



AGENDA

INFRASTRUCTURE COMMISSION

Infrastructure Commission : May 6, 2025 at 6:00 PM
Village Hall 740 Hillgrove Avenue, Western Springs, IL 60558

- A. Call to Order**
- B. Approval of Minutes**
 - 1. Minutes from 02-20-2025
- C. Public Comment**
- D. New Business**
 - 1. Capital Improvement Plan - Update on Referendum and Project Planning
 - 2. NIU Capstone Project - Localized Public Works Intergovernmental Agreement for Mutual Aid
- E. Other Business**
- F. Adjournment**

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

**Infrastructure Commission
Meeting Minutes
Thursday, February 20, 2025
6:00 PM
Village Hall All-Purpose Room
740 Hillgrove Avenue
Western Springs IL 60558**

Called to Order: 6:11 p.m. by Chairman Shawn Murphy

Roll Call

Commission & Committee Members Present:

Shawn Murphy – Chairman
Thomas Kelleher – Commission Member
Eric Haas – Commission Member
Thomas Mitoraj- Commission Member

Alan Fink – Village Trustee
Heidi Rudolph, Village President

Staff Present:

Matthew Supert Director of Municipal Services
Jeff Koza, Village Engineer
Christopher Breakey, PW Superintendent
Jenny Pesek, Administrative Assistant-MS
Ron Derengowski- Water Plant Superintendent

Others Present: None

Approval of Minutes:

The Infrastructure Commission minutes from the October 10, 2024 were approved with corrections. Motion to approve by Chairman Shawn Murphy, seconded by Commissioner Kelleher. Motion passed on a voice vote.

Public Comment:

None

New Business:

Capital Improvement Plan and Referendum Update

Director Supert presented the Referendum 2025 Video to the Infrastructure Commission and all others in attendance. He reported that this 4-minute video gives information on the upcoming referendum vote for critical infrastructure funding for the Village. He stated that the vote will be in April. The final open house was successful, and staff answered a lot of residents questions. Chair Murphy asked about the video responses and Director Supert stated there were over 400 views of the Referendum video.

Municipal Services Department-2024 Work Order Maintenance Summary Report

Director Supert reported on the Brightly Work Order and Asset Management System summarizing the work orders over the past year. Director Supert presenting detailed summary of work, information and completed orders during 2024. The following categories were discussed and summarized.

- 912 Total Reactive Maintenance Work Order Requests.

- Types-Water Utility, Wastewater, Streets, Forestry, Fleet, Code Enforcement.
- Water Main Breaks
- Average Number of Work Hours
- % of Work Completed

Cook County Plainfield Road Corridor Study-North Side Pedestrian Accommodations between I-294 and Wolf Rd.

Director Jeff Koza presented to the Commission the Plainfield Road Corridor Study. The Village staff is seeking a recommendation for which pedestrian accommodation between I-294, and Wolf Road the Commission prefers.

Alternative 1

Would involve not installing new sidewalk between Burr Oak Drive and Wolf Road. CCDOTH would install sidewalk from I-294 to Burr Oak Drive and then at Burr Oak Drive the County would connect new sidewalk to the existing asphalt path system. The existing Timber Trails asphalt path system would serve as the pedestrian accommodations for the north side of Plainfield Road.

Alternative 2

Would involve installing new continuous sidewalks in the north side of Plainfield Road right of way between I-294 and Wolf Road. It would run next to and parallel to the existing Timber Trails path system.

The Infrastructure Commission recommended Alternative 1.

Old Business:

Ridgewood Oaks Detention Basin Project Update

Village Engineer Koza reported this project started in 2016 when the Village began work with the Ridgewood Oaks Condominium Association (HOA) for the repair and improvement of the privately owned detention basin located on the Ridgewood Oaks property. The HOA decided to proceed with the design of a detention basin on their own and they hired a civil engineer. Village Staff anticipates the HOA will submit for a MWRD permit in the next two months. As soon as an MWRD permit is obtained the HOA would be able to start construction work. Director Koza reported this project could potentially begin later this calendar year.

Other Business:

Water System Update

53rd Street Water Main

Water Main Replacement on 53rd Street between Fair Elms Avenue and Commonwealth Avenue. This repair and replacement are necessary to provide the best water quality and pressure to the Commonwealth and Forest Hills subdivisions. Based on conversations, initial estimates for repairs will total between \$200,000.00 and \$250,000.00.

Water Plant Pipe Lining

H.R. Stewart performed televising of the existing water main in the courtyard of the water treatment plant, which could provide the water from Well 5 to the water plant. Current operations only allow

water from Well 5 to be pumped to our reservoir. This main is approximately 100' in length and will require a replacement of a fitting that had some tubercles and scale and a section of pipe that was discovered to have a small gap at the joint. Baxter and Woodman will analyze the reports and provide recommendations for repairing and preserving the pipe. The Water Plant has budgeted \$50,000.00 for the pipelining.

Water Model Study

Ronald Derengowski reported that Western Springs has just received the first draft of the water model study that was performed by H.R. Green. The complete water system analysis report will be shared with the Board once completed.

Adjournment:

Motion to adjourn by Chairman Murphy and seconded by Commissioner Kelleher.

Motion passed on a roll call vote.

Voting Aye: Dan Cieccko, Dan Lewis, Eric Haas, Thomas Mitoraj,

Meeting adjourned at 7:49 P.M.

Respectfully Submitted: Jenny Pesek



AGENDA ITEM SUMMARY

INFRASTRUCTURE COMMISSION

Infrastructure Commission : May 6, 2025

AGENDA ITEM D.1.

To: Infrastructure Commission

From: Matthew Supert, Director of Municipal Services

CC: Ellen Baer, Village Manager

RE: Capital Improvement Plan - Update on Referendum and Project Planning

Recommendation

None.

Summary

Attached for the Infrastructure Commission's review is a preliminary projection of costs and schedules for projects identified in the 2025 Referendum. Village Staff will be scheduling meetings with the Village's municipal consulting firms (Christopher Burke Engineering, Baxter & Woodman, HR Green, V3 Companies) in May to review the proposed schedules and project scopes.

Revised project schedules and scopes may come back to the Infrastructure Commission in early summer once revisions have been completed. Projects identified for 2026 are anticipated to be brought through the Village Board for Phase II (Design) Engineering by July to begin engineering design for projects targeted for a winter 2025 letting.

Financial Impact

None.

Recommended Motion

None.

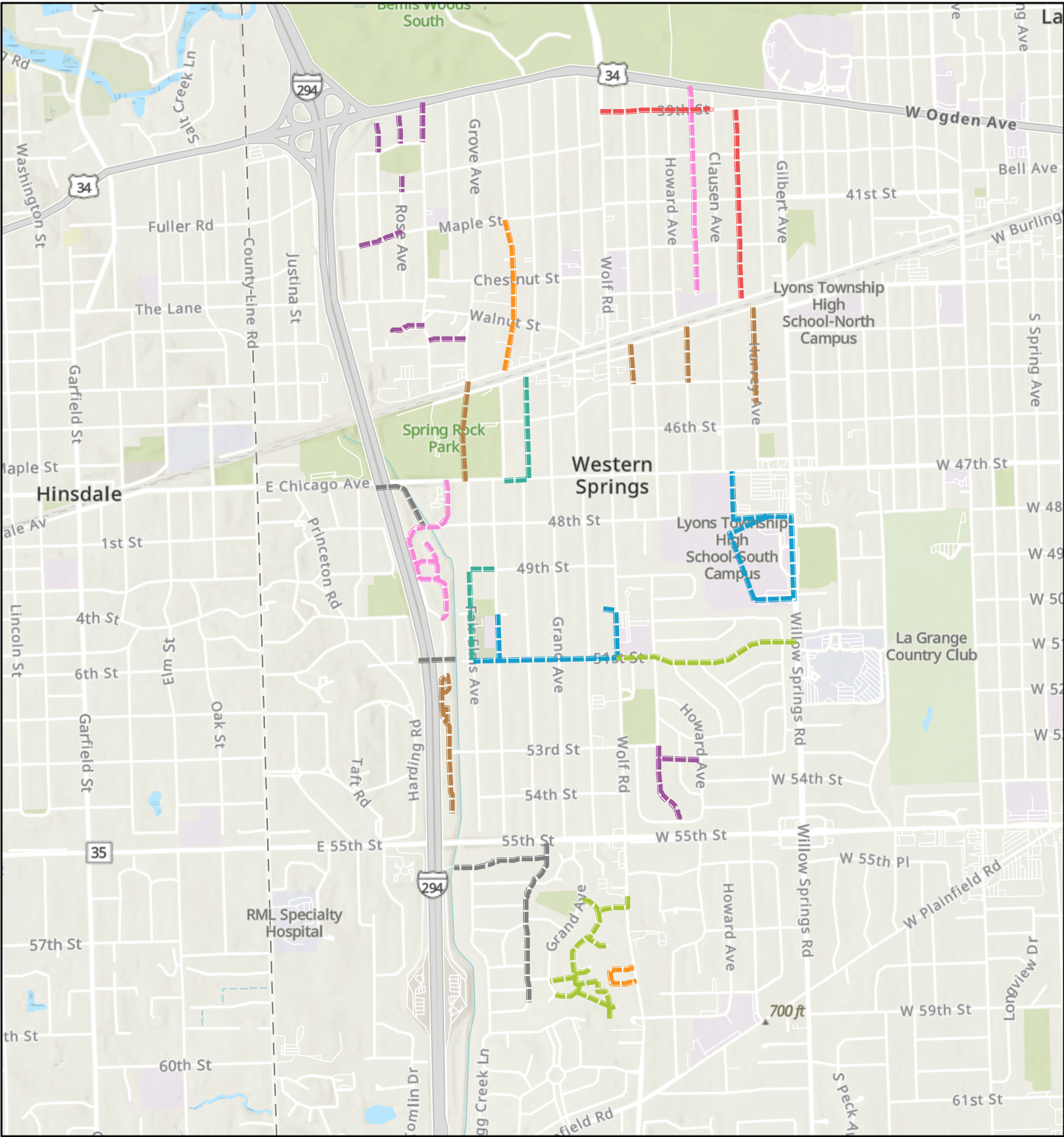
Strategic Plan Alignment

Infrastructure Improvements

File Attachments

1. CIP - By Project Name
2. CIP - By Project Type
3. CIP - By Firm
4. Referendum Project Projections Export Table 04.30.25

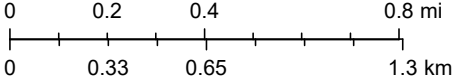
Referendum CIP Projections - By Project Name



4/11/2025

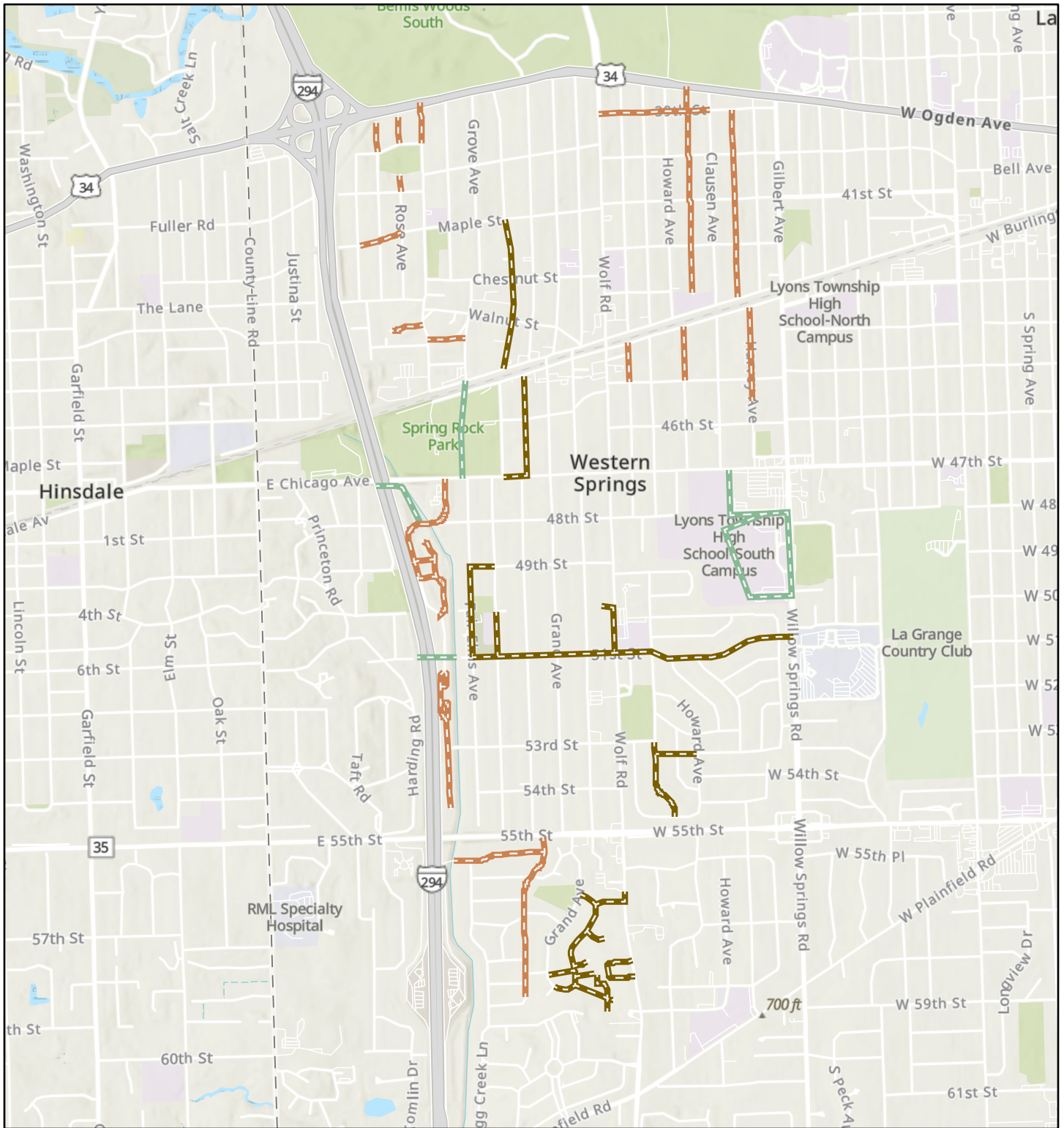
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- ...Sorted by Project Name
- | | | |
|---|---|---|
| <ul style="list-style-type: none"> --- 39th - Clausen to Wolf --- 51st - Fair Elms to Wolf --- 51st - Gilbert to Wolf --- Caroline - 53rd to 54th Pl --- Central Avenue --- Ellington - Ogden to 43rd | <ul style="list-style-type: none"> --- Fair Elms - 49th to 51st --- Hinsdale Interconnect --- Linden - 39th to Hillgrove --- Lyons Township Watermain --- Old Town Northwest Resurfacing --- Ridgewood Court --- Spring Rock Park Sewer Lining | <ul style="list-style-type: none"> --- Woodland - Burling to 47th --- Commonwealth North --- Commonwealth South --- Lawn Drive and Cul-de-Sacs --- Ridgeacres - North --- Woodland - 55th to Ridge Ln --- World_Hillshade |
|---|---|---|






Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Referendum CIP Projections - By Project Type

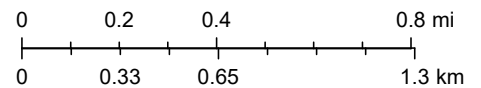


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...Sorted by Project Type

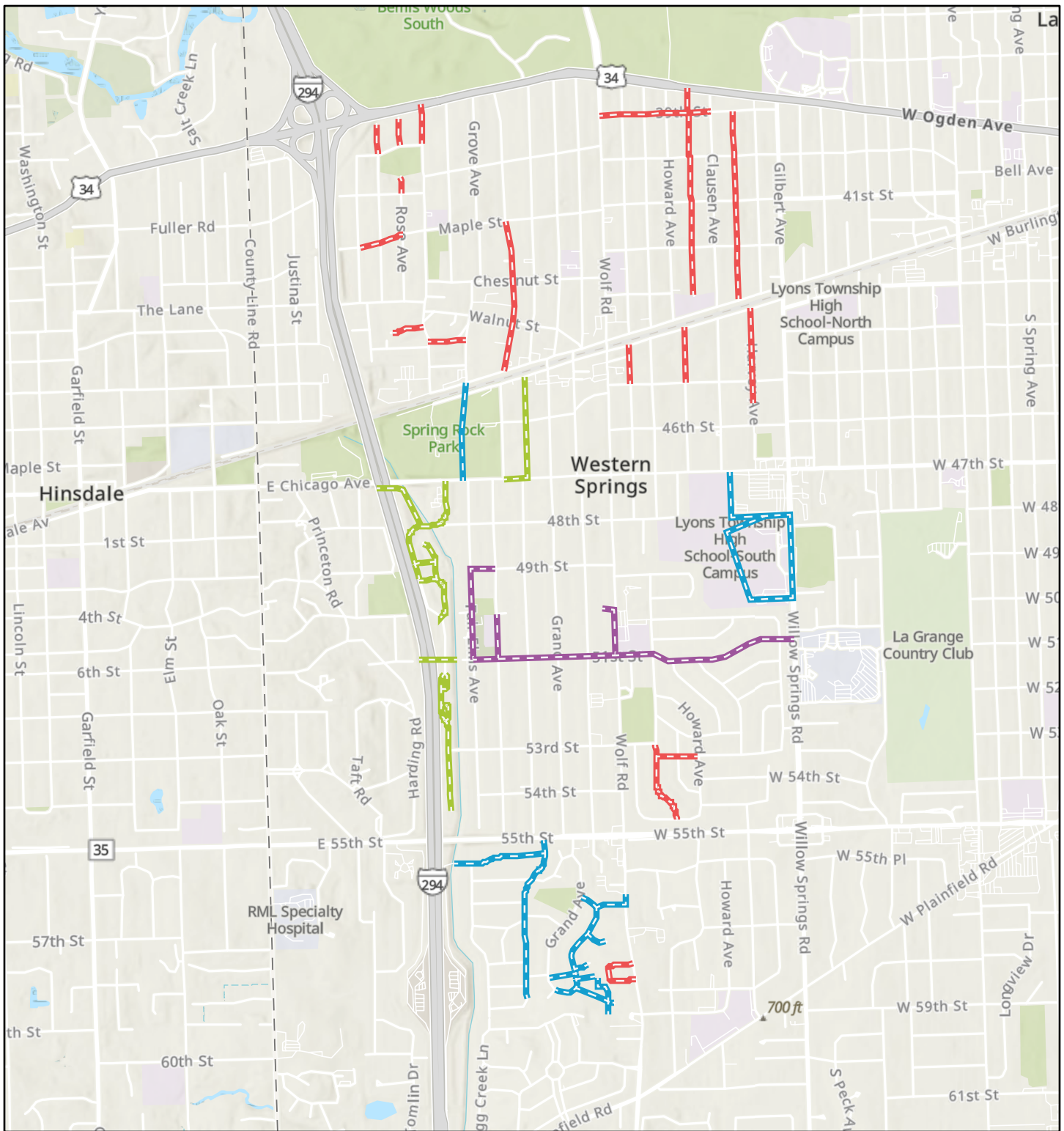
-  Reconstruction
-  Resurfacing
-  Water/Sewer Only
- World_Hillshade

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Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Referendum CIP Projections - By Firm



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...Sorted by Firm

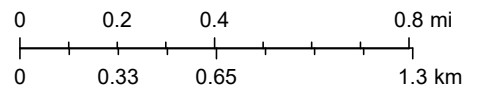
V3

Baxter & Woodman

HR Green

CBBEL

World_Hillshade



Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

OBJECTID	Project Name	Est_Project_Cost	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
5	Woodland - Burling to 47th	\$ 5,330,000	\$ -	\$ 5,330,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27	Spring Rock Park Sewer Lining	\$ 570,000	\$ 68,400	\$ 501,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Old Town Northwest Resurfacing	\$ 264,616	\$ 31,754	\$ -	\$ 232,862	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38	Linden - 39th to Hillgrove	\$ 324,896	\$ 38,988	\$ -	\$ 285,908	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
39	39th - Clausen to Wolf	\$ 195,624	\$ 23,475	\$ -	\$ 172,149	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Ridgewood Court	\$ 1,020,000	\$ -	\$ 122,400	\$ -	\$ 897,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	Fair Elms - 49th to 51st	\$ 4,158,000	\$ -	\$ 498,960	\$ -	\$ 3,659,040	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Lyons Township Watermain	\$ 2,550,000	\$ -	\$ -	\$ 306,000	\$ -	\$ 2,244,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	51st - Fair Elms to Wolf	\$ 5,090,000	\$ -	\$ -	\$ 610,800	\$ -	\$ 4,479,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37	Ellington - Ogden to 43rd	\$ 402,714	\$ -	\$ -	\$ -	\$ 48,326	\$ -	\$ 354,388	\$ -	\$ -	\$ -	\$ -	\$ -
11	Caroline - 53rd to 54th Pl	\$ 3,257,000	\$ -	\$ -	\$ -	\$ 390,840	\$ -	\$ 2,866,160	\$ -	\$ -	\$ -	\$ -	\$ -
35	51st - Gilbert to Wolf	\$ 4,390,000	\$ -	\$ -	\$ -	\$ 526,800	\$ -	\$ 3,863,200	\$ -	\$ -	\$ -	\$ -	\$ -
22	Hinsdale Interconnect	\$ 2,900,000	\$ -	\$ -	\$ -	\$ -	\$ 348,000	\$ -	\$ 2,552,000	\$ -	\$ -	\$ -	\$ -
1	Central Avenue	\$ 2,975,000	\$ -	\$ -	\$ -	\$ -	\$ 357,000	\$ -	\$ 2,618,000	\$ -	\$ -	\$ -	\$ -
47	Commonwealth North	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 120,000	\$ -	\$ 880,000	\$ -	\$ -	\$ -	\$ -
51	Commonwealth South	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 120,000	\$ -	\$ 880,000	\$ -	\$ -	\$ -	\$ -
54	Woodland - 55th to Ridge Ln	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 120,000	\$ -	\$ 880,000	\$ -	\$ -	\$ -	\$ -
40	Lawn Drive and Cul-de-Sacs	\$ 7,040,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 844,800	\$ -	\$ 6,195,200	\$ -	\$ -	\$ -
57	Ridgeacres - North	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 120,000	\$ -	\$ 880,000	\$ -	\$ -
		\$ 44,467,850	\$ 162,616	\$ 6,452,960	\$ 1,607,720	\$ 5,522,606	\$ 7,788,200	\$ 7,928,548	\$ 7,930,000	\$ 6,195,200	\$ 880,000	\$ -	\$ -
				First Issuance				Last Issuance			Last Encumbrance		

Design Eng 12%

Note: Projects, timelines and cost estimates in this table are preliminary and should be use for discussion purposes only. Actual project scopes, costs, and dates will be revised through the Village's annual budget process.



AGENDA ITEM SUMMARY

INFRASTRUCTURE COMMISSION

Infrastructure Commission : May 6, 2025

AGENDA ITEM D.2.

To: Infrastructure Commission

From: Matthew Supert, Director of Municipal Services

CC: Ellen Baer, Village Manager

RE: NIU Capstone Project - Localized Public Works Intergovernmental Agreement for Mutual Aid

Recommendation

None.

Summary

Every year, local universities with public administration and public policy programs solicit policy, operations, and other governmental issues to be worked on through their independent study and graduate capstone programs. These programs offer undergraduate and graduate students an opportunity to work in collaborative groups and to assist local government on various initiatives. Western Springs strives to engage with these programs whenever possible and for 2025 had two submissions accepted. One was by UIC for their undergraduate students to review the Village's current ADA Transition Plan and to provide guidance on revisions and the second was for NIU's Masters of Public Administration Program to conduct an analysis on mutual aid frameworks for public works departments.

Emily Ann Brier is a graduate student from NIU in the Masters in Public Administration program and is currently an intern at the Village of Schiller Park. She is expected to graduate later this spring and will be attending a fellowship working for the City of McKinney, Texas next year. Her project looked at the under-utilization of mutual aid agreements in public works departments compared to police and fire departments. Emily presented her final report along with a draft intergovernmental agreement template to NIU and the Village on April 28, 2025 and presented her findings before a review panel at NIU.

This topic and similar ones regarding mutual aid and shared services has been regularly discussed with neighboring municipalities and on several occasions with the DuPage Mayor and Managers Conference (DMMC) Public Works Steering Committee and the IRMA Public Works Safety Committee. The Village hopes to continue to explore this concept and will present the capstone report from Emily to the DMMC Public Works Steering Committee and IRMA Public Works Safety Committee for further discussion and development in the coming months.

Financial Impact

None.

Recommended Motion

None.

Strategic Plan Alignment

Shared Services

File Attachments

1. NIU Capstone Project - Localized Public works Intergovernmental Agreement for Mutual Aid - Final Project Report
2. NIU Capstone Project - Localized Public works Intergovernmental Agreement for Mutual Aid - Powerpoint

Filling a Niche when Resources are Scarce: The Creation of a Localized Public Works Intergovernmental Agreement for Mutual Aid, Specific to Water Main Breaks

Emily Ann Brier

PSPA 699

April 28th, 2025

Problem Statement

The Village of Western Springs is struggling with an issue increasingly relevant to many older municipalities. This issue is water main breaks, and the response to them. Western Springs' specific issue is the overworking of their staff during these breaks, and accrued costs from overtime and contracting for emergency repairs. Often in inclement weather conditions, there will be several breaks in rapid succession, putting it beyond the ability of Western Springs to respond to them. Western Springs does not have the capacity to generate or acquire revenue to hire additional staff, or to mass-replace the known problem mains to alleviate these breaks. Contracting out in sudden breaks also accrues costs and further denies Western Springs the ability to deliver much-needed training and experience to new staff.

Therefore, it is the desire of Western Springs to address its main breaks, develop staff skills and relationships, while keeping costs down. With the knowledge that even if sufficient funding is acquired that it would not immediately fix the problem of main breaks due to time for replacements and not providing staff development opportunities through collaboration, this capstone chose another direction.

This capstone will examine the rationale and feasibility of a localized mutual aid agreement for public works departments, one that would have a specific focus on water main breaks. Its avenues of examination include comparison to MABAS (Mutual Aid Box Alarm System), a review of IPWMAN (Illinois Public Works Mutual Aid Network) and ILWARN (Illinois Water/Wastewater Agency Response Network), interviews with key figures, and surveys sent to several other public works departments.

Analysis of the Problem:

The Village of Western Springs was incorporated in the year 1886, making it and its infrastructure among the oldest in the state. Western Springs' name comes from the natural springs formerly found within its borders. The management of those springs and wetlands created its initial groundwater systems after engineers were hired to create the Villages water systems when the springs dried up. This led to the creation of its first water tower, which became so integral to the community's identity that it's the Village's official logo, speaking to the cultural importance of their waterworks.

This leads to the first pillar of the problem. The Village's age has resulted in frequent breaks, a common issue in older Cook County municipalities. 45% of the pipes in-village are 100 years or older. This creates a common need that a localized IGA for mutual aid could fill a niche for.

The second key factor that contributes to this problem of main breaks is Western Springs' limited capacity to generate revenue. The Village is a majority residential bedroom community. They are built out with no further room for sales tax generating businesses. Most of their land use is dedicated to single-family homes, creating a thin tax base for the property tax. Being a non-home rule municipality, they have

no capacity to significantly raise property taxes. The next biggest chunk of land usage is transportation, in the way of untaxed parking lots, the Metra line, and state-owned highways, of which generate no income for the Village. In addition to this, the Village has a relatively wealthy population. Its median household income is \$198,836, as compared to the Cook County average of \$78,304. This renders it ineligible for most grants, further cutting off another area of potential funding. The last option for revenue is the 45-million-dollar infrastructure referendum that was approved on April 1st. While significant, the Village estimates it needs \$200 million in critical repairs. In addition, that \$45 million will not be going solely to waterworks, but to improvements such as sidewalk implementation. This proves that there are no avenues for revenue funding to solve the core problem of water main breaks and the inability to respond to them in quick succession.

Recommendation:

Additional income is not possible to generate, therefore leaving solutions such as hiring more staff or wholesale replacing mains out of the question. With that in mind, this capstone project elected to take a third route.

It is the official recommendation for this capstone on behalf of the Village of Western Springs to implement two deliverables. The primary deliverable being an Intergovernmental Agreement (IGA) for Mutual Aid among public works departments, centered around water main breaks. This agreement would also allow for other non-emergency mutual aid, such as equipment sharing, sharing of specific resources such as arborists, and other needs that would not require an IPWMAN invocation. MABAS is a regional IGA for mutual aid among fire departments, where individual fire departments will often take the umbrella agreement, create a localized agreement based off the overarching one, and tailor it for one other partner department, typically one neighboring them. IPWMAN is the regional agreement for public works in which this capstone took the umbrella framework and tailored it for two local partners in public works based off the surveys and interviews that stated their main concerns and primary wants for a localized IGA.

This IGA would allow for quick response from local partners within a reasonable proximity. It would allow for a response to an urgent situation, outside of IPWMAN, which to date has never been invoked for a water main break. It would allow for the response of partner departments who already have a familiarity with the local infrastructure due to their proximity and their own similar municipalities with classic Cook County grid system infrastructure. Finally, it would allow the department to develop its employees and network among local departments.

The secondary deliverable is a cultural analysis of public works departments. It was frequently noted in the surveys and in interviews with public works leadership and staff of the hesitancy of public works departments to engage in formalized agreements despite frequent informal sharing of equipment and general aid. This was especially stark in contrast to fire and police departments, who readily signed mutual aid agreements. This cultural analysis gathered insight through interviews and surveys to shine light on this avoidant tendency. Understanding this tendency will assist in future negotiations when trying to implement the localized IGA.

Project Name: Localized Public Works IGA for Water Main Breaks
Focused on a Mutual Aid Agreement

Project Organization: The Village of Western Springs

NIU Team Member Names: Emily Ann Brier

Course Number: PSPA 699, Public Service Capstone Project

Date: April 28, 2025

Problem Statement

The Village of Western Springs is struggling with an issue increasingly relevant to many older municipalities. This issue is water main breaks, and the response to them. Western Springs' specific issue is the overworking of their staff during these breaks, and accrued costs from overtime and contracting for emergency repairs. Often in inclement weather conditions, there will be several breaks in rapid succession, putting it beyond the ability of Western Springs to respond to them. Western Springs does not have the capacity to generate or acquire revenue to hire additional staff, or to mass-replace the known problem mains. Contracting out in sudden breaks also accrues costs and further denies Western Springs the opportunity to deliver much-needed training and experience opportunities to new staff. Therefore, it is the desire of Western Springs to address its main breaks, develop staff skills and relationships, while keeping costs down. With the knowledge that even if sufficient funding is acquired that it would not immediately fix the problem of main breaks due to time for replacements and not providing staff training, this capstone chose a different direction. This capstone will examine the rationale and feasibility of a localized mutual aid agreement for public works departments, one that would have a specific focus on water main breaks. Its avenues of examination include comparison to MABAS, a review of IPWMAN and ILWARN, interviews, and surveys sent to several other public works departments.

Recommendations

I recommend that the Village of Western Springs uses an Intergovernmental Agreement (IGA) for mutual aid among public works departments to better facilitate responses to water main breaks on a local level. This IGA is based on framework from IPWMAN and in addition, takes inspiration from MABAS, where individual fire departments who are both apart of the umbrella IGA MABAS will form separate localized sub-agreements based on the MABAS framework. While IPWMAN is respected and efficient when utilized, many Villages won't invoke their regional IPWMAN agreement for a main break or general, non-emergency needs, creating a niche need for a localized mutual aid IGA, attached in Appendix A.

Furthermore, a second recommendation would be to maintain current relations in local collaborative organizations, and to continue to study organizational culture through this capstone's internal and external surveys, Appendix B and Appendix C respectively. This is to note that many public works departments are noticeably resistant to formalizing IGA's in comparison to paramilitary organizations such as police or fire departments. If possible, the department could shift to focus on partially developing a culture of first responders, and to emphasize the crucial services provided by the public works department.

Background and Analysis of the Problem and Alternatives

The Village of Western Springs is a smaller, bedroom community with direct access to Chicago by rail and highway. It has a population of 13,290 as of the 2023 census adjustment.

The Village was founded in 1886 in western Cook County and is a part of Lyons township today. It is among the oldest municipalities in the state, with correspondingly old infrastructure, with aged water works in particular.¹

Western Springs history with water is in its name. Residents were initially attracted to the area due to its natural springs, in spite of its swamps. Specialty engineers were hired after the springs dried up, and implemented a waterworks system, leading to the creation of the Village's infamous water tower, a point of pride for the Village where it was replaced again in 1962.² This pride in its water tower, its history, and its water systems is reflected to this day, in the Villages efforts to maintain its water infrastructure and quality of life despite expenses.

The expenses associated with Western Springs water main breaks are significant. 45% of Western Springs water and sewer system is over 100 years old.³ In 2024, the Village experienced 78 main breaks on its 54 miles of piping⁴. The cost of repair varies depending on severity of breaks, duration worked and supplies, and equipment needed.

12% of the property taxes collected from the Village goes to the Village, which is inadequate to meet the demand for construction and maintenance. With the previous budget, the Village would have been able to do 2 substantial infrastructure projects per year over the next 10 years. On April 1st the Village's residents voted overwhelmingly to support the passage of a \$45 million bond referendum for specifically infrastructure improvements, which would fund an additional two infrastructure projects a year. These funds are not solely for water and involve other major projects, such as implementing sidewalks to areas that do not have them. In total, the Capital Infrastructure Plan estimates the Village needs \$200 million to address critical infrastructure projects, further putting into context that even additional funds won't solve the core issue of addressing those breaks⁵.

No influx of money is within the Village's capabilities to either hire more staff to prevent overwork when breaks happen in rapid succession, or to wholesale replace aging mains before they can break. Nor would the Village wish to replace the mains all at once, as down the line they would age at the same rate and begin failing all at once, instead of in a staggered, manageable pattern. Therefore, to address main breaks a third option needed to be considered.

¹ Home - Western Springs Historical Society. (2019). Western Springs Historical Society - Preserving and Celebrating the History of Western Springs, IL. <https://westernspringshistory.org/>

² Western Springs Water Tower, 914 Hillgrove Avenue, Western Springs, Cook County, IL. (2015). The Library of Congress. <https://www.loc.gov/item/il1003/>

³ Referendum 2025 - Investing in Infrastructure | Western Springs, IL - Official Website. (2025). Wsprings.com. <https://wsprings.com/811/Referendum-2025---Investing-in-Infrastru>

⁴ Supert, M. (2025, March). Interview with the Public Works Director of Western Springs (E. A. Brier, Interviewer) [Personal communication].

⁵ Referendum 2025 - Investing in Infrastructure | Western Springs, IL - Official Website. (2025). Wsprings.com. <https://wsprings.com/811/Referendum-2025---Investing-in-Infrastru>

A localized IGA for mutual aid specific to public works is suggested. This option will assist in cross-collaboration among municipalities who already have familiarity, who themselves might be affected by these main breaks, who can share localized expertise and institutional knowledge, be within travel range during a break, who can address main breaks without an official IPWMAN invocation, and who can allow for the training of new staff. In addition, this localized agreement can be further tweaked and personalized for mutual aid in non-emergency situations, such as borrowing arborists and equipment.

Stakeholder Analysis

Western Springs has an enriched history with several active citizens groups, who are heavily involved in the community⁶. The Public Works department is unique in that it has fewer hands-on interactions with the community and these civic groups than departments it's being compared with for the sake of comparing their respective IGA's, such as the police and fire departments. The public works department often works during the daytime, when people are at work or school, rendering much of their crucial actions not overtly known to the public. The police and fire departments are heavily involved with its citizen stakeholders in comparison to its public works department⁷.

The first group of stakeholders when considering a mutual aid IGA are the residents themselves. Service interruptions from water main breaks can severely impact residents. Water may be shut off for several hours, rendering cooking, cleaning, and even healthcare for family members difficult if not impossible⁸. Many businesses operate at a limited capacity or shutter completely until water is returned. For this capstone, citizens were not engaged, as many do not have an understanding of what an intergovernmental agreement is or understand mutual aid.

The second group of stakeholders are the staff themselves of Western Springs public works department. The department has a total of 21 staff members, with 8 assigned to field functions specifically. The median age for public works departments who responded to this capstones' external survey was 38, in comparison to Western Springs, where the average age of its staff was 34 years old⁹. On average, Western Springs had younger staff than surrounding public works departments. This is a blessing during a time when many local governments are

⁶ Community | Western Springs, IL - Official Website. (2021). Wsprings.com. <https://www.wsprings.com/109/Community>

⁷ Supert, M. (2025, March). *Interview with the Public Works Director of Western Springs* (E. A. Brier, Interviewer) [Personal communication].

⁸ Reynolds, K. (2021, April 15). *Water Main Breaks and Public Health Risks*. WCP Online. <https://wcponline.com/2021/04/15/water-main-breaks-and-public-health-risks/>

⁹ Public Works Survey. (2024). *The Public Works Operating and Staffing Survey*.

struggling to recruit and retain young workers in the face of a silver tsunami¹⁰. With that in mind, the goal of Western Springs is to provide training and networking opportunities for new hires. An IGA would allow for those opportunities, providing valuable experience with other municipalities in terms of on the job experience fixing mains, and meeting and networking with other departments for collaboration and information sharing.

An additional benefit to staff is the reduction of stress on staff during main breaks themselves. In older municipalities such as Western Springs, main breaks can happen in rapid succession, going beyond the ability of a smaller department to respond to them by itself. An IGA would allow the department to request aid from the other signer, opening the possibility of their staff helping with additional breaks. This was seen when Niles assisted Skokie when they had a rupture of their 36-inch main. Another separate break occurred in Skokie during the 36-inch break. Being unable to address it themselves, they called Niles, who agreed to fix that main for them as “If it were their own break” further preventing Skokie’s staff from being overwhelmed¹¹.

The third major stakeholders are other public works departments. Cook County's urban fabric contains many older municipalities all hooked to interconnected grid systems. Often, a main break in one municipality can impact another municipality. For example, when Chicago experienced a main break near Schiller Park, the Village itself experienced ripple main breaks due to the sudden change in water pressure as the Village gets its water from the city¹². When Skokie had its break, Evanston had to severely throttle the water that it supplied to Skokie and the rest of the Northwest Water Commission to prevent ripple effects in those communities¹³. In both cases, clear communication between different municipalities allowed for the coordination of repairs and for the communities to brace themselves.

Other Villages stand to benefit from IGA’s. First, their own staff can get more experience and network. Additionally, during breaks, other Villages can call upon aid with an IGA. The same benefits would be available to them, such as helping to prevent being overwhelmed if concurrent breaks are taking place.

Impacts

Political

The political impacts of water main breaks can be substantial. Putting in infrastructure and maintaining it takes political will, and funding approval of the budget. The biggest example

¹⁰ Stern, A. (2025). *The Silver Tsunami: Water Industry Faces Workforce Crisis*. Ayyeka.com. <https://www.ayyeka.com/blog/silver-tsunami>

¹¹ Quinn, S. (2025, April 4). *Niles Director of Public Works interview* [Personal communication].

¹² Hastings, P. (2025, March). *Public Works Director of Schiller Park* (E. A. Brier, Interviewer) [Personal communication].

¹³ Quinn, S. (2025, April 4). *Niles Director of Public Works interview* [Personal communication].

of this is the recent referendum that passed on April 1st approving 45 million in funding for infrastructure improvements with 72% support to issue those bonds. For residents to willingly vote to raise taxpayer money spent speaks to the political support for infrastructure projects¹⁴.

Infrastructure is a relatively bipartisan, apolitical issue during a time of polarization. It does not have the same backlash as a motion for increasing funding to a police department would invoke, or the resistance to building homeless shelters¹⁵. This can be used to campaign for additional funding to improve water mains.

Outside of the municipality itself, water main breaks have the potential to impact other communities through the interruption of their water services. Therefore, it is in the political interests of those municipalities to consider a mutual aid IGA for their own benefit.

Social

Social impacts of water main breaks are substantial. Interrupted services prevent social gatherings, efficient work, and safe schooling. Western Springs' connection to and history around water creates a unique context for its main breaks¹⁶. The Village's residents are willing to pay more to maintain their infrastructure.

The social impacts of this IGA for mutual aid would be beneficial. It's a small world in local government, with many local government workers already knowing each other, working well together, and resource sharing. An IGA has the potential to further foster those bonds and help create new bonds for younger hires.

Economic

Western Springs is a bedroom community, with a significant population density of roughly 4,900 people per square mile, on a mostly grid pattern of development. As a non-home rule municipality, their ability to generate property tax revenue is limited, and the space to create businesses to generate sales tax is also significantly impeded, as the Village is built out and surrounded by highways¹⁷. The economic impact of these main breaks throws those revenue generating limitations into stark relief¹⁸.

¹⁴ *Referendum 2025 - Investing in Infrastructure | Western Springs, IL - Official Website*. (2025). Wsprings.com. <https://wsprings.com/811/Referendum-2025---Investing-in-Infrastru>

¹⁵ Smeltz, D. (2021). *Americans Support Infrastructure Investment*. Globalaffairs.org. <https://globalaffairs.org/commentary-and-analysis/blogs/americans-support-infrastructure-investment>

¹⁶ *Western Springs Historical Society*. (2019). Western Springs Historical Society - Preserving and Celebrating the History of Western Springs, IL. <https://westernspringshistory.org/>

¹⁷ Ambler, A. (2020, April 13). *The Economics of Water Main Failures*. Water Finance & Management. <https://waterfm.com/the-economics-of-water-main-failures/>

¹⁸ Supert, M. (2025, March). *Interview with the Public Works Director of Western Springs* (E. A. Brier, Interviewer) [Personal communication]

The economic impacts of these breaks include lost revenue from businesses that need to shut down, and the cost of repair¹⁹.

The economic impacts of the IGA itself are dependent on a few factors. First, the wage compensation for responders is the responsibility of the responding agency. Response is voluntary. It's understood that a responding agency is taking up risk and can cover the insurance of its employees. Equipment may be shared without a price through this agreement, and a borrowing agency must pay the cost of repairs for any damage from irresponsible usage. Supplies are reimbursable. A receiving agency can also reimburse a responding agency with the promise of mutual aid in the future.

Overall, the economic impact is positive. The shortened amount of time to fix a main break with a responding agency allows for less damage, less flooding, and a shorter duration of time for businesses to be shut down²⁰. It allows for experience making for younger employees and networking. It also prevents ripple effects in the interconnected grid system, prevents boil orders and further breaks in neighboring municipalities.

Data collection and Analysis

Surveys

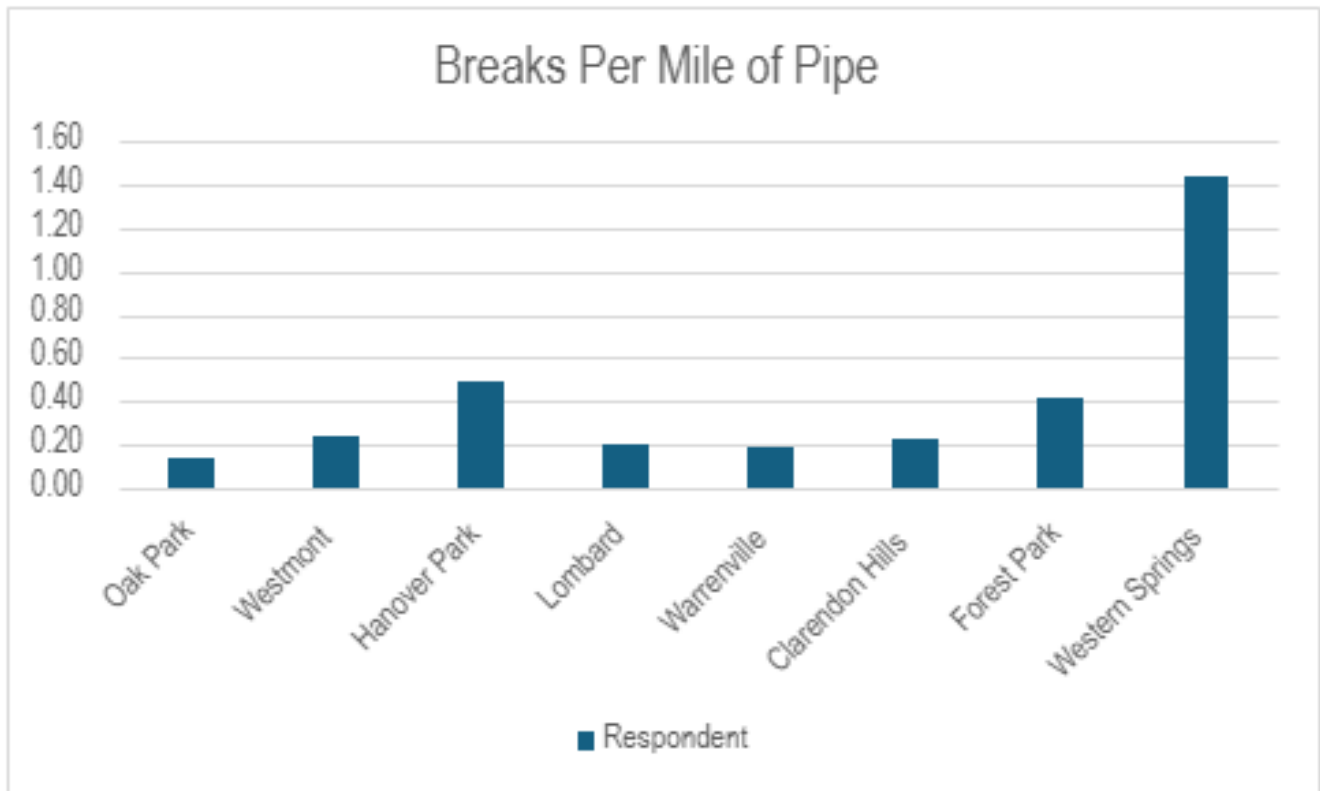
The Public Works Operating and Staffing Survey was sent out in 2024 by the DuPage Mayors and Managers Conference for municipalities in Cook County. Most respondents were from the Public Works Steering Committee. This survey was not drafted by, disseminated, or collected by this capstone project. It provides general public works department information, including the basics of their water services.

Useful information from this survey included the total miles of water mains, and the total staff assigned specifically to water functions. The miles of water mains was a useful comparison to make with Western Springs miles of mains, and was used to calculate the number of main breaks per mile, shown in the figure below²¹.

¹⁹ Heflin, C., Jensen, J., & Miller, K. (2014). Understanding the economic impacts of disruptions in water service. *Evaluation and Program Planning*, 46, 80–86. <https://doi.org/10.1016/j.evalprogplan.2014.05.003>

²⁰ American Society of Civil Engineers. (2020). *The Economic Benefits of Investing in Water Infrastructure*. <https://infrastructurereportcard.org/wp-content/uploads/2021/03/Failure-to-Act-Water-Wastewater-2020-Final.pdf>

²¹ Public Works Survey. (2024). *The Public Works Operating and Staffing Survey*.



This figure demonstrates that Western Springs rate of main breaks is far higher than any other respondents for 2024. At 1.44 breaks per mile, it would mean a break occurs in Western Springs every 0.69 miles. Compare this to the next highest, Hanover Park, with 0.49 breaks per mile, or roughly one break every 2 miles.

This information is helpful in showing the need Western Springs has for a solution to prevent being overwhelmed by these breaks.

Internal Survey

The internal survey, attached in appendix B was drafted with the goal of getting more qualitative data. Quantitative analyses have already been done by Western Springs, which all ran into the brick wall of an impossibility of additional funding or ability to wholesale replace mains. Therefore, this internal survey was used to collect cultural information on the department.

First, the areas of operation that the Western Springs public works department felt they could benefit the most from was the shared usage of specialized equipment only needed on occasion. The second was water main breaks, which also tied into the need for equipment sharing, such as a vacuum for when the area around a break becomes flooded and needs to be cleared to get to the break.

The second question centered on why respondents thought many public works departments were okay with informal collaboration, but not formalized IGA's. The first reason was the rationale that it was easy to ignore liability concerns if nothing bad happens. An IGA ensures accountability. A second reason was communication standards and expectations set by an IGA might be intimidating. A third reason is that it's informally easier to manage collaboration, until there is a problem. In that case, an IGA would spell out how to handle that disagreement.

The internal survey also confirmed that management at the public works department have elements of emergency response management and that they regard themselves as frontline workers. The department points out that public works employees often collaborate with police and fire during emergencies. However, they point out that public works differs from police and fire departments. Public works has a wide variety of responsibilities. One respondent with history in both fire and public works stated, "I don't see us [Western Springs Public Works] being receptive to outside help unless we have no other choice; it's a matter of pride and ego". Another difference was baseline staffing levels. Police and fire departments practice minimal staffing and pull additional needed resources from surrounding communities during an event, meaning IGA's are much more ingrained in those organizations. Public works on the other hand, fully staffs themselves. If there are no major events for public works, such as snow removal, they divide up and do secondary tasks requiring less manpower²².

External Survey

The external survey, attached in Appendix C, was drafted with the goal of getting more qualitative data. Quantitative analysis's have already been done with the 'Public works operating and staffing survey' however, that survey lacked more subjective information on organizational culture.

²² Public Works Department of Western Springs Staff. (2025, March). *Internal Interview with the Western Springs Public Works Department* (E. A. Brier, Interviewer) [Personal communication].

In the time allotted, this Capstone was able to receive responses from the following municipalities:

- Village of Oak Park
- Village of Westmont
- Village of Bolingbrook
- Village of Hanover Park
- Village of Lombard
- City of Warrenville
- Clarendon Hills
- Village of Forest Park
- Village of La Grange Park

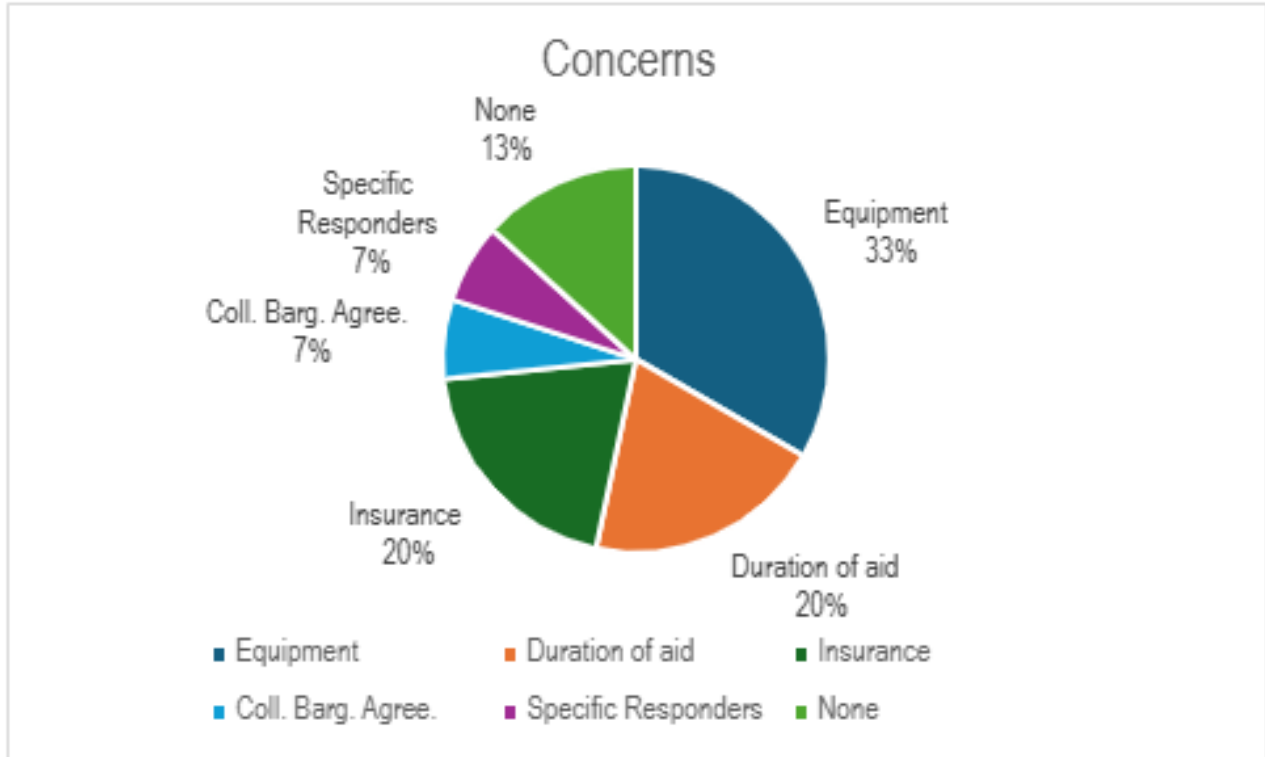
This external survey gathered significant external information. All respondents are members of IPWMAN, therefore laying groundwork for a localized IGA based on IPWMAN. All respondents agreed with the idea that public works employees are either first responders or have first responder elements to their jobs.

When asked how a public works department differs culturally from a police or fire department, there was an array of responses. While the sentiment remained that public works departments hesitated to ask for help formally from outside the Village, they were seen as quite willing to lend a hand internally. Some felt that public works were not seen as important as a police or fire when it should be. Respondents indicated that public works did not do as good a job in promoting their work and accomplishments compared to police or fire. The biggest distinction was public works not being a paramilitary organization, with police and fire having members sworn in with ceremony.

One question posed was the biggest concern respondents had with collaboration, shown below in graph format in terms of how many times it was mentioned. The most common concern was equipment, the sharing of it, damage that could occur from it, and the possibility the lending agency might need it but be unable to access their own equipment if it's at a borrowing location. The second concern was the duration of aid, or the idea that their staff might spend so much time helping another department through mutual aid they could neglect their own duties in their jurisdiction. Insurance concerns were tied to that, primarily being around employees and if they're injured. The fourth relevant concern was 'none'. Meaning the respondents never had an issue collaborating with other municipalities

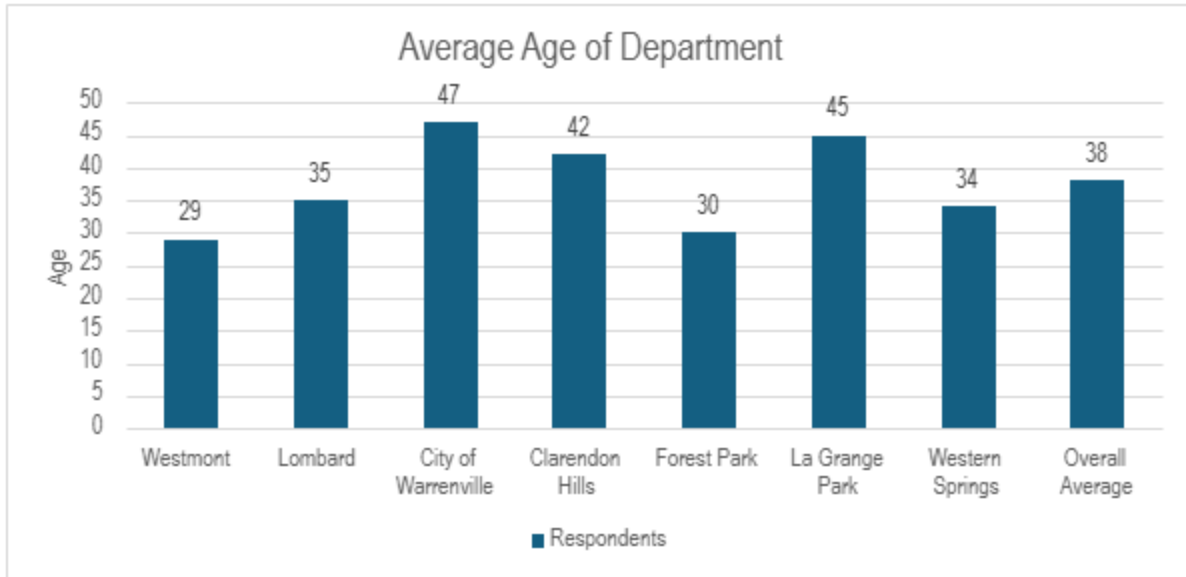
This information indicated that the sharing and maintenance of 'Equipment' was the most common concern, followed by 'Duration of aid' or the ability of responding municipalities

putting too much time in a requesting municipality and inhibiting their ability to take care of themselves. Tied with that was ‘Insurance’ or if a worker is injured when responding to another agency, or damages something in that municipality. The final noteworthy concern was ‘none’ or that the respondents never had an issue during their history of both formal and informal collaborations.²³

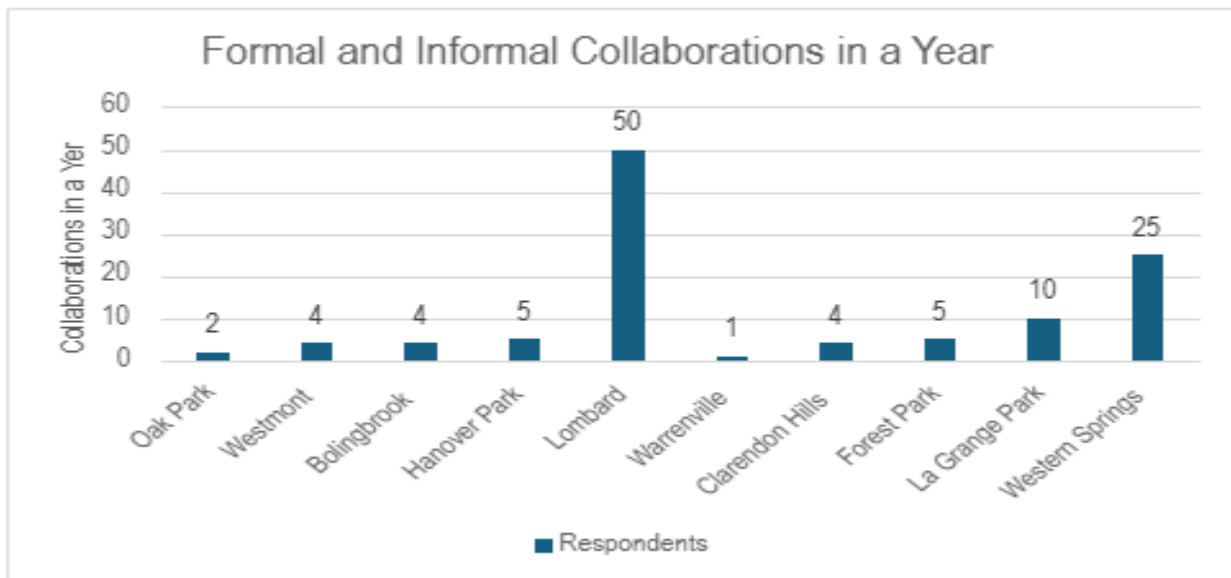


Another comparison of note was the average age of respondents. The point here is that an IGA for mutual aid could help departments with younger employees acquire valuable collaboration skills and partake in networking opportunities through a mutual aid agreement. This was to show the average age of Western Springs in comparison to surrounding departments. Western Springs' average age of 34 was younger than the respondents' overall average of 38, lending to the idea that Western Springs and other agencies would stand to benefit from additional collaborative experiences through an IGA.

²³ External Survey with Local Public Works Departments. (2025). *Mutual Aid Survey with External PW Departments* [Personal communication].

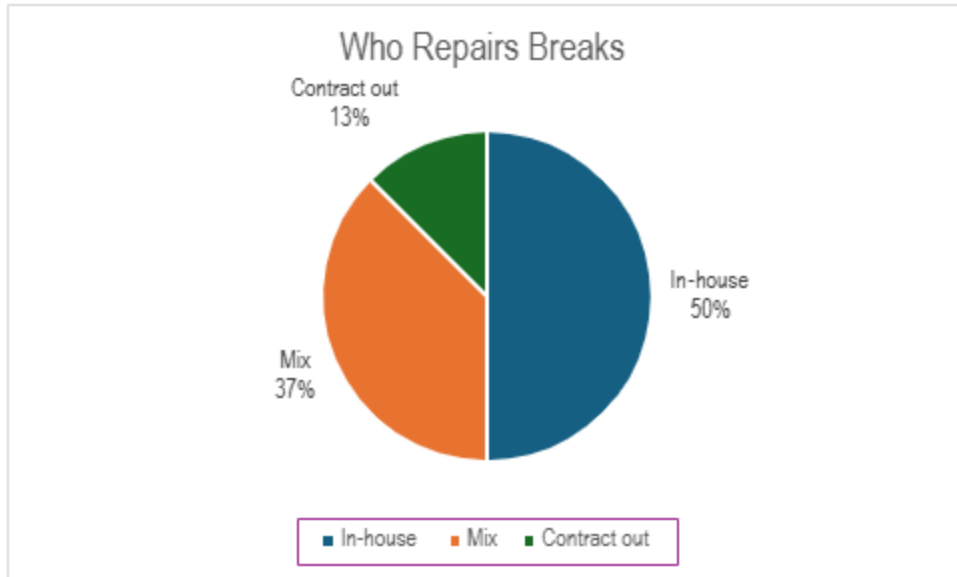


An additional fact this capstone wanted to find out was how many times a year respondents already collaborate, formally or informally. This varied greatly. Some departments collaborated no more than once or twice in an entire year. Others did dozens of times, with the Village of Lombard stating it was a near daily occurrence. All stated they had agreements through IPWMAN, and many had agreements with other public works departments. This fact proves there is already a precedence for localized IGA collaboration among these departments.



An additional goal was to determine how many respondents fixed all their main breaks in-house or contracted out with private businesses. This would shine light on how many municipalities had the capacity to repair mains on their own. The ones that contracted out would

indicate a need for external help, help that could be provided cheaper by other public works departments through this IGA. In reverse, the argument can be made for those that mostly do their repairs in house that they have the ability to collaborate with their neighbors in assisting with their main breaks, and could benefit from training, and non-main break mutual aid. The 50/50 split indicated there is a solid base among respondents who need additional help during breaks and would benefit immensely from a localized mutual aid IGA.



Interviews

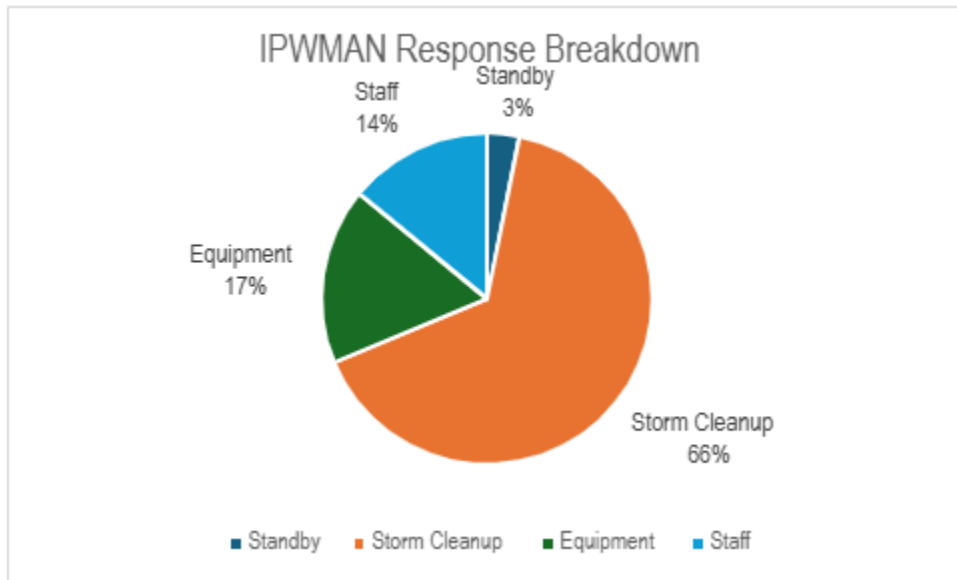
IPWMAN

The IPWMAN Interview, with acting director Mark Doerfler, attached in appendix D, was to get an understanding of the Illinois Public Works Mutual Aid Network, or 'IPWMAN'. IPWMAN was founded in 2009, and on its historical timeline has responded to a total of 64 calls for mutual aid²⁴. An analysis of rendered aid reveals that the majority of them are in response to storm clean up, followed by equipment sharing, then staff, and finally standby. None of these 64 incidents were in response to a water main break²⁵. IPWMAN serves as the default mutual aid agreement that many public works departments turn to when in extreme need, but is not often used for more day to day needs. IPWMAN also got its start by immediately being elevated to a regional agreement, rather than starting as a local agreement between only a few parties such as MABAS. This means that while many fire departments have pre-existing local agreements

²⁴ Welcome to IPWMAN | IPWMAN. (2025, January 7). Ipwman.org. <https://www.ipwman.org/>

²⁵ Doerfler, M. (2025). Interview with IPWMAN Director [Personal communication].

they've been using for decades, it's very difficult to find those same local agreements in public works departments. The Director also stated that IPWMAN itself did not have a clear reason why public works departments wouldn't join, considering the relatively low cost of membership and the immense benefits that could be invoked when a department needed it. That would be an additional difference between the local agreement and IPWMAN, as the local agreement would not have dues. IPWMAN gives the first 5 days of aid for free, while the local agreement leaves those details up to the two partners in the agreement.



ILWARN

The ILWARN Interview, attached in Appendix E, was to check to see their response history, overall purpose, and acquire general information. This interview was unstructured in comparison to the IPWMAN interview but asked the same general questions. ILWARN (Illinois Water/Wastewater Agency Response Network). ILWARN's reach does not extend to the same degree as IPWMAN. ILWARN, like IPWMAN, is a mutual aid network based around emergency response for public works departments. IPWMAN has a focus on public works' services as a whole, while ILWARN is specifically focused on restoring water services. ILWARN, however, has a larger focus on supplies and equipment in comparison to IPWMAN. ILWARN upon questioning has not responded to any water main breaks in the past 5 years, although an encompassing history was not available²⁶.

²⁶ Storey, A. (2025). *Interview with ILWARN* (E. A. Brier, Interviewer) [Personal communication].

Niles Interview

The Niles Interview with their director of public works, Stephen Quinn, attached in Appendix F, provided insight into the response to Skokie's newsworthy water main break on February 14th. The main that broke was a 36-inch, cast-iron pipe that gave the city water from Evanston, who provides water to several other municipalities through the Northwest Water Commission. The three primary actors relevant to the argument for a localized IGA are Niles, who aided Skokie, and Evanston, who came out to help Skokie as a municipality who received their water. Despite all three being members of IPWMAN, none of them invoked that agreement. Instead, they informally provided mutual aid to Skokie based on the IPWMAN framework. Evanston helped repair the 36-inch break, and Niles helped to fix a separate break, and was willing to open an interconnect to provide Skokie with water if necessary.

Of note in that story is how Evanston turned off water completely for Skokie in order to "isolate the bleeding" and prevent ripple effect to other communities in the form of a 'Boil Water Notice'. This speaks to the mutual benefits of working together to fix broken mains, as they ultimately affect all communities on the same systems²⁷.

Comparisons

The MABAS comparison and the IPWMAN comparison serve several functions. First, MABAS and IPWMAN are both broad, regional mutual aid organizations made up of a collection of individual departments. Both organizations began when local level departments formed IGA's for mutual aid, however IPWMAN's local units mostly comprised of counties, who leapfrogged local level IGA's in favor of immediately creating a state level agreement, as IPWMAN formed in 2009 while MABAS formed by starting small among local departments in the late 1960's, meaning IPWMAN had that framework of a regional agreement to instantly base itself off of. This capstone is a return to those roots, as while IPWMAN is extremely useful on a regional level, it does not offer the flexibility sought after at a local level.

MABAS is an acronym for 'Mutual Aid Box Alarm System'. The overall agreement is that aid is automatically rendered when a call is received on emergency dispatch for fire departments and districts²⁸. A responding agency has more responsibility than in the IPWMAN agreement due to the urgency of fires and car crashes. A responding agency is required to inform the agency in need before they can deny aid or leave when rendering aid. This auto-aid was of particular interest to this localized IGA draft, as a stated interest was to secure external aid when Western Springs would need it. However, the nature of these mutual aid agreements is that you cannot force collaboration. No public works department would willingly sign an agreement

²⁷ Quinn, S. (2025, April 4). *Niles Director of Public Works interview* [Personal communication].

²⁸ (2025). MABAS. <https://www.mabas-il.org/>

where they'd be forced to render aid in a situation that might prevent them from attending to their own needs and duties. Therefore, no mandatory response is enforceable in this IGA.

The second reason MABAS was chosen is for the way its individual agencies often tweak the overall MABAS IGA, localize it, and then sign a two-party agreement with other municipalities. This capstone's IGA draft borrows language from MABAS and primarily IPWMAN. The fact that MABAS already has the idea of tailoring a regional agreement for the local level is promising for this capstone to do the same with IPWMAN²⁹. For example, the Village of Schiller Park's Fire Department is a part of MABAS and its interstate members list. However, they have separate agreements based off MABAS with Norwood Park and Rosemont. These agreements further specify action, when auto-aid can be invoked, and specific territory for coverage that better fit its local departments compared to the interstate agreement³⁰

Challenges to Implementation

The biggest challenges for a localized IGA are issues around compensation, worry over equipment, ability to respond while managing their own duties, insurance, and a general abundance of caution³¹.

For compensation, the agreement establishes that employees' wages are to be paid by the employing municipality, and that risk is taken up in terms of insurance and injury by the responding agency. If the responding agency is acting in good faith and accidentally damages something within the requesting agency, they shall not be held in contempt unless there is proof of gross negligence. If an agency borrows equipment and breaks it, they can be held liable for damages and can be invoiced the price of repair or replacement. For supplies, this varied greatly, and in the agreement, there are several options. An invoice can be sent for reimbursement. A requesting agency can provide supplies. A responding agency can bring their own and do it 'pro bono' due to the relatively low cost of supplies compared to equipment. Or a requesting agency can state they will pay back the responding agency through a mutual aid request in the future.

This agreement is non-binding, and a responding agency may leave any time they feel their own duties are being neglected. However, they are required to inform the requesting agency of this before they leave, so the requesting agency may begin to plan around that absence³².

Timeline

²⁹ *Welcome to IPWMAN | IPWMAN*. (2025, January 7). [ipwman.org](https://www.ipwman.org/). <https://www.ipwman.org/>

³⁰ Fire Chief Cesaretti. (2024). *Schiller Park MABAS Interview* (E. A. Brier, Interviewer) [Personal communication].

³¹ External Survey with Local Public Works Departments. (2025). *Mutual Aid Survey with External PW Departments* [Personal communication].

³² External Survey with Local Public Works Departments. (2025). *Mutual Aid Survey with External PW Departments* [Personal communication].

The implementation timeline for this agreement varies. Western Springs already works closely with several other municipalities for public works services. These include Darien and La Grange Park. The Village could, within a few weeks' time, take the draft, review, tweak, and sign with those municipalities.

The goal of this IGA is a localized agreement, meaning many of the departments Western Springs would be interested in signing an agreement with already have good relations with Western Springs, and have collaborated in the past. This would make them open to a localized IGA.

In terms of other local public works departments, they are frankly outside of the bounds of the ideal range of responders. This localized agreement is meant to cut down on response time by specifically seeking agencies that border Western Springs or are within a reasonable distance. This diverges from IPWMAN, who tends to have multi-day responses after the fact of an emergency such as a violent storm. Since Western Springs has made a point to be on good terms with their neighbors, they could have agreements signed in relatively short order.

Conclusion

The Village of Western Springs stands to benefit immensely from a localized IGA for mutual aid specific to public works departments. It would allow them to get valuable collaborative experiences for their younger than average department. It would allow them to not burden their staff with their higher-than-average main breaks per mile. And it would allow for the repair of these breaks without having to contract out.

The IGA draft based on IPWMAN and MABAS will have to be reviewed by any Villages legal staff, and voted on by its board, but it currently serves as a workable draft that Western Springs and any partners may use to begin the process of signing a localized agreement.

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Appendix A- Localized IGA Draft for Mutual Aid

Intergovernmental Agreement (IGA) Mutual-Aid Draft.

IGA FOR MUTUAL AID AMONG LOCAL PUBLIC WORKS DEPARTMENTS, specific to Water Main Breaks, improving in-house capabilities through training, and alleviating strain on staff.

(IMPORTANT: This IGA heavily takes from the MABAS agreement and the IPWMAN agreement. Many sections and language in the agreement below can and should be credited to MABAS and IPWMAN).

Table of Contents:

1. Section One- Purpose and Background
2. Section Two- Rules of Construction and Definition
3. Section Three- Responsibilities, Authority and Action to Effect Mutual Aid
4. Section Four- Procedures for Requesting Aid
 - a. Responding agencies assessment of ability to provide aid
5. Section Five- Jurisdiction over Personal and Equipment
6. Section Six-Training and General aid
7. Section Seven- Compensation for Aid
 - a. Emergency repair
 - b. Equipment
8. Section Eight- Insurance
9. Section Nine-Liability
10. Section Ten- Term
11. Section Eleven- Miscellaneous
12. Section Twelve- Amendment
13. Section Thirteen- Approval

Introduction:

This Agreement by and between Public Works Departments (PW), themselves units of local government hereafter referred to as “parties” is intended for usage at the local level, for the effective response among neighboring PW’s in the event of a Water Main Break, to facilitate mutual training to enhance the skills and response capabilities of workers, and for general, non-

emergency but useful collaboration, such as equipment sharing. This Agreement is made and entered into the date set forth next to the signatures of those authorized to execute the agreement on behalf of their respective parties. Each party will abide by the laws of their municipality or unit of local government, and by state law.

WHEREAS, Municipalities in Northern Illinois are facing increasing infrastructure risks, ones that will require adaptation moving forward. These risks pertain to a changing climate, which will affect water service and pipe maintenance. A second risk pertains to aging infrastructure, common in Cook County as one of the longest settled parts of the state. With these two factors in mind, a local IGA for Mutual Aid pertaining to Public Works is a rising niche need, where both parties agree mutual collaboration is necessary to address.

WHEREAS, Article VII, Section 10 of the Illinois Constitution authorizes cooperation among units of local government in pursuit of fulfilling their duties;

WHEREAS, the “Intergovernmental Cooperation act”, 5 of ILCS 220/1 et seq. Establishes the ability of local governments to jointly exercise any power or powers, privileges, or authority prior bestowed upon the signing parties.

WHEREAS, Section 5 of the Illinois “Intergovernmental Cooperation Act”, 5ILCS 220/5 Established that a public agency or agencies have the authority to contract with any other agency or agencies in the pursuit of fulfilling their duties. This includes any governmental service activity, or undertakings the agencies have been prior bestowed by their local codes or charters to perform, so long as the current governing body votes in approval of said agreement.

WHEREAS, The parties have authority over their local infrastructure and have determined that it is in their best interests to engage in a localized mutual aid agreement in order to secure the benefits of having an adjacent public works department with shared familiarity, the ability to response to active main breaks in short order, and to participate in shared non-emergency training and equipment lending to further the skills of employees and their ability to respond.

Section One, Purpose and Background

The purpose of this agreement is to address the challenges of aging infrastructure and a changing climate in relation to water services, and specifically to water main breaks. The purpose of this agreement is to acknowledge the existing need for mutual aid regarding urgent events such as main breaks, that are not usually addressed otherwise through prior agreements.

This agreement creates a precedence for responding to ‘Local Emergencies’, incidents where the requesting agency needs additional aid and assistance, but not to the degree of an IPWMAN invocation. In addition, this agreement furthers the normalization of ‘general mutual aid,’ with the formalized sharing of equipment and joint training.

Section Two- Rules of Construction and Definition

The language in this agreement shall be interpreted in accordance with the following rules of construction: The word “May” is Permissive and the word “Shall” is Mandatory.

- A. “AID AND ASSISTANCE” includes, but is not limited to, personnel, equipment, facilities, services, materials and supplies and any other resources needed to provide mutual aid response during non-emergency situations, defined primarily as ‘water main breaks’, but also including training exercises to prepare for situations requiring mutual aid and assistance.
- B. “AUTHORIZED REPRESENTATIVE” refers to the point of contact in each party whose responsibility is to coordinate mutual aid response. This is to provide aid for other communities, or to accept and direct aid and assistance from a party.
- C. “GENERAL MUTUAL AID” Is the rendering of aid, assistance, equipment, and resources during non-emergency situations.
- D. “LOCAL EMERGENCY” is an event or urgent need beyond the capabilities of the requesting agency to respond to but might not warrant an IPWMAN invocation. A LOCAL EMERGENCY would be grounds for invocation of this agreement.
- E. "RESPONDING AGENCY" Is the public works department who has agreed to render aid and assistance for a local emergency through this agreement.
- F. “REQUESTING AGENCY” Is the public works agency who is requesting aid and assistance for a local emergency through this agreement.
- G. “PARTIES” refers to each individual Public Works Department who is eligible for and responsible for mutual aid through signing this agreement.
- H. “POINT OF CONTACT” This person or persons will have the authority to coordinate aid in their respective jurisdictions normally and would be the “AUTHORIZED REPRESENTATIVE” in the terms of this agreement. Upon renewal of the agreement, this person will be kept on or updated.

Section Three- Responsibilities, Authority and Action to Effect Mutual Aid

- A. PROVISION OF AID. All parties who have signed this agreement recognize they may be requested to provide aid and assistance to any other signers. This request is understood to be non-binding. A party may choose to not render aid at any time for any reason, for no penalties.
- B. AGREEMENT FOR THE BENEFIT OF PARTIES. It is understood by all parties to this agreement that this agreement is for the benefit of said parties. This is through the collaboration of neighbors, the rendering of aid and assistance through equipment, staff, and supplies to address main breaks and any other local emergency. Third parties who are not signers of this agreement may collaborate informally but are not entitled to the compensation guarantees described in section seven.

- C. JURISDICTION. By signing this agreement, all parties confirm that they have the authority to carry out the duties of a Public Works Department in the municipality they serve and agree to extend that authority in a Local Emergency to a Responding Agency, under the direction of a point of contact.
- D. IMMUNITIES. All immunities provided by law to the Parties shall be fully applicable to the Parties providing or receiving aid and assistance pursuant to this Agreement, including, but not limited to, the Local Governmental and Governmental Employees Tort Immunity Act, 745 ILCS 10/1-101, et seq

Section Four- Procedures for Requesting Aid

The Requesting party shall have an assigned point of contact responsible for coordinating aid with the Responding party.

This assigned point of contact will be responsible for reaching out to request mutual aid to the other party, and their designated point of contact. These points of contact will coordinate in the event of critical infrastructure failure (e.g. Water Main Breaks) to partition responsibility of repairs, actions of responders, and timeline of repairs. A secondary point of contact may be assigned in case the primary is not in-office.

A party affected by an infrastructure failure or in need may request assistance from the other party to the agreement. This aid may take the form of equipment, labor, technical support, staff, and any other aid that would allow the minimization of service interruption and streamline repair times.

Section Five - Jurisdiction over Personal and Equipment

The Requesting party shall have an assigned point of contact responsible for coordinating aid with the Responding party. The Requesting party will take precedence in directing and managing aid in the jurisdiction where the Water Main Break is occurring.

In the event of dual main breaks, the Responding party may act and operate with the same power and authority to repair any main breaks as if in their own jurisdiction. The employees of the Responding agency may retain the same powers, duties, immunities, and privileges as if in their own jurisdiction.

Section Six-Training and General Aid

The parties to this agreement both recognize the need to build up internal skills in their respective departments regarding water main breaks. The implementation of a mutual aid agreement for local emergencies and general mutual aid will allow for the opportunity of hands-on experience and on the job training.

Other non-main break benefits of this agreement pertain to equipment sharing, staff sharing, and general resource sharing not related to main breaks. The sharing of specialized

equipment shall be allowed through this agreement, with the borrowing agency agreeing to carefully use said equipment. If the damage is due to provable negligence, the borrowing agency agrees to cover expenses.

Section Seven- Compensation for Aid

The Parties agree that the Requesting Agency shall be responsible for payment of workers' compensation benefits owed to Requesting Agency's employees and that Responding Agency shall be responsible for payment of workers' compensation benefits owed to Responding Agency's employees.

Costs associated with emergency repairs shall be borne primarily by the Party in whose jurisdiction the failure occurred, with the other Parties contributing assistance in the form of equipment, personnel, and expertise as needed. Any additional costs incurred by assisting Parties may be reimbursed by the Party requesting assistance.

Responding parties and Requesting parties must document all expenses related to the localized aid invocation to receive compensation.

Supplies

The reimbursement for supplies is dependent on the desires of the agencies. Requesting agencies may provide supplies for Responding agencies to use, or Responding agencies may bring their own and later send an invoice. Some agencies may do it 'pro bono' due to the relatively small cost of supplies compared to equipment. Another allowable compensation method is the promise of future help to the Responding Agency through the mutual aid agreement.

Equipment

The borrowing of equipment in addressing main breaks shall incur no cost to the requesting agency. The requesting agency agrees to use equipment responsibly and is responsible for any injuries incurred from improper usage on their own employees. If equipment is damaged, the party responsible for that damage must cover the cost of repair or replacement if said damage is incurred through gross negligence.

Section Eight– Insurance

Each party signs this agreement and knowingly takes up the risk of liability for its agency and its employees acting in the scope of this agreement. The agency can determine what insurance policy it is under and judge if that is sufficient enough to render aid to a Requesting agency.

Each Party understands that it bears the risk of liability for its agency, its actions, and its employees, and what insurance it should carry.

Each Party agrees to hold harmless and waive all claims against all Parties for any loss, damage, personal injury or death that occurs as a result of or in consequence of partaking in this agreement, but only if said harm is not a result of gross negligence or willful misconduct by the other Party.

Section Nine–Liability

The rendering of aid and assistance during a local emergency, or the rendering of general aid for the sharing of non-emergency but still requested assistance is understood to not be mandatory under any circumstances.

It is understood by all parties that a Responding Agency has its own obligations and priorities to its residents that take precedence. An inability to respond shall not be taken as being out of the bounds of this agreement. No liability will be assigned for inability to respond.

Section Ten– Term

The Initial Term shall be three months from its effective date, with a pilot-period of one year. From then, the parties will reconvene to sign an extended agreement for additional terms of 5 years.

Section Eleven- Miscellaneous

- A. Severability-If any text of this agreement is adjudged by any recognized court of competent jurisdiction to be invalid, it shall not impair the validity of the remaining agreement. Each party signs the agreement knowingly that unless stricken by a court of law, the remainder of the agreement will remain valid.
- B. Effective Date- This agreement shall be in effect three months after the initial signing.

Section Twelve– Amendment

Amendments to this agreement may be made through a written draft, then reviewed by both parties, voted on by each parties' respective elected boards of their municipalities, and then signed into the agreement.

Section Thirteen- Approval

Village of Western Springs

By: _____

Title: _____

Date: _____

Partner By: _____

Title: _____

Date: _____

Appendix B-Internal Survey

1. What do you feel are the weak points of IPWMAN that would justify a local agreement?
2. How many times a year do you collaborate (Sharing equipment, aiding during an emergency), formally or informally, with other Public Works departments?
3. What areas of operation do you feel could most benefit from sharing services or equipment with another community?
4. Why do you think PW is okay with informal agreements, but not formalized ones?
5. Would you consider PW as frontline workers? To have elements of emergency response management?
6. How do you feel a PW department differs culturally from a Police or Fire department?
7. What is your biggest concern with sharing equipment or services with another community?

Appendix C-External Survey

1. Please state your name and the municipality you're submitting this on behalf of.
2. How many times a year do you collaborate (Sharing equipment, aiding during an emergency), formally or informally, with other Public Works departments?
3. What is your biggest concern with sharing equipment or services with another community?
4. What is the average age of your department?
5. Would you consider that your employees could benefit from joint training with other PW's departments?
6. How many water main breaks did you have in 2024?
7. Does your community resolve water main breaks completely in-house or contract out in certain situations?
8. What would you consider to be potential barriers in signing a localized IGA for mutual aid?
9. Are you a member of IPWMAN?
10. As a Public Works Department, are you a part of any other localized IGA's? If so, please describe below.
11. How do you feel a PW department differs culturally from a Police or Fire department?

Appendix D- IPWMAN Interview Questions

1. What was the motivating event for the creation of IPWMAN in 2009?
2. What were common reasons for a municipality to not join IPWMAN?

3. What convinced municipalities to join?
4. Does IPWMAN function only for emergency events such as storms or sudden communication outages, or is there room for joint training sessions/ experiences sometimes seen in Fire and Police mutual aid agreements?
5. Does IPWMAN have any enforcement mechanisms? Are members required to help or is it optional?
6. I see on the IPWMAN timeline that response events include the costs calculated, how does IPWMAN calculate those costs, and could those formulas be shared with myself?
7. Have Water Main Breaks ever been covered or assuaged through an IPWMAN invocation

Appendix E-ILWARN Interview Questions

This interview was mostly unstructured, but here are a few questions asked:

1. How frequently do you address water main breaks?
2. What was the origin story of ILWARN?
3. How many responses have you aided in?

Appendix F-Niles Interview Questions

1. Are you a part of IPWMAN?
2. When were you notified that Skokie needed help?
3. Was IPWMAN invoked in this?-Not invoked at all
4. Did Skokie receive any other help from other departments?
5. What was the duration of your involvement?
6. Why type of aid was rendered?
7. Was there any compensation at the end?
8. Who coordinated aid?
9. How would you describe the overall process?
10. Do Skokie and Niles have a similar capacity for delivering services and aid?
11. Benefits of a localized agreement
12. Would you be interested in a localized IGA?



A Localized Mutual Aid Agreement for Public Works Centering Water Main Breaks



By: Emily Ann Brier

Background



- Western Springs is a **bedroom community** with a population of 13,290
- Founded in 1886
- The Village is **built-out**
- It's mostly **residential**, and **not home-rule**.
- Wealthier residents = **no ability to apply for grants**
- **45%** of their water system is over **100 years old**
- **78 main breaks on 54 miles of piping** in 2024
- **Needs 200 million** for critical infrastructure repair.

Problem Statement



- Western Springs is afflicted with the increasingly common problem of aging water mains
 - **Workers face exhaustion during consecutive breaks**
 - **No capacity for revenue generation to hire more workers or to mass replace mains**
 - Contracting out accrues costs and denies the younger worker's experience
- This capstone examines the feasibility of a **localized mutual aid Intergovernmental Agreement (IGA) for water main breaks**

Definitions



- **Intergovernmental Agreement (IGA's)**
 - Formal legal agreements between governments
- **Mutual aid**
 - Connects those in need with resources from parties who volunteer them. Does not operate as a business. Can be between neighbors up to interstate
- **Localized**
 - IGA's between two local municipalities
- **Formalized**
 - Mutual aid rendered through a formal IGA

Data Collection Methodology



- Interviews
 - Western Springs Staff
 - Director of IPWMAN, Mark Doerfler
 - Staff of ILWARN
 - Niles's Director of Public Works
- Comparison to existing agreements
 - MABAS (Mutual Aid Box Alarm System) (Regional)
 - IPWMAN (Illinois Public Works Mutual Aid Network) (Regional)
- Internal and external surveys
 - Internal- Western Springs
 - 9 external municipalities

IPWMAN Interview



- Director Mark Doerfler
- In 2009, several counties were working on separate public works IGA's
- Join for disaster readiness
- First 5 days of aid are no charge
- **No known invocations for water main breaks**

ILWARN Interview



- Illinois Water/Wastewater Agency Response Network
- 25 members as compared to IPWMAN's 498
- A mutual assistance agreement with a focus on natural disasters
- Sharing equipment and supplies during emergencies
- **Never invoked to address a water main break**

MABAS



- 'Mutual Aid Box Alarm System' for fire services
- Like IPWMAN, they are a state-wide mutual aid network
- Auto-aid elements of interest to this localized IGA
- Member local departments **take the umbrella MABAS agreement** and **create their own local agreements** with just two signing parties



Niles's Aid to Skokie



- Stephen Quinn, Niles's Public works Director
- Evanston, Skokie, and Niles are **all IPWMAN, which was not invoked, but served as a frame**
- "Handled their main break as if we would one of our own" - Quinn
- Mutual aid happened in real time, clear communication, and sharing of supplies and equipment

Internal Survey



- Focused on self-perception
 - Front line workers?
- **Common resistance to formalized local agreements**
- *Groundwork to do a similar adaptation with IPWMAN's umbrella agreement into localized mutual aid agreements for water main breaks*



External Survey

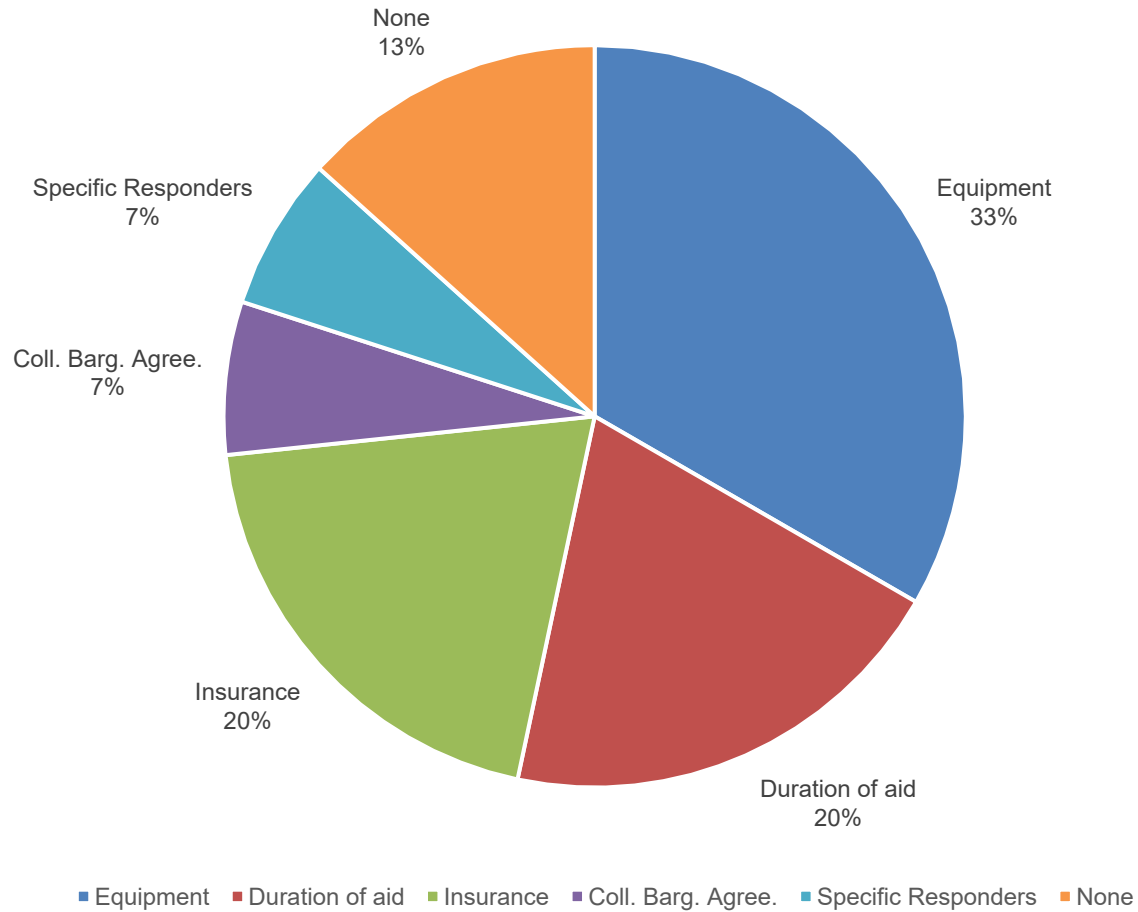


- Highlights
 - **All agencies were members of IPWMAN**
 - Views of being 'frontline workers' and 'emergency responders'
 - Themes of 'resistance to formalization'
 - All interested in a localized and formalized mutual aid IGA centering water main breaks

Concerns



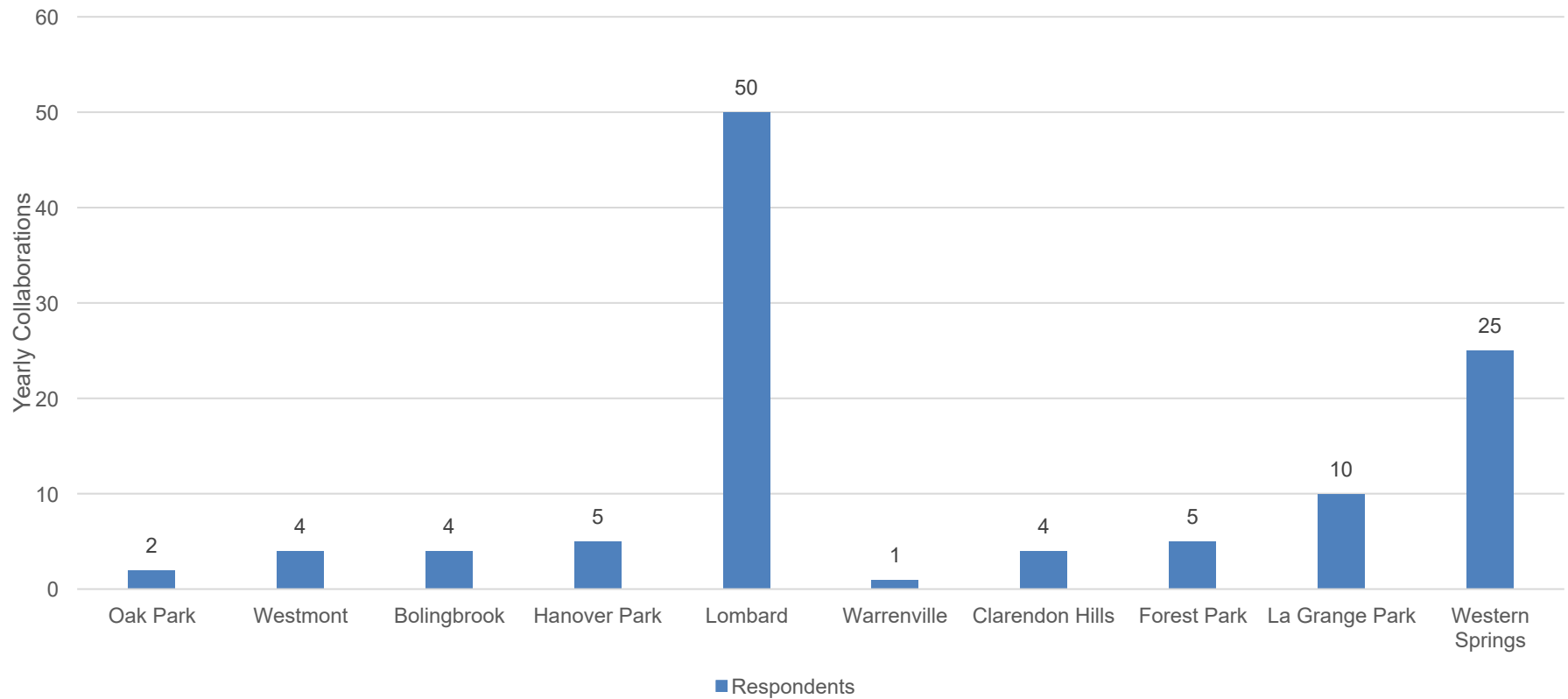
Concerns



Collaborations in a Year



Formal and Informal Collaborations in a Year



IGA Mechanics



- Non-obligatory
- Biggest concerns
 - Equipment
 - Duration of aid
 - Insurance
- One to one for tailoring
- Allows for additional non-emergency aid
- Reimbursement for supplies up to the municipalities
- Meant to be within driving distance

Impacts



- Political
 - Local campaigns centered around breaks-bipartisan appeal
 - The IGA would enhance cross-municipal collaboration
- Social
 - Networking for employees
 - Safety net
- Economic
 - Decreased duration of breaks = less community costs
 - No need to contract out-cost effectiveness
 - No overtime pay

Conclusion



- A localized IGA for mutual aid based off the umbrella IPWMAN agreement, centering water main breaks, addresses an unfilled niche
- Proven feasibility
- Accounts for revenue shortfalls
- As municipalities continue to age, It's in the collective best interest to begin fostering these relationships now

Questions?



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