

EQUIFLOW LEAD-FREE PROGRAM

A Case Study in Lead Service Line Replacement Using the CBP3 Model

WAUSAU, WISCONSIN

OVERVIEW

The City of Wausau, Wisconsin, faced a significant challenge: replacing approximately 8,000 lead service lines (LSLs) affecting a community of 40,000 people to eliminate health risks associated with lead in drinking water. To tackle this large-scale issue, Wausau partnered with Community Infrastructure Partners (CIP) to leverage federal funding through the Bipartisan Infrastructure Law (BIL) and implement an innovative Community-Based Public-Private Partnership (CBP3) approach.

The EquiFlow Lead-Free Program was designed to replace LSLs across both public and private properties, addressing financial, technical, and community engagement challenges. The results were transformative —demonstrating how even small to mid-sized utilities can scale from minimal replacement efforts to substantial outcomes while ensuring budgetary discipline, fostering community involvement, and improving public health.

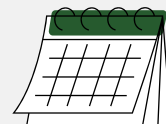
PROBLEM STATEMENT

Wausau, like many other cities across the United States, faced significant challenges in replacing its lead service lines. Lead exposure from aging infrastructure poses serious health risks, particularly for vulnerable populations like children and pregnant women. However, the City's existing contractor base had limited capacity, and pre-development costs, including securing right-of-entry agreements from thousands of homeowners, were prohibitive.

Additionally, the technical and financial hurdles for small to mid-size municipalities often hinder the rapid rollout of such programs, as securing State Revolving Fund (SRF) loans and other federal support typically involves resource-intensive planning, procurement, and community outreach efforts. The City required a solution that would allow it to scale up its efforts quickly while keeping costs manageable.



AT A GLANCE



5 YEARS
(2024 - 2028)



+10 YEARS
Faster than
originally planned



~\$60M
Total project cost



>\$40M
Projected savings

EQUIFLOW TEAM



SOLUTION

The City of Wausau, through a CBP3 model, partnered with CIP to implement a comprehensive LSLR program. This approach allowed the City to tackle multiple layers of complexity involved in the project, from increasing contractor capacity to coordinating with homeowners and locking in cost certainty for maximizing the amount of replacements. The contract is structured to be performance-based, holding CIP accountable to deliver on the goals of the program.

COMMUNITY OUTREACH & ENGAGEMENT

Tailored Community Engagement Strategy

Securing homeowner participation in lead service line replacements is one of the most critical and challenging components of such programs. CIP recognized early on that traditional methods of engaging residents—such as mass mailings, general notifications, or contractors knocking on doors—would not yield the necessary participation rates for a successful program. Instead, CIP implemented a highly personalized and community-focused outreach strategy that emphasized public health and safety.

To enhance community involvement and trust, partnerships with respected local institutions such as the Wisconsin Institute for Public Policy and Service (WIPPS), the Medical College of Wisconsin-Central Wisconsin, the Hmong and Hispanic Communication Network (H2N), the Rural Resiliency Network (R2N), and Healthy Opportunities for Latin Americans (HOLA) were established. These collaborations have been crucial in overcoming barriers and ensuring effective outreach to underserved neighborhoods. The team worked closely with local stakeholders, including neighborhood leaders, schools, and community organizations, to educate residents on risks associated with lead exposure and the benefits of replacing their lead service lines. Tailored efforts, including door-to-door canvassing and multilingual educational materials, aim to build trust, raise awareness, and ensure equitable participation among all residents.

A cornerstone of the program is its innovative community outreach model, utilizing Community Health Workers (CHWs) to foster bi-directional communication between residents and health systems. These CHWs, comprised of members from H2N and R2N, have been instrumental in engaging Hmong, Hispanic, and rural community members. Through community health events, resource fairs, and targeted media outreach, CHWs build awareness of lead's health impacts and potential exposure sources, ensuring that critical information reaches vulnerable populations, including refugees and low-income residents.

Consent Campaigns & Right-of-Entry Agreements

One of the most time-consuming aspects of LSL replacement (LSLR) programs is obtaining right-of-entry agreements from homeowners and tenants, especially in cases where distrust or a lack of understanding exists. CIP launched a dedicated consent campaign, which involved door-to-door canvassing, neighborhood meetings, and one-on-one consultations with homeowners. Additionally, a self-verification feature was added to the program website allowing homeowners to upload a photo of their service line for review by a program team member if they were unable to have an in-person verification appointment for any reason. The outreach team made a concerted effort to frame the replacements as a critical health and safety measure rather than a mere infrastructure project, which led to higher rates of consent and cooperation from residents.



The program's community engagement efforts in its first year highlight the power of a culturally tailored, trust-based approach. By leveraging partnerships with local institutions, multilingual educational materials, and innovative tools like self-verification and real-time inventory tracking, the program achieved unprecedented success. With 2,174 properties inspected, 654 identified as having lead or galvanized service lines, and 629 consents secured ([a 96.2% success rate](#)), the program demonstrated that a robust and inclusive outreach strategy can overcome barriers to participation even in the absence of mandates or ordinances. These results underscore the program's ability to foster community trust, streamline operations, and deliver impactful public health outcomes.



2885

Total number of homes in Year 1 (2024) census tracts



2174

Total number of homes verified by EquiFlow in Year 1



654

Total number of homes found to be eligible for replacement through verification



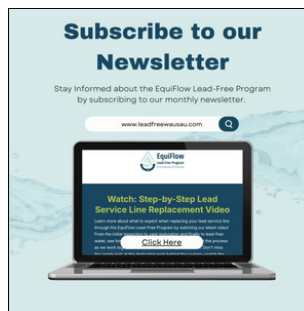
629

Total number of Right of Entry forms received from residents for Year 1 replacements

Multichannel Communication Approach

CIP utilized a multichannel communication strategy that included direct mail, social media campaigns, and community events. By reaching homeowners through various touchpoints, the program ensured that residents were consistently informed and updated. Additionally, feedback loops were built into the outreach strategy, allowing homeowners to express concerns, ask questions, and engage directly with program representatives. This community-focused approach led to a more trusting relationship between the City and its residents, facilitating smoother operations and a faster replacement timeline.

Social Media Examples



CONTRACTOR CAPACITY & WORKFORCE DEVELOPMENT

Expanding Contractor Capacity Through Strategic Outreach

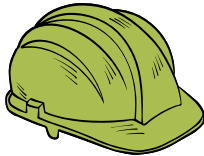
One of the critical challenges for municipalities like Wausau is the limited availability of contractors with the expertise and capacity to handle lead service line replacements. CIP addressed this issue by holding construction contracts directly and managing logistics such as securing right-of-entry (ROE) agreements and completing pre-construction tasks. This approach removed significant administrative burdens from contractors, enabling them to focus solely on the technical work of replacing lines.

CIP's strategy to enhance contractor capacity involved extensive outreach to qualified contractors, with a particular emphasis on engaging local small businesses. By clearly communicating the program's benefits—including CIP's responsibility for securing ROEs, a high LSL replacement volume, and prompt payment terms (net 15 days)—CIP attracted a wider pool of competitive bidders.

Driving Competition Through Tailored Contractor Outreach

CIP's tailored outreach efforts significantly increased competition, resulting in better pricing, greater contractor capacity, and higher quality service. Through proactive engagement and clear program incentives, 30 firms attended the pre-bid meeting, and eight firms were prequalified for the bidding process. Ultimately, six firms participated in the competitive bid process, reflecting a marked improvement over previous experiences as Wausau had never received more than two bids for LSL replacements prior to this program.

By establishing a structured program rather than isolated projects, CIP created a predictable pipeline of work that appealed to contractors, fostering long-term partnerships. This comprehensive strategy ensured the program's sustainability, enhanced service quality, and drove down costs through increased competition.



30

firms attended the
Pre-Bid Informational
Meeting



8

firms submitted
prequalification
documents

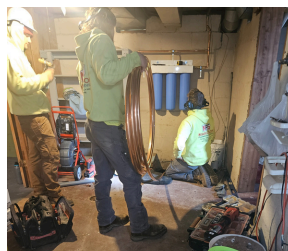


6

firms participated in
the bid process and
submitted bids

Focus on Workforce Development

Recognizing the shortage of skilled labor for LSL replacements, particularly in Central Wisconsin, the program is partnering with the Wisconsin Laborers' District Council and the Laborers' International Union of North America (LIUNA) to establish a comprehensive training program. Leveraging LIUNA's local facility, the training program offers a 4,000-hour apprenticeship to local residents, creating a skilled workforce to address the needs of the program. By increasing the technical expertise within the local contractor base, the program further enhances its ability to scale operations quickly and efficiently. These training programs also helped build long-term contractor capacity, ensuring that Wausau—and other municipalities—will have access to skilled contractors for future infrastructure projects. This initiative not only addresses labor shortages but also provides local employment opportunities, boosting the Wausau community's economic development.



FINANCIAL PLANNING & FINANCIAL TECHNICAL ASSISTANCE

Interim Financing

A major hurdle for small to mid-sized municipalities like Wausau is managing the significant upfront costs associated with LSLR programs. CIP integrated financial planning directly into the implementation phase of the program, aligning the City's financial needs with available federal, state, and private funding sources. Initially, there didn't seem to be a need for private financing given the extremely low cost of BIL funding. However, it was determined that interim financing from CIP would be required to advance predevelopment activities, thus enabling the projects to reach "shovel-ready" status while waiting to secure the necessary federal (BIL) funding. CIP's interim financing was used for community engagement, door-to-door canvassing to secure right of entry agreements, complete inventory verification, and conduct planning, engineering, contractor outreach, procurement, as well as all other necessary predevelopment costs. Without this private financing, Wausau would have missed an entire construction season, leaving hundreds of residents with lead pipes.

Significant Cost Savings

CIP's EquiFlow Lead-Free Program redefined Wausau's lead service line replacement efforts through a performance-based model that prioritized transparency, accountability, and cost savings. As illustrated in the table below, CIP achieved remarkable financial efficiencies. In the first year of the program (2024), CIP replaced 605 LSLs which was 52 more than contracted for and which saved Wausau nearly \$600,000, approximately 10.5% of the annual budget.

PROGRAM SUMMARY (YEAR 1)

Year 1 Summary	Projected	Actual	Savings	%
LSL Replacement Cost	\$8,175	\$7,057	\$1,118	13.7%
All-In Cost	\$9,350	\$8,370	\$980	10.5%
Total	\$5,656,650	\$5,063,605	\$593,045	10.5%

PROJECTED PROGRAM

Total LSLs Replaced			553		
Direct Replacement Costs			Cost	Cost/Line	
Engineering, Procurement & Construction Mgm	\$200,785			\$332	
Hard Construction Costs - Partial	\$3,321,630			\$4,820	
Hard Construction Costs - Full	\$0			\$6,000	
Construction Contingency	\$332,163			\$549	
Permitting	\$0			\$0	
Total Direct Costs	\$3,854,579			\$6,970	
Programmatic Costs			Cost	Cost/Line	
Program Management	\$751,154			\$1,242	
Community Outreach	\$125,000			\$207	
Data Management & Scheduling	\$215,000			\$355	
Total Programmatic Costs	\$1,091,154			\$1,804	
Total Replacement Costs	\$4,945,733			\$8,175	
Inventory Related			Cost	Cost/Line	
Inventory Investigation/Canvassing	\$288,336			\$477	
Hydroexcavations	\$0			\$0	
Total Inventory Related Costs	\$288,336			\$477	
Ancillary Costs			Cost	Cost/Line	
Water Filters	\$42,581			\$77	
Legal	\$0			\$0	
Third-Party Inspection	\$380,000			\$628	
Total Ancillary Costs	\$422,581			\$705	
All-In Year 1 Costs	\$5,656,650			\$9,350	

ACTUAL PROGRAM

Total LSLs Replaced			605		
Direct Replacement Costs			Cost	Cost/Line	
Engineering, Procurement & Construction Mgmt	\$200,785			\$332	
Hard Construction Costs - Partial	\$2,892,000			\$4,820	
Hard Construction Costs - Full	\$30,000			\$6,000	
Construction Contingency	\$87,360			\$144	
Permitting	\$78,953			\$131	
Total Direct Costs	\$3,289,098			\$5,437	
Programmatic Costs			Cost	Cost/Line	
Program Management	\$751,154			\$1,242	
Community Outreach	\$118,843			\$196	
Data Management & Scheduling	\$110,105			\$182	
Total Programmatic Costs	\$980,102			\$1,620	
Total Replacement Costs	\$4,269,200			\$7,057	
Inventory Related			Cost	Cost/Line	
Inventory Investigation/Canvassing	\$288,336			\$477	
Hydroexcavations	\$17,400			\$29	
Total Inventory Related Costs	\$305,736			\$505	
Ancillary Costs			Cost	Cost/Line	
Water Filters	\$46,585			\$77	
Legal	\$44,433			\$73	
Third-Party Inspection	\$397,650			\$657	
Total Ancillary Costs	\$488,668			\$808	
All-In Year 1 Costs	\$5,063,605			\$8,370	

Additionally, throughout the program lifecycle, CIP provided continuous financial and technical assistance to adapt to unforeseen challenges, such as variations in public versus private lead service lines and lower-than-expected LSLs in eligible census tracts. This flexibility ensured Wausau maintained a high level of principal forgiveness grants from the SRF, preventing delays and funding gaps while maintaining program momentum.

CIP's performance-based approach, which tied compensation to exceeding agreed-upon targets within the allocated budget, demonstrated the value of aligning public and private interests. By optimizing debt, locking in competitive pricing, and refining financial models, CIP saved the City significant resources while delivering measurable results and a transparent, accountable program. This innovative model sets a benchmark for performance-based infrastructure delivery and highlights its potential to maximize public value.

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The EquiFlow program is an important initiative for Wausau, delivering significant health and financial benefits to our community. By replacing lead service lines, we are ensuring safer drinking water for our residents, which directly impacts public health. Additionally, this program will lead to long-term cost savings for the City and its residents by reducing health-related expenses and increasing property values.

The collaboration with Community Infrastructure Partners has been vital in advancing this program, maximizing federal funding to reduce costs to residents, and together, we're creating a healthier and more economically stable future for Wausau.

- Eric Lindman | Director of Public Works & Utilities, City of Wausau

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SUMMARY OF KEY TAKEAWAYS

✓ RAPID SCALING IS POSSIBLE

The City of Wausau achieved a remarkable increase in LSL replacements, scaling from a historical high of 55 to 605 LSLs in the first year, with plans for at least 1,800 replacements in the second year. This underscores that it is entirely feasible to rapidly scale from a low or nonexistent LSL replacement volume to a substantial operational capacity, even with limited contractor availability. The EquiFlow Lead-Free Program demonstrated that, by aligning strong program management with a performance-based contract, small and mid-sized utilities can overcome initial operational inertia.

✓ IMPORTANCE OF COMMUNITY OUTREACH

The technical work required for LSL replacements is relatively standardized and straightforward, requiring minimal design and engineering. The main challenge lies in community outreach and engagement, particularly in gaining homeowner consent to replace lines on private property. Highlighting health benefits rather than infrastructure goals significantly increased consent rates, addressing the primary bottleneck in replacement programs.

✓ ENABLING SMALL TO MID-SIZE MUNICIPALITIES

Many small and mid-sized communities lack the financial and personnel resources to structure large-scale LSL replacement programs. Providing upfront interim financing helps these communities get projects "shovel-ready" by securing right-of-entry agreements, completing pre-development work, and closing funding gaps before SRF loans are disbursed.

✓ EXPANDING CONTRACTOR CAPACITY

The program attracted more contractors by offering faster payments (net 15 days), reducing administrative burdens (CIP handled right-of-entry agreements), and guaranteeing work volumes. This approach not only drove cost savings but also supported local economic development.

✓ COST CERTAINTY WITH FIXED TERMS

CIP's contract is performance-based, ensuring full compensation was only received after the program's goals were achieved. As a result, the City needed to monitor only three metrics: the contracted minimum volume of replacements, the achievement of a fixed price per line, and quality compliance—managed through third-party inspection.

✓ FLEXIBILITY AND ADAPTABILITY

A year-to-year implementation strategy allowed Wausau to start quickly, maximizing its ability to take advantage of a small window of free and low-to-no-cost funding opportunities. This approach ensured progress while adapting to uncertainties, with ongoing financial technical assistance enabling mid-program adjustments to funding allocations and maintaining momentum despite unforeseen challenges.

✓ FOCUS ON PUBLIC HEALTH BENEFITS

Framing the program around community health rather than solely infrastructure fostered stronger public buy-in and reinforced the long-term value of the initiative. This ultimately led to securing right of entry agreements at a consent rate greater than 95%.

✓ VALIDATION OF THE CBP3 APPROACH

The CBP3 approach has proven to be a highly effective mechanism, validated by the P3 Bulletin, which awarded the EquiFlow Lead-Free Program "Best Utilities Project" in 2024 and shortlisted it for the "Social Impact Award", clearly highlighting its innovation and positive community impact.

CONCLUSION

The EquiFlow Lead-Free Program demonstrates how municipalities can overcome large-scale infrastructure challenges through innovative approaches like the CBP3 model. In its first year, the program replaced 605 lead service lines—11 times the City's previous annual high of 55—while saving approximately \$600,000. With plans to replace over 1,800 lines in the second year, the program sets a new benchmark for scalability and efficiency.

By integrating comprehensive financial planning, robust community outreach, and strategic contractor engagement, Wausau leveraged federal infrastructure funding to deliver measurable results. The EquiFlow Lead-Free Program highlights the power of collaboration, adaptability, and performance-based delivery. It proves that even small to mid-size municipalities can capitalize on limited windows of federal funding to achieve significant health, financial, and infrastructure improvements, setting a model for communities nationwide.

