

# Tapping into Success

Strategies for Effective Lead  
Service Line Replacement  
Communication

December 2023



**ELEVATE**

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# Introduction

## Silent No More

As far back as the 1940s, the water sector recognized the need for better communications.<sup>1</sup> The “silent service” went unnoticed (and underappreciated) as long as drinking water utilities had affordable bills, provided reliable service, and delivered safe and clean water.

In the modern era - with rising costs, water infrastructure reaching the end of its usable life, and concerns about drinking water quality frequently entering public discourse - drinking water utilities are finding that they need a mindset shift around communications. Instead of their only interactions with residents being in a moment of crisis, utilities need in-house communication experts who can proactively engage with their community and foster partnerships that help fulfill their formational purpose: to protect public health through the provision of clean, safe drinking water.

<sup>1</sup> *“Silent Service Is Not Enough! AWWA Public Relations Study,” Journal - American Water Works Association 46, no. 12 (1954): 1187-1322,*

# Project Purpose and Approach

The focus of this report is **lead service line replacement (LSLR) program communication, education, and outreach**. For this project, Elevate spoke with staff, elected officials, and consultants for municipalities nationwide where LSLR programs are underway to learn about what has worked well and what hasn't. We also talked to residents and other stakeholders about their experiences on the receiving end of those communications.

Wherever your municipality is in the process, this report is designed to share lessons learned and key considerations for successful LSLR program communications - to help us all remove lead service lines (LSLs) as safely and efficiently as possible while keeping communities engaged.

## Authors

Elevate is a nonprofit organization that works nationally and is headquartered in Chicago. Elevate designs and implements programs to ensure that everyone has clean and affordable heat, power, and water in their homes and communities - no matter who they are or where they live. For more information, visit [ElevateNP.org](https://www.elevatenp.org).





# Background

## Lead in Water

Lead is a toxic metal that can seep into drinking water through pipes and plumbing materials made with lead. While lead exposure has health implications for people of all ages, the effects are especially concerning among infants, children under age six, and pregnant or nursing mothers.<sup>2</sup> Lead is typically not found in drinking water when it leaves a water treatment plant or as it travels through transmission mains. Rather, especially in older homes, lead can dissolve or break off as tiny particles as water passes through a) lead service lines (i.e., pipes) that connect homes to municipal water mains, b) plumbing fixtures and internal pipes that are made of lead, or c) building plumbing connected with lead-based solder.<sup>3,4</sup>

- 2 *Elevate (2022). Lead Service Lines 101. [elevatenp.org/water/lead-service-lines-101/](https://elevatenp.org/water/lead-service-lines-101/)*
- 3 *American Waterworks (2019, February 27). AWWA: Together, Let's Get the Lead Out [Video]. [youtu.be/PqFHrae92OM](https://youtu.be/PqFHrae92OM)*
- 4 *U.S. Environmental Protection Agency (2017). Infographic: Lead in Drinking Water (PDF). [epa.gov/ground-water-and-drinking-water/infographic-lead-drinking-water](https://epa.gov/ground-water-and-drinking-water/infographic-lead-drinking-water)*

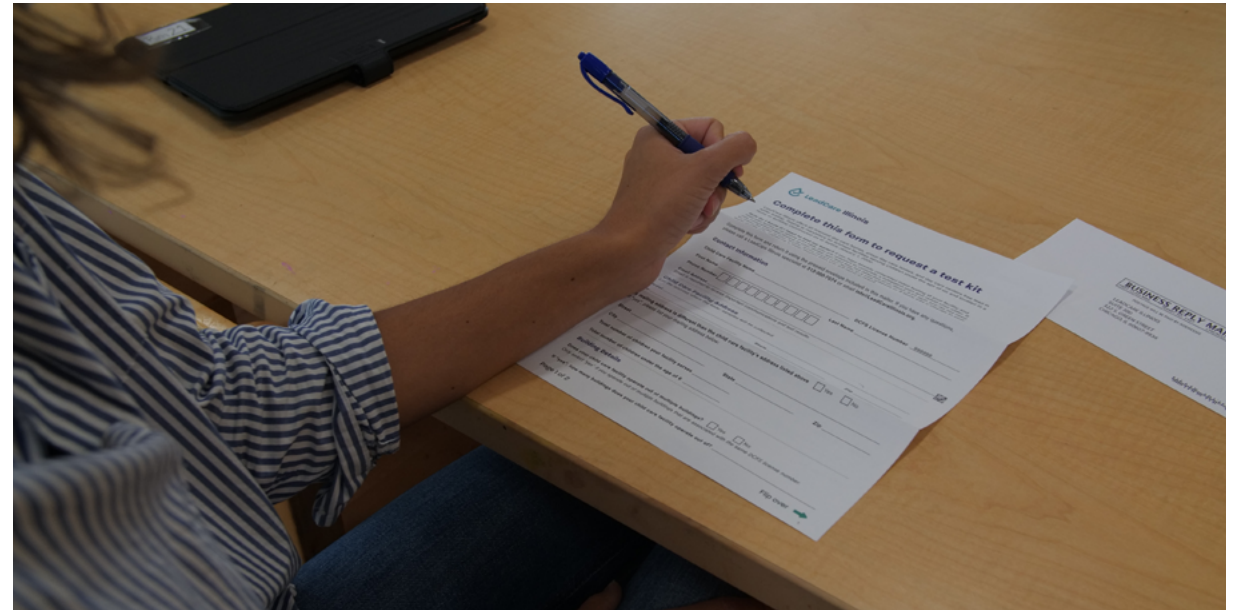
# Increased Oversight

In response to the Flint, MI water crisis – where a switch from Detroit water to the Flint River resulted in a significant spike in lead levels – research led to the adoption of new state laws to prevent future crises.<sup>5,6</sup> For example, in Illinois the Lead Service Line Replacement and Notification Act requires municipalities to develop LSLR plans by April 2027 and then complete replacements within 15 to 34 years, depending on the total number of lines needing to be replaced.<sup>7</sup>

Revisions were also made to the federal Lead and Copper Rule, originally published by the U.S. Environmental Protection Agency (EPA) in 1991 to minimize lead and copper in drinking water. These Lead and Copper Rule Revisions (LCRR) went into effect in December 2021 with a 2024 compliance date, and the latest update includes revisions to action levels, monitoring, corrosion control, and required outreach, among other actions.

Some of these new outreach actions require utilities to:

- Translate public education materials into other languages
- Provide annual notices to households with service lines made of lead or an unknown material



- Conduct targeted outreach to encourage LSLR program participation when tap samples exceed the newly-defined “trigger level” of 10 µg/L
- Notify individual households when their tap sample exceeds the “action level” of 15 µg/L “as soon as practicable but no later than 3 days” (as compared to within 30 days of learning results, as was required in the previous version of the Lead and Copper Rule)

Based on concerns raised by stakeholders during the LCRR public comment period, the EPA began drafting additional guidance that will be released as Lead and Copper Rule Improvements in late 2024.<sup>8,9</sup> Further rule revisions are expected, and **what’s clear is that community outreach efforts are not just being recommended, they are being required.**

5 Natural Resources Defense Council (2018). *Flint Water Crisis: Everything You Need to Know*. [nrdc.org/stories/flint-water-crisis-everything-you-need-know](https://nrdc.org/stories/flint-water-crisis-everything-you-need-know)

6 Robinson Engineering (n.d.). *Lead in Water Fact Sheet*. [https://www.reltd.com/files/ugd/903a54\\_81e5b5459c544eaa8c6207a40ab854ee.pdf](https://www.reltd.com/files/ugd/903a54_81e5b5459c544eaa8c6207a40ab854ee.pdf)

7 Illinois Statutes Chapter 415. *Environmental Safety § 5/17.12. Lead service line replacement and notification - last updated January 01, 2022* | <https://ilga.gov/legislation/ilcs/documents/041500050K17.12.htm>

8 Unearth Labs (n.d.). *The Complete Guide to the Lead and Copper Rule Revisions (LCRR)*. [unearthlabs.com/blogs/the-lead-and-copper-rule-revisions](https://unearthlabs.com/blogs/the-lead-and-copper-rule-revisions)

9 U.S. Environmental Protection Agency (2021). *Stronger Protections from Lead in Drinking Water: Next Steps for the Lead and Copper Rule*. [epa.gov/ground-water-and-drinking-water/review-national-primary-drinking-water-regulation-lead-and-copper](https://epa.gov/ground-water-and-drinking-water/review-national-primary-drinking-water-regulation-lead-and-copper)

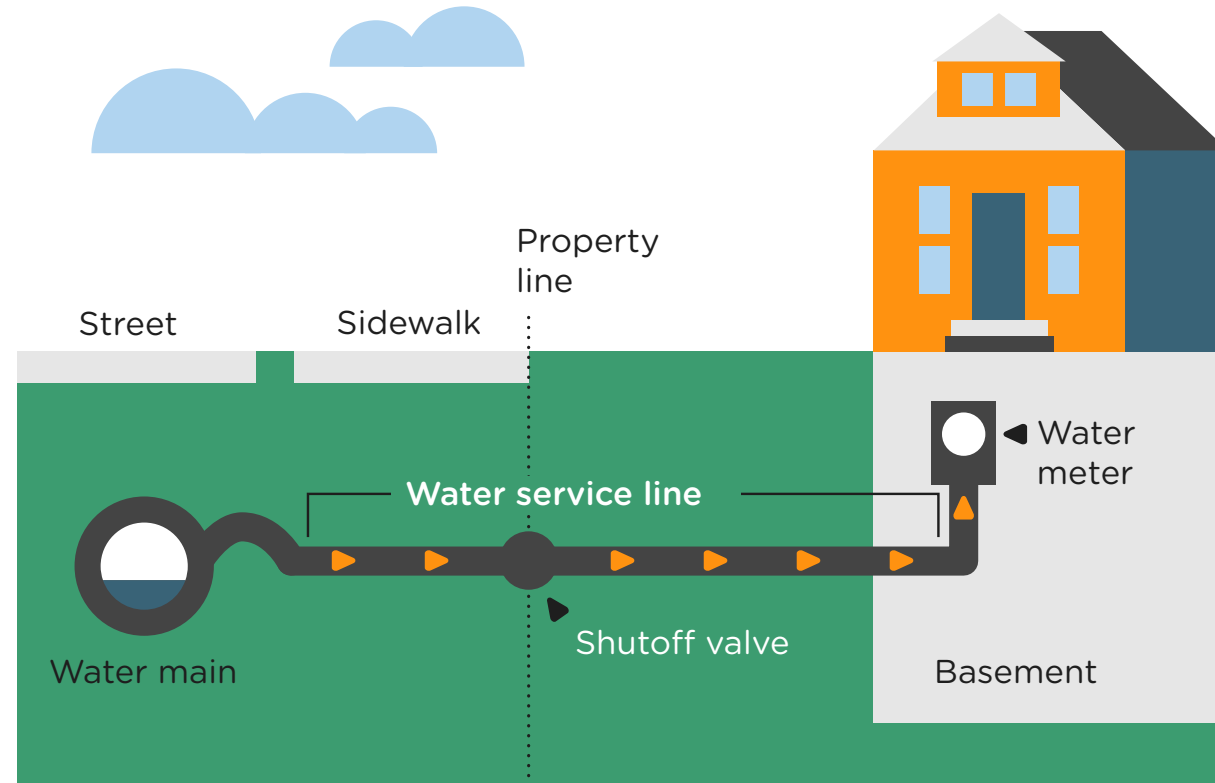
## Unique Challenges

LSLR programs differ from most other public works projects in substantial ways. The primary difference, of course, is that work is done not just within the public right-of-way but on someone's private property and even inside their home. Water service lines run from the street, under residential yards, and into basements, meaning that in most cases, utilities want to have signed agreements from residents allowing them to access the property to replace the water service line, and at a minimum ensure residents are aware of what is going on. Compared to LSLR programs, water meter replacements may also necessitate going onto private property but are generally less disruptive.<sup>10</sup> Even in cases where drinking water utilities do not have to answer difficult questions – Who is responsible for reseeding my lawn? What will happen to grandmother's rose bushes? Are you going to cut down my mature tree? – LSLR requires significantly more interactions with property owners than the standard posting of notice and hosting pre-construction meetings.

While there will come a point when the last lead service line has been replaced, until then, there are going to be a lot of interactions between drinking water utilities and their customers. Beyond the cost of replacement and filters, necessary LSLR communications will cost utilities money – from printing and postage to documentation, reporting, and more – and, depending on the size of the municipality or the number of LSLs, may require additional staff and consultants to lead the outreach.

<sup>10</sup> J. Flowers, personal communication, June 13, 2023.

## Drinking Water Service Line Components





# Municipal Interviews

## Overview

Elevate interviewed more than a dozen municipal drinking water utility staff and consultants actively engaged in LSLR programs representing communities of various sizes, socioeconomic status, and number of LSLs both replaced so far and yet to be replaced. We were interested in understanding what these municipalities have learned regarding community engagement, public education, and ongoing resident communications. From these interviews, we compiled a list of key insights that might benefit any municipality as they reach out to residents before, during, and after LSLRs.



# Key Takeaways

## 1. Communicate A Sense Of Urgency, But Not Emergency.

Nearly every municipality we spoke with shared the challenge of ensuring residents are concerned enough about lead in water to do something about it, while also not creating a sense of panic in the community. While no amount of lead in water exposure is safe, through lead testing and filter programs utilities have found creative ways to support their residents in the short term while they wait for their LSL to be replaced.

For example, municipalities who do not have access to sufficient funding or capacity to replace every LSL in the near future don't want to cause a panic when residents learn they may not receive a LSLR for several years. This is particularly concerning in communities that have a lead exceedance. Faced with the reality that it would take years to replace all the LSLs in their area, Denver Water knew that many of their residents would be concerned about lead mitigation while they waited for a LSLR. In response, they launched a Filter Program that provides all residents with a water filter, replacement cartridges, and ongoing education about lead mitigation until their LSL is replaced.

“ We're walking a fine line between making sure that people are concerned with the issues while still telling people that they've got safe, reliable drinking water available to them. We're not going to sound the alarm and say it's an emergency... so that message is a challenging message to get out.

Paul Moyano, Senior Project Manager–Water and Sewer, Public Works Agency, Capital Planning & Engineering Bureau, Evanston, IL

So how are utilities getting residents on board? They are working to foster a healthy level of concern so that residents take steps to mitigate risk while they wait for their LSL to be replaced, and grant access when that time comes.

## 2. Center the Customer in Your Communications

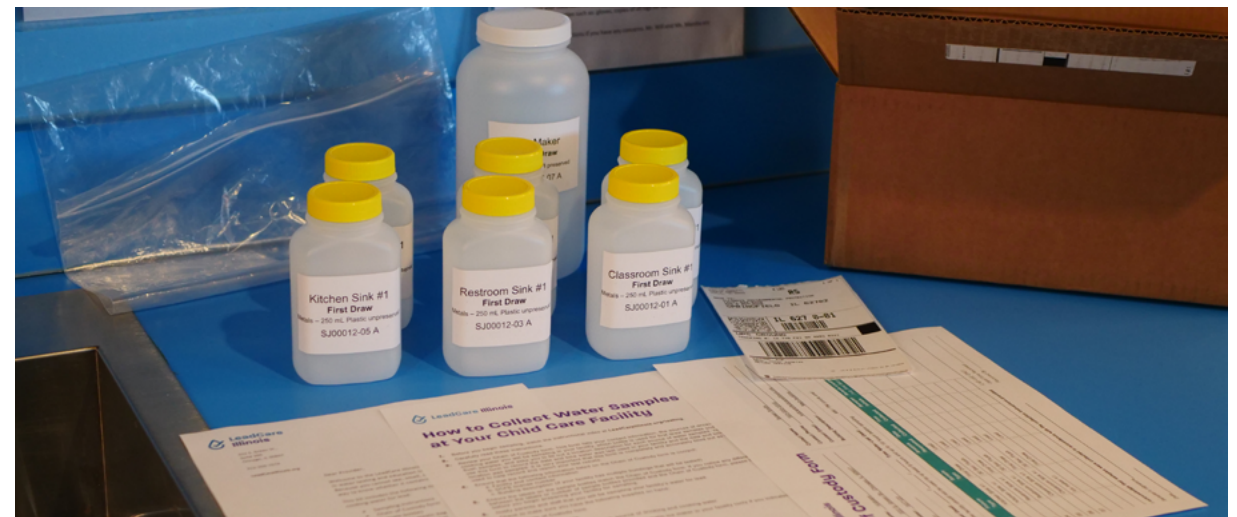
In some cases, it is not just reaching the resident with information, but reaching them with a message that resonates. The most common resistance to LSLR are resident concerns that their yards will be torn up or property damaged and not restored. Residents may also err more towards apathy – they do not see the need and decide that the work is not worth the hassle because “[I've] lived here my whole life, drank the water for decades, and I'm fine.”

*Residents should be appropriately informed about the risks of lead exposure.* Information should be consistent across all communication channels, accessible to a general audience, and free of acronyms and engineering jargon that may not be understood by someone who isn't a water

professional. While many people have heard about the problems caused by lead in paint, lead in water is less well known and easily misunderstood. Utilities should seek to become a trusted source of information regarding lead in water issues as they work to implement LSLR programs.

A prime example of this is the communications toolkit used in Akron, OH. Using easily accessible low cost/free tools, Akron has a LSLR specific website, inventory map, and promotional materials to provide both education about lead in water and program specific information for their LSLR program.

Communications can be more effective when you address customer concerns up front. A top concern of residents is the impact of the replacement to their property – what will the impact of LSLR be on grandmother's rose bush, yard, or trees? For them, utilities could share photos of another resident's yard before, during, and after a LSLR to demonstrate the restoration work included or the limited disturbance



using trenchless replacement methods. Some municipalities have also focused on the economic value to the property and potential risks of not doing the replacement while public funding is available.

“ We tried to, you know, fit the dynamic with who was in the property. If it was a family, we would talk about the effect on kids. If it was an older person, you know, retirement age or something like that, we would try to talk to them about ‘hey, at some point you’re going to, or your family is going to have to sell the house. When it’s time... you want to be able to show that that you’ve got this done.

Howard Crowfoot, Director of Public Works, Platteville, WI

### 3. Diversify Communication Channels

From phone calls and texts, emails and social media ads, flyers and LED construction signs, door hangers and door knockers, utilities seem to have tried just about every tool in the toolbox to reach their residents about LSLR – and it’s working. Each municipality we spoke with echoed a similar refrain,

“ What we kind of learned from the first year is that there’s no one outreach method that’s going to work for everybody. So it’s really just doing as many different avenues as we could possibly get and hoping that eventually everybody gets caught through one of them.

Paul Moyano, Evanston Senior Project Manager-Water and Sewer, Public Works Agency, Capital Planning & Engineering Bureau, Evanston, IL

Utilizing a variety of outreach strategies, while time consuming, is what utilities like DC Water say helps them get a resident to “yes.” Strategies should be layered, for example, childcare providers enrolling in LeadCare Illinois are told over the phone to be on the lookout for a mailer with a form to sign and return. Other municipalities call to give notice that someone will be coming to their door with a utility badge, so people know it’s not a salesperson or scam. Door hangers are effective at reminding residents of program deadlines and the mailer they received a few weeks ago but haven’t had a chance to read yet.

Utilities have found that it often takes five or more touch points to get residents on board, and some have even hired consultants or outside agencies to handle the outreach well in advance. Outreach teams in Evanston, IL start calling six to nine months before a project, and “maybe by the 4th or 5th phone call they’ll finally answer, and we’ll get to talk to someone.” In Buffalo, NY, contractors have tried to do some of the outreach but have found that they may have to call a resident upwards of 20 times before they get a response. To be more effective in their outreach, utilities should consider layering a variety of outreach strategies into a more traditional marketing campaign.

Additionally, all resources should be made available to a variety of languages spoken in the community. Multilanguage call centers have been a valuable resource to non-English speakers and residents with less access to technology.

### 4. Build Community Trust

Some communities find that because the water utility is a part of the municipal government, they must battle against a baseline level of distrust in their programs from the beginning.

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## Outreach Strategies

- Door-to-door visits from the utility or municipal leaders
- Social media ads targeted to a certain area
- Coalition building with community action agencies
- Recurring, virtual meetings
- Employees attending community events
- One-on-one meetings with residents
- Sending flyers home through schools
- Doorhangers
- Yard signs
- LED construction signs
- Print and digital newsletters
- Websites
- Presentations for groups
- Phone calls, mailers, text follow ups

We heard countless ways that this played out in municipalities around the U.S., and across the board one of the most efficient ways to fight distrust is through word-of-mouth communication from resident to resident.

“ Even if it's like putting a sign in your yard that says, 'hey, I did it.' There's something to that, right? That's somebody who is helping [the utility] convey the message that this is something you should do. And so there's a lot of that that we're trying to do. That is, to get folks to advocate or be influencers in a way to help us with that messaging and to get people to yes.

John Lisle, Vice President,  
Marketing and Communications, DC Water

The other critical piece of building trust is working alongside community groups. Utilities who focused on creating open, transparent channels of communication with the broader community had the most success in customer education and engagement.

“ We've had to build the relationship with the community groups. Some groups felt they were being left in the dark by the utilities, but now we have recurring meetings and conversations to inform them of what Buffalo water has been doing and what they're hoping to do.

“ I think you have to have trust both ways, you have to be open, and you have to be willing to create those connections. So I think that trust is a big thing. You have to be willing to open the doors and

show people what you're doing because you're doing really good work. We have a corrosion control treatment lab and are doing research at the water authority. We're measuring, you know, what's in the water. The water is clean. Great Lakes is a great source of water, so people need to see that and you know the people that work at the plant, they drink the water too, so they surely don't want to have anything bad in their water.

John Davis, Project Manager, GHD, for Buffalo Water

Block by block approaches can hugely benefit from yard signs because they build a sense of urgency and peer pressure within a neighborhood. Those previously resistant to signing up start to see community buy-in.

“ [They start to think], 'this work is actually happening, it's not just something that's in the newsletter, it's in my neighborhood.' Then there's a switch that gets flipped, they start paying more attention.

Jonathan Flowers, Senior Engineer,  
Robinson Engineering

## 5. Be Visible Beyond Times of Crisis

The reliability and accessibility of public water supply in the U.S. means that most people don't give much thought to their water supply or water utility – unless they have a problem. In our modern era, there are still lessons to be learned from history books.

“Though impressive, the viaducts that brought water to ancient Rome were outside the city, largely out of public view. Rome's leaders built ornate fountains in





Grand Rapids,  
Michigan

(Grand Rapids), participating in workforce development programs at local colleges (Grand Rapids), to giving tours of water treatment facilities (Buffalo), water utilities are taking steps to repair distrust in their communities by showing up outside of times of crisis.

**6. Make It Personal, Go Door to Door**

Community relationships also influence resident responses during door-to-door outreach.

“ If they could see individuals that they know, they may be more likely to, you know, answer the door and say yes to this free opportunity.”

John Lisle, Vice President,  
Marketing and Communications, DC Water

public squares to make the water supply investment and engineering marvel visible to the public. [...] a poignant visual reminder of the state’s engineering accomplishments... Ornate fountains are no longer the most effective way to build public support for investing in water infrastructure. Utilities and policymakers would be well served to experiment with novel ways of effectively communicating the vast infrastructure—and financial resources—required to provide high-quality municipal water and sanitation services to the public.”<sup>11</sup>

As utilities work to get resident buy-in for LSLR, they should consider how water – plus its treatment and delivery – is seen and valued by their communities. Simply increasing visibility can garner the political and financial support needed to replace LSLs. While they aren’t building ornate fountains

in the town square, DC Water, Buffalo, and the City of Grand Rapids, MI are working towards being known and visible to the community not just when there is a problem. They’re opening up a two-way conversation where they can hear from residents too.

“ We always say that we’re a silent service. Other people don’t know about us or, you know, contact us unless there’s something that goes wrong. That’s not when we want to hear from people, when you know there’s something going wrong, we want them to contact us even if there’s nothing wrong.”

Izamar Contreras, Administrative Analyst,  
City of Grand Rapids, MI

From attending community events with Wendy the Water Drop (DC), to hosting writing competitions

While larger cities can reach a diverse audience through establishing partnerships with community organizations, in smaller cities, it is often the public works staff going door to door. The Village of Norridge, IL sent public works staff to homes with known LSLs. They brought a piece of lead pipe and answered questions about their LSLR program and whether the water is safe to drink. We told Norridge that this sounded like a lot of work for their staff – and, indeed, many of the visits took place after hours and on weekends – but they said it was spread out over time and viewed it as an investment in good public relations. Similarly, after sending a LSLR program mailer, the City of Platteville, WI staff knocked on people’s doors, answered questions about the program, and offered to go down to the basement to help identify the service line material.

<sup>11</sup> David Fuente, Richard Mulwa, Joseph Cook (27 February 2023). *Out of Sight Out of Mind: Household Perceptions of “Fair” Water Prices in Nairobi, Kenya*. *Water Resources Research*. <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2022WR033374>

Across all our interviews, someone going door to door seemed to be one of the most effective outreach strategies. However, in some municipalities, staff were met with skepticism if door knocks were the first interaction residents had with the LSLR program. In Grand Rapids, residents questioned why the government was coming to their house. When operators showed up at homes in the city of Edgerton, WI people often weren't home, didn't trust the operator, or refused to answer the door. But when visits were scheduled (residents could sign up for a time on Calendly) people were much more receptive because they knew why someone was at their door.

“ We just have found that that door to door contact really helps us to be able to, you know, say, ‘did you receive our letter, do you have any questions?’ Some people, as we know, are just distrustful, inherently of utilities or people door knocking and they don't want to be disturbed. So, we try to say ‘look for these individuals, they're coming to educate you, answer your questions, etc.’”

John Lisle, Vice President,  
Marketing and Communications, DC Water

## 7. Keep It Simple

Large municipalities may have their work cut out for them when it comes to LSLR outreach simply due to the number of LSLs, but they also tend to be the utilities who can afford to outsource marketing and outreach to consultants or agencies. Conversely, smaller communities may have less outreach to do, but they're often doing it all in-house with existing staff. We were inspired how creatively these smaller utilities took advantage of free or low-cost tools to effectively manage their LSLR program.

<sup>12</sup> Izamar Contreras, Administrative Analyst, City of Grand Rapids, Michigan

<sup>13</sup> Ibid.

As a part of their inventorying process, utility staff and municipal leaders often found themselves knocking on individual doors to identify LSLs and collect signed access agreements. In Edgerton, grant funding for the LSL inventory work generated a lot of press and residents were encouraged to sign up for an inspection through Calendly – a free, online scheduling tool. Nearly 1,000 people signed up and the public works director visited each home personally to identify their service line material alongside other basic assessments the utility needed to do. At the residence, the director filled out a mobile friendly, and also free to use, Google form to collect the information contractors would need to begin the work. When it was time to start planning construction, contractors were then given access to the Google sheet with all the form responses. These free tools helped the small community collect the data they needed for their inventory and manage the LSLR projects while keeping administrative costs low.

“It takes a lot of manpower”<sup>12</sup> and often pay, but Grand Rapids has shown how simple outreach tools can be highly effective. Every day, they have 2-3 staff people hitting the phones, sending texts, attending meetings, and going to tabling events. Their commitment to “meeting the community where they're at”<sup>13</sup> has kept Grand Rapids on track to replacing 2,000 LSLs in 2023 alone.

## 8. Find the Right Person for the Job

Whether it's finding a trusted messenger, someone skilled at one-on-one outreach, or that one person in public works who has just been around forever, utilities should take a thoughtful approach to who

interacts with residents on their behalf. Depending on who shows up at their door, residents could have vastly different responses to the same basic request. Contractors may come across too rough or like they're trying to sell something. An elected official may be intimidating. Engineers may struggle to help the resident understand without speaking with acronyms and jargon. What utilities need is someone with experience in a one-on-one setting, who will explain the process simply, answer questions with empathy, and convince residents that this project is worth doing.

Sometimes it just takes the right person. Reverend Edward Pinkney, a long-time community organizer and president of the Benton Harbor Community Water Council, has been leading the boots-on-the-ground LSLR initiative in Benton Harbor, MI. “People are funny about opening their doors to people but they know me. Even the team could say ‘Reverend Pinkney said this... do this...’ and that made people open up.”

We heard about how in Dixmoor, IL, consultants helping with the LSLR program from Robinson Engineering walked around with the Mayor and had a very different experience than door knocking on their own.

“ People opened their doors to [the Mayor]. I can talk till I'm blue in the face, but that doesn't necessarily mean that I can relate to the people that we're doing these projects with.”

Jonathan Flowers, Senior Engineer,  
Robinson Engineering

In Evanston, the water utility found the right person who was a trusted member of the community. After that one person had signed up, they went and got everyone on the block to sign up with them. Residents shared about the impact it had on them to be able to talk to a neighbor before signing up.

“ She had had the filtering process done before me and she sort of eased some of my preliminary fears, saying it doesn't hurt. It'll be OK. You need to have someone prior to you who has one of these old houses. They're over 100 years old. You mess with the plumbing or pipe,

*and anything could happen. You hope it won't, but it's always in the back of your head if you tap something, it floods in the wall. She had gone through the same process. She has an older building. And it set me at ease.”*

Linda Thomas, Chicago Resident

### **9. Involve Residents in the Process, from Planning through Restoration**

LSLR programs should include in their development the voices of those most impacted. Residents who have LSLs will have the most insight into how replacement will impact them and their neighbors, as well as suggestions for outreach in their

communities. Through focus groups or meetings with community organizations, utilities should seek to hear from residents that will be impacted by LSLR during the development of their programs.

We heard frequently that one of residents' primary concerns has to do with possible damage to their property. The customer service responsibility for utilities then, is to recognize both the practical and emotional impact a project like this has when their sidewalk or driveway is inaccessible, a hole is left in a basement wall, or grandmother's rose bush is torn up. Residents should also be given ample notice about what will happen, what the timeline is, and who is responsible for what when it comes to property restoration. Additionally, sharing photos of past projects before and after restoration can be a helpful tool to ease concerns regarding property damage.

A couple in Chicago we spoke with who had their LSL replaced worried about how their property would be impacted. The floor in their basement had to be torn up to replace the service line and was neatly repaired. However, the first time they heard about how their mature shade tree had to be cut down was when their dog started barking at the chainsaw. Ultimately, while they understood that it had to be cut down, the lack of communication beforehand was frustrating. Not only was the tree a primary source of shade for their home and yard, but it was planted by the man's father decades before. After it was cut down came the questions: would they leave the stump? Would anyone replace the tree? Who was responsible for putting the yard back in order? When would they have a new sidewalk? Now a few months into the project, they don't know when it will be finished and still do not have answers to those questions.



With a major construction project happening on their block, residents want to be informed. Utilities and contractors should work together to talk with residents about the project timeline, the impact it will have to their home, yard, sidewalk, and street. A dedicated project manager or point of contact to answer questions can also be helpful. Transparency around the project progress through community meetings, letters, door hangers, LED signage, or video updates should keep residents informed, especially if there are any delays. Due to the LSL running through private property, utilities need to view these projects as more collaborative in nature if they want continued resident support.

### 10. Consider Ordinances and Other Legal Tools

Know that, despite all your outreach, some property owners may still prefer to opt out – a legal tool may be needed to ensure that all LSLs are removed. Some communities have passed ordinances requiring the full replacement of all identified LSLs, usually depending on the funding source. Wisconsin encourages the adoption of a municipal ordinance in certain circumstances, requiring it when ratepayer funds are used to help fund private side replacements (at up to 50% of the total cost). Some ordinances are even given contingencies – as a condition of receiving water service, residents must agree to a LSLR.

“ It definitely goes more smoothly [in places where ordinances are passed]. Because we’ve seen that even when 100% of the cost is being covered, a lot of homeowners still say, Nope, you’re not replacing my

*line. You’re not coming into my house. You’re not ripping up my yard. We don’t care. You know, we hear things like, I’ve been drinking this water for 40 years and I’m fine, so I don’t need to do this.”*

Rebecca Scott, Environmental Loans  
Section Manager, Wisconsin DNR

Platteville, WI passed an ordinance requiring that “all LSLs will be replaced by 12/31/2024.” In this smaller community (12,000 people), the water utility has identified around 750 LSLs and have only 100 left to replace, attributing the success of their program in large part due to the backing of the ordinance.

Ordinances are not without pushback, however. Larger communities in particular, (Grand Rapids, DC, Buffalo) have chosen not to lean on mandate language in favor of “partnership messaging” when they consider their overall brand representation in the community.

“ I think leading with the trust factor, leading with the partnership aspect even though we have the right now to do this, we don’t want to foster that culture with our customers because we don’t do it on anything else. This standalone project, while it’s extremely important, you’ve got national attention... It’s just not our culture and how we try to engage with our customers.”

Kirsten B. Williams, Chief Communications  
& Stakeholders Engagement Officer and  
Executive Vice-President, DC Water

Several municipalities recognized the political unpopularity of LSLR ordinances, but still felt compelled to take action to address the clear public health threats and liability that may otherwise linger, both for future purchasers of homes that “opt-out,” and for the utility who may still need to invest in expanded corrosion control to protect the hold-outs. It is worth noting, though, that even in some places where it was expected, resolutions have passed without much noise. The town of Edgerton had an exceedance and in late 2022 passed a resolution “recognizing lead in drinking water [as] a public health hazard and declaring a commitment to replace 100 percent of lead service lines over the next five years.”

“ You know, I thought when we passed a resolution that would say that you have to replace and you have to let us in, I thought we would have absolute chaos. Nothing. Our decision makers were like, this all makes sense and whether people are just asleep at the switch out there, I was shocked. I thought it would be we’d have mutiny, but no, nothing happened.”

Ramona Flanigan, City Administrator,  
City of Edgerton, WI



# Conclusion

This report has delved into the most important and unique aspects of LSLR program communication, education, and outreach. It is clear that the cornerstone of a successful public works endeavor is trust. Building and maintaining community trust through transparent communication practices is essential to securing widespread support and engagement. Through consistent outreach and making the invisible aspects of water visible and personal, we can foster a deeper connection between municipal leaders and residents that cultivates a sense of shared responsibility for our water supply.





We're grateful to all the experts, officials, consultants, and stakeholders across various municipalities who took the time to share their insights with us. We hope their examples and insights into what has worked and what has been more challenging than expected will help you build out successful LSLR program communication and ultimately safer water systems for all.

*To summarize, here are our recommended best practices for any utility working to remove LSLs in their communities.*

**1. Communicate a sense of urgency, not emergency:**

Work to foster a healthy level of concern so that residents take steps to mitigate their risk of lead exposure (like using utility provided water filters) while they wait for their LSL to be replaced, and readily grant access when that time comes.

**2. Center the customer in your communications:**

Outreach to residents should address their concerns about the lead service line replacement process, accurately inform them about the risks of lead exposure, and be easily understood by the general public.

**3. Diversify communication channels:** There's no one outreach method that will work for everyone, so layer a variety of different strategies to reach a diverse audience and ensure your messages are translated into multiple languages that meet the needs of your community.

**4. Build community trust:** Utilities who focus on creating open, transparent channels of communication with the broader community have the most success in customer education and engagement.

**5. Be visible beyond times of crisis:** Consider how water – its treatment and delivery – is seen and valued by your community. Simply increasing visibility can garner the political and financial support needed to replace lead service lines.

**6. Make it personal, go door to door:** While time consuming and resource intensive, doing outreach on a one-on-one basis – particularly with community partners – may be necessary to get residents to sign up for lead service line replacement.

**7. Keep it simple:** Learn how other communities have creatively kept outreach costs down. Take advantage of free or low-cost tools to manage your LSLR program.

**8. Find the right person for the job:** Whether it's finding a "trusted messenger", someone skilled at one-on-one outreach, or that one person in public works who has just been around forever, utilities should take a thoughtful approach to who interacts with residents on their behalf.

**9. Involve residents in the process, from planning through restoration:** Resident voices should be included in the development of LSLR projects. They should also be given ample notice about what will happen, what the timeline is, and who is responsible for what throughout the entire LSLR process.

**10. Consider ordinances and other legal tools:** Know that, despite all your outreach, some property owners may still prefer to opt out, and a mandate may be needed to achieve 100% LSL removal. Depending on community and political support, ordinances have been successful in some communities where utilities are given tools to enforce LSLR.

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# Acknowledgements

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## Project Partners

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For more information, visit [BlacksinGreen.org](https://BlacksinGreen.org).

## About Elevate

Elevate is a nonprofit organization that works nationally and is headquartered in Chicago. Elevate designs and implements programs to ensure that everyone has clean and affordable heat, power, and water in their homes and communities — no matter who they are or where they live. For more information, visit [ElevateNP.org](https://ElevateNP.org).

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# Contributing Interviewees

Elevate wishes to express our gratitude to the drinking water utility staff, municipal consultants, and community leaders who shared their insights and stories with us. The views and opinions expressed in this report belong to Elevate and do not necessarily reflect those of the interviewees.

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# Appendix A: Resident Interviews (Little Village Environmental Justice Organization)

## Overview

In addition to speaking with municipal drinking water utility staff and consultants actively engaged in LSLR programs, Elevate interviewed residents with direct experience with the replacement process and, accordingly, as recipients of LSLR program outreach. With support from the Little Village Environmental Justice Organization (LVEJO), we spoke with Little Village residents participating in Chicago's LSLR pilot project.

Based on discussions with LVEJO, Elevate elected to refer to people pseudonymously and has obscured other identifying details, such as professions and home characteristics.

## Background

In April 2021, Chicago released the multi-phase "Lead Service Line Replacement Plan." Phase I included three parts: a) no-cost LSLR for income-eligible homeowners with samples consistently above 15 ppb; b) permit fee waivers for homeowner-initiated replacements; and c) a block-level pilot project "designed to test and evaluate coordination logistics for construction and homeowner outreach" for LSLR alongside water main replacement.<sup>14</sup>

The 3100 block of South Ridgeway Avenue in Chicago's Little Village neighborhood was chosen as the site of the block-level pilot project. Little Village, or "La Villita," is a Mexican-American commercial and cultural center in the South Lawndale community area.<sup>15</sup> The community area has a population of 71,399 individuals (81% Latino, 13% Black) and a median household income of \$38,953, compared to the Chicago median of \$65,781.<sup>16</sup>

Owing in part to its location in one of Chicago's industrial corridors, Little Village community members have long struggled with environmental issues, in particular poor air quality. Although a local coal plant shut down in 2012, plans to redevelop the site as a warehousing facility renewed air quality concerns related to diesel truck traffic. In 2020, the developer demolished the coal plant without adequate precautions or notice, blanketing the neighborhood in hazardous dust and particulate matter.<sup>17, 18</sup> Based on these and other factors, residents may be wary of participating in the pilot.<sup>19</sup>

Elevate connected with three residents that participated in Chicago's block-level LSLR pilot project to discuss their experience with the LSLR process and related engagement.

14 City of Chicago (2021). *Lead Service Line Replacement Plan, Executive Summary*. [leadsafechicago.org/resources](https://leadsafechicago.org/resources)

15 Acosta-Córdova, J.M. (2017). *The Latino Neighborhoods Report: Issues and Prospects for Chicago*. University of Illinois at Chicago, Great Cities Institute. [greatcities.uic.edu/2017/10/11/latino-neighborhoods-report/](https://greatcities.uic.edu/2017/10/11/latino-neighborhoods-report/)

16 Chicago Metropolitan Agency for Planning (2023). *South Lawndale: Community Data Snapshot, Chicago Community Area Series (July 2023 Release)*. [cmap.illinois.gov/data/community-snapshots](https://cmap.illinois.gov/data/community-snapshots)

17 Campillo, P., & Simba, I. (2021, February 8). *From Toxic Fluff in Lincoln Park, to the Smoke that Blanketed Little Village: A Snapshot of Environmental Justice Issues in Chicago*. Illinois Environmental Council. [ilenviro.org/snapshot-of-environmental-justice-issues-in-chicago/](https://ilenviro.org/snapshot-of-environmental-justice-issues-in-chicago/)

18 Chase, B. (2022, August 5). *Seven months before smokestack's botched implosion smothered Little Village in dust, Chicago city inspector issued dire warning*. Chicago Sun-Times. [chicago.suntimes.com/2022/8/5/23292152/hilco-crawford-coal-plant-implosion-warning-john-kryl-dust-cloud-little-village](https://chicago.suntimes.com/2022/8/5/23292152/hilco-crawford-coal-plant-implosion-warning-john-kryl-dust-cloud-little-village)

19 Gersony, L. (2021, July 21). *Some Chicagoans Wary of Lead Pipe Replacement*. Circle of Blue. [circleofblue.org/2021/world/some-chicagoans-wary-of-lead-pipe-replacement/](https://circleofblue.org/2021/world/some-chicagoans-wary-of-lead-pipe-replacement/)

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# Appendix A: Resident Interviews (Little Village Environmental Justice Organization)

## Key Takeaways

### Water Quality Is Important

In interviews, residents shared concerns about the quality of the water flowing from their taps. One family has never drunk the water from their tap and said that even with a LSLR that fact wouldn't change for them. While lead was no longer an issue, they spoke about concerns with sewage overflows into the Chicago River and contamination of Lake Michigan. Another resident was grateful for the improved water quality, and he explained that, before the LSLR, he wouldn't even let his cat drink from the faucet due to concerns it would make him sick.

- **Takeaway:** *Residents are concerned about the quality of their water before, during, and after service line replacements and should be informed as their water quality is impacted.*

### Property Damage Is Top Of Mind

LSLR necessitates that yards, sidewalks, and landscaping be torn up to get to the old water line and lay a new one. The work inside a resident's home can leave holes cut in basement floors and walls. Residents mentioned that they were very happy about the restoration work done in their home but had lingering questions about the responsibility of restoration work of their yards, even though construction was nearing completion.

- **Takeaway:** *Residents are concerned about damage to their property, and utilities should prioritize communication regarding restoration before LSLR work begins.*

### If Construction Is Delayed, Residents Want To Know

Residents expressed frustration about the construction delays, but not without understanding that projects like this can be delayed. Not knowing an approximate date of project completion left residents feeling like "it's a forgotten project, on the back burner."

- **Takeaway:** *Residents are generally understanding of construction delays but want to be updated throughout the project process when delays impact their property.*

### Accessibility During Construction Matters

A block-wide approach can be an efficient way to implement LSLR programs, but it can also be hugely inconvenient for the residents who live there. Residents spoke with us about safety concerns for people who use mobility aids, families with strollers, or kids walking home not having access to clear sidewalks. Other concerns were parking, driveway accessibility, and dust.

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# Appendix A: Resident Interviews (Little Village Environmental Justice Organization)

- **Takeaway:** *Residents are concerned about the safety and accessibility of their driveways and sidewalks during construction.*

## **Experiences With Plumbers Have Been Positive**

The plumbers and crews working in homes were mentioned to be “very nice and polite” and residents appreciated their quick response to water pressure issues as well as clean, finished work.

- **Takeaway:** *Residents appreciate when the crews working in their home are kind, address their questions, and take care to do their job neatly.*

## **Residents Want To Hear More From Their Elected Officials**

Residents we interviewed learned about the LSLR program from the alderman’s office coming out to a community meeting. However, they also

expressed a desire for more engagement from local government – local aldermen and the City of Chicago – through more community meetings and one-on-one interactions in their neighborhood.

- **Takeaway:** *Residents want to have more opportunities to interact with local elected officials regarding the LSLR project.*

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# Appendix B: Resident Interviews (Blacks in Green)

## Overview

In addition to speaking with municipal drinking water utility staff and consultants actively engaged in LSLR programs, Elevate interviewed residents with direct experience with the replacement process and, accordingly, as recipients of LSLR program outreach. With support from Blacks in Green, we spoke with seven Chatham and Woodlawn residents participating in the Lead-Free Water For All program.

## Background

With funding provided by the EPA's Environmental Justice Small Grants Program, the Lead-Free Water For All program is a partnership Blacks in Green, Elevate, and the University of Illinois at Chicago's School of Public Health. The program aims to provide lead in water education to residents of Chicago's Chatham and Woodlawn community areas as well as free sampling and water filters for participating households.<sup>20</sup>

Chatham and Woodlawn are two predominantly Black community areas on Chicago's South Side that experience high levels of childhood lead poisoning. A recent report by the Chicago Urban League highlights Chicago's racial disparities, with Black Chicagoans living in "separate and unequal" neighborhoods based on indicators like income, unemployment, homeownership, and vacancies, among others,

which can manifest as public health and quality of life issues.<sup>21</sup> Chatham and Woodlawn have median incomes of \$40,335 and \$28,794, respectively, compared to the citywide median of \$65,781.<sup>22,23</sup> Unlike wealthier (and often whiter) neighborhoods, Black residents in many of Chicago's historic neighborhoods may find themselves in homes served by a LSL but without the means to have it replaced, resulting from a confluence of factors stemming from disinvestment and systemic racism.<sup>24</sup>

This led, in part, to the Blacks in Green initiative to educate residents on how they can protect themselves and their families from potential exposure to lead in water. In tandem with this program, Elevate connected with residents to discuss their concerns about lead in water, how they learned about this issue, and what they understand about risks and mitigation strategies.

## Key Takeaways

Discussions were conducted either by phone or using Microsoft Teams, lasting approximately 30 minutes each. Key takeaways from the discussions include the following:

### Sources of Information

Based on media reports and messages from elected officials, Michele learned about the dangers of lead in water and that it is a common

<sup>20</sup> *Blacks in Green (n.d.). Lead-Free Water For All.* [blacksingreen.org/lead-free-water](https://blacksingreen.org/lead-free-water). Retrieved July 24, 2023.

<sup>21</sup> *Chicago Urban League (2023). State of Black Chicago 2023.* [chiul.org/2023/06/01/read-our-2023-state-of-black-chicago-report/](https://chiul.org/2023/06/01/read-our-2023-state-of-black-chicago-report/)

<sup>22</sup> *Chicago Metropolitan Agency for Planning (2023). Chatham: Community Data Snapshot, Chicago Community Area Series (July 2023 Release).* [cmap.illinois.gov/data/community-snapshots](https://cmap.illinois.gov/data/community-snapshots)

<sup>23</sup> *Chicago Metropolitan Agency for Planning (2023). Woodlawn: Community Data Snapshot, Chicago Community Area Series (July 2023 Release).* [cmap.illinois.gov/data/community-snapshots](https://cmap.illinois.gov/data/community-snapshots)

<sup>24</sup> *Metropolitan Planning Council (2017). The Cost of Segregation.* [metroplanning.org/costofsegregation/cost.aspx](https://metroplanning.org/costofsegregation/cost.aspx)

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# Appendix B: Resident Interviews (Blacks in Green)

problem in Chicago. Similarly, Margaret also heard about lead in water from news stories as well as earlier education campaigns about the dangers of lead paint. Sharlette, on the other hand, did not know about the issue until after participating in the Lead-Free Water For All program. After having her water sampled, she looked into it more. Meanwhile, Tiffany heard about the issue of lead in water at a conference. The conference was discussing issues in Michigan, but upon returning home, she started looking for information about Illinois and “fell down a concerning rabbit hole.”

- **Takeaway:** *People get information from a wide variety of sources. LSLR programs must account for this by promoting their program and sharing educational materials in as many communication channels as is practicable.*

## Accuracy of information

We asked people questions to ascertain their baseline understanding of the risks of lead in water. Patrice told us that she believes it affects your skin and may cause mental and physical disabilities. Michele expressed a general distrust about the information related to the impacts of lead, stating that existing body of research is inconclusive and that, “science doesn’t really show us, you know, like with the vaccine.” She also acknowledged that there is variability in the trustworthiness of available information.

- **Takeaway:** *Due to the abundance of information available, municipal drinking water utilities need to present themselves as an authority on lead in water and provide a consistent message throughout communications materials and the messages shared by the utility’s representatives.*

## Motivations to participate

Patrice participated in the Lead-Free Water For All program primarily because she trusts, and is a supporter of, Blacks in Green. Secondly, she was happy to get the water filter. For Sharlette, free sampling and the water filter were the primary motivators. Combined, they provided her a sense of security and was a cost saver. Whereas she previously drank only bottled water, she said, “I feel more safe and comfortable drinking out of the tap now that I’m able to put the water into my filter.”

- **Takeaway:** *Just as people get information from a variety of sources, people’s motivations vary, and municipal drinking water utilities will need to try a variety of incentives to ensure broad buy-in.*

## Sampling Challenges

Only one person we interviewed expressed challenges with the sampling process, but her challenges were multifarious. Helena previously chose not to participate in the water sampling program run by the Chicago Department of Water Management because the required stagnation period – according to the EPA, at least six hours<sup>25</sup> – was too onerous. She almost chose not to participate in the program run by Blacks in Green but eventually agreed. But she also said she is “not an expert” and was somewhat intimidated by the process. Furthermore, she knew she would receive a water filter through the program and planned to use it, so it did not matter to her what the results of the water sampling showed.

In addition to the interviews described here, Elevate also conducted the water sampling program for multiple homes. Very few individuals allowed their water to stagnate

25 U.S. Environmental Protection Agency (n.d.). *Water Testing Recommendations for Chicago Residents*. [epa.gov/il/water-testing-recommendations-chicago-residents](https://epa.gov/il/water-testing-recommendations-chicago-residents). Retrieved on July 24, 2023.



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# Appendix B: Resident Interviews (Blacks in Green)

as directed, for example, telling us, “Yes,” they had allowed the water to stagnate for 10 minutes (i.e., not long enough) or showing us the kitchen sink, which they had not used for the prescribed period of time but then flushing the bathroom toilet shortly thereafter (i.e., misunderstanding the directions).

- **Takeaway:** *While certain elements of LSLR programs are undeniably difficult and burdensome for residents, those who work in the water industry may incorrectly assume that other elements straightforward and easy, but we cannot discount the challenges they can pose to community members. Utilities must work to remove barriers and stumbling blocks that may prevent participation.*

## Filter Issues

Both Patrice and Michele complained that cold water pressure went down significantly after an under sink filter was installed in their kitchens. Tiffany, who also had a under sink filter installed, said, “My issue is trying not to forget to replace the filter!” In other conversations with residents, we have heard that pitcher filters pose similar challenges related to the speed of filtration and need to change filters.

- **Takeaway:** *Water filtration is a vital step for protecting against the risks of lead in water, both before LSLR as well as, especially, the period immediately after replacement. Utilities should acknowledge the inconvenience imposed and provide clear education about the importance of filtration.*

## Costs

Tiffany appreciated that water sampling and water filters were provided free of charge through the Lead-Free Water For All program, saying, “If you’re

eligible, it costs you nothing to get that extra level of security and prevent contamination.” The program did not, however, offer no cost LSLR, and Margaret was very concerned about potential exposure to lead after the results of her sampling indicated she likely has a lead service line. She wants to replace the service line but may not be able to afford to, lamenting, “if it’s cost prohibitive, I don’t know.”

- **Takeaway:** *It is certainly not news that the cost of LSLR is a roadblock for both utilities and residents. As available, funding for no-cost programs should be prioritized based on transparent and equitable criteria that ensure the most at-risk households and those that are least able to afford the costs receive the benefit.*

## Targeting resources

Montel told us he was not concerned with potential exposure to lead in his home’s drinking water after the filter was installed. However, later in the conversation, we learned that his home is relatively new and is not served by a lead service line.

- **Takeaway:** *While this specific example may be an outlier, it still illustrates the need to target resources so that funding for replacements, filters, etc. are reaching those most at risk.*

## Conclusion

The small sample size and geographic concentration of interview participants means broad generalizations cannot be drawn. Nonetheless, these anecdotes provide useful considerations related to distributing project information and countering misinformation, incentivizing participation and removing hurdles, simplifying instructions, and prioritizing resources to protect the most at-risk members of a community.

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# Appendix C: Water Sector Resource Guides

Many excellent resource guides exist on the topic of community engagement for drinking water utilities, and some even focus specifically on LSLR-related outreach. A selection of guides and the practices they recommend includes the following:

Trending in an Instant: A Risk Communication Guide for Water Utilities. (American Water Works Association, 2019).  
[awwa.org/Portals/0/AWWA/Communications/TrendinginanInstantFinal.pdf](https://www.awwa.org/Portals/0/AWWA/Communications/TrendinginanInstantFinal.pdf)

Communicating About Lead Service Lines: A Guide for Water Systems Addressing Service Line Repair and Replacement. (American Water Works Association (2014).  
[awwa.org/Portals/0/AWWA/Communications/FINALLeadServiceLineCommGuide.pdf](https://www.awwa.org/Portals/0/AWWA/Communications/FINALLeadServiceLineCommGuide.pdf)

Communicating for Multiple Audiences (Lead Service Line Replacement Collaborative (n.d.)  
[lsr-collaborative.org/communicating-for-multiple-audiences.html](https://lsr-collaborative.org/communicating-for-multiple-audiences.html)

Principles for Lead Service Line Replacements (Natural Resources Defense Council et al. 2022).  
[nrdc.org/bio/erik-d-olson/principles-lead-service-line-replacements](https://nrdc.org/bio/erik-d-olson/principles-lead-service-line-replacements)

Basic Information about Lead in Drinking Water (US EPA).  
[epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water](https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water)

Raftelis Wins Back-to-Back Water Quality Communications Contests (Example of a communications toolkit).  
[raftelis.com/insight/raftelis-wins-back-to-back-water-quality-communications-contests/](https://www.raftelis.com/insight/raftelis-wins-back-to-back-water-quality-communications-contests/)

2023 Lead Free DC Plan (DC Water).  
<https://www.dewater.com/sites/default/files/2023%20LFDC%20Plan%20FINAL%206.29.2023.pdf>

Lead Reduction Program Plan, Appendix III.A Overall Communications, Outreach, and Education Plans (Denver Water).  
<https://www.denverwater.org/sites/default/files/lead-reduction-program-plan-appendices-vol1.pdf#page=125>

Many guides and other materials exist to assist municipal drinking water utilities in developing outreach strategies and communications campaigns. Those included here comprise only a limited sample of the available resources and provide a sense of the recommended practices.



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