

Lead Service Line Replacement Best Practices



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Project Summary

Many communities across Michigan, and throughout the country, are working to remove lead service lines while balancing limited staff capacity, rising construction costs, and tight local budgets. At the same time, federal and state requirements are pushing systems to move faster than ever before. This Playbook was created to help you navigate those pressures with practical tools that reflect the real challenges municipalities face when trying to accelerate LSLR work.

This resource is built from the experiences of two pilot communities—Bay City and Dearborn—who tested a variety of approaches to funding, staffing, engineering, and community engagement. Their work showed that while every community is different, the types of obstacles they encounter are often similar, and so are the strategies that can help overcome them.

The goal of this Playbook is to provide you with:

- A clear understanding of common challenges communities face when planning or implementing LSLR
- A set of best practices you can adapt to your local conditions
- Step-by-step checklists to help you move from planning to action
- Examples that illustrate how these ideas have been used in real communities
- Guidance on how to plan for long-term financial and operational success

This Playbook is designed for municipal staff, public works and water system operators, engineering and planning consultants, and technical assistance providers who support local infrastructure efforts. You can use each best practice individually or combine several to build a more comprehensive strategy. The intent is to help you focus on the steps that will make the biggest difference in your community.

As you move through this guide, you'll see practical recommendations, checklists, and examples you can apply right away. Whether you feel on track with your LSLR program, or have identified significant challenges, this Playbook is meant to meet you where you are and support the work ahead.



Overview of Best Practices

As you begin planning or refining your lead service line replacement (LSLR) program, it's helpful to have a clear framework for where to focus your energy. Every community has different strengths and constraints, but many of the challenges you face may look familiar: funding that doesn't go far enough, limited staff capacity, difficulty reaching residents, long agency approval processes, or engineering and construction approaches that slow down replacement efforts.

The best practices included in this Playbook address some of these common pain points. These practices need not be implemented all at once. Instead, think of these practices as tools you can pick up as needed, whether you are trying to strengthen your workforce, improve likelihood of receiving state funding, or streamline how crews operate in the field.

Throughout this Playbook, you will find recommendations and short checklists that help you move from idea to action. These best practices are grouped into key focus areas:

06	Project Financing	How to build a reliable mix of funding sources, including flexible local tools that help fill gaps.	↗
10	Partnering with Local Organizations	Ways to work with trusted nonprofits and community groups to expand outreach and build resident trust.	↗
14	Expediting Residential Access	Strategies to reduce delays when residents are difficult to reach or hesitant to grant access.	↗
18	Regional Procurement & Resource Sharing	Opportunities to lower costs and strengthen capacity by partnering with neighboring communities.	↗
22	Workforce Stabilization & Development	Approaches to building and sustaining the staffing you need to complete LSLR work efficiently.	↗
26	Streamlining Agency Review	How to prepare high-quality applications, manage documentation, and engage effectively in state-level processes.	↗
30	Rate Analysis	Tools to help you plan, manage affordability concerns, and understand the financial realities of meeting LSLR requirements.	↗
34	Engineering Efficiencies	Practical adjustments to your field operations that can reduce cost per line and increase throughput.	↗
38	Community Implementation Checklist	A step-by-step roadmap you can use to guide your community's LSLR efforts.	↗

Each best practice includes a short explanation of why it matters, an implementation checklist, and an example from the pilot communities—so you can see how the ideas were applied in real-world settings.

Project Financing

Financing LSLR work often requires more than securing one grant or applying to a single funding cycle. Most communities need a mix of resources to cover the full scope of work, including construction, planning, staffing, outreach, and long-term operations. State and federal programs provide a foundation, but they don't always cover everything—especially activities that are essential but not traditionally funded, such as community engagement or temporary program staff.

This section helps you think through how to build a sustainable financing approach that reflects your community's real needs. It introduces tools like flexible local funds, multi-year planning, and partnerships with philanthropy or other institutions that can help fill the gaps left by conventional funding sources.

Why This Matters

You will likely need several complementary funding sources to keep your LSLR program moving.

Communities often find that:

- SRF or federal dollars do not cover 100% of project costs
- Subsidies may be limited or unavailable in certain years
- Some critical activities, such as resident outreach or hiring additional staff, are not eligible under certain programs
- Internal workforce capacity depends on stable, predictable funding
- Funding gaps can delay projects or reduce annual replacements

A strong financing approach ensures your program stays on track even when external funding fluctuates.





Pilot Examples

Bay City recognized the need for a local, flexible fund to support critical staffing and outreach activities that were previously covered by temporary American Rescue Plan Act (ARPA) funds. By exploring a DCIF model, they positioned themselves to maintain internal capacity even when federal dollars decline. These dollars may be leveraged in the future for additional infrastructure needs beyond LSLR activities, making it a flexible source of capital to unlock beyond State Revolving Fund (SRF) dollars and their existing Lead Abatement Fee, which covers a portion of their LSLR activities annually.

Dearborn identified funding gaps tied to their high number of remaining lead lines and significant affordability challenges. Flexible funding tools, such as a DCIF, would allow the city to support the translation of program materials, community liaison roles, and outreach activities that are essential for LSLR progress—but not always covered by SRF funds.

CASE STUDY:

DCIF for Workforce Housing

In response to a growing need for attainable workforce housing, a convening was held in Petoskey in 2024, aiming to kick off community-driven projects surrounding workforce housing, ecotourism, and small business. This resulted in the creation of a Direct Community Investment Fund (DCIF) to fund projects within these focus areas in the format of a Charitable Revolving Loan Fund. While the municipality is a primary driver of this project, creating a separate 501(c)(3) to hold and manage the fund has broadened the sources and revenue that can come into the fund. The newly established 501(c)(3) has already identified its first project, a 24-unit apartment building to be converted into attainable workforce housing.

[Learn more about emerging DCIF uses in Michigan.](#)

Implementation Checklist

STEP 1

Clarify Funding Needs

Start by identifying what you're trying to pay for, not only construction, but also the activities that support it.

Consider the following:

- Total remaining LSLR costs
- Staffing needs (temporary or permanent)
- Community engagement and translation
- Data management, mapping, or inventory updates
- Pre-development tasks required for funding applications
- Contingency needs created by cost escalation

Having a clear breakdown helps you determine where each funding source can be most effective.

STEP 2

Assess Current Funding Sources

Look at what you are already using or plan to use, which may include:

- SRF loan and subsidy programs
- Other federal funds (e.g., WIFIA, CBDG, etc.)
- Locally created funds (e.g., DCIF)
- LSLR specific fees
- General fund support

Identify which activities each funding source can cover—and more importantly, which they cannot.

STEP 3

Explore Flexible Local Funding Tools

Flexible dollars help fill gaps left by traditional funding sources. Communities may benefit from creating a Diversified Community Investment Fund (DCIF) or similar mechanism to support program needs.

A flexible fund can support:

- Community outreach and education
- Temporary staffing or project management support
- Pilot programs or demonstrations
- Workforce training or retention efforts
- Affordability initiatives

The National Coalition for Community Capital (NC3) offers a framework for community builders to consider. More information on DCIFs can be found at www.nc3now.org.

STEP 4

Identify & Engage Local Partners

Consider reaching out to:

- Community foundations
- Local hospitals
- Major employers and anchor institutions
- Housing organizations
- Statewide or regional philanthropic partners

When approaching partners, be clear about:

- The specific need you are trying to address
- How their contribution will accelerate progress
- How outcomes will be measured or shared

Partnerships work best when they complement your existing funding sources.

STEP 5

Build a Multi-Year Financing Plan

Your plan should reflect both your annual needs and the long-term work ahead. A multi-year view helps you avoid interruptions and plan for future funding cycles.

As you map out your strategy:

- Estimate how many lines you plan to replace each year
- Align staffing and contractor capacity with those targets
- Identify expected SRF cycles and anticipated competition
- Consider how flexible funding can support years when external dollars fall short
- Communicate clearly with leadership and residents about long-term costs and benefits

STEP 6

Pilot & Refine

- Secure one early contribution and use it for a high visibility need.
- Track outcomes and use them to show value to future contributors.
- Adjust governance or guidelines as needed.

Partnering with Local Organizations

Collaborating with trusted community organizations—e.g., nonprofits, neighborhood associations, faith leaders, cultural organizations, and tenant groups—can aid in supporting outreach, communication, and resident engagement around your LSLR program.

These partners can help you reach residents more effectively, especially in communities with diverse languages, cultural groups, or varying levels of trust in government. They can also support tasks that your staff may not have time to manage, such as door-to-door outreach, translation, or hosting neighborhood meetings.

This section is designed to help you identify the right partners, set clear expectations, and build relationships that strengthen your program from the inside out.

Why This Matters

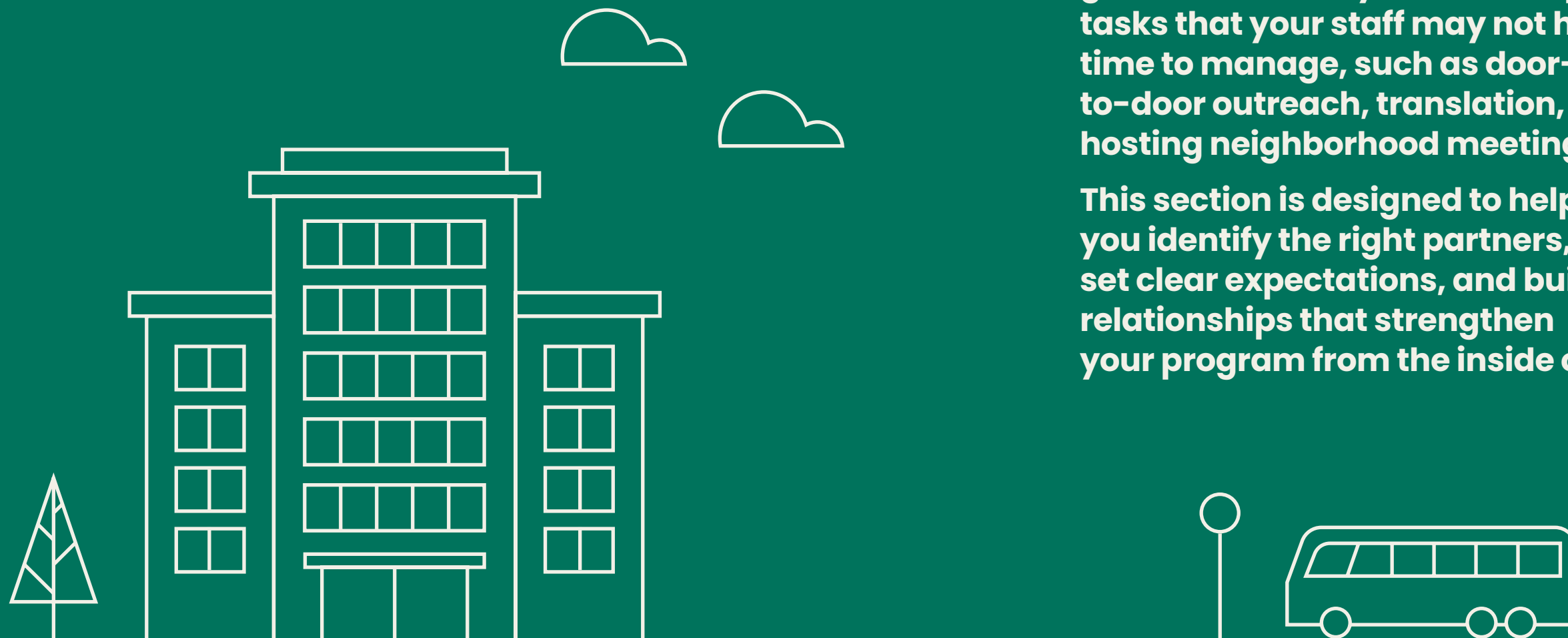
Communities discover early on that successful LSLR programs depend on consistent and meaningful engagement with residents.

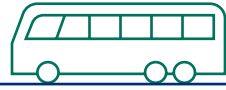
However, municipal staff often face constraints:

- Limited time for direct outreach
- Staff shortages that restrict capacity for education or follow-up
- Difficulty reaching renter households or linguistically diverse communities
- Challenges building trust when residents are unfamiliar with the program

Local organizations can help you bridge these gaps. They often have long-standing relationships with the community and can communicate in ways that feel more accessible and relatable to residents.

Partnering with these organizations allows you to expand your impact without adding new full-time positions and ensures residents receive information from voices they already trust.





Pilot Examples

Dearborn proposed to work with the Arab Community Center for Economic & Social Services (ACCESS) and other nonprofits to support multilingual outreach and build trust with residents. These partners help translate materials, attend community events, and communicate directly with households that might otherwise be difficult to reach. Their involvement can significantly expand Dearborn’s engagement capacity.

Bay City proposed to leverage a relationship with Bay County to help explain infrastructure work, address resident concerns, and increase understanding of the LSLR process where overlapping work occurs within the community.

CASE STUDY:

Brita & Mount Vernon, NY

In response to the new 2025 EPA mandates on residential notices, Brita and the City of Mount Vernon, NY established a public-private partnership to collaborate on public communications, resident education, and to provide point-of-use filtration systems to community members affected by LSLs and LSLR. Rather than pursue separate community engagement strategies, Brita has helped to build municipal capacity by developing and co-issuing a communications package tailored to the unique context of Mount Vernon with the City. This has been built alongside Mount Vernon municipal staff and has significantly increased the communications capacity of the City without adding burden to staff and at no cost. Together, the municipality and Brita are working to build a stronger sense of trust within the community and are equipping residents with the information and resources they need to ensure the health of the community and LSLR efficiency.

In addition to their partnership with Mount Vernon, Brita has partnered with the Denver and the Chicago, among others. [Learn more about how Brita is partnering with municipalities.](#)

Implementation Checklist

STEP 1

Identify Potential Community Partners

Start by mapping out who is already doing work in your neighborhoods:

- Nonprofits serving specific cultural or linguistic communities
- Health clinics or hospitals
- Tenant associations or housing organizations
- Youth groups, senior groups, or social service agencies
- Faith-based organizations
- Community development organizations

The goal is to understand who people already trust, rather than create new structures from scratch. By doing this, you remove redundancies within your system and create stronger local partnerships that you can rely on beyond LSLR activities.

STEP 2

Understand What Each Partner Can Offer

Each organization brings different strengths. Some may help with translation, while others are better at door-to-door outreach or hosting events.

Consider asking:

- Whom are you already reaching?
- What kinds of outreach do you typically support?
- Are you comfortable hosting or co-hosting educational events?
- What languages and cultural groups do you serve?
- What level of staffing do you have for neighborhood work?

This will help you determine which roles align with which partners.

STEP 3

Define Clear Roles & Expectations

Strong partnerships rely on clarity.

Discuss & document:

- The outreach activities you want the partner to support
- What information they are expected to share with residents
- How they will collect feedback or questions from the community
- How you will coordinate on scheduling, events, or follow-up
- How the partner will be compensated for their work

Clear expectations help build trust on both sides.

STEP 4

Provide Tools That Support Success

Partners can only be effective if they have the right resources.

Be prepared to provide:

- Plain language materials explaining LSLR
- Flyers and outreach scripts
- Translated documents
- Frequently asked questions
- Contact information for program staff
- Maps, visuals, or handouts that explain the replacement process

These materials ensure that partners feel confident in the information they are presenting. This will also provide clarity to residents or those impacted by LSLR activities, including expectations around access and timelines.

STEP 5

Schedule Regular Check-Ins

Regular communication helps keep outreach efforts aligned and responsive.

Consider including in your strategy:

- Biweekly or monthly check-ins
- A shared document or dashboard where partners can record questions or barriers they encounter
- Quick updates after major program announcements
- A process for adjusting outreach based on partner feedback

This creates a feedback loop that strengthens both your program and your relationships which may apply to other long-term projects beyond LSLR activities.

STEP 6

Budget for Local Outreach Campaigns

You may need to use various funding sources to support local outreach campaigns:

- General fund dollars
- Grant or philanthropic support
- Contracted outreach budgets

Be sure to appropriately budget for a local outreach campaign, especially if residents within your community are unclear on replacement process or access expectations. When in doubt, communicate early and provide ample time for feedback.

Expediting Residential Access

Although the EPA does not require municipalities to replace residential lines in other parts of the country, municipalities in Michigan are currently responsible for replacing both public and private lines. Partial land replacements are not permitted.

This section provides guidance on how to reduce access-related delays. You will learn how to prepare effective access tools, work with residents and landlords more smoothly, and support contractors who depend on predictable access to keep things on schedule.

Why This Matters

Access challenges can quickly stall your program, especially in neighborhoods with:

- High rental occupancy
- Absentee landlords
- Multi-unit properties
- Residents who are hesitant about construction or distrustful of local government
- Language barriers that slow down communication

If crews arrive at a property and cannot perform the work, the entire schedule can be thrown off. Over time, access delays raise costs, lower productivity, and frustrate residents and staff. A clear, proactive access strategy keeps your program moving and ensures residents understand what is happening—and why.





Pilot Examples

With a large number of renter-occupied homes, the City of Dearborn proposed collaboration with multilingual community organizations to explain the LSLR process and encourage residents to sign access waivers. By pairing translation support with trusted messengers, Dearborn aims to increase their access rates and reduce scheduling delays.

Bay City focused on simple, easy-to-understand access waivers supported by local outreach. Because waivers could be implemented quickly, they became the City’s preferred access tool to maintain a steady schedule for in-house crews.

CASE STUDY:

Benton Harbor LSLR Approach

The City of Benton Harbor, MI used a whole-of-government approach to support its LSLR activities and successfully completed replacement efforts six months ahead of schedule. As part of their strategy, the City issued a Renters Ordinance that allowed municipalities to access residential lines without the presence of a landlord. The City is now in the State’s [Get Ahead of Lead strategy](#) to continue lead service line assessments on private properties.

Implementation Checklist

STEP 1 Assess Housing Types Within Your Community

Start by understanding which types of properties you are working with and where challenges are most likely to occur.

- Ask yourself:**
- What percentage of target properties are rentals?
 - How often do we encounter absentee landlords?
 - Are multi-family buildings included in this phase of the program?
 - Are there language or cultural considerations that may slow down communication?

Knowing your landscape helps you choose the right access tools.

STEP 2 Choose the Access Tools That Fit Your Needs

Most communities use one or more of the following:

- **Access Waivers:** A simple form that residents sign to allow crews to enter private property. This is usually the fastest and most flexible option.
- **Renter Access Ordinance:** A local policy that clarifies responsibilities of landlords and tenants and ensures residents can participate in LSLR even when the property is rented. This option takes more time to adopt but may offer long-term consistency.
- **Hybrid Approach:** In many cases, communities start with waivers and consider ordinance development if waiver compliance is low.

Choose the option that aligns with your capacity, legal environment, and housing mix.

STEP 3 Design Easy-To-Use Forms

Residents are more likely to grant access when forms and instructions are simple and easy to understand.

Ensure your materials include:

- A plain-language explanation of what LSLR is
- Why the work is beneficial and important
- What the resident can expect during construction
- How long the work will take
- Whether water will be temporarily shut off
- A clear contact number for questions
- Translations where needed

Short, clear communication builds trust and reduces confusion. If you plan to distribute water filters post-construction, be sure to communicate that as well.

STEP 4 Align Outreach with Access Needs

Access improves dramatically when outreach is coordinated.

Consider implementing the following:

- Door-to-door outreach to explain the work and collect signed waivers
- Sending materials through trusted community partners
- Hosting informational sessions at a community hall for residents, landlords, and property managers
- Providing multiple ways to submit waivers (online, in person, paper mail)

STEP 5 Prepare & Train Staff & Contractors

Provide your contractors and field staff with:

- A brief script explaining the project
- Standard responses for common questions or concerns
- Contact information for a city staff member who can answer escalated questions
- Clear instructions on how to document attempts at contact or access issues
- Equipped with the right information, crews can resolve issues quickly and respectfully.

STEP 6 Track Access Patterns & Adjust as Needed

Access issues vary by neighborhood, building type, and even time of year.

Consider tracking documenting:

- Number of refusals
- Reasons residents decline access
- Delays due to missed appointments
- Geographic patterns in access challenges
- You can use this information to adjust your outreach strategy, revisit landlord engagement, or improve materials.

Regional Procurement & Shared Resources

Regional procurement and resource sharing involve partnering with neighboring communities, counties, or utilities to purchase materials, contract services, or share equipment and expertise. These collaborations can take many forms, from informal agreements between public works departments to formal cooperative purchasing agreements or joint contracting processes.

The goal is to reduce costs, increase efficiency, and give communities access to resources they may not be able to secure on their own.

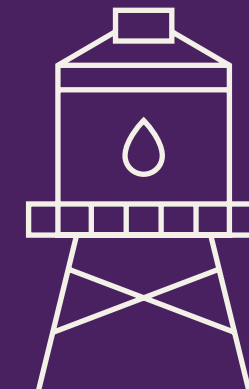
Why This Matters

Communities struggle with the same challenges: high construction costs, limited contractor availability, and tight budgets.

By working together, municipalities can:

- Strengthen their purchasing power
- Reduce material and equipment costs
- Improve contractor availability and pricing
- Share specialized equipment that is too expensive to purchase individually
- Reduce duplication of effort in training and workforce development
- Access procurement models already tested by larger communities

Regional collaboration is especially helpful for communities with limited staff capacity and contractor pools.





Pilot Examples

Dearborn explored collaborating with regional partners to reduce contractor costs and increase availability, especially given the volume of LSLR work within their region. Considering high construction costs and limited contractor capacity, regional procurement could help improve pricing and scheduling.

Bay City recognized the potential to share equipment and workforce training opportunities with nearby communities. Because Bay City performs a portion of its LSLR work in-house, sharing specialized equipment or partnering on training could create additional efficiencies.

CASE STUDY:

Lansing Board of Water and Light & Eaton Rapids Source Water Protection Collaboration

Regional procurement can take many forms—from planning to purchasing. In 2024, the MML Foundation’s MI Water Navigator program (now MI Funding Hub) helped the Lansing Board of Water and Light (LBWL) and the City of Eaton Rapids draft a regional procurement agreement for the development of a shared source water protection plan. Source water protection plans significantly increase scoring on state funding opportunities and are a critical planning document for water infrastructure improvements. By collaborating on this work, both communities saved thousands on planning costs, gained an essential planning document, and increased their chances of securing state funding. MI Water Navigator helped secure Source Water Protection grants for both communities through the Michigan Department of Environment, Great Lakes, and Energy (EGLE), which further reduced costs for both communities and facilitated a regional purchasing agreement and protection plan.

Implementation Checklist

STEP 1

Identify Potential Regional Partners

Start by considering who in your region faces similar challenges or infrastructure needs, including overlapping utility partners in other departments.

Potential partners may include:

- Neighboring cities or townships
- County water or sewer departments
- Regional utilities
- Rural water authorities
- Public works collaborations or councils of government

Look for communities replacing service lines, repairing water mains, or completing related infrastructure work.

STEP 2

Explore What You Can Share

Begin by identifying the types of resources that could be shared easily or cost-effectively.

Common examples include:

- **Materials:** pipes, fittings, meters, replacement parts
- **Contractors:** joint bid lists or shared master contracts
- **Equipment:** hydrovac trucks, pavement saws, restoration equipment
- **Training:** safety programs, excavation training, utility apprenticeships
- **Technical expertise:** engineering support, GIS or data management tools

STEP 3

Review Legal & Administrative Pathways

Before finalizing a partnership, explore which pathway to collaboration would work best for your community.

Common pathways include:

- Interlocal or intergovernmental agreements
- Cooperative purchasing programs
- Piggybacking on another community’s competitively bid contracts
- Regional procurement organizations
- Shared services agreements

The goal is to select an approach that is manageable and creates a sustainable shared resource for all parties involved.

STEP 4

Align Technical Standards & Expectations

For joint purchasing or shared contractors to work well, communities need to align key expectations.

Be sure to discuss:

- Material types and specifications
- Restoration standards
- Documentation and reporting requirements
- Field protocols and job site expectations

Workforce Stabilization & Development

This best practice refers to your community's ability to build and maintain the staff, contractors, and technical capacity needed to perform LSLR work at a steady, predictable pace. It includes evaluating the skills you currently have, identifying gaps, and planning ahead so your program isn't disrupted by turnover, retirements, or the expiration of temporary funding.

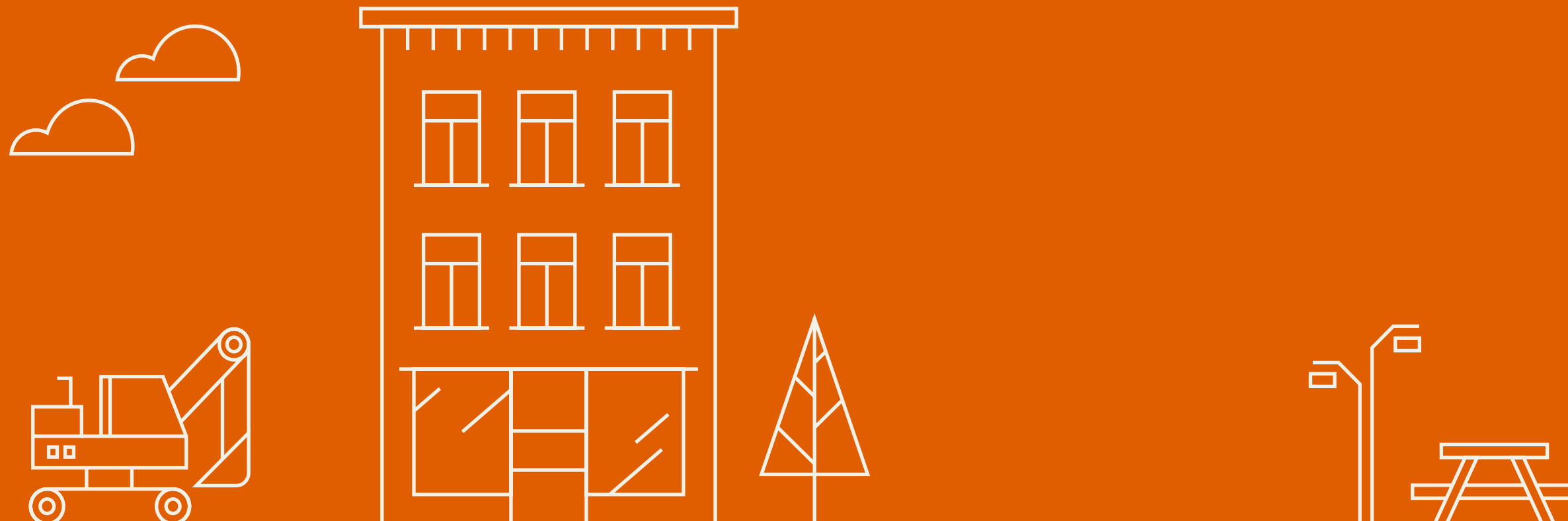
Creating a strong workforce plan ensures that your LSLR program does not stall due to shortages in labor or technical expertise.

Why This Matters

Communities share similar challenges:

- Limited full-time staff dedicated to LSLR
- Positions that were created with temporary funds
- High contractor costs due to limited regional competition
- Difficulty recruiting or retaining specialized field staff
- Limited training opportunities for new or early-career workers
- Lack of predictable funding to support long-term staffing decisions

Stabilizing your workforce ensures that you can maintain or increase the number of lines replaced annually, reduce per line costs, and maintain momentum toward long-term regulatory deadlines.





Pilot Examples

Bay City has relied heavily on its in-house crews, which helps keep costs low and maintain high-quality work. However, several key positions were originally funded through ARPA and are at risk of expiring. Stabilizing this internal workforce became a priority to avoid losing capacity that is central to the city’s success. Each time the City pulls their crew from LSL replacements, it slows down their timeline, which directly impacts their ability to meet the mandated deadline. Additionally, contractors cost approximately \$2000 more per service than the costs associated with using their in-house crew. A four-person crew dedicated to LSLR-only activities saves Bay City approximately \$2.5 million over the course of their replacements.

Dearborn relies heavily on external contractors to complete LSLR work, and rising construction costs have made the program increasingly expensive for the City. To address these challenges, Dearborn is exploring a hybrid workforce model, along with regional approaches to workforce training and contractor development, to create a more predictable and cost-effective implementation pipeline. The City estimates the total cost of its LSLR program at \$64 million. Currently, Dearborn budgets \$2–3 million per year for LSLR activities, which is expected to cover roughly \$27 million of the total need by the 2035 EPA deadline—leaving a \$37 million funding gap. Rate increases are not considered feasible at this time, as they would place an undue financial burden on residents.

If Dearborn implements a hybrid workforce approach, the total cost of the LSLR program could be reduced to approximately \$43.2 million, generating an estimated \$20.8 million in savings over the life of the project. In addition to lowering costs, this approach would expand the local workforce and strengthen coordination between the City and other departments responsible for utility replacement activities. Dearborn is also pursuing operational efficiencies, including a dig-once policy for line replacements. These efficiencies are expected to further reduce costs and help close an additional \$16.2 million of the remaining funding gap.

Implementation Checklist

STEP 1

Assess Your Current Capacity

Start by understanding who is currently doing the work and how much they can realistically accomplish.

Ask yourself:

- How many dedicated staff or crews do we have?
- What skills or certifications does each role require?
- Are we relying mostly on in-house crews, contracted crews, or a combination of both?
- How many service lines can we replace per month with our current staffing?
- Do we expect retirements, turnover, or funding losses in the next 1–3 years?

STEP 2

Identify Gaps & Vulnerabilities

Common vulnerabilities include:

- Key positions tied to temporary grant funding
- Limited cross-training among staff
- Contractors that are over capacity or have variable performance
- Seasonal staffing challenges
- Shortages of licensed or certified workers

Understanding these vulnerabilities helps you plan before they become barriers.

STEP 3

Choose the Workforce Model That Fits Your Community

There is no one-size-fits-all approach.

Most communities choose one of the following models:

- **In-House Model:** City crews perform most or all LSLR work.
Pros: Lower cost per line, consistent quality, strong institutional knowledge
- **Contractor Model:** External contractors manage the majority of replacements.
Pros: Increased capacity quickly, flexible staffing, no long-term labor commitments
- **Hybrid Model:** A blend of in-house staff and contractors.
Pros: Flexibility, resistance to disruptions, ability to shift workload based on funding or staff availability

Choose the model that best aligns with your staffing, funding, and local labor market.

STEP 4

Plan for Workforce Sustainability

To maintain progress over many years, you need a plan that supports your workforce financially and operationally and offers continuity in workforce availability regardless of external factors.

Consider the following:

- Transitioning temporary roles into permanent positions (if possible)
- Using flexible local funding to support staffing in lean years
- Cross-training employees to cover multiple roles
- Offering professional development to retain experienced staff
- Monitoring contractor performance and maintaining a diverse pool of qualified vendors

The goal is to protect your program from disruption and reduce the risk of losing essential expertise.

Streamlining Agency Review

Most communities rely on their state's drinking water and clean water financing programs, most commonly the State Revolving Fund (SRF), to pay for major infrastructure work. These programs typically offer the most affordable long-term capital available, but they also come with significant administrative requirements, firm deadlines, and competitive scoring systems that can sometimes feel confusing or opaque to applicants.

This section is designed to help you navigate those challenges with greater confidence. It highlights what to pay attention to, how to position your projects for success, and what steps you should take before applying so that you don't lose valuable time in the process.

Why This Matters

Regardless of where you are located, you are likely to encounter similar challenges when seeking SRF or comparable state-administered dollars.

Many communities experience:

- Rating and ranking criteria that do not fully reflect local needs or equity considerations
- Strict program requirements that strain limited staff capacity
- Long lead times between project development and funding awards
- Uncertainty caused by fluctuating federal allocations
- Repeat application cycles due to high competition and limited subsidy

Understanding how these barriers show up, and how you can work around them, is essential to maintaining momentum on your LSLR goals.





Pilot Examples

Dearborn qualifies for Clean Water State Revolving Fund (CWSRF) funding, but not for Drinking Water State Revolving Fund (DWSRF) funding, despite having a large remaining LSL inventory. Current scoring criteria do not fully reflect the community’s affordability constraints, renter population, or public health needs. Participation in public comment periods could help advocate for future improvements.

CASE STUDY:

Advocating for SRF Scoring Improvements

In 2023, the MML Foundation’s MI Water Navigator program (now part of [MI Funding Hub](#)), helped the City of Alma, MI to access funding from EGLE’s [State Revolving Fund](#) (SRF). This came at a historic time when ARPA funds were paired with EGLE’s low interest loans while SRF reform was also underway. Initially, the City’s SRF application was not approved under the reformed criteria. This was one of many cases during this first round of SRF applications where initial scoring did not reflect actual assets. Due to the way certain questions were phrased on the new application, many communities received lower scores than they should have, specifically regarding locally versus regionally owned assets. The MI Water Navigator team flagged this issue and—through a collaborative relationship with EGLE—was able to renegotiate scoring for several overburdened communities. As a result, the City’s score was adjusted accordingly, and the community was extended an offer for \$9.7 million in ARPA grants.

Implementation Checklist

STEP 1

Understand How Your State Scores Projects

Before you prepare any application materials, spend time reviewing your state’s SRF scoring system. This will help you understand where your project is likely to be competitive and where gaps may exist.

STEP 2

Build a Multi-Year Funding Strategy

Most communities must apply to SRF multiple years in a row before receiving a subsidy or moving high enough on the funding list. Rather than viewing SRF as a single-year opportunity, approach it as a multi-year planning tool.

Ask yourself:

- What progress can we make in years when we do not receive subsidy?
- Which elements of our LSLR plan can move forward regardless of SRF awards?
- How do we plan for the possibility that funding may be delayed or partial?

STEP 3

Invest in Pre-Development Early

Pre-development work is one of the strongest predictors of SRF success. Beginning this work well before the application period allows you to submit a complete, competitive package.

Important pre-development steps include:

- Updating your service line inventory or asset management plan
- Preparing preliminary engineering reports
- Completing environmental documentation
- Gathering affordability metrics and community data
- Securing council or board resolutions to apply
- Coordinating early with engineering partners

STEP 4

Participate in Public Comment Periods

Every state offers opportunities for municipalities to comment on draft funding lists, scoring criteria, and Intended Use Plans (IUPs). These comment periods are one of the most effective ways to advocate for updates that better reflect local infrastructure challenges.

During these periods, you can:

- Request changes to scoring criteria
- Explain how current criteria do not capture the complexity of your community’s needs
- Provide data or examples that illustrate public health or affordability issues

Your feedback provides state staff with insight and helps shape future funding cycles.

STEP 5

Create a Clear Internal Workflow

Because SRF is documentation-heavy, establishing an internal workflow will make your process smoother and reduce the burden on individual staff.

Your workflow should include:

- A centralized document repository
- Templates for resolutions, outreach summaries, and financial documentation
- Internal deadlines that are earlier than state deadlines
- Defined staff roles (e.g., engineering lead, finance lead, project lead)
- A tracking tool to monitor deliverables and submission status

This approach supports consistency across years and reduces risk if staff turnover occurs.

STEP 6

Plan for Delays and Funding Limitations

Even well-prepared projects can face delays due to reduced federal allocations or high competition.

It is important to plan for:

- Partial funding awards
- Multi-year wait times before subsidy becomes available
- Funding cycles where no subsidy is awarded at all
- The need to combine SRF dollars with local or philanthropic funding sources

Building flexibility into your financial plan ensures you remain ready to move forward when funding becomes available.

Rate Analysis



This best practice focuses on examining your current revenue, forecasting future costs, identifying funding gaps, and planning for steady, predictable progress over many years.

Long-term planning does not mean you must raise rates immediately or dramatically. Instead, it gives you clarity about what is needed, what is realistic for your community—and what tools you can use to support affordability while still meeting regulatory expectations.

Why This Matters

Even with federal and state support, the cost of replacing every lead line often exceeds available external dollars.

Without a clear financial plan, communities may face:

- Unexpected rate increases
- Delayed construction schedules
- Inability to support necessary staffing
- Difficulty securing SRF or other competitive funding
- Difficulty meeting replacement deadlines

A thoughtful rate and financial planning process helps you avoid these challenges by laying out a realistic path forward.



Pilot Examples

Dearborn faces a significant affordability challenge, coupled with a large number of lines to replace. Their cost per line is high and—even with SRF support—a large funding gap remains. Long-term planning helped Dearborn understand the level of subsidy needed, the limits of rate capacity, and the value of flexible local funds to support essential non-capital expenses such as workforce development and resident engagement.

Due to its in-house workforce, Bay City has a more stable cost structure, but must plan for the expiration of ARPA-funded positions and explore mechanisms to support critical staffing long-term. Rate and financial planning help the City assess how to maintain momentum while avoiding disruptions to service or unexpected financial burdens.

CASE STUDY:

Montague, MA, Long-Term Control Plan Financial Capacity Assessment

Quantified Ventures, through its partnership with the New England Water Infrastructure Network (NEWIN), a program of the New England Environmental Finance Center, completed a Financial Capacity Assessment for the Town of Montague, Massachusetts. The Town was under an Administrative Order to update its Long-Term Control Plan (LTCP) and sought partners to assist with updating the document. QV analyzed the Town’s current financials, along with the short- and long-term recommended system upgrades, to support a plan that balances the implementation of necessary infrastructure projects with the challenging demographic and financial realities of the Town. QV worked with the town to complete a rate analysis that considered a five-year budget projection with the short-term LTCP recommendations and other planned infrastructure, bringing more stability to the system for the long term.

Implementation Checklist

STEP 1 Estimate Your Remaining Financial Need

Begin by developing a clear understanding of your current financial needs.

- How many lead service lines are left in your community
- Cost per line based on your staffing model (in-house, contractor, hybrid)
- Engineering, restoration, permitting, and administrative costs
- How inflation or cost escalation will impact future years

STEP 2 Establish Annual Replacement Targets

To meet upcoming regulatory timelines, determine:

- How many lines you need to replace each year
- Whether current capacity matches that target
- What investments would be required to increase throughput

This step helps you understand the financial implications of meeting (or falling behind) your LSLR goals.

STEP 3 Review Your Current Revenue Structure

Look closely at existing revenue streams:

- Water rates
- Capital charges or system development fees
- Existing surcharges or fees
- General fund support
- Remaining federal or state funding

Identify which revenue sources are stable, which are temporary, and which may need adjustment.

STEP 4 Assess Affordability & Community Impact

Affordability plays a key role in shaping realistic rate and financing options.

To understand what is possible:

- Compare proposed rate adjustments to regional affordability benchmarks
- Consider the percentage of low-income households or renters
- Look at how other local utilities structure their affordability programs
- Discuss potential rate impacts with finance staff and elected officials early

A transparent affordability discussion helps set expectations and build trust.

STEP 5 Identify Funding Gaps & Solutions

Potential solutions to funding gaps include:

- Adjusting rates gradually over multiple years
- Using flexible local funding tools (e.g., DCIF)
- Blending SRF loans and subsidies with local revenue
- Seeking philanthropic or employer partnerships
- Exploring fees targeted at lead-related work (where allowable)
- Coordinating LSLR with other capital projects to reduce costs

The goal is not to eliminate all gaps immediately, but to build a realistic plan that acknowledges them and identifies ways to move forward.

STEP 6 Develop a Multi-Year Financial Plan

Translate your findings into a long-term financial plan.

Your plan should include:

- Projected annual costs and revenues
- Planned funding sources (local, state, federal, philanthropic)
- Expected rate adjustments, if any
- Staffing needs and funding strategy for those roles
- A schedule of financing cycles (e.g., annual SRF applications)
- Clear milestones to reassess progress

A multi-year plan helps you communicate clearly with elected officials, residents, and partners about what it will take to complete the work.

Engineering Efficiencies

This best practice refers to the decisions made—both in design and construction—that help teams work more efficiently, keep construction costs manageable, and increase the number of lead service lines that can be replaced each year. This does not always require new technologies or major investments. Often, it is about taking a production-minded approach to LSLR and making practical adjustments that reduce friction in the field.

This section will help you think through how to structure your engineering and construction processes so that they support high-volume, repetitive work.

Why This Matters

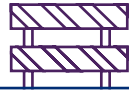
LSLR is not a traditional capital project. Unlike a single plant upgrade or a one-off pipe replacement, it involves repeating the same tasks thousands of times, often under varying field conditions. If your engineering or construction approach treats each replacement like a standalone project, your program will move more slowly, and cost more than it needs to.

Communities often face:

- High per line construction costs
- Contractor downtime due to access or scheduling gaps
- Inefficient dig practices
- Overly complex design requirements
- Limited coordination between engineering, public works, and restoration teams
- Backlogs caused by sequential (rather than parallel) workflows

Engineering efficiencies help you break these bottlenecks and build a more predictable, productive LSLR program.





CASE STUDY:

Top Ten Strategies to Reduce Lead Service Line Replacement Costs and Ensure Public Health Protection

By Safe Water Engineering

Safe Water Engineering offers national expertise in LSLR replacement efforts and has produced ten effective strategies to reduce LSLR costs and ensure public health protection.

The full article: [The Top Ten Strategies to Reduce Lead Service Line Replacement Costs and Ensure Public Health Protection](#)

The full report: [Lead Service Line Replacement Costs and Strategies for Reducing Them](#)

The Top Ten Strategies:

- ① Develop a plan
- ② Analyze replacement costs
- ③ Fully fund replacement efforts
- ④ Adopt appropriate ordinances
- ⑤ Minimize pavement disturbances
- ⑥ Revisit pavement policies
- ⑦ Streamline permits
- ⑧ Tailor traffic control requirements
- ⑨ Create effective contracting and bidding practices
- ⑩ Be transparent about project costs

Implementation Checklist

STEP 1

Align Your Engineering Approach with Repetitive Work

Traditional engineering workflows are not always necessary for LSLR.

Instead, look for opportunities to streamline:

- When possible, use unit price contracting to reduce administrative work and avoid redesigning each location.
- Limit detailed engineering to sites where unusual conditions—such as major obstructions or complex restorations—make it necessary.
- Standardize your design assumptions so crews can work more consistently and quickly.

This allows your team and contractors to focus on replacing lines rather than repeatedly reviewing unique designs.

STEP 2

Minimize Pavement Disturbance & Restoration Costs

Restoration can become one of the most expensive parts of LSLR.

A few adjustments can reduce that burden:

- Encourage the use of trenchless or small-footprint excavation methods when feasible.
- Clarify restoration standards upfront to avoid delays or rework.
- Coordinate with street programs to align LSLR work with planned repaving or reconstruction.
- Reducing surface disturbance supports faster and more affordable replacements.

STEP 3

Sequence Work Geographically

Replacing service lines by neighborhood or block reduces travel time and setup costs, helps contractors stay productive, and simplifies communication with residents.

When planning your sequencing:

- Group properties that share similar street or housing characteristics.
- Avoid scheduling crews across wide geographic areas on the same day.
- Use GIS or field mapping tools to plan efficient daily routes.

This approach creates a steady rhythm for your crews and makes communication easier for residents.

STEP 4

Standardize Expectations & Documentation

Consistent documentation helps you measure performance, track progress, and maintain program quality.

Create clear standards for:

- Installation methods
- Materials used
- Restoration expectations
- Photos and field documentation
- Communication protocols between contractors and city staff

The more consistent your standards, the smoother the workflow will be across different crews or contractors.

STEP 5

Use Data to Monitor Productivity & Improve Performance

Keeping an eye on a few simple metrics can reveal where inefficiencies are slowing down your work.

Consider tracking:

- Lines replaced per day per crew
- Reasons for incomplete or delayed replacements
- Average restoration turnaround time
- Cost per line by contractor or neighborhood
- Weather, soil conditions, or site characteristics that affect throughput

This information helps you make informed adjustments to sequencing, staffing, or contractor expectations.



Community Implementation Checklist

This section brings together the best practices from the Playbook and turns them into a step-by-step roadmap you can use to guide your community’s LSLR efforts. This checklist aims to help you stay organized, prioritize your work, and identify where additional support might be needed.

How to Use This Checklist

You can work through the items in order, or you can jump directly to the steps that align with your most urgent needs. The checklist is not meant to be completed in one sitting—most communities build out these pieces over time. Think of it as a reference to support planning, coordination, and communication with leadership and partners.

STEP 1 Understand Your Local Context

Before implementing any best practice, take time to establish a clear baseline.

Take these actions:

- Count the number of remaining lead service lines
- Identify where those lines are located
- Estimate cost per line (in-house, contractor, or hybrid)
- Review your current staffing capacity
- Identify existing funding sources and gaps
- Assess community demographics (e.g., renter share, language needs, affordability risks)

A good understanding of your starting point helps you make informed decisions about where to focus first.

STEP 2 Identify Your Primary Challenges

Every community has unique constraints. Clarifying yours early will make it easier to choose the right strategies.

Ask yourself:

- Is funding the primary barrier?
- Do we lack staffing or workforce stability?
- Are engineering or restoration practices slowing progress?
- Are internal processes or permitting creating delays?
- Do we struggle with access or resident trust?

This step helps you prioritize which best practices will have the greatest immediate impact.

STEP 3 Select the Best Practices That Fit Your Needs

Based on the challenges you identified, choose two to four best practices to focus on first. Trying to implement everything at once can overwhelm staff and dilute progress.

Each best practice in this Playbook includes a checklist to help you get started.

Match best practices to your challenges:

Funding gaps → Project Financing, Rate Planning, SRF Navigation

Staffing shortages → Workforce Stabilization

Low resident participation → Partnering with Local Organizations, Access Strategies

Inefficient construction workflow → Engineering Efficiencies

High construction costs → Regional Procurement

STEP 4 Build a Simple Action Plan

Once you know which best practices you want to implement, outline steps and assign responsibilities.

Your action plan should include:

- Lead staff or department for each best practice
- 3–5 specific activities for the next 12–24 months
- Expected timeline for each activity
- Resources needed (e.g., staff time, funding, partners)
- Potential risks and how you will mitigate them
- Keep the plan simple and easy to update

STEP 5 Engage Internal & External Partners

Effective communication helps align expectations and maintain momentum.

To strengthen collaboration, consider:

- Holding kickoff meetings with all participating departments
- Scheduling recurring coordination meetings (monthly or quarterly)
- Engaging local nonprofits early to support outreach or translation needs
- Building shared tools for tracking progress (e.g., spreadsheets, dashboards, shared drives)
- Updating leadership regularly to maintain buy-in

STEP 6 Monitor Progress & Adjust as Needed

Monitoring your work helps you understand what is working well and where improvements are needed.

Track simple, meaningful metrics such as:

- Number of lines replaced per month
- Cost per line
- Access success rates
- Permit and restoration turnaround times
- Contractor or crew productivity
- Resident communication or outreach engagement

Use this information to adjust your processes, staffing, or sequencing.

STEP 7 Revisit Your Plan Annually

LSLR programs evolve over time. Revisiting your plan once a year helps you stay aligned with funding opportunities, staffing realities, and community needs.

During your annual review:

- Refresh your cost estimates
- Update your financial plan and SRF strategy
- Evaluate workforce needs
- Assess partner capacity and communication
- Identify new opportunities based on lessons learned

This ensures your program stays responsive and forward-looking.



Additional Resources

Title	Source	Description
<u>Lead and Copper Rule Improvements</u>	EPA	Federal rules for lead and copper in drinking water.
<u>2025 Lead Pipe Funding: The Good, the Bad, and the Big Opportunities Ahead</u>	EPIC	This article explains how EPA's updated approach ties funding to actual inventory data, adjusting allocations across the US.
<u>Funding and Financing Options for Full Lead Service Line Replacement</u>	EPIC	This documents creative funding and financing mechanisms for LSLR.
<u>Stretching the Dollar to Get the Lead Out: Good Decision-Making and Planning for Lead Service Line Cost Efficiencies</u>	EPIC	This guide offers strategic planning guidelines for LSLR efforts.
<u>Early Trends in LSL Inventories from New Jersey</u>	Jersey Water Works	This report examines data and case studies from five New Jersey water systems, highlighting gaps and areas for improvement.
<u>6 Key Principles for Mayors to Act on Lead Pipe Replacement</u>	Lead Innovation Hub	This article examines six key actions Mayors can take to ensure the success of their LSLR programs.
<u>What Cities Need to Know About Lead Service Line Replacement Requirements and How to Fund It</u>	National League of Cities	This article explores best practices for securing funding.

Title	Source	Description
<u>Identification, Monitoring, and Replacement Regulations for Lead Service Lines</u>	National League of Cities	This factsheet outlines EPA's requirements for identifying, monitoring, and replacing lead service lines, and provides case studies of how two communities were able to use state and federal support to catalyze their replacement projects.
<u>Public Communication and Risk Management for Lead Service Lines</u>	National League of Cities	This guide provides best practices for approaching public communication and risk management for Lead Service Lines.
<u>New Map Shows Areas with Lead Violations and High Lead Levels in Tap Water</u>	NRDC	This interactive map shows national data on lead exposure across the US.
<u>Michigan Lead Service Line Tracker</u>	Planet Detroit & Safe Water Engineering	This dashboard compiles Michigan's 2024 data on lead service line inventories and replacement progress, based on EGLE reports released in 2025.
<u>Water Utility – Community Guide for Communications</u>	Water Hub	This guide offers best practices of water communications for communities and utilities

The Michigan Municipal League Foundation supports innovative work through partnerships, grants, and programming that creatively and intentionally bring people together and build community wealth. We also provide fiscal sponsorship and project support in Michigan Municipal League member communities.

We are a nonprofit, but we act with the fervor of entrepreneurs; our people are dynamic, energetic, and highly approachable. We passionately support change for better, thriving communities.

What We Do

Provide grant opportunities to support and build community

Support local public spaces projects that improve quality of life

Build partnerships and connect communities with funding opportunities and strategic connections

Support the education of local government officials and the development of a more diverse pipeline of leadership

Mission

To create and cultivate resources, partnerships, and opportunities that Michigan communities need to thrive.

Vision

Local leaders with the drive to make their community better will have access to the tools and resources needed to act on that opportunity.

How to Support

Help support work like the MI Water Navigator that bolsters Michigan communities and helps them thrive.

[Learn more about how you can contribute to thriving communities.](#)

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The City of Dearborn

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We thank you for your support and partnership in this effort!



We love where you live.