Lead in Water and the Challenges of Lead Service Line Replacement

Lead is a toxic material that is known to have harmful health impacts, especially in children. Lead exposure can damage the brain and nervous system, harm vital organs, impede child development, and cause other long-term, irreversible health impacts. Yet, tens of millions of people in the U.S. get their drinking water from drinking water pipes, known as service lines, made of lead.

Estimates vary as to how many lead service lines (LSLs) are still in use nationwide, ranging from 6 to 12 million, but all are in urgent need of replacement. Unfortunately, many communities do not have complete inventories of their water system’s service line materials and locations. Communities are starting to take stock of LSLs following the Lead and Copper Rule Revisions, which mandate that all water systems must have initial inventories by October 2024.

Replacing LSLs is expensive, with price tags starting at $5,000 in some communities to $25,000 in Chicago. Because lead service lines carry water from the water main to homes, some refer to the portion of the line under the street as the “public side,” and the portion that runs under private property as the “private side” of the line. When water utilities only take responsibility for the “public” portion of the service line, many residents find the cost to replace the remaining portion of LSLs prohibitively high. This results in a disproportionate exposure to lead and its harmful impacts among Americans unable to pay for replacement. In some cases, that distinction has led to a dangerous practice of partial LSLR, in which disruptions to the lead pipe can actually lead to a spike in lead exposure. BIL-funded projects must replace the entire LSL, not just a portion, and EPA encourages states to work with communities to ensure potential SRF applicants propose projects that will fully replace, and pay for, the entire LSL.

Key Takeaways

• The Bipartisan Infrastructure Law (BIL) provides $15 billion to identify and replace lead service lines (LSLs); funding is provided through the DWSRF with no state match requirement.

• 49 percent of funds provided through the DWSRF Supplemental Funding and Lead Service Line Replacement (LSLR) Funding must be provided as grants or forgivable loans to disadvantaged communities.

• Any project funded under the $15 billion LSLR appropriation must replace the entire LSL, not just a portion.
Significant work is needed nationwide to find and replace this toxic drinking water infrastructure while prioritizing affordability and equitable deployment of replacement funding and programs at the local level.

**SRF Basics: How State Revolving Funds Can Support Lead Service Line Replacement (LSLR)**

The Bipartisan Infrastructure Law (BIL) includes $15 billion specifically for LSLR to be allocated by states through the Drinking Water State Revolving Fund program. While these funds will provide important new opportunities for communities to finance LSLR projects and related activities, replacing every LSL in the nation is estimated to cost upwards of **$45 billion**. This means that states and communities will need to leverage multiple funding and financing tools, and that Congress will need to continue to appropriate additional funding to address the nation’s LSLR challenge.

That said, the $15 billion provided by BIL is a significant downpayment on addressing lead in American drinking water systems, especially when combined with other federal and state funding programs for LSLR. The five-year funding package also comes with strong guidance from EPA to make rapid progress on LSLR while prioritizing equity through the process. As such, EPA encourages states to take advantage of supplemental LSLR funding under BIL, as well as base DWSRF funds, to accelerate progress on LSLR through the following activities:

- Leverage DWSRF LSLR infrastructure funds to complete removal and replacement of LSLs, update and map LSL inventories, plan and design for LSLR infrastructure projects, and for certified point-of-use water filters to reduce lead after LSLR projects.
- Devote DWSRF set-aside funding and technical assistance to identify where LSLs are and update inventories
- Use DWSRF set-aside funds to support public education and outreach related to replacement and inventorying efforts.
- Fund sampling and activities directly connected to the identification, planning, design, and replacement of lead service lines.
Prioritizing Funding For “Disadvantaged Communities”

In its 2022 implementation memo, EPA underscores that 49 percent of LSLR funding must be provided as grants and forgivable loans to “disadvantaged communities” (DACs), a technical term that is defined at the state level and shapes which applicants are eligible to receive subsidized funding such as principal forgiveness.

Funding Full, Not Partial, Lead Service Line Replacement

Any LSLR project funded under the dedicated $15 billion appropriation must replace the entire lead line, not just a portion, unless one portion has already been replaced. Partial replacement of lead service lines is a dangerous practice that can create elevated lead levels caused by disruptions to the pipe. As an advocate, you can encourage your state SRF agency to devote funding and technical assistance to help local water systems develop LSL inventories and replacement plans while this funding is available. Under the Lead and Copper Rule Revisions, all water systems must have initial inventories by October 2024. Accelerating those efforts will help communities to develop SRF-eligible LSLR projects sooner.

Allocating Funding According to Need

The Safe Drinking Water Act requires the EPA to conduct a new Drinking Water Infrastructure Needs Survey and Assessment (DWINSA) every four years. The DWINSA dictates each state’s DWSRF allotment based on its assessed proportional share of capital drinking water infrastructure needs. EPA’s most recent DWINSA, based on data from 2015, did not accurately evaluate each state’s share of LSL burden. Congress amended the Safe Drinking Water Act in 2018 to require EPA to include LSLR cost in the next DWINSA, which EPA expects to release in early 2023.

It is imperative that EPA update the DWINSA and DWSRF LSLR allocation formula to reflect the best-available data and direct LSLR resources to address the greatest need. In the case of incomplete inventories and poor LSL data, EPA should incorporate supplemental data, align LSLR funding and LCRR compliance efforts, and take other steps as needed to ensure the DWSRF LSLR funding is appropriately and equitably allocated. This is essential in ensuring that states have the necessary resources to protect their communities from the dangers of lead exposure.
1. **Find out if you have a lead service line** in your home, help other residents in your community identify theirs, and learn about the risks of lead-contaminated water. If you have a lead pipe, contact your water utility to let them know.

2. **Reach out to your water utility and elected officials to find out what their plan and timeline is to develop an inventory, secure funding, and replace lead pipes in your community.** Help your water utility prioritize the community’s most vulnerable residents and neighborhoods in public outreach, communications, and replacement efforts. Share the **lead principles** with your water utility. If needed, help connect your community to the [Environmental Finance Centers](#) for assistance with accessing SRF funds.

3. **Connect with trusted partners in the SRF State Advocates Forum for support in learning about your state’s approach to LSLR**, including through its annual Intended Use Plan (IUP). Pay attention to which communities in your state are receiving funds through the project priority lists in these IUPs – and which communities are not. You can share your recommendations during the public comment period. Find comment examples from organizations across the country on this tracker from EPIC, and feel free to reach out via the SRF State Advocates Forum for more information.

4. **Tell Congress to continue appropriating funds for LSLR nationwide, ensure LSLR dollars go where they are most needed, and that they prioritize the nation’s most vulnerable residents, neighborhoods, and communities.**

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For more information, go to [www.srfadvocatesforum.org](http://www.srfadvocatesforum.org)