
# Enhancing Equity in Lead Service Line Replacement

March 2023

# LSLR Collaborative

The LSLR Collaborative's goal is to accelerate full lead service line replacement in communities across the United States.

**LSLR-Collaborative.org**

# Collaborative Members

- American Public Health Association
- American Water Works Association*
- Association of Metropolitan Water Agencies*
- Association of State Drinking Water Administrators
- Blue Green Alliance
- Children's Environmental Health Network*
- Clean Water Action*
- Environmental Defense Fund*
- EPIC
- Green and Healthy Homes Initiative
- Justice and Sustainability Associates
- Learning Disabilities Association of America
- National Center for Health Housing
- National Association of County and City Health Officials
- National Association of State Utility Consumer Advocates
- National Association of Water Companies
- National Conference of State Legislatures
- National Environmental Health Association
- National League of Cities
- National Rural Water Association
- Natural Resources Defense Council
- North East Midwest Institute
- RESOLVE*
- River Network
- Rural Community Assistance Partnership
- Trust for America's Health
- United Parents Against Lead
- Water Research Foundation

*Steering Committee Members

# Panelists

- **Elin Betanzo**, President and Founder, Safe Water Engineering
- **Jennifer Liggett**, Global Technology Leader for Drinking Water Quality, Jacobs
- **Dr. Marian Rice**, Deputy Director, Salt Lake City Department of Public Utilities
- **Queen Zakia Shabazz**, Founder, United Parents Against Lead

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# Enhancing Equity in Lead Service Line Replacement Programs

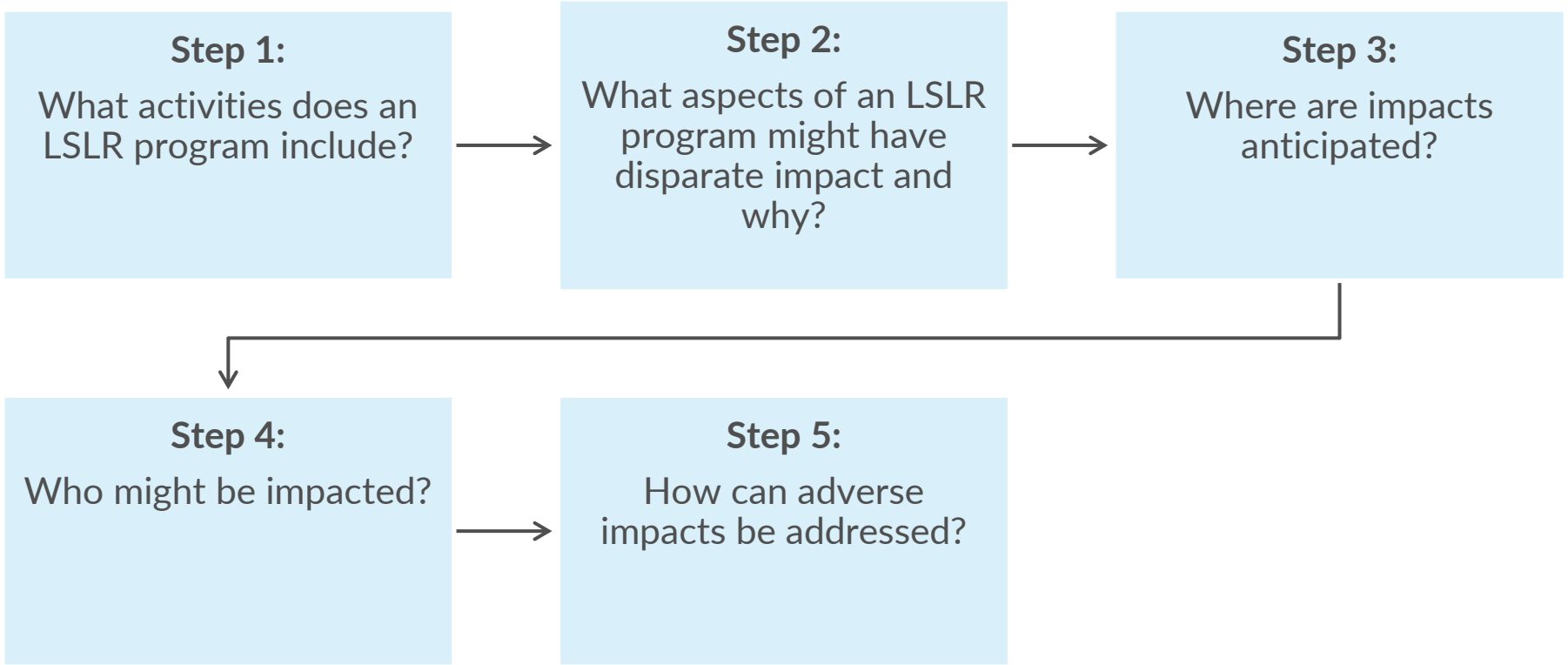
# Why Is Equity Important in a LSLR Program?

## Intentionally centering equity in LSLR helps:

- Ensure equitable access to safe drinking water
- Address environmental racism and promote environmental justice in communities
- Meet LCRR requirements
- Secure funding for LSLR programs


Watch the LSLR Collaborative's webinar on equity

# Step-by-Step Guide to Equity Analysis



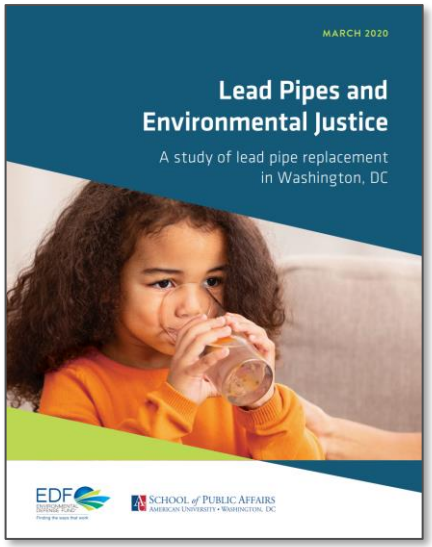
# Elements of a Lead Service Line Replacement Program

1. Create an **inventory** of all service lines and their material types
2. Secure **funding** and **policies** to facilitate full LSLR
3. Plan and **coordinate** LSLR
4. Conduct **full** LSL **replacements** and **implement** measures to reduce risks to homeowners
5. **Communicate** with customers about LSL replacement during planning and implementation

# Where Do Equity Issues Come Up in LSLR?

## Just about everywhere!

- Funding
- Replacement sequencing and timing
- Communications
- Construction-related impacts
- Partial replacements




American University and EDF Report: Lead Pipes and Environmental Justice

**Step 1:** What activities does an LSLR program include?

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**Step 2:** What aspects of an LSLR might have disparate impact and why?

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**Step 3:** Where are impacts anticipated?

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**Step 4:** Who might be impacted?

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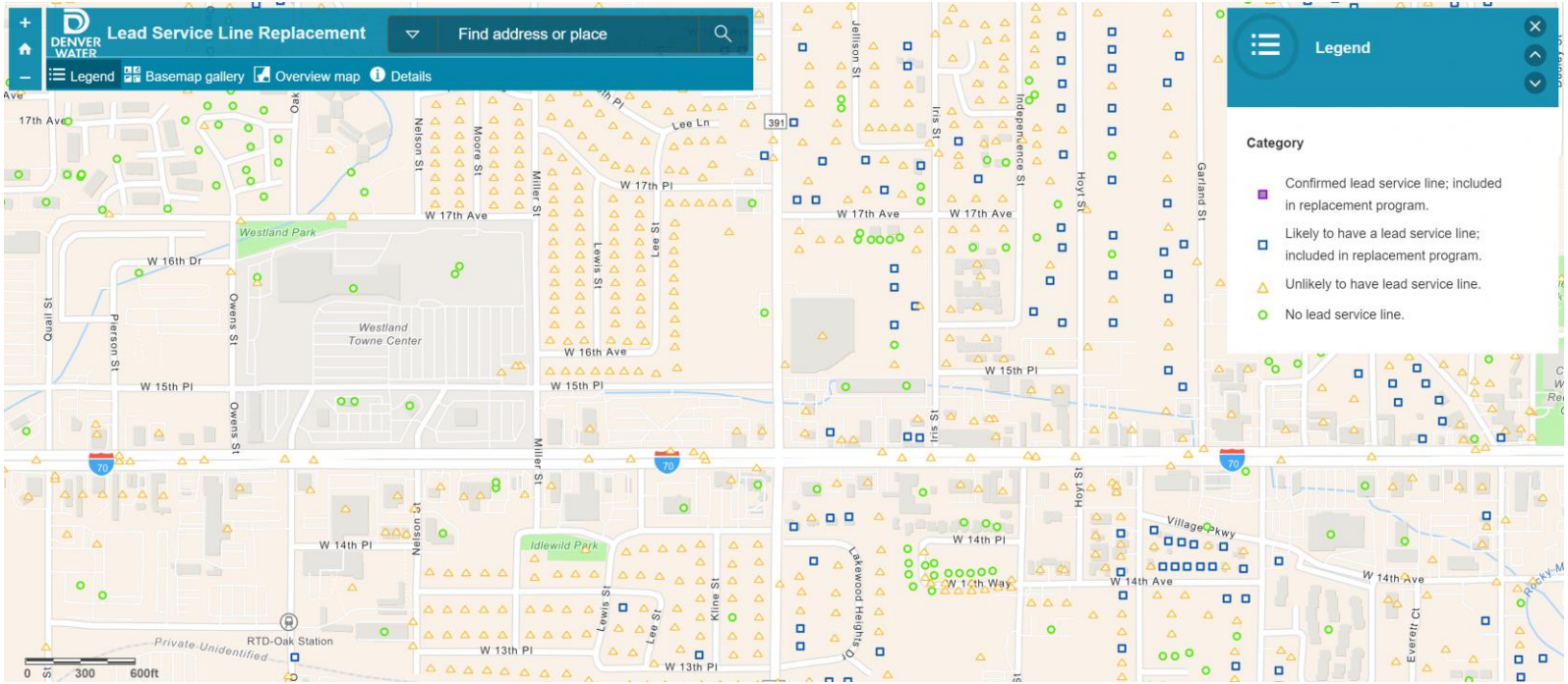
**Step 5:** How can adverse impacts be addressed?

# Where are impacts anticipated?

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# Who Might Be Impacted?

| Consider… | May tell you something about… |
| --- | --- |
| What building types are served by LSLs (e.g., single-family, multi-family, child care facility, school, etc.)? | • Locations with a high density of at-risk populations (e.g., children)<br>• Whether residents are predominantly renters or homeowners |
| What is the income and employment status of neighborhoods with LSLs? | • Residents' relative ability to pay for replacement |
| Are LSLs concentrated in non-English speaking communities? | • Communications strategy |
| Are there other known environmental justice concerns in homes/neighborhoods with LSLs? | • Potential risk of cumulative effects<br>• Exacerbating existing inequities |

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# Overlay Service Line Inventory with Relevant Data

- National-level indices designed to track equity concerns geographically
- Additional key indicators
  - Demographic data (e.g., age, race, education)
  - Economic and employment status
  - Community development patterns

# Use the Right Data and Tools

| Index | Description | Key Indicators Used in Analysis |
|---|---|---|
| **EJSCREEN - Demographic Index**<br>https://www.epa.gov/ejscreen | EJSCREEN is an environmental justice mapping tool that helps identify areas with people of color and/or low-income populations and increased environmental risk factors on a census-block scale nationwide. EJSCREEN overlays demographic indicators of inequity with environmental risk factors to identify locations at high risk of negative outcomes because of environmental factors. These data are also combined into an overall Environmental Justice Index score by census block. EJSCREEN can be used to identify high-priority communities for LSL replacement. | • Percent low-income<br>• Percent people of color<br>• Less than high school education<br>• Linguistic isolation<br>• Individuals under age 5<br>• Individuals over age 64 |
| **City Health Dashboard - Lead Exposure Risk Index**<br>https://www.cityhealthdashboard.com/ | The Lead Exposure Risk Index is a poverty-adjusted risk of housing-based lead exposure from LSLs, paint, and fixtures. Lead exposure risk is calculated based on when a house was constructed and the likelihood of lead exposure in housing from that era. The index combines lead exposure risk with information about the percentage of households living at or below 125% of the poverty level. Housing with potential lead risk and overall lead exposure can directly help in identifying areas to prioritize for LSL REPLACEMENT. | • Poverty<br>• House construction year |
| **Economic Innovation Group - Distressed Communities Index (DCI)**<br>https://eig.org/dci/interactive-map | The DCI examines a variety of key indicators at zip-code level to understand the spatial distribution of U.S. economic well-being. The index combines seven socioeconomic indicators into a single score that depicts how economic well-being in a community compares to its peers. The DCI is calculated at four different levels of geography: zip codes, counties, cities, and congressional districts. Within each level, places are sorted into quintiles based on their performance on the index: prosperous, comfortable, mid-tier, at risk, and distressed. Areas with high DCI scores may be prioritized in equity-based LSL replacement programs. | • Education (based on high school diploma cut-off)<br>• Poverty Rate<br>• Working Class (Adults Not Working)<br>• Housing Vacancy Rate<br>• Median Household Income<br>• Employment<br>• Establishments |
| **Center of Disease Control Social Vulnerability Index (SVI)**<br>https://svi.cdc.gov/map.html | Social vulnerability refers to the ability of communities to survive and thrive when confronted by external stresses on human health. Reducing social vulnerability can decrease both human suffering and economic loss. The Social Vulnerability Index (SVI) uses U.S. census data to determine the vulnerability of every census tract based on 15 indicators and provides a score on a scale from 0 (lowest vulnerability) to 1 (highest vulnerability). Water systems can use the SVI to check if they are part of a Socially Vulnerable County to acquire funding for initiating LSL replacements for their local communities. | • Socioeconomic status (poverty, unemployment, income, and no high school diploma rates)<br>• Household composition and disability status (aged 65 or older, aged 17 or younger, older than age 5 with a disability, single-parent households)<br>• Minority status and language (minority, speak English “less than well”)<br>• Housing type and transportation (multi-unit structures, mobile homes, crowding, no vehicle, group quarters) |

# Defining “Disadvantaged Communities”

- Under the LCRR, LSLR programs must prioritize disadvantaged communities and populations most sensitive to impacts of lead
- Required to receive Infrastructure Improvement and Jobs Act funding

Each state determines what “disadvantaged community” means.

We encourage water systems, regulators and public health departments to connect on the definition to ensure alignment.

# How Can Adverse Impacts Be Addressed?

- Adequate funding and staff for the program
- Supported by relevant policies
- Inclusive program design
- Adequate data collection and engagement to assess progress
- Mechanisms for affected individuals and communities to raise concerns
- Robust public communication
- Working with trusted community partners that can serve as a liaison to facilitate program roll out

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# Thank you!

Questions?

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Or email us at feedback@lslr-collaborative.org