



From Inventory to Implementation:

Lead and Copper Rule Community Forum

MWRA and MWRA Advisory Board
October 24, 2024



Welcome and Introductions

Matthew Romero

MWRA AB Executive Director

Lisa Bina

Deputy Director of Waterworks



Who Are We?

MWRA Advisory Board:

Working to **represent** and **protect** the interests of member communities in the MWRA service area.



Our mission is to foster collaboration and ensure that all communities receive the support they need in water and wastewater management.



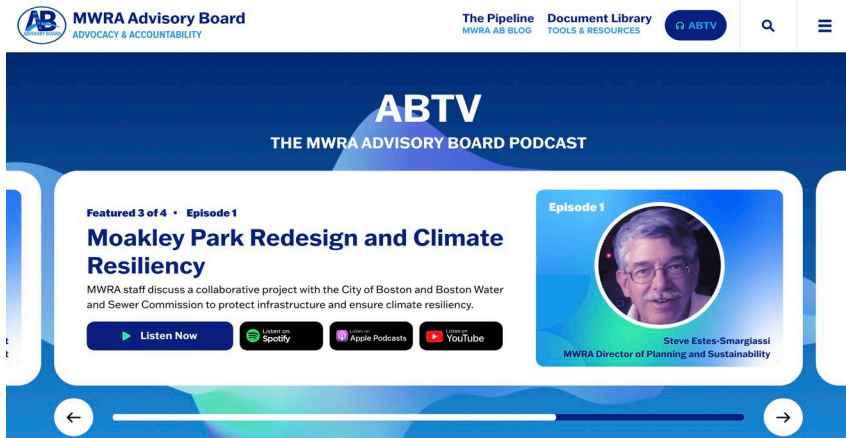
Our New Chapter with ABTV

Introducing **ABTV**, our brand-new podcast!

We'll be discussing key issues around water sustainability, infrastructure, and what's happening in your community.

Catch our latest episodes directly on our website or through your favorite podcast platforms.

Be sure to tune in for the **LCR Workshop podcast** that will be posted on all streaming platforms!



Scan this QR code for Access

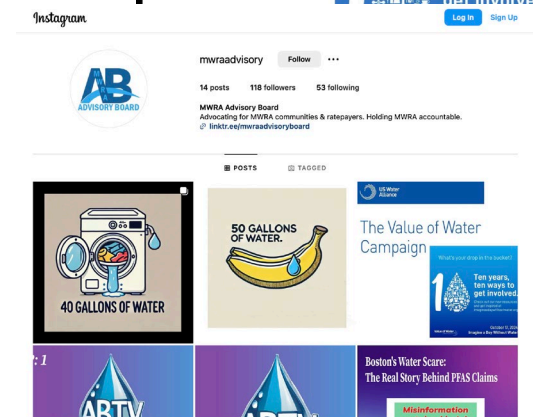
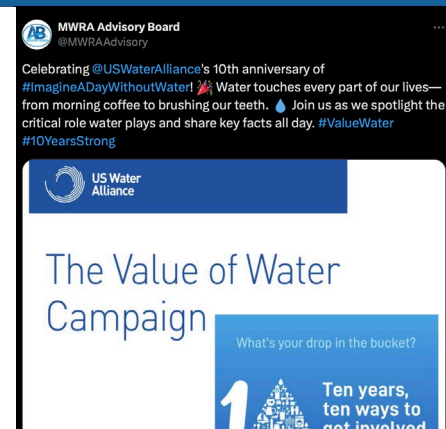
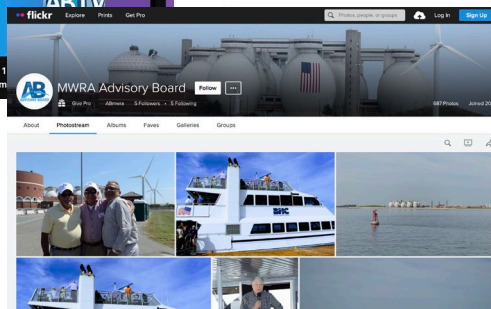
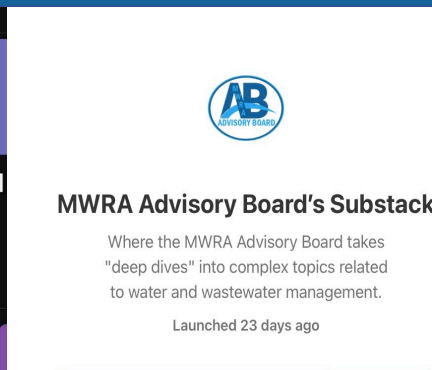
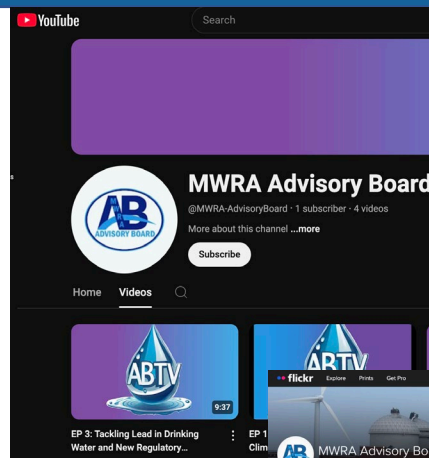




Our Social Media Re-Launch

We're back and better!

Stay connected with us across all platforms for updates, community news, and important water information.



Let's grow our online community and keep the conversation going!



Share Our Work

Our resources aren't just for MWRA communities—they're valuable for **everyone!** 💧



Share our content with anyone who could benefit, from other towns to environmental groups.



shutterstock.com • 2208216527



If you're from a community **without** an active representative, **reach out**—we'd love to have you join us!



Connect With Us

We'd love to hear from you!

Whether it's feedback, questions, or collaboration opportunities, let's stay connected.

Scan This QR Code



- Website: <https://www.mwraadvisoryboard.com/>
- Linktree (access to all links): <https://linktr.ee/mwraadvisoryboard>
- Podcast: <https://www.mwraadvisoryboard.com/podcasts/>



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Training Logistics for Participants

- Everyone is muted – please use raise hand or use chat function
- We'd love for this to be interactive – add your experiences or questions as we go along
- Put your name, affiliation and email address in the chat to ensure TCHs are received. (For each person, if more than one are at your computer) 1.5 TCHs will be awarded for this training.
- Respond to any review questions as they are presented
- A copy of slides will be provided after the forum



Forum Agenda

- Welcome and Introductions – *Lisa Bina*
- Overview -- Where to from here? – *Stephen Estes-Smargiassi*
- Notification to Homeowner and Residents– *Kristen Hall*
- What's On Your Website? – *Claudia Baptista*
- Working to Improve Inventories - *Claudia Baptista*
- Galvanized Requiring Replacement – *Stephanie Tarves*
- 24 Public Notice Hour if Over the Action Level - *Stephen Estes-Smargiassi*
- It's All About Lead Service Lines - *Stephen Estes-Smargiassi*
- Funding Sources for LSL Replacement – *Dave Granados*
- Best Practice is Practice for Compliance - *Stephen Estes-Smargiassi*
- *Q and A – Lisa Bina*
- Upcoming AWIA Deadlines – *Michael O'Keefe*



Where to From Here?

Stephen Estes-Smargiassi
Director of Planning and Sustainability



What's Due in October 2024 and Beyond

- Every community should have submitted an initial service line inventory to MassDEP by October 2024
 - MWRA would love to have your inventory summary
- Every community with lead service lines (LSL), galvanized requiring replacement (GRR) or unknown service lines (UNK) must do initial annual customer notification by November 15, 2024
- Every community over the lead Action Level of 15 ppb must do the 24 hour Tier 1 public notice
- Other aspects of the LCRR have been deferred by the LCRI until after 2027



Lead and Copper Rule *Improvements*

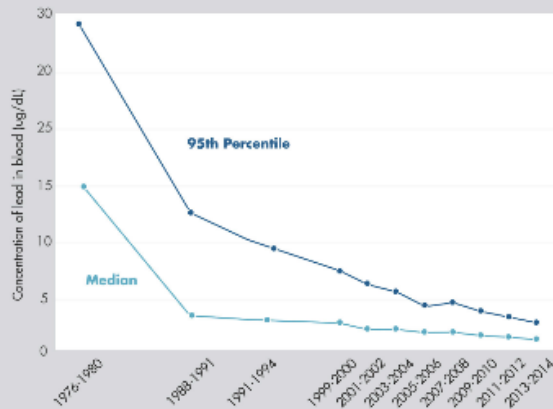
- EPA issued final LCRI in October 2024, as expected, it requires:
- Replace all LSL within 10 years
- Lower Action Level from 15 ppb to 10 ppb
- Change sampling and reporting protocols
- Require re-optimization of corrosion control if over the AL
- Option to defer CCT changes if replace LSL in 5 years
- School and Childcare Sampling
- We will touch on a few of these today
- More details in future training, and as EPA issues guidance



Reminding ourselves why we care!

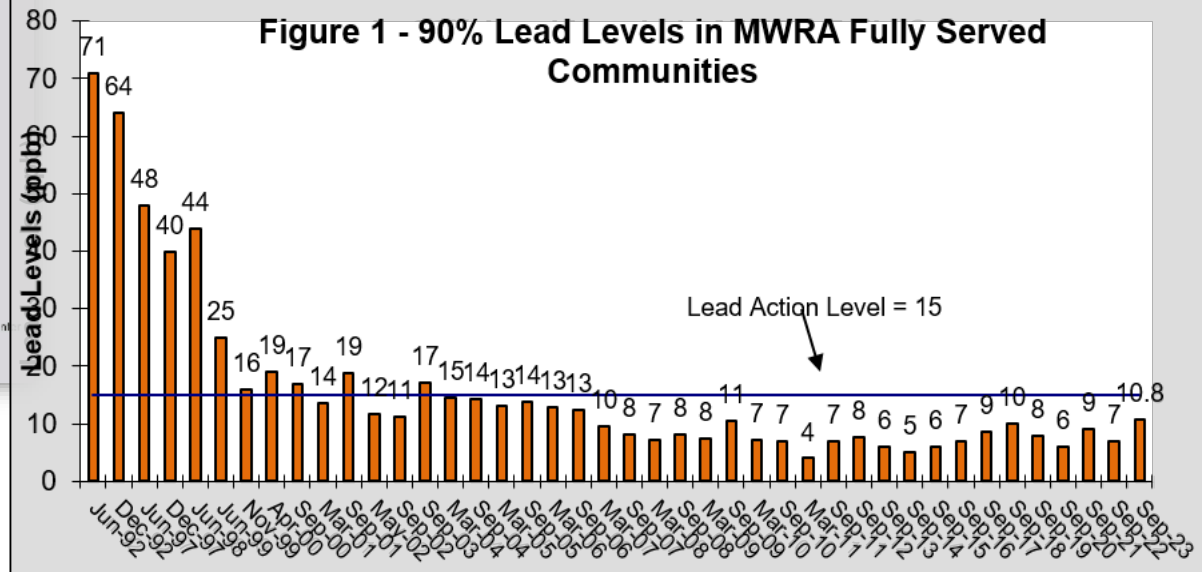
- Our goal is public health protection
- Children's blood lead levels are down 90 percent
- Lead levels at customer's taps have declined dramatically
- But still more to be done – get as close to zero as possible

Lead in U.S. children ages 1 to 5 years: Median and 95th percentile concentrations in blood, 1976-2014



Data: Centers for Disease Control and Prevention, National Center for Health Statistics and National Center for Environmental Health, National Health and Nutrition Examination Survey
EPA, America's Children and the Environment, Third Edition, Updated February 2016

Figure 1 - 90% Lead Levels in MWRA Fully Served Communities





Managing the risk of lead in water is a shared responsibility

- Long Term Goals
 - Reducing lead corrosion
 - Removing lead from contact with our water
- MWRA - Effective Corrosion Control Treatment
- Communities – Removing LSL, Informing the Public
- Residents – Cooperate in LSL Replacement, Premise Plumbing
- Health Professionals – Effective Communication about Risks





Notifications to Homeowners and Residents

Kristen Hall, Senior Program Manager, Community Support



Consumer Notifications

Who gets a notification?

- All customers and consumers with **Lead**, **GRR**, and **Unknown** connections
- New customers at the time of service activation

When?

- Must be received by **November 15th 2024**, and **every year** until it's replaced
- New customers at the time of service activation

How?

- U.S. Mail, Hand/Direct Delivery
- Another method approved by MassDEP
- Posted at multi-family

When to stop?

- When the service line is no longer Lead, GRR or Unknown



Notifications and Media

Likely to generate
national and local
press coverage...



...be prepared to **tell
your story.** Give
people the good news



Have a **plan** in place
and show that you
have already taken
action



Have your staff ready
to respond to
questions



Content of the Notifications: Required Language

Required language, cannot be changed

Health effects of lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or worsen existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these negative health effects. Adults can have increased risks of heart disease, high blood pressure, and kidney, or nervous system problems.



Content of the Notifications: Required Topics

Discuss Steps Consumers Can Take to Reduce Exposure to Lead in Drinking Water

- Running water to flush out the lead
- Explain concerns with using hot water from tap and specifically caution against the use of hot water for preparing baby formula.
- Explain that boiling water does not reduce lead levels
- Encourage regular cleaning of faucet aerators
- Certified Filter to reduce lead exposure
- Suggest that parents have their child's blood tested for lead
- Tell consumers how to get their water tested



Templates: Mass DEP Lead

[System] DRINKING WATER NOTICE

**Choose One: (1) Your home is served by a confirmed lead service line.
(2) Your home is served by a lead service line verified by [verification method]**

This notice contains important information about your drinking water. Have someone translate it for you or speak with someone who understands it.

Dear Customer,

Water systems are now required to document all water service line materials and identify any lead or lead containing materials. Our most recent inventory has determined that [a portion of or the entire] water pipe (called a service line) that connects your [home, building, or other structure] to the water main is made from lead.

Health effects of lead.

[Remove Instructions Before Sending: This section "Health effects of lead" must be kept as is without any changes as required by the LCRP.]

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

Steps you can take to reduce exposure to lead in drinking water.

- **Run your water to flush outlead.** Lead levels increase over time as water sits in lead-containing plumbing materials. Before drinking or cooking with your water after it has sat overnight or longer, flush your home pipes by running water through the kitchen faucet, taking a shower, or doing any other non-consumptive water usage. Run the water for at least 1 minute or until after it turns cold. The amount of time to run the water will depend on whether your home has a lead service line or not, as well as the length and diameter of the service line and the amount of plumbing in your home. **[Areas prone to drought or currently experiencing scarcity of water may want to omit or edit this recommendation.]**
- **Use only cold, fresh water for drinking, cooking, and preparing baby formula.** Run the water for at least 1 minute or until after it turns cold.
- **Do not boil water to remove lead.** Boiling water does not remove lead.
- **Clean your aerator.** Regularly clean your faucet's screen (also known as an aerator). Sediment, debris, and lead particles can collect in your aerator. Lead particles can release lead into your water. See how to clean your aerator at [important-resources-for-safe-drinking-water.pdf \(epa.gov\)](https://www.epa.gov/important-resources-for-safe-drinking-water/pdf/epa.gov).
- **Use your filter properly, if you use a filter.** Filters can reduce lead in drinking water. Make sure it is certified by NSF to remove lead - it will say so on the package. Follow directions to properly install, use, and replace your filter. Do not run hot water through the filter. For more information, and which certifications to look for, visit EPA's website at <https://www.epa.gov/water-research/consumer-tool-identifying-point-use-and-pitcher-filters-certified-reduce-lead>.
- **Identify and replace plumbing fixtures containing lead and any copper piping with lead solder.**
- **Have your child's blood tested for lead.** Children are a higher risk group of the health effects of lead. If you would like to have your child tested, you may contact your health care provider, or local state health department here: **[Health Department Contact Information]**

Have your water tested for lead. You cannot see, taste or smell lead in drinking water. Contact our system for more information about lead in your drinking water and how to get your water tested by a state certified laboratory. See the list of labs here: [Certified Laboratory Search Results \(https://www.mass.gov/how-to/find-a-certified-laboratory-for-water-testing\)](https://www.mass.gov/how-to/find-a-certified-laboratory-for-water-testing)

Opportunities to Replace Lead Service Lines

[Optional: [System] has developed/is developing a Lead Service Line Replacement Program with the goal of removing all the lead service lines in the water system. [If applicable: choose one of the following statements: (1) Consumers may obtain a copy of [System] Service Line Replacement Plan by contacting our system at: [Contact Information]. OR (2) Consumers may view the [System] Service Line Replacement Plan at this website: [Website Information].]

[Explain here who is responsible for replacing the service line and your recommendation. For example: If System Owns Part of the Service Line: [System] intends to replace the portion of the service line under [System] ownership; while replacing this line, we offer to replace the homeowner's portion of the service line at the homeowner's expense or without cost. If you as the homeowner do not replace your portion of the service line, you may experience a temporary increase in lead levels in your drinking water; we strongly recommend having your portion of the service line replaced when [System] replaces the service line portion under [System] ownership.]

If you are planning on replacing the portion of the service line that you own, please notify us at [insert PWS contact information - phone, email, etc.].

Financing for Homeowner Lead Service Line Replacement

Select the applicable option

[If Applicable: System must include information about programs that provide financing solutions to assist homeowners with replacement of their portion of a lead or galvanized requiring replacement service line if consumer payment for a portion of the replacement is required by State or local law or a water tariff agreement.] For more information on financial assistance programs for service line replacement see [\[insert System LSLR help if applicable\]](#).

OR

[If Applicable: Systems without financial programs:

Please consider contacting your home insurance company regarding any information they may have on insurance solutions.]

For MassDEP information on Lead in Drinking Water see <https://www.mass.gov/lead-in-drinking-water>

[System] is required to replace its portion of a lead service line if the homeowner notifies **[System]** that they are replacing their portion of the lead service line.

Please notify **[System]** if you disagree with the service line material categorization in our service line inventory, using the contact information below.

For more information, contact [name of contact] at [phone number] or [mailing address or email address].

Please share this information with all the other people who drink this water at this address, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. PWS ID#: [xxxxxxx] Date distributed [date]

Distributed media type [insert type]

Plan

Ownership

Financing
Private Side

Contact Info

Required
Language

Required
Topics

<https://www.mass.gov/doc/lcrp-consumer-notification-template-confirmed-lead-service-line/download>

<https://www.mass.gov/doc/lcrp-consumer-notification-template-confirmed-galvanized-requiring-replacement-service-line-grr/download>



Templates: Mass DEP Unknown

[System] DRINKING WATER NOTICE

Your home is served by a service line that may contain lead.

This notice contains important information about your drinking water. Have someone translate it for you or speak with someone who understands it.

Dear Customer,

Water systems are now required to document all water service line materials and identify any lead or lead containing materials. Our most recent inventory has determined that [a portion of or the entire] water pipe (called a service line) that connects your [home, building, or other structure] to the water main are of **unknown material classification**. Unknown means that the service line could contain lead.

As a precaution, here is information on the health effects of lead and steps to reduce your exposure. If your service line is confirmed as lead, [System] will share information on financial help to remove it and replace it with one made of a safer material.

Health effects of lead.

[Remove Instructions Before Sending: This section "Health effects of lead" must be kept as is without any changes, as required by the LCRL.]

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

Until the material of your service line is confirmed and any lead is removed, use the following steps to reduce exposure to lead in drinking water.

- **Run your water to flush out lead.** Lead levels increase over time as water sits in lead-containing plumbing materials. Before drinking or cooking with your water after it has sat overnight or longer, flush your home's pipes by running water through the kitchen faucet, taking a shower, or doing any other non-consumptive water usage. Run the water for at least 1 minute or until after it turns cold. The amount of time to run the water will depend on whether your home has a lead service line or not, as well as the length and diameter of the service line and the amount of plumbing in your home. **[Areas prone to drought or currently experiencing scarcity of water may want to omit or edit this recommendation.]**
- **Use only cold, fresh water for drinking, cooking, and preparing baby formula.** Run the water for at least 1 minute or until after it turns cold.
- **Do not boil water to remove lead.** Boiling water does not remove lead.
- **Clean your aerator.** Regularly clean your faucet's screen (also known as an aerator). Sediment, debris, and lead particles can collect in your aerator. Lead particles can release lead into your water. See how to clean your aerator at [important-resources-for-safe-drinking-water.pdf \(epa.gov\)](https://www.epa.gov/water-research/consumer-tool-identifying-point-use-and-pitcher-filters-certified-reduce-lead).
- **Use your filter properly, if you use a filter.** Filters can reduce lead in drinking water. Make sure it is certified by NSF to remove lead - it will say so on the package. Follow directions to properly install, use, and replace your filter. Do not run hot water through the filter. For more information, and which certifications to look for, visit EPA's website at <https://www.epa.gov/water-research/consumer-tool-identifying-point-use-and-pitcher-filters-certified-reduce-lead>.
- **Identify and replace plumbing fixtures** containing lead and any copper piping with lead solder.
- **Have your child's blood tested for lead.** Children are a higher risk group of the health effects of lead. If you would like to have your child tested, you may contact your health care provider, or local state health department here: **[Health Department Contact Information]**.

Have your water tested for lead. You cannot see, taste or smell lead in drinking water. Contact our system for more information about lead in your drinking water and how to get your water tested by a state certified laboratory. See the list of labs here: [Certified Laboratory Search Results \(https://www.mass.gov/how-to/find-a-certified-laboratory-for-water-testing\)](https://www.mass.gov/how-to/find-a-certified-laboratory-for-water-testing)

Opportunities to Verify Lead Service Materials [PWS should include one of the options below, or a similar method]

(1) To verify the material of your service line, contact PWS at [preferred contact method] to schedule an inspection.

(2) The [System] Staff or its contractor may contact you to perform a service line material inspection, please utilize the **MassDEP Lead Service Line Identification Tool** presented in the QR codes below to send your service line information to the [System] and to **learn more about Lead in Drinking Water**.

[Delete graphics below if not applicable]

MassDEP Lead Service Line Identification Tool
<https://app.smartsheet.com/b/form/9ee3967972f943ca63e8b936cd7f92b>



US EPA Protect Your Tap Tool **Protect Your Tap: A Quick Check for Lead**



For more information on lead see [System] webpage at [weblink]

For MassDEP information on Lead in Drinking Water see <https://www.mass.gov/lead-in-drinking-water>

For more information, or if you have questions on how to verify the material of your service line, contact [name of contact] at [phone number] or [mailing address or email address].

Please share this information with all the other people who drink this water at this address, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [system]. PWS ID #: [xxxxxxx] Date distributed [date]

Distributed media type [insert type]

QR code to LSL
Identification Tool



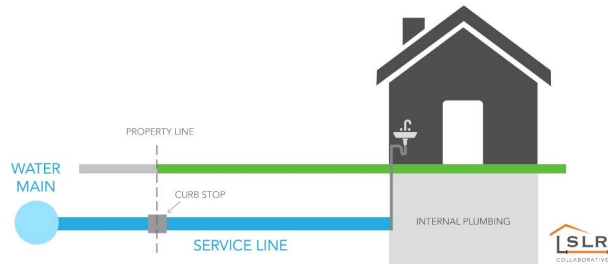
Templates: EPA Lead

Notice of confirmed lead service line

< Public Water System (PWS) name > is focused on protecting the health of every household in our community. This notice contains important information about your drinking water. Please share this information with anyone who drinks and/or cooks using water at this property. In addition to people directly served at this property, this can include people in apartments, nursing homes, schools, businesses, as well as parents served by childcare at this property.

< PWS name > has determined that **< a portion of or the entire >** water pipe (called a service line) that connects your **< home, building, or other structure >** to the water main is made from **lead**. People living in homes with a lead service line may have an increased risk of exposure to lead from their drinking water.

< The figure below represents a typical scenario for a residence in many cases but does not represent all scenarios. Water systems may wish to replace the image with one of their own or remove it.>



Health effects of lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or worsen existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these negative health effects. Adults can have increased risks of heart disease, high blood pressure, and kidney, or nervous system problems.¹

¹ Text in italics is required and cannot be changed.

Steps you can take to reduce lead in drinking water.

Below are recommended actions that you may take, separately or in combination, if you are concerned about lead in your drinking water. The list also includes where you may find more information and is not intended to be a complete list or to imply that all actions equally reduce lead in drinking water.

Use your filter properly. Using a filter can reduce lead in drinking water. If you use a filter, it should be certified to remove lead. Read any directions provided with the filter to learn how to properly install, maintain, and use your cartridge and when to replace it. Using the cartridge after it has expired can make it less effective at removing lead. Do not run hot water through the filter. For more information on facts and advice on home water filtration systems, visit EPA's website at <https://www.epa.gov/water-research/consumer-tool-identifying-point-use-and-pitcher-filters-certified-reduce-lead>.

Clean your aerator. Regularly remove and clean your faucet's screen (also known as an aerator). Sediment, debris, and lead particles can collect in your aerator. If lead particles are caught in the aerator, lead can get into your water.

Use cold water. Do not use hot water from the tap for drinking, cooking, or making baby formula as lead dissolves more easily into hot water. Boiling water does not remove lead from water.

< Areas prone to drought or currently experiencing scarcity of water may want to omit or edit this recommendation.> Run your water. The more time water has been sitting in pipes providing water to your home, the more lead it may contain. Before drinking, flush your home's pipes by running the tap, taking a shower, doing laundry, or doing a load of dishes. The amount of time to run the water will depend on whether your home has a lead service line or not, as well as the length and diameter of the service line and the amount of plumbing in your home. [Include tailored flushing information, if appropriate, or add following language] Residents may contact us at [phone number and/or email address] for recommendations about flushing times in their community.

Learn about construction in your neighborhood. Contact us at [phone number and/or email address] to find out about any construction or maintenance work that could disturb your service line. Construction may cause more lead to be released from a lead service line or galvanized service line if present.

Have your water tested. Contact us, your water utility, at **< insert PWS contact information – phone, email, etc.>** to have your water tested and to learn more about the lead levels in your drinking water. Alternatively, you may contact a certified laboratory to have your water tested for lead. A list of certified laboratories is available at **< provide location of list or explain your water system's testing program and any costs to customer if one exists>**. Note, a water sample may not adequately capture or represent all sources of lead that may be present. For information on sources of lead that include service lines and interior plumbing, please visit <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#getinfo>.

Get your child tested to determine lead levels in their blood.

A family doctor or pediatrician can perform a blood test for lead and provide information about the health effects of lead. State, city, or county departments of health can also provide information about how you can have your child's blood tested for lead. The Centers for Disease Control and Prevention recommends public health actions when the level of lead in a child's blood is 3.5 micrograms per

Required
Topics

All three in one Link

<https://www.epa.gov/system/files/documents/2024-07/notification-templates-for-known-or-potential-lsls.docx>

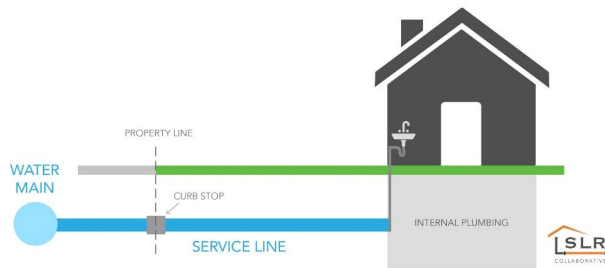


Templates: EPA Unknown

Notice of unknown service line material

<Insert PWS Name> is focused on protecting the health of every household in our community. This notice contains important information about your drinking water. Please share this information with anyone who drinks and/or cooks using water at this property. In addition to people directly served at this property, this can include people in apartments, nursing homes, schools, businesses, as well as parents served by childcare at this property.

<Insert PWS name> is working to identify service line materials throughout the water system and has determined that the water pipe (called a service line) that connects your <home, building, or other structure> to the water main is made from **unknown material** but may be lead. Because your service line material is unknown, there is the potential that some or all of the service line could be made of lead or galvanized pipe that was previously connected to lead. People living in homes with a lead or galvanized pipe previously connected to a lead service line have an increased risk of exposure to lead from their drinking water.



Identifying service line material

To help determine the material of your service line, please <contact PWS via phone, email and/or visit website>. EPA has developed an online step-by-step guide to help people identify lead pipes in their homes called Protect Your Tap: A Quick Check for Lead. It is available at: <https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead>.

Health effects of lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or worsen existing learning and behavior problems. The children of women who are exposed to

Link to LSL
Identification Tool

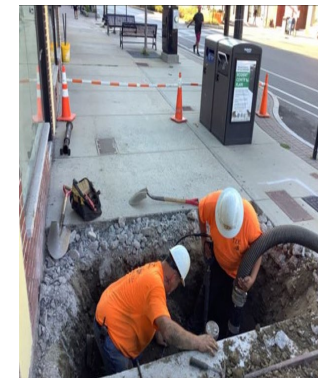
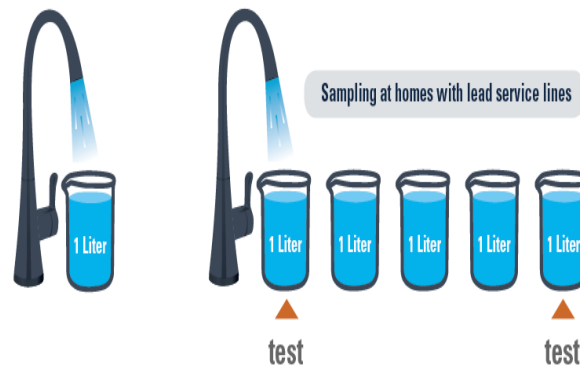
All three in one Link

<https://www.epa.gov/system/files/documents/2024-07/notification-templates-for-known-or-potential-lsls.docx>



Notifications Recommendations

- Be sure to include important information about your own programs, and situation. Tell your story well
- Offer recipient something positive to do
 - Help confirm inventory
 - Schedule LSL replacement
 - Take action to reduce risk until replacement





Multi-Family Homes and DEP Q&A

- **Notifications for Multi-Family Dwellings**
 - Owner to notify all residents individually **OR**
 - Post notification in visible location
 - PWS to request verification
- **DEP Q&A**
 - Lots of useful Information
 - Links to templates



<https://www.mass.gov/doc/frequently-asked-questions-about-the-lead-and-copper-rule-revisions-lcrr/download>



Use your Website to Answer Likely Questions

- How do you know what my service line is made of?
- I think the information is wrong!
- Why didn't I get a letter?

<https://www.fairfaxwater.org/news/did-you-receive-letter-fairfax-water-about-your-water-service-line>



Letters will be mailed mid-late October. **If you do not receive a letter, it may be for one of the following reasons:**

- Your service line was installed in 1979 or later, in which case it is designated as non-lead since it was installed after the ban on lead pipes
- You filled out our online survey and identified that your service line is non-lead
- Fairfax Water was able to obtain records on the material of your service line, and those records show that it is non-lead



Service Line Inventory

What's On Your Website?

Claudia Baptista

Project Manager, Community Support



Service Line Inventory

It's complete! Now What?

- ❑ *"Publicly Available" Requirements*

- ❑ *Communication / Transparency*

- ❑ *Continued Improvement:*

 - "Initial" to "Baseline" Inventory*

- ❑ *Community Example*



Publicly Available Requirements

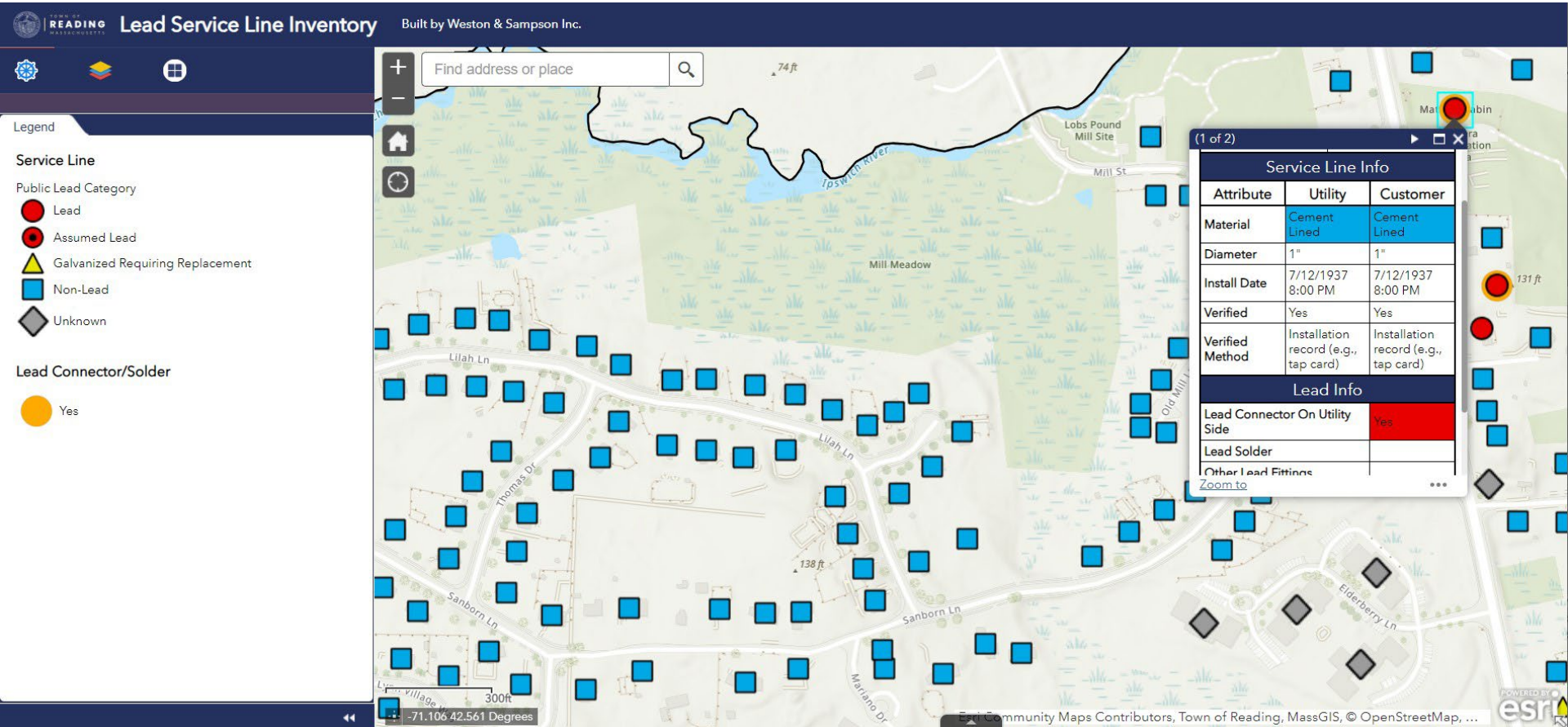
ALL SYSTEMS MUST MAKE THE INVENTORY AVAILABLE TO THE PUBLIC

- Full Accounting of Services Using: List, Table, or Map with Location Identifier
- Required data for each Service Line Materials on both sides (public and private)
- Every system – make available to the public
 - Systems greater than **50,000** must post inventory online
- Every system – Information on Inventory in CCR
- “No lead” certification alternative if no LSL, GRR or UNK





Public/Private Details





Service Line Inventory LIST

Lead Service Report

Street Number	Street Name	Size	Material
213			
0	Aberdeen Avenue	2"	Copper
16	Aberdeen Avenue	1"	Copper
20-22	Aberdeen Avenue	1"	Copper
24-26	Aberdeen Avenue	1"	Copper

	A	B	C	D
1	LOCATIONAL IDENTIFIER	CURRENT PUBLIC SERVICE LINE MATERIAL	CURRENT PRIVATE SERVICE LINE MATERIAL	ENTIRE SERVICE LINE CLASSIFICATION
15470	104 WOODSTOCK ST	C	C	NON-LEAD
15471	98-100 WOODSTOCK ST	C	C	NON-LEAD
15472	11 WOODS AVE #2	B	B	NON-LEAD
15473	12-14 WOODS AVE	C	C	NON-LEAD
15474	15-17 WOODS AVE	L	L	LEAD



Website should include:

- Service Line Inventory (SLI)
- Contact information
- Plans for Improvements
- Goal for complete LSL Replacement: **2032**
- Prioritization plan
- FAQ's



Protecting Public Health, Building Community Trust



Consider: Dashboard / Work Areas

Lead Service Lines by the Numbers



Lead Service Lines (Utility Owned)

639



Lead Service Lines (Customer Owned)

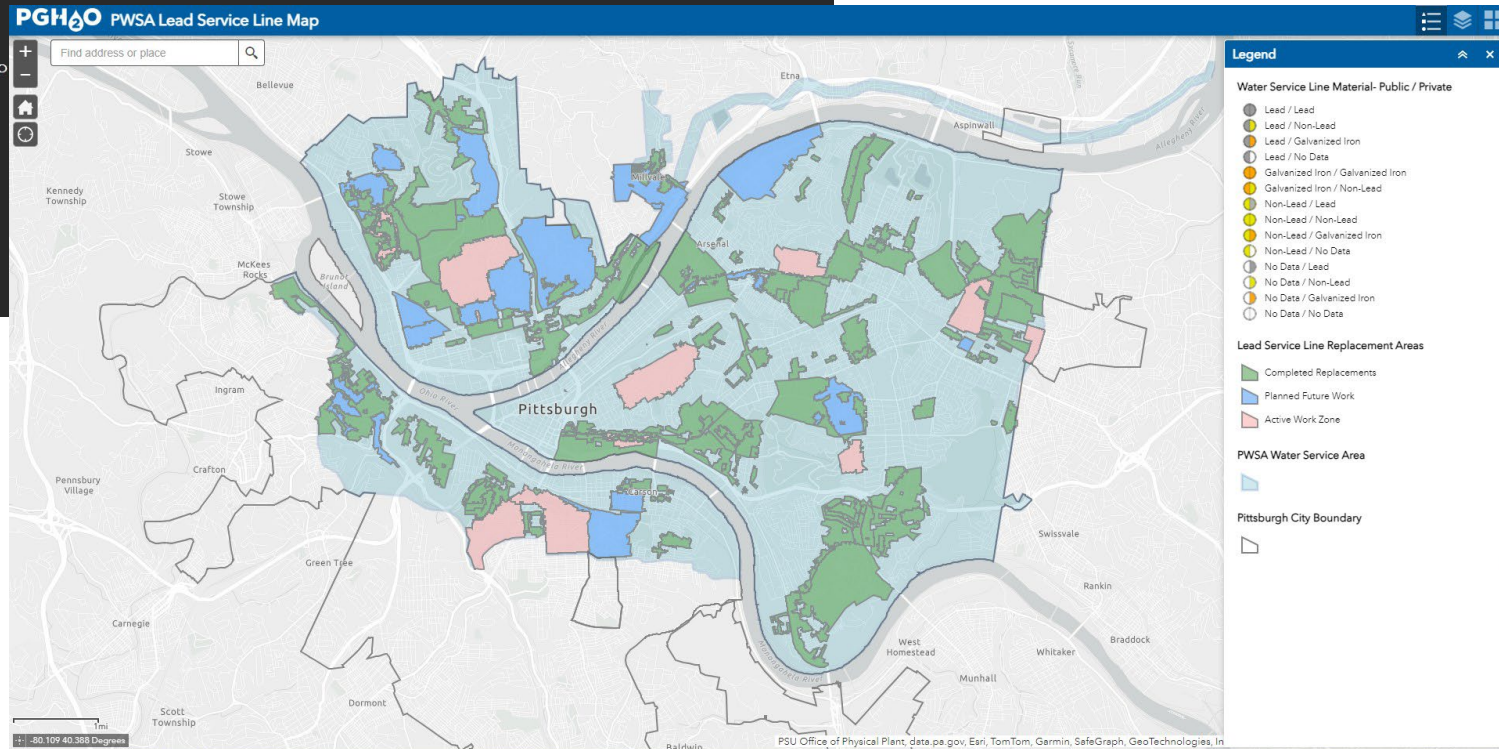
694



Lead Service Lines Replaced

374

Use the link below to



LEAD REDUCTION PROGRAM

Report Period 1/1/2024 to 9/30/2024

KEY METRICS



Program Replacements

28,392

Replacements

YTD Lead Service Line Replacements*

Lines Replaced:

6,067

135.5% of Annual Target

04,477

*Minimum target ALSLR Replacement based on 7% of baseline inventory.

Lines Investigated:

10,881

449.6% of Annual Target

02,420

**Target of investigations is 1.4% of likely and unlikely lead service lines based on the baseline inventory.

Filter Adoption Rate

83%

As of Oct 9, 2023

12%

Response Rate

Corrosion Control Treatment

Location (WTP)

pH = 8.8 ± 0.2

Footfills WTP Treated Water

Yes

✓

Marston WTP Treated Water

Yes

✓

Moffat WTP Treated Water

Yes

✓

Location (Distribution System)

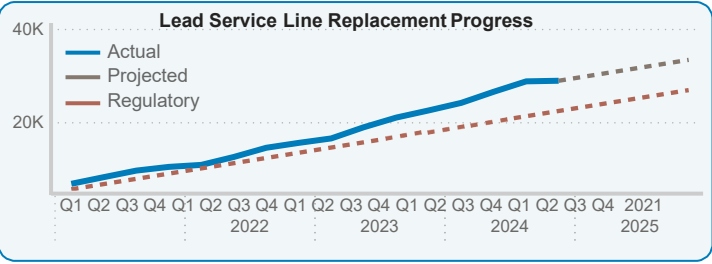
pH = 8.8 ± 0.3

Distribution System

Yes

✓

Lead Service Line Replacement Progress



Communications, Outreach and Education Activity



183

Events



21,843

Event Attendees



935.1K

Mailing, Digital & Phone Outreach*

*Digital Data Updated Quarterly.

Equivalency Model

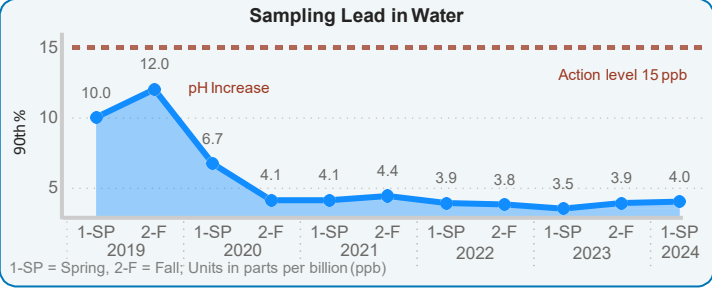
LRP 90th Percentile / Lead Optimal Corrosion Control Treatment (OCCT) 90th percentile as reported for 2023

0.06

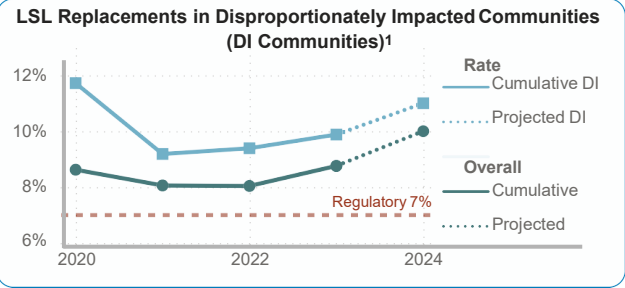
Values less then or equal to 1 indicate the LRP is at least as efficient as OCCT*

*Optimal corrosion control treatment was designated bythe state health department to protect Denver Water customers from lead exposure.

Sampling Lead in Water



LSL Replacements in Disproportionately Impacted Communities (DI Communities)¹



The information presented in the dashboard should be used for program management reporting. Regulatory reporting requires additional data review and update prior to the time of submittal.

¹ Denver Water must replace LSLs at the same or greater rate in disproportionately impacted communities than the overall program rate on a cumulative rolling average basis. Disproportionately impacted communities are those at risk of experiencing more adverse environmental or health impacts as determined by the U.S. EPA's Environmental Justice Screening and Mapping tool (epa.gov/ejscreen).



Educational Resources



Lead and Your Health

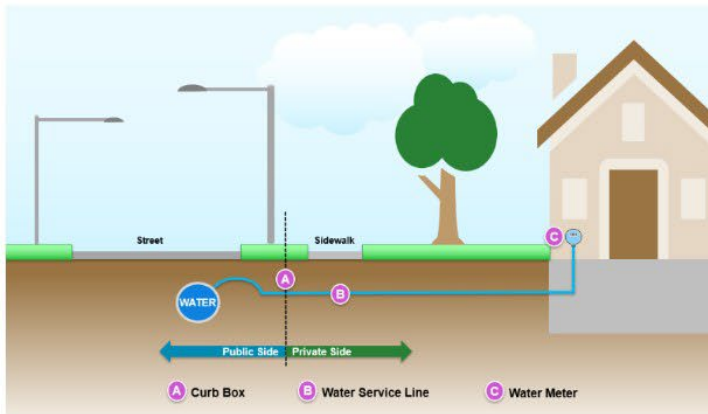
Why is lead a problem?

Lead can affect almost every organ and system in your body. Young children and infants are particularly vulnerable to lead. A dose of lead that would have little effect on an adult can have a significant effect on a child.

How does lead get into drinking water?

Lead can enter drinking water when pipes and plumbing fixtures that contain lead corrode, especially where the water has high acidity or low mineral content.

[Learn more](#)



What is a service line?

The service line connects the water main to the property. The water utility owns the utility owned portion of the service line and the customer owns the customer owned portion of the service line.

[Learn more about Lead Service Lines from the EPA](#)



From Initial Inventory to Baseline Inventory

Claudia Baptista
Project Manager, Community Support



Continuous Improvement

**Initial Inventory
Oct 2024**

- Publicly Available
- Notifications

**Baseline Inventory
Oct 2027**

- Notifications
- Replacement Rate



Impact of Unknowns on Replacement Planning

1. No Unknowns

Lead	2,000
GRR	1,000
Total Replacement Pool	3,000
Rate	20%
Replacements Per Year	600

2. Unknowns = Lead

Lead	2,000
GRR	1,000
Unknown	3,000
Total Replacement Pool	6,000
Rate	20%
Replacements Per Year	1,200

- 20% Rate = 5 year goal (2027 – 2032)
- No credit for partial replacements
- Verification of unknown to non-lead does not count
- Updated annually for verified unknowns

WORK ON THE UNKNOWNSES!!!



Impact of Unknowns on Replacement Planning

3. Unknowns Greater than Lead

Lead	500
GRR	200
Unknown	4,000
Total Replacement Pool	4,700
Rate	20%
Replacements Per Year	940

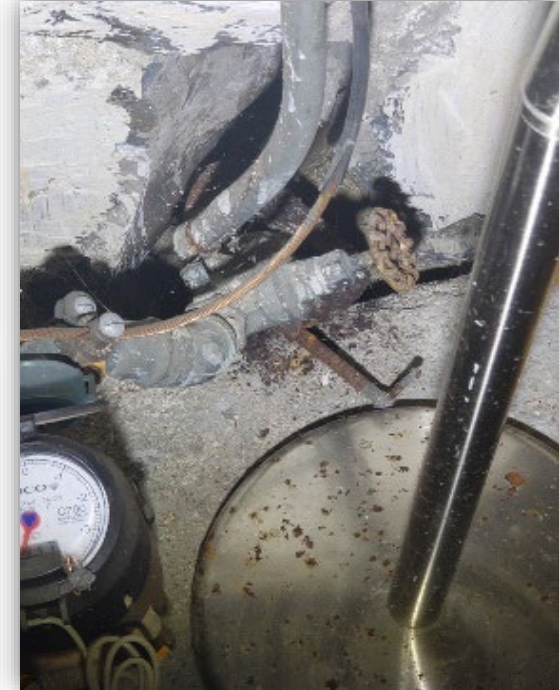
Too many unknowns = unachievable replacement rates

WORK ON THE UNKNOWNSES!!!



Strategies for Eliminating Unknowns

- ☐ Customer Self-Identification
- ☐ Visual Inspection
- ☐ Scrape Test
- ☐ Magnet Test
- ☐ Water Quality
- ☐ Potholing
- ☐ Full Test Pit Excavation



LCRI requires a verification survey



Customer Self-Identification

CITY OF MALDEN

WATER SERVICE LINE CUSTOMER SURVEY

Please scan the QR code to complete the online survey.

Por favor, escanee el código QR para completar la encuesta en línea.

Por favor, digitalize o código QR para completar a pesquisa online.

Tanpri skane kòd QR la pou ranpli sondaj la sou entènèt.

請掃描 QR 碼以完成在綫調查。

請掃描 QR 碼以完成網上調查

Vui lòng quét mã QR để hoàn thành cuộc khảo sát trực tuyến.

لاستكمال الاستبيان عبر الإنترنت QR من فضلك، قم بمسح الرمز الاستجائي



The survey will have instructions about how to identify lead service pipes and information about how this data will be used.

NEED HELP?

We are available to help complete the survey or answer any questions you may have. Call Fuss & O'Neill, the City's Engineering consultant, at (973)-525-9094; Monday through Friday: 9am-4pm

To set up an appointment for someone to perform the survey in person, please scan the QR code below. (Note you must be present and on property during the appointment.)



¿NECESITA AYUDA?

Estamos disponibles para ayudarle a completar la encuesta o responder cualquier pregunta que pueda tener. Llame a Fuss & O'Neill, el consultor de ingeniería de la Ciudad, al (973)-525-9094; de lunes a viernes de 9 a. m. a 4 p. m.

Default language

Water Service Line Material Survey

**MALDEN**
MASSACHUSETTS

Please complete the form to submit the material of your water service line.

Translation Information

To change the language of this survey, click the button above

Default language

عربي

Español

Kreyòl Ayisyen

Português

Tiếng Việt

廣東話

中文

中文

Full Name*

Resident Information

Full Name*



Customer Self-Identification: MassDEP

HELP YOUR COMMUNITY WATER SUPPLIER!



WHAT
WHO
WHY
HOW

Your Public Water Supplier is updating their records on service lines- pipes that bring water to your house.

You can help by submitting photos of the pipe in your residence!

In order to identify pipes that may need to be replaced.

Go to <https://tinyurl.com/MA-LSLI-App> and follow the instructions.

<https://www.mass.gov/doc/lcrr-service-line-inventory-public-outreach-toolkit/download>

HELP US IDENTIFY WHAT YOUR SERVICE LINE IS MADE OF

INSERT
LOGO

STEP 1: IDENTIFY

Use the QR code or the link below and go to the EPA website; this website has a step-by-step guide on how to identify what your service line is made of.

<https://tinyurl.com/ProtectYourTap>

STEP 2: INFORM

Use the QR code or the link below and INFORM your public water supplier about what your service line is made of.

<https://tinyurl.com/MA-LSLI-App>

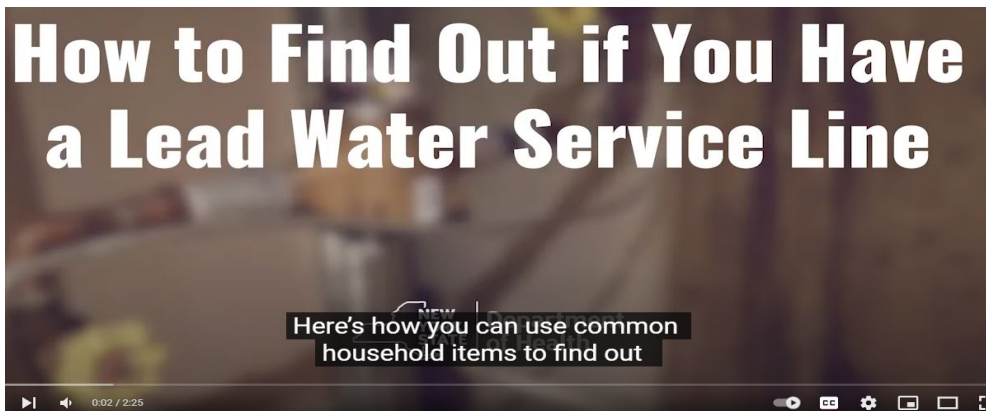


Customer Self-Identification: EPA or YouTube

- EPA: Protect Your Tap - www.epa.gov/pyt

The screenshot shows the EPA website header with the logo and navigation menu. The main content area is titled 'Ground Water and Drinking Water' and features a sidebar with links to 'Ground Water and Drinking Water Home', 'Basic Information', and 'Private Wells'. The main heading is 'Protect Your Tap: A Quick Check for Lead', with a sub-link to 'View this guide in Spanish or Portuguese.' and a 'CONTACT US' link in the top right corner.

- Video from New York DOH
www.youtube.com/watch?v=PcO5FCE9Vfw



Water Service Line Inventory: Galvanized Services Requiring Replacement (GRR)

City of Framingham

Water & Wastewater Division

Stephanie Tarves, P.E. – Senior Water & Wastewater Engineer



What is a galvanized service requiring replacement?



EPA: A galvanized pipe is considered Galvanized Requiring Replacement (GRR) if it IS or WAS downstream of a lead service line or a galvanized service line preceded by a service with an unknown lead status.

Are all galvanized pipes GRR?

NO.

Do lead goosenecks “count” as upstream lead?

NO.

Our records show a public side service that was lead at one time, but isn't now, and the private side is still galvanized, is it a GRR?

MAYBE...Let's get into it.

Initial Inventory Results : 71 GRR (August 2024 draft)



Framingham has no known lead services.

Our GRR are:

- Galvanized services that were once downstream of lead
- Galvanized services that may have been downstream of lead
- Galvanized services downstream of public service lines with unknown material

D	E	F	G	H	I	J	K	L	M
CONNECTOR (GOOSENECK / PIGTAIL) CURRENTLY PRESENT?	CONNECTOR (GOOSENECK / PIGTAIL) MATERIAL	CURRENT PUBLIC SERVICE LINE MATERIAL	WAS PUBLIC SERVICE LINE MATERIAL EVER PREVIOUSLY LEAD?	PUBLIC SERVICE LINE SIZE (inches)	PUBLIC SERVICE LINE INSTALL DATE (YYYY)	CURRENT PRIVATE SERVICE LINE MATERIAL	PRIVATE SERVICE LINE SIZE (inches)	PRIVATE SERVICE LINE INSTALL DATE (YYYY)	ENTIRE SERVICE LINE CLASSIFICATION
UNK		UNK-LG	YES	←		G	1"		GALVANIZED REQUIRING REPLACEMENT
UNK		UNK-LG	UNK	←		G	1"		GALVANIZED REQUIRING REPLACEMENT
UNK		UNK-LG	UNK	←		G	1/2"		GALVANIZED REQUIRING REPLACEMENT
UNK		UNK-LG	YES	←		G	1"		GALVANIZED REQUIRING REPLACEMENT
UNK		UNK-LG	UNK	←		G	2"		GALVANIZED REQUIRING REPLACEMENT
UNK		UNK-LG	UNK	←		G	2"		GALVANIZED REQUIRING REPLACEMENT
UNK		UNK-LG	UNK	←		G	2"		GALVANIZED REQUIRING REPLACEMENT



Data Scrubbing: Eliminating GRR through administrative review



Why is this service GRR?

- Public service line material?
- Lead gooseneck
- Previously lead?

D	E	F	G	H	I	J	K	L	M
CONNECTOR (GOOSENECK / PIGTAIL) CURRENTLY PRESENT?	CONNECTOR (GOOSENECK / PIGTAIL) MATERIAL	CURRENT PUBLIC SERVICE LINE MATERIAL	WAS PUBLIC SERVICE LINE MATERIAL EVER PREVIOUSLY LEAD?	PUBLIC SERVICE LINE SIZE (inches)	PUBLIC SERVICE LINE INSTALL DATE (YYYY)	CURRENT PRIVATE SERVICE LINE MATERIAL	PRIVATE SERVICE LINE SIZE (inches)	PRIVATE SERVICE LINE INSTALL DATE (YYYY)	ENTIRE SERVICE LINE CLASSIFICATION
YES	L	G	UNK	3/4"	1927	G	3/4"	1927	GALVANIZED REQUIRING REPLACEMENT
NO		PVC		1"	1998	G	3/4"	1910	GALVANIZED REQUIRING REPLACEMENT
NO		PVC	UNK	1"	1998	G	3/4"	1892	GALVANIZED REQUIRING REPLACEMENT
NO		C	UNK	1"	2010	G	1 1/2"	1924	GALVANIZED REQUIRING REPLACEMENT
NO		C	UNK	1"	2012	G	3/4"	1907	GALVANIZED REQUIRING REPLACEMENT
YES	L	CI-L	UNK	1"	1962	G	1"	1924	GALVANIZED REQUIRING REPLACEMENT
NO		C	UNK	1"	2013	G	3/4"	1926	GALVANIZED REQUIRING REPLACEMENT

We must answer "Was Public Service Line Material Ever Previously Lead?" accurately.

Was it GRR?



RETURN OF SERVICE PIPE Reg. No. 232

Date Laid *July 23-1886*
 Owner of Premises *H.S. Drake*
 Street *105-106 Waverley*
 Main Pipe inches Diam.
 Foreman

see First CARD 6/6/2005 RP

COST TO TOWN — Main to Curb Stop Cock Inc.		COST TO OWNER	
13 1/4 Feet	1/2 Inch Lead Pipe	22 5/8 Feet	3/4 Inch Iron Pipe
Inch	Corporation Stop	Feet	Inch Pipe
One	Inch Curb Stop	Inch	Stop and Waste
One	Sidewalk Box	Inch	Elbows
	Couplings		Tees
	Elbows		Hours Labor
	Hours Labor		Men
	Hours Labor		Foreman
Total		Total	

The branch of the service to Lumber Yard replaced Nov. 7-1910 See Service Return #1723

RETURN OF SERVICE PIPE Reg. No. 232

Date Laid *Nov 2-3, 1906*
 Owner of Premises *Rented by Water Dept. for Shop*
 Street *105 Waverley St.*
 Main Pipe 12 inches Diam.
 Foreman *A.C. Fletcher*

See Location Dept 4

COST TO TOWN — Main to Curb Stop Cock Inc.		COST TO OWNER	
34 Feet	2 Inch G.I. Pipe .12	408	Feet
Inch	Corporation Stop	Feet	Inch Pipe
One	Inch Curb Stop	Inch	Stop and Waste
One	Sidewalk Box		Elbows
	Couplings		Tees
	Elbows		Hours Labor
34	Hours Labor	Men .25	8 50
12	Hours Labor	Foreman .37 1/2	4 50
31 ft. 1/2	Lead pipe		
Total		Total	

** 06/06/2005 INSPECTED: ORIGINAL HOUSE + SERVICE GONE RP*

Was this service previously lead? YES.
 Is it GRR? YES.

The private side galvanized iron from 1886 was installed BEFORE the lead public side service was replaced in 1906, so this would be GRR.

Was it GRR?



RETURN OF SERVICE PIPE

Date Laid *July 30-1886* Reg. No. *245*

Owner of Premises *E. and N. G. Eames*

Street *13-19 Gordon*

Main Pipe *4* inches Diam. Distance Main to Curb Stop Cock _____ feet

Foreman _____

COST TO TOWN — Main to Curb Stop Cock inc.		COST TO OWNER	
<i>22 1/3</i> Feet	<i>5/8</i> Inch <i>Lead</i> Pipe	<i>19 1/4</i> Feet	<i>1</i> Inch <i>Iron</i> Pipe
	<i>5/8</i> Inch Corporation Stop		
One	Inch Curb Stop		
One	Sidewalk Box		
	Couplings		
	Elbows		
	Hours Labor		
	Men		
	Hours Labor		
	Foreman		
Total		Total	

Was this service previously lead? YES.
Is it GRR? NO.

RETURN OF SERVICE PIPE

Date Laid *June 18, 1927* Reg. No. *245*

Owner of Premises *Everett R. Eames*

Street *15-17-19-21 Gordon*

Main Pipe *4* inches Diam. Distance Main to Curb Stop Cock *24* feet

Foreman *Brillhart*

COST TO TOWN — Main to Curb Stop Cock inc.		COST TO OWNER	
<i>24</i> Feet	<i>1</i> Inch <i>gal</i> Pipe	<i>20</i> Feet	<i>1</i> Inch <i>gal</i> Pipe
	<i>15</i> Corporation Stop		
One	<i>3/4</i> Inch Curb Stop		
One	Gate Valve		
One	Sidewalk Box		
	Couplings		
	Elbows		
	Hours Labor		
	Men		
	Hours Labor		
	Foreman		
Total		Total	

The private and public sides were both replaced on June 18, 1927. This galvanized private side pipe was never downstream of lead.

Final Inventory Results: 60 GRR (October 2024)



Rather than
answering:
“Was public
service line
material ever
previously lead?”

D	E	F	G	H	I	J	K	L	M
CONNECTOR (GOOSENECK / PIGTAIL) CURRENTLY PRESENT?	CONNECTOR (GOOSENECK /PIGTAIL) MATERIAL	CURRENT PUBLIC SERVICE LINE MATERIAL	WAS PUBLIC SERVICE LINE MATERIAL EVER PREVIOUSLY LEAD?	PUBLIC SERVICE LINE SIZE (Inches)	PUBLIC SERVICE LINE INSTALL DATE (YYYY)	CURRENT PRIVATE SERVICE LINE MATERIAL	PRIVATE SERVICE LINE SIZE (inches)	PRIVATE SERVICE LINE INSTALL DATE (YYYY)	ENTIRE SERVICE LINE CLASSIFICATION
YES	L	G	NO	1 1/4"	1926	G	1 1/4"	1926	NON-LEAD
YES	L	G	NO	OTH	1891	G	1"	1891	NON-LEAD
NO		C	NO	1"	2011	G	1"	1924	NON-LEAD
YES	L	CI-L	NO	1"	1933	G	1"	1933	NON-LEAD
YES	L	G	NO	3/4"	1925	G	3/4"	1925	NON-LEAD
YES	L	G	NO	3/4"	1926	G	3/4"	1926	NON-LEAD
YES	L	G	NO	1 1/4"	1923	G	1 1/4"	1923	NON-LEAD
NO		PVC	NO	1"	1994	G	1 1/4"	1924	NON-LEAD
NO		HDPE	NO	1"	1998	G	3/4"	1925	NON-LEAD
YES	L	G	NO	1"	1970	G	1"	1970	NON-LEAD
YES	L	G	NO	1"	1924	G	1"	1924	NON-LEAD
YES	L	CI-L	NO	1"	1958	G	3/4"	1925	NON-LEAD
YES	L	G	NO	3/4"	1935	G	3/4"	1935	NON-LEAD
NO		C	NO	1"	2005	G	3/4"	1911	NON-LEAD
YES	L	G	NO	3/4"	1922	G	3/4"	1922	NON-LEAD
YES	L	G	NO	3/4"	1923	G	3/4"	1923	NON-LEAD
YES	L	G	NO	3/4"	1925	G	3/4"	1925	NON-LEAD
NO		C	NO	1"	2013	G	5/8"	1915	NON-LEAD



We answered: “Was this galvanized pipe ever downstream of a lead service?”



Thank You.

Questions?

Stephanie Tarves, P.E.

Senior Water & Wastewater Engineer

Framingham Water & Wastewater Division

✉ starves@framinghamma.gov

💬 (508) 532-6050

📍 100 Western Avenue, Framingham



New 24-Hour Public Notice for Any System over the Lead Action Level

Effective for All Systems Now

Stephen Estes-Smargiassi
Director of Planning and Sustainability



Be ready for -- 24-Hour Public Notice

- If a community 90th percentile is over the Action Level:
 - 24-hour public notice using newspaper and other media
 - New template for notice – *focus is on LSL*
- Recommend discussing with town officials and preparing in advance
- Timing trigger is completion of all lab results, but could still be a surprise
- MWRA available to assist with notice and follow up activities
 - Still need to do mailed public education brochure (also new)

WATER DEPARTMENT DRINKING WATER NOTICE:

Some homes have high levels of lead

This notice contains important information about your drinking water. Have someone translate it for you or speak with someone who understands it.



BE Prepared, Before PN is Needed

- Public Notice Language must be approved by MassDEP prior to use
- Outreach methods must be approved prior to notice:
 - Radio or Television
 - Reverse 911
 - Hand or direct delivery
 - Posting in conspicuous locations
- Tell your story – “we are dealing with this”
- Publication and outreach within 24 hours of receiving final 90th results
- Emailed to LeadALE@EPA.gov
- Publication in local paper as advertisement within 14 days as well
- www.mass.gov/doc/pn-tier-1-template-lead-action-level-exceedance/download



It's All About the Lead Service Lines

Stephen Estes-Smargiassi

Director of Planning and Sustainability



It's All About the Lead Service Lines

- Where they exist, LSL are the single largest source of lead in water
- The new rules require that we sample in those homes with LSL
- First and fifth liter sampling will drive results upward
- Lead Action Level will drop from 15 ppb to 10 ppb
- Systems that exceed the lead AL, must re-optimize corrosion control





90th Percentile Results Significantly Lower for Non LSL Sites

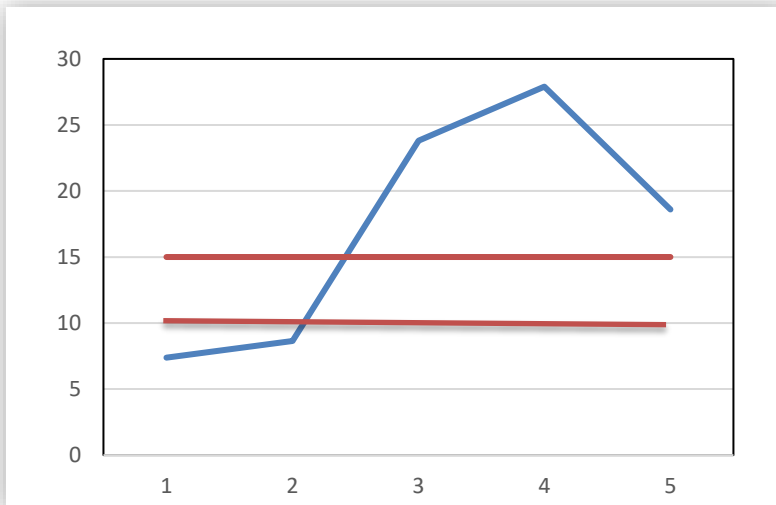
Year	2018	2019	2020	2021	2022	2023
90th Percentile Full system	10	8	6	9	7	11
90th Percentile Just LSL	12	11	8	13	9	14
90th Percentile Just Lead Solder	3	3	2	3	2	3

Red shows results over new Action Level of 10 ppb (effective 10/27)
Five bottle sampling will tend to increase reported lead levels



New Five Bottle Sampling Will Make Results Higher

- New 5-Bottle Sampling Procedure for Homes with LSL starting in 2028
 - EPA believes that a 5th liter sample will better characterize water in the LSL
1. Provide owner with 5 1-liter bottles.
 2. After stagnation period of at least 6 hours, bottles should be filled in sequence (1 through 5) with tap running
 3. Bottles No. 1 and 5 will be analyzed
 4. Higher of two included in 90th Percentile





Option to Defer Change to Corrosion Treatment

- If MWRA exceeds the lead Action Level, we must re-optimize corrosion control treatment
 - Most likely option is adding orthophosphate
- Estimated capital and operating costs - \$60 to \$80 million (current \$)
- LCRI offers an option to accelerate lead service line replacement rather than change corrosion control treatment
 - Replace all LSL within 5 years at 20% per year (done by 2032)
 - Defer action on treatment changes while in process
- Protect public health and eliminate the problem, rather than just add another chemical to our drinking water



Set goal of complete elimination by October 2032





What Could Prevent “Getting the Job Done”

- Current estimates are that there are at around 15,400 LSLs (2.9%)
 - *Will update numbers when all inventories available*
- Only get credit if all of the LSLs and GRRs are replaced.
- Private side replacement required, but can be difficult to get participation



Lead Loan Program to Lead Replacement Program (LLP to LRP)

David Granados

Program Manager, LSLR Program, Community Support



MWRA Lead Loan Program

- Launched in 2016 - \$100 Million for community projects
- 10 year interest-free loans
- Must replace **ALL** lead pipe within a service line - **BOTH** public and private portions
- If any portion of service is lead or brass, entire service is eligible for replacement
- \$43.8 Million distributed to 17 communities
- MWRA's water programs have funded more than **7,900 LSL** replacements & **1,400 lead gooseneck** replacements





Revisions to the Program

- The Board of Directors authorize the inclusion of a 25% grant and addition of \$100 million to program
- Fully funded removal of private side will be required for grant/loan. Communities that do not fully fund the private side can still apply for 0% interest loan
- Eligible projects LSL replacements, Investigations, Consulting Services, Public Education, Filters.



Enough to get the job done



Process Remains the Same

- Application to MWRA for Lead Program (include a copy of most up to date inventory)
- Community Authorization (via Town Meeting or City Council Vote). Include language for grant.
- Community Executes Financial Assistance and Loan Agreements
- Bond Counsel Issues Bond
- Distribution of Funds to a ***new*** Community MMDT Account
- Community Utilizes Funds for Project





Community Support Program Website



Massachusetts Water
Resources Authority

[About
MWRA](#) [Your
Water System](#) [Your
Sewer System](#) [Our
Environment](#) [Projects &
Programs](#)

Projects & Programs

Projects

Major Programs

Metropolitan Water Tunnel Program

Water & Wastewater System Expansion

Wastewater Covid-19 Tracking

Local I/I Community Financial Assistance

Local Water System Assistance

Lead Service Line Replacement Program

School Program

Public Affairs

Home > Projects & Programs > Major Programs > Lead Service Line Replacement Program

Lead Service Line Replacement Program

In 2016, on recommendation from the MWRA Advisory Board, the Board of Directors approved an enhancement to the Local Water System Program to provide up to \$100 million in 10-year zero-interest loans to communities to fully replace lead service lines. Each community will develop its own plan based on its local circumstances.

In 2024, the Board of Directors approved an additional \$100 million in funding to include a twenty-five (25%) grant component for communities to replace the portion of the lead service line on private property.

MWRA's goal in providing financial assistance to member communities is to ensure that the high quality water MWRA delivers can make it all the way to consumers' taps. The presence of a lead service line connecting a home to the main in the street can lead to elevated lead levels in tap water, especially if that water sits stagnant for an extended period. MWRA's stable water quality and effective corrosion control treatment reduce the risk that a lead service line will cause elevated lead levels; measured lead levels in high risk homes have decreased by 90 percent since corrosion control was brought on-line in 1996. However, the risk of elevated levels remains as long as lead service lines are in use.

[Guidelines](#) [Application](#)

[Map and Contact Information](#)

Projects

Major Programs

School Program

Public Affairs

<https://www.mwra.com/projects-programs/major-programs>

<https://www.mwra.com/projects-programs/major-programs/lead-service-line-replacement-program>

MWRA Lead Contacts

David Granados
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617-749-6528

Kristen Hall
Kristen.hall@mwra.com



Contact me anytime, but not until next week..





Best Practice is Practice for Compliance

What Should We Be Doing to Prepare?

Stephen Estes-Smargiassi



Lead Service Line Replacement Plan Requirements

Who Needs a LSL Replacement Plan?

All water systems with one or more lead, galvanized requiring replacement, or lead status unknown service lines in their distribution system must submit a LSLR Plan.

When Must the LSL Replacement Plan be Submitted?

By October 2027

If using SRF, MassDEP requires a LSLR Plan



Lead Service Line Replacement Plan Requirements

What must be included the Replacement Plan?

Outreach
Approach

Strategy for
resolving
“unknowns”

Procedure
for FULL LSL
Replacement

LSL
Replacement
Prioritization
Strategy

Strategy for
informing
customers
before a
replacement

Flushing &
Filters for
Customers

Funding
Strategy for
those that
cannot afford
private
replacement

Gooseneck
Replacement
for planned or
unplanned
work



Prioritize most Vulnerable and Disadvantaged Communities



Sensitive Populations



Proximity to high lead results



Previous Partial Replacements



Areas that receive a lot of WQ complaints



Environmental Justice Communities



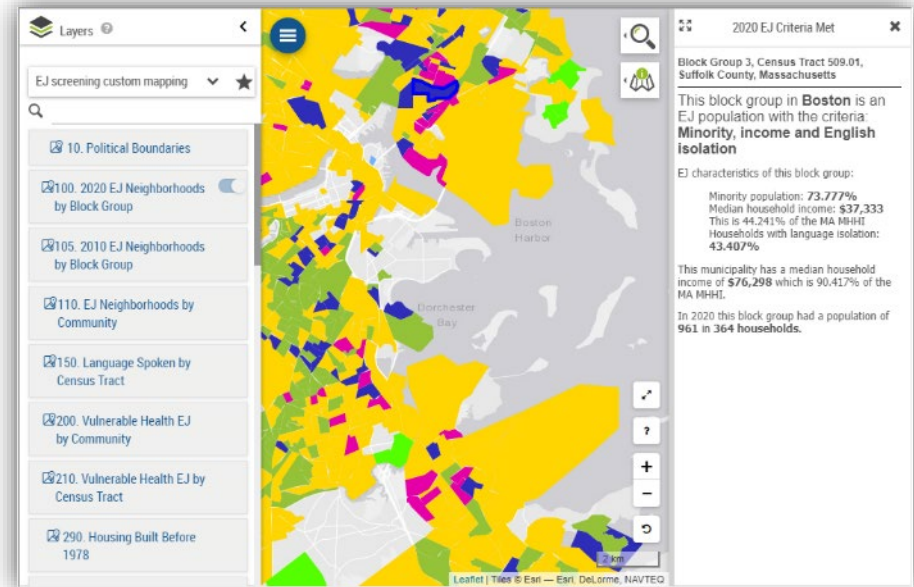
Licensed Childcare Centers



Nursing Homes / Senior Centers



Areas with high density of Children





Priority Setting – Improve Program Efficiency

Areas where all Service Lines are of unknown material

Areas where water mains replacements are planned or conducted

Previous participation in Lead and Copper Sampling

Age of current water mains

Proximity to other known contaminants

Road moratorium

Areas where all residents have agreed to participate





Partial Replacements by System, actions required after 2027

At least **45 days** notification to owner and resident prior to work

- Include temporary increased lead levels, health effects of lead and actions to reduce exposure
- Information about service line flushing
- ANSI certified Pitcher Filters or POU devices and 6 months of cartridges replacements
- Offer sample: Between 3 and 6 months after completion

Notification,
Flushing, Filters, and
Sample

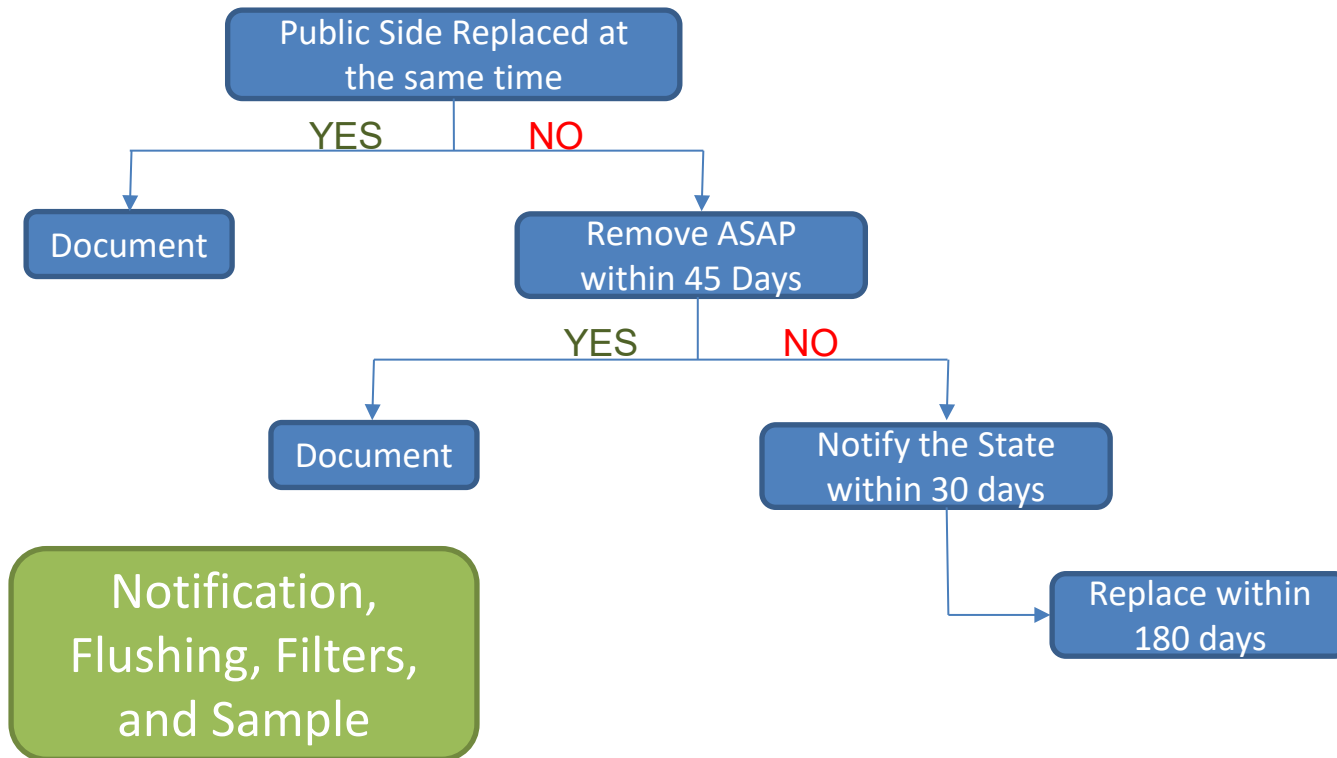
RECORD KEEPING





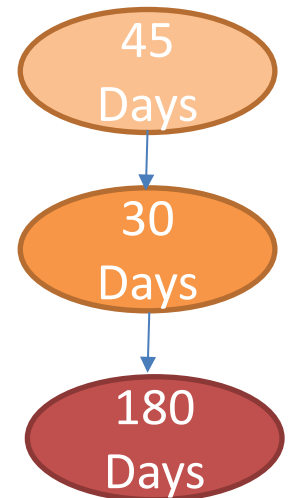
Partial Replacements by Owner, actions required after 2027

By Homeowner:



RECORD KEEPING

Time Clocks





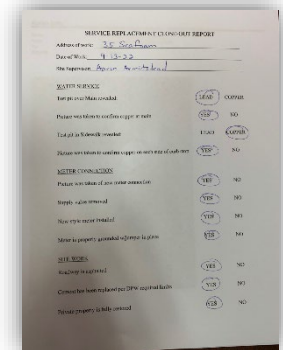
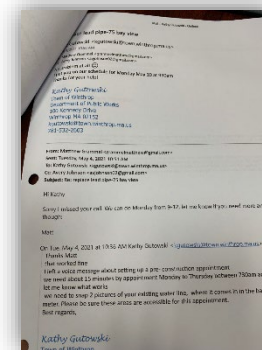
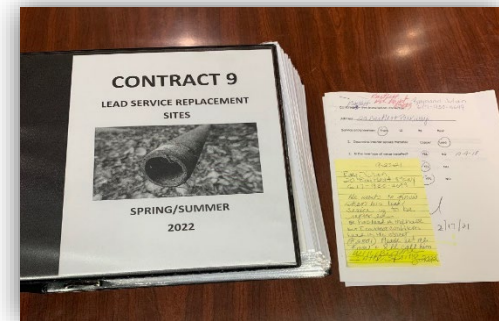
Full Replacements Requirements – No Lead Left Behind

After 2027:

Notify owner and resident within **24 hours** of the completion of the replacement (ideally before SL is returned to service)

- Include temporary increased lead levels, health effects of lead and actions to reduce exposure
- Information about service line flushing
- ANSI certified Pitcher Filters or POU devices and 6 months of cartridges replacements
- Offer Sample: Between 3 and 6 months after completion

Notification,
Flushing, Filters,
and Sample



RECORD KEEPING



Replacement and Disturbance Actions, Required after 2027

Minor disturbance

- (i.e. test pit, loss of pressure, curb or corp valve operation)



Lead Education and Flushing Info

Major disturbance

- (i.e. Gooseneck replacement, meter replacement)



Certified Filter + Cartridges

LSLR

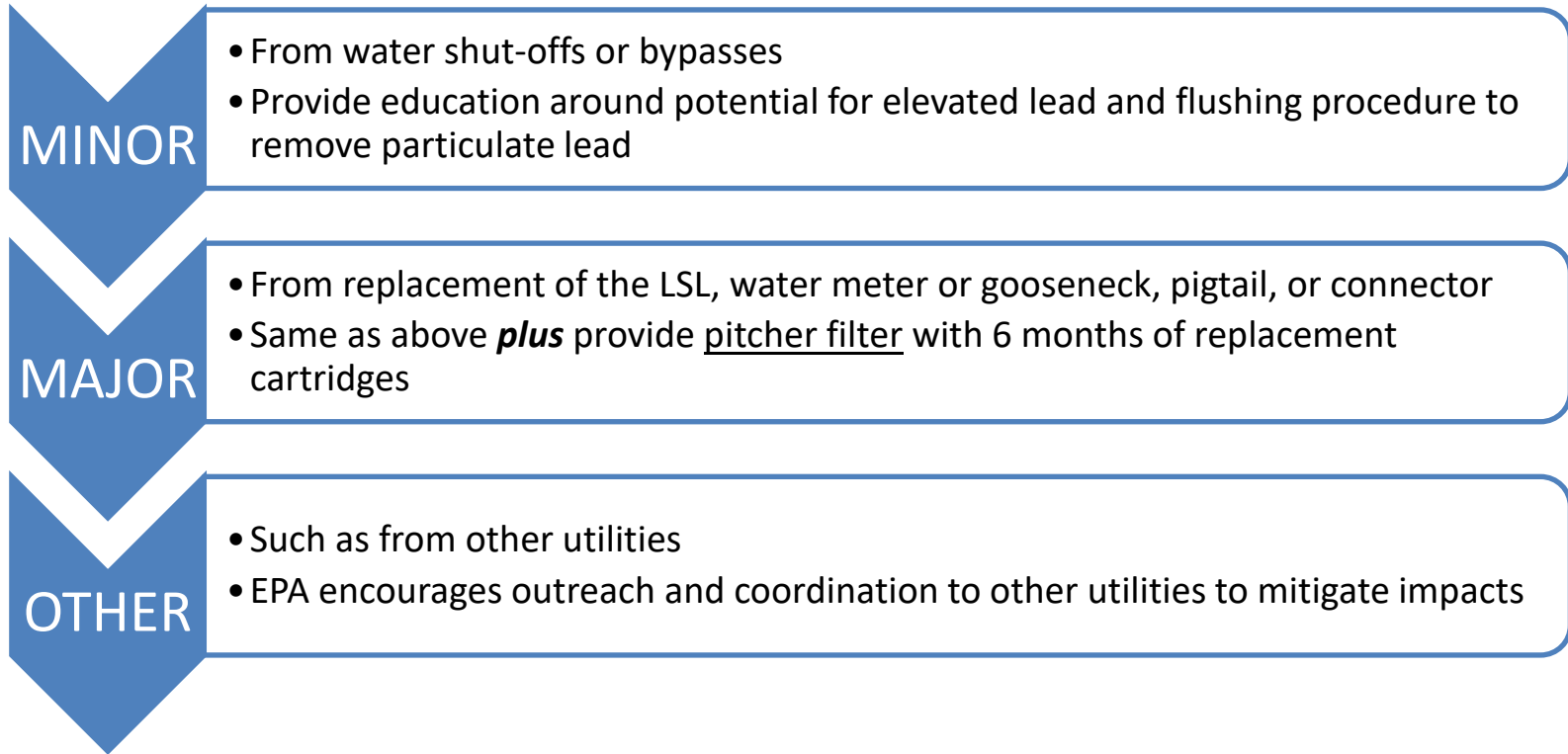
- (i.e. Partial or full lead service line replacement)



Offer sample 3-6 months later



Responses to Disturbances, required after 2027



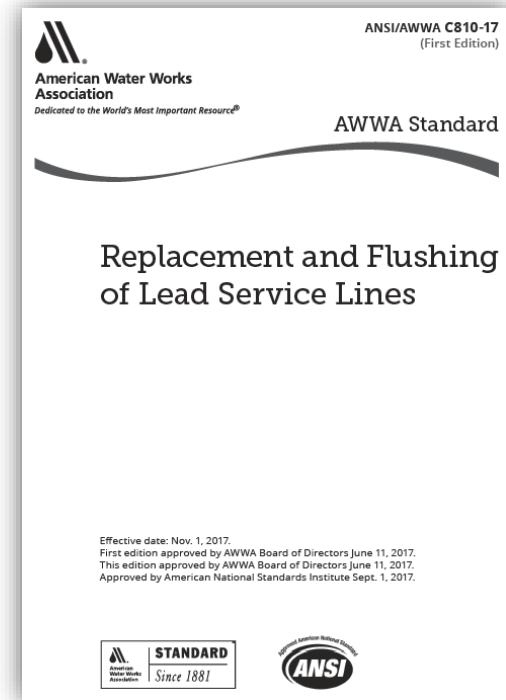
Notification,
Flushing, Filters,
and Sample

RECORD KEEPING



Service Line Flushing -- By the system, required after 2027

- Flush water from an outside connection from the house side of the meter installation immediately after replacing the LSL
- Replace the meter with a straight pipe.
- Flush at full velocity for 10 minutes.
- Reconnect meter.

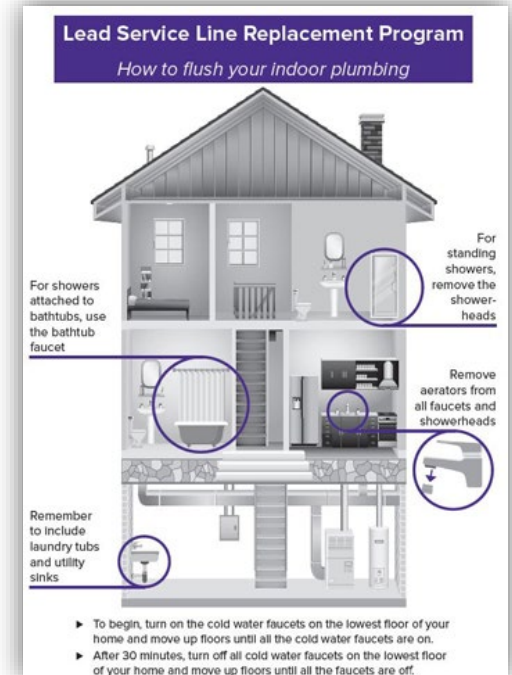


Source: ANSI/AWWA Standard C810-17 Replacement and Flushing of Lead Service Lines



Service Line Flushing -- By the customer, required after 2027

1. Locate ALL faucets that will drain.
2. Remove aerators and screens (include laundry tubs, bathtubs, and showers)
3. Open the cold water valves to the full extent of all faucets in the lowest floor in the house.
4. Open faucets on the next highest floor until all faucets are opened.
5. Leave the water running for 30 minutes.
6. Close the faucet first opened and continue in the same ordered they were opened.
7. Replace aerators/screens.



Flushing should be done at least once every 2 weeks for 3 months
Additional daily mini-flushes (when water has been sitting for 6 hours) for 5 minutes



Continue to Work on School and Childcare Sampling

- Official start of 5-year cycle is October 2027
- Offer sampling to 20% per year
 - Schools – 5 samples each
 - Childcare – 2 samples each
- You will get credit for the work already done
- Some systems starting early
- MWRA will do laboratory analysis





Over next three years...

- All of these requirements are essentially “best practice”
- Consider implementing them early
- Develop all the documentation processes early
- Practice now will increase your ability to comply later



Lessons Learned From EPA Audits

- Sampling Plans Must be Verified
 - EPA audits have found sampling plans with inaccurate site designations
 - Sites identified as LSL, but
 - Never were lead, or have been since been replaced
 - If your plan says a site is a LSL, verify that it is!
 - Do not sample at a site that is incorrectly identified – use an alternate
- Mis-identification has resulted in monitoring violations





Record Keeping is an Achilles Heel

- Failure to meet reporting deadlines OR to be able to prove that you did meet them
- Need to keep track of when data is received, and what actions are required and when
 - This will be even more important with LCRI
- Need to develop contemporaneous records of actions, and keep them (for up to 12 years)
- Need to date letters, and document phone calls
- This resulted in several violations for communities – in some cases, even though they had done the work on time

Questions or Comments?

Lisa Bina– Deputy Director of Waterworks

Drink with Confidence

Flush with Pride

This presentation represents the opinions of the authors and not necessarily those of the MWRA



America's Water Infrastructure Act Update Requirements

Has it Really Been Five years Already?!

Michael O'Keefe
Senior Program Manager



America's Water Infrastructure Act (AWIA) Deadlines

- Seems like just yesterday that we certified compliance with AWIA:
 - Risk and Resiliency Assessments, and
 - Emergency Response Plan requirements
- Risk and Resiliency Assessments must be updated and certified again by:
 - More than 100K population -- March 31, 2025
 - 50K to 100K – December 31, 2025
 - 3,300 to 50K – June 30, 2026
- Emergency Response Plans must be updated and certified again by:
 - 6 months after RRA certification



To qualify for TCHs --

- Include your name, affiliation and email address in chat
- TCH Certificates will be mailed out within a few weeks
- We will send out the slides after the forum as well



Before you go...

Review Questions

**From Inventory to Implementation:
Lead and Copper Rule Community Forum**



1) Which of these is required to get a letter with risk information?

- A. Buildings with lead service lines
- B. Buildings with galvanized service lines requiring replacement
- C. Buildings where one or both sides of the service line are of unknown materials
- D. All of these



2) Who should be receiving letters based on the service line inventory?

- A. Bill paying customers
- B. All residents served by that service line
- C. Landlords for posting
- D. All of the above



3) When are letters to customers and residents due?

- A. October 16, 2027
- B. January 1, 2025
- C. November 15, 2024
- D. What letters?



4) What is the MWRA recommended goal for complete LSL replacement?

- A. October 2027
- B. End of 2032
- C. October 2037
- D. As soon as possible, but no later than 2032

Thank You

Drink with Confidence
Flush with Pride

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SUMMARY OF LINKS

MassDEP

TEMPLATES

- Lead Service Line Notice
<https://www.mass.gov/doc/lcrr-consumer-notification-template-confirmed-lead-service-line/download>
- Galvanized Requiring Replacement Service Line Notice
<https://www.mass.gov/doc/lcrr-consumer-notification-template-confirmed-galvanized-requiring-replacement-service-line-grr/download>
- Unknown Service Line Notice
<https://www.mass.gov/doc/lcrr-consumer-notification-template-unknown-service-line/download>

LCRR FAQs

<https://www.mass.gov/doc/frequently-asked-questions-about-the-lead-and-copper-rule-revisions-lcrr/download>

Public Outreach Toolkit

<https://www.mass.gov/doc/lcrr-service-line-inventory-public-outreach-toolkit/download>

EPA

TEMPLATES:

<https://www.epa.gov/system/files/documents/2024-07/notification-templates-for-known-or-potential-lsls.docx>

Protect Your Tap

www.epa.gov/pyt

Fairfax Water <https://www.fairfaxwater.org/news/did-you-receive-letter-fairfax-water-about-your-water-service-line>

Pittsburgh Water and Sewer Authority <https://www.pgh2o.com/projects-maintenance/lead-line-replacement-programs>

Denver Water <https://www.denverwater.org/your-water/water-quality/lead/dashboard>

New York DOH www.youtube.com/watch?v=PcO5FCE9Vfw



OTHER RESOURCES

MassDEP

- All Lead & Copper Forms & Templates
<https://www.mass.gov/lists/lead-copper-forms-and-templates>
- Q and A from October 9, 2024 training
<https://www.mass.gov/doc/lcrr-october-9-2024-training-qa/download>
- Public Inventory Guidance
<https://www.mass.gov/doc/guidance-how-pws-can-make-their-service-line-inventories-accessible-to-the-public/download>
- LSL Planning SRF Grant
https://www.mass.gov/info-details/lead-service-line-planning-program?_gl=1*1ovqbc5*_ga*ODE0MTQ4NDM1LjE2NzUxODAxOTI.*_ga_MCLPEGW7WM*MTY5NTE0NjQ1Ny4yLjAuMTY5NTE0NjQ1Ny4wLjAuMA..
- LSLR Plan Summary
<https://app.smartsheet.com/b/form/8f676b18cc224884a7069e3cc727f968>

Environmental Justice (EJ) DPH Tool

<https://matracking.ehs.state.ma.us/Environmental-Data/ej-vulnerable-health/environmental-justice.html>

Lead Service Line Replacement Collaborative

<https://www.lslr-collaborative.org/proactive-notification-about-water-service-lines.html>

EPA

- Inventory Development/Maintenance Factsheet
<https://www.epa.gov/system/files/documents/2023-06/EPA-Factsheet-Combined-06072023%20508-final.pdf>
- Protect your Tap
<https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead>