Proposed Lead and Copper Rule Improvements

Informational Webinar

December 6, 2023

EPA United States Environmental Protection Agency

Office of Water

Purpose

- To provide information on the proposed Lead and Copper Rule Improvements (LCRI) National Primary Drinking Water Regulation (NPDWR).

Background on lead in drinking water and the Lead and Copper Rule

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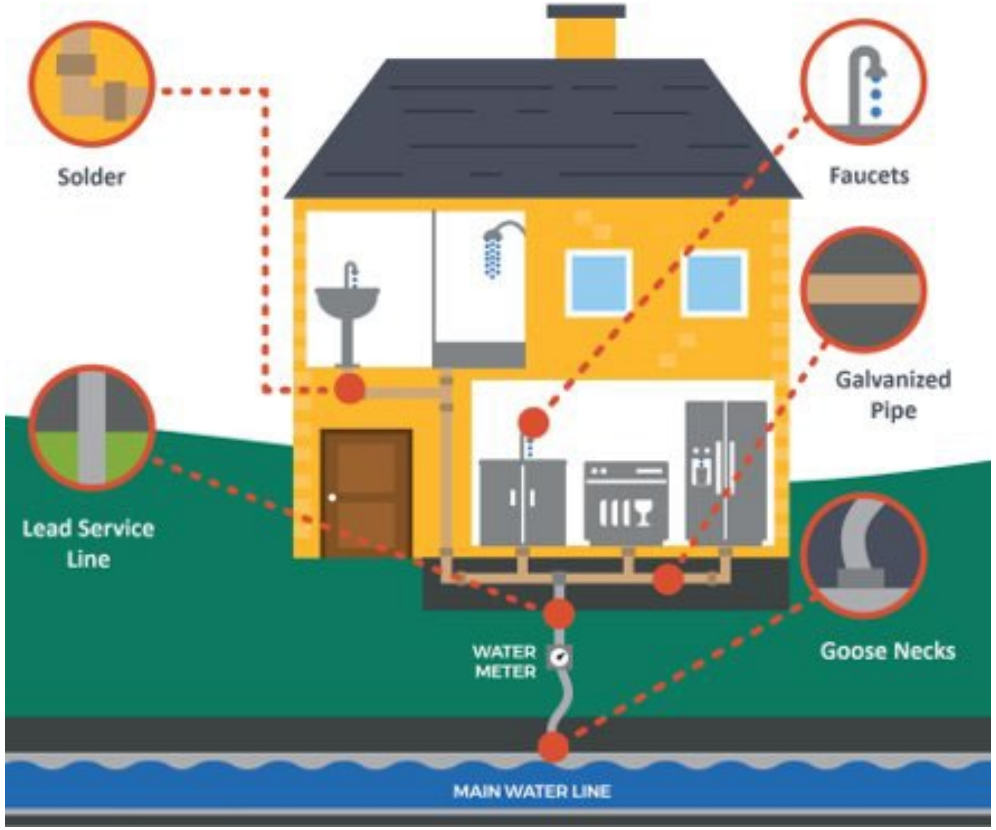
Lead in drinking water

- Lead in pipes, solder, and faucets can dissolve in water or break off as particles.
- When present, lead service lines are the most significant source of lead in drinking water.
- In children, exposure to lead can cause serious health effects like lower IQ, learning and behavioral problems.
- In adults, health effects can include higher risk of heart disease, high blood pressure, and kidney or nervous system problems.



Lead and Copper Rule

- The Safe Drinking Water Act (SDWA) authorizes EPA to establish regulations for public water systems.
- EPA first established the Lead and Copper Rule in 1991 to reduce exposure to lead and copper in drinking water.
- The rule requires some water systems to treat drinking water to keep lead (or copper) from leaching into water when lead (or copper) levels in water require action. This is called corrosion control treatment.
- When corrosion control is not enough to reduce lead levels, the Lead and Copper Rule requires water systems to take additional actions, including lead service line replacement and public education.

Lead and Copper Rule

- Maximum Contaminant Level Goal (MCLG): lead = 0 µg/L; copper = 1.3 mg/L
  - The MCLG for lead is zero because there is no level of exposure to lead that is without risk.
- Action Level: lead = 15 µg/L; copper = 1.3 mg/L
  - The Action Level was set in 1991 based on a level that is generally representative of what water systems achieved with corrosion control treatment at that time.
- The Lead and Copper Rule requires water systems to test water at the tap in certain homes that have lead in the plumbing.
- If more than 10 percent of the lead samples from a system are greater than the Action Level, the system needs to take actions to reduce lead exposure.

The Lead and Copper Rule Revisions (LCRR)

- The LCRR was published on January 15, 2021.
- Subsequently, the Agency reviewed the 2021 LCRR in accordance with Executive Order 13990 and concluded that there are significant opportunities to improve the LCRR including:
  - Proactive and equitable lead service line replacement,
  - Strengthening compliance tap sampling to better identify communities most at risk of lead in drinking water and to compel lead reduction actions, and
  - Reducing the complexity of the regulation by improving the action and trigger level construct.

Proposed Lead and Copper Rule Improvements (LCRI)

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Key Provisions in the Proposed LCRI

- Achieving 100% Lead Pipe Replacement within 10 years
- Locating Legacy Lead Pipes
- Improving Tap Sampling
- Lowering the Lead Action Level
- Strengthening Protections to Reduce Exposure

Achieving 100% Lead Pipe Replacement within 10 years

- When lead service lines are present, they represent the greatest source of lead exposure in drinking water.
- The proposed LCRI would require all water systems to replace lead services lines under their control, with the vast majority completing replacement within 10 years.
- While corrosion control can be effective at reducing lead exposure, removing lead pipes provides even greater public health protection by eliminating the key source of lead.

Locating Legacy Lead Pipes

- Knowing where lead pipes are is critical to replacing them efficiently and equitably.
- Water systems are currently required, under the 2021 LCRR, to provide an initial inventory of their lead service lines by October 16, 2024.
- Under the proposed LCRI, all water systems would be required to regularly update their inventories, validate their inventories, create a service line replacement plan, and identify the materials of all service lines of unknown material.

Improving Tap Sampling

- The proposed LCRI would make key changes to drinking water sampling requirements.
- Water systems would be required to collect first liter and fifth liter samples at sites with lead service lines and use the higher of the two values when calculating the system's 90th percentile lead level.

Lowering the Lead Action Level

- EPA is proposing to lower the lead action level from 15 µg/L to 10 µg/L.
- When a water system's lead sampling exceeds the action level, the system would be required to inform the public and take action to reduce lead exposure while concurrently working to replace all lead pipes.
- For example, the system would be required to install or adjust corrosion control treatment to reduce lead that leaches into drinking water.
- EPA's proposal would eliminate the 2021 LCRR's Trigger Level to simplify implementation.
- Water systems would be required to replace all lead pipes regardless of whether they exceed the lead action level.

Strengthening Protections to Reduce Exposure

- Water systems with multiple lead action level exceedances would be required to conduct additional outreach to consumers and make filters available to all consumers. The filters must be certified to reduce lead.

Transparency and Trust

The proposed LCRI would strengthen the requirements for water systems to communicate with consumers.

- The proposed rule would require water systems to communicate more frequently and proactively about lead service lines and the system's plans for replacing these lines.
- The proposed rule would revise the Consumer Confidence Report language to increase clarity about the health effects of lead, the water system's efforts to sample for lead in schools and child care facilities, and how consumers can access the water system's lead service line replacement plan.
- Systems would be required to notify the public within 24 hours if systemwide lead levels exceed the proposed lower action level, and EPA would continue to require systems to collect follow-up samples at sites with higher levels of lead.

Costs and Benefits

- EPA estimates the proposed rule would cost between $2.1 and 3.6 billion dollars per year.
  - These costs are primarily associated with identifying and replacing lead service lines, making lead filters available and changes in water treatment.
- These actions to reduce drinking water lead exposure are estimated to result in benefits of $9.8 to $34.8 billion per year including the prevention of the loss of IQ points in children and the avoided deaths and heart disease in adults.
- EPA estimates that the benefits of the rule would be 4-10X greater than the costs.

Available Funding Sources

- The Bipartisan Infrastructure Law (BIL) provides for significant investments in safe drinking water infrastructure and drinking water programs.
- EPA is working to ensure the funds are available to drinking water systems, especially those within disadvantaged communities.
- Specific funds to potentially support implementation of the LCRI drinking water regulation:
  - $11.7 billion: Funding to supplement the Drinking Water State Revolving Loan Fund (DWSRF)
  - $15 billion: Funding for lead service line replacement projects and associated activities directly connected to the identification of and planning for the replacement of lead service lines.
- The WIIN Voluntary School and Child Care Lead Testing and Reduction Grant Program provides funding to States for lead testing and remediation in schools and child care facilities. This funding is for States, not water systems.

Frequently Asked Questions

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Which systems does the proposed LCRI apply to?

- The proposed LCRI applies to community water systems (CWSs) and non-transient non-community water systems (NTNCWSs). The proposed rule does not apply to transient non-community water systems (TNCWSs).

Frequently Asked Questions

What are the proposed service line inventory requirements?

- Requires water systems to develop an updated initial service line inventory, called the LCRI baseline inventory, which would be due by the compliance date of the LCRI (i.e., 3 years after the final LCRI is published).
- EPA is not proposing to change the 2021 LCRR requirement for water systems to develop an initial inventory, make it publicly available, and submit it to the State by October 16, 2024. The proposed LCRI would require water systems to review records for information on connector materials and include lead connector materials in the LCRI baseline inventory. In addition, the proposed rule would require systems to:
  - Update their inventory annually,
  - Use a validation process to ensure the service line inventory is accurate, and
  - Identify all service lines of unknown material by the replacement deadline.

Frequently Asked Questions

What are the proposed requirements for replacing lead and GRR service lines?

- EPA is proposing mandatory full service line replacement of lead and GRR service lines under a water system's control, with limited exceptions, regardless of the system's 90th percentile lead level.
- The proposed LCRI would set a national minimum average annual service line replacement rate of at least 10 percent, with compliance assessed in accordance with a three-year rolling average, equating to a 10-year replacement deadline. As proposed, States must require systems to replace service lines by an earlier deadline if they determine that an earlier deadline is feasible.
- The proposed LCRI provides, in limited circumstances, additional time for some systems to complete system-wide full service line replacement.

Frequently Asked Questions

What are "galvanized requiring replacement" (GRR) service lines and why is EPA requiring water systems to replace them?

- A galvanized service line is iron or steel piping that has been dipped in zinc to prevent corrosion and rusting.
- A GRR service line is a galvanized service line: 1) that is currently or ever was downstream of an lead service line; 2) that is currently downstream in the direction of flow of a lead status unknown service line; or 3) that the water system is unable to demonstrate was never downstream of an lead service line.
- EPA is proposing mandatory full service line replacement of all GRR service lines because they can adsorb upstream lead particulates and contribute to lead in drinking water even after the original lead source has been removed.

Frequently Asked Questions

How does the proposed LCRI define "under the control" of the water system?

- The proposed LCRI would require water systems to replace lead and GRR service lines, and any lead connectors encountered, that are "under the control" of the water system.
- EPA is proposing to treat a service line and lead connector as under the system's control wherever a water system has adequate access (e.g., legal access, physical access) to conduct full service line replacement or replacement of the lead connector.
- EPA is not proposing to delineate the prerequisites or elements of "access" that a system would need to conduct full service line replacement because of the wide variation of relevant State and local laws and water tariff agreements as well as the potential for these to change over time. Instead, EPA emphasizes the many requirements proposed in the LCRI, in addition to funding and non-regulatory actions, that can increase a system's likelihood of obtaining any necessary access to conduct a full service line replacement, such as providing transparency in the service line replacement plan. For example, EPA is proposing to require the water system to identify in its service line replacement plan any State or local laws or water tariff agreement requirements pertaining to its ability to gain adequate access.

Frequently Asked Questions

How does the proposed LCRI define "under the control" of the water system? (Continued)

- EPA is proposing that, where customer consent is required by State or local law or water tariff agreement, the system would be required to make a reasonable effort to obtain property owner consent.
- EPA is proposing that a reasonable effort includes a minimum of at least four attempts to engage the customer using at least two different methods. If the water system is unable to obtain customer consent when required, the water system would not be required to conduct full service line replacement because, under those circumstances, the full service line would not be "under the control" of the operator of the system. The proposal also includes requirements and flexibilities to increase access and expedite full service line replacement.

Frequently Asked Questions

Under what circumstances can the service line replacement deadline be deferred?

- EPA is proposing two pathways for water systems to defer their service line replacement deadline past 10 years.
- The first is proposed for systems with a high proportion of lead and GRR service lines in their distribution system relative to their total number of households served. EPA has proposed 0.039 replacements per household per year as a deferral threshold (equivalent to 39 service line replacements per 1,000 households). Systems with a higher per-household replacement rate would be eligible for a deferred replacement deadline.
- The second proposed pathway is for systems that would otherwise be required to replace greater than 10,000 service lines per year under the proposed 10-year replacement requirement.

Frequently Asked Questions

Are partial service line replacements prohibited under the proposed LCRI?

- In some cases, yes, they are prohibited.
- In the LCRI, EPA is proposing to prohibit partial service line replacement unless it is conducted as part of an emergency repair or in coordination with planned infrastructure work (e.g., water main replacements), excluding planned infrastructure work solely for the purposes of lead or GRR service line replacement.
- The proposed LCRI, like the 2021 LCRR, would prohibit water systems from counting partial replacements and "test-outs" (i.e., where a service line sample measures below the lead action level) towards the service line replacement rate.

Frequently Asked Questions

What are the replacement requirements for lead connectors?

- EPA is proposing to retain the 2021 LCRR requirement that systems must replace lead connectors as they are encountered, for example, where they are encountered during the replacement of an LSL.
- This proposed requirement is intended to help ensure regular progress towards lead connector replacement is made in coordination with other activities, such as planned infrastructure work, while resources are prioritized for replacement of lead and GRR service lines as quickly as feasible.

Frequently Asked Questions

What happens when a water system's 90th percentile level exceeds the proposed lead action level of 10 ppb?

- In the proposed LCRI, water systems that exceed the lead action level of 10 µg/L would be required to take actions including corrosion control treatment (CCT) and public education.
- Under the LCRR, water systems that exceed the current lead action level of 15 µg/L are required to conduct 24-hour (Tier 1) public notification to persons served by the water system within 24 hours of learning of the exceedance.
- If the LCRI is finalized as proposed, water systems would be required to conduct Tier 1 public notification for an exceedance of the lowered action level of 10 µg/L following the compliance date of the LCRI (i.e., 3 years after the final LCRI is published). Water systems would be required to optimize or re-optimize optimal CCT and conduct public education. Small systems serving 3,300 people or fewer and NTNCWSs would be able to choose an alternative compliance option in lieu of the CCT requirements.

Frequently Asked Questions

What happens when a water system's 90th percentile level continues to exceed the lead action level?

- EPA is proposing that systems with three lead action level exceedances in five years must:
  - Make filters certified for lead reduction available to all consumers served by the system.
  - Conduct at least one additional system-wide public education outreach activity, such as conducting a townhall meeting or participating in a community event, to raise additional awareness of the health effects of lead in drinking water, identify steps consumers can take to reduce their exposure, and provide information about how the water system is addressing the issue.
  - Repeat the public education activity every six months until the system no longer meets the multiple lead action level exceedance criteria.

Frequently Asked Questions

What are the small system flexibilities under the proposed LCRI?

- The proposed LCRI reduces the eligibility threshold for CWSs to those serving 3,300 people or fewer, from 10,000 people or fewer under the 2021 LCRR.
- EPA is proposing to eliminate service line replacement as a standalone compliance option because all systems would be required to conduct mandatory full-service line replacement of lead and GRR service lines, regardless of their 90th percentile lead level.
- Under the proposed LCRI, NTNCWSs and CWSs serving 3,300 or fewer people that exceed the lead action level of 10 ppb may choose implementation of POU devices or full replacement of lead-bearing plumbing materials in lieu of CCT with State approval.

Public Comment Period and Public Hearing

Public Comment Period and Docket

- EPA invites the public to review the proposed LCRI and supporting information and provide written input to EPA through the public docket.
- The public docket can be accessed at http://www.regulations.gov under Docket ID No. **EPA-HQ-OW-2022-0801.**
- Written comments must be received on or before **February 5, 2024.**
- For more information and instructions on how to submit input to the public docket, visit: https://www.epa.gov/dockets/commenting-epa-dockets.

Public Comment Period and Public Hearing

- During the public comment period, EPA will be holding a virtual public hearing on the proposed LCRI on **January 16, 2024**.
- EPA invites members of the public to register and attend the hearing where there will also be an opportunity to make oral comments to EPA.
- EPA will consider both written and oral public comments equally in the development of the final LCRI.

EPA's LCRI Website: https://www.epa.gov/ground-water-and-drinking-water/lead-and-copper-rule-improvements

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