

Proposed Lead and Copper Rule Improvements (LCRI). Frequently Asked Questions for States and Public Water Systems November 2023

1. Why is EPA proposing the Lead and Copper Rule Improvements (LCRI)?

EPA is proposing the Lead and Copper Rule Improvements (LCRI) to significantly reduce exposure to lead through drinking water. The proposal builds on the 2021 Lead and Copper Rule Revisions (LCRR) to the 1991 Lead and Copper Rule (LCR). The proposed LCRI strengthens key elements of the rule in three main focus areas: 1) Identifying and Replacing Lead Service Lines, 2) Reducing Complexity and Improving Public Health Protection, and 3) Increasing Transparency and Informing the Public.

2. What are the key provisions of the proposed LCRI?

EPA is proposing that water systems must replace lead service lines (LSLs) and certain galvanized service lines that are under the control of the water system in 10 years or less, with limited exceptions, regardless of the water system's 90th percentile lead level.

EPA is proposing to lower the lead action level to 10 parts per billion (ppb) (or 0.010 mg/L) and eliminate the lead trigger level to simplify the rule and require water systems to take actions to reduce drinking water lead exposure. Water systems with continually high lead levels determined by having multiple lead action level exceedances would be required to conduct additional outreach to consumers about lead in drinking water and make filters certified to reduce lead available to consumers.

EPA is proposing an updated tap sampling protocol that would require systems to collect first-liter and fifth-liter samples at sites with LSLs or lead premise plumbing. EPA is also proposing to further streamline the rule by allowing systems to defer the optimal corrosion control treatment (OCCT) and re-optimized OCCT processes for systems that can remove 100 percent of lead and galvanized requiring replacement (GRR) service lines at a minimum rate of 20 percent of lines each year within five years of the date the system is triggered into the corrosion control treatment (CCT) steps.

EPA is proposing to improve the public education requirements by updating the content and delivery frequency for more proactive messaging about lead in drinking water. For additional information, visit <https://www.epa.gov/ground-water-and-drinking-water/lead-and-copper-rule-improvements>.

3. 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).

4. 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.

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

When LSLs are present, they represent the greatest lead exposure source in drinking water. 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. Water systems would also be required to track lead connectors in their inventories and replace them as they are encountered.

6. 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 LSL; 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 LSL.

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. Where systems are unable to demonstrate that a galvanized service line was never downstream of an LSL, it would be categorized as a GRR service line and be subject to the proposed rule's service line replacement requirement to ensure that all potential GRR service lines are eliminated from the system.

7. 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, 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.

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.

8. 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.

9. 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 at or below the lead action level) towards the service line replacement rate.

10. What mitigation measures is EPA proposing to reduce lead exposure following service line replacement and disturbances?

EPA is proposing improvements to the 2021 LCRR requirements for risk mitigation after full and partial lead and GRR service line replacement and disturbances. EPA is maintaining the 2021 LCRR requirements for water systems that cause a disturbance to a lead, GRR, or unknown service line to notify persons at the service connection and provide them with information to reduce their exposure to potentially elevated lead levels that could result from the disturbance. In the LCRI, EPA is proposing to also require water systems to provide notification following disturbances resulting from physical action or vibration (e.g., mechanical or vacuum excavation during service line material investigations).

EPA is maintaining the 2021 LCRR requirement that water systems provide pitcher filters or point-of-use (POU) devices certified by an American National Standards Institute (ANSI) accredited certifier to reduce lead in drinking water and six months of replacement cartridges following full and partial replacement of lead and GRR service lines, after replacement of a lead connector, and after disturbances resulting from the replacement of an inline water meter, and water meter setter.

To strengthen these risk mitigation requirements, EPA is proposing to clarify that water systems are required to provide filters and replacement cartridges to every occupant, rather than every residence as required in the 2021 LCRR, to ensure that non-residential building occupants, also receive filters following replacements or disturbances. EPA is also proposing that risk mitigation actions after a disturbance apply to lead status unknown service lines, given the possibility they might be lead or GRR service lines.

In addition, EPA is proposing a new mitigation requirement that, following partial service line replacement, water systems would be required to install a dielectric coupling to separate the remaining LSL or GRR service line and the replaced service line (i.e., the new service line) unless the replaced service line is made of plastic.

11. 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.

12. What financial assistance is available to help pay for service line replacements?

There are a number of pathways for systems to receive support for service line replacement and related activities both for ongoing service line replacement efforts and replacements that would be conducted under the LCRI. These include low- to no-cost financing through the Drinking Water State Revolving Fund (DWSRF), lead remediation grants established by the Water Infrastructure Improvements for the Nation (WIIN) Act, and low-cost financing from the Water Infrastructure Finance and Innovation Act (WIFIA) program. Funding may also be available from other federal agencies, state, and local governments.

The Infrastructure Investment and Jobs Act, also referred to as the Bipartisan Infrastructure Law (BIL), appropriated \$30.7 billion in supplemental DWSRF funding and reemphasized the importance of lead service line replacement (LSLR) under the DWSRF program by including \$15 billion specifically appropriated for “lead service line replacement projects and associated activities directly connected to the identification, planning, design, and replacement of lead service lines.” The dedicated LSLR appropriation and the General Supplemental appropriation under the BIL as well as annual base appropriations for the DWSRF can pay for lead and GRR service line and lead connector replacement and related activities. The BIL requires that States provide 49 percent of their LSLR and General Supplemental capitalization grant amounts as additional subsidization in the form of principal forgiveness and/or grants to disadvantaged communities, as defined under Safe Drinking Water Act (SDWA) section 1452(d)(3).

EPA has compiled information on federal and non-federal funding sources available to assist States and water systems with replacement efforts, available online here: <https://www.epa.gov/ground-water-and-drinking-water/funding-lead-service-line-replacement>. EPA also developed a guide to help small and disadvantaged communities identify potential federal funding sources for service line replacement and technical assistance related to LSLR, available online here https://www.epa.gov/sites/default/files/2020-12/documents/ej_slr_funding_sources-final.pdf. EPA strongly encourages water systems to evaluate these available funding opportunities to support LCRI implementation and full service line replacement.

13. What are the tap sampling requirements under the proposed LCRI?

EPA is proposing that systems collect both a first- and fifth-liter sample from sites served by LSLs or that contain lead-premise plumbing and to use the higher of the two lead sample results in the 90th percentile calculation. EPA is proposing to retain the requirement under the 2021 LCRR that prioritizes LSL sites for tap sampling. Water systems with LSLs must collect all samples from sites served by LSLs, if available.

14. 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 ppb would be required to take actions including CCT and public education. Under the LCRR, water systems that exceed the current lead action level of 15 ppb 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 ppb 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 OCCT 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. See Questions 17 through 19 for information about proposed CCT, small system flexibility, and public education requirements, respectively, and the proposed rule for a full description of all proposed requirements.

15. 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.

16. What happens when a lead result from an individual tap sample site exceeds 10 ppb?

EPA is proposing to maintain the 2021 LCRR requirement for systems to conduct additional activities when a tap sample exceeds 10 ppb. Previously called “find-and-fix”, EPA is proposing to rename this requirement “distribution system and site assessment” to describe this requirement more precisely, recognizing that the “fix” to address the exceedance may be outside of the control of the water system. Consistent with the proposed change to the lead action level, under the proposed LCRI, systems would conduct the distribution system and site assessment for any sampling site that exceeds 10 ppb. The distribution system and site assessment would involve collecting a water quality sample in the distribution system near the site, collecting a follow-up lead tap sample, and evaluating the results to determine if either a localized or centralized adjustment of the OCCT or other distribution system actions are necessary and submit a recommendation to the State.

EPA is proposing in the LCRI for lead and copper tap sample results to be provided to the consumers served at the tap within three calendar days regardless of sample results.

17. What are the changes to corrosion control treatment (CCT) and water quality parameter (WQP) monitoring under the proposed LCRI?

EPA is proposing several changes to CCT requirements under the proposed LCRI to streamline the requirements and improve implementation.

Under the proposed LCRI, EPA is allowing deferral of installation or re-optimization of CCT for water systems that can remove 100 percent of their lead and GRR service lines at a minimum rate of 20 percent per year within 5 years of being triggered into CCT steps. EPA is also proposing to require all water systems serving 10,001 to 50,000 people with CCT to monitor for WQPs, similar to requirements for systems serving more than 50,000 people, regardless of the system’s lead and copper 90th percentile levels.

18. 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.

19. What are the public education and public notification requirements under the proposed LCRI?

EPA is proposing to improve the public education requirements by updating the content and delivery frequency for more proactive messaging about lead in drinking water. The proposal introduces new public education requirements regardless of the lead or copper levels sampled. EPA is proposing to require systems to offer to sample the tap water for lead for any customer served by a lead, GRR, or unknown service line. EPA is also

proposing requirements that would help to ensure greater accessibility of public education and outreach materials to consumers including renters and individuals with limited English proficiency.

EPA is also proposing improvements to the timing of public education after a lead action level exceedance. Water systems that exceed the lead action level would be required to provide public education no later than 60 days after the end of a sampling period and continue providing public education with this same frequency until the system no longer exceeds the action level. This public education is in addition to the requirement for water systems to provide public notification of a lead action level exceedance within 24 hours.

Other examples of proposed changes to public education requirements include: 1) updated mandatory language on the health effects of lead, 2) required outreach activities for systems that fail to meet the mandatory service line replacement rate, 3) additional information included in annual notifications of service line material, including instructions to request lead sampling from the water system, 4) improved notification as a result of service line disturbances, and 5) improved requirements for accessibility of public education and outreach materials to all consumers including renters and individuals with limited English proficiency.

EPA is proposing to maintain the requirement for water systems to conduct 24-hour Tier 1 public notification following a lead action level exceedance at the current action level of 15 ppb starting October 16, 2024. If the LCRI is finalized as proposed, water systems would be required to conduct Tier 1 public notification at a revised lead action level of 10 ppb.

20. What are the proposed LCRI requirements for lead sampling at schools and child care facilities?

EPA is proposing to retain the LCRR requirements for CWSs to conduct sampling and public education in the schools and licensed child care facilities they serve. Requirements include compiling a list of all schools and licensed child care facilities served by the system, conducting sampling at all elementary schools and licensed child care facilities and offering to sample at secondary schools during the first five-year cycle, offering to sample at all schools and child care facilities after the first five-year cycle, delivering results and remediation options to the sampled school and child care facilities, and submitting results to the State and state and local health departments annually.

EPA is proposing to expand the time period to allow States to waive the requirements for the first five-year cycle if sampling was conducted between January 1, 2021 and the LCRI rule compliance date. The LCRR allows States to offer waivers to CWSs for sampling in the schools and child care facilities if those facilities are sampled under an alternative program, such as a State or local law. However, the LCRR only allows waivers for sampling conducted after the LCRR compliance date of October 16, 2024.

EPA is authorized under SDWA to establish National Primary Drinking Water Regulations (NPDWRs) that are legally enforceable standards that apply to public water systems as defined in SDWA section 1401(4) and 40 CFR § 141.2. EPA does not have the authority under SDWA section 1412 to require schools and child care facilities that are not regulated as public water systems to act under an NPDWR. However, schools and child care facilities that operate their own public water systems would be subject to the requirements of the LCRI. EPA anticipates that the majority of these systems would be eligible for the small system flexibilities under the proposed rule.

21. When will EPA issue the final LCRI?

EPA anticipates issuing the final rule by October 2024.

22. How do I provide comment on the proposed LCRI?

EPA welcomes public input as part of the regulatory development process. EPA invites members of the public to review the proposed LCRI and supporting information and provide written comments at www.regulations.gov, Docket ID Number: EPA-HQ-OW-2022-0801. Follow the online instructions for submitting written comments. Comments must be submitted to the public docket during the 60-day public comment period.

EPA will consider all public comments in informing the development of the final regulation. For more information and instructions on how to submit written comments to the public docket, visit <https://www.epa.gov/dockets/commenting-epa-dockets>. EPA will also hold a virtual public hearing on January 16, 2024, at which the public will be invited to provide EPA with verbal comments. For more information on the public hearing and how to provide EPA with verbal and written comments, please visit: <https://www.epa.gov/ground-water-and-drinking-water/lead-and-copper-rule-improvements>.

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