

FAQs Initial Lead Service Line Replacement

Office of Drinking Water

1. **Who must prepare a lead service line (LSL) replacement plan under the Lead and Copper Rule Revisions?** All community and nontransient noncommunity (NTNC) waterworks with one or more lead, galvanized requiring replacement, or lead status unknown service lines.
2. **When must the LSL replacement plan be submitted?** The waterworks must submit the LSL replacement plan to ODW by the compliance date, October 16, 2024.
3. **What is included in the LSL replacement plan?** The ODW template covers the following required plan elements, including a description of:
 - A strategy for determining the composition of lead status unknown service lines in the waterworks' inventory;
 - A procedure for conducting full LSL replacement;
 - A strategy for informing customers before a full or partial LSL replacement;
 - For waterworks that serve more than 10,000 persons, an LSL replacement goal rate recommended by the waterworks in the event of a lead trigger level exceedance;
 - A procedure for customers to flush service lines and premise plumbing of particulate lead;
 - An LSL replacement prioritization strategy based on factors including but not limited to the targeting of known LSLs, and LSL replacement for disadvantaged consumers and populations most sensitive to the effects of lead; and
 - A funding strategy for conducting LSL replacements which considers ways to accommodate customers that are unable to pay to replace the portion of the service line they own.
4. **What about lead goosenecks, pigtails, or connectors?** A waterworks must replace any lead gooseneck, pigtail, or connector it owns when encountered during planned or unplanned infrastructure work after the compliance date. The waterworks must offer to replace a customer-owned lead gooseneck, pigtail, or connector; however, the waterworks is not required to bear the cost of replacement of the customer-owned parts. The waterworks is not required to replace a customer-owned lead gooseneck, pigtail, or connector if the customer objects to its replacement.
5. **Does a replacement of a lead gooseneck, pigtail or connector count toward an LSL replacement goal or mandatory LSL replacement?** No, a lead gooseneck, pigtail or connector, by itself does not constitute an LSL and does not count as an LSL replaced.
6. **What is a partial LSL replacement?** This means replacement of any portion of an LSL or galvanized service line requiring replacement that leaves in service any length of LSL or galvanized service line requiring replacement upon completion of the work.
7. **What is the advance notification requirement for a planned partial LSL replacement?** The waterworks must provide notice to the owner of the affected service line, or the owner's authorized agent, as well as non-owner resident(s) served by the affected service line at least 45 days prior to the replacement. The notice must explain that the waterworks will replace the portion of the line it owns and offer to replace the portion of the service line not owned by the waterworks.
8. **What is the advance notification requirement for a full LSL replacement?** The Lead and Copper Rule does not require advance notification for full LSL replacement; however, in practice, waterworks and their contractors likely will obtain permission to conduct work on private property and schedule the work in advance. In addition, the waterworks must provide notice to the owner of the service line, or the owner's authorized agent, as well as non-owner resident(s) served by the

affected service line within 24 hours of completion of the replacement. The notification must explain that consumers may experience a temporary increase of lead levels in their drinking water, information about health effects of lead, and actions that consumers can take to minimize their exposure to lead in drinking water.

9. What are lead mitigation strategies? Lead mitigation strategies include:

- In advance of returning the service line to service, provide notice to the consumer that they may experience a temporary increase of lead levels.
- In advance of returning the service line to service, provide information to the consumer about service line flushing.
- Provide the consumer with a pitcher filter or point of use device, six months of replacement cartridges, and instruction for use.
- Offer to the consumer to take a follow up tap sample between three months and six months after service line replacement and provide the results to the consumer.

10. When are lead mitigation strategies required? Lead mitigation strategies are triggered upon a full or partial replacement of an LSL, including an emergency repair.

11. What about sampling following a partial or full LSL replacement? The waterworks must offer to collect a follow up tap sample between three months and six months after completion of any partial or full replacement of an LSL. The waterworks must provide the results of the sample no later than 30 days after the waterworks learns of the monitoring result, except if the sample exceeds 15 µg/L, then provide as soon as practicable but no later than three calendar days after the waterworks learns of the result. Provide a consumer notice consistent with the content requirements for notification of lead tap sample results.

12. What if a customer replaces their portion of an LSL? When a waterworks is notified by the customer that the customer's portion of the LSL will be replaced, the waterworks must make a good faith effort to coordinate simultaneous replacement of its portion of the service line. If simultaneous replacement cannot be conducted, the waterworks must replace its portion as soon as practicable but no later than 45 days from the date the customer replaces its portion of the LSL. The waterworks must provide notification and lead risk mitigation as described above.

13. What's required if there is a disturbance to an individual service line? After a lead, galvanized requiring replacement, or lead status unknown service line is shut off or bypassed, such as by operating a valve on a service line or meter setter, and without conducting a partial or full LSL replacement, the waterworks must provide the persons served by the waterworks at the service connection with information about the potential for elevated lead levels in drinking water as a result of the disturbance as well as instructions for a flushing procedure to remove particulate lead before returning the service line to service.

14. What's required after replacement of an inline water meter, a water meter setter, or gooseneck, pigtail, or connector? The waterworks must provide the person served by the waterworks at the service connection with information about the potential for elevated lead levels in drinking water as a result of the disturbance, public education materials, a pitcher filter or point-of-use device, instructions to use the filter, and six months of filter replacement cartridges.

15. What are the applicable standards for pitcher filters and point-of-use devices? Pitcher filters and point-of-use filters and filter cartridges must be certified to NSF/ANSI Standard 53 by an American National Standards Institute accredited certifier to reduce lead.

- 16. When is the goal-based full LSL replacement triggered?** Waterworks that serve more than 10,000 persons whose 90th percentile lead level from tap samples is above the lead trigger level but at or below the lead action level must conduct goal-based full LSL replacement at a rate approved by the state. Goal-based full LSL replacement is not triggered for small community waterworks serving 10,000 or fewer persons and all nontransient, non-community waterworks.
- 17. When does the first year of goal-based full LSL replacement begin?** The first year of goal-based LSL replacement shall begin on the first day following the end of the tap sampling period in which the lead trigger level was exceeded. If sampling is required annually or less frequently, the end of the tap sampling monitoring period is September 30 of the calendar year in which the sampling occurs. If sampling is required on a six-month frequency, the tap sampling monitoring period ends either June 30 or December 31. If the State has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.
- 18. What is the goal-based replacement rate?** The percentage of service lines to be replaced per year, approved by the state. This rate is applied to the sum of known lead and galvanized requiring replacement when the waterworks first exceeds the trigger plus the number of lead status unknown service lines in the beginning of each year.
- 19. When is the mandatory full LSL replacement triggered and what is the mandatory rate?** Waterworks serving more than 10,000 persons that exceed the lead action level in tap samples must conduct mandatory full LSL replacement at an average annual rate of at least three percent, calculated on a two-year rolling basis. Waterworks serving 10,000 or fewer persons that exceed the lead action level may select a full LSL replacement program as a compliance option. In this case, the waterworks would implement a full LSL replacement program on a schedule approved by the State but not to exceed 15 years.
- 20. When does the first year of mandatory full lead service line replacement begin?** The first year of LSL replacement shall begin on the first day following the end of the tap sampling period in which the lead action level was exceeded.
- 21. How does a waterworks calculate the number of required service line replacements?** To calculate the number of required service line replacements, multiply the replacement rate times the sum of the known lead and galvanized requiring replacement service lines at the time the waterworks first exceeded the trigger or action level, plus the number of unknown service lines in the beginning of each year of the waterworks' replacement program.

$$\text{Required SL Replacements} = (\text{Replacement Rate}) \times (\text{LSLs} + \text{GRRs} + \text{Unknowns})$$

- 22. What happens if a waterworks fails to meet its LSL replacement goal?** The LCRR anticipates that a cause for failure to meet an LSL goal is lack of participation by home and business owners. A waterworks must conduct public outreach activities until either the waterworks meets its replacement goal or tap sampling shows the 90th percentile of lead is at or below the trigger level for two consecutive one year monitoring periods. Public outreach activities include direct mail notification, conducting a town hall meeting, participating in a community event to provide information, contacting customers by phone, text message, email, or door hangers.
- 23. What happens if a small waterworks exceeds the lead trigger level but does not exceed the lead and copper action levels?** Small community waterworks serving 10,000 or fewer persons and all NTNC waterworks must continue operating and maintaining optimal corrosion control treatment,

must collect water quality parameters and must select a compliance option from the following list for approval by the State:

- LSL replacement
- Corrosion control treatment
- Point of use devices
- Replacement of lead-bearing plumbing

24. If a small waterworks exceeds the lead action level, what's required? Small community waterworks serving 10,000 or fewer persons and all NTNC waterworks that exceed the lead action level but do not exceed the copper action level must implement the compliance option approved by the State. A waterworks that exceeds the lead action level must complete the requirements for exceeding a trigger level, above and implement the compliance option approved by the State.

25. If a small waterworks selects LSL replacement, what's required? The waterworks must implement a full lead service line replacement program on a schedule approved by the State but not to exceed 15 years and begin the replacements within one year after the State's approval of the compliance option. The waterworks must continue LSL replacement even if the waterworks' 90th percentile lead level is at or above the in future tap sampling monitoring periods. A waterworks must have no LSLs, galvanized serving lines requiring replacement or lead status unknown service lines in its inventory by the end of the replacement program.

26. How should a waterworks rank the methods used to prioritize LSL replacements in replacement plan template section 5a when the method is not used? Rank only the items used with numbers and indicate "NA" for items not used.

27. Is the ordinance mentioned in section 5c of the replacement plan template required? Creating an ordinance at the local level is one approach to requiring replacement of LSLs on the private side. The ordinance is not required.

28. What's the basis for the utility flushing protocol and customer flushing protocols in the templates attached to the LSL Replacement Plan Template and why are they so different?

- The utility flushing protocol in Appendix A is based on AWWA C810-17 section 4.4.1 and is based on a high rate of flushing achieved when the water meter is replaced with a temporary straight pipe and the premise plumbing is flushed through a hose bib.
- The customer flushing protocol is based on AWWA C810-17 section 4.4.2.1 and calls for 30 minutes of flushing every two weeks for three months.
- A daily 5-minute flush is recommended is based on AWWA C810-17 section 4.4.2.2 and is intended to replace the water in the premise plumbing with fresh water from the water main.
- The customer flushing protocols are repeated based on the premise that some lead-containing sediment remains present in the premise plumbing after the initial LSL replacement and utility flushing.

29. How should waterworks owners submit the LSL Replacement Plan to ODW? ODW is preparing a web portal for submittal of the LSL inventory and related documents, including the LSL Replacement Plan. Stay tuned for more information.

This FAQ document does not replace or supersede the requirements of the EPA Lead and Copper Rule or guidance published by the EPA. You may find more information on the requirements at 40 CFR § 141.84.