BACKGROUND: Federal Rule Overview: LCR, LCRR and LCRI

The Environmental Protection Agency (EPA) established the Lead and Copper Rule (LCR) in 1991 to protect public health and reduce exposure to lead in drinking water. That rule was revised in 2021 and again in 2024 to include several new actions to better protect the public against the harmful effects of lead.

EPA's 2021 Lead and Copper Rule Revision's (LCRR) introduced the requirement for systems to develop a service line material inventory. Under the LCRR, all community (CWS) and non-transient, non-community (NTNC) water systems were required to create an inventory of their service lines throughout their distribution systems and submit them to LDH by October 16, 2024.

The EPA published the Lead and Copper Rule Improvements (LCRI) in the Federal Register on October 30, 2024 to further strengthen lead reduction efforts. The LCRI establishes a compliance deadline of November 1, 2027 for systems to comply with various requirements such as submitting an updated service line inventory (baseline inventory), creating a lead service line replacement plan, updating lead and copper sampling plans, a lowered lead action level (lowered from 15 ppb to 10 ppb), and submitting a list of schools and childcare facilities to the state. The LCRI also requires systems to validate certain unknown service lines by 2034 and replace all lead lines by 2037.

LCRI SUMMARY TABLE: Summary of key LCRI deadlines:

LCRI Requirement	Deadline	Applicability
Customer Notices to Lead or Potential Lead Lines	Annually by November 15th	Systems with service lines classified as "Lead", "Galvanized Requiring Replacement", or "Unknown" in their inventory
Baseline Inventory with Updates and Connector Material	11/1/2027	All Community and Non-Transient Non-Community Systems
Lead Service Line Replacement Plan	11/1/2027	Systems with "Lead", "GRR", or "Unknowns"
Updated Sample Site Plan	11/1/2027	All Community and Non-Transient Non-Community Systems
First and Fifth Liter Sampling	Beginning in 2028	For sample sites served by a lead service line, an additional fifth-liter sample must be collected at the same time as the first-liter sample (both samples must be analyzed for lead)
Revised Lead Action Level (15 ppb > 10 ppb)	11/1/2027	All Community and Non-Transient Non-Community Systems
Lead Gooseneck Replacements	Ongoing	Beginning 11/1/2027, must replace when encountered during routine work
List of School and Daycares to the State	11/1/2027	Systems that serve one or more school or daycare
School and Childcare Lead Monitoring	Beginning in 2028	Systems that serve one or more school or daycare
Field Validation of Non-Lead Lines	11/1/2034	Systems with lines installed pre-1988 that were not field verified
Identification/verification of remaining unknowns	11/1/2037	Systems with remaining unknowns
Lead Service Line Replacement	11/1/2037	Systems with Lead or GRR lines

FREQUENTLY ASKED QUESTIONS (LCRI):

1. **When does the LCRI officially go into effect?**
   While the final rule was published in October 2024, the primary compliance date for water systems is November 1, 2027. Until then, you must continue to comply with the Lead and Copper Rule Revisions (LCRR) requirements for:
   - Submitting your Initial Service Line Inventory (deadline passed: Oct 16, 2024).
   - Notifying customers of their service line material.
   - Issuing a Tier 1 Public Notice if you exceed the current lead action level of 15 ppb.

2. **What is the "Baseline Inventory" and when is it due?**
   The Baseline Inventory is an updated version of your initial inventory and is due by November 1, 2027. The baseline Inventory must include the material of connectors (e.g., goosenecks, pigtails) and any other updates since the initial service line inventory submittal.
   - Systems must review their records to attempt to identify connector materials. Proactive field identification is not required.
   - If a system does not know if a connector exists at a given location, it can be classified as “unknown”.
   - Connector materials must be categorized in the following manner:
     - “Lead” where the connector is made of lead.
     - “Non-Lead” where the connector is determined through an evidence-based record, method, or technique not to be made of lead.
     - “Unknown” where the material of the connector is not known.
     - “No connector present” where there is no connector at the location (*e.g.,* where a service line is directly connected to a water main with not connection such as the use of a corporation stop).

Illustration of Gooseneck Connector

3. **What is the impact if you have lead connectors (i.e. lead goosenecks) in your service line inventory?**
   Under the LCRI, lead connectors 3’ or less in length are not considered lead service lines. Therefore, the replacement requirements related to lead service lines do not apply to lead connectors. However, beginning November 1, 2027, lead connectors are required to be replaced when encountered during planned or unplanned work in the distribution system. In addition, sites with lead connectors will be included in the new Tier 3 pool for lead and copper sampling and need to be prioritized for sampling above sites with copper piping and lead solder.

4. **If I replace a lead gooseneck, am I required to distribute a filter or conduct public education to the resident?**
   Public education, flushing instructions and filter is only required if the replaced lead connector/gooseneck is connected to a Lead, GRR, or Unknown service line. Therefore, it is important for the water system to verify the service line materials prior to replacing the connector.

5. **What is the mandatory lead service line replacement deadline?**
   Systems must replace all lead service lines (LSLs) and galvanized requiring replacement (GRR) lines under their control within 10 years (by 2037).
   - Rate: You must achieve an average annual replacement rate of 10% (calculated cumulatively).
   - Deferred Deadline: Systems with a high proportion of LSLs may qualify for a deferred deadline if replacing 10% annually would require replacing more than 39 lines per 1,000 service connections per year.

6. **What constitutes "control" of a service line?**
   The LCRI defines a line as under your control if you have the legal or physical access to replace it. To count a line as "replaced," you must replace the portion that is lead, or the entire line when both system and customer-owned portions are lead and/or GRR).
   - Access: If you cannot gain access to the private side, you are not penalized, provided you make a "reasonable effort" to obtain access.
   - Reasonable Effort Definition: At least 4 attempts using at least 2 different methods (e.g., mail, door hanger, phone call, text) to contact the property owner.

7. **Are partial replacements allowed?**
   Generally, no. Partial replacements are prohibited except during emergency repairs or planned infrastructure work (e.g., main replacement) where the customer refuses full replacement. In these cases, you must still offer to replace the customer side (often at their cost if no funding is available) and capture a follow-up sample.

8. **Why does my lead and copper sample plan have to be updated?**
   Sample plans must be updated under the LCRI primarily because the criteria for what counts as a "high-risk" site have changed to be more focused on lead, and the underlying data about where lead is located (the inventory) has improved. The deadline to submit updated sample plans is November 1, 2027.

9. **What are the new sample site selection Tier criteria for the LCRI?**
   The tiers categorize sites based on the likelihood of finding lead. You must exhaust higher tiers before using lower ones:
   - **Tier 1**: Single-family structures with premise plumbing made of lead and/or served by a lead service line.
   - **Tier 2**: Buildings, including multiple-family residences, with premise plumbing made of lead and/or served by a lead service line.
   - **Tier 3**: Sites that are served by a lead connector. Tier 3 sites are also sites served by a galvanized service line or containing galvanized premise plumbing identified as ever having been downstream of a lead service line. Tier 3 for community water systems only includes single-family structures.
   - **Tier 4**: Sites that contain copper premise plumbing with lead solder installed before the effective date of the State's applicable lead ban (September 20, 1988). Tier 4 for community water systems only includes single-family structures.
   - **Tier 5**: Representative sites (sites that reflect general system plumbing).

10. **Are all sites served by a Galvanized Requiring Replacement (GRR) service line considered a Tier 3 site?**
    No. Only those where the galvanized service line or galvanized plumbing was confirmed to have previously been downstream of a lead service line. For example, if there is a galvanized line on the customer-side of the meter, and the system is aware that they previously replaced a lead service line on the system-side of the meter, the site would be considered a Tier 3 site. However, if there is a galvanized line on the customer-side of the meter, and the system does not know if their line was ever previously lead, the site would be considered a galvanized requiring replacement but not a Tier 3 sampling site.

11. **What if I don't have enough LSL sites to meet my minimum number of required samples?**
    If you have fewer LSL sites than the required number of samples, you must use all available LSL sites (Tiers 1 and 2) and then fill the remainder of your pool with Tier 3 sites. Only after exhausting all Tier 1, 2 and 3 sites can you move to Tier 4. Only after exhausting all Tier 1, 2, 3, and 4 sites can you move to Tier 5.

12. **What happens if a resident refuses to participate?**
    You must make a "reasonable effort" to maintain your pool. If a site is no longer available or the resident refuses, you must replace it with a site of the highest tier available. You must document the reason for any site changes in your sampling plan.

13. **How has the tap sampling procedure changed?**
    For sites with lead service lines, systems must now collect a first and fifth-liter sample.
    - First-liter sample: Represents water from the fixture.
    - Fifth-liter sample: Represents water from the service line.
    - Both must be analyzed, and the higher of the two results is used for 90th percentile compliance calculations.

14. **Is First and Fifth-liter sampling required at sites with galvanized requiring replacement sites?**
    No, under the LCRI only sites served by a “Lead” service line requires first and fifth-liter sampling.

15. **What is the new Lead Action Level?**
    Starting November 1, 2027, the lead action level drops from 15 µg/L (ppb) to 10 µg/L (ppb).

16. **What are the new notification deadlines for tap results?**
    Beginning November 1, 2027 systems must provide consumer notice of individual tap results within 3 calendar days of receiving the lab report (previously 30 days). This applies regardless of whether the result is above or below the action level.

17. **Do water systems have to collect lead water samples at schools and child care facilities?**
    Yes, community water systems (CWS) are required to test for lead in schools and licensed child care facilities within their service area. Systems must test all elementary schools (through grade 8) and licensed child care facilities they serve within the first five years following November 1, 2027 unless the facility was constructed or had full plumbing replacement on or after January 1, 2014 and they are not served by a lead, GRR or unknown service line.

    - **November 1, 2027**: Deadline for water systems to submit a comprehensive list of all served schools and licensed childcare facilities to their state.
    - **2028–2032**: The first five-year sampling cycle begins. Systems must sample at least 20% of elementary schools and 20% of licensed childcare facilities annually until all have been sampled one or have declined to participate or are non-responsive.
    - **2033 and Beyond**: After the initial cycle, sampling at these facilities is required only upon request.

18. **What are the sampling protocols of the school and child care samples?**
    - **Sample Volume:** All samples must be 250 mL "first-draw" samples (unlike the 1-liter standard for residential taps).
    - **Stagnation Period:** Water must remain stationary in the plumbing for 8 to 18 hours before collection.
    - **Schools:** 5 samples per building (typically 2 fountains, 1 kitchen faucet, 1 classroom faucet, and 1 nurse’s office faucet).
    - **Childcare Facilities:** 2 samples per building (1 fountain and 1 kitchen or classroom faucet).

19. **Are water systems responsible for remediation if a high lead is detected in a sample?**
No, systems must provide individual tap results and information on remediation options to the facility, the state, and local health departments within 30 days of receiving lab data. Water systems are also required to provide facilities with the EPA's 3Ts (Training, Testing, Taking Action) Manual to guide follow-up actions.

20. **Under the LCRI, are costly pipe loop studies required as part of a corrosion control treatment (CCT) evaluation?**
Large and medium systems with lead or GRR service lines are required to include pipe loop studies as part of their CCT evaluation (if required to evaluate for CCT). For smaller systems without lead, a table top study or using a successful neighboring system experience to develop their CCT recommendation is allowed (i.e., "analogous" system).

Useful Links:

- LDH LCRI Website: https://www.ldh.la.gov/bureau-of-engineering-services/lcrrlcri-rulemaking-overview
- EPA LCRI Technical Fact Sheets: https://www.epa.gov/dwreginfo/lead-and-copper-rule-improvements-supporting-materials
- EPA Lead and Copper Rule Improvements (LCRI): https://www.epa.gov/ground-water-and-drinking-water/lead-and-copper-rule-improvements
- EPA Lead and Copper Rule Revisions (LCRR): https://www.epa.gov/dwreginfo/lead-and-copper-rule-implementation-tools
- Federal Register - Final Lead and Copper Rule Revisions (LCRR): https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-141/subpart-I
- Federal Register – Final Lead and Copper Rule Improvements (LCRI): https://www.epa.gov/ground-water-and-drinking-water/lead-and-copper-rule-improvements
- EPA's LCRI Questions and Answers: https://www.epa.gov/ground-water-and-drinking-water/lcri-questions-and-answers EPA LCRI Webinar: https://www.youtube.com/watch?v=ecN38LOlO5o