EPA Lead & Copper Rule Improvements (LCRI)

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LOUISIANA DEPARTMENT OF HEALTH

Presentation Overview:

1. Intro:
   - Sources of Lead and the Intent of the EPA Lead/Copper Rules
   - Initial Service Line Inventory Recap
2. LCRI Overview
   - Baseline Inventory
   - Lead Gooseneck Replacements
   - Inventory Validation
   - Lead Service Line Replacement Plans
   - Updated Lead & Copper Sample Plans
   - School & Childcare Lead Monitoring
3. Funding and Implementation Resources

Sources of Lead Exposure

Common Sources of Lead Exposure:

- **House Paint** – Houses build prior to 1977 likely have lead based paint which can be inhaled or consumed through dust and paint chips.

- **Soil** – Soil exposed to flaking lead-based paint or car exhaust, particularly in areas near busy roads, may contain lead that can be tracked into homes.

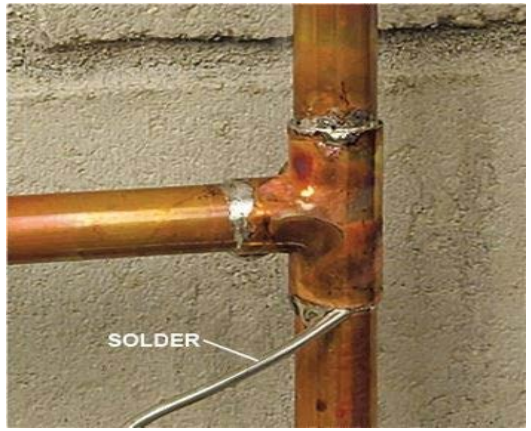
- **Tap Water** – Lead can leach into drinking water from leaded pipes, fittings and fixtures. Most common in plumbing installed prior to 1988 (lead ban date).

Sources of Lead in Drinking Water:

NOTE: Lead can leach into drinking water as it passes though leaded plumbing materials.

Leaded Brass

Lead Gooseneck Connectors



Lead Solder

Lead Service Lines

Sources of Lead in Drinking Water:

Other factors that can affect leaching include:

- Water Quality – Corrosiveness of the water (pH, Alkalinity, Chlorides, etc.).
- Stagnation – The longer the water sits in leaded plumbing materials, the more lead can leach into the water.
- Pipe disruptions or water flow changes – Can disrupt pipe scales.

Rule Intentions:

Original EPA Lead and Copper Rule (1991):

- Lowers lead/copper in drinking water by sampling to determine if ***corrosion control treatmen***t is necessary.
  - pH adjustment
  - Orthophosphate-based corrosion inhibitor

Lead and Copper Rule Improvements (LCRI):

- Lowers lead exposure by identifying and ***removing lead service lines***.
- Requires systems to replace lead lines by 2037.
- Requires lead testing in schools/childcares to help lower lead exposure to the most vulnerable.
- Strengthens existing corrosion control treatment requirements.

Initial Service Line Inventory Recap

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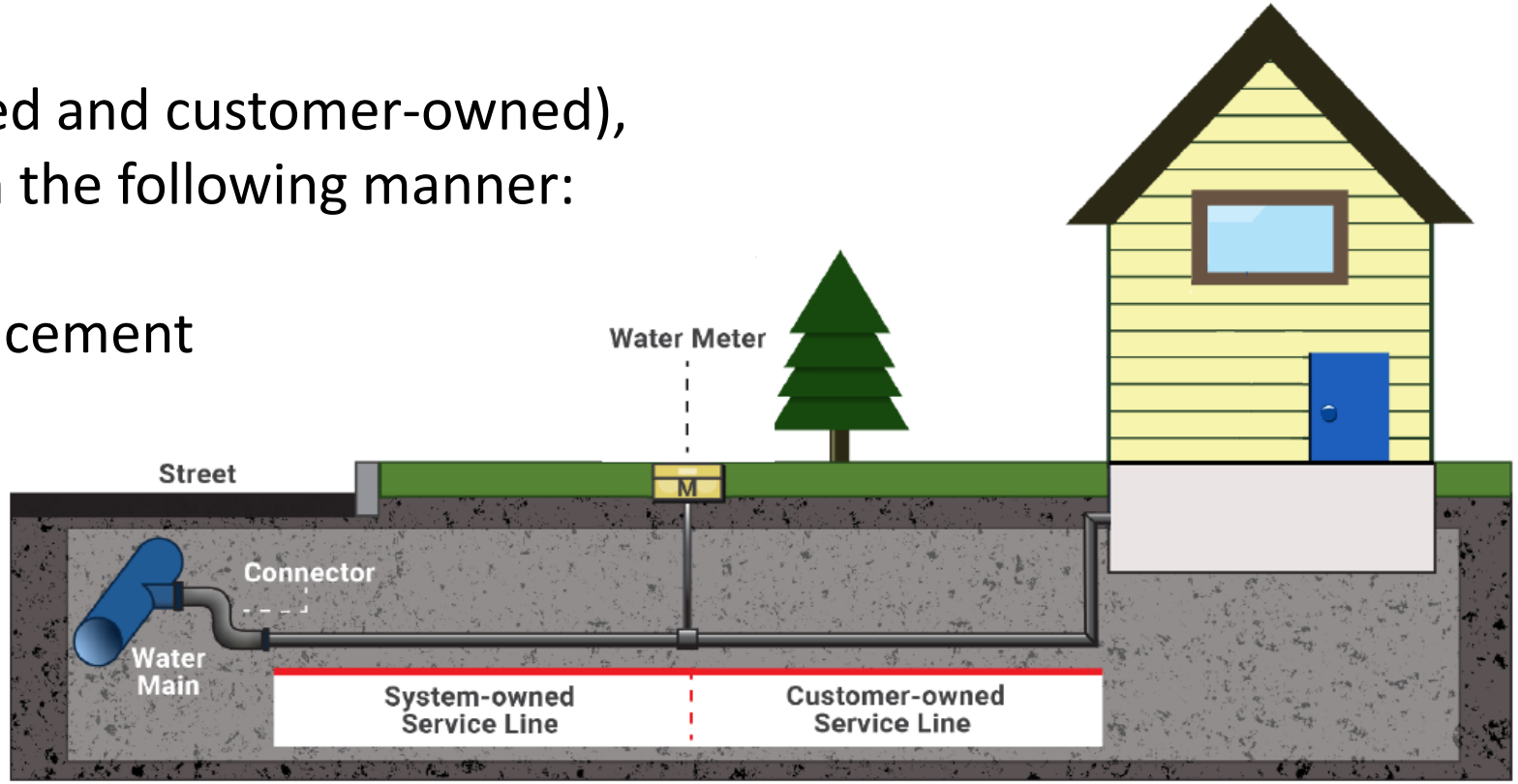
Initial Service Line Inventory

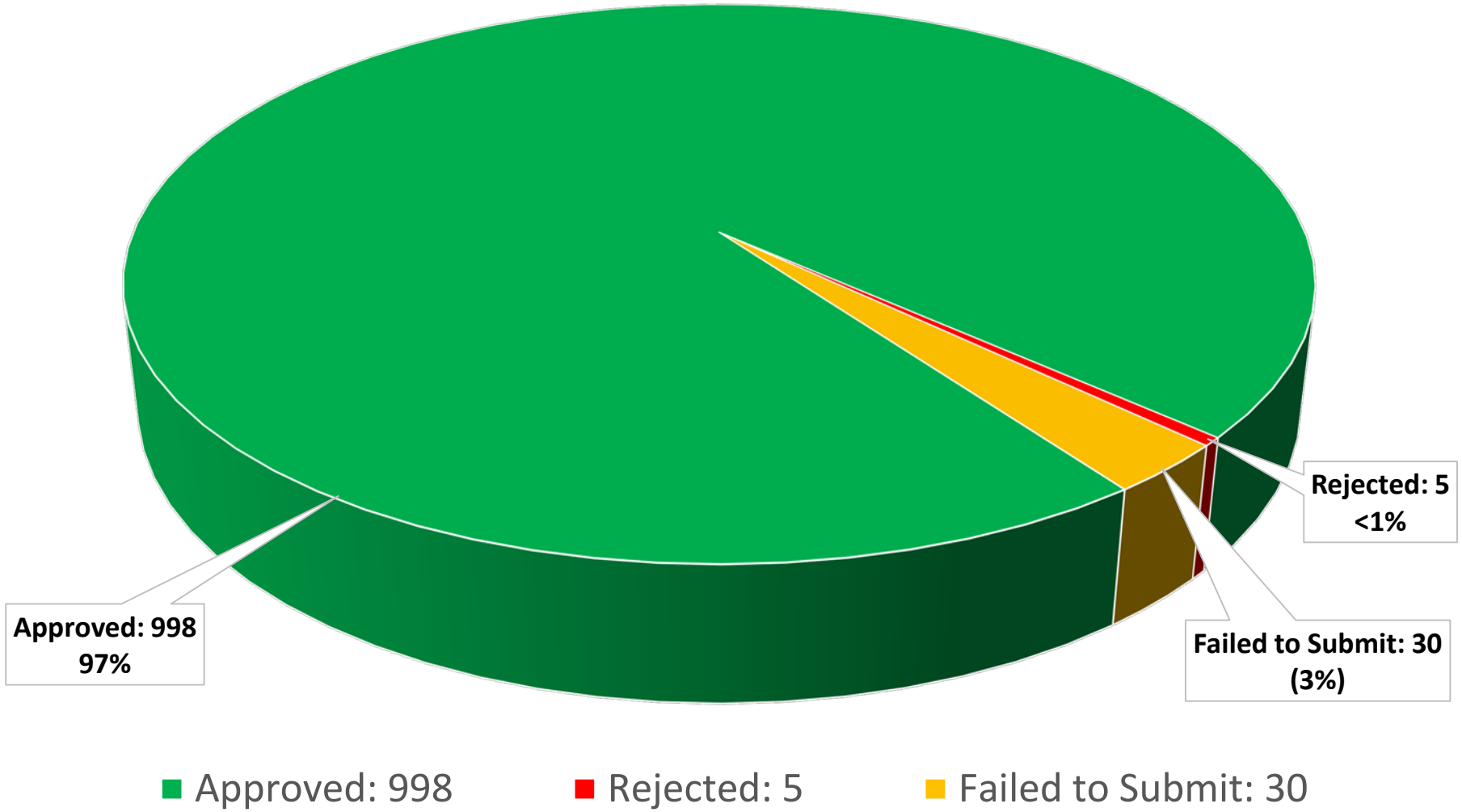
Under the LCRR, initial inventories were due October 16, 2024:

Each service line (system-owned and customer-owned),
is required to be categorized in the following manner:

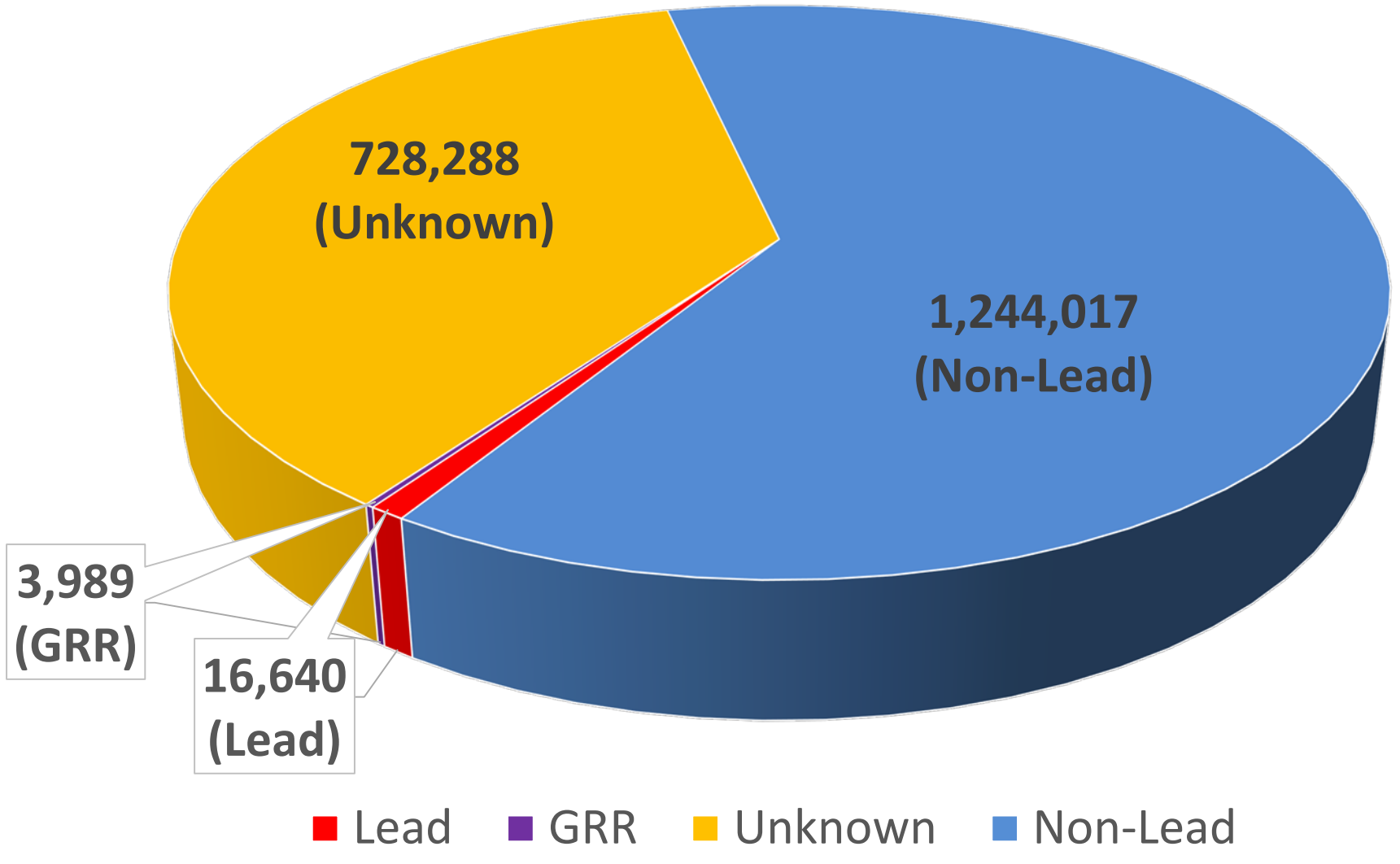
- Lead
- Galvanized Requiring Replacement
- Non-Lead
- Unknown



Current Service Line Inventory Review Status
(1,033 Total Active Systems)



Current Service Line Classification Counts (as of 5/4/2026)



Lead & Copper Rule Improvements (LCRI) Overview

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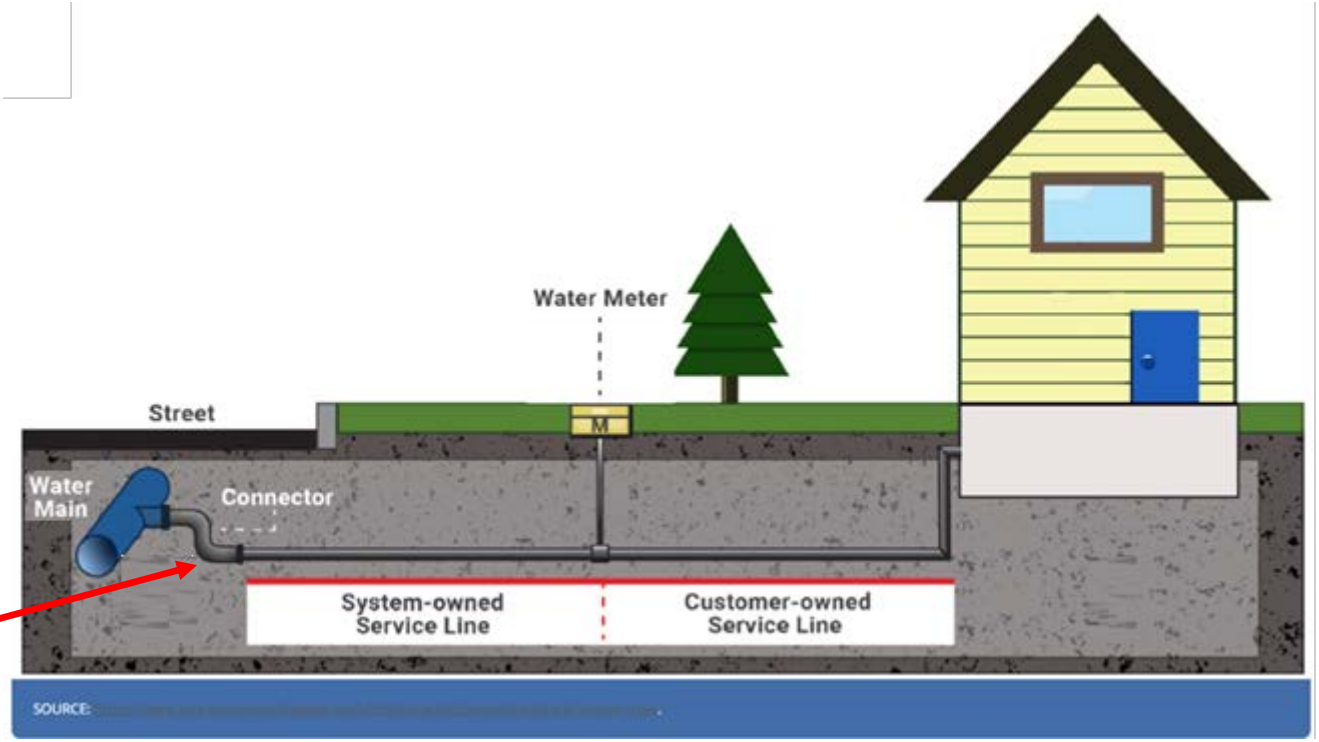
Baseline Inventory

Systems must submit an updated inventory known as the “baseline inventory” by **November 1st, 2027**.

- Must include all updates to the inventory since the initial submittal.
- Must include service line ***connector material*** for each entry.

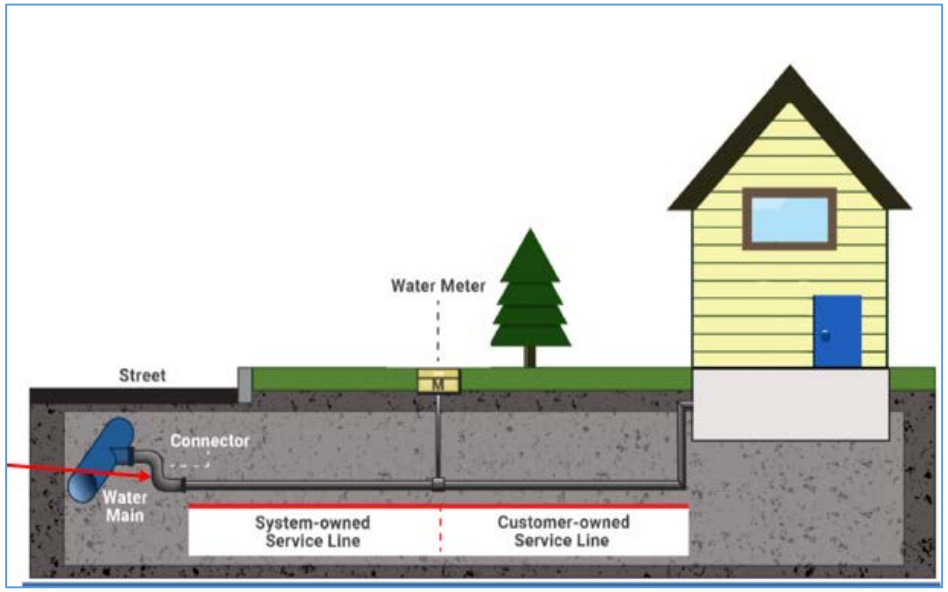


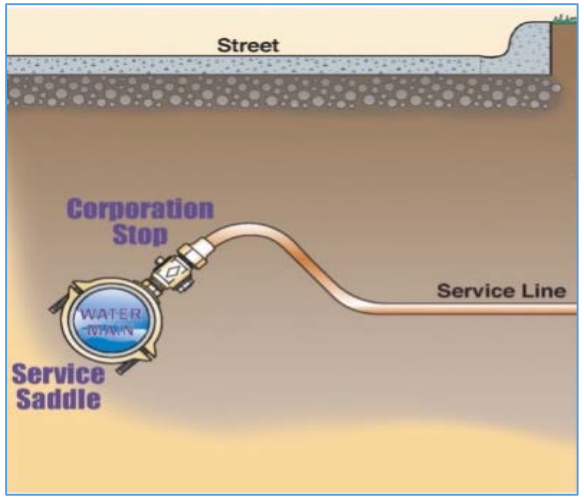
Connector Material

Connector materials must be categorized in the baseline inventory submittal as follows:

- "**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 directly connects a water main to a building inlet).

Updated inventories must be uploaded to the LDH LSLI Portal by the November 1st 2027 deadline.





Lead Gooseneck Connectors

Water System Responsibilities:

- Systems must replace any system-owned lead connectors when encountered during planned or unplanned water system infrastructure work.
- **IF** the gooseneck is connected to a “Lead”, “GRR” or “Unknown” service line, upon replacement, the water system must provide the homeowner:
  - ✓ information about the potential for elevated lead levels in drinking water as a result of the disturbance,
  - ✓ An NSF approved pitcher filter or POU treatment device certified to reduce lead,
  - ✓ Instructions to use the filter,
  - ✓ and six months of filter replacement cartridges.

Customer Notifications

Systems with any service connections classified as “Lead”, “Galvanized Requiring Replacement”, or “Unknown” in their inventory are required to deliver public education information to those customers each year by **November 15th.**

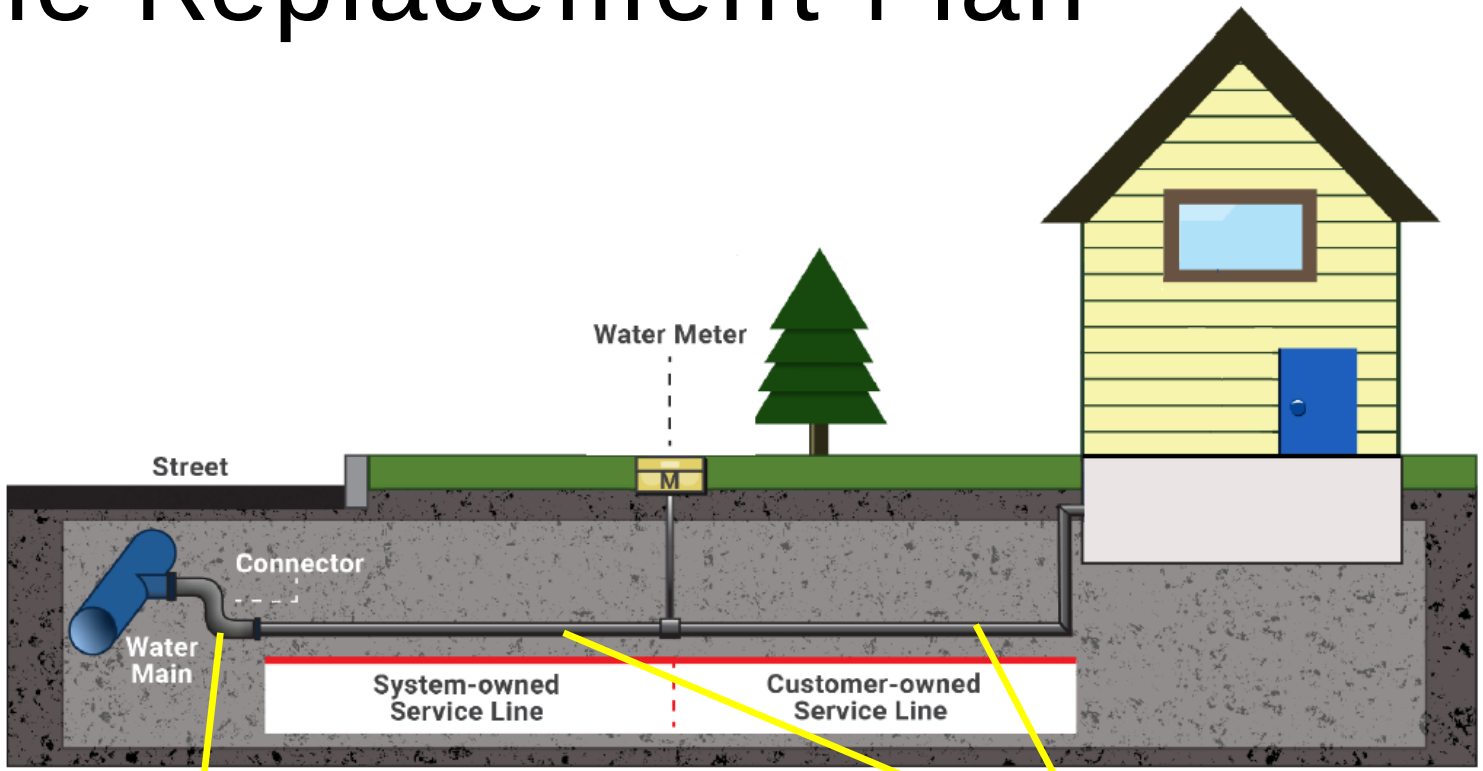
Lead	GRR	Lead Status Unknown
✓ A statement that the service line is lead.	✓ A statement that the service line is GRR.	✓ A statement that the service line material is unknown but may be lead.
✓ An explanation of the health effects of lead as specified in the rule and below.	✓ An explanation of the health effects of lead as specified in the rule and below.	✓ An explanation of the health effects of lead as specified in the rule and below.
✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.	✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.	✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.
✓ Information about opportunities to replace LSLs as well as programs that provide financing solutions to replace the LSL.*	✓ Information about opportunities for replacement of the service line.	✓ Information about opportunities to verify the material of the service line.

Notification templates are available at: https://www.ldh.la.gov/bureau-of-engineering-services/lcrrlcri-rulemaking-overview

Lead Service Line Replacement Plan

Under the LCRI, LSLs must be replaced by 2037.

Note: Lead Goosenecks are not considered LSL's under the LCRR but they are required to be replaced when exposed during routine work beginning November 1, 2027.



Lead Gooseneck

Lead Service Line

LSL Replacement Plan cont'd

Systems with at least one **"Lead", "GRR", or "Unknown"** service line must develop and submit a replacement plan to the state by **November 1, 2027**. The plan must be made publicly available and must include:

1) A strategy to identify the material composition of all unknown service lines in the inventory.
2) A SOP for conducting full service line replacements.
3) A communication strategy for informing customers before a Lead or GRR service line replacement.
4) A procedure for customers to flush service lines and plumbing following a disturbance or LSL replacement.
5) A strategy to prioritize service line replacement.
6) A funding strategy for conducting replacements that includes ways to accommodate customers that are unable to pay to replace the portion of the service line they own.
7) A communication strategy to inform consumers and customers about the replacement plan and program.
8) Identification of any laws that affect the water system's ability to gain access to conduct replacements.
9) For water systems that identify any lead-lined galvanized service lines in the inventory, a strategy to determine the extent of their use in the distribution system.

Inventory Validation

Systems must validate certain “non-lead” lines by **2034**.

- **Step 1: Identify the validation pool.** The validation pool consists of all non-lead service lines in the inventory **excluding** lines installed after the lead ban of 1988, and lines that were visually verified.
- **Step 2: Determine the minimum number of validations required** (See Table 1)
- **Step 3: Randomly select service lines to be field validated.** Water systems can use tools such as a random number generator to ensure the sites are truly randomly selected.
- **Step 4: Field verify the randomly selected locations.** Where ownership of the service line is split, one verification point is required on each side of the meter (i.e., public and private).
- **Step 5: Submit field verification results to the State.** Field verification findings shall be documented and submitted to the state upon completion. If a water system identifies a lead or GRR service lines during validation, water systems must notify the state within 60 Days.

Table 1. Minimum Number of Validations Required

Size of Validation Pool	Number of Validations Required
<1,500	20% of validation pool
1,500 to 2,000	322
2,001 to 3,000	341
3,001 to 4,000	351
4,001 to 6,000	361
6,001 to 10,000	371
10,001 to 50,000	381
>50,000	384

Service Line Disturbances

Beginning **November 1, 2027**, systems must provide notice and educational materials during water-related work that could disturb “lead”, “GRR”, or “unknown” SLs.

- Includes work on or near a lead service line, such as the replacement of a water main, service line, or meter replacements, and other work that may move, vibrate, or physically disturb the service line.
- This can release lead particles and cause a temporary increase of lead levels in water.
- Systems are required to distribute a pitcher filter or point-of-use treatment device (certified to reduce lead), instructions to use the filter, and six months of filters; **only when** the disturbance is resulting from:
    1. the replacement of an inline water meter, a water meter setter, or connector; or,
    2. from the replacement of a water main whereby the service line pipe is physically cut.

1st and 5th Liter Sample Collection

Water systems are required to collect first and fifth-liter tap samples **at sites with lead service lines (LSLs)**. Both the 1st and 5th-liter samples must be analyzed for lead and the higher of the two values is used for compliance.

1st and 5th-liter sample collection procedure:

- Fill the first numbered wide-mouth sample bottle with tap water.
- Immediately slide the second bottle under the tap without turning the water off and repeat the process for bottles three through five in consecutive order.
- The 1st and 5th liter samples must be tested for lead, higher of the two sample results are used for 90th calculation.

Updated Lead & Copper Sample Plans

Under the LCRI, systems must reevaluate the sites used for their lead and copper monitoring and submit an updated sample plan to the state by **November 1, 2027**.

- EPA has placed a bigger emphasis on selecting sites that have the greatest likelihood of capturing lead levels at the tap (used to weigh lead and copper equally).
- EPA has updated the site selection Tier criteria.
- Sampling sites must be selected from the highest Tier available (Tier 1 is the highest tier and Tier 5 is the lowest tier).
- A system without a large enough number of sites from a higher tier to meet the minimum number of sites required, may sample sites from the next highest tier.

Updated Lead & Copper Sample Tiers

Tier Classification	Description
Tier 1	Single-family structures (SFS) with premise plumbing made of lead and/or served by an Lead Service Line (LSL).
Tier 2	Buildings, including multiple-family residences, with premise plumbing made of lead and/or served by an LSL.
Tier 3	SFS served by a lead connector. Tier 3 sites are also SFS served by a galvanized service line or containing galvanized premise plumbing identified as ever having been downstream of a LSL. *NOTE: EPA Clarified that not all Galvanized Requiring Replacements (GRRs) are Tier 3 sites, only those where the galvanized service line has been confirmed to have previously been downstream of a lead service line.*
Tier 4	SFS that contain copper premise plumbing with lead solder installed before the effective date of the State's applicable lead ban (pre-1988).
Tier 5	SFS or a building in which the plumbing materials used at that site would be commonly found at other sites served by the water system (i.e., representative of sites throughout the distribution system).

Standard 6-Month Monitoring

Beginning **January 1, 2028**, systems with “Lead” and/or “GRR” service lines must conduct standard six-month monitoring for at least two consecutive six-month tap monitoring periods:

- As of 5/4/2026:
  - 6 Systems with Lead Service Lines
  - 25 Systems with GRR Service Lines

	6-MONTH MONITORING	3-YEAR MONITORING
System Size (number of people served)	Standard number of sites	Reduced number of sites
≤100	5	5
101 - 500	10	5
501 – 3,300	20	10
3,301 – 10,000	40	20
10,001 – 100,000	60	30
>100,000	100	50

Lowering the Lead Action Level

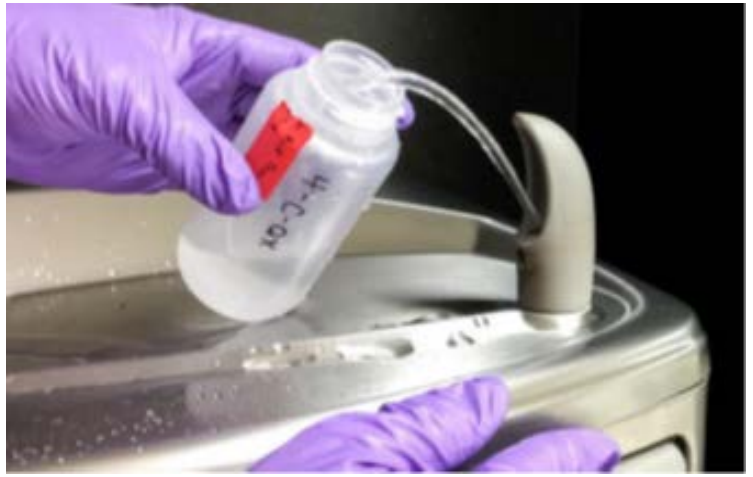
Beginning **November 1, 2027**, the lead action level will be reduced from 15 parts per billion (ppb) to 10 ppb.

How might this affect me???

- Find and Fix – Requires systems to collect a follow-up sample at each location with lead > 10 ppb within 30 days of learning of the results. Conduct WQP monitoring at or near the site > 10 ppb. Systems must determine if a "fix" is needed (e.g., adjustment to CCT, flushing portions of the distribution system, or other strategies).
- 90th Percentile Action Level Exceedance – When more than 10 percent of a systems routine lead sample results exceed the action level, systems are required to:
  - Inform the public within 24 hours (Tier 1 Public Notice) and conduct public education.
  - Evaluate for, install or adjust corrosion control treatment to reduce lead that leaches into drinking water.
  - Under the LCRI, systems are required to make filters certified for lead reduction available to all consumers if they have three or more 90th lead action level exceedances (above 10 ppb) within a 5-year time period.

School and Childcare Lead Monitoring

- All CWSs must submit a list of schools and child care facilities they serve to LDH by November 1, 2027. We emailed systems our "best guess" list on 4/6/27. Currently tracking responses. Please make sure to respond.
- Starting in **2028**, systems must conduct lead sampling at each elementary school (pre-k through 8th grade) and licensed childcare that they serve. At least 20%/year during the first five years (2027-2032).
- After 2032, must sample upon request (including high schools). You don't have to recollect if a facility has been sampled within 5 years.
- **Minimum of 5 samples per school and 2 samples per daycare (**1st Draw, 250 mL bottles). Sample results, public education and remediation options must be provided to each sampled school or daycare.
- Water systems are required to provide annual public education to schools and childcare facilities about the health risks of lead in drinking water.



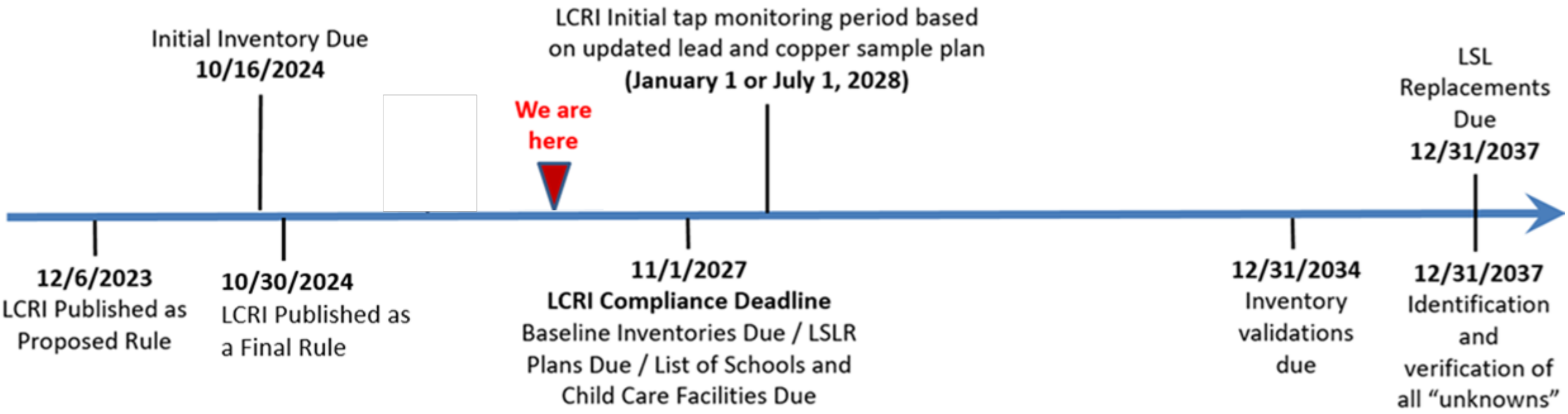
LCRI Deadline Summary

LCRI Requirement	Deadline	Applicability
Customer Notices to Lead or Potential Lead Lines	Notify customers annually by November 15th and Certify to the State by July 1st of the following year	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
Revised Lead Action Level (15 ppb > 10 ppb)	11/1/2027	All Community and Non-Transient Non-Community Systems

LCRI Deadline Summary (continued…..)

LCRI Requirement	Deadline	Applicability
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 Replacements	11/1/2037	Systems with Lead or GRR lines

LCRI Timeline



Ongoing Activities:

- Water systems must continue identifying service line materials and updating their inventories.
- Annual notifications to consumers with "Lead", "GRR", or "Unknown" lines are required each November.

Bipartisan Infrastructure Law (BIL) Funding

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Bipartisan Infrastructure Law (BIL)

- Louisiana is eligible to receive over $45 million per year over the next several years in dedicated funding for Lead Service Line (LSL) identification (i.e., inventories) and replacement.
- Funding is managed by our Drinking Water Revolving Loan Fund Program. For a project to be eligible for funding, it must be otherwise DWRLF eligible and be a lead service line identification and/or replacement project.
- Any project funded under this appropriation involving the replacement of a lead service line must replace the entire lead service line (both public and private owned portions), unless a portion has already been replaced or is concurrently being replaced with another funding source.
- Under the BIL, **49% of funds awarded to a LSL replacement project would be in the form of principal forgiveness (free)** and 51% would be in the form of no-interest loans.
- For more information visit the LDWRLF Program at: https://ldh.la.gov/page/430

RESOURCES

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LCRI Resources:

- **LDH LCRR/LCRI Website:** https://www.ldh.la.gov/bureau-of-engineering-services/lcrrlcri-rulemaking-overview
- **EPA's LCRI Website:** 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
- **EPA LCRI Technical Fact Sheets:** https://www.epa.gov/dwreginfo/lead-and-copper-rule-improvements-supporting-materials
  - Tap Monitoring Requirements
  - Service Line Inventory & Replacement Requirements
  - Public Education and Customer Notice Requirements
  - Inventory Validation
  - Schools and Childcare Sampling

Service Line Inventory Resources:

- **LDH Lead Service Line Inventory Website:** https://ldh.la.gov/bureau-of-engineering-services/LSLI
- **LDH LSLI Inventory Portal:** https://pwsportal.ldh.la.gov/Portal
- **EPA Guidance on Developing Lead Service Line Inventories and Service Line Inventory Template:** https://www.epa.gov/ground-water-and-drinking-water/revised-lead-and-copper-rule.
- **EPA Customer Notice Fact Sheet:** https://www.epa.gov/system/files/documents/2024-07/fact-sheet-for-notification-of-known-or-potential-lsls_0.pdf

Questions???

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