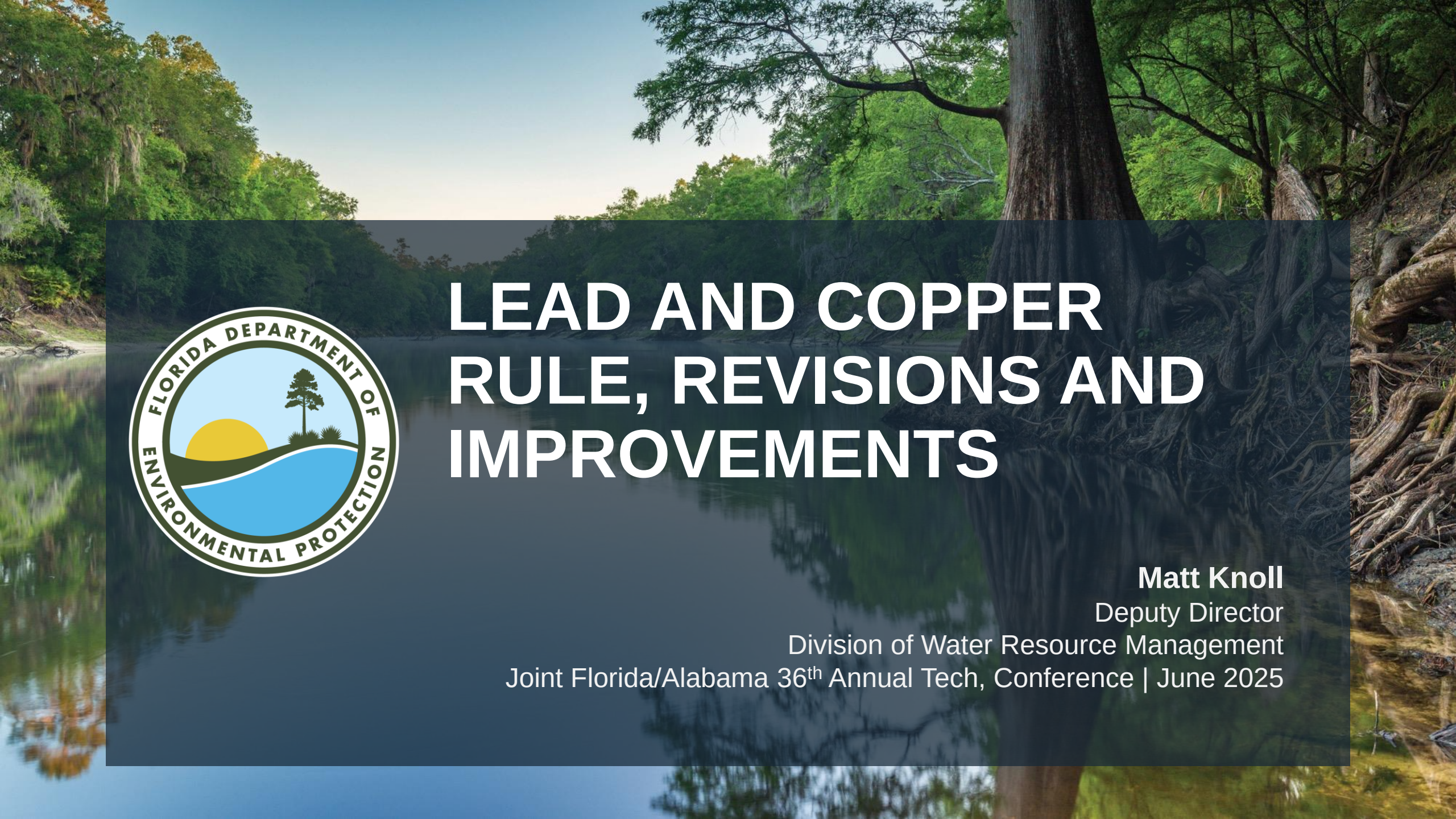


LEAD AND COPPER RULE, REVISIONS AND IMPROVEMENTS

Matt Knoll
Deputy Director
Division of Water Resource Management
Joint Florida/Alabama 36th Annual Tech, Conference | June 2025

INTRODUCTION TO LEAD AND COPPER

USE OF LEAD IN DRINKING WATER INFRASTRUCTURE

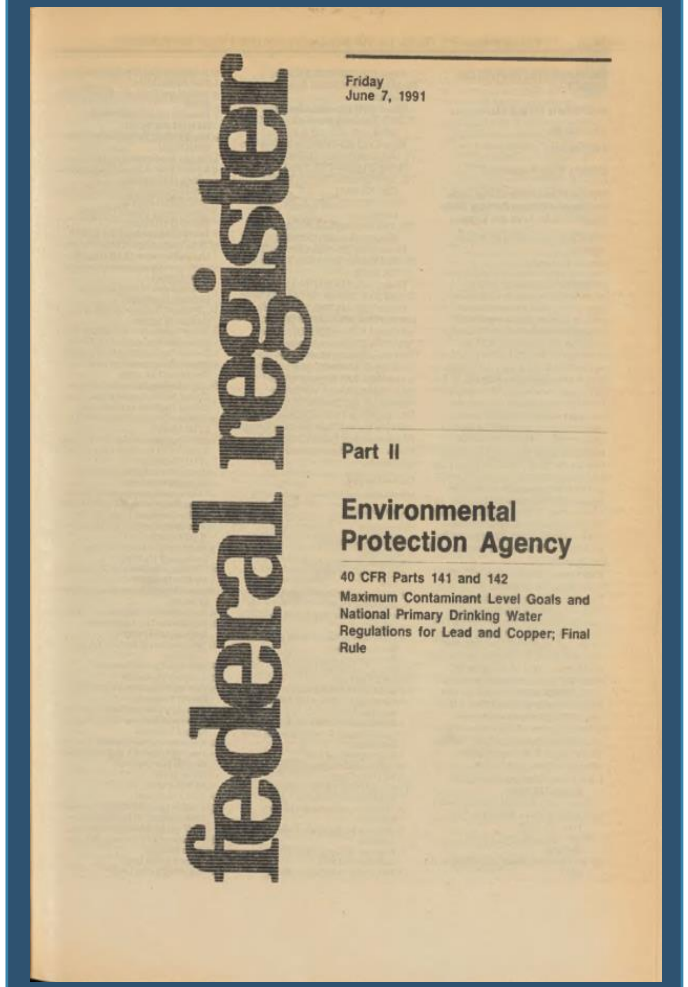
- Two sources of lead in drinking water:
  - (1) Raw water, and
  - (2) Corrosion of pluming materials in water distribution.
- Most lead contamination in drinking water is from corrosion of pluming infrastructure containing lead materials.
- Lead has been used in drinking water infrastructure since Rome.
  - Lead was considered ideal for plumbing because it is durable, malleable and resistant to corrosion.

Thomas Sumner, Science.org (2024)

INTRODUCTION TO LEAD AND COPPER

40 CFR 141 SUBPART I

- First interim maximum contaminant levels (MCLs) for lead and copper were set in 1975.
  - .050 mg/L Lead.
  - 1 mg/L Copper.
- In 1986, Congress amended the Safe Drinking Water Act (SDWA) to direct the U.S. Environmental Protection Agency (EPA) to revise the interim MCLs, public notification requirements and better address corrosion control.
- In response to the amendments, in 1991 EPA promulgated the first Lead and Copper Rule (40 CFR 141 Subpart I).
- Since implementation in 1991, exceedances have decreased over 90%.



56 FR 26548 National Archives

INTRODUCTION TO LEAD AND COPPER

COMPARISON OF RULE, REVISION, AND IMPROVEMENTS

1991 Lead and Copper Rule (LCR)

- No inventory requirement.
- No replacement plan requirement.
- Replacement program required based on the lead 90th percentile (P90) level, corrosion control treatment, and source treatment.
- Lead Action Level 0.015 mg/L.

2021 Lead and Copper Rule *Revisions* (LCRR)

- Must develop an inventory of service lines.
- Systems with potential lead service lines must develop replacement plan.
- Replacement program based on P90 and system size.
- Lead Action Level 0.015 mg/L.

2024 Lead and Copper Rule *Improvements* (LCRI)

- Inventory must include connector materials.
- Replacement plan must be publicly accessible.
- Replacement program required for all systems.
- Lead Action Level 0.010 mg/L.

LEAD AND COPPER RULE IMPROVEMENTS

OVERVIEW

- Inventory Requirements
- Replacement Requirements
- Lead Action Level and Exceedances
- Sampling Requirements
- Implementation Challenges
- What's Next?

INVENTORY REQUIREMENTS

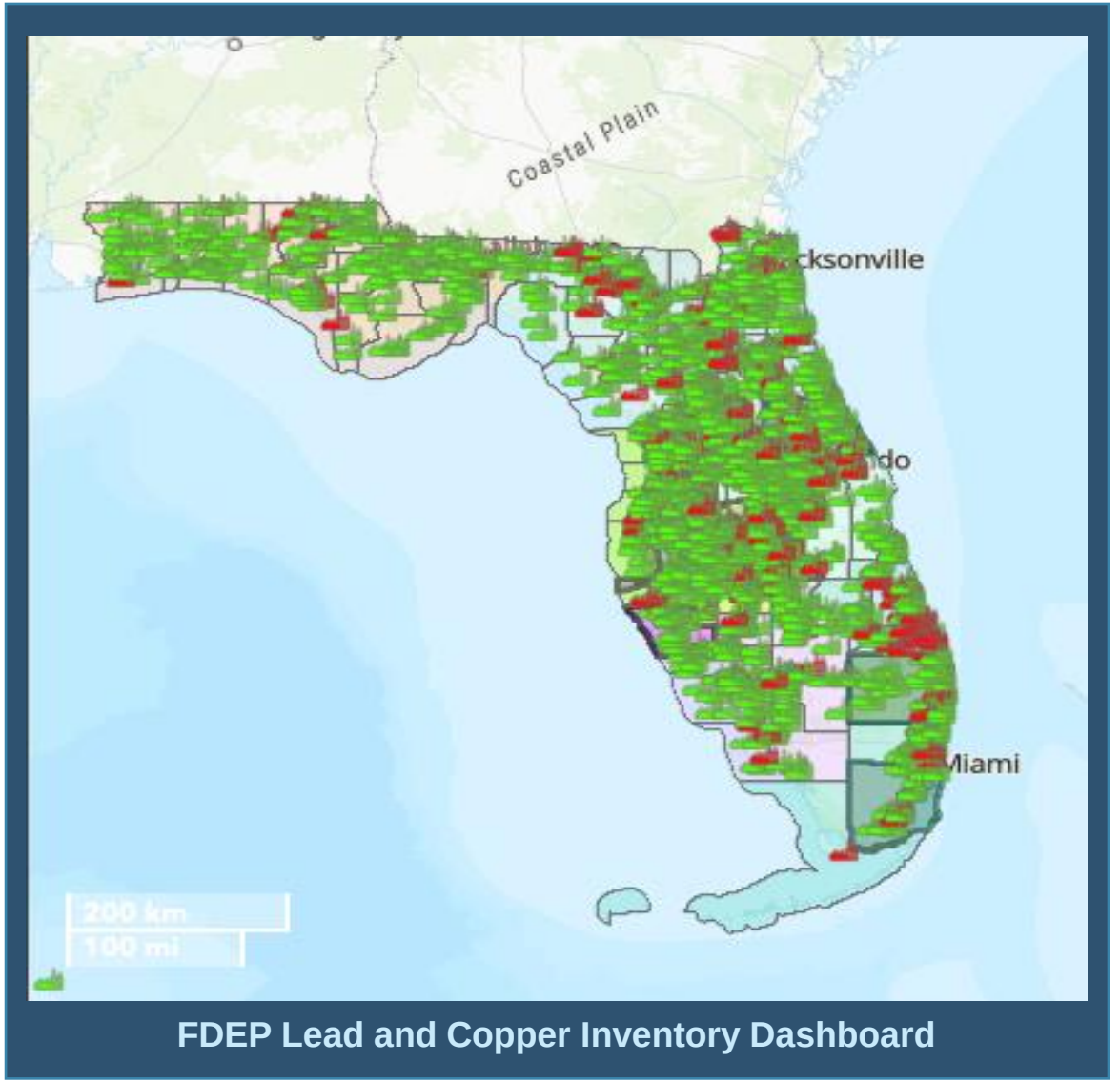
INITIAL INVENTORY

- Community water systems (CWS) and Non-transient non-community systems (NTNC) required to inventory all service lines.
- Inventory identified service lines as:
  - Lead.
  - Non-lead.
  - Galvanized Requiring Replacement (GRR).
  - Unknown.
- Initial inventories were due Oct. 16, 2024.
- EPA granted an extension for Florida to Feb. 16, 2025.

INVENTORY REQUIREMENTS

INITIAL INVENTORY TECHNIQUES

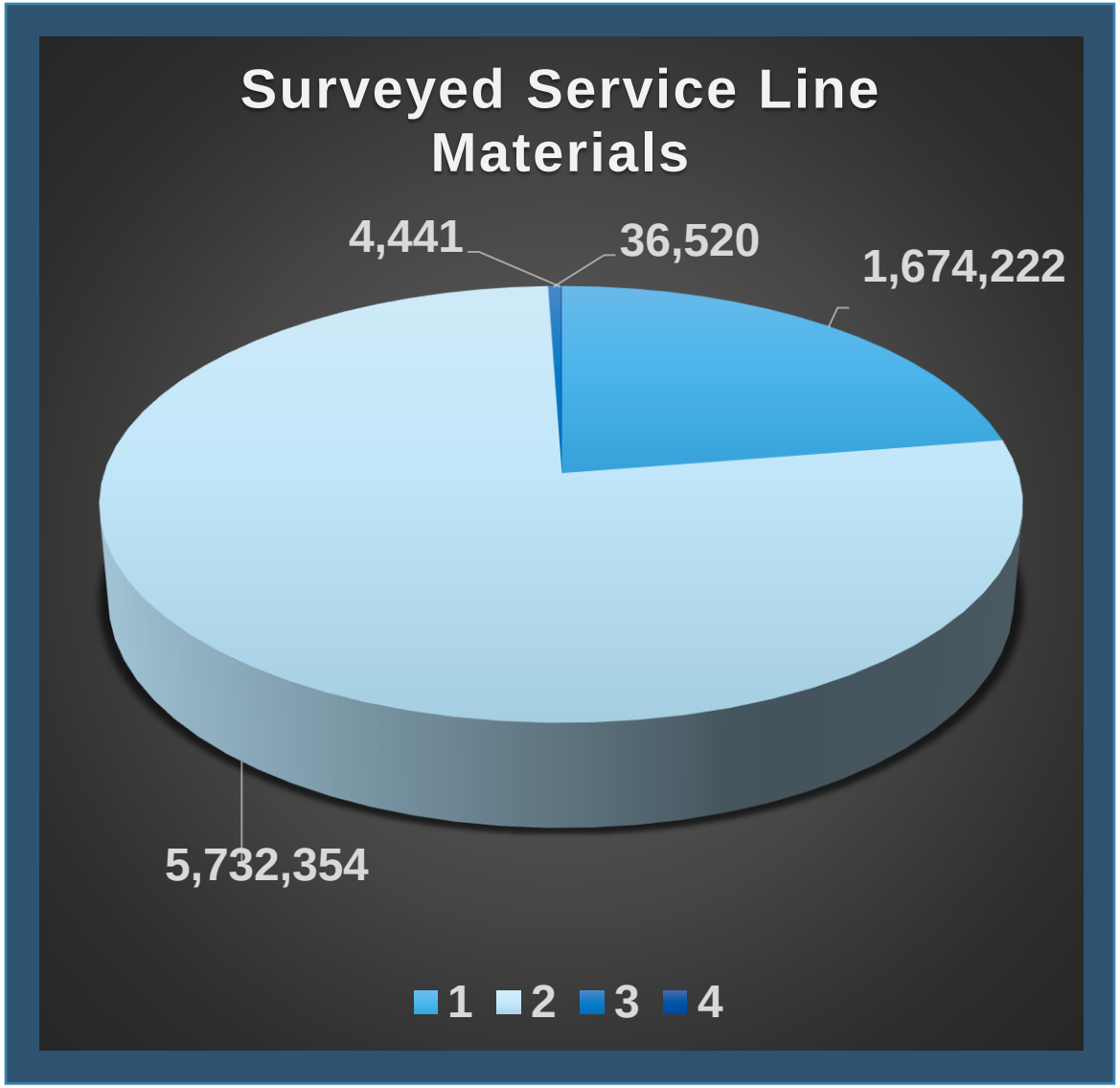
- Florida has approved three methods for classifying service lines:
  - Physical verification.
  - Record review.
    - Built after 1989.
    - Diameter > 2 in.
  - Predictive modeling.
- Geo-statistical modeling.
  - At least 95% confidence level.
  - At least 90% accuracy rate.



FDEP Lead and Copper Inventory Dashboard

INVENTORY REQUIREMENTS

INITIAL INVENTORY RESULTS

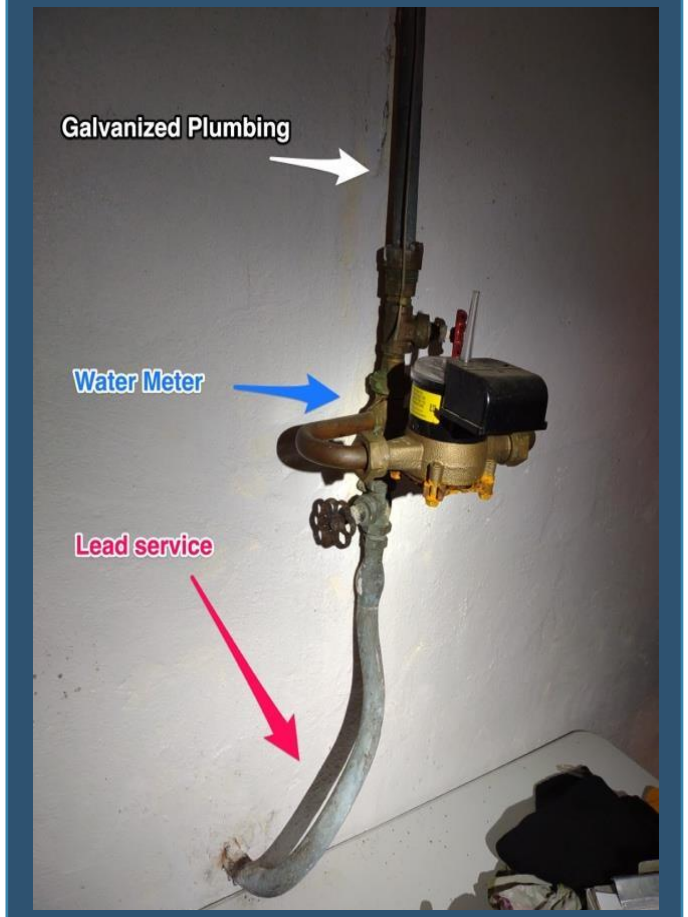


- Florida was projected to have over 1 million lead service lines.
- Approximately 4,441 lead service lines identified.
- 50 systems have reported at least one lead service line.

INVENTORY REQUIREMENTS

BASELINE INVENTORY

- Must provide an update on service line information.
- Must identify the material of connectors as:
  - Lead.
  - Non-Lead.
  - Unknown.
  - No connector present.
- Baseline inventory due by Nov. 1, 2027.
- Must be updated annually.



City of Highwood, cityofhighwood.com (2024)

INVENTORY REQUIREMENTS

SCHOOLS AND CHILDCARES

- LCRI requires CWS:
  - To sample schools and licensed childcare facilities for lead by 2033.
  - Conduct monitoring at the schools and childcare facilities.
  - Provide guidance to schools and childcare facilities regarding lead exposure.
- In 2016, the federal Water Infrastructure Improvements for the Nation Act (WIIN), established a grant program for lead testing in schools and childcares.
  - In 2021, was amended to provide funding for remediation and compliance monitoring.
- Sampling under DEP's WIIN grant program can satisfy the requirements for LCRI.

Voluntary Lead Testing Program Results		
	Schools	**Childcares**
Samples Taken	36,801	1,775
Exceedances	545	17
	1.48%	**0.95%**
Data collected between January 2021 – April 2025.		

REPLACEMENT REQUIREMENTS

REPLACEMENT PLANS

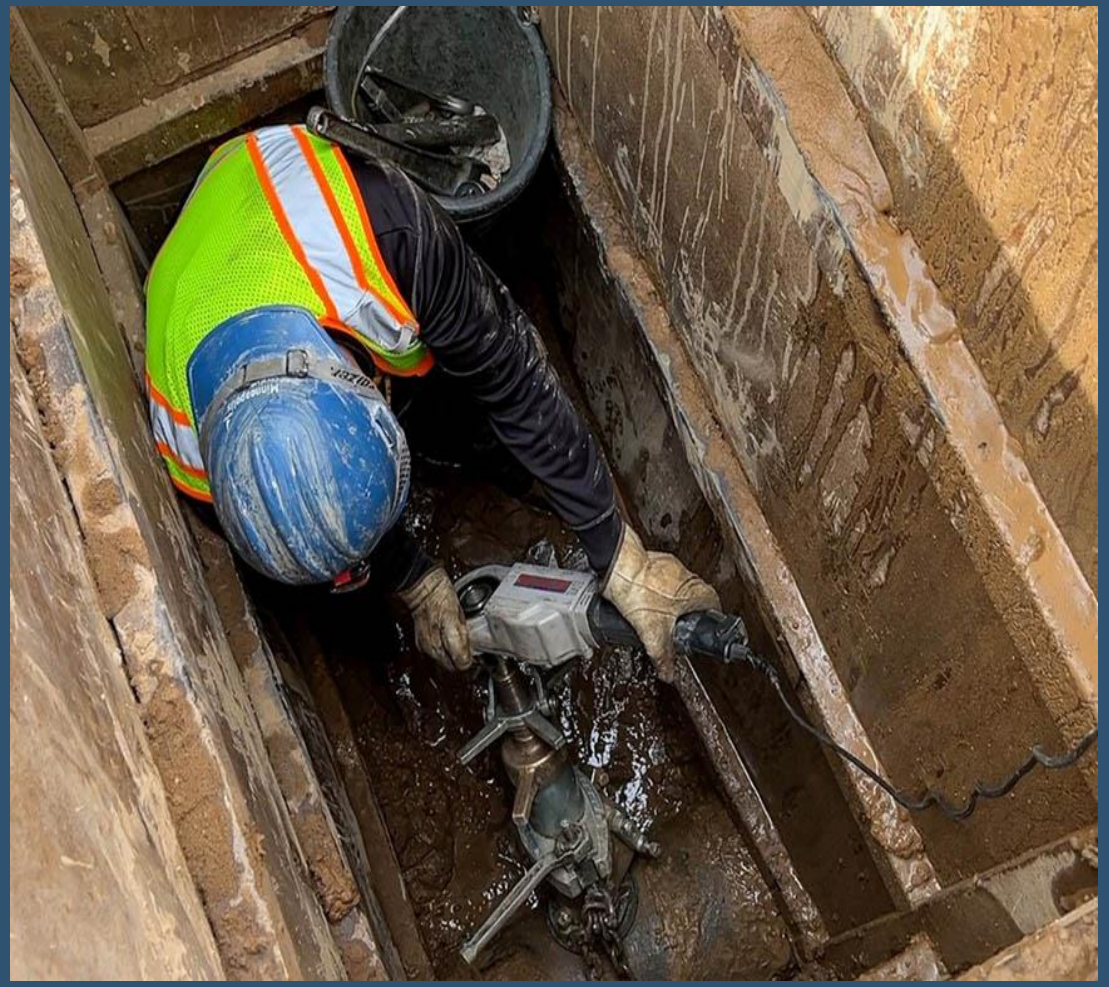
City of Beaverton, beavertonoregon.gov

- Required for any water system with a lead, GRR or unknown service line.
- Must include:
  - Strategy to identify unknown service lines and replace all lead and GRR service lines.
  - Standard operating procedure for full-service line replacement.
  - Communication strategy to inform customers.
  - Flushing procedures post replacement.
- Due Nov. 1, 2027.

REPLACEMENT REQUIREMENTS

REPLACEMENT AND DISPOSAL

- Must replace all lead service lines within 10 years, unless deferred.
- This includes utility and customer sides of the meter.
- Disposal options:
  - Recycling.
  - Disposal in a permitted disposal facility.
  - Abandon in place.



City Minneapolis, Minneapolismn.gov (2025)

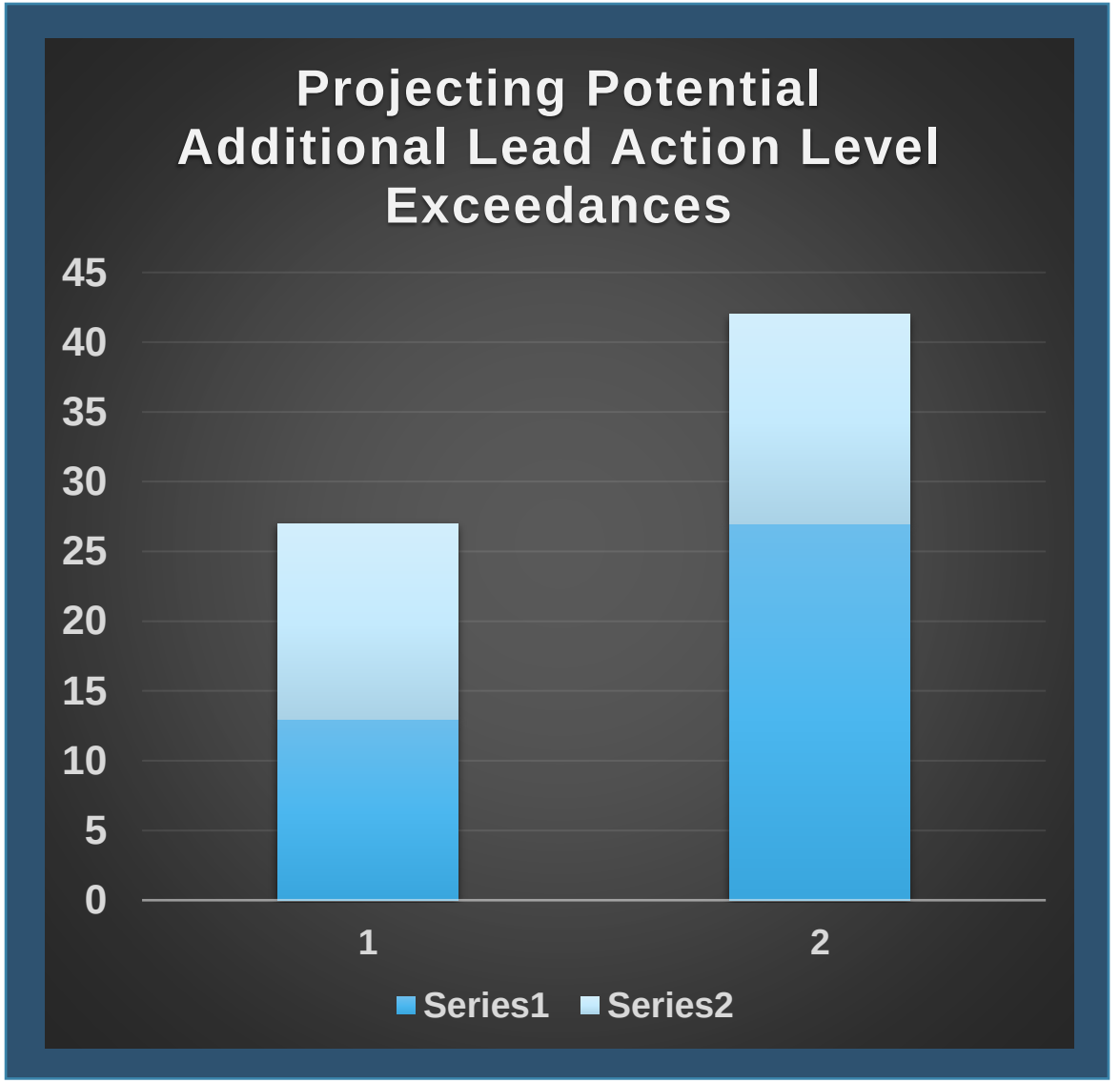
SAMPLING REQUIREMENTS

- LCRI requires public water systems must collect the fifth- and now first-liter samples at sampling sites.
  - First liter sample expected to reflect influence of plumbing sources.
  - Research indicates that on average the first-liter sample can have two to four times higher lead concentrations than the fifth.
- Calculation must be done using the higher of the two.

LEAD ACTION LEVEL

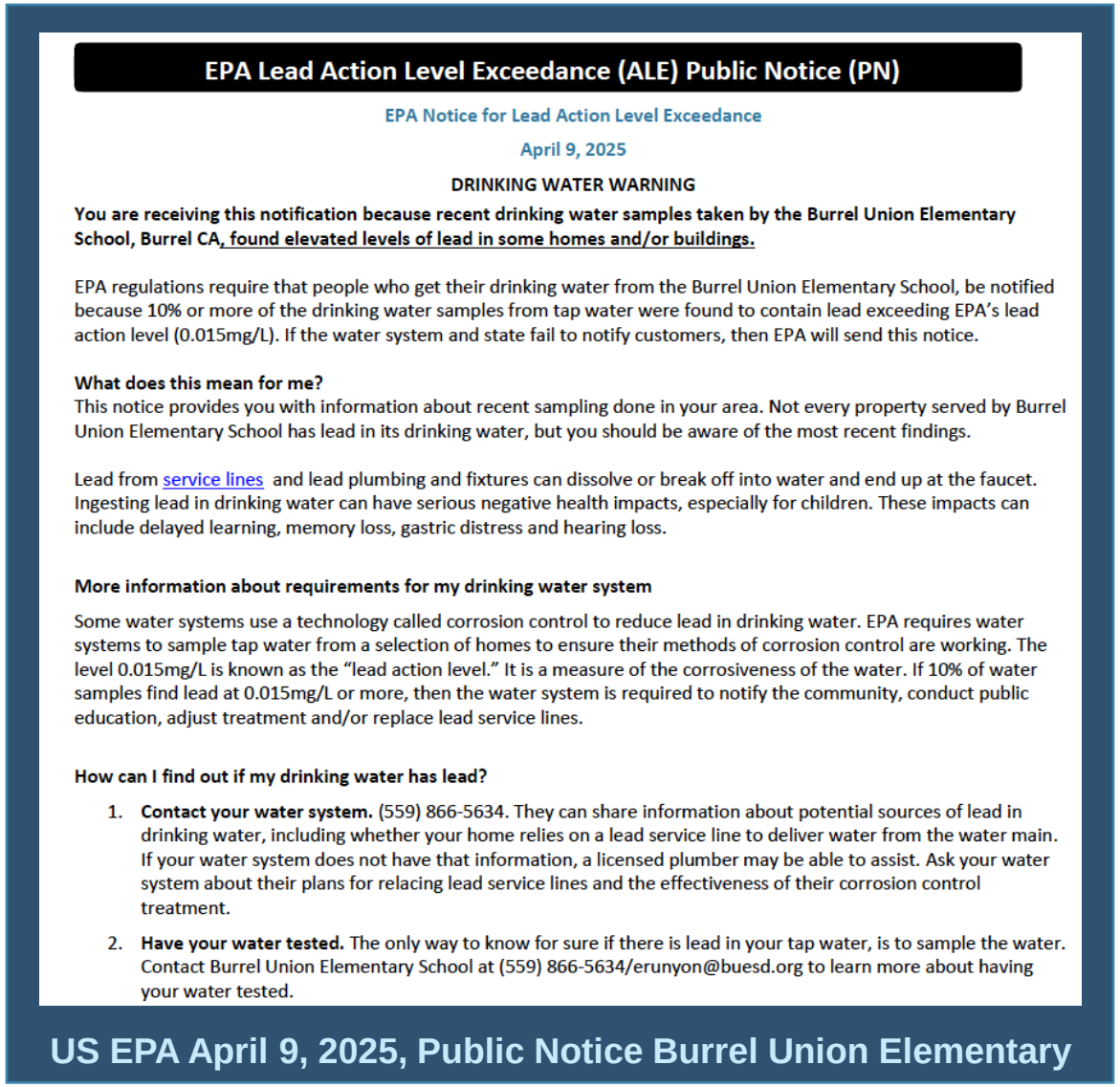
LEAD ACTION LEVEL

- The lead action level is a measure of the effectiveness of the corrosion control treatment in water systems.
- Exceeding the action level is not a violation but the system must perform certain actions such as public education or service line replacement.
- Effective October 2024, LCRI reduced the lead action level reduced from 0.015 to 0.010 mg/L.



LEAD ACTION LEVEL

LEAD ACTION LEVEL EXCEEDENCES AND PUBLIC NOTICE



EPA Lead Action Level Exceedance (ALE) Public Notice (PN)

EPA Notice for Lead Action Level Exceedance

April 9, 2025

DRINKING WATER WARNING

You are receiving this notification because recent drinking water samples taken by the Burrel Union Elementary School, Burrel CA, found elevated levels of lead in some homes and/or buildings.

EPA regulations require that people who get their drinking water from the Burrel Union Elementary School, be notified because 10% or more of the drinking water samples from tap water were found to contain lead exceeding EPA's lead action level (0.015mg/L). If the water system and state fail to notify customers, then EPA will send this notice.

What does this mean for me?
This notice provides you with information about recent sampling done in your area. Not every property served by Burrel Union Elementary School has lead in its drinking water, but you should be aware of the most recent findings.

Lead from service lines and lead plumbing and fixtures can dissolve or break off into water and end up at the faucet. Ingesting lead in drinking water can have serious negative health impacts, especially for children. These impacts can include delayed learning, memory loss, gastric distress and hearing loss.

More information about requirements for my drinking water system

Some water systems use a technology called corrosion control to reduce lead in drinking water. EPA requires water systems to sample tap water from a selection of homes to ensure their methods of corrosion control are working. The level 0.015mg/L is known as the "lead action level." It is a measure of the corrosiveness of the water. If 10% of water samples find lead at 0.015mg/L or more, then the water system is required to notify the community, conduct public education, adjust treatment and/or replace lead service lines.

How can I find out if my drinking water has lead?

1. **Contact your water system.** (559) 866-5634. They can share information about potential sources of lead in drinking water, including whether your home relies on a lead service line to deliver water from the water main. If your water system does not have that information, a licensed plumber may be able to assist. Ask your water system about their plans for relacing lead service lines and the effectiveness of their corrosion control treatment.
2. **Have your water tested.** The only way to know for sure if there is lead in your tap water, is to sample the water. Contact Burrel Union Elementary School at (559) 866-5634/erunyon@buesd.org to learn more about having your water tested.

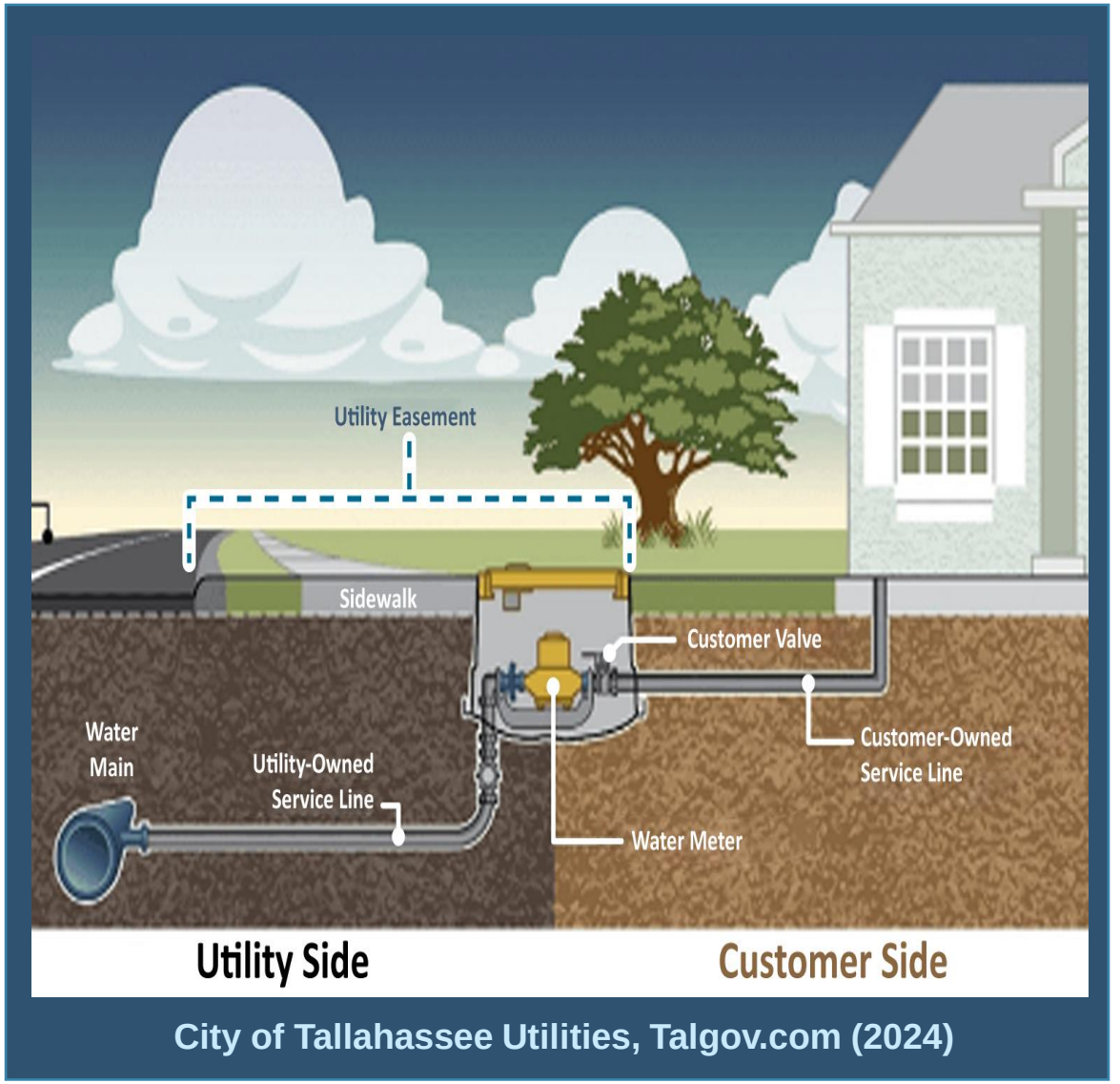
US EPA April 9, 2025, Public Notice Burrel Union Elementary

- Under LCRI, public water systems must issue a Tier 1 Public Notification (PN) within 24 hours of the exceedance of the lead action level.
  - Public water system also send copies of the public notification to the state and EPA.
- EPA will require the regional administrator to provide a Tier 1 PN within 24 hours of "notification" if the public water system and primacy state have failed to do so.
  - Five Systems in California
  - One in Marianna Islands.

IMPLEMENTATION CHALLENGES

REPLACEMENT OF CUSTOMER OWNED SERVICE LINES

- LCRI requires replacement of all service lines within the “control” of the public water system.
  - This includes lines or portions of lines outside of right of ways that are privately owned.
  - Public water system will be required to make “reasonable effort” to gain access to make full replacement.
  - Customers can decline replacement.



City of Tallahassee Utilities, Talgov.com (2024)

IMPLEMENTATION CHALLENGES

ESTABLISHMENT OF SHORTENED REPLACEMENT DEADLINES

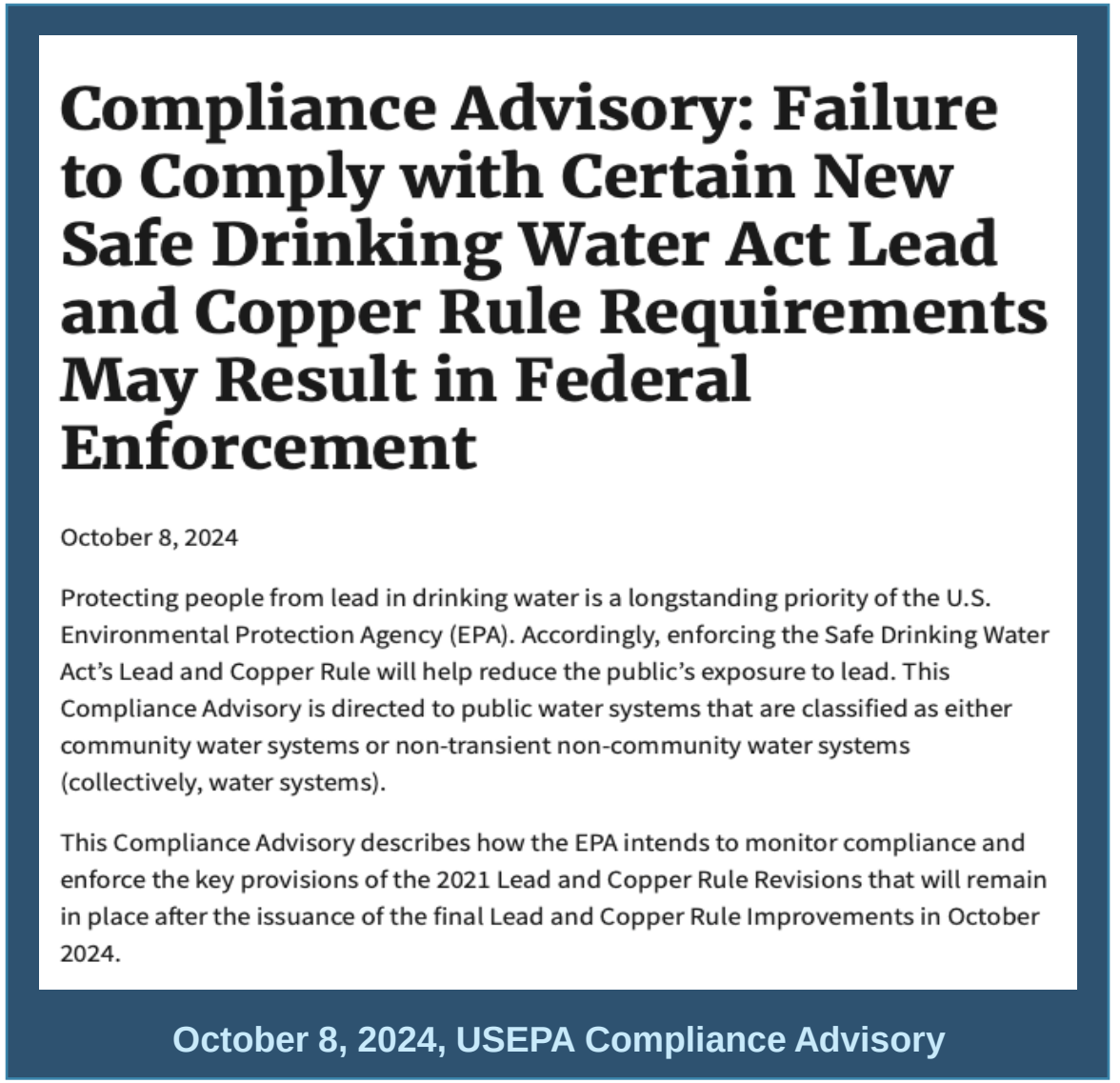
DCWater, dcwater.com (2019)

- LCRI requires the State establish a shortened deadline if determined a shorter deadline is “feasible.”
- EPA intends to issue guidance to assist states in determining the “fastest feasible rate” for public water systems.
  - Proportion of service lines which require replacement.
  - Identification of a feasible replacement rate, but not less than 39 replacements per year.

IMPLEMENTATION CHALLENGES

ENFORCEMENT & FLORIDA'S PRIMACY

- On Oct. 16, 2024, EPA granted DEP a primacy extension for the LCRR requirements until December 2025.
  - Track and report information.
  - Offer compliance assistance.
- DEP has until October 2026 to apply for primacy for LCRI.
- Until primacy is granted, EPA retains all enforcement authority.
  - EPA issued a "compliance advisory" on Oct. 8, 2024, for service line inventories, public education, public notification and reporting requirements.



Compliance Advisory: Failure to Comply with Certain New Safe Drinking Water Act Lead and Copper Rule Requirements May Result in Federal Enforcement

October 8, 2024

Protecting people from lead in drinking water is a longstanding priority of the U.S. Environmental Protection Agency (EPA). Accordingly, enforcing the Safe Drinking Water Act's Lead and Copper Rule will help reduce the public's exposure to lead. This Compliance Advisory is directed to public water systems that are classified as either community water systems or non-transient non-community water systems (collectively, water systems).

This Compliance Advisory describes how the EPA intends to monitor compliance and enforce the key provisions of the 2021 Lead and Copper Rule Revisions that will remain in place after the issuance of the final Lead and Copper Rule Improvements in October 2024.

October 8, 2024, USEPA Compliance Advisory

WHAT'S NEXT

CHALLENGES TO LCRI

- On Dec. 13, 2024, American Water Works Association, petitioned the Court of Appeals for the District of Columbia to review the LCRI.
- On Jan. 13, 2025, Rep. Gary Palmer, sponsored legislation to repeal the LCRI through the Congressional Review Act (CRA).
    - CRA deadline passed on May 15, 2025, with no further action.
- On April 21, 2025, EPA filed for a 60-day extension to the petition for new leadership to review.
- Repeal of the LCRI could potentially affect public water systems' compliance with LCRR requirements.
    - Replacement plan deadline was October 2024.

THANK YOU

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