



LEAD & COPPER RULE REVISIONS OVERVIEW

ISAWWA 2021 Spring Regulatory Update

March 8, 2021

PRESENTERS



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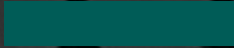


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Agenda

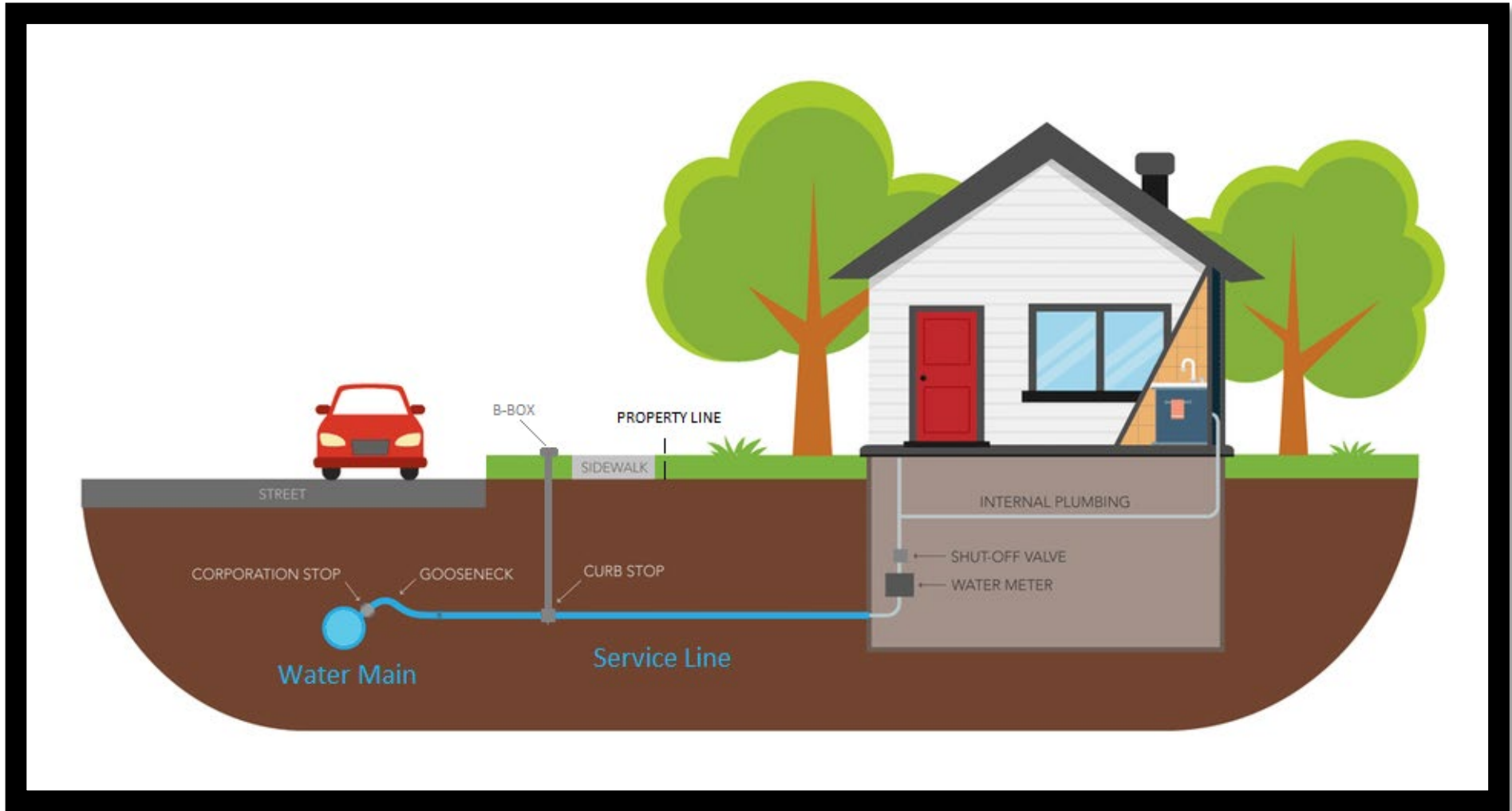
1. Background
2. Rule Highlights
3. Lead & Copper Tap Monitoring
4. LSLR Inventory & LSLR Plan
5. Outreach & Public Education
6. Corrosion Control Treatment & Water Quality Parameters
7. Closing Remark



BACKGROUND

ACRONYM SOUP

- AL = action level
- ALE = action level exceedance
- Ca = calcium
- CCS = corrosion control study
- CCT = corrosion control treatment
- CCR = Consumer Confidence Report
- Cu = copper
- CWS = community water system
- FLSLR = full lead service line replacement
- LSL = lead service line
- LSLR = lead service line replacement
- NDWAC = National Drinking Water Advisory Council
- P90 = 90th percentile value
- Pb = lead
- PLSLR = partial lead service line replacement
- PQL = practical quantitation level
- TL = trigger level
- WQP = water quality parameter



Source: <https://www.lslr-collaborative.org/intro-to-lsl-replacement.html>

LCR Revision History

2004

LCR revision process begins



2007

EPA published short term revisions to LCR



2014

Flint, MI switches water source



2015

National Drinking Water Advisory Council (NDWAC) Recommendations



2021

LCR Revised Rule published in Federal Register



January 16, 2024

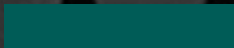
Final LCR Compliance Date

Effective March 16, 2021

HEALTH RISKS ASSOCIATED WITH LEAD



- “No safe blood lead level in children exists” (CDC)
- Lead Damages the Brain, Red Blood Cells and Kidneys (EPA)
- Lead Can Pose Health Risks To Anyone, But There Are Heightened Risks For (Lead and Copper Working Group to the National Drinking Water Advisory Council):
 - Pregnant Women
 - Infants and Young Children
 - Other Vulnerable Populations With Both Acute and Chronic Exposures
- Too Much Lead In Children Can Cause Lasting Problems With Growth and Development (EPA)



RULE HIGHLIGHTS

LSL Inventories

All systems must prepare a LSL inventory and make it available for Public Access



LSLR Plan

All systems with LSLs must prepare a LSLR Plan and submit it to the State



Sampling

Following at least six (6) hours of stagnation, 1st liter samples to be tested for Cu & 5th liter samples to be tested for Pb



Outreach & Public Education

A significant amount of outreach and public education requirements have been added



Schools & Child Care Facilities

CWSs are required to conduct testing at 20% of the K-12 and child care facilities within their system annually

PLSLR Discouraged

Partial lead service line replacement is discouraged



Harvested Pipe Studies

Harvested LSL pipe loop studies are required with ALE and CCS



Ca Hardness Adjustment

Calcium hardness adjustment has been removed as a CCT option



Find & Fix Process

If tap samples above AL, then CWS must conduct a Find & Fix process



Action Level & Trigger Level

See next slides

NEW: TRIGGER LEVEL

- Requires additional planning, monitoring, and CCT
- Action Level remains at 15 $\mu\text{g}/\text{L}$

10 < P90 ≤ 15 $\mu\text{g}/\text{L}$
LEAD TRIGGER LEVEL

IF ABOVE TL BUT BELOW AC

- Annual tap monitoring
- Create LSLR plan
- CCT study or re-optimization
- Small system flexibility

ACTION LEVEL EXCEEDANCE



**24 HR PUBLIC
NOTIFICATION**



**SEMI-ANNUAL
MONITORING**



**INSTALL CCT OR
RE-OPTIMIZE**



3% LSLR



**LEAD & COPPER TAP
MONITORING**

**Greater
focus on
LSLs**



Source: <https://www.reviewatlas.com/news/20190910/galesburg-makes-progress-removing-lead>

UPDATED TIER CRITERIA

01

Single
family
homes with
LSL

02

Multi-family
homes with
LSL

03

Single
family
homes with
galvanized
currently or
formerly
preceded
by lead

04

Single
family
homes with
copper
pipes +
lead solder
installed
before
effective
date of
local lead
ban

05

Represent-
ative
sample of
plumbing
similar to
that used
at other
sites
served

5th Liter Sample

- In LSL homes
- 6-hr min. stagnation
- No aerator cleaning or flushing instructions

Takeaway: Reported lead values will likely be higher



LEAD MONITORING BASED ON 90TH PERCENTILE

P90 > 15 µg/L

- Semi-annually at standard number of sites

P90 > 10 to 15 µg/L

- Annually at standard number of sites

P90 ≤ 10 µg/L

- Annually at standard number of sites and triennially at reduced # of sites using same criteria as previous rule except copper P90 level is not considered.

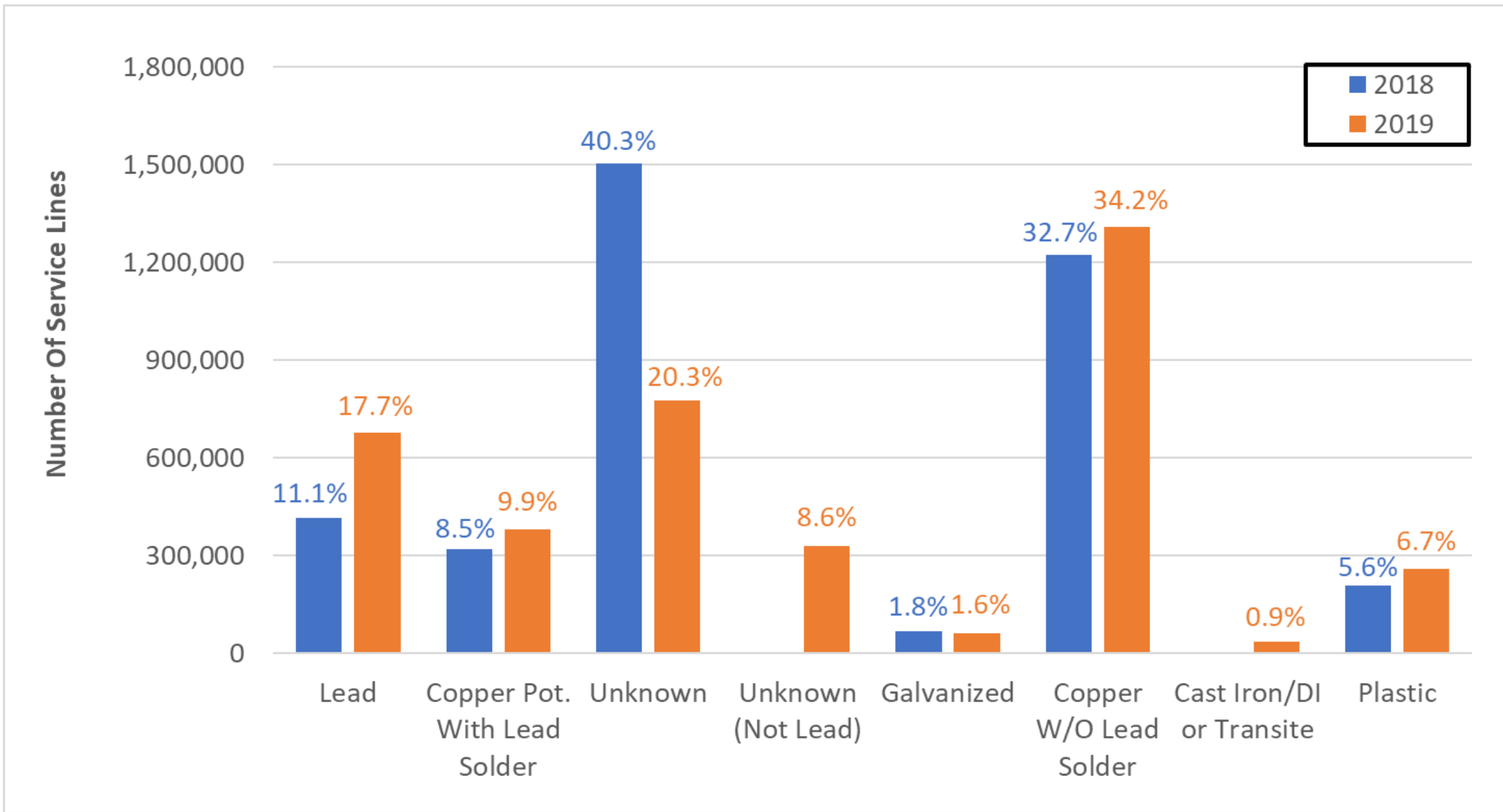


LSL INVENTORY & LSLR PLAN

MANDATORY INVENTORY FOR ALL SYSTEMS

- Systems serving > 50,000 publish online
- Include statement in CCR
- Galvanized downstream of lead = Galvanized requiring replacement
- Includes “Lead Status Unknown”
- Update inventory based on monitoring period frequency
- Location ID for LSLs

Illinois Water Service Line Inventory (Per IEPA Website)



2018 Data (As of November 2018): 1,660 of 1,749 CWS Had Reported Inventory Information

2019 Data (As of June 2020): 1,739 of 1,749 CWS Had Reported Inventory Information

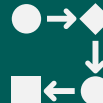
Strategy for determining composition of Pb status unknown lines



Strategy for informing customers before a FLSLR or PLSLR



A procedure for flushing service lines and premise plumbing



A funding strategy for conducting LSLRs



Procedures to conduct FLSLR



A recommended LSLR goal rate in event of Pb TLE (Pop. > 10,000)

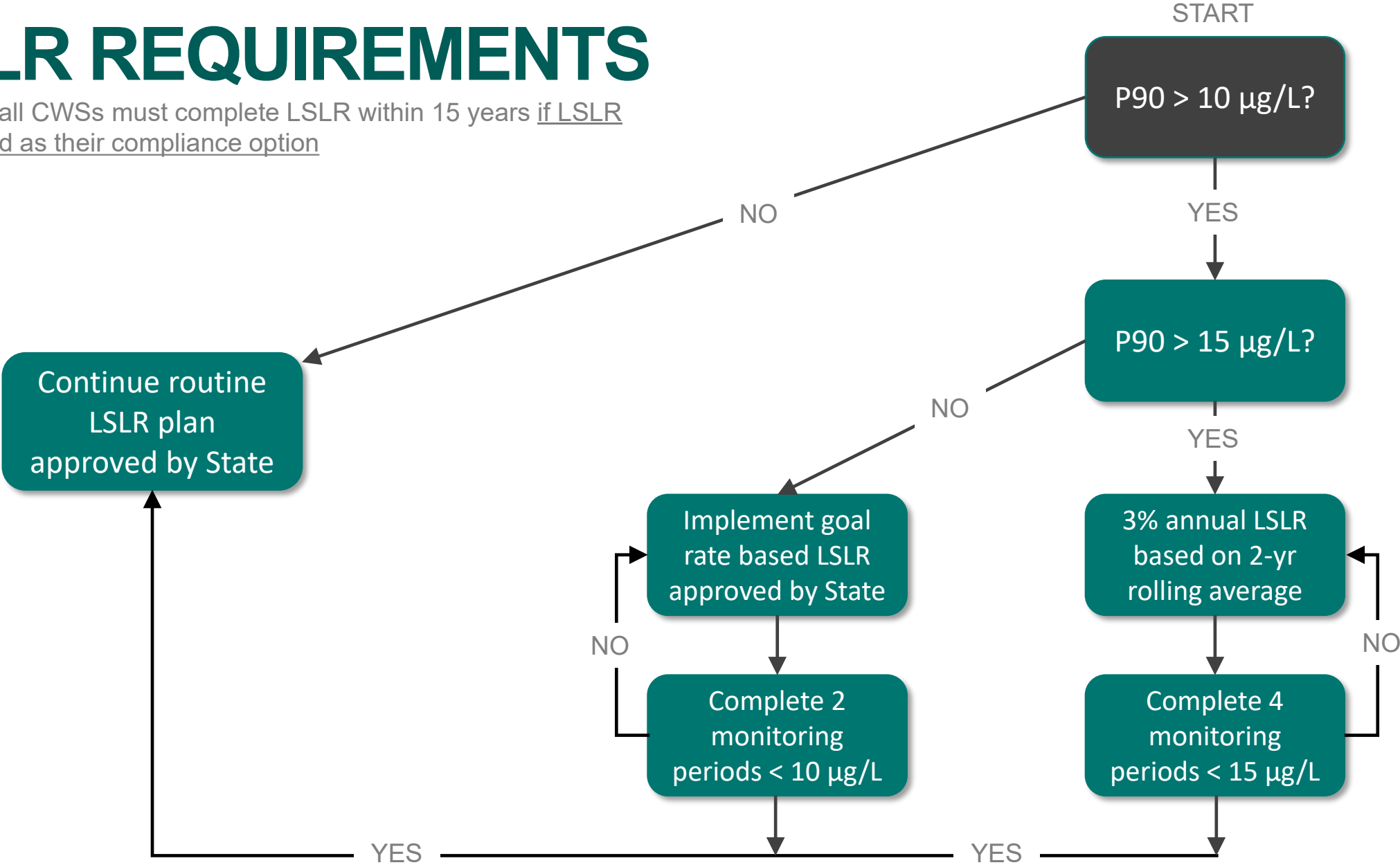


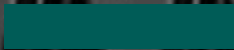
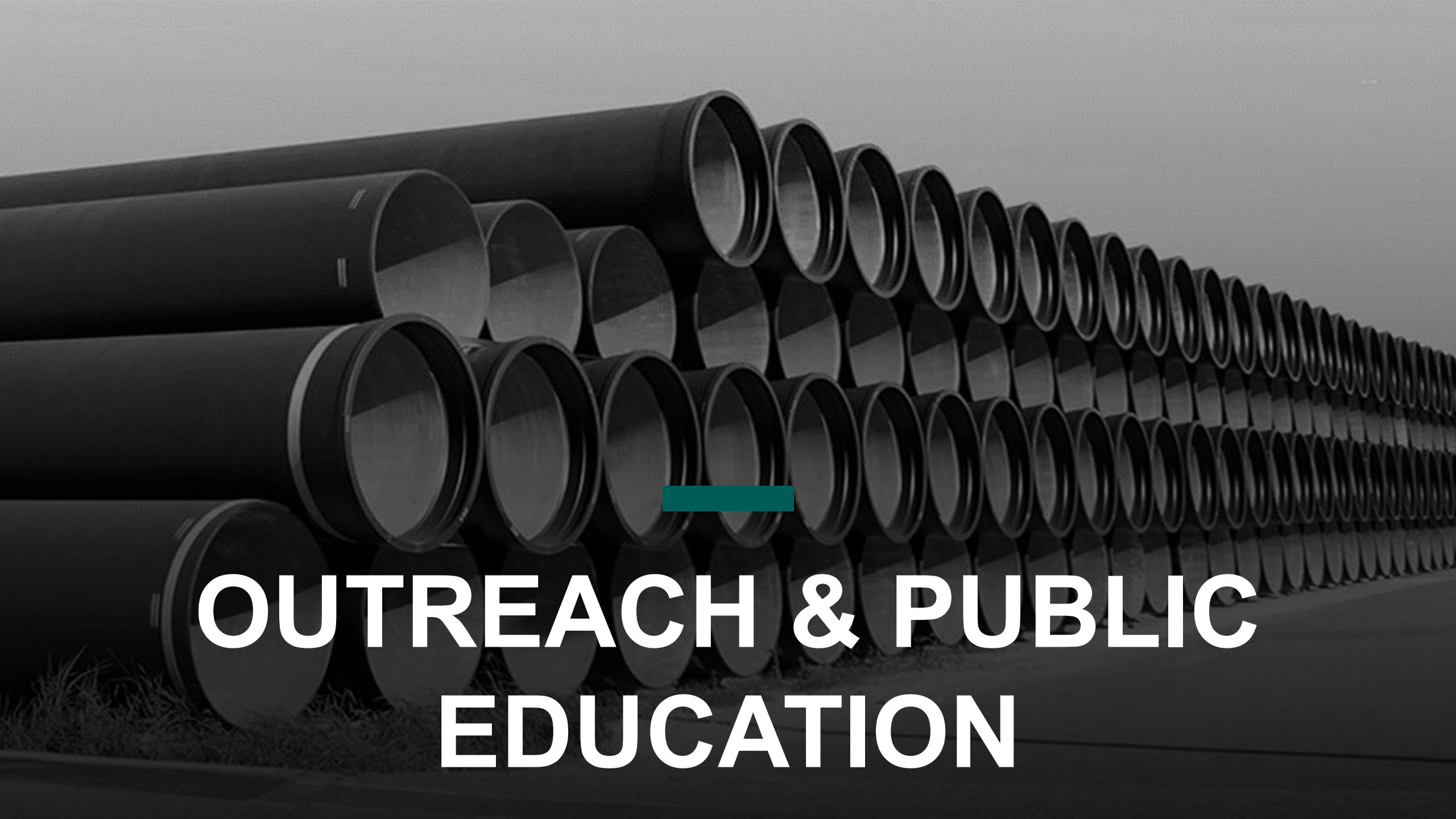
A LSLR prioritization strategy for disadvantaged consumers & sensitive populations

**Develop
LSLR Plan
by
Compliance
Date**

LSLR REQUIREMENTS

Note: Small CWSs must complete LSLR within 15 years if LSLR is selected as their compliance option





OUTREACH & PUBLIC EDUCATION

SCHOOLS & CHILDCARE FACILITIES

- Sample 20% of elementary schools & childcare facilities annually for 5 years
- Sample secondary schools on request
- Document non-responses and refusals (counts towards 20%)



Public Notifications:

LSLs

versus

**Trigger Level
& Action
Level
Exceedance**

LSL

**Annual
notices**

**Customer
notification
after full
LSLR**

**Additional
requirements if
on goal-based
replacement**

TL / ALE

**TLE = notify
w/in 30 days**

**ALE = notify
w/in 24 hours**

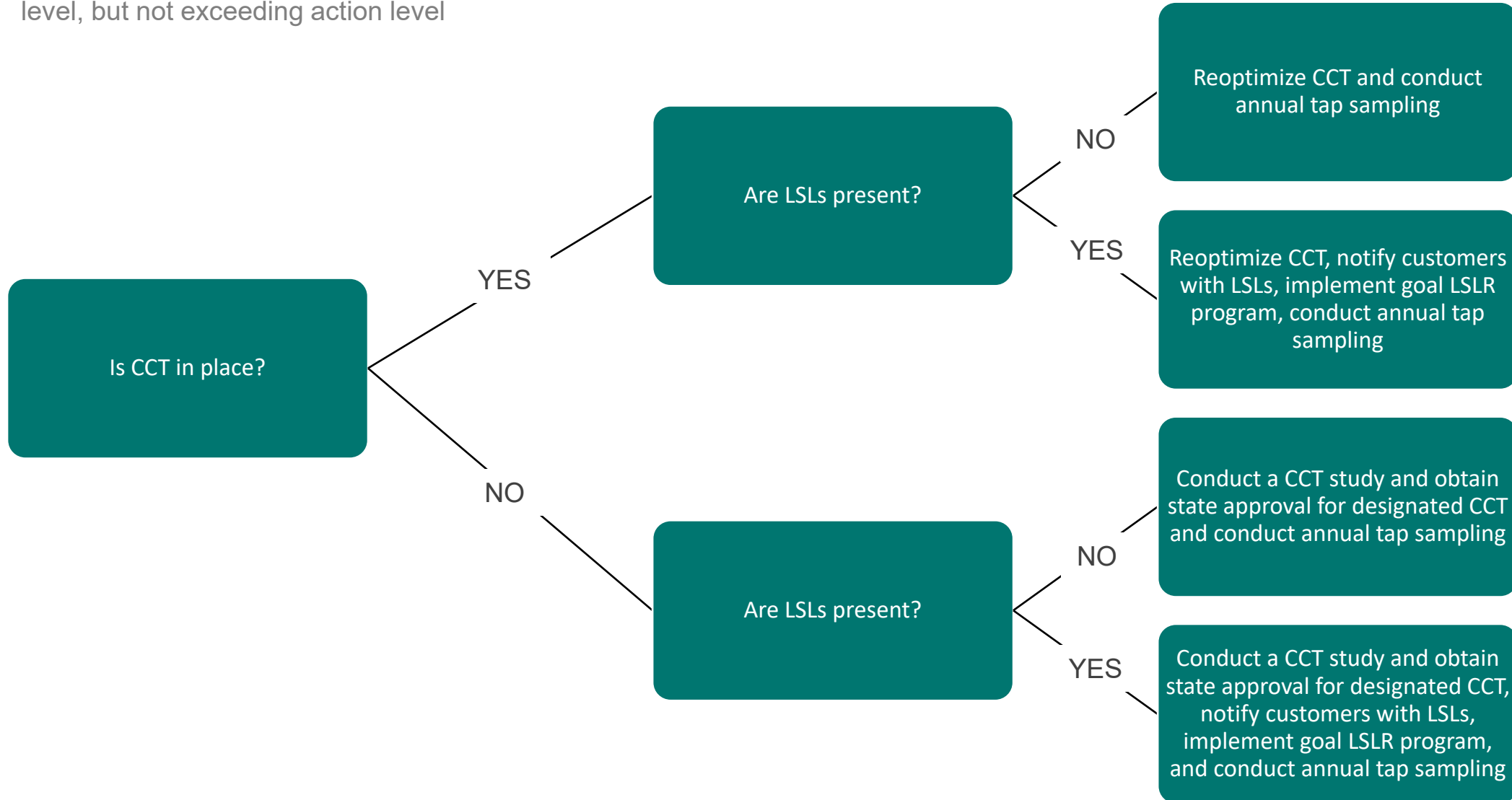
**Current
public
education
requirements**



**CORROSION CONTROL
TREATMENT & WATER
QUALITY PARAMETERS**

CCT Requirements Based on P90

For systems serving > 10,000 people exceeding trigger level, but not exceeding action level



OTHER CCT UPDATES

- Systems with P90 > 15 µg/L:
 - No CCT = must complete CCT installation
 - With CCT = must re-optimize CCT
- Removes calcium hardness as option
- Must be orthophosphate inhibitor

WQP Monitoring

Systems serving $\geq 50,000$ people

- Conduct regular WQP monitoring at entry points & within the distribution system

Systems serving $< 50,000$ people

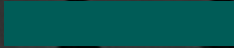
- Must continue WQP monitoring until they no longer $>$ lead and/or copper AL for two consecutive 6-month monitoring periods.

To qualify for reduced monitoring

- P90 must be ≤ 10 $\mu\text{g/L}$
AND
- System must meet its optimal WQPs

FIND-AND-FIX

- If individual tap samples $> 15 \mu\text{g/L}$:
 - ❑ Collect tap sample at same site w/in 30 days
 - ❑ If LSL, collect any sample volume
 - ❑ If not LSL, collect 1st liter after stagnation
 - ❑ For systems with CCT:
 - Conduct WQP monitoring at or near the site
 - Perform needed corrective action
 - Document customer refusal or non-response after 2 attempts
 - Provide information to local public health officials



CLOSING REMARK



START NOW

Preparing now will ease transition to full compliance