

# Proposed Lead and Copper Rule Revisions

Overview Version: March 2020



# Agenda



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# Proposed Revisions: Highlights



- Takes a proactive and holistic approach to improving the current rule—from testing to treatment to telling the public about the levels and risks of lead in drinking water.
- Proposes to require earlier action to reduce risks and better protect families.
- Includes efforts to improve transparency and communication to help protect children from lead exposure where they live, learn, and play.



**Background**

# Lead in Drinking Water Overview:



- Lead is not naturally found in water.
- Lead from lead pipes, faucets, and fixtures can dissolve into water or sometimes can enter as flakes or small particles.
- To keep lead from entering the water, EPA requires some systems to treat water using certain chemicals that keep the lead in place by reducing corrosion.
- When corrosion control alone is not sufficient to control lead exposure, EPA requires systems to educate the public about risks of lead in drinking water and to replace lead service lines.

# Overview: Current Lead and Copper Rule (LCR)



- LCR was promulgated 1991, revised in 2000 and 2007.
- Applies to 68,000 community (CWS) and non-transient non-community (NTNCWS) public water systems serving ~300 million people.
- The LCR is a complicated drinking water regulation to implement because the primary source of contamination is corrosion of lead or copper in service lines and premise plumbing after drinking water leaves the treatment plant; therefore, systems must conduct tap sampling in homes.
- EPA is continuously working with primacy agencies to ensure that the LCR is being properly implemented.

# Overview: Current LCR

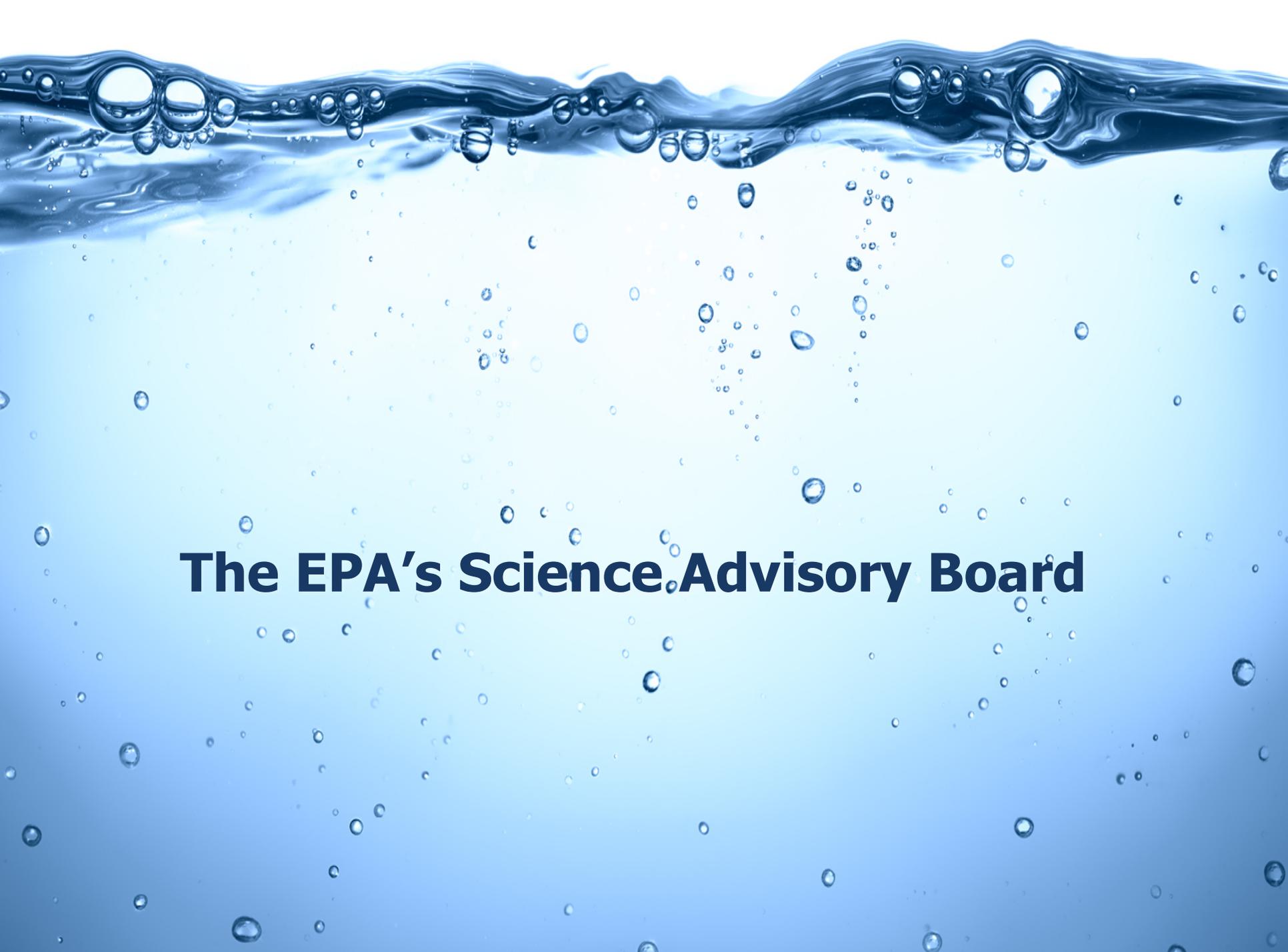


- Maximum Contaminant Level Goals (MCLG)
  - Lead – 0  $\mu\text{g/L}$
  - Copper – 1.3  $\text{mg/L}$
- 90<sup>th</sup> percentile tap sampling results are compared to an action level (AL)
  - Lead – 15  $\mu\text{g/L}$  (ppb)
  - Copper – 1.3  $\text{mg/L}$  (ppm)

# Proposed LCR Revisions: Development



- EPA has conducted extensive consultations regarding potential LCR revisions including:
  - Science Advisory Board
  - National Drinking Water Advisory Council
  - State, Local, and Tribal officials
- Based upon this input and experience implementing the LCR, EPA has proposed revisions that target actions to reduce lead exposure where it is needed most.
- The proposed rule will identify the most at-risk communities and ensure systems have plans in place to rapidly respond by taking actions to reduce elevated levels of lead in drinking water.



**The EPA's Science Advisory Board**

# Science Advisory Board Consultation



- In 2011, EPA sought an evaluation of scientific data to determine whether partial lead service line replacement (LSLR) effectively reduces water lead levels.
- The SAB determined the quality and quantity of data was inadequate to fully evaluate the effectiveness of partial LSLR in reducing drinking water lead concentrations. However, the SAB concluded that partial LSLR have not been shown to reliably reduce drinking water lead levels in the short-term of days to months, and potentially longer and concluded that available data suggest that partial LSLR may pose a risk due to short-term elevation in drinking water lead concentrations which last for an unknown period.
- Considering SAB's findings, EPA proposed that partial LSLR should no longer be required when water systems exceed the action level for lead, therefore, the EPA has proposed full LSLR requirements.
- In the LCR revisions, the EPA proposed to only allow partial LSLR under limited circumstances and to require water systems to provide pitcher filters and information to residents about how they can reduce lead exposure following a partial replacement.

# Science Advisory Board Consultation



- In October 2019, EPA sought an evaluation from the SAB of the All Ages Lead Model (AALM) theoretical framework and model.
- The AALM is a tool for rapidly evaluating the impact of possible sources of lead on blood and other tissue levels in humans from birth to 90 years of age. The AALM predicts lead concentration in body tissues and organs for a hypothetical individual, based on a simulated lifetime of lead exposure.
- EPA will consider using the peer reviewed model in future regulations to support quantification and monetization of adult health benefits from reduced lead in drinking water.



# **Overview of Proposed Rule**

# Proposed LCR Revisions: Summary



- The proposed LCR maintains the current MCLG of zero and AL of 15 ppb but requires a more comprehensive response at the action level and introduces a trigger level of 10 ppb.
- The trigger level is a new provision designed to compel water systems to take progressive, tailored actions to plan upgrades to aging infrastructure and reduce levels of lead in drinking water at levels approaching the action level.

# Proposed LCR Revisions: Key Areas



1. Identifying areas most impacted
2. Strengthening treatment requirements
3. Replacing lead service lines
4. Increasing sampling reliability
5. Improving risk communication
6. Protecting children in schools and child care facilities

## Identifying Areas Most Impacted

- The EPA proposes for the first time to require systems to develop a public lead service line inventory and create a plan for removing lead service lines.
- Unlike now, systems would have to pay attention to individual locations with elevated levels of lead by identifying the cause and mitigating the problem (find & fix).

## Strengthening Treatment Requirements

- Based on sampling results, systems with elevated lead levels would reevaluate their existing corrosion control treatment or conduct a treatment study so that they are prepared to respond quickly when necessary.
- Flexibility is important for small systems so that they can protect public health by taking the action that makes sense for their community.

## Replacing Lead Service Lines

- Systems above the trigger level of 10 ppb would be required to work with their state to set an annual goal for replacing lead service lines.
- Water systems above 15 ppb would be required to fully replace a minimum of three percent of the number of known or potential lead service lines annually.
- The proposal's required interrelated actions combined with transparency and outreach requirements, will increase the current rate of lead service line replacements.

## Replacing Lead Service Lines, continued

- Importantly, the proposal prohibits “test-outs” to avoid replacing lead service lines – an allowed practice under the current rule that has significantly slowed national progress in removing this significant source of lead from our homes.
- As proposed, partial lead service line replacements would no longer be allowed except in certain situations (e.g., emergency repair) because science has recently shown us that partial LSLR may increase short-term lead exposure.

## Increasing Sampling Reliability

- As proposed, water systems would follow new, improved sampling procedures, would adjust sampling sites to better target locations with higher lead levels, and systems with higher lead levels would be required to sample more frequently.

## Improving Risk Communication

- The proposal would enable homeowners and occupants to learn about elevated levels of lead in their system sooner.
- Homeowners and occupants would also understand where lead services lines are in their community and how to protect their household from exposure to lead.

# Proposed LCR Revisions: Key Area 6



## Protecting Children in Schools & Child Care Facilities

- For the first time, systems would be required to test school and child care facilities.
- The system would be required to provide the results and information about the actions the school or child care facility can take to reduce lead in drinking water.

# Next Steps



- Review and evaluate ~ 80,000 public comments.
- Promulgate Final LCR Revisions in summer 2020.



**Questions?**