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March 7, 2018

Ms. Iliriana Mushkolaj, PhD
Physical Scientist
Office of Standards and Risk Management
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460-0001

RE: Request for public comments Lead and Copper Rule UMRA/Federalism Consultations, Docket No. EPA-HQ-OW-2018-0007

Dear Ms. Mushkolaj:

The American Public Works Association (APWA) appreciates the opportunity to submit comments on the Environmental Protection Agency's public comments for the Lead and Copper Rule (LCR) UMRA/Federalism Consultations. APWA was grateful to participate in the federalism consultation meeting at EPA headquarters on January 8th, of this year, and we look forward to continuing the conversation about revising the LCR.

Protecting the nation's drinking water is essential to public health and the quality of life our citizens enjoy. APWA's over 30,000 members play a critical role in providing clean and safe water to their communities which are large and small, urban and rural. Chief among their responsibilities are the planning, design, construction, operation, and maintenance of water supply systems of all sizes. Our members include public works professionals from cities, counties, and special districts, as well as their private sector partners. Our members take their responsibilities seriously, and they are committed to a partnership with federal, state, regional, and local partners in assuring a sustainable future.

As you know, recent events have made lead exposure in drinking water a key subject for communities across the nation. The membership of APWA is committed to reducing lead

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contamination in our nation's drinking water. Moreover, our members will work to provide EPA information and expertise on how to best proceed in achieving that goal in all communities, both large and small, rural and urban.

With that in mind, APWA would like to make the following recommendations regarding revisions to the LCR:

1) Require all systems with known lead service lines, regardless of population served, to install and maintain corrosion control treatment (CCT).
2) Dedicate additional EPA and other federal funds to providing resources (direct funding, technical assistance, incentives, etc.) to small and disadvantaged systems to help in installing and maintaining CCT.
3) Make regular evaluation of their CCT a requirement for systems that would be reviewed by the state with primary regulatory authority.
4) Implement a "sliding scale" for installing CCT, with smaller systems a longer period to install and optimize CCT.
5) Make completing a full inventory of lead service lines an Agency priority, with the goal of allowing water utilities to use the inventory to assist in replacement of those lines in their service area.

As acknowledged at the January 8th meeting, the LCR has a multitude of issues that make implementation and enforcement difficult. First and foremost is the fact that the LCR requires sampling in homes, the only drinking water regulation with this requirement. This sampling is often done by consumers, and the specific sampling procedures outlined in the LCR are not always followed. This information often casts doubt on the efficacy of the samples provided to water utilities, leading to additional sampling being required by the utility.

Next, the LCR requires action by water systems only after an event, rather than prior to potential problems being identified. As specified under the LCR, action is only needed once the 90th percentile of samples exceeds the lead action level.

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Finally, one of the more cost-effective and proven solutions for reducing lead contamination, corrosion control treatment, is either not used, as is the case with smaller systems, or not fully optimized, as is the case in many systems of all sizes.

One solution that has been discussed at length in the past few years is that of full lead service line replacement. For the purposes of these comments, the term "lead service line" is taken to mean the lateral running from the water main into the residence. Various organizations across the country, in the wake of the crisis in Flint, Michigan, were quick to advocate for EPA to issue a mandate for this option. However, there are multiple issues with this alternative that make it unfeasible at the current time.

The first issue is that of our base knowledge about the location and number of lead service lines in the country. Estimates on the number of lead service lines have ranged from 6 million to 10 million. Our knowledge of the location of the lead service lines is also limited to using blueprints from home construction, as there is no single inventory of the lines. Creating such an inventory may be a step towards a long-term solution like full lead service line replacement but does little to prevent lead contamination right now.

Next, there is a question of how "full" this replacement process would be. In most communities in our country, the lead services lines are only partially owned by the water utility, requiring homeowners to replace the portion of the line that is privately owned. Many homeowners or renters would likely be unwilling or unable to replace the portion of the line in their home or residence. That being the case, replacing only the publicly owned portion of these lines would have limited effect on lead contamination, as there would still be many lead lines that service individual residences. Additionally, replacement of the lead service lines could have unknown effects on the distribution system, which would require additional planning and cost to remedy. In fact, there is significant evidence that a partial lead service line replacement could result in increased lead levels in homes.

Perhaps the most prohibitive factor in full lead service line replacement is the cost of replacement. A conservative estimate of 6 million lead service lines replaced at an average cost of $4,700 each would total $28.2 billion. In a worst-case scenario, that cost would balloon to

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$123 billion. That figure would be on top of the EPA-estimated $600 billion or more that is needed for investment in our nation's water infrastructure. These figures also may not account in full for permitting, municipal oversight, EPA oversight, reconstruction costs, prevailing wage laws, future compliance costs, and economic impact of the construction itself. Simply put, the cost makes full lead service line replacement unfeasible at the current time.

A reasonable case study would be the City of Ypsilanti, Michigan. The City, with a population of roughly 20,000, undertook a project in 2003 to replace a portion of the publicly-owned lead service lines within their drinking water distribution system. Overall, the City replaced 750 out of 3,000 lead service lines, at a cost of $1,800 to $2,000 per line. Adjusted for inflation, the City was able to replace only one quarter of the total lead service lines in its system at a cost of $2.25 million dollars (a figure that was in addition to regular operations and maintenance of the system). And, as previously noted, this project only replaced the publicly-owned portion of the line, which could very well generate increased lead levels within the residence. After the public portion was replaced, the resident was notified if there was lead on their side of the property line, and that they could replace that portion at their cost.

Our recommendations to the Agency, given what we have already stated, is to focus on CCT as the best option for immediate reduction of lead contamination in drinking water. That is not to say that installing and maintaining CCT does not have its own challenges. Water utilities will need to balance CCT with other demands from other National Public Drinking Water Regulations, as well as variables unique to that system, such as system composition and water quality.

Also, installing and maintaining CCT will have its own associated costs, which are not insignificant. However, when compared to the enormous costs of full lead service line replacement, the cost is much more manageable. The benefit of CCT, when compared to full lead service line replacement, also shows CCT to be the better option.

Phosphate-based corrosion inhibitors are widely used, and their effects are well-known. That being the case, there is little need for extensive research on implementing their wider use. There are other treatments, such as silica-based corrosion inhibitors, that require further research, and

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may be used in systems where phosphate-based methods are impractical for various reasons. Again, the associated costs with researching new corrosion inhibitors pales in comparison to full lead service line replacement.

To that point, the true costs of CCT implementation are significantly less than full lead service line replacement. According to the Agency, a water system serving between 25 and 100 customers that initiated a centralized orthophosphate treatment CCT would face capital costs of $18,000 and annual operations and maintenance costs of $2,000 per year. That second figure aggregates to an annual household cost of $78 per year. For larger systems, the cost is much more widely dispersed. A system serving 100,000 to 500,000 customers implementing the system previously mentioned would incur capital costs of $92,000 with annual operations and maintenance costs of $265,000 per year. The cost of operations and maintenance of such a system would average out to $2 per household.

On top of these costs, there is a need for EPA to install a more rigorous evaluation process for CCT in systems across the nation. It would serve the communities well for EPA, along with the states of primary regulatory authority, to conduct periodic reevaluations of CCT programs at systems to ensure that the treatment programs being utilized are truly optimized. This evaluation process should be more intense immediately after installation, to ensure that any necessary changes are made as quickly as possible.

While the costs of installing and maintaining CCT are much less than full lead service line replacement, they are not insignificant, especially for smaller or disadvantaged systems. Simply put, these systems do not have the resources to carry out this project on their own. It is important that EPA make every effort to ensure that these systems are provided every available resource to make the adoption of CCT as universal as possible.

For that to be the case, the Agency should make additional federal funding available for this express purpose. EPA should also continue its public outreach, technical assistance, and other education programs on CCT, specifically, for small and disadvantaged systems. Additionally, the Agency should explore ways to incentivize systems with optimized CCT in place to provide technical assistance to smaller and disadvantaged systems that do not. Finally, the Agency

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should investigate the potential for implementing a "sliding scale" of CCT installation and optimization. Under this scale, smaller systems, or those with less resources, are given a longer period in which to install CCT in their systems, given that they will require a longer period to amass the necessary resources for the enterprise.

On behalf of public works professionals nationally, we thank you for the opportunity to comment and urge you to give serious consideration to the above comments. We are committed to working with the Agency on our common goal of clean water. If you have any questions, please contact Sean Garcia in our Washington, D.C. office at sgarcia@apwa.net or at 202-218-6734.

Sincerely,

Scott Grayson
Executive Director