



# MASSACHUSETTS WATER RESOURCES AUTHORITY

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March 8, 2018

Mr. Peter Grevatt  
Director, OGWDW  
USEPA Headquarters  
Mail Code: 4601M  
1200 Pennsylvania Avenue, N. W.  
Washington, DC 20460

RE: Long-Term Lead and Copper Rule Federalism Consultation (Docket ID No. EPA-HQ-OW-2018-0007)

Dear Mr. Grevatt,

The Massachusetts Water Resources Authority (MWRA) appreciates the opportunity to comment on the U.S. Environmental Protection Agency's 2018 federalism consultation on potential long-term revisions to the Lead and Copper Rule (LT-LCR). The MWRA has been actively involved in various EPA consultation opportunities during the development of the revisions to the LCR since 2004, and is pleased to be able to provide additional comments at this stage of the process.

The MWRA is the regional water and wastewater wholesaler to 61 communities in eastern and central Massachusetts, providing service to approximately 2.5 million residents. With the implementation of modern corrosion control in 1996, MWRA has seen lead levels in those homes most at risk drop by around 90 percent. MWRA communities have been removing lead service lines since the 1960's, and in 2016 MWRA established a \$100 million zero-interest loan program to accelerate full lead service replacement by our customer communities.

MWRA believes that managing potential risks associated with lead in drinking water is a shared responsibility. MWRA, our customer communities, their individual retail customers, our state and federal regulators, and local, state and federal health officials, all share a part of the responsibility for appropriate action. MWRA takes its role seriously, including efforts to assist our communities, and offers the following specific comments for your consideration:

**Avoid one size fits all corrosion control mandates and exercise caution in pushing corrosion control changes**

Treatment is a key part of that shared responsibility. The peer reviewed guidance and EPA guidance materials make it clear that there are two primary effective methods of corrosion control treatment to reduce lead levels – adjusting the pH and alkalinity of the water or adding a corrosion inhibitor such as orthophosphate. When properly selected for the local water system characteristics, properly implemented and properly maintained, both can provide effective and substantial reductions in lead levels at the tap. This fact is clear from EPA's own data, and hundreds of individual system's

experiences – when corrosion control treatment is implemented properly, lead levels can be substantially reduced<sup>1</sup>.

It is also clear from the literature, and painfully clear from individual system experience, that changes in corrosion control treatment practices are fraught with the possibility of actually increasing lead levels and of interfering with the ability to meet competing Safe Drinking Water Act or Clean Water Act regulatory objectives. The MWRA urges EPA to be cautious in pushing water systems to modify stable corrosion control treatment practices, as we believe that the science and practice do not provide adequate tools to make incremental or substantial changes with full understanding of the implications.

Recent experience throughout the industry tell us that the available science of corrosion control treatment is adequate for choosing a corrosion control path for reducing soluble lead when a system is not currently practicing corrosion control. The science to understand particulate lead release is substantially less developed, and unfortunately current science and guidance offer little help in reducing particulate lead through corrosion control. Therefore, removal of lead service lines seems the most reliable way to reduce both dissolved and particulate lead.

Furthermore, the various tools (desk top studies, bench scale tests and pipe loop pilots) which are adequate to evaluate the first application of corrosion control in a particular water system, are not adequate for determining appropriate treatment adjustments for incremental progress. The inherent experimental variability and noise in pipe loop or coupon studies is frequently significantly greater than the hoped for incremental change, raising the risk of inadvertent backsliding.

There is little information available in the scientific literature about successful transitions from one corrosion control treatment to another, but there are an alarming number of anecdotes and examples of treatment changes which resulted in increased lead release. Whatever requirements for corrosion control EPA proposes, they must include evaluation of the risks to public health during the transition. Further, MWRA recommends that EPA make substantial investments in research and peer reviewed guidance on this topic, before chancing unintended consequences that could come from hasty regulatory changes.

For all these reasons, MWRA is opposed to a one-size-fits-all corrosion control treatment choice. Each system's infrastructure, each system's history of water quality and treatment, and each system's current water quality must be considered in making any treatment change. An assumption that a particular treatment option is best unless it can be proven otherwise will likely cause most state drinking water regulators to take an excessively rigid approach, forcing larger systems to spend on unnecessary studies, and forcing smaller systems to make changes without adequate evaluation.

### **Phosphate is not the silver bullet of corrosion control**

While EPA's presentation at the initial session of the federalism review did not clearly state that EPA's assumed default corrosion control treatment would be orthophosphate, papers published by EPA staff, interactions with EPA researchers, and EPA's approach to several problematic water systems, indicate that that is likely.

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<sup>1</sup> See MWRA's data at <http://www.mwra.com/04water/html/qual6leadinfo.htm#mwratestresults>.

Beyond our arguments against one-size-fits-all decision making stated above, MWRA would like emphasize that phosphate may not be the most appropriate choice given all the factors which must be considered. The addition of a nutrient to the distribution system increases the risks of increased biofilm at a time when research is beginning to focus on biofilm as it relates to opportunistic pathogens. The addition of a nutrient to finished water increases the risks of environmental degradation when treated water is discharged to local water bodies which communities have spent billions of dollars cleaning up. In MWRA's case, we have already spent almost \$5 billion cleaning up Boston Harbor and managing Combined Sewer Overflows, and our member communities are spending substantial sums on storm water. Adding phosphorus to drinking water may jeopardize those investments.

In addition, MWRA (and many other communities) maintains emergency backup supplies within our service area, which must be periodically "topped off" with treated water from the distribution system. Adding a nutrient would increase the already real risk of harmful algae blooms in those backup supplies, potentially rendering them unusable in an emergency.

### **Focus on better OWQP monitoring and more systems doing corrosion control**

MWRA supports the National Drinking Water Advisory Council's (NDWAC) recommendations on Optimum Water Quality Parameter (OWQP) monitoring. Corrosion control treatment works best when treatment is operated stably, so we support efforts such as process control monitoring, regular use of control charting, and the periodic review of that data during primacy agency sanitary reviews.

As EPA looks for opportunities to reduce lead exposure through corrosion control technology, it seems to MWRA that a focus on those systems which are not yet practicing corrosion control and those systems which are not currently monitoring and reporting on their treatment through use of OWQP would be more fruitful and less risky than forcing systems to tinker with treatment where it is currently stable and working.

### **Transparency on service lines and data**

Inventories should be available to the public. Boston and several of our cities have already made maps and electronic databases available on line, others are moving in that direction, and some are responding to requests for information about a particular address. Any regulatory requirement about transparency and lead service line inventories should recognize the varying technical and IT capabilities of different water systems.

MWRA believes that the public should have access to the same data that we use to make our decisions and which gives us confidence in our water. In addition to the required annual water quality report, which we choose to mail to every household in our service area, thereby including the difficult to reach renter community, we publish a monthly water quality update, archived on our web site, and have posted every lead sample collected under the LCR on our web site for over a decade (maintaining customer privacy by only providing the community name)<sup>2</sup>. Again respecting that each community

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<sup>2</sup> The individual lead results are here, including all historical LCR results and other more recent results as well: [www.mwra.com/watertesting/lead/residentialresults.html](http://www.mwra.com/watertesting/lead/residentialresults.html). The data is also available elsewhere on [www.MWRA.com](http://www.MWRA.com) in a variety of other graphical formats to assist in understanding changes over time.

will have different technical and IT capabilities, MWRA believes that data transparency is an appropriate regulatory requirement.

**Allow a realistic lead service line replacement time line:**

A successful program of full lead service replacement cannot begin without adequate consideration of the local financial, environmental justice and equity considerations, and an understanding of the current state of the community's asset management programs. How the burden of an action which may be five or ten times the cost of an annual water and sewer bill is handled at the local level will necessarily vary. Each community must respond to their own local circumstances, and the speed with which they can move toward full replacement of all lead services will vary. EPA must acknowledge this intrinsic local variability as it is crafting a nationwide regulatory approach.

**Filters should not be mandated, but a local option**

You asked stakeholders to comment on how to respond to customers who are "unwilling or unable" to participate in a full lead service line replacement. MWRA does not believe that a mandate to provide pitcher filters to such customers is appropriate. The recently released AWWA/ANSI standard on lead service line replacement (C810-17) acknowledges the risk of elevated lead release from partial replacements, and lays out options for consumer education, aggressive flushing, as well as the possibility of providing filters. MWRA believes the choice should be up to the local community. The AWWA comments lay out a number of practical issues associated with filter provision. In addition to those practical issues, MWRA believes that the provision of filters undercuts long standing professional and regulatory action to appropriately increase the public's confidence in their tap water, and may conflict with efforts to foster continued support for the funding necessary to protect public health and the environment.

MWRA strongly believes that a mandate to provide plumbed in water filters to all homes with a lead service line is unworkable and sends the wrong message about the need to replace their service line. The water system would be communicating the message, "with this filter, you can leave the lead service line in forever and still be safe". The experience in Flint that even with extraordinary outreach and publicity, and with a massive infusion of resources, they were able to only manage to get filters installed in a portion of the community points out how impractical this approach would be under more ordinary circumstances.

**Example cost estimates are too low:**

You provided some example costs for the addition of phosphate. Our engineering staff have taken a preliminary look at them, and believe they are low. The costs of designing and installing the chemical storage tanks alone would appear to be well above the example capital costs. The potential costs adding phosphate removal to our wastewater plants are not included nor are other changes necessary in water treatment to deal with simultaneous compliance issues or unintended consequences. For example, MWRA is just completing a project to add phosphorus removal at a 3 million gallons per day wastewater plant at a cost of approximately \$9 million, and an expected operating cost of at least \$100,000 per year.

The example costs for lead service line replacement also appear to be low. MWRA community experience with lead service line replacements clearly points to higher costs when full replacement is considered. We believe that some estimates available to EPA may have only been for partial replacements or a mixture of full and partial. In addition, there can be substantial costs beyond the construction "bid item". Upfront costs for engineering, legal services, outreach, collection letters allowing access to private property, and all of the other administrative costs must be included. The administrative costs of various cost sharing programs must be included. In particular, outreach costs are likely to increase over time as the "low hanging fruit" of those most interested in replacing their service line will participate early in the program. Recent information from two MWRA community lead service replacement programs showed construction costs of \$5,900 and administrative and engineering support costs of at least \$2,000 per service (community staff time not included) in one case, and \$6,800 construction and \$760 support costs in a second case.

### **Coordination of Federal agencies approach to lead**

MWRA staff were heartened to hear that Administrator Pruitt was gathering key agency heads from across the government to look for cross cutting action on reducing lead risks. We believe in the need to better coordinate efforts between CDC, HUD, EPA and other agencies. A number of non-regulatory actions by EPA and other agencies would make substantial progress toward a lead-free future. Requirements for disclosure or removal upon sale of property; inclusion of lead service replacement in other agencies' Healthy Homes and Lead Safe Homes programs; including water testing and lead service line identification in community lead poisoning and prevention programs would all be effective and welcome additions.

Another important addition would be additional federal governmental resources available to water systems, including substantial increases in State Revolving Loan Programs and opportunities for interest free loans or principle forgiveness. EPA should also be moving forward with implementation of a clearing house of information resources available to local water systems, local health boards and citizens. The clearing house should have information on lead risks, and examples of successful outreach and communication programs and brochures, service line replacement contracts, easements agreements, local ordinances, and funding mechanisms. Robust EPA technical assistance action is necessary to back up any regulatory requirements.

Thank you again for the opportunity to comment at this stage in the development of the revised Lead and Copper Rule. Please feel free to contact me at [dave.coppes@mwra.com](mailto:dave.coppes@mwra.com) or our Director of Planning and Sustainability, Stephen Estes-Smargiassi at [smargias@mwra.com](mailto:smargias@mwra.com) with any questions or concerns.

Very Truly Yours,



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Chief Operating Officer

Cc:

Alexandra Dapolito Dunn, Regional Administrator, EPA RI  
Martin Suuberg, Commissioner, MassDEP  
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