

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: November 20, 2019
SUBJECT: Update on Lead and Copper Rule Compliance – Fall 2019



COMMITTEE: Water Policy & Oversight

INFORMATION
 VOTE

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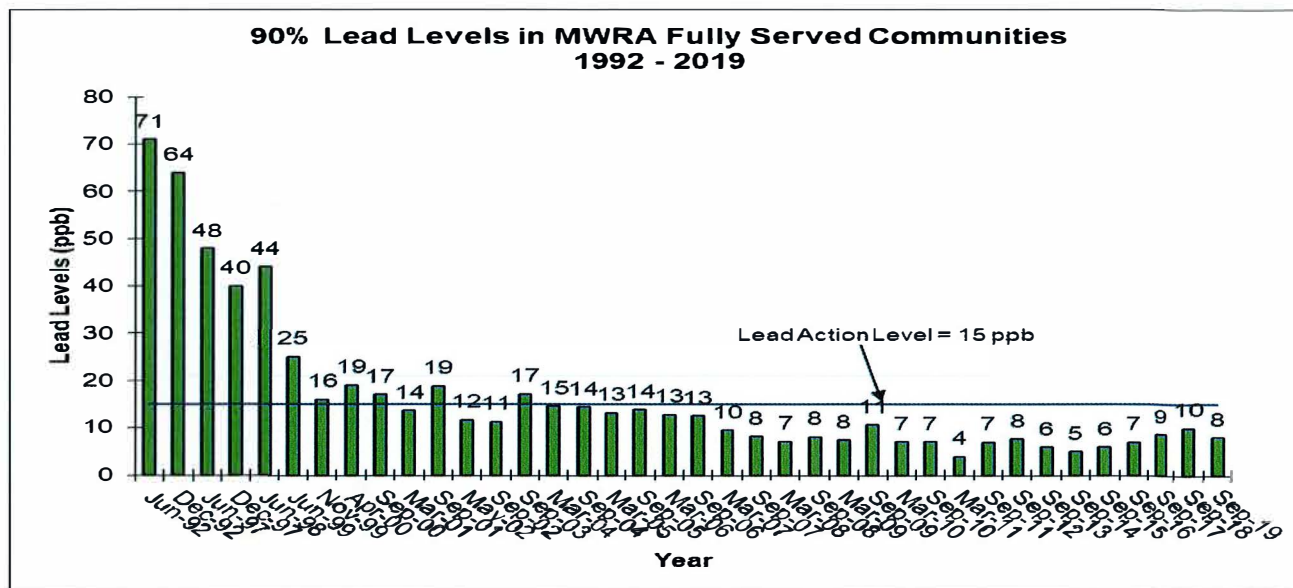
RECOMMENDATION:

For information only.

DISCUSSION:

MWRA and its communities conducted the calendar year 2019 Lead and Copper Rule sampling round beginning in September 2019. The 90th percentile lead value for the system as a whole was 7.97 parts per billion (ppb), which is below the Lead Action Level of 15 ppb.

Five communities were individually over the lead Action Level: Arlington, Medford, Quincy, Somerville, and Winthrop. Three of the communities, Medford, Quincy and Winthrop, had been above the Action Level in 2018.



Under EPA’s Lead and Copper Rule (LCR), each year MWRA and every fully-supplied community must collect and test tap water in a sample of homes *that are likely to have high lead levels*. These are usually homes with lead services or lead solder. EPA requires that nine out of ten of the sampled homes must have lead levels at or below the Action Level of 15 ppb.

The Massachusetts Department of Environmental Protection (DEP) has had extensive interactions with all five communities with regard to fulfilling the requirements of the Lead and Copper Rule. All communities have been notified and will be required to meet public education requirements, including mailing updated lead education brochures, and will be required to meet lead service line replacement requirements set by DEP. The three communities that have been over the Action Level before have experience working with DEP on meeting the requirements of the Lead and Copper Rule. MWRA is working with the two others to provide technical assistance. MWRA will provide an updated educational brochure, and staff have offered assistance in working with DEP on the educational requirements and documentation that demonstrates that the community has replaced the required number of service lines.

Under the LCR, each community is also required to collect samples from two schools or childcare facilities. As with residential samples, MWRA staff immediately contact any community that has a school sample above the Action Level. Four communities had one school or childcare facility test above the Action Level as part of the LCR testing. All school data are available on DEP's online school database that includes over 30,000 school test results from MWRA communities. A link to the DEP database is available on the MWRA webpage.

MWRA has formally transmitted these results to DEP. The results were also transmitted to the communities, and, through them, to each individual homeowner or school that collected a sample for the program. MWRA staff also directly contacted communities with schools above the Action Level and individual homeowners with very high or unusual results.

Review of Corrosion Control Treatment

Staff conducted a thorough "desk top" review of MWRA's corrosion control treatment using EPA's latest guidance manual in 2017. Staff continue to review long-term water quality data, potential changes in EPA's regulations and the state of knowledge about corrosion control treatment, in case a change is ever needed. That effort will include fabrication this winter and future operation of an experimental pipe loop system with lead pipe to evaluate possible changes to treatment. Staff are reviewing recent experience with pipe loops in other systems prior to fabrication.

Staff are working to assemble an expert panel to provide some initial input into the design of the pipe loop system, and treatment adjustments to be considered. DEP and EPA staff will be invited to participate in the panel discussions.

School and Childcare Sampling Program

MWRA continues to offer no-cost laboratory analysis services to any of our customer communities that want to sample drinking water taps in schools or childcare facilities. The program is offered in coordination with the Massachusetts Department of Environmental Protection's similar program. MWRA will participate in a press event in early December with DEP and the Department of Public Health announcing an expansion of the DEP program using recently received funds from EPA.

Lead Service Line Replacement Program

In March 2016, the Board approved an enhancement to the Local Water System Assistance Program to make \$100 million in 10-year interest-free loans available to communities solely for efforts to fully replace lead service lines. Under MWRA's Lead Service Line Replacement Loan Program,

each community can develop its own replacement program, tailored to its local circumstances.

During the first three years of the program (through August 2019), MWRA has distributed a total of \$11.9 million in Lead Service Line Replacement Loan Program funds to nine communities:

- Quincy: \$1.5 million in FY17;
- Winchester: \$500,000 in FY17 and \$500,000 second phase in FY18;
- Newton: \$4.0 million in FY17;
- Marlborough: \$1.0 million in FY18 and \$1.0 million in FY19;
- Revere: \$195,000 in FY18;
- Winthrop: \$284,000 in FY18 and \$487,850 in FY19;
- Needham: \$1.0 million in FY18;
- Everett: \$1.0 million in FY19; and,
- Chelsea: \$100,000 in FY19 and \$300,000 in FY20.

Staff have received two applications for November 2019 funding: Everett's second phase project for \$1.0 million and a new project in Somerville for \$900,000. With these two final 2019 distributions, MWRA will have distributed \$13.8 million to ten communities.

Revisions to the Lead and Copper Rule:

The proposed revisions to the federal Lead and Copper Rule presented at the October Board of Director's meeting were formally published in the Federal Register on November 13, 2019, beginning a 60-day comment period. A number of water utility and environmental and public health organizations have requested a 30-day extension. MWRA staff have been involved with EPA at many stages of this rule development, are working extensively with American Water Works Association and the Association of Metropolitan Water Agencies on their comments, and plan to submit MWRA comments as well.

Staff have alerted our customer communities of the release of the draft, and expect to work with the Advisory Board on outreach and eventually training on the new rule requirements.

A summary of the more significant changes to the rule is attached.

BUDGET /FISCAL IMPACT:

MWRA began modern effective corrosion control treatment to reduce lead and copper levels at the tap in 1997. MWRA's corrosion control treatment involves raising the pH and alkalinity to the water to provide a stable, non-corrosive product, reducing the potential for both lead and copper to leach from customer's home plumbing. The annual average cost for corrosion control is approximately \$3.6 million (\$3.3 million in soda ash costs, and \$0.3 million in carbon dioxide costs.)

ATTACHMENTS:

Attachment A - Summary of Significant Proposed Changes to Federal Lead and Copper Rule

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Notification After an Action Level Exceedance: One of the most important changes is EPA's proposal is that if a system is over the lead Action Level, they must notify the public within 24 hours of receiving the results. This treats a lead exceedance as if it were an acute (i.e. immediate) health risk, similar to a confirmed *e. Coli* positive. This will present significant risk communication challenges and likely lead to confusion and reduction in the public's confidence in tap water. Systems currently have 60 days to provide notice and public education after a lead Action Level exceedance.

Notification of Individual Sample Results: If an individual home has a sample over the Action Level, the system must notify them with 24 hours of receiving the results. MWRA currently strives to provide same day notification of elevated results to communities.

No Change to the Action Level of 15 ppb: EPA is not proposing a change to the lead Action Level of 15 ppb. However, they are adding a second regulatory limit called a Trigger Level.

New Trigger Level of 10 ppb: EPA is proposing that systems with a 90th percentile level over 10 ppb be required to conduct lead service line replacement for at least two years at a rate previously agreed to by their state regulator and to evaluate optimization of their corrosion control treatment process. As currently drafted, large systems such as MWRA, would then be required to actually implement the changes in treatment, while small and medium systems would just complete the study. How this will be implemented between MWRA and customer communities is unclear.

Lead Service Line Replacement: EPA is not proposing to make lead service line replacement mandatory for all systems. If a system is over the lead Trigger Level of 10 ppb, it must implement a replacement program for at least two years, with locally set annual goals. If a system is over the lead Action Level of 15 ppb, it must implement a program with at least a three percent replacement rate for at least two years. Only full replacements, from the main to the house, are allowed, with certain narrow exceptions (similar to MWRA's zero interest loan program). If a customer voluntarily replaces the private portion of the lead service line, the system must replace the part in the street within 3 months.

For all lead service line replacements, the system must provide the customer a certified lead-removing pitcher filter within 24 hours of the replacement.

Although EPA is proposing to make the lead service line replacement requirements more stringent and established the second Trigger Level, there has already been significant negative press coverage that EPA's proposal reduces the required lead service line replacement rate for systems over the Action Level from seven percent to three percent. Staff expect significant negative comments from public health and environmental groups on this aspect of the proposal.

Lead Service Line Inventories: All systems must develop a comprehensive inventory of their lead service lines and those with unknown material, including both the public side and the private side, within three years of final rule being issued. The inventories must be publicly accessible (on-line for

larger systems) and updated annually. Galvanized steel service lines with lead goosenecks would be classified as a lead service line. The proposal provides a substantial incentive to initially resolve service lines of unknown material by including them with the inventory count of lead service lines.

Systems must provide annual outreach to every home with a lead service line or service line of unknown material, urging them to have them replaced, and must have developed a lead service line replacement plan with an agreed upon goal, to be ready to implement it if required.

New Sampling Requirements: EPA is proposing clearer mandatory sampling procedures: MWRA has been following them for several years. If a community has any lead services lines, then all of the lead service line samples must be taken from homes with lead service lines. This will tend to increase the 90th percentile of lead values as sampling plans are updated. MWRA is already seeing evidence of this as DEP has encouraged more use of homes with lead service lines in community sampling plans.

Sampling at Schools and Childcare Facilities: Water systems must sample at least 20 percent of all public and private schools in their service area each year, and sample at least 20 percent of all licensed childcare facilities each year. For most states, this is an entirely new requirement. Massachusetts has had an LCR requirement to sample two schools *or* childcare facilities during each sampling round, as well as having a more recent voluntary school sampling program. For larger cities and towns, this will likely require a substantial increase in sampling and outreach efforts.