STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: November 18, 2020
SUBJECT: Update on Lead and Copper Rule Compliance – Fall 2020

COMMITTEE: Water Policy & Oversight

X INFORMATION
VOTE

Beverly Anderson, Project Manager, Public Health
Stephen Estes-Smargiassi, Director, Planning and Sustainability
Preparer/Title

David W. Coppes, P.E.
Chief Operating Officer

RECOMMENDATION:

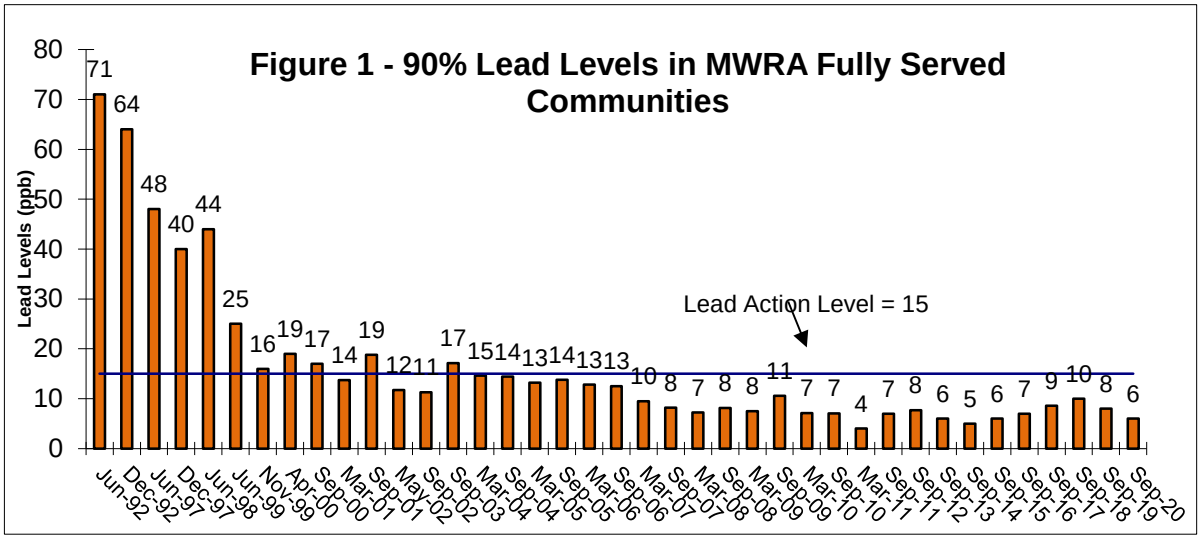
For information only.

DISCUSSION:

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 have lead levels at or below the Action Level of 15 ppb.

MWRA and its communities conducted the 2020 LCR sampling round beginning in September 2020. The 90th percentile lead value for the system as a whole was 6.47 parts per billion (ppb). The MWRA system has been below the lead Action Level of 15 ppb in every round since 2004.

In addition to determining how the system as a whole performs, EPA looks at each individual community's results. Three communities were individually over the lead Action Level: Boston, Medford, and Melrose. Medford was above the Action Level in 2019 as well as for several rounds before then. Melrose was over in 2017; and Boston was last over in 2004.



Staff have notified all three communities that exceeded the lead Action Level. Massachusetts Department of Environmental Protection (MassDEP) has had extensive interactions with all three communities regarding the requirements of the Lead and Copper Rule. Each will need to meet the rule's public education requirements, including mailing updated lead education brochures to all customers, and each will be required to meet lead service line replacement requirements set by MassDEP. MWRA has provided an updated educational brochure and staff have offered assistance in working with MassDEP 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. This year, MWRA provided additional guidance to communities on appropriate sampling in school buildings that were not in full use and on steps building managers could take to keep water fresh in buildings with less than normal water use. Six schools in five communities had one sample above the Action Level as part of the LCR testing. As with residential samples, MWRA staff immediately contact any community that has a school sample above the Action Level. All school data are available on DEP's online school database that includes over 38,000 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 MassDEP. The results were also transmitted to the communities and, through them, to each individual homeowner or school that collected a sample.

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. As of the end of October, MWRA's laboratory has conducted over 38,000 tests from 507 schools and childcare facilities in 44 communities.

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 four years of the program (through August 2020), MWRA has distributed a total of $16.7 million in Lead Service Line Replacement Loan Program funds to eleven communities:

- Quincy: $1.5 million in FY17;
- Winchester: $500,000 in FY17, $500,000 in FY18, and $600,000 in FY20 ($1.6 million total);
- Newton: $4 million in FY17;
- Marlborough: $1 million in FY18, $1 million in FY19, and $1 million in FY20 ($3 million total);

- Revere: $195,000 in FY18;
- Winthrop: $284,000 in FY18, $487,850 in FY19, and $690,000 in FY20 ($1,461,850 total);
- Needham: $1 million in FY18;
- Everett: $1 million in FY19, and $1 million and $500,000 in FY20 ($2.5 million total);
- Chelsea: $100,000 in FY19 and $300,000 in FY20 ($400,000 total);
- Somerville: $900,000 in FY20; and
- Weston: $160,000 in FY20.

Boston Water and Sewer Commission has its own long standing lead service line incentive program providing the first $2,000 toward replacement of lead service lines on private property with a zero-interest loan over 48 months for any cost above that.

Revisions to the Lead and Copper Rule

EPA's long awaited revisions to the Lead and Copper Rule have still not been released. As of early November, the proposed final rule is still under review by the White House Office of Management and Budget. It had been anticipated that the revised LCR would be released in September 2020. MWRA submitted comments on the draft rule and participated in developing comments with the American Water Works Association, the Association of Metropolitan Water Agencies and other water professional associations.

It is expected that there will be new requirements for inventorying and disclosing the presence of lead service lines, more intense and faster outreach after a lead Action Level exceedance, and potentially an additional trigger for action at 10 ppb. Once EPA releases the rule, staff will provide a briefing for the Board of Directors and will work with the Advisory Board on community outreach and eventually training on the new rule requirements.

Review of Corrosion Control Treatment

While awaiting EPA's revisions to the LCR, staff continue to review long-term water quality data and the state of knowledge about corrosion control treatment in case a change in corrosion control is ever desired or required. That effort has included construction of a pipe loop system with "harvested" lead service lines to enable future evaluation of possible changes to treatment. Initially, the system is being operated with MWRA finished water to acclimate and stabilize the harvested lead pipes. This period will help provide a more realistic evaluation of any potential treatment changes.

Evaluating a corrosion control treatment change is a significant undertaking. It would require careful consideration of both the level of confidence in the expected changes in long-term lead levels, as well as the likelihood of significant water quality problems during the treatment transition. In addition, the potential for issues in wastewater treatment and environmental impacts, if the addition of orthophosphate is recommended would need to be evaluated.

Prior to beginning any alternative treatment evaluation, staff anticipate consulting with an expert panel to provide input into the type of treatment adjustments to be considered and the type of evaluations to be included. DEP and EPA staff, as well as community and Advisory Board staff, would be invited to participate in the panel discussions, as has been MWRA's practice for all prior treatment evaluations.

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 ($3.4 million in soda ash costs, and $0.2 million in carbon dioxide costs.)