## 12.10.17 UPDated COMMENTS

*I updated the comments over the weekend to incorporate the feedback I’ve received. Please let me know by noon tomorrow if you have any other changes to make.*

*Thanks, Cyndi*

**Prohibition on Partial Lead Service Line Replacements**

We strongly support the draft Lead and Copper Rule (LCR) requirement for proactive, full lead service line (LSL) replacements on a specific timeline in all water systems. However, we are absolutely opposed to the draft rule language in Rule 604f that provides off-ramps allowing partial LSL replacement including:

*Rule 604f (6)(c)* By inserting the question of control into the rule, there is unnecessary ambiguity about the ability of water systems to replace the portion of the lead service line on private property. Consequently, Michigan Department of Environmental Quality (DEQ) would be establishing a mandate to replace LSLs while providing ambiguity about the control of the entire service line, which could result in massive partial LSL replacements.

Under certain circumstances, conducting a partial LSL replacement has been shown to increase lead levels in drinking water for the short- and long-term. Typically, these elevated lead levels occur as spikes that can be persistent and intermittent, making it difficult if not impossible to identify or predict them using standard sampling schemes. Therefore, as written, the DEQ would be establishing a rule that risks further lead exposure.

Attachment 1 outlines the case for water supply authority over the service lines.

* *Delete: “If a supply controls the entire service line”*
* *Delete (6)(d) and (6)(e)*

The Flint Water Interagency Coordinating Committee (FWICC) resolutions in response to the Flint Water Advisory Task Force (FWATF) recommendations recognized the importance of a partial lead service line ban.

The American Water Works Association (AWWA) recommends the prioritization of the ***removal*** of partial LSLs in its most recent standards[[1]](#footnote-1).

Additionally, research by Centers for Disease Control and Prevention (CDC) scientists based on 63,854 children in Washington, DC, demonstrated that children living in homes with a partially-replaced lead service line were two times as likely as children living in homes with an intact lead service line to have an elevated blood lead level (≥10 mg/dL), and almost four times as likely as children living in homes with no lead service line to have an elevated blood lead level (≥10 mg/dL).

DEQ must return to the original draft language stating*: Prohibit partial LSL, unless an exception is granted by the State. The State’s exception should only apply to emergency situations in which a* ***temporary*** *partial service line can be installed, and the full LSL replacement must be completed within 30 days.*

Further, the LSL definition (R 325.10105, (r) should read: *“Lead service line” means a service line which is made in whole or in part of lead including goosenecks, pigtails and partials containing lead as well as galvanized service lines if they are or were connected to lead piping or goosenecks.*

Given the immense variability in the number, types and content of attempts that might be made, the word “decline” should be defined in the rule.

If a water system cannot gain approval from the owner and occupant after multiple attempts, the LSL should remain in place until a later date. The State of Michigan absolutely cannot be allowing partial LSLs.

Water systems must adopt best practices to ensure owners and occupants grant permission to replace the LSL[[2]](#footnote-2).

Partial LSL replacement is not cost-effective in that it still costs a significant amount, and has, we submit, limited (if any) public health benefit and potential for greater harm. To be clear, the expansion of partial LSLs in Michigan would be an investment in continued lead exposure to residents for generations to come, and we’re confident the DEQ staff will agree the agency should not codify a rule that allows for this ongoing exposure.

**Copper Pipe Only for LSL Replacement**

The rule must specify that only copper lines should be used to replace lead service lines. There must be a prohibition on the use of liners and other plasticized materials.

**Definition of Service Line**

If 18 inches is the minimum length to the shut off valve, DEQ should not regulate to the minimum. In lieu of an industry calculated average, twice the minimum length should be sufficient and should capture the service line to the shut off valve in most homes.

Rule 108 (e) “Service line” means the pipe from the discharge of the corporation fitting to the customer site piping or to the building plumbing at the first shut off valve inside the building, or 3 feet inside the building, whichever is shorter.

**Materials Evaluation**

We support the draft rules requiring the development of an accurate LSL inventory with the following changes:

Rule 604 (c)(i) When the preliminary inventory is complete, owners and occupants must be notified of even the potential presence of LSLs based on a thorough assessment of existing information. Once the presence of an LSL is verified, owners and occupants should be notified as stated in the Version 3 draft rule language: The water supply shall make information available to the public. If service line contains lead, notify owner and occupant of service line content within 30 days of verification. Community supplies shall provide service line summary information on their CCR until all LSL are replaced. This summary should also be made available on the WS website or upon request, if website unavailable.

Rule 604 (c)(ii) The verified inventory must be a physical examination based on best practices and guidance developed by the state. As noted in Version 3, priority should be given to verifying high risk sites early in the process.

Rule 604 (c)(iii) Delete “customer-owned” and insert “the portion of the lead service line on private property”.

The results of the both the preliminary and verified inventories should be posted on a searchable database accessible by the public.

**Prioritize High Risk Sites**

These sites should be prioritized for both the verified inventory (as noted above) and for LSL replacement efforts.

The rule revisions must include mandates to incorporate lead service line replacement as a prioritization factor in asset management plans. This can be incorporated in two ways: a lead service line replacement plan should be submitted following the initial distribution system inventory, and the presence of lead service lines should be a primary factor for prioritizing asset criticality in the overall asset management program.

Rule 604 (c)(new) By January 1, 2021, supplies that have a distribution system inventory that includes lead service lines shall complete and submit to the department a preliminary lead service line replacement plan describing the supply’s approach and schedule for meeting the replacement requirements in R325.10604f(6), funding strategy, homeowner contact procedure, and strategy for community notification of construction disturbance during replacement projects. The plan shall be posted on the supply’s website, notice of the plan’s availability mailed to all residents, and the plan shall be discussed at a public meeting of the Water System Advisory Council per 325.10410(7). The plan shall be updated and submitted every 5 years with the updated inventory.

To the extent Asset Management Plans are currently viewed as impediments to accomplishing the LSL replacement goal, the Part 16 Rules should be amended as follows:

Rule 1606 (1)(b) A summary describing the method used to assess the criticality of assets considering the likelihood and consequence of failure. Insert: *For purposes of prioritizing infrastructure replacement, the number of lead service lines must be one of the primary factors determining asset criticality*.

**Public Education Regarding Lead**

Rule 410 (2)(a)(iv)(D) should read: …including the availability of filters certified to remove lead *and the critical importance of proper filter maintenance.*

It’s important to note that many low-income residents impacted by lead in drinking water struggle to afford replacement filters. Improper filter usage can result in even greater risks of lead consumption in drinking water. Water supplies should have programs to provide filters to low-income residents to ensure residents are properly using and maintaining the filters. If filters are not properly used and maintained, resident exposure could be increased, which might implicate water suppliers and the DEQ.

Rule 410 (2)(b)(iii) Lead-free plumbing fixtures are not lead-free. Therefore, residents should receive a plain language explanation of how the wetted surfaces are calculated to ensure they aren’t lulled into believing the devices are actually lead-free. This mean that, although they’re called lead-free, these fixtures still contain some lead.

*As of January 2014, revisions to the Safe Drinking Water Act made it illegal to install any pipe, or plumbing fitting or fixture, any solder, or any flux, during the installation or repair of a public water system or customer’s drinking water plumbing unless it meets the following definition of “lead-free”:*

* *not containing more than 0.2 percent lead when used with respect to solder and flux; and*
* *not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.*

Rule 410 (3)(b) This should be done within **30 days** (not 60 days) of notification. If you have LSLs in your system, you should have this information on-hand and be prepared to mobilize rapidly if lead is detected in your system.

**Household Advisory Level**

There is no scientific rationale for a Household Advisory Level (HAL) other than zero given that is EPA’s drinking water Maximum Contaminant Level Goal (MCLG). Anything other than zero, creates an artificial notion that there is a safe level of lead exposure. Consequently, any detectable amount of lead in the very small number of homes sampled by the system should receive the items identified in Rule 410 (5)(b)(iii) along with the provision of filters and filter maintenance training and the Department of Health and Human Services escalated response.

Because EPA’s MCLG doesn’t provide the necessary calculations for a standard, we recommend using California’s health-based goal which was based on the impact of an IQ loss of 1 point resulting in .2 ppb.[[3]](#footnote-3)

In addition to EPA’s MCLG of zero, on June 20, 2016, the American Academy of Pediatrics issued a statement calling for a 1 ppb standard for drinking water fountains in schools.

To reinforce this point, and as noted in Rule 410 (2)(a)(iii)(D), there is an unpredictability of lead release, so any level of lead indicates there is pathway for exposure to the resident.

The only responsible ways to respond to the presence of lead in drinking water are to either: 1) undertake effective public educational efforts throughout the water system, or 2) establish a HAL at the level of detection. It’s hard to imagine the State of Michigan establishing an arbitrary HAL that could lead to liability for additional lead exposure.

Therefore, the proposed rule should either delete R604f (1)(l) or replace it with the following:

R604(1) (l) - The household advisory level for lead is exceeded if the lead level at an individual sampling location is more than **0.000 milligrams per liter (mg/l)**, when collected pursuant to a sampling protocol designed to represent water typically drawn for consumption.

**Lead Action Level**

Given what we know about the dangers of lead in drinking water, the trigger for the new Lead Action Level should be January 1, 2021 rather than January 1, 2024. Otherwise, given the replacement timeline outlined in the rule, the 10 ppb standard is meaningless in terms of replacing the LSLs.

Rule 604 (1)(c) – This section should read “**Through December 31, 2020**, the lead action level is exceeded if the ninetieth percentile lead level is more than 0.015 milligrams per liter (mg/l) in tap water samples collected during a monitoring period conducted under R 325.10710a. **Beginning January 1, 2021, the lead action level is exceeded if the ninetieth percentile lead level is more than 0.010 mg/l in tap water samples collected during a monitoring period conducted under R 325.10710a.**

**Corrosion Control Treatment Requirements**

The LCR must clarify that corrosion control studies must be completed in anticipation of a source water or treatment change. The U.S.EPA’s Review of the MDEQ Drinking Water Program states “MDEQ must ensure all required studies are completed and reviewed and all required treatment, including CCT, is approved and implemented before operations of any new drinking water treatment plant, change in long-term treatment, or addition of a new source, as required by State statutes, rules, and policy.” MDEQ should clarify the rule requirements; water systems will also appreciate the clarity in expectations. The default position should be that a corrosion control study is required, with narrowly defined exemptions.

There also needs to be renewed emphasis on the effectiveness of ongoing corrosion control treatment. With the mandatory replacement schedule, the action level is a smaller trigger to further action to reduce lead exposure system-wide and, if the systems that do exceed the action level already have “optimal” corrosion control, there is no requirement to see if they can improve corrosion control effectiveness during the 20-year replacement period. There has to be a protective backstop to provide protection to residents that must wait the entire 20-years for replacement.

The overall strategy should be as follows:

* All water supplies must complete a corrosion control study prior to changing source water or treatment prior to implementation.
* All small and medium supplies that exceed the action level must complete a CCT optimization study
* All small and medium supplies applying CCT must maintain treatment after they drop below the action level; if they exceed the action level again they must re-evaluate their OCCT. If small and medium water systems maintain OCCT, cases of re-exceeding the action level should be low.
* All large systems that currently use treatment to meet OCCT requirements must complete a new CCT study no later than 5 years after the rule is finalized.

1. [*AWWA Standard, Replacement and Flushing of Lead Service Lines*](https://www.awwa.org/Portals/0/files/publications/documents/standards/C810-17-LookInside.pdf) Effective date: Nov. 1, 2017. First edition approved by AWWA Board of Directors June 11, 2017. This edition approved by AWWA Board of Directors June 11, 2017. Approved by American National Standards Institute Sept. 1, 2017, pg. ix. [↑](#footnote-ref-1)
2. The LSL replacement program completed by the Lansing Board of Water and Light provides cost-effective best practices for other communities to consider. [↑](#footnote-ref-2)
3. [Public Health Goal for Lead in Drinking Water](https://oehha.ca.gov/media/downloads/water/chemicals/phg/leadfinalphg042409_0.pdf), Prepared by Pesticide and Environmental Toxicology Branch Office of Environmental Health Hazard Assessment California Environmental Protection Agency April 2009. [↑](#footnote-ref-3)