GUIDANCE – FLUSHING FOLLOWING LEAD SERVICE LINE REPLACEMENT (LSLR)

(Version 1, March 2021)

INTRODUCTION

Community water systems and non-transient non-community water systems (systems) that fail to meet the lead action level, 0.015mg/L, in tap samples after installing corrosion control and/or source water treatment must replace their lead service lines under the federal Safe Drinking Water Act, specifically §141.84(a). A service line is a pipe that runs between the system's water main and a building inlet. A service line may be owned by the system, the property owner, or both. There are two types of lead service line replacement (LSLR):

(1) Full LSLR = when there is no longer any lead pipe or material in the service line upon completion of the work.

(2) Partial LSLR = when there is still lead pipe or material remaining in the service line upon completion of the work.

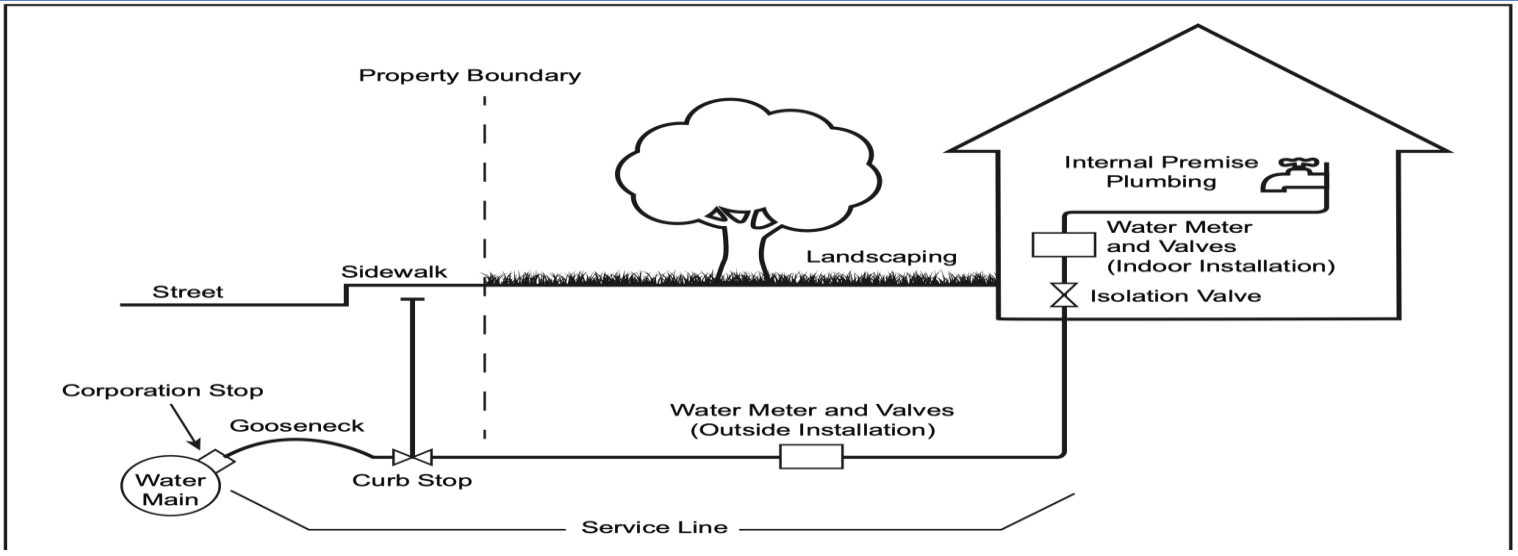

Figure 1 Typical water service line components *AWWA STANDARDS C810-17 "Replacement and Flushing of Lead Service Lines"*

LSLR May Affect Water Quality by temporarily increasing lead levels by disrupting any remaining portion of lead pipe or redeposited lead in scale of the premise plumbing. It is strongly recommended you take action to reduce lead in your home or building's water supply following either type of LSLR.

Immediately Following LSLR

- Throw away any ice from your freezer. If you have an automatic ice maker, shut it off.
- Do not consume any tap water, including filtered water from a point of use treatment device (e.g. refrigerator)
- Do not open and use hot water faucets

Resume these activities only after completing all actions for flushing as outlined below immediately after LSLR.

Instructions For Flushing Immediately After LSLR

1. Turn on an outside faucet of your home/building and leave it running at the highest rate possible. Flushing should continue for at least ten minutes (longer if there is visible appearance of particulates or other matter within the water being flushed). Be sure to safely direct water away from your home. *The system or contractor may have indicated they completed this step.*
2. Locate all faucets, laundry tubs, sinks, bathtubs, showers, and hose bibs that have a proper drain. Remove all screens and aerators, including showerheads, and make sure all drains are clear. Fully extend flexible faucets for flushing.
3. Turn off or bypass any water softener or filtration system to allow for maximum flow.

Instructions For Flushing Immediately After LSLR are continued on Page two.

Instructions For Flushing The Home Immediately After LSLR (continued)

4. Turn on the cold-water faucets in the basement (or lowest floor). Leave all faucets running at the highest rate.
5. Turn on the cold-water faucets on the next highest floor. Continue until all faucets are running on all floors.
6. Record the order in which the faucets were turned on.
7. Leave water running for at least 30 minutes.
8. Turn off the faucets in the same order they were turned on.
9. Clean or replace the faucet aerators and screens before you re-attach. Separate the individual parts and, if necessary, soak them in white vinegar for a few minutes and scrub with a brush.

Conduct the above flushing once every two weeks for three months.

Instructions For Daily Flushing And Cleaning Aerators And Screens For at Least Six Months Following LSLR

(These instructions are in addition to the above flushing.)

- Flush your home/building daily in the morning or when the water sits in the pipe for at least six hours for six months following LSLR by running the cold water for at least five minutes before using it for drinking, cooking, making infant formula or brushing teeth.
- Flushing could also include taking showers, washing clothes or dishes, or collecting water for gardening.
- Clean debris from aerators and screens once a month for six months (as described in number 9 above).

Testing Your Water For Lead

Conduct water sample testing within 72 hours of partial LSLR. If your water supplier conducted partial LSLR, coordinate with the system to ensure this water sampling is conducted. This test will help inform you and the system about the quality of the water immediately after the partial LSLR. If you replaced your portion of the LSL; therefore, conducting partial LSLR, see instructions below on how to identify a certified laboratory to conduct important water testing.

At least one month after LSLR, to allow for sufficient in-house/building flushing and a period of normal use, and again 6 months after LSLR, to allow for reestablishment of water chemistry, have your water tested by a NJ certified laboratory. Samples collected should be representative of a first draw (initial water drawn from the tap) and a five-minute flushed sample (representative of water drawn from the service line) after the water has been unused in the home/building for at least 6 hours.

NJDEP maintains a list of certified drinking water laboratories. To access this list, visit https://www13.state.nj.us/DataMiner . Once there, click *Search by Category* then select *Certified Laboratories* from the *Report Category* drop down box. Then click on the *Submit* button and under *Certified Laboratories* choose *Drinking Water Certified Lead Labs*.

Additional Steps To Reduce Exposure To Lead In Drinking Water

1. If a partial LSLR was completed, replace the remaining portion of the LSL. Contact your system for resources.
2. Do not boil water to remove lead. Boiling water will not reduce lead.

Additional Steps to Reduce Exposure to Lead in Drinking Water are continued on Page three.

ADDITIONAL STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER (Continued)

3. Use cold water for cooking and preparing baby formula. Do not cook with, drink water or make baby formula from the hot water tap. Hot water dissolves lead more quickly than cold water. If you need hot water, draw water from the cold tap and then heat it.
4. Replace plumbing fixtures containing lead. If your home/building was constructed prior to 1987, it is also important to determine if interior lead solder or lead pipes are present. You can check yourself, hire a licensed plumber, or check with your landlord. Replace brass faucets, fittings, and valves that do not meet the current definition of "lead free." The current definition went into effect January 4, 2014; therefore, any "lead free" plumbing materials purchased and/or installed prior to that date should be discarded or replaced. Visit the NSF website at www.nsf.org to learn more about lead-containing plumbing fixtures.
5. You may consider purchasing bottled water or a water filter during the 6-months following LSLR, or longer if there is confirmed or suspected lead-containing materials (e.g. interior lead plumbing or lead solder) in your home or building. Be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or www.nsf.org for information on water filter performance standards. Be sure to maintain and replace a filter device in accordance with the manufacturer's recommendations.
6. Proper routine maintenance of water softeners. Not properly maintaining your water softener could have a negative impact on the corrosivity of the water in your home/building. Water softeners and reverse osmosis units will remove lead from water but can also make the water more corrosive to lead solder and plumbing by removing certain minerals; therefore, the installation of these treatment units at the point of entry into homes/buildings with lead plumbing should only be done under supervision of a qualified water treatment professional.
7. Cleaning of the aerators and screens and continue to flush. After six months from the LSLR, it is recommended to clean the debris from aerators and screens at least twice a year and regularly flush a tap after the water has remained stagnant for 6 hours or more..

Health Effects of Lead

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development. In other words, it is the fetus that is at risk because developing fetuses receive lead from the mother's bones. Children and fetuses absorb more lead into their bodies than adults and are more susceptible to its effects on brain development; however, most children with elevated blood lead levels do not exhibit any symptoms, but effects may appear later in life.

RESOURCES

- AWWA STANDARDS C810-17 "Replacement and Flushing of Lead Service Lines"
- The NJ Department of Environmental Protection's Division of Water Supply and Geoscience's Lead website at https://www.state.nj.us/dep/watersupply/dwc-lead.html or send questions to WaterSuppy@dep.nj.gov.
- The Environmental Protection Agency's Lead website at www.epa.gov/lead
- The National Lead Information Center at 800-424-LEAD (5323)
- The Safe Drinking Water Act hotline at 800-426-4791
- Lead Service Line Collaborative's website at https://www.lslr-collaborative.org
- Contact your health care provider for any medical concerns