

# Lead and Copper Rule for Drinking Water

## Introduction to the Lead and Copper Rule

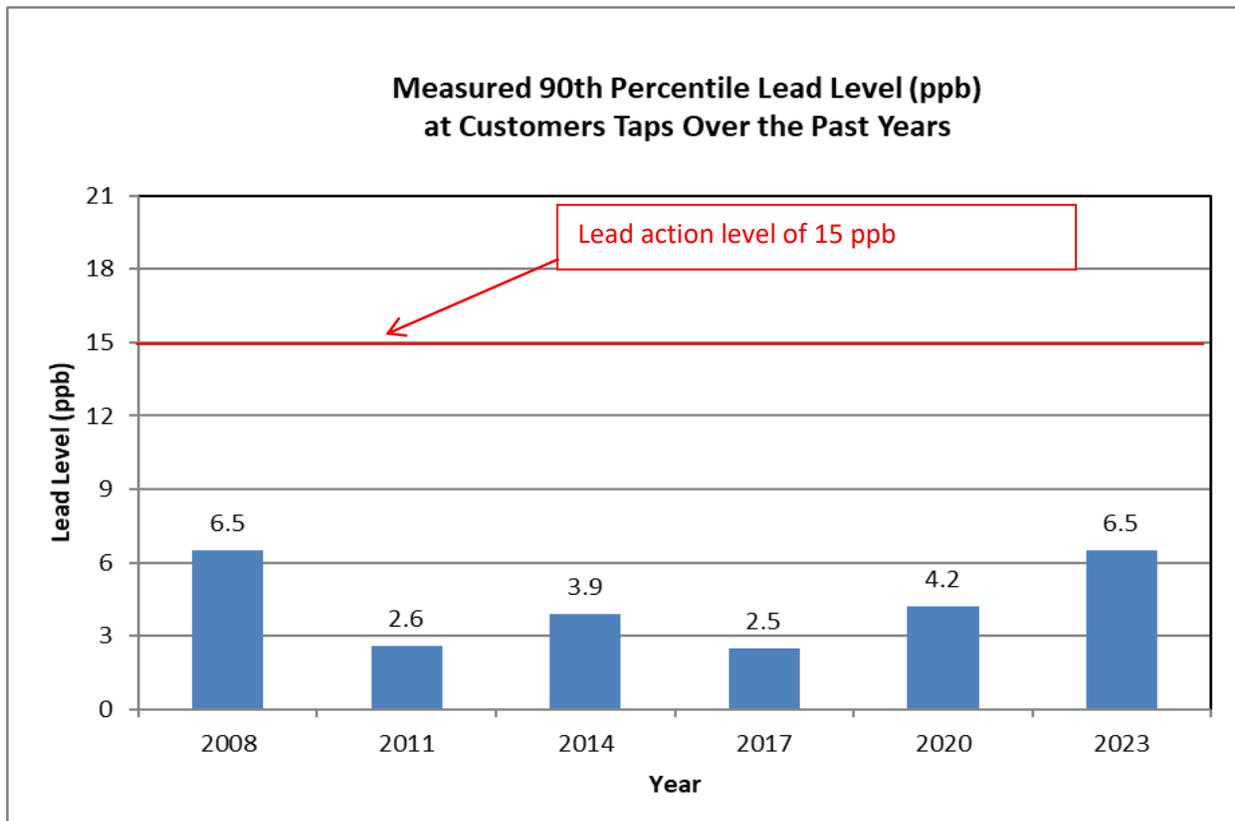
In 1991, the United States Environmental Protection Agency (USEPA) published a regulation to control lead and copper levels in drinking water. This regulation is known as the Lead and Copper Rule (also referred to as the LCR). The purpose for this rule is to protect public health by minimizing lead and copper concentrations in drinking water. Since 1991, the LCR has undergone several revisions to the rule in order to improve public health protection by making substantive changes to the rule and to streamline the rule requirements. The latest revision is EPA's 2021 Revised Lead and Copper Rule. This revision provides essential information to help water systems comply with the Lead and Copper Rule Revisions requirement to prepare and maintain an inventory of service line materials by October 16, 2024.

All community water systems are subject to the LCR. Lead and copper enter drinking water mainly from the corrosion of plumbing materials containing both metals. This rule establishes monitoring provisions and an action level of 15 ppb (part per billion) for lead and 1.3 ppm (part per million) for copper based on the 90<sup>th</sup> percentile level from the analysis of all tap water samples. The 90<sup>th</sup> percentile means 90% of the water sample results are smaller than the action level. An exceedance of the action level is not a violation, but can trigger other requirements for a community water system that may include water quality parameter monitoring, corrosion control treatment, source water monitoring/treatment, public education and lead service line replacement.

For more information on LCR, such as the rule summary, the rule history and additional resources, please visit EPA's website at <https://www.epa.gov/dwreginfo/lead-and-copper-rule#additional-resources>

## City of Valparaiso's History of Lead Monitoring

The Valparaiso Water Department started to monitor and test lead concentrations in its drinking water in 1992. Since then, at least 30 water samples have been taken by the Department on an annual or triennial schedule depending on the water monitoring framework set forth by Indiana Department of Environmental Management (IDEM). Shortly after that, orthophosphate was added into the Department's water treatment process. Orthophosphate serves as a corrosion inhibitor as it forms a protective layer on the interior walls of the water pipe and therefore prevents lead in the water pipe from leaching into the drinking water. Figures 1 shows the lead levels measured at the customers' water taps over the past 15 years.



**Figure 1: Valparaiso Water Department Measured Lead Level (ppb) at Customers Water Taps Since 2008.**

Based on available records, the City of Valparaiso's water system originally contained 1,912 lead service lines. Since 1983, the Water Department has replaced 328 lead service lines within our drinking water system have been replaced. Currently, there are 527 lead service lines still active within our water system. The majority of those lead service lines are located in the older parts of the City's residential and downtown areas. Figure 2 shows the locations of those known lead service lines in our water distribution system. Please note that these listed lead service lines shown in Figure 2 are the portions owned by the Valparaiso Water Department, which typically measure from the water mains to the shut off valves. The portions from the shut off valves all the way to customers' houses are owned and maintained by the customers.

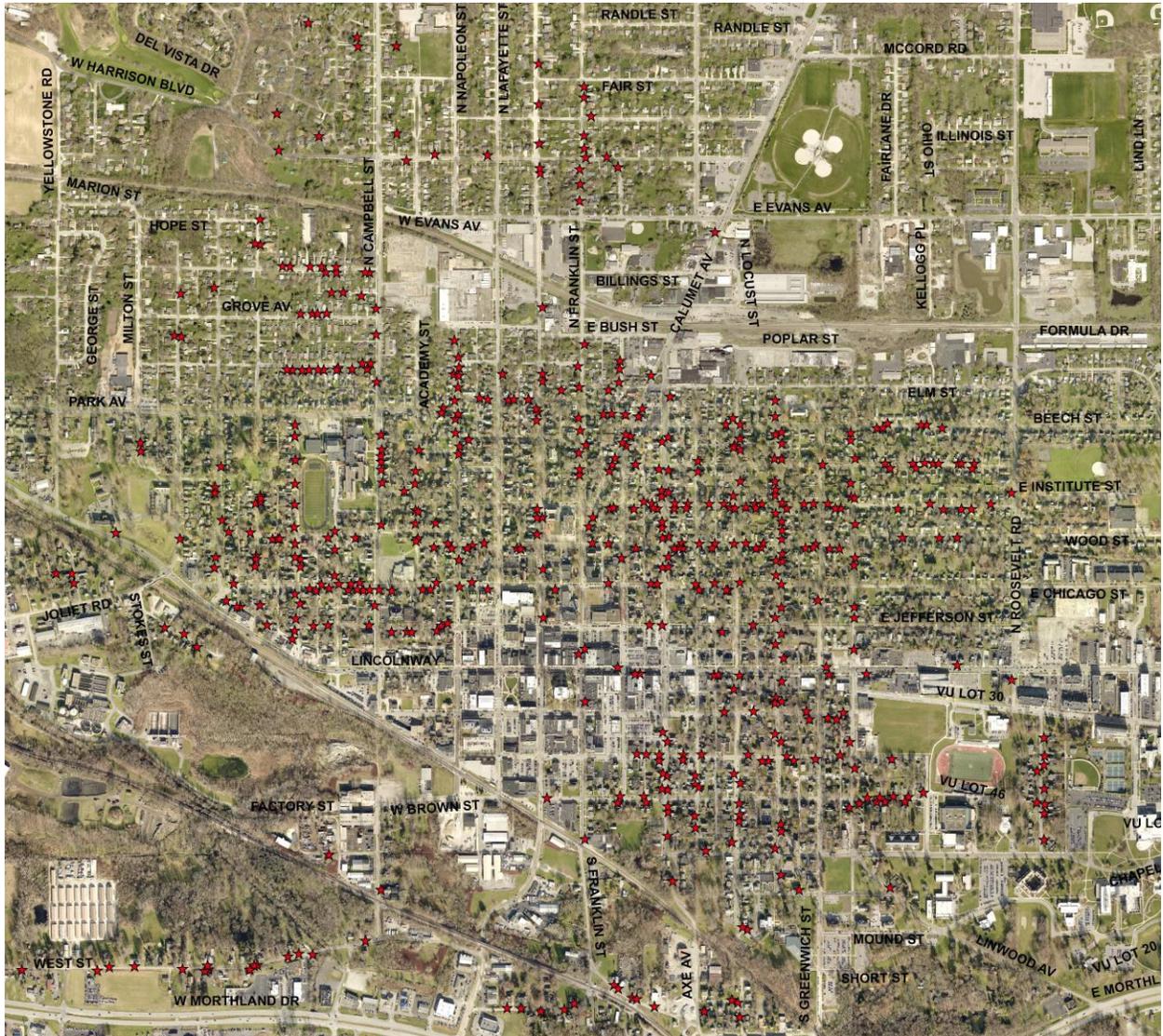


Figure 2: The known active lead service lines in City of Valparaiso’s water distribution system.

Figure 3 demonstrates the typical service line layout for your reference. Valparaiso Water Department doesn’t have a record of customers’ portions of the service lines. If you are not sure but would like to know whether there is lead service line in your house, a licensed plumber may be able to help you.

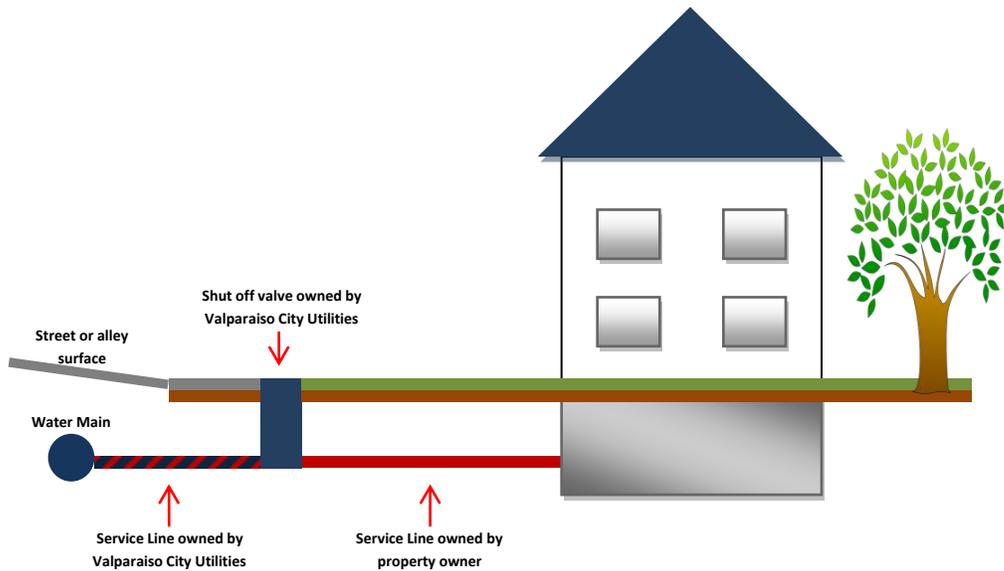


Figure 3: The schematic of water service lines that are owned by Valparaiso Water Department and by customers.

### **Valparaiso Water Department's Best Practices to Provide Safe Drinking Water**

To provide high quality water to the customers served by the Valparaiso Water Department and to minimize the levels of lead in the drinking water, the Department continues the following best practices:

1. Monitoring lead levels in the drinking water on a regular basis, as required by the IDEM, through the testing of water samples collected from various locations throughout the City of Valparaiso.
2. Continuing the addition of orthophosphate at both water treatment plants so that the water pipes in the City's water distribution system are protected from corrosion.
3. The current practice of periodically replacing lead service lines as found by the Department may be formalized into an ongoing replacement program in the near future which identifies the locations of suspected lead service lines and to replace them once confirmed.
4. Public education and outreach. The Valparaiso Water Department continues to actively communicate with its customers on the water quality via public notice, news paper and City's newsletter.