

# Summary of Lead and Copper Monitoring in South Dakota

## What Causes Lead in Drinking Water:

- Lead enters tap water through the corrosion of plumbing materials.
- Homes built before 1986 are more likely to have lead fixtures and solder. Older homes built prior to World War II are more likely to contain lead pipes.
- The amount of lead in tap water also depends on the types and amounts of minerals in the water, how long the water stays in the pipes, the amount of wear in the pipes, the pH of the water, and its temperature.

## What is the Lead and Copper Rule:

- In June of 1991, the United States Environmental Protection Agency published a regulation to control lead and copper in the drinking water; this became known as the Lead and Copper Rule.
- The treatment technique for the rule requires systems to monitor drinking water at customer taps.
- If the 90<sup>th</sup> percentile for lead exceeds an action level of 15 parts per billion; the system must undertake a number of additional actions to control corrosion. Typically an orthophosphate is added to control the corrosivity of the water.
- The regulation also requires systems to collect customer tap samples from sites served by the system that are more likely to have plumbing materials containing lead. If the 90th percentile action level for lead is exceeded, then water systems are required to take additional actions such as public notice and determine an optimal corrosion control plan.

## How often do systems test for Lead and Copper:

- Initially systems are required to conduct 2 consecutive rounds of 6 month monitoring.
- Any water system that demonstrates 2 consecutive rounds of 6 month monitoring periods that the 90<sup>th</sup> percentile tap water level is equal to or below 5 parts per billion and the copper level is equal to or below 0.65 parts per million may reduce its sampling frequency to once every 3 years.
- If a system is not able to demonstrate levels less than or equal to 5 parts per billion for lead and less than or equal to 0.65 parts per million for copper; they will continue on to 2 rounds of annual monitoring. After 2 rounds of annual monitoring, the system will move to sampling every 3 years.
- If a system changes sources or treatment techniques, the system starts back at 2 rounds of consecutive 6 month monitoring.

## Monitoring for Lead and Copper in South Dakota's Water Systems:

- 22 systems, which serve a total of 91,170 people in South Dakota, have corrosion control treatment installed to help limit the corrosion potential of the treated water and reduce lead and copper leaching from the plumbing.
- Since the promulgation of the lead and copper rule in 1991, 32 South Dakota systems have exceeded the lead action level and distributed the required public notices. All systems have also installed corrosion control treatment.
- Currently one system which supplies water to 180 people exceeds the action level for lead. The system changed operators and had discontinued using their existing corrosion control treatment system. This was determined in September of 2014. We contacted them in November of 2014 informing them of public education requirements and instructed them to restart their corrosion control equipment which was completed in September 2015. The system is now required to complete two 6-month monitoring periods followed by two rounds of annual monitoring before they will be allowed to sample on a 3 year cycle. The first 6-month sampling will be in May 2016.
- All public water systems are required to issue a Consumer Confidence Report each year. Lead and Copper sampling results for the system are required to be shown on the report. To see your system's report you may visit the State of South Dakota's Drinking Water Website at <http://denr.sd.gov/des/dw/dwhome.aspx>