

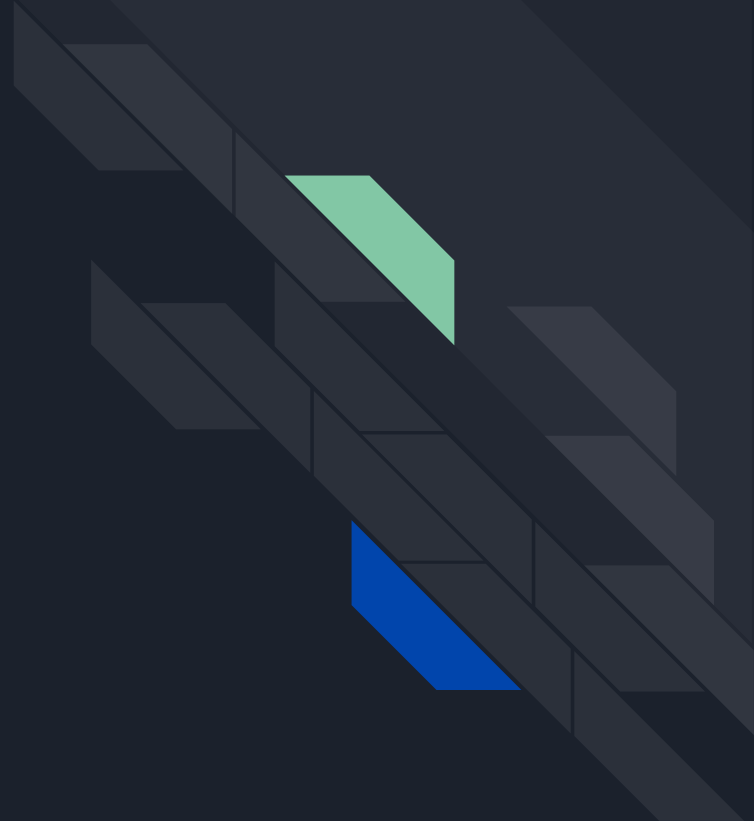


# Lead in Drinking Water

Presentation by Robert Kearney

# 20%

EPA estimates that drinking water can make up **20% or more** of a person's total exposure to lead. Infants who consume mostly mixed formula can receive **40% - 60%** of their exposure to lead from drinking water.



# Lead in the News...

- Flint, MI
- Pittsburg, PA
- Newark, NJ



<https://www.nytimes.com/2019/08/14/nyregion/newark-water-lead.html>

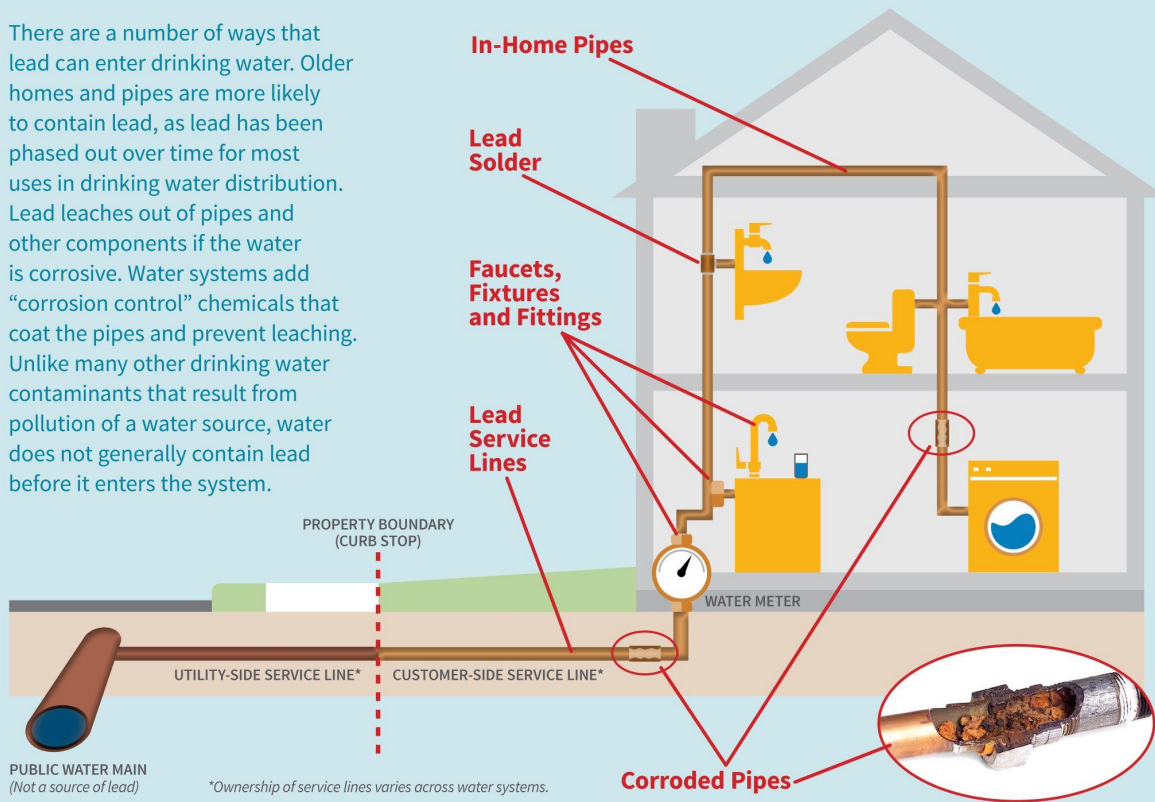


# How Lead Gets Into Drinking Water

- Lead can enter drinking water when plumbing materials that contain lead *corrode*.
- Common sources of lead in drinking water are *lead pipes, faucets, and fixtures*.
- Lead pipes that connect the home to the water main, also known as *Lead Services Lines (LSLs)*, are typically the most significant source of lead in the water.
- Lead pipes are more likely to be found in *older cities and homes built before 1986*.
- Among homes without lead service lines, the most common problem is with *brass or chrome-plated brass faucets and plumbing with lead solder*.

# How Lead Gets Into Drinking Water

There are a number of ways that lead can enter drinking water. Older homes and pipes are more likely to contain lead, as lead has been phased out over time for most uses in drinking water distribution. Lead leaches out of pipes and other components if the water is corrosive. Water systems add “corrosion control” chemicals that coat the pipes and prevent leaching. Unlike many other drinking water contaminants that result from pollution of a water source, water does not generally contain lead before it enters the system.



<https://www.cleanwateraction.org/features/lead-and-drinking-water>



# Safe Drinking Water Act (1974)

- Requires EPA to determine the level of contaminants in drinking water at which *no adverse health effects are likely to occur* with an adequate margin of safety.
- These non-enforceable health goals, based solely on possible health risks are called *maximum contaminant level goals (MCLGs)*.
- The MCLG for lead is *zero*.
- For most contaminants, EPA sets an enforceable regulation called a *maximum contaminant level (MCL)* based on the MCLG.
- However, because lead contamination of drinking water often results from corrosion of the plumbing materials belonging to water system customers, EPA established a *treatment technique* rather than an MCL for lead.



# Lead and Copper Rule

- Requires water systems to control the **corrosivity** of the water.
- Requires systems to **collect tap samples** from sites that are more likely to have plumbing materials containing lead.
- If more than 10% of tap water samples exceed the **lead action level of 15 parts per billion (ppb)**, then water systems are required to take additional actions including:
  - **Educating** the public about lead in drinking water and actions consumers can take to reduce their exposure.
  - **Replacing** the portions of LSLs under the water system's control.
  - Optimize their corrosion control **treatment**.

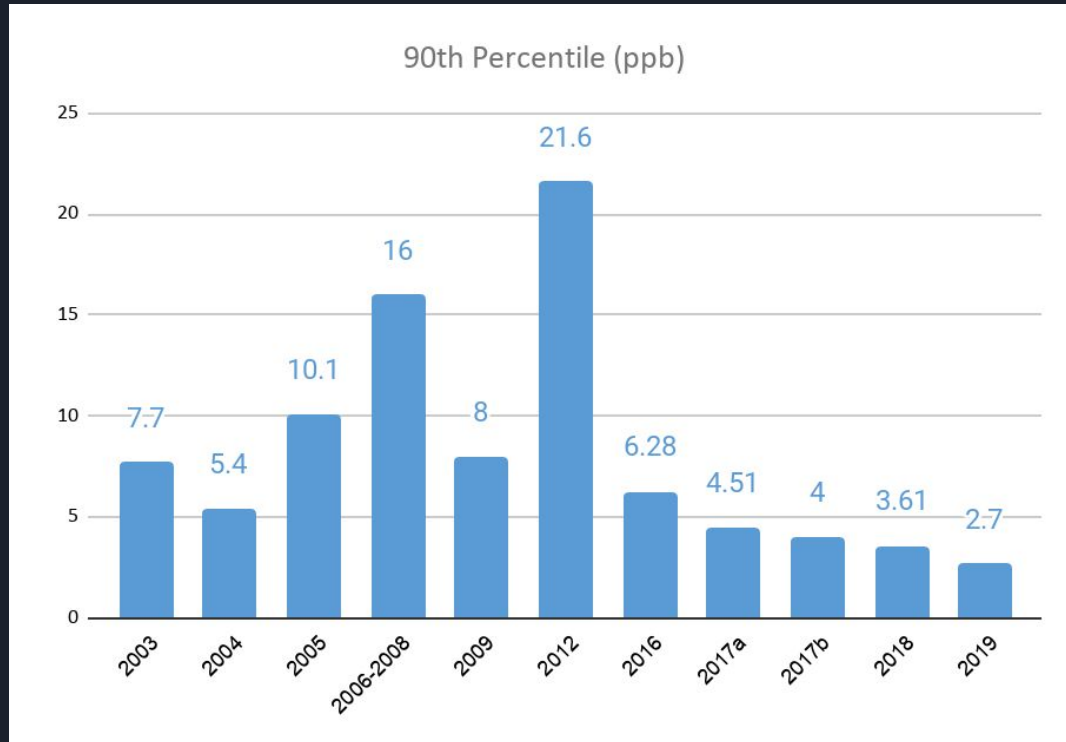
# RW's Corrosion Control Treatment

- *Poly-orthophosphate* additive
- Inhibits the *corrosion* of lead from plumbing materials
- Implementation fully completed in *April 2016*
- Significant *testing* of purchased water sources

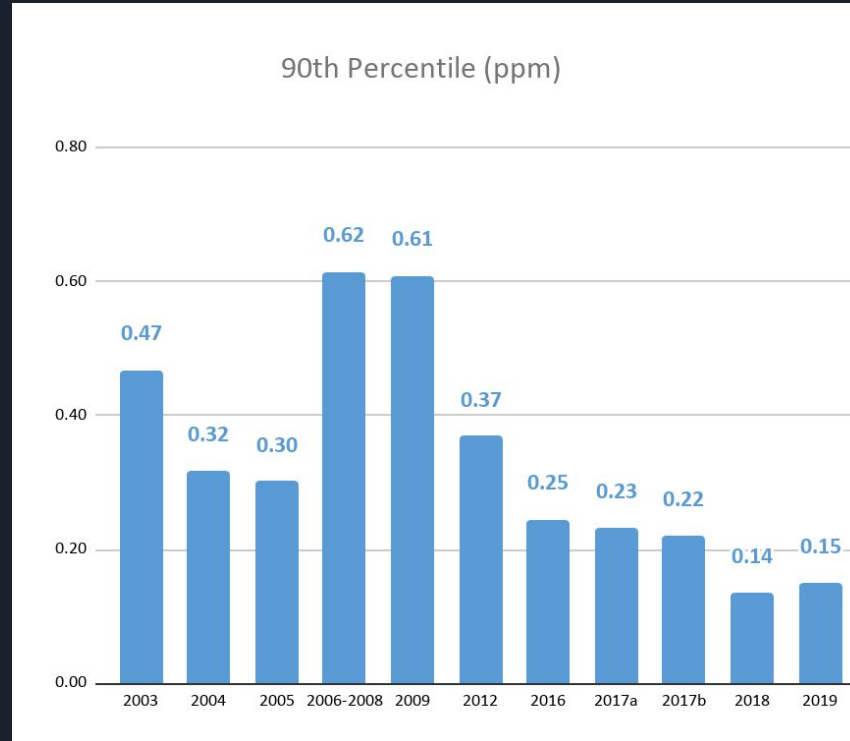




# Lead Testing Results (Action Level - 15 ppb)



# Copper Testing Results (Action Level - 1.3 ppm)





# Getting the Lead Out!

- ***Get you water tested***: Discounted water test kits (\$50) are available from Ridgewood Water. Please call **201-670-5520** or visit **Village Hall** at 131 N. Maple Ave. Ridgewood, NJ 07450 for more information
- ***Know Your Piping***: If you would like to know the material of your service line please call **201-670-3372**.
- ***Consult with an expert*** to check the pipes and fixtures in your home:
  - Lead pipes or iron pipes lined with lead.
  - Brass fixtures or fittings made prior to 2014.
  - Lead solder joints prior to 1986.



# Additional Resources

Clean Water Action -

<https://www.cleanwateraction.org/features/lead-and-drinking-water>

EPA -

<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>

CDC - <https://www.cdc.gov/nceh/lead/prevention/sources/water.htm>