



### Lead and Copper Monitoring Information

Pinellas County Utilities (PCU) is very proactive and is nationally recognized for participation in research applicable to emerging health and safety issues in the water industry. Research partners include entities such as the Centers for Disease Control and Prevention (CDC), Environmental Protection Agency (EPA), The Water Research Foundation (WRF), and several university research centers.

Lead and copper monitoring in Pinellas County:

- In response to the 1974 Safe Drinking Water Act, PCU began investigations into copper levels in the drinking water distribution system and residential plumbing between 1974 and 1977.
- The 1984 SDWA amendments added lead as an item of concern in drinking water systems. Additional studies and monitoring programs were implemented to include lead. Water quality research had determined that potable water can leach copper and lead from metal pipes and fixtures in the distribution system.
- In 1987, a comprehensive water quality study was conducted in conjunction with University of Central Florida (UCF) to study multiple aspects of water quality, including the source of copper and lead in drinking water systems.
- Based on results from the UCF study and previous work done by PCU, the use of a phosphate-based corrosion inhibitor was incorporated into the distribution system.
- The polyphosphate corrosion inhibitor is formulated to form a protective layer inside the piping and acts as a barrier to corrosion.
- PCU Water Treatment Plant Operators control and verify the dose rates and residuals using online, real-time monitoring of the polyphosphate. Samples are also collected and analyzed routinely to verify the residuals.
- Every five years, PCU conducts ongoing studies to review best management practices and optimize this treatment process.
- PCU has been designated as "optimized" for corrosion control of copper and lead by the Florida Department of Environmental Protection (FDEP) based on results of samples collected from residential plumbing since the mid-1990s.

- The PCU system has remained in compliance with FDEP regulations for lead and copper to date, qualifying for reduced monitoring as a result of consistent compliance over a long period of time. PCU collects 50 lead and copper samples at the customers water tap on a three year interval. The last sampling event was June through September 2017. The next sampling event will be June through September 2020.
- The regulatory Lead Action Level is 0.015 milligrams per liter. The 2017 Lead 90<sup>th</sup> percentile result was 0.0016 milligrams per liter, well below the limit.
- The regulatory Copper Action Level is 1.3 milligrams per liter. The 2017 Copper 90<sup>th</sup> percentile result was 0.516 milligrams per liter.
- In addition to the FDEP regulatory requirement, lead levels are analyzed annually to confirm the quality of the water supply. Results are reported in the annual [Consumer Confidence Report](#).
- In 2002, Tampa Bay Water, the agency which supplies water to PCU, changed the water supply from groundwater to a varying mixture of ground and surface water. They also changed the disinfection process from chlorine to chloramines. Chloramine is a form of disinfectant produced by combining chlorine with ammonia. Both chloramines and chlorine are disinfectants that destroy potentially harmful bacteria in the potable water system. The resulting changes in the water chemistry were expected to have a corrosive impact on metal pipes and fixtures.
- To prepare for this change, PCU implemented the Galvanized Pipe Replacement Program to expedite the removal of galvanized pipe in the water distribution system. Within 18 months, 118 miles of galvanized pipe was replaced with new high density polyethylene (HDPE) plastic pipe with no lead content. In addition, 12,850 service connections were replaced.
- Currently, the EPA is considering Long-Term Revisions to the existing Lead and Copper Rule to strengthen its public health protections and clarify its implementation requirements. For more information visit the EPA website at <https://www.epa.gov/dwstandardsregulations/lead-and-copper-rule-long-term-revisions>)