

April 18, 2016

City of Pataskala Utility Department
Lead and Copper Drinking Water Quality Assurance Program



Utility Division

Nathan W. Coey
Utility Director

Dear Customer,

Thank you for your interest in participating in our water quality testing program. Your voluntary participation in the “Lead and Copper Drinking Water Quality Assurance Program” will provide necessary data to ensure the best drinking water quality to our customers. Our goal is to provide you with valuable information as we work through the testing process.

In 1991, the United States Environmental Protection Agency established requirements for the testing of lead and copper in drinking water. As a public water system, the City of Pataskala is required to test for lead and copper in drinking water under the Ohio Administrative Code sections 3745-81-80 to 3745-81-90. The purpose of the lead and copper testing program in Ohio is to protect public health. The testing program and required treatment techniques are to minimize public exposure to lead and copper in the drinking water. Similar to many of our quality tests, this is conducted at an end users water tap. Our staff is dedicated to education and awareness.

Understanding Lead and Copper in Drinking Water

Your drinking water is free of lead and copper when it leaves the water treatment plant. Lead and copper can be released into drinking water when it comes in contact with pipes and plumbing fixtures that contain lead and/or copper. The deterioration of house hold plumbing and fixtures provides the potential of lead and copper deposits in drinking water, especially when water is in contact with copper and lead material for several hours undisturbed. The water treatment plant and main line infrastructure provides copper and lead free water to you.

How Lead Gets into Drinking Water (Source USEPA)

“Lead can enter drinking water when service pipes that contain lead corrode, especially where the water has high acidity or low mineral content that corrodes pipes and fixtures. The most common problem is with brass or chrome-plated brass faucets and fixtures with lead solder, from which significant amounts of lead can enter into the water, especially hot water. Homes built before 1986 are more likely to have lead pipes, fixtures and solder.” USEPA <https://www.epa.gov/lead>

“Corrosion is a dissolving or wearing away of metal caused by a chemical reaction between water and your plumbing. A number of factors are involved in the extent to which lead enters the water, including:

- *The chemistry of the water (acidity and alkalinity) and the types and amounts of minerals in the water,*
- *The amount of lead it comes into contact with,*
- *The temperature of the water,*
- *The amount of wear in the pipes,*
- *How long the water stays in pipes, and*
- *The presence of protective sales or coatings inside the plumbing materials.”*

USEPA <https://www.epa.gov/lead>

Lead Service Pipe. In the United States, lead service pipes were used to supply water to users from main line until the 1950's. This is a significant contributor to elevated lead levels in drinking water. However, the Utility Department has not encountered any lead service lines to date.

Lead Solder. Solder is used to connect pipes in household plumbing systems. In 1987, lead solder was banned from use. Lead solder is a contributor to elevated lead levels in drinking water. If your plumbing was installed prior to 1987 there is a possibility that lead solder was used.

Brass Faucets, Valves, or Fittings. The majority of faucets, valves, and fittings have brass components. Until 2014, brass faucets and fittings sold in the U.S. and labeled "lead-free" could contain up to eight percent lead. Aged fittings and fixtures could be a source of lead in drinking water. Effective January 2014, the "Reduction of Lead in Drinking Water Act" specifies that materials may not contain more than .25 percent lead.

Galvanized Iron Pipes. Galvanized iron pipes were used in many homes prior to the 1960's. Galvanized pipes were made with a protective layer of zinc. The zinc layer can erode over time and result in corrosion that may contribute to elevated lead levels in the drinking water.

Copper Service Lines, pipes, and fittings. The majority of copper exposure in drinking water can be attributed from copper material in household plumbing and service lines. Deterioration and corrosion of copper material will result in deposits in the drinking water.

Lead and Copper Health Information

Elevated lead levels in drinking water can cause damage to the brain, red blood cells, and kidneys. Elevated lead levels can affect people of all age. Infants, young children, and pregnant women have the greatest risk to lead exposure.

Elevated copper levels in drinking water can cause stomach and intestinal distress, liver and kidney damage. Elevated copper levels can affect people of all age. Infants, young children, and pregnant women have the greatest risk to copper exposure.

For information on reducing lead exposure around your home or building, visit the EPA's website at <http://www.epa.gov/lead>

What is the City of Pataskala's Utility Departments Role?

Our staff is on the front line as defenders of public health and the environment. Our staff is highly trained and qualified as treatment plant operators. Our job is to ensure the best quality possible while maintaining the expectations of the Ohio EPA.

Corrosion Control.

The City of Pataskala owns and operates two water treatment plants to provide water to our customers. Both treatment plants utilize ground water through production wells for the water treatment process. Filters are utilized to remove natural compounds such as iron and manganese that affect appearance and aesthetics. Ion exchange (water softening) filtration is used to soften and filter the source water prior to distribution to customers. Ground can be more stable compared to surface water treatment plants that utilize rivers and lakes for source water. As a result, the treated water pH is stable with very little corrosive

characteristics. The Ohio EPA requires that we utilize a disinfectant additive, sodium hypochlorite to eliminate the potential for microbial growth in the drinking water system. Sodium hypochlorite is an excellent disinfectant and oxidizer but can increase the drinking water pH.

Orthophosphate is added to control corrosion in the distribution system and to reduce the likelihood of lead and copper leachate in to the drinking water. The phosphates create a barrier between plumbing material walls and the drinking water. At a very low dose, 1-2 gallons per 800,000 gallons distributed, the phosphates provide a necessary coating to prevent interior wall plumbing corrosion.

Drinking Water Quality Assurance Testing

In 2015, we conducted nearly 4,000 water quality tests to ensure excellent drinking water to our customers. The City of Pataskala has been conducting lead and copper testing since the late 1990's as a requirement of the Ohio EPA. Lead and copper testing sites have been established based on the Ohio EPA requirements, specifically, structures constructed prior to 1987. The City of Pataskala is currently on a "Reduced Triennial Monitoring" schedule. We are required to collect 20 samples this year between June 1, and September 30. The reduced monitoring is a direct result of our corrosion control efforts.

During a reporting cycle to the Ohio EPA, we are to report on our Annual Consumer Confidence Report, the "90th percentile" result. "All lead and copper samples collected during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration." *OAC 3745-81-80 (3)(a)*. The annual reportable result in this case would be the 18th sample in ascending order as required.

The "90th percentile" results of lead and copper from the 20 samples collected in 2013 are as follows.

2013 90th percentile of lead, .0058 mg/l or parts per million, or 38.6% of the action level. The lead action level is any test result over .015 mg/l or parts per million.

2013 90th percentile of copper, .517 mg/l or parts per million, or 39.7% of the action level. The copper action level is any test result over 1.3 mg/l or parts per million.

1 mg/l is equal to 1 part per million or the equivalent of 1 ounce in 7,350 gallons.

Lead and Copper Sample Collection Procedure

If you have received this letter, we seek your participation in the Lead and Copper Drinking Water Quality Assurance Program. You may have requested to participate in the program, a past participant, or we have determined the location and age of your home or building meets the Ohio EPA test procedure requirements. Please confirm your participation in this program by sending an email to my attention with the following information.

To: Nathan W. Coey, ncoey@ci.pataskala.oh.us

Subject: Pataskala Lead and Copper Test Program

Message: Please indicate your desire to participate in the testing program. Please include name, address, and contact information.

Once I have received your contact information we will coordinate with you to schedule a test sample date. We have to coordinate test collection days with our certified laboratory to be mindful of sample hold times prior to analysis. We will provide a sample collection container and instructions for collecting the sample. The requirement for the test is referred to as a “first draw sample”, which means the water from the test tap has not been used for at least 6 hours. Intentional flushing of the service line prior to the test is prohibited outside of normal daily usage. For single family homes or multifamily dwelling units, a cold water sample will be collected from the kitchen sink. For commercial buildings, a minimum of 3 samples will be collected from a cold water kitchen sink, bathroom sink, and a drinking fountain.

What you can expect after sample analysis

Once test results have been received from the certified testing laboratory, you will be notified within two business days of the test results. If test results are below detectable limits or below the action level, no corrective actions are needed. We will plan to test your site during the next monitoring cycle to gauge deterioration and effect of our corrosion control methods.

If the test results meet or exceed the action level for lead and/or copper the following steps are required by the Ohio EPA.

“Public water systems that have any individual sample locations with results greater than .015 mg/l (ppm) should implement the following actions.

1. *Not later than two business days after the receipt of the laboratory results, issue by hand delivery or by phone followed by certified mail a consumer notices for any lead results over .015 mg/l.*
2. *Notify the local health department of these individual results.*
3. *Provide information regarding availability of health screenings and testing of lead blood levels.*
4. *Within five days of receiving results, inform Ohio EPA using the Consumer Notice Verification Form.”* Source Ohio EPA, letter dated March 2, 2016

Additional steps the Utility Department will recommend to the exceedance location.

1. Recommend intentional flushing of the interior plumbing and resample for the level exceeded.
 - a. This option will provide an example of water movement or turn over in the private plumbing system that may reduce the exceedance level.
2. Recommend plumbing upgrades to eliminate the pipes or fixtures that may be contributing to the level exceedance.
3. Recommend the installation of water filters that can specifically remove lead or copper exceedance levels. Recommend the installation of filters at locations where water is directly used for potable purposes.
 - a. The National Science Foundation (NSF) provides a free service to determine what filters are designed to specifically remove lead from drinking water
 - i. <http://info.nsf.org/Certified/DWTU/>
4. If any recommendations are utilized in efforts to reduce the likelihood of lead or copper exposure a follow up test will be offered by the Utility Department.

Additional Information

The observed drinking water issues in Flint, Michigan and Sebring, Ohio has created national dialog regarding lead in drinking water. The national attention has revolved around aging infrastructure and systematic failures in the operational process. The unfortunate situation in Flint serves as a solemn reminder of our responsibility. Certified treatment operators have taken an oath to protect the human health and the environment at all costs. Our customers expect clean, safe drinking water every day and we take that responsibility with the utmost diligence.

As we work through our Lead and Copper Drinking Water Quality Assurance Program with you, our goal is to provide a channel of communication and education to all of our customers. In efforts to ensure compliance and confidence we will expand our lead and copper testing throughout our service area. If you desire to have the lead and copper tested at your home or building, the department will be happy accommodate as many testing requests with in our approved testing budget. If you desire to participate in the voluntary testing program we ask that you meet the following criteria.

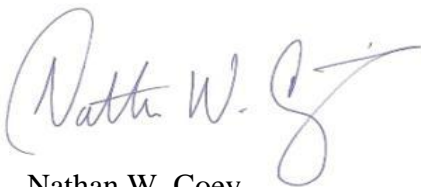
- Your home or building was constructed prior to 1990.
- Your home or building has a copper service line, and/or copper plumbing lines.

If you wish to participate in the program please follow the request process outlined in the “Lead and Copper Testing Procedure”.

The City of Pataskala Utility Department will continue to strive for excellence to ensure safe drinking water to you. We will continue to be vigilant in our daily duties and ensure our efforts are always in compliance with the requirements of the Ohio EPA.

Our daily mission of clean water includes operating in a safe and reliable manner with a daily focus of excellence!

Highest Regards,

A handwritten signature in blue ink that reads "Nathan W. Coey". The signature is fluid and cursive, with a long horizontal stroke at the end.

Nathan W. Coey
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