

Questions and Answers

- **How is Lead Tested?**

Lead and copper testing is unique from most other types of water testing. EPA requires the sample to be a “First Draw.” This means we only test sinks after they have sat unused for a minimum of six hours. The idea is that we are analyzing for any lead and copper that may have leached out from the pipes into the water during the six or more hour time period. The greatest risk of lead and copper exposure is when water is consumed first thing in the morning before the pipes have been flushed from regular use. The reason for this “First Draw” is to mimic this worst case scenario.

- **How often is the water tested?**

East Derry Elementary is a Public Water System monitored by NH DES. Public Water Systems undergo regular extensive testing and Granite State Analytical is responsible for their testing and compliance. Lead and copper have been tested at this location regularly since 1993, and have always fallen within the acceptable limits. It was tested annually up until 2000 and was reduced to triennially. Furthermore, all water quality, results and violation history can be found for this location at the following link below.

<http://www2.des.state.nh.us/DESOnestop/PWSDetail.aspx?ID=0615060#LC90>

- **When was lead found above the acceptable limit?**

The test done in late November had results above the acceptable limit. Follow up testing was required to see if the water had the characteristics of being aggressive, meaning it was likely to leach metal from the pipes. It was not found to be aggressive and since this was unusual from historical data, we decided to run the test again. This was done on January 18th when the school was closed for MLK day. The results for this test were available on January 26th and were again above the acceptable limit. We are actively pursuing a remedy for this situation and have already consulted with NHDES Engineering staff and water treatment professionals. NHDES requires a plan of action and optimal corrosion control report before 6/20/2016. We have already come up with a corrective action plan are currently implementing it well before required deadlines.

- **What were the results, and how does that compare to the acceptable limit?**

The EPA limit for lead is 15 ppb (Parts per Billion). Lead and copper are tested at multiple locations. The numbers of locations are determined by NHDES, and are based on population. At East Derry Elementary we tested 10 locations in November. Three of those ten were above the 15 ppb limit. Lead and Copper results are calculated as a 90th percentile, and the 90th percentile for the round in November was 43 ppb. In the second round of testing, we tested 20 locations and four were found above the limit. The 90th percentile was 23 ppb. Copper was

tested and results well within the maximum contaminant levels. Most of these locations are sinks that may not see regular use, and therefore exposure to lead is likely to be very minimal.

- **What are the risks of lead?**

Lead is a common metal found throughout the environment in lead-based paint, air, soil, certain types of pottery, porcelain and pewter, household dust, food and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination, like dirt and dust, which rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure that they only put food in their mouths.

For additional information on lead exposure follow the link below:

<http://www.epa.gov/lead>

- **Is my child at risk?**

The sampling protocol is mimicking the worst case scenario of lead exposure. Since water is being used frequently when school is in session, the lead concentration will be lower than what we tested. This means the risk of lead exposure is very low, and this information is being sent to you out of an abundance of caution. Any further questions regarding your child's health or lead exposure should be directed to your doctor as lead exposure can come from many avenues. Spring water coolers will be provided for drinking water until the issue is resolved. In addition, the food prep sinks in the kitchen yielded acceptable levels.

EPA has developed health risks for people over a lifetime. It assumes that a 70 kg adult consumes two liters of water per day and that the total dose to a person results solely from drinking water. It is important to remember that actual exposures in the environment may occur through other routes, such as inhalation or dermal contact, or from other sources, such as from food or soil. Other health advisory levels for children have referenced consuming 1 liter of water a day for a 10 kg child.

- **What is being done to correct this?**

The custodial staff will be flushing every sink in the morning before the children arrive. This will eliminate the risk of consuming water that sat in the faucet overnight. Furthermore, the pipes for water fountains are rarely a problem as they are composed mainly of copper and stainless steel. Fountains are included in the routine monitoring and have been acceptable in the past. We proactively sampled all fountains on 1/28/16 and will have results available 1/29/16. The school will be moving quickly to install water treatment. More investigation will be done to determine the best course of water treatment and the exact cause of the lead exceedance. Water treatment contractors have been contacted for quotes and the likely solution will be

injecting orthophosphate. Phosphates are used by thousands of water systems all over the country and are a proven mitigation tool for lead in drinking water.

Recently there has been a lot of media attention regarding the municipal water system in Flint, Michigan. That system is dealing with vastly different water quality concerns and actual lead pipe in the distribution system. The lead values seen at the East Derry Memorial School are many orders of magnitude *lower* than what is being seen in Michigan. Additionally, one of the faucets that tested the highest (Library Sink) has been replaced with a lead free faucet and will be tested in the near future as a pilot study.

- **Where can I get more information?**

Derry Cooperative School District
SAU 10
18 South Main Street
Derry, NH 03038
603-432-1210

Granite State Analytical
22 Manchester Rd.
Derry, NH 03038
(603) 432-3044

NHDES Drinking Water and Groundwater Bureau
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095
(603) 271-2513

Safe Drinking Water Hotline (800-426-4791)