

## Public Education Material

### CITY OF HOUGHTON WATER CUSTOMERS IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

*The City of Houghton found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this notice closely to see what you can do to reduce lead in your drinking water.*

This notice is brought to you by the City of Houghton, Water Supply Serial Number 3230,  
Date: November 10, 2017

#### **What Happened? What is Being Done?**

The City of Houghton, along with all water systems throughout the state, does regular tests on the tap water for lead and copper as a measure of corrosion control. Houghton has been doing tests every three years as required by the Michigan Department of Environmental Quality (MDEQ). This September, we collected 20 bottles of tap water from our regularly sampled homes and had them tested for lead and copper. The test results showed three of the samples were just over the Action Level for lead. An Action Level is not a health based standard, but a level that triggers additional investigative sampling of water quality and requires educational outreach to customers. The Action Level is set so, if exceeded, the water provider has time to investigate, get more details, and take proactive corrective action if needed before there is a potential public health issue.

Corrosion of household plumbing is one of the biggest sources of lead and copper in drinking water. Many water systems, including Houghton, treat their water to reduce its ability to corrode pipes, fittings, and plumbing. The MDEQ assesses the effectiveness of the corrosion control measures based on the 90<sup>th</sup> percentile of all lead and copper results collected in each round of sampling. The lead 90<sup>th</sup> percentile for the Houghton water supply based on this year's samples is 16 parts per billion (ppb) which exceeds the current Action Level of 15 ppb. The exceedance was very slight statistically, but it was still an exceedance and thus requires the city take certain actions which include distributing this document.

Over the next year, the Houghton Water Department will also conduct additional monitoring of the water system to assess the current corrosion control treatment and, working with MDEQ, will determine if additional corrosion control measures are necessary to reduce corrosion in household plumbing. At the same time, we believe subsequent rounds of sampling will show the water is below that Action Level.

Based on the Houghton Water Department's experience working on the water system for many years we do not know of any lead pipes or service lines in our water system. Older city records did not necessarily differentiate what materials were used. In past years, if a suspected lead component was found during water line work it was removed and replaced. It was reported that on rare occasions a short piece of lead might be found connecting the service line to the main (as was common practice long ago) and it was taken out and replaced with new pipe. Major projects in the past two decades have replaced a significant portion of Houghton's distribution system with modern materials as well.

However, many homes and businesses may have older internal plumbing that could contain lead. Given that individual homes and buildings are private property the city does not have records of the plumbing materials in each house or building. A plumber may be able to look at your household plumbing to determine if there is a possibility of there being pipe, fittings, or fixtures that may contain lead.

Houghton has regularly tested its tap water for lead for decades. Over that time the same basic group of homes and businesses were tested. The last time Houghton had an Action Level exceedance was in the late 1990's. The water was retested right away after that exceedance and the results showed that the water was in compliance. Historically the individual home sample results can vary between test cycles because of the unique conditions within each of the sampled homes and their plumbing. This variability is why MDEQ uses the 90<sup>th</sup> percentile results of all the samples tested in each round.

The City of Houghton water is supplied from three groundwater wells. The city also sampled the water from each individual well for lead right away and sent them to a certified laboratory. Two of the wells sampled resulted in a "non detect" which means that the lab test could not detect lead in the well water. The third well came back with a result of 0.22 ppb, but was flagged by the laboratory because "*The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.*" In other words, it was too small to measure and they decided to estimate. The particular certified laboratory we used chose to report the extremely low value that way. Other laboratories, including the MDEQ state lab, report such a low result as a "non detect" because it is below the minimum detectable level of the EPA-approved test method.

The city is working with MDEQ and taking more well samples to verify the most recent test results. More data will allow us to determine why any lead at all was detected in the one sample and flagged test. We will also look at the well construction records and historic data and then if there is action to be taken; take it.

### **Health Effects of Lead**

*Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.*

### **Sources of Lead**

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. Other sources of lead exposure for most individuals are lead-based paint, lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, fixtures, food, and cosmetics. Other sources include exposure in the work place and exposure from certain hobbies (lead can be carried on clothing or shoes).

Plumbing products such as pipes and fixtures, may contain lead. Homes built before 1988 are more likely to have plumbing containing lead, but newer homes may also contain lead; even

“lead-free” plumbing may contain some lead. Beginning in 2014, the law reduced the allowable level of lead in these products to a maximum of 0.25 percent to be labeled as “lead free.” Older fixtures may contain higher levels of lead.

At the water plant, the filters remove iron and manganese from the well water and then we add soda ash to help with corrosion control. We also chlorinate the water to prevent bacterial growth once the water leaves the plant. Even with treatment, if water sits in a pipe or fixture that contains any lead for a long time it can dissolve some of the lead. When water is in contact with pipes, service lines or plumbing that contain lead for several hours, the lead may enter drinking water.

EPA estimates that drinking water can make up 20 percent or more of a person’s potential exposure to lead. Infants who consume mostly mixed formula can receive 40 percent to 60 percent of their exposure to lead from drinking water.

Don’t forget about other sources of lead, such as lead paint, lead dust, and lead in soil. Wash your children’s hands and toys often as they can come into contact with dirt and dust containing lead.

### **Steps You Can Take to Reduce Your Exposure to Lead in Your Water**

1. **Run your water to flush out lead.** Run water for 30 seconds to two minutes or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn’t been used for several hours. This flushes lead-containing water from the pipes.

2. **Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.

3. **Do not boil water to remove lead.** Boiling water will not reduce lead levels.

4. **Look for alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010 or [www.nsf.org](http://www.nsf.org) for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer’s instructions to protect water quality.

5. **Get your child tested.** Contact the Western Upper Peninsula Health Department (WUPHD) at 906-482-7382 or your healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

6. **Test your water for lead.** Call us at 906-482-1700 to find out how to get your water tested for lead. As we are conducting follow-up testing of the tap water at our regularly sampled sites we are not planning on sampling sites “on demand”.

You can get your water tested on your own at your expense. There are several certified laboratories which can test water for lead. Some are:

Brighton Analytical, Brighton, Michigan 810-229-7575

Whitewater Associates, Amasa, Michigan 906-822-7889

MDEQ Laboratory Services, Lansing Michigan 517-335-8184

MDEQ maintains a list of laboratories online at:  
[http://www.michigan.gov/documents/deq/Lead\\_\\_Copper\\_Lab\\_Certs\\_526434\\_7.pdf](http://www.michigan.gov/documents/deq/Lead__Copper_Lab_Certs_526434_7.pdf)

The Western Upper Peninsula Health Department (WUPHD) can also assist area residents. Their website (WUPHD.org) has extensive information on lead prevention and links to lead-related resources. Home water testing kits are available as well. Individuals with questions about blood lead testing should contact their healthcare provider or the WUPHD at 906-482-7382.

Also, we are looking for approximately 20 more sites to add to our sampling pool for regular testing. If you are interested in becoming part of the pool, please contact us at the number above and we will determine, with MDEQ, if your home meets the criteria to be included in the sample pool for our next round of testing in 2018.

**7. Identify if your plumbing fixtures contain lead.** Faucets, fittings, and valves may contribute lead to drinking water unless they have been replaced since 2013. Any new connecting plumbing and fittings should meet the 2014 lead-free definition. If you replace your faucet, buy a new one that meets the 2014 lead-free definition. Visit the National Sanitation Foundation Web site at [www.nsf.org](http://www.nsf.org) to learn more about lead-containing plumbing fixtures.

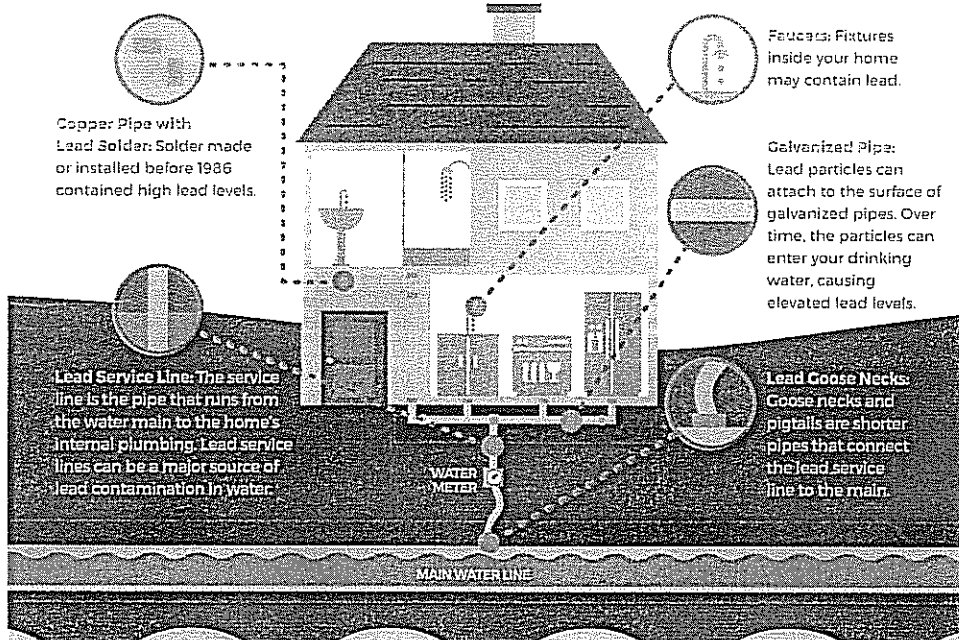
#### **For More Information**

*Call us at 906-482-1700 or visit our Web site at [www.cityofhoughton.com](http://www.cityofhoughton.com). For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at [www.epa.gov/lead](http://www.epa.gov/lead) or contact your health care provider.*



## CONCERNED ABOUT LEAD IN YOUR DRINKING WATER?

# Sources of LEAD in Drinking Water



## Reduce Your Exposure To Lead



Use only cold water for drinking, cooking and making baby formula. *Boiling water does not remove lead from water.*



Regularly clean your faucet's screen (also known as an aerator).



Consider using a water filter certified to remove lead and know when it's time to replace the filter.



Before drinking, flush your pipes by running your tap, taking a shower, doing laundry or a load of dishes.

To find out for certain if you have lead in drinking water, have your water tested.

## Replace Your Lead Service Line



Water systems are required to replace lead service lines if a water system cannot meet EPA's Lead Action Level through optimized corrosion control treatment.

Replacement of the lead service line is often the responsibility of both the utility and homeowner.

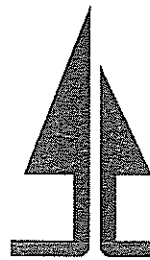
Homeowners can contact their water system to learn about how to remove the lead service line.

## Identify Other Lead Sources In Your Home

Lead in homes can also come from sources other than water. If you live in a home built before 1978, you may want to have your paint tested for lead. Consider contacting your doctor to have your children tested if you are concerned about lead exposure.



For more information, visit: [epa.gov/safewater](http://epa.gov/safewater)



# WHITE WATER ASSOCIATES, INC.

429 River Lane • PO Box 27 Amasa, MI 49903 • Ph (906) 822-7889 • Fax -7977

Client: Houghton-Portage Twp Schools

WWA Job #: 62412

Project: Drinking Water

Sample Matrix: Drinking water

Date Received: 4/14/2016 16:11

Date Reported: 5/2/2016

## Sample Results

Sample No. / ID / Description	Result	Flags	Units	Date	Method	MDL	MQL	Analyst
62412-001 / Elementary Handicap Restroom								
Copper (dw)	1100		ug/L	4/18/2016	200.7	2.0	20	SB
Lead (dw)	1.5		ug/L	4/30/2016	200.8	0.17	1.0	OL

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit

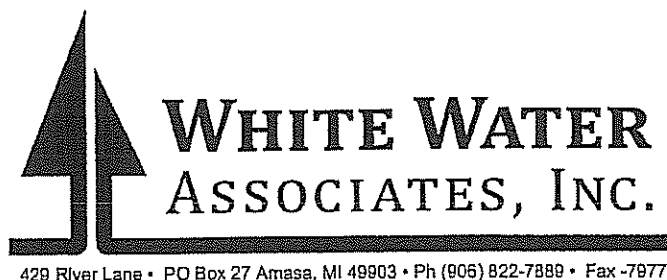
Page 1 of 1

\* Indicates reading exceeds U.S. EPA 90th Percentile Action Level for Arsenic (10 ug/L).

† Indicates reading exceeds U.S. EPA 90th Percentile Action Level for Copper (1300 ug/L).

‡ Indicates reading exceeds U.S. EPA 90th Percentile Action Level for Lead (15 ug/L).

*1 ug/L = 1 ppb*



Client: Houghton-Portage Twp Schools

WWA Job #: 62388

Project: Drinking Water

Sample Matrix: Drinking water

Date Received: 4/14/2016 6:42

Date Reported: 4/25/2016

### Sample Results

Sample No. / ID / Description	Result	Flags	Units	Date	Method	MDL	MQL	Analyst
62388-001 / 1603 Gundlach Rd, Houghton MI 49931 / HS Fountain by room 125								
Copper (dw)	270		ug/L	4/18/2016	200.7	2.0	20	SB
Lead (dw)	ND		ug/L		200.8	0.17	1.0	OL

Pb run by TAL Cert. 9937

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit

Page 1 of 1

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1 ug/L = 1 ppb