

Determination Date: May 24, 2017

From: Village of Potsdam Water Treatment Plant

Subject: Treatment Violation

To: Village Water Users

The Village Water Treatment Plant has exceeded the Maximum Contaminant Level (MCL) Locational Running Annual Average (LRAA) of 80 ug/l (micro grams per liter or parts per billion) by 5 ug/l for Trihalomethanes (THM's) present in the drinking water at the Lowes Store, 61 Country Ln. Although this is not an emergency, EPA and NYSDOH require the Village to advise you that you have a right to know where these contaminants come from, what you should do, and what is being done to lower this level in our drinking water supply.

**Where do THM's come from?**

Trihalomethanes are a group of chemicals that includes chloroform, bromoform, bromodichloromethane and chlorodibromomethane. Trihalomethanes are formed in drinking water during treatment by chlorine, which is the most commonly used disinfectant in New York State. Chlorine reacts with certain acids that are in naturally-occurring organic material (e.g., decomposing vegetation such as tree leaves, algae or other aquatic plants) in surface water sources such as rivers and lakes. The amount of trihalomethanes formed in drinking water during disinfection can change from day to day, depending on the temperature, the amount of organic material in the water, the amount of chlorine added, and a variety of other factors. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses. For this reason, disinfection of drinking water by chlorination is beneficial to public health.

Some studies suggest that people who drank chlorinated drinking water (which contains trihalomethanes) or water containing elevated levels of trihalomethanes for long periods of time may have an increased risk for certain health effects. For example, some studies of people who drank chlorinated drinking water for 20 to 30 years show that long term exposure to disinfection by-products, (including trihalomethanes) is associated with an increased risk of certain types of cancer. A few studies of women who drank water containing trihalomethanes during pregnancy show an association between exposure to elevated levels of trihalomethanes and small increased risks for low birth weights, miscarriages and birth defects. However, in each of the studies, how long and how frequently people actually drank the water, as well as how much trihalomethanes the water contained is not known for certain. Therefore, we do not know for sure if the observed increases in risk for cancer and other health effects are due to trihalomethanes or some other factor. The individual trihalomethanes chloroform, bromodichloromethane and dibromochloromethane cause cancer in laboratory animals exposed to high levels over their lifetimes. Chloroform, bromodichloromethane and dibromochloromethane are also known to cause effects in laboratory animals after high levels of exposure, primarily on the liver, kidney, nervous system and on their ability to bear healthy offspring. Chemicals that cause adverse health effects in laboratory animals after high levels of exposure may pose a risk for adverse health effects in humans exposed to lower levels over long periods of time.

**What happened and what is being done?**

We have been testing for THM's for many years and have consistently tested well below the MCL. In order to kill disease producing microorganisms, the water treatment regulations require a certain contact time for the chlorine and water before it enters the distribution system. The amount of disinfectant we add plus the amount of naturally occurring organic material in the incoming water resulted in level of THM's in the drinking water to exceed the standard by 5 ug/l or ppb. We have no control over the incoming levels of organics in the plant's incoming water. Since the THM's are created by the interaction of organics and disinfectant, the most practical solution is to reduce the amount of disinfectant we add, which will in turn reduce the THM levels. We are currently working with the New York State Department of Health and our staff to monitor and reduce our disinfectant level while at the same time continuing to provide the amount necessary to produce clean and safe water.

**What should I do?**

You do not need to boil your water or take other corrective actions. No immediate action is required or necessary.

If you have any questions, please contact me at 315-265-7033 or 8670, or the New York State Department of Health, Canton District Office at 315-386-1040.

Sincerely,

Corey L. Sheldon, Chief Water/Wastewater Treatment & Hydro Plant Operator  
Village of Potsdam