Notice of High Haloacetic Acid Levels Richfield Springs Water System
May 2022

From the 2nd quarter of 2021 through the 1st quarter of 2022 *(4/1/21 - 3/31/22)* the Village of Richfield Springs water system was found to have an average concentration of haloacetic acids (HAA) that exceed the maximum contaminant level (MCL) of 60 parts per billion (ppb). Compliance with the MCL is based on the average of the four most recent quarterly sample results collected from each sampling location (called the locational running annual average or LRAA). The current HAA LRAA is 60.5 ppb. Water suppliers are required to provide written public notification to consumers when an MCL is exceeded.

What are haloacetic acids? HAAs are formed in drinking water during treatment by chlorine (the most commonly used disinfectant in New York State), which 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 HAAs in drinking water 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.

Disinfection of drinking water by chlorination is beneficial to public health. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses, and chlorine is the most commonly used disinfectant in New York State.

What are the health effects of haloacetic acids? Some studies suggest that people who drank chlorinated drinking water containing disinfection by products (possibly including HAAs) for long periods of time (e.g., 20 to 30 years) have an increased risk for certain health effects. These include an increased risk for cancer. However, how long and how frequently people actually drank the water as well as how much HAAs the water contained is not known for certain. Therefore, the evidence from these studies is not strong enough to conclude that the observed increased risk for cancer is due to HAAs, other disinfection by-products, or some other factor. Studies of laboratory animals show that the individual HAAs, dichloroacetic acid and trichloroacetic acid, can cause cancer following exposure to high levels over their lifetimes. Dichloroacetic acid and trichloroacetic acid are also known to cause other effects in laboratory animals after high levels of exposure, primarily on the liver, kidney, and nervous system and on their ability to bear healthy offspring. The effects reported in studies of laboratory animals occur at exposures much higher than exposures that could result through normal use of the water. The risks for adverse health effects from HAAs in drinking water are small compared to the risk for illness from drinking inadequately disinfected water.

Consumers having questions on any of the above can contact Doug Bordinger at 315-858-1098 or the EPA's Safe Drinking Water Hotline at 800-426-4791.

NOTICE OF HIGH TRIHALOMETHANE LEVELS Richfield Springs Village Water System May 2022

From the 2nd quarter of 2021 through the 1st quarter of 2022 *(4/1/21 - 3/31/22)* the Village of Richfield Springs water system was found to have an average concentration of total trihalomethanes (THM) that exceed the maximum contaminant level (MCL) of 80 parts per billion (ppb). Compliance with the MCL is based on the average of the four most recent quarterly sample results collected from each sampling location (called the locational running annual average or LRAA). The current THM LRAA is 83.7 ppb. Water suppliers are required to provide written public notification to consumers when an MCL is exceeded.

What are trihalomethanes?

Trihalomethanes are a group of chemicals that are formed in drinking water during disinfection when chlorine reacts with 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. They are disinfection byproducts and include the individual chemicals chloroform bromoform bromodichloromethane and chlorodibromomethane. 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.

Disinfection of drinking water by chlorination is beneficial to public health. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses, and chlorine is the most commonly used disinfectant in New York State. All public water systems that use chlorine as a disinfectant contain trihalomethanes to some degree.

What are the health effects of trihalomethanes? Some studies suggest that people who drank water containing trihalomethanes for long periods of time (e.g., 20 to 30 years) have an increased risk of certain health effects. These include an increased risk for cancer and for low birth weights, miscarriages and birth defects. The methods used by these studies could not rule out the role of other factors that could have resulted in the observed increased risks. In addition, other similar studies do not show an increased risk for these health effects. Therefore, the evidence from these studies is not strong enough to conclude that trihalomethanes were a major factor contributing to the observed increased risks for these health effects. Studies of laboratory animals show that some trihalomethanes can cause cancer and adverse reproductive and developmental effects, but at exposures much higher than exposures that could result through normal use of the water. The United States Environmental Protection Agency reviewed the information from the human and animal studies and concluded that while there is no causal link between disinfection byproducts (including trihalomethanes) and human health effects, the balance of the information warranted stronger regulations that limit the amount of trihalomethanes in drinking water, while still allowing for adequate disinfection. The risks for adverse health effects from trihalomethanes in drinking water are small compared to the risks for illness from drinking inadequately disinfected water.

What is being done?

The Village Water Department has been working diligently to lower the THM levels throughout the system for the past several years. We have implemmented the use of sodium permanganate as a pretreatment to the raw water before filtration to aid in the removal of organic material, we have lowered the storage levels and we have installed automatic hydrant flushing devices on "deadend" water mains to help keep the water moving and in turn "fresh". We have also dramatically lowered the chlorine residuals and have been doing maintenance on the filters by adding new media and updating parts for improved filtration.

Consumers having questions on any of the above can contact Doug Bordinger at 315-858-1098 or the EPA's Safe Drinking Water Hotline at 800-426-4791.