Quarterly water samples for haloacetic acids (HAA5) were taken from the Rhinebeck Village Water public water supply on 8/7/2018, 11/13/2018, 2/12/2019, and 5/14/2019. The locational running annual average of 61 parts per billion (ppb) exceeded the state and federal drinking water Maximum Contaminant Level (MCL) of 60 ppb. New York State and Federal drinking water regulations require that when drinking water standards are exceeded, a notice be made to inform all drinking water customers of the MCL exceedance, potential health risks, and measures being taken to correct the problem.

What is an MCL?

An MCL provides guidance on acceptable levels of drinking water constituents and although it provides a strict regulatory limit, it is not a threshold between concentrations that constitute an immediate health hazard and concentrations that do not. Studies of animal exposure to contaminants provide the basis for the understanding of the adverse health effects of the regulated contaminants. The MCL is set at a concentration much lower than those observed to cause adverse health effects in animals. Thus, exceedance of the standard is not a trigger for health effects, but a trigger for water suppliers to take action to reduce HAA5 concentrations and maintain what is already a large margin of protection against health effects. We therefore do not expect adverse health effects to occur from normal use of the water.

What are Haloacetic Acids?

The New York State Department of Health and the United States Environmental Protection Agency (EPA) set drinking water standards and require the disinfection of drinking water. Haloacetic acids are disinfection byproducts formed during treatment of drinking water by chlorine, the most commonly used disinfectant in New York State. 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. The amount of haloacetic acids in drinking water can change from day to day, depending on the temperature, the amount of organic material in the source water, the amount of chlorine added, and a variety of other factors.

The following paragraph summarizes and characterizes the available studies on human populations exposed to haloacetic acids and provides a general summary of the health effects of haloacetic acids in animals, which occur at exposure levels much higher than exposures that could result through normal use of the water.

What are the health effects of Haloacetic Acids?

Some studies suggest that people who drank chlorinated drinking water containing disinfection by-products (including haloacetic acids) for long periods of time (e.g., 20 to 30 years) have an increased risk for cancer. However, how long and how frequently people actually drank the water, and how much haloacetic acids 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 haloacetic acids, other
disinfection by-products, or some other factor. Studies of laboratory animals show that the two haloacetic acids, 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 risks for adverse health effects from haloacetic acids in drinking water are small compared to the risk for illness from drinking inadequately disinfected water.

Steps Being Taken to Correct the Problem.

We are taking immediate action to correct the water quality issue. First, we are taking samples of finished water in the treatment plant as well as additional samples from the distribution system to determine the extent of the water quality issue. Additionally, we will be conducting a flushing program to clear existing water from the system. Furthermore, we will perform a full evaluation of the system to identify operational and treatment issues that may have contributed to the HAA5 exceedance and to determine methods to improve operations/treatment and reduce HAA5 concentrations. A report outlining the findings of the evaluation will be produced and will be made available to the public in September.

Additional Measure People Can Take.

Some people may wish to take an additional practical measure to reduce their exposure. We do not consider this measure necessary to avoid health effects but those who may be especially concerned could use bottled water for drinking and cooking purposes.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For further information please contact:

Bryan Alix - Operator – (845) 876-7331

Dutchess County Department of Behavioral and Community Health (845) 486-3404
Why did I receive a notice regarding water quality? The Village of Rhinebeck regularly tests the water it supplies for a wide range of chemicals. New York State and Federal drinking water regulations require that when drinking water standards are exceeded, a notice be made to inform all drinking water customers of the MCL exceedance, potential health risks, and measures being taking to correct the problem.

Why are there HAAs in my water? Chlorine is critical for ensuring that our drinking water is free from disease causing microorganisms. A small amount of chlorine is used to keep water safe as it travels through the distribution system from the plant to our homes and businesses. Chlorine reacts with naturally occurring organic matter in our water and in the process create two groups of undesirable by-products: haloacetic acids (HAAs) and trihalomethanes (THMs). Our system has not had any prior exceedances of HAAs and has not had any exceedances of THMs.

Is this a water emergency? This is not a water emergency. Normal use of the water should result in no adverse health effects. EPA studies show it takes a lifetime of exposure to disinfection by-product chemicals for any health effect to occur.

How did this exceedance occur? The regulatory level is based on the average of samples collected over the last four quarters of the year at a point in the distribution system where the highest levels are expected to occur. At one sampling location in the Village, one sample was 90 ppb as compared to all previous samples at the sample location having much lower levels. This monitoring location is in an area near the end of the distribution system which can result in higher water age. The other sample location in the distribution system has been below the regulatory standard.

What is the Village doing to correct the situation? The Village is taking immediate action to address this issue. We have already resampled the same location during the following month and found the level of HAAs had dropped substantially from the prior sampling event. In addition, we are modifying our flushing program to clear existing water from the system. We are also conducting an operations evaluation to determine if other operational changes can be made to the system to reduce HAA formation. We will make a report available to the public this September.