

Annual Drinking Water Quality Report for 2017
Rhinebeck Water Treatment Facility
76 Slate Dock Rd.
Rhinebeck, NY 12572

Public Water Supply ID #1302776

INTRODUCTION

To comply with State regulations, Rhinebeck Water Treatment Facility will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards. If you have any questions about this report or concerning your drinking water, please contact Chief Operator, Bryan Alix at 876-7331 or your Water Clerk, Karen McLaughlin at 876-7015. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings held on the second Tuesday of the month at 7:30pm, Rhinebeck Village Hall, 76 East Market St., Rhinebeck, NY.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is the Hudson River and located off Slate Dock Road in the Hamlet of Rhinecliff, just south of the Kingston- Rhinecliff Bridge. During 2017, our system did not experience any restriction of our water source. The facility was completed in 1968 and is certified by the State of New York to produce 1.5 million gallons of potable water per day. The system utilizes 25 miles of pipeline and a 2 million-gallon water storage facility located off Violet Hill on Hilee Road, Rhinebeck. The plant utilizes direct filtration and conventional filtration utilizing rapid mix, coagulation, flocculation, sedimentation, filtration, and disinfection by the monitored use of chlorine. Orthophosphate is also added to reduce corrosion of customers' lead fixtures. Potassium permanganate is used as a pretreatment for the control of Zebra Mussels during the warm water months.

A source water assessment conducted by the Water Department in 2005 reveals the Hudson River, as our raw water source, is open to the public. It is susceptible to contamination due to traffic from both pleasure and commercial vessels on the river. The U.S. Coast Guard and local law enforcement perform patrols. This is the extent of our source water assessment and no other information is available.

FACTS AND FIGURES:

Our water system serves 5600 people through 1762 accounts. The total water produced in 2017 was 160 million gallons. The daily average of water treated and pumped into the distribution system is 438,000 gallons per day. Our highest single day was August 27th, 2017 at 633,000 gallons. The amount of water delivered to customers was 119 million gallons. Total water not billed but accounted for was 6 million gallons. This leaves an unaccounted total of 35 million gallons. In 2017, water customers were charged \$6.00 per 1,000 gallons of water. The annual average water charge per user is \$443.00.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER? As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, total haloacetic acids, synthetic organic compounds, asbestos, and radiologicals. The information presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled water, might be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Dutchess County Health Department, 85 Civic Center Plaza, Suite 106 Poughkeepsie, NY 12601-3316 at 845-486-3404.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of sample	Level Detected (Avg./Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely source of contamination
Arsenic	No	2/14/17	1.2	ug/L	n/a	10	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Sulfate	No	2/14/17	13.7	mg/L	N/A	250	Naturally occurring.
Chloride	No	2/14/17	44.4	mg/L	N/A	250	Naturally occurring or indicative of road salt contamination.
Sodium	No	2/14/17	6.6	mg/L	N/A	(see Health Effects) Footnote (1)	Naturally occurring; Road salt; Water softeners; Animal waste.
Nitrate (as Nitrogen)	No	2/14/17	0.651	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	No	2/14/17	0.13	mg/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Total Haloacetic acids Spring Brook Ave	No	Quarterly	49.53 (23-62.7) LRAA Footnote (2)	ug/L	n/a	60	By-product of drinking water disinfection needed to kill harmful organisms.
Total Haloacetic acids Baptist Home	No	Quarterly	39.35 (3.7 - 68) LRAA Footnote (2)	ug/L	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms.
Total Trihalomethanes Spring Brook Ave	No	Quarterly	47.5 (27.5 -76.5) LRAA Footnote (2)	ug/L	N/A	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Total Trihalomethanes Baptist Home	No	Quarterly	64.63 (51.3 - 91.2) LRAA Footnote (2)	ug/L	N/A	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Chlorine Residual	No	Continuous	1.2	mg/L	N/A	4.0	Water additive used to control microbes.
Copper	No	9/11/17 Thru 9/13/17	0.12 (ND-0.19)	mg/L	1.3	AL=1.3 Footnote (3)	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

Iron	No	2/14/17	82	ug/L	N/A	300	Naturally occurring.
Manganese	No	2/14/17	3	ug/L	N/A	300	Naturally occurring; Indicative of landfill contamination.

- (1) Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
- (2) LRAA (Locational Running Annual average) An average of samples collected quarterly at a single location and averaged over an annual period. Concentrations reflect the LRAA as of December 31, 2017.
- (3) The level presented represents the 90th percentile of 20 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 20 samples were collected at your water system and the 90th percentile value was 0.06 mg/L. The action level for copper was not exceeded at any of the sites tested.

DEFINITIONS:

- Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
- Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.
- Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- Milligrams per liter (mg/l):** Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
- Micrograms per liter (ug/l):** Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).
- Picocuries per liter (pCi/L):** A measure of the radioactivity in water.
- Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the state.

WE ARE REQUIRED TO PRESENT THE FOLLOWING INFORMATION ON LEAD IN DRINKING WATER.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The Village of Rhinebeck Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2017, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

DREDGING OF THE RIVER

Dredging of the northern reach of the river began in the spring of 2009. The New York State Health Department monitored for any irregularities during the dredging. Information concerning the dredging can be found at "www.hudsonredgingdata.com".

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Repair it and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Repair it and you could save more than 30,000 gallons per year.
- ◆ Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then make note of the meter reading. Go back and check the meter after 15 minutes. If the reading has changed, you have detected a leak somewhere in your home.

SYSTEM IMPROVEMENTS

- In 2004 system improvements consisted of 3 new raw water pumps and new filter bottoms and filter media.
- In 2007 new mixers were installed in the flocculation basins.
- In 2008 2 backwash pumps were replaced and 1 finished water pump was replaced.
- In 2013 12 old fire hydrants were replaced and 12 valves were replaced in the distribution system.
- In 2014 7 old or damaged fire hydrants were replaced.
- In 2015 4 old or damaged fire hydrants were replaced.
- In 2016 2 old or damaged fire hydrants were replaced.
- In 2017 2 old or damaged fire hydrants were replaced

CLOSING

Thank you for allowing us to continue to provide you and your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. Please report any suspicious activity around the treatment plant or storage tank to local police by calling 911 or by calling the Village Office at 845-876-7015.

Gary Bassett, Village Mayor

Bryan Alix, Chief Operator