

**Annual Drinking Water Quality Report for 2010**  
**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 has never violated a maximum contaminant level or any other water quality statement. 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, Tom Wallbank at 876-7331 or your Water Clerk, Pat Coon 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 2010, 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.

**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.hudsondredgingdata.com".

**FACTS AND FIGURES:**

Our water system serves 4300 people through 1625 accounts. The total water produced in 2010 was 172 million gallons. The daily average of water treated and pumped into the distribution system is 471,000 gallons per day. Our highest single day was November 8, 2010 at 682,000 gallons. The amount of water delivered to customers was 135 million gallons. This leaves a non-billed total of 37 million gallons. Backwashing filters, flushing mains, fighting fires, community services, and leakage, accounts for the remaining 37 million gallons. In 2010, water customers were charged \$6.00 per 1,000 gallons of water. The annual average water charge per user is \$498.46.

**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, and synthetic organic compounds. 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 dates, 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 John Glass, Public Health Officer, Dutchess County Health Department, 387 Main Mall, Poughkeepsie, NY 12601-3316 at 845-486-3404.

**MICROBIOLOGICAL CONTAMINANTS:** 5 samples per month. Total Coliform- Naturally present in the environment, MCL- presence of coliform bacteria in 5% of monthly samples. Fecal Coliform and E. Coli – present in human and animal waste. There were no positive samples in year 2010.

**TURBIDITY-** is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. State regulations require that distribution system turbidity must always be below 5.0 NTU. In 2010, 260 distribution system turbidity samples were collected. The highest reading was 0.51 NTU. The regulations require that 95% of composite filter turbidity samples collected have measurements below 0.30 NTU. In 2010, 2188 composite filter samples were taken in addition to constant monitoring. Finished water average was .05 NTU. Our highest single finished water turbidity measurement for the year occurred on Jan. 21, 2010 (.35 NTU). Pre-treated samples average was 33.39 NTU.

**ASBESTOS-** The MCL for asbestos is 7.0 MFL. Results on sample collected 5/15/02 were <0.2 MFL

**INORGANIC CONTAMINANTS NOT DETECTED IN TREATED WATER SUPPLY IN 2010**

Arsenic, Cadmium, Chromium, Mercury, Selenium, Fluoride, Antimony, Beryllium, Thallium, Silver.

**SYNTHETIC ORGANIC CHEMICALS NOT DETECTED IN TREATED WATER SUPPLY IN 2010**

Alachlor, Aldrin, Atrazine, Chlordane Total, Dieldrin, Endrin, Heptachlor, Heptachlor epoxide, Lindane, Methoxychlor, Metolachlor, Metribuzin, Simazine, Toxaphene, Aldicarb, Aldicarb sulfone, Aldicarb sulfoxide, Carbaryl, Carbofuran, 3-Hydroxy Carbofuran, Methomyl, Oxamyl, 1,2 Dibromoethane, 1,2 Dibromo-3-chloropropane, 2,4-D, Dalapon, Dicamba, Dinoseb, Pentachlorophenol, Pichloram, 2,4,5-TP, Benzo (a) pyrene, Butachlor, Di (2-ethylexyl) adipate, DI (2-ethylexyl) pthalate, Glyphosate, Hexachlorobenzene, Hexachlorochylopentadiene, PCB, total (as docosolobiphenyl), Aroclor 1016, Aroclor 1211, Aroclor 1232, Aroclor 242, Aroclor 1248, Aroclor 1254, Aroclor 1260, Propachlor.

**STATEWIDE WAIVER:** 2,3,7,8- Tetrachlorodibenzo-p-dioxin, Diquat, Endothall

**PRINCIPAL ORGANIC CHEMICALS NOT DETECTED IN TREATED WATER IN 2010**

Benzene, Bromobenzene, Bromochloromethane, Bromomethane, N-Butylbenzene, Sec-Butylbenzene, Tert-Butylbenzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloromethane, 2-Chlortoluene, 4-Chlortoluene, Dibromomethane, 1,2-Dibromomethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, Cis-1, 2-Dichloroethane, Trans-1, 2-Dichloroethene, 1,2 Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, 1,3-Dichloropropene (total), Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, P-Isopropyltoluene, Methylene Chloride, N-Propylbenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl Chloride, M-Xylene, O-Xylene, P-Xylene, Methyl Tertiary-Butyl Ether (MtBE)

**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).

**Nanograms per liter (ng/l):** Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

**Picograms per liter (pg/l):** Corresponds to one part of liquid to one quadrillion parts of liquid (parts per quadrillion - ppq).

**Picocuries per liter (pCi/L):** A measure of the radioactivity in water.

**Millirems per year (mrem/yr):** A measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL):** A measure of the presence of asbestos fibers that are longer than 10 micrometers.

**90<sup>th</sup> Percentile Value:** The values reported in lead and copper represent the 90<sup>th</sup> percentile. A percentile is a value of a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90<sup>th</sup> percentile is equal to or greater than 90% of the lead and copper values detected at your water system.

**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
Radium 228	No	5/10/05 8/15/05	1.19 .84	pCi/L	N/A	5(combined radium 226&228)	Naturally occurring
Sulfate	No	2/9/10	20	mg/L	N/A	250	Naturally occurring
Chloride	No	2/9/10	29	mg/L	N/A	250	Naturally occurring or indicative of road salt.
Sodium	No	2/9/10	15.8	mg/L	Footnote (1)	N/A	Naturally occurring, road salt, water softeners, animal waste
Nitrate (as Nitrogen)	No	2/9/10	.4	mg/L	10	10	Runoff from fertilizer use, leaching from septic tanks, sewage, and erosion of natural deposits.
Nickel	No	2/9/10	.0007	mg/L	N/A	0.1	Naturally occurring.
Total Haloacetic acids	No	Quarterly	30.3 RAA (2)	ug/L	Footnote (2)	60	Disinfection by-product
Total Trihalomethanes	No	Quarterly	37.0 RAA (2)	ug/L	Footnote (2)	80	Disinfection by-product
Chlorine Residual	No	Continuous	1.2	mg/L	N/A	4.0	Added as disinfectant
Zinc	No	2/9/10	.02	mg/L	N/A	5.0	Naturally occurring
Iron	No	2/9/10	.08	mg/L	N/A	.3	Naturally occurring
Manganese	No	2/9/10	.02	mg/L	N/A	0.3	Naturally occurring
Barium	No	2/9/10	.0161	mg/L	N/A	2.0	Naturally occurring
Odor	No	2/9/10	Chlorine/2	units	N/A	3	Naturally occurring/ Chlorine added

- (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) RAA (Running Annual Average) An average of all samples collected quarterly and averaged over an annual period. Concentrations listed reflect the RAA as of Dec. 31, 2010.

**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 New York State requirements.

**LEAD**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home 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>. \*\* During the summer of 2008, 20 random samples were collected from the residents of the Village of Rhinebeck, lead concentration ranged from a low of non- detectable in 19 of 20 samples to a high of 47 ug/l in 1 sample and a 90<sup>th</sup> percentile of 1 ug/l. The action level for lead is 15 ug/L. One of the 20 samples collected exceeded the action level for lead. Copper results ranged from a low of .02 mg/L to a high of .26 mg/L with a 90<sup>th</sup> percentile of .15 mg/L. The action level for copper is >1.3 mg/l.

**IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2010, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

**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) or by contacting John Glass, Public Health Officer, Dutchess County Dept. of Health, 387 Main Mall, Poughkeepsie, NY 12601-3316 at 485-3404.

**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.

**CLOSING**

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.

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.

Wayne Riffenburg, Water Commissioner

Thomas Wallbank, Chief Operator