Poughkeepsies' Water Treatment Facility (PWS# 1302774) and the City of Poughkeepsie's (PWS# 1330291) Annual Drinking Water Quality Report for 2009

The Poughkeepsies' Water Treatment Facility, which is owned and operated by the City and Town of Poughkeepsie, provides drinking water to 75,000 individuals within the City of Poughkeepsie, Town of Poughkeepsie, the Dutchess County Water Authority, and the Village of Wappingers Falls. To comply with State regulations, we 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. 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 and Federal standards. Last year, we analyzed our Plant Effluent Water for over 160 organic and inorganic contaminates, in which 4 were detected and no MCL (Maximum Contaminate Level) violation resulted. For each contaminate detected the concentration and source in drinking water can be found in table #1. For a complete list of organic and inorganic contaminates tested throughout the 2009 year please visit our web site. All tests verified your tap water met all State drinking water health standards. We are pleased to present this annual report. A complete listing of our test results can be obtained by contacting Chief Water Plant Operator Matthew Geho at (845) 451-4173 x2012. A copy of this annual report is also available on our web site at www.pokwater.com or can be obtained by contacting us at (845) 451-4173 X2003.

We want you to be informed about your drinking water. If you have any questions about this report or the source of your drinking water, please contact Matthew Geho, Chief Water Plant Operator, Poughkeepsies' Water Treatment Facility at 451-4173 x2012 or Lee Felshin, Senior Engineer, Dutchess County Department of Health, 387 Main St., Poughkeepsie 12601-3316, telephone 486-3404. If you have questions concerning the City of Poughkeepsie distribution system please contact Jesse Purcell, Water Distribution Operator/Engineer at 451-4074. For additional information you may want to visit EPA's drinking water web site (*www.epa.gov/safewater/*) and the New York State Department of Health's web site (*www.health.state.ny.us)*. If you want to learn more, please attend any of our regularly scheduled Joint Water Board meetings. The meetings are held the first Tuesday of every month at the Water Treatment Facility.

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 and require monitoring for the contaminants. 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. 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 Department of Health at 486-3404.

Our water source is the Hudson River, which originates from the north in the Adirondacks at Lake Tear of the Clouds, located on the southwest shoulder of Mount Marcy; New York State's highest peak. The Hudson River Water shed is very expansive, covering nearly 12,500 square miles, of which the majority is within New York State; however small portions are located in Vermont, Massachusetts, Connecticut and New Jersey. Raw water is taken from the Hudson River adjacent to our treatment plant, approximately 1,000 feet from shore at a depth of 48 feet below the mean river elevation. Water quality tests have shown the river to be of very high quality. During 2009, our system did not experience any restriction of our water source.

Facts and Figures

The Poughkeepsies' Water Treatment Facility was constructed in 1962 and is currently rated at a maximum production capacity of 19.3 million gallons per day (MGD). The plant is located along the Hudson River within the Marist College Campus on Route 9.

In 2009, the treatment facility produced 3,531,488,000 gallons, approximately 9.68 MGD. Our 2009 maximum daily production was 11.82 MGD while our minimum day was 5.12 MGD. Total billed water for the Joint Treatment Plant in 2009 averaged 9.68 MGD: 1,814,068,236 gallons to City, 1,717,419,764 gallons billed to the Town of Poughkeepsie. The City total includes 709,033,484 gallons that the City sold to Third Party Users. In 2009 City resident water customers were charged $2.42 per 100 ft^3 (748 gallons). This equates to 3 gallons of water for less than one penny!

The City Distribution System reports unaccounted for water losses as 9.2% of total production. * This figure does not include fire fighting, meter age error, water used for street and sewer cleaning.

Water Treatment

The Poughkeepsies' Water Treatment Facility utilizes conventional, state of the art, filtration process to treat the water supply. This process includes chemical application of polyaluminum chloride to stabilize the small particles in the raw water supply. Once stabilized the particles are combined with an organic polymer and previously settled solids then slowly mixed to form larger particles that are then removed through settling. Following the settling process the water is aerated to improve taste then filtered through a coal and sand media that polishes the final product. Disinfection, the process used to kill disease-producing organisms, is accomplished through application of ultraviolet light followed by a carefully monitored Chloramination process.

Post treatment includes the addition of orthophosphate and sodium hydroxide. Orthophosphate is added at 2.0 mg/L to reduce corrosion of customer lead piping and fixtures. Sodium hydroxide is added when necessary to increase treated water to a pH of 7.7 in effort to minimize corrosion of pipes within the distribution system and customers plumbing. Sodium hypochlorite and aqua ammonia are added at a 4:1 (weight to weight) ratio to form monochloramine for our distribution system disinfectant. In 2009, our plant effluent total chlorine residual ranged from 1.92-4.4 mg/l with and average of 2.51 mg/l.

Are There Contaminants in our Drinking Water?

To insure maximum water quality for our customers, the Poughkeepsies' Water Treatment Facility staff monitors source, treated and distribution water daily. In addition, to continuous plant effluent monitoring for turbidity, chlorine residuals, and pH approximately 19,000 water quality tests were conducted on over 1800 samples collected in 2009. Samples tested were collected from the Source, Treatment Plant Effluent, Distribution System, and Customer's taps. These tests include the following potential contaminants: total coliform (~1200 tests), turbidity (1700 samples), inorganic compounds (metals), nitrate, nitrite, lead and copper, volatile organic compounds (source water and plant effluent), total trihalomethanes (50 samples), and synthetic organic compounds (source water and plant effluent). Results of regulated contaminants found in our treated water supply, within the City distribution system and at City customer taps are presented in the enclosed Table.

It should be noted that all drinking water, including bottled drinking water, may 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.

Fluoride

Since February 2008, fluoride has not been added to the finished water.

UCMR2- Unregulated contaminate monitoring rule

Poughkeepsies' Water Treatment Facility completed 2 rounds of sampling in 2009, in order to satisfy the federal requirement to "collect occurrence data on compounds suspected to be present but have no set health based standards". Three categories were defined insecticides, flame retardants, and explosives. For a complete list of parameters measured and results please visit our web site.

SUMMARY OF REGULATED CONTAMINANTS DETECTED IN POUGHKEEPSIES' WATER TREATMENT FACILITIES PLANT EFFLUENT (PWS # 1302774) & CITY OF POUGHKEEPSIE DISTRIBUTION SYSTEM (PWS # 1330291)

Poughkeepsies' Water Treatment Facility
PWS # 1302774
3431 North Road
Poughkeepsie, NY 12601
Licensed Operator: Paul Lill

City of Poughkeepsie's Distribution System
PWS# 1330291
PO Box # 300
Poughkeepsie, NY 12602
Licensed Operator: Nelson Wallace

Microbiological Contaminants

CONTAMINANT	NYSDOH MCL	USEPA MCLG	VIOLATION YES/NO	# OF SAMPLES	RANGE	AVERAGE	SOURCE IN DRINKING WATER
Total Coliform Bacteria							
PWTF PLANT EFFLUENT	5%[1]	0%	NO	185	n/a	n/a	Naturally Present in the Environment
CITY of POUGHKEEPSIE	5%[1]	0%	NO	618	n/a	n/a	
TURBIDITY NTU							
PWTF PLANT EFFLUENT	95% OF SAMPLES < 0.3NTU[2]	95% OF SAMPLES < 0.3NTU[2]	NO	Continuous	0.02-0.30 ntu	0.04 ntu	SOIL RUNOFF, FLUSHING HYDRANTS
CITY of POUGHKEEPSIE	Monthly Average >/= 5.0 NTU[3]	n/a	NO	947	0.05-39.9 ntu	0.64 ntu	

Inorganic Contaminants mg/l (Unless otherwise noted)

BARIUM							
PWTF PLANT EFFLUENT	2	2	NO	1	0.0208	n/a	Erosion of Natural Deposits
CITY of POUGHKEEPSIE	2	2	n/a	0	n/a	n/a	
COPPER							
PWTF PLANT EFFLUENT	Action Limit=1.3[4]	0	n/a	n/m	n/a	n/a	Erosion of Natural Materials and Corrosion of house hold plumbing
CITY of POUGHKEEPSIE		0	NO	120	0.005-0.728	0.028	
CHLORINE							
PWTF PLANT EFFLUENT	4	n/a	NO	Continuous Monitoring	1.92-4.4	2.51	Disinfectant Additive
CITY of POUGHKEEPSIE	4	n/a	NO	950	0.03-3.7	1.90	
LEAD							
City Round 1	90th Percentile Action Limit=0.015[4]	0	NO	60	<0.001– 0.04	0.008 [5]	Erosion of Natural Materials and Corrosion of house hold plumbing

NITRATE [8]							Runoff from fertilizer; Leaching from septic tanks; Sewage; Erosion of Natural Materials
PWTF PLANT EFFLUENT	10	10	NO	117	0.24-0.63	0.38	
CITY of POUGHKEEPSIE	10	10	NO	570	0.24-0.64	0.38	
NITRITE [8]							
PWTF PLANT EFFLUENT	1	1	NO	118	n/a	<0.010	
CITY of POUGHKEEPSIE	1	1	NO	574	<0.010-0.64	0.05	

Volatile Organic Contaminants[6] ug/l

CONTAMINANT	NYSDOH MCL	USEPA MCLG	VIOLATION YES/NO	# OF SAMPLES	RANGE	AVERAGE	SOURCE IN DRINKING WATER
Disinfection By-Products[7]							
Haloacetic Acids HAA5 (mon-di, & tri chloroacetic acid, and mono, & di bromoacetic acid)							
PWTF PLANT EFFLUENT	60	n/a	n/a	n/a	n/a	n/a	Naturally Occurring
CITY of POUGHKEEPSIE	60	n/a	NO	20	8.3-26.6	17.3	
Trihalomethane THM (chloroform, bromodichloromethane, dibromochloromethane,& bromoform)							
PWTF PLANT EFFLUENT	80	n/a	NO	1	1.4-21.2	10.0	Naturally Occurring
CITY of POUGHKEEPSIE	80	n/a	NO	20	24.7-50.7	38.9	

FOOTNOTES:

1. A violation occurs when more then 5% of the total number of samples collected are Total Coliform positive.

2. Turbidity is a measure of the cloudiness of the water. It is used as an indicator for overall water treatment. State and Federal regulations require that turbidity must always be less then 1.0ntu leaving the treatment plant.

3. A violation occurs when the monthly average of the results of all distribution samples collected in any calendar month exceeds 5.0 NTU round off to the nearest whole number

4. A violation occurs when the 90 percentile calculated on all samples collected for each sampling event exceeds the Action Limit of 0.015mg/l for lead and 1.3 mg/l for copper.

5. This value is not the average lead concentration for the City of Poughkeepsie, rather the 90% value.

6. Annually we test for over 120 compounds in both our source and finished water. For a complete list of Synthetic and Volatile Organic Compounds tested for please visit our web site at www.pokwater.com

7. Range for disinfection byproducts is based on the average of 4 samples collected quarterly. The average is calculated from the running annual average (RAA) which is the average of the last 4 quarters sampled.

8. As of 6-25-2010 this report was modified. Nitrate & Nitrate headings in the data table were switched to reflect 2009 water quality. Printed reports have Nitrate MCL and 2009 data labeled as Nitrite and Nitrite MCL and 2009 data labeled as Nitrate.

TABLE DEFINITIONS:

MAXIMUM CONTAMINATE LEVEL (MCL): The highest level of a contaminate that is allowed in the drinking water.
MAXIMUM CONTAMINATE LEVEL GOAL (MCLG): The level of a contaminate in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

NEPHELOMETRIC TURBIDITY UNIT (NTU): A measure of the clarity of the water. Turbidity in excess of 5.0 NTU is just noticeable to the average person.

MILLIGRAM PER LITER (mg/l): Corresponds to one part of a liquid in one million parts of another liquid (parts per million=ppm)

MICROGRAMS PER LITER (ug/l): Corresponds to one liquid part in one billion parts of another liquid (parts per billion= ppb).

Salt Front

Our water is taken from the Hudson River Estuary, which is subject to increased chloride and sodium levels during low rainfall periods. In 2009, we did not experience a salt front episode (defined by USGS as Chloride levels exceeding 100mg/l) at our facility, in which we were required to adjust pumping, treatment, or issue public notification for elevated sodium levels. We are not required to monitor sodium on regular bases; rather we use conductivity and chloride as a surrogate. Last year the average plant effluent chloride was 35.5mg/l (range 24.5-49.5) which did not trigger additional sodium monitoring.

During normal water years the sodium level varies from 15 – 25 mg/L with higher levels occurring during periods of low rainfall. **Customers that are on a salt restricted diet should consult with their physician concerning salt in their drinking water.** Information concerning sodium levels in your water can be obtained at any time by contacting our Chief Operator, Matthew Geho at 451-4173 x 2012.

Lead in Your Drinking Water

The Joint Treatment Facility adds phosphoric acid at 2.0 mg/L to the treated water in order to protect lead plumbing in customer's homes. This program has resulted in reducing lead levels significantly in most homes

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. City of Poughkeepsie Distribution System 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.

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 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. Fix it up 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. Fix it and you save more than 30,000 gallons a year.

- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

Thank you for allowing us to continue to provide 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 and our way of life.