

ANNUAL WATER QUALITY REPORT FOR CALENDAR YEAR 2006
POUGHKEEPSIE TOWNWIDE WATER DISTRICT
1 Overocker Road
Poughkeepsie, New York
Federal Public Water Supply ID #NY1302812

Introduction:

To comply with State regulations, the Poughkeepsie Townwide Water District annually issues 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 standards.

Sampling and analyses are carried out routinely as directed by the Dutchess County Health Department and the New York State Department of Health and currently meet the drinking water standards.

If you have any questions about this report or concerning your drinking water, please contact George Cacchio, Department Manager, at Camo Pollution Control, (845) 462-6535 or (845) 463-7310, or the Dutchess County Health Department at (845) 486-3404. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled meetings. Town of Poughkeepsie Board and Committee of the Whole meetings are scheduled on Wednesdays at 7:00 pm in the Town Hall at One Overocker Road in Poughkeepsie; please phone the Water Department to confirm meetings at (845) 462-6535. You may also visit the Joint Town/City Water Treatment Facility web site at <http://www.pokwater.com>. Learn more about the water treatment plant by attending any of the regularly scheduled Joint Water Board meetings held the first Tuesday of every month in the conference room at the Joint Water Plant (behind Marist College); for further information about the City/Town Water Treatment Facility, telephone the Joint Water Board Administrator's office at (845) 451-4173, ext. 16.

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, in some cases, radioactive material, 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.

The New York State Department of Health has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. **The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become, contaminated.** See section "*Are there contaminants in our drinking water?*" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The source water assessment has rated our water source as having an elevated susceptibility to microbials, nitrates, industrial solvents and other industrial contaminants. These ratings are due primarily to the close proximity of the wells to permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government), an inactive hazardous waste site and the associated industrial activities, as well as the residential land use and related

activities in the assessment area. In addition, the wells draw from fractured bedrock and the overlying soils may not provide adequate protection from potential contamination.

The primary source of water for the Poughkeepsie Townwide Water District is treated surface water (Hudson River) which is purchased from the jointly owned Town and City of Poughkeepsie Water Treatment Facility. This purchased source is supplemented from time to time by the three (3) Town wells located on Overlook Road in the Town of Poughkeepsie. The water drawn from the Town's wells is disinfected with chlorine to kill microorganisms prior to distribution. The use of these wells can be defined as "minimal". An extensive engineering study of these wells performed in 1991 determined that surface water does not influence the quality of the Town's well water, and therefore filtration of the well source is not necessary.

The county and state health departments will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning and education programs. A copy of the assessment can be obtained by contacting us, as noted below:

Town of Poughkeepsie Water Department
c/o Town Offices
One Overocker Road
Poughkeepsie, NY 12603 phone: 845-462-6535

Facts and Figures

The Poughkeepsie Townwide Water District serves a population of approximately 43,550 through 10,464 service connections. An average volume of approximately 5.730 million gallons per day (MGD) or 2,095.5 million gallons per year (MGY) was withdrawn from the sources to serve the Poughkeepsie Townwide Water District and approximately 4.1588 MGD (1,516.3 MGY) were delivered to its customers. The difference is approximately 1.5869 MGD (579.227 MGY), accounted for as follows: 0.625 MGD from 25 water main breaks, 0.0369 MGD from 2 service line breaks, 0.650 MGD from aggressive hydrant flushing in preparation of chloramine introduction, and 0.275 MGD from line flushing, fire fighting and meter inaccuracies. The Town of Poughkeepsie employs an on-going leak detection program to locate any system leaks in a timely manner.

Water Cost

The Town of Poughkeepsie bills its users based on quarterly water meter readings at the rate of \$1.50 per 100 cubic feet of water, with \$7.00 being the minimum rate for 0-400 cubic feet of water consumed.

Water Source Restriction

In 2006, the Frank Brothers Wells were used monthly, on a minimal basis, to insure that they are in a ready state.

Capital Improvements

The Fairview Pumping Station was upgraded in 2006 to provide for an increase in the amount of water that can be delivered to the system. This has enabled the Joint Water Board to provide water to the Dutchess County Water and Wastewater Authority for its Central Dutchess County Transmission Line. The increased consumption by this "third party" user should enable the Water Treatment Facility to maintain a cost-effective rate to those being supplied.

System Enhancements

In October of 2006, Poughkeepsie's Water Treatment Facility changed from the use of Free Chlorine as the distribution system disinfectant to the use of *Chloramine*. Chloramine is a combination of chlorine and ammonia that is regarded as a more reliable disinfectant in water distribution systems than chlorine alone because it lasts longer. Chloramines also produce lower levels of disinfection by-products compared to chlorine. This change will improve our drinking water quality and allow us to meet more stringent state

and federal regulations for public drinking water. As a result of this change, we now test for Total Chlorine residual instead of Free Chlorine residual in the distribution system.

Water containing chloramine is completely safe to use for drinking, bathing, watering plants and gardens, and other household uses. However, some water users who currently remove chlorine from their water for other uses will also have to remove chloramines. These water users include kidney dialysis centers and home dialysis patients, owners of aquariums, and businesses that use chlorine-free water in their treatment processes. Additional information about the conversion to chloramine disinfection is available at www.pokwater.com, public libraries, and municipal halls.

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 Bacteria, Turbidity, Orthophosphate, Inorganics, Nitrate, Lead and Copper, Volatile Organic Compounds, Chlorine Residual, Total Trihalomethanes, Haloacetic Acids, Synthetic Organic Compounds, Microscopic Particulate Analysis (including Giardia and Cryptosporidium), and Asbestos. The table 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.

The test data presented in this report cover solely the Poughkeepsie Townwide Water District distribution system and data from the Town’s wells, and does not reflect data from the Town/City Water Treatment Facility. Information about the water supplied by the Town/City Water Treatment Facility may be found in the Annual Water Quality Report published by the Joint Town/City Water Board.

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. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline at 800-426-4791, or the Dutchess County Health Department at 845-486-3404.

Table of Detected Contaminants, Poughkeepsie Townwide Water District, 2006							
Wells							
Contaminant	Violation Yes/No	Sample Date(s)	Level Detected	Unit of Measurement	MCLG	Regulatory Limit	Likely Source of Contamination
Radioactive Contaminants							
Gross alpha activity (including radium 226 but excluding radon and uranium)	No	3/05	Highest level=2.4 Range= ND-2.4	pCi/L	0	MCL = 15 ⁹	Erosion of natural deposits
Beta particle and photon activity from manmade radionuclides	No	3/05	Highest level=2.5 Range= 0.4-2.5	pCi/L	0	MCL = 50 ¹⁰	Decay of natural deposits and man-made emissions.
Combined radium 226 and 228	No	3/05	Highest level=1.3 Range = 0.91-1.3	pCi/L	0	MCL = 5	Erosion of natural deposits
Uranium	No	3/05	Highest level=2.53 Range= 1.49 – 2.53	ug/L ¹¹	0	30	Erosion of natural deposits
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Contaminant	Violation Yes/No	Sample Date(s)	Level Detected	Unit of Measurement	MCLG	Regulatory Limit	Likely Source of Contamination
Inorganic Contaminants							
Barium	No	9/06	Highest level = 0.040 Range = 0.024 -- 0.040	mg/L	2	MCL = 2	Discharge of drilling wastes; erosion of natural deposits
Calcium	No	9/06	Highest level = 87.5 Range = 76.6 – 87.5	mg/L	N/A	N/A	Naturally occurring
Chloride	No	9/06	Highest level = 140 Range = 90 – 140	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination.
Iron	No	9/06	Highest level = 22 Range = ND - 22	ug/L	N/A	MCL = 300	Naturally occurring
Magnesium	No	9/06	Highest level = 21.3 Range = 19.2 – 21.3	mg/L	N/A	N/A	Naturally occurring
Manganese	No	11/02	Average = 2.5 Range = ND-3	ug/L	N/A	MCL = 300	Naturally occurring
Nitrate	No	9/06	Highest level = 2.54 Range = 1.79 – 2.54	mg/L	10	MCL = 10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	No	3/06, 9/06	Highest level = 83.8 Range = 48.4 – 83.8	mg/L	N/A	(see health effects ⁵)	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate	No	9/06	Highest level = 31 Range = 26 – 31	mg/L	N/A	MCL = 250	Naturally occurring
Zinc (Well 2)	No	7/04	0.025	mg/L	N/A	MCL = 5	Naturally occurring.
Contaminants Listed in Table 16 of Part 5 of the New York State Sanitary Code							
Methyl Tertiary Butyl Ether (MTBE) (Well 1)	No	5/03	1.2	ug/L	N/A	MCL = 10	Releases from gasoline storage tanks. Atmospheric deposition.
(Well 3)	No	8/03	0.5				
Table of Detected Contaminants, Poughkeepsie Townwide Water District, 2006 Water Distribution System							
Microbiological Contaminants							
Total Coliform Bacteria	No	7/06	One positive sample	CFU/100 mL	0	Any positive sample ¹	Naturally present in the environment.
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Contaminant	Violation Yes/No	Sample Date(s)	Level Detected	Unit of Measurement	MCLG	Regulatory Limit	Likely Source of Contamination
Inorganic Contaminants							
Color	No	3 per week ⁸	Average = 2.78 Range = ND – 10	PtCo	N/A	MCL = 15	Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant byproducts such as trihalomethanes, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants, and soil organic matter..
Copper	No	6/04 and 9/04	0.046 ³ Range = ND – 0.072	mg/L	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits.
Fluoride	No	2/05 and 11/05	Highest level = 0.86 Range = 0.71-0.86	mg/L	N/A	MCL = 2.2	Water additive that promotes strong teeth
Lead	No	6/04 and 9/04	3 ⁴ Range = ND – 10	ug/L	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate	No	12/06	0.48	mg/L	10	MCL = 10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Orthophosphate (reported as Phosphorus)	N/A	3 per week	Average = 0.67 Range = 0.52 – 0.95	mg/L	N/A	N/A	Orthophosphate is added at the City/Town Water Treatment Facility to inhibit corrosion of lead piping in the distribution system.
Turbidity	No	5 per week	Average = 0.12 Range = ND – 2.1	NTU	N/A	MCL = 5.0 ²	Soil runoff
Disinfection Byproducts							
Free Chlorine Residual	No	50 per month through 10/23/06	Average = 0.9 Range = 0.1 – 1.5	mg/L	N/A	MCL = 4 ⁶	By-product of drinking water chlorination.
Total Chlorine Residual	No	50 per month from 10/24/06	Average = 2.8 Range = 1.0 – 5.0	mg/L	N/A	MCL = 4 ⁶	By-product of drinking water chlorination.
Total Trihalomethanes (TTHMs -- chloroform, bromo-dichloromethane, dibromochloromethane, and bromoform)	No	2/06 5/06 8/06 11/06	Highest Annual Average = 78 Range of detects = 26 – 151	ug/L	N/A	MCL = 80 for four-quarter average ⁷	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids (mono-, di-, and trichloroacetic acid, and mono- and di-bromoacetic acid)	No	2/06 5/06 8/06 11/06	Highest Annual Average = 46 Range of detects = 16 – 87	ug/L	N/A	MCL = 60 for four-quarter average ⁷	By-product of drinking water disinfection needed to kill harmful organisms.

Footnotes:

1. A violation occurs at systems collecting 40 or more samples per month when more than 5% of the total coliform samples are positive.
2. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration system of the City/Town Water Treatment Facility. In accordance with State regulations for distribution systems, we test for turbidity 5 days/week, 52 weeks/year. Results are reported for the year. Since the Town purchases most of its water from the Town/City Water Treatment Facility, Treatment Technique regulations do

not apply to the Town's distribution system. State regulations for distribution systems require that the monthly average for turbidity must be below 5 NTU.

3. The level presented represents the 90th percentile of the 30 sites tested for copper. In this case, 30 samples were collected throughout the distribution system and the 90th percentile was the 27th highest value (0.046 mg/L). The action level for copper was not exceeded at any of the sites tested.

4. The level presented represents the 90th percentile of the 30 sites tested for lead. In this case, 30 samples were collected throughout the distribution system and the 90th percentile was the 27th highest value (3 ug/L). The action level for lead was not exceeded at any of the sites tested.

5. 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.

6. The value reported represents the Maximum Residual Disinfectant Level (MRDL) which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. MRDLs are currently not regulated but in the future they will be enforceable in the same manner as MCLs.

7. This level represents the rolling annual average calculated from data collected. Some data used to calculate the rolling annual average may be carried over from the previous year's testing.

8. Color is tested as a corollary to the orthophosphate test. Orthophosphate is added at the City/Town Water Treatment Facility to inhibit corrosion of lead piping in the distribution system.

9. An MCL violation occurs when the annual composite of four quarterly samples or the average of the analysis of four quarterly samples exceeds the MCL.

10. The State considers 50 pCi/L to be the level of concern for beta particles.

11. Uranium results are reported by the testing laboratory in pCi/L units. To convert pCi/L to ug/L as required for this report, we multiplied the results in pCi/L by a conversion factor of 1.49.

DEFINITIONS:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

CFU/100 mL: Colony Forming Units per 100 milliliters of sample.

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.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as possible.

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.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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).

N/A: means standards are Not Applicable.

ND (Non-Detects): Laboratory analysis indicates that the contaminant 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.

90th Percentile Value: The values reported for lead and copper represent the 90th percentile. 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 lead and copper values detected at your water system.

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

PtCo: Platinum Cobalt Unit, a measure of color in water

What does this information mean?

As you can see by the table, our system had no violations in 2006. We learned through our testing that some contaminants have been detected; however, these contaminants were detected at levels below the State MCLs.

As listed in the table, we experienced an occurrence of microbiological contamination. In July 2006, total coliforms were detected in one of the 50 routine monthly compliance samples collected from our system. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Four additional samples were subsequently collected and total coliforms were not detected in those samples. Since total coliforms were detected in less than 5% of the samples collected during the month, the system did not have an MCL violation. It should be noted that E. Coli, associated with human and animal fecal waste, was not detected in any of the samples collected.

Is our water system meeting other rules that govern operations?

During 2006, 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 at 1-800-426-4791.

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.
- Water your garden and lawn only when necessary. Remember that a layer of mulch in the flower beds and garden is not only aesthetically pleasing but will help retain moisture.
- Turn off the tap when brushing your teeth.
- 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. Please call us at the number listed at the beginning of this report if you have any questions.