VILLAGE OF POTSDAM

Annual Drinking Water Quality Report for 2017

The Potsdam Water Treatment Plant (Federal ID # 4404397) on Raymond St. in the Village of Potsdam is required to provide this Annual Water Quality Report by Federal and State regulation defined as "Every community water system that serves 15 or more service connections used by year-round residents or regularly serves at least 25 year-round residents must prepare and distribute an Annual Water Quality Report". The Village of Potsdam is committed to providing the best possible drinking water for its customers. Towards this end, we are providing an Annual Water Quality Report detailing our source, methods of treatment, goals, recommendations for water conversation, major modifications, cost, and test results of our finished product – the water you rely on.

We are also including information on some of the specific concerns that you may want to be informed of. If you have any Questions about treatment or testing methods, please feel free to call Brian Paige at the Treatment Plant 315-265-7033. For interpretation of test results or reasons for concern about some of the substances tested for, please call the New York State Dept. of Health at 315-386-1040. For an opportunity to participate in decisions that affect drinking water quality, please call the Village Offices (315-265-7480) for a schedule of Village Board of Trustees Meetings.

Source of Supply: The Potsdam Water Treatment Plant draws its water from the Racquette River, which provides an abundant amount of water for Village needs. As a surface water source, it is highly colored with relatively low turbidity. It is subject to rapid changes in quality and contamination with bacteria from wildlife and human activity. The NYS Dept. of Health has performed a source water assessment for this source, and found an elevated susceptibility to contamination. The amount of pasture in the area results in a high potential for protozoa contamination. However, there is reason to believe that land cover data may overestimate the percentage of pasture in the assessment area. While there are some facilities present, permitted discharges do not likely represent an important threat to the source water based on their density in the assessment area. However, the total amount wastewater discharged to surface water in this assessment area is not high enough to further raise the potential for contamination. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include mines. Finally, it should be noted that relatively high flow velocities make river drinking water supplies highly sensitive to existing and new sources of microbial contamination.

The dominant considerations for defining natural sensitivity ratings for rivers are their relatively shallow depth, high flow rate and directionality. Microbial contaminant categories are rated high for rivers, because some of these contaminants can travel great distances in flowing water with little die-off or sedimentation.

The organic and other chemical categories are rated medium because they tend to show some volatilization and inactivation. The phosphorus category is rated low because phosphorus does not generally limit algae growth in low residence time (high flow rate) water bodies such as rivers. This emphasizes the high natural sensitivity of river systems to these contaminants. In these cases, small changes in land cover can result in substantial degradation in the water quality.

Potential sources of contamination of this source includes: transportation routes, pipelines, landfills, mines, Inactive - Hazardous Waste Sites (IHWS), chemical bulk storage, oil storage facilities, agriculture land and permitted discharges from wastewater treatment plants.

Population Served: Potsdam had a population of under 10,000 (9416) in the 2010 Census. There are 1624 water service connections.

Quantity of Water Treated: During 2017 we calculate our withdrawal from the river to be approximately 1,075,000 gallons a day on average, and use approximately 69,000 gallons each day for process water which is used for filter backwash and other In- plant uses, waste water discharges to the Water Pollution Control Plant. This leaves a balance delivered to the distribution system of about 1,006,000 gallons per day on average. The amount lost from the distribution system due to leaks or intentional flushing is unknown. This correlates to an annual withdrawal of around 392.4 million gallons, with annual delivery estimated to be about 367 million gallons.

Water Quality Testing: Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline 1-800-426-4791, or by accessing their website at (www.epa.gov/safewater/) or the DOH website at (www.health.state.ny.us)

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water suppliers. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking than the general population. Immuno-comprised 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 at particular risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

The sources of drinking water (both tap 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 case 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: microbiological , inorganic; pesticides and herbicides; organic chemicals or radioactive. In order to ensure tap water is safe to drink, the State and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Dept.'s. and the EPA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Potsdam Water Treatment Plant tests its water under guidelines from the New York State Dept. of Health. The tests performed, frequency of tests, and results are available in Table 1. We are pleased to report that most tests are within the required parameters, and the water continues to be safe to drink. We report all samples in the interest of providing complete data.

Some of the terms and units may be unfamiliar. Most parameters are measured in mg/L, which is milligrams per liter. This is identical to the old system of ppm, or parts per million, which is one part contaminant in one million parts of water. Some contaminants are measured in ug/L, which is micrograms per liter. This is equal to 1/1000 of a mg/L or ppm, or one part contaminant per billion parts of water.

Although the presence of contaminants in drinking water does not necessarily pose a health risk, for each hazardous or potentially hazardous contaminant, a maximum safe level has been established. This is known as MCL which stands for the Maximum Contaminant Level, which is the highest level of a contaminant allowed in drinking water. To provide a margin of safety, we treat our water to comply as closely as our abilities allow, to a Maximum Contaminant Level Goal (MCLG). This is the level of a contaminant in drinking water below which there is no known or expected risk to health.

There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants. We disinfect our finished water with sodium hypochlorite, which provides a Free Chlorine Residual. The maximum and minimum amount of disinfectant is regulated. The Maximum Residual Disinfectant Level (MRDL) is the maximum amount allowed. The maximum and minimum dosing for disinfection with sodium hypochlorite is 4.0 mg/L and 0.2 mg/L respectively at entry point. The Village of Potsdam uses an adjustable target of 1.5 mg/L Free Chlorine Residual depending on several factors.

Violations: In accordance with section 5-1.52 of New Sanitary Code, 10 NYCRR Part 5, The Village of Potsdam during the year 2017 had two violations. The running annual average for Total Trihalomethanes exceeded the MCL regulatory limits in the first two quarters of 2017. Last summer, the village instituted a program of increased hydrant flushing and turnover of water in the storage tanks, which resulted in compliance with the standards the second and third quarters. This program is ongoing.

Detected Contaminants:

Turbidity: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our highest single distribution system turbidity measurement for the year occurred on January 25, 2017 (1.06) NTU. State regulations require the monthly average of the results of all distribution samples must always be less than 5.0 NTU. Our average was 0.27 NTU. The regulations also require that 95% of the filter effluent turbidity samples collected have measurements below 0.3 NTU. 99.98% of our filter effluent test results were less than 0.3 NTU.

Lead and Copper: Lead and copper detected in residential samples generally occurs because of corrosion in the home plumbing system, and the erosion of natural deposits. Although we add corrosion control treatment at our plant, results of tests performed In 2015 indicated that one residence had elevated lead levels. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels in your home may be higher than at other homes in the community because of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Fluoride: Fluoride is added to the water at our plant to enhance dental health. The highest level recorded was 1.03 mg/L on June 23, 2017. This reading did not exceed the regulatory limit of 2.2 mg/L. Our target concentration for fluoride in 2017 was 0.70 mg/L. Some people who drink water containing fluoride in excess of the MCL over many years could develop bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

Our system is one of the many water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.6 to 1.0 mg/L (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Dept. of Health requires that we monitor fluoride levels on a daily basis. During 2017 monitoring showed fluoride levels in your water were in the optimal range 91.0% of the time. None of the monitoring results showed fluoride levels that approach the 2.2 mg/L MCL for fluoride.

Barium: Barium in the water may be the result of discharge of drilling wastes, discharge from metal refineries, or, most likely, the erosion of natural deposits. Barium was detected at 0.01 mg/L, less than the regulatory limit of 2.0 mg/L. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in blood pressure.

Total Trihalomethanes: Total trihalomethanes are the by-product of drinking water disinfection needed to kill harmful organisms. These are formed when source water contains large amounts of organic matter. Our average trihalomethane result was 67 ug/L, less than the regulatory limit of 80 ug/L for the calendar year 2017. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

Halocacetic Acids: Haloacetic acids are also a by-product of drinking water disinfection needed to kill harmful organisms. Our average haloacetic acid result was 41 ug/L, below the regulatory limit of 60 ug/L for calendar year 2017. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Phosphate: Phosphate is added to the finished water to inhibit corrosion in distribution piping and residential plumbing. Our phosphate product is approved by the National Sanitation Foundation (NSF). We add phosphate at less than the NSF allowable limit (16mg/L), with a target concentration of 0.5mg/l, and it has no known adverse health effects.

Treatment Methods: Water is withdrawn from the Racquette River, and pumped into the plant with low lift pumps. It receives conventional treatment using automated controls for precision dosing of treatment chemicals and flows.

The Water Treatment Plant, built in 1983, is in good condition. The Plant was upgraded to provide better control of the processes to meet the strictest standards. This upgrade was completed and fully operational by 2000.

Conservation Measures: Water is a valuable resource, and should not be wasted. While a good value, it also is expensive to waste water. To minimize the quarterly water bills, all leaks should be repaired as soon as possible. In addition, water saving toilets and other appliances are available, and are effective in reducing water use.

1. Check all faucets, toilets, and outlets for leaks often. Even a small drip wastes water 24 hours per day, adding up to a Significant waste of water and expense.
2. Insulate hot water pipes. This reduces the amount of water that is wasted before the temperature is appropriate.
3. Water lawns and gardens only when necessary, always at night or in the cool of the day. Evaporation on a hot day is a significant portion of the water used. Water deeply to reduce frequency. A heavy mulch in gardens and flower beds reduces evaporation. Don't cut the lawn too short, longer grass needs watering less frequently.
4. Install water saving shower heads, flow limiters, or toilet tank displacement devices.
5. Use automatic dishwashers and washing machines only with full loads.
6. Do not leave water running while shaving or hand washing dishes. Rinse razor or clean dishes in filled sink or basin.
7. Keep drinking water in the refrigerator, rather than letting it run until cool.
8. Do not run the hose while washing cars. Turn it on to wet down or rinse, shut off while washing.
9. Turn off water flow while lathering up during showers. Bathe in partially filled tub.
10. Use broom, not hose to clean driveways.

Distribution System Modifications: In 2017 there were no significant modifications to the distribution system. Additional hydrant flushing of mains on the north end of Market Street was instituted to improve water quality in that area.

Cost of Water: The cost of operating, maintaining and upgrading the distribution system is also considerable. This is reflected in the 2017 charge of $7.34 per 1000 gallons of water delivered. This roughly correlates to a household of four using about 16,000 gallons per quarter, having an average annual charge of $469.76.

Cryptosporidiosis and Giardiasis: Cryptosporidiosis and Giardiasis are intestinal illnesses caused by microscopic parasites. While they have not been identified in our water supply, they are of concern for people with weak immune systems, such as chemotherapy, dialysis or transplant patients, and those with Crohn's disease or HIV infection. People with weakened immune systems should discuss with health care providers the need to take extra precautions such as boiling water, using a certified bottled water, or a specially approved home filter. Individuals who think they may have Cryptosporidiosis or Giardiasis should contact their health care provider immediately.

For Further Information: If you need additional information on Cryptosporidiosis or Giardiasis, or have any questions about any part of this report, or on subjects not discusses in this report, please free to call Brian Paige at the Water Treatment Plant at 315-265-7033, or the New York State Dept. of Health at 315-386-1040.

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Level Detected (PCT-AVE) (RANGE) (DATE)	UNIT MEASURE-MENT	MCGL	REGULATORY LIMIT (MCL, TT, OT AL)	LIKELY SOURCE OF CONTAMINATION
TURBIDITY	NO	(99.89%) (0.02-.034) (DAILY)	NTU	N/A	95% <0.3 NTU	Naturally occurring
FLUORIDE	NO	(0.67) (0.07-01.03 DAILY	mg/L	N/A	2.2 mg/L	Naturally occurring, added to water to prevent tooth decay
PHOSPHATE	NO	(0.42) (0.11-1.01) (DAILY)	mg/L	N/A	N/A	Naturally occurring, added to water to reduce pipe corrosion
TOTAL TRIHALOMETHANES	**YES**	**(85) (55-106) (2/7,5/2,8/1 11/7 2017)**	**ug/L**	**80 ug/L**	**N/A**	**Byproduct of drinking water chlorination needed to kill harmful organisms**
HALOACETIC ACIDS	NO	(52) (3.9-59) (2/7,5/2,8/1, 11/7 2017)	ug/L	60 ug/L	N/A	Byproduct of drinking water chlorination needed to kill harmful organisms, naturally occurring
LEAD	NO	(90% = 5.8) (<1.0 – 28) (2015)	ug/L	15 ug/L	15 ug/L	Corrosion of household plumbing systems, Erosion of natural deposits
COPPER	NO	(90% = 0.21) (0.024 – 0.31) (2015)	mg/L	1.3 mg/L	1.3 mg/L	Corrosion of household plumbing systems, Erosion of natural deposits
ALUMINUM	NO	(0.10) (<0.10 – 0.13) (MONTHLY)	mg/L	N/A	N/A	Erosion of natural deposits
BARIUM	NO	9.6 (6/6/2016)	ug/L	2000 ug/L	2000 ug/L	Erosion of natural deposits
ALKALINITY	NO	(23) (9.9-42) (MONTHLY)	mg/l	N/A	N/A	Important in determining a streams ability to neutralize acidic pollution from rainfall or wastewater.
TOTAL ORGANIC CARBON (TOC)	NO	(2.4) (2.1-3.1) (MONTHLY)	mg/L	N/A	N/A	Amount of carbon found in an organic compound and is often used as a non-specific indicator of water quality.

NOTES AND DEFINITIONS:

1. Lead and Copper monitoring: The results of the lead and copper tests above represent the 90th percentile (a percentile is the 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.) Every three years we are required to test 20 residences for lead and copper. These results are from 2015. We will be testing again in 2018. The 90th percentile for lead was 5.8ug/L. There was 1 residence above the action level. The 90th percentile for copper was 0.21mg/L. There were no residences over the action level for Copper.

2. Trihalomethanes include Bromodichloromethane, Bromoform, Chloroform, and Dibromochloromethane. Haloacetic acids include Dibromoacetic acid, Dichloroacetic acid, Monobromoacetic acid, Monochloroacetic acid, and Trichloroacetic acid. Determination of violation based on running annual averages.

3. TOC results reported in the chart above represent the water entering the distribution system from the plant. We also test the river water entering the plant. We are required to remove 45% of TOC in our filtration process. In 2017, we removed an average of 61% of the TOC.

4. Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

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

7. The table above represents only contaminants detected in the drinking water in 2017. During 2017, we also tested for many other contaminants, concentrations of which were less than the detection level. These include: Metals and Inorganics- (Aluminum, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Mercury, Nickel, Selenium, and Thallium),120 Bacteriological tests- (Total Coliform and Fecal Coliform bacteria (E Coli is among these)) and: Organic chemicals- (Pesticides, Herbicides, Solvents, Fuel constituents, etc.)

These tests were required by New York State Law. None of these chemicals were detected in your drinking water.