

Annual Drinking Water Quality Report for 2016
City of Plattsburgh Water System
Plattsburgh, New York
(Public Water Supply ID#0900217)

INTRODUCTION

To comply with State and Federal regulations, we annually issue a report describing the quality of your drinking water. The purpose of this report is to enhance your understanding of drinking water and increase awareness for 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. If you have any questions about this report or concerns about your drinking water, please contact Willard Todd, Chief Plant Operator at (518) 563-1188 or Jonathan P. Ruff, P.E. at 518-563-7731. The Mayor and Members of the Common Council hold meetings every Thursday evening at 5:30 p.m. in the Common Council Chambers at City Hall.

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: pesticides, herbicides, microbial, organic, inorganic, chemical and radioactive. 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 also establish limits for contaminants in bottled water which must provide the same protection for the public's health.

The City of Plattsburgh utilizes three upland gravity surface water sources (Mead Reservoir, West Brook Reservoirs and the Saranac River) to supply drinking water to the City of Plattsburgh users. The two reservoirs are located approximately five miles west of the City of Plattsburgh, located near the intersection of Rand Hill Road and Route 374. Water taken from the reservoirs is piped to the City's water filtration plant located west of the city limits on New York State Route 3, Cornelia Street. Water can also be withdrawn from the Saranac River located on the Kent Falls Road in Cadyville and piped into the West Brook Reservoir. At the water filtration plant, the water has chlorination, sedimentation, filtration, and fluoridation treatments and is stored in a new ground storage tank. After treatment, the water is distributed to the City of Plattsburgh users. The city water system did not experience any water source restriction during 2016.

FACTS AND FIGURES

Our water system serves approximately 24,173 individuals (18, 816 population in 2000 census plus 6,358 SUNY enrollment) through 5,680 water meters. The cost for a customer using 6000 gallons per year is about \$321/year. The amount of water treated at the water filtration plant in 2016 was 688,698,000 gallons. The total amount of water delivered to customers was recorded at 600,901,000 gallons. This leaves an unaccounted total 88,797,000 gallons. We believe this is due to the water used to flush hydrants, backwash filters, fight fires and leakage (water main breaks). Also, the water meters at the Water Filtration Plant are designed to measure high flows and are not as accurate with the lower flows. There may also be some inaccuracies with meters that record the water used by customers. The daily average of water treated and sent into the distribution system was 1,884,532 gallons per day. Our highest single day was 2,731,000 gallons.

SOURCE WATER ASSESSMENT REPORT SUMMARY

The NYS DOH has completed source water assessments for this system, based on available information. Possible and actual threats to these drinking water sources 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 to the source. 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 detected contaminants. The source water assessments provide resource managers with additional information for protecting source waters in the future.

SOURCE: Mead Reservoir

This assessment found an elevated susceptibility to contamination for this source of drinking water prior to treatment. The amount of agricultural lands in the assessment area results in elevated potential for protozoa and pesticide contamination. No permitted discharges are found in the assessment area. There is also considerable susceptibility associated with other discrete contaminant sources, and these facility types including mines, which may generate turbidity. Finally, it should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

SOURCE: West Brook Reservoir

This assessment found a moderate susceptibility to contamination for this source of drinking water prior to treatment. Land cover and its associated activities within the assessment area do not increase the potential for contamination. No permitted discharges are found in the assessment area. There is also noteworthy contamination susceptibility associated with other discrete contamination sources, and these facility types including, mines which may generate turbidity. Finally, it should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

SOURCE: Saranac River

This assessment found a moderate susceptibility to contamination for this source of drinking water. Land cover and associated activities within the assessment area do not increase the potential for contamination. While there are some facilities present, permitted discharges are not likely represented as an important threat to water source quality based on their density in the assessment area. However, it appears that the total amount of wastewater discharged to surface water in this assessment area may be high enough to further raise the potential for contamination (particularly for protozoa). There are no noteworthy contamination threats associated with other discrete contaminant sources. Finally, it should be noted that relatively high flow velocities make river drinking water supplies highly sensitive to existing and sources of microbial contamination. Please note that, while the source water assessment, rate reservoirs and rivers as highly sensitive to microbial contamination, our water is disinfected to ensure that the finished water delivered into your home meets the New York State drinking water standards for microbial contamination. A copy of this assessment, including a map of the assessment area, can be obtained by contacting us, as noted above.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: inorganic compounds, nitrate, volatile organic compounds, total trihalomethanes, haloacetic acids, turbidity, radiological, lead and copper, and synthetic organic compounds. In addition, we tested the water for coliform bacteria 25 times each month and turbidity continuously. The table presented on the following page 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. Calling the EPA’s Safe Drinking Water Hot line (800-426-4791) or the Clinton County Health Department at (518) 565-4870 can obtain more information about contaminants and potential health effects.

Table of Detected Contaminants

Contaminant	Violati on Y/N	Date of Sample	Level Detected	Unit Measure - Ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely source of Contamination
Turbidity (1) 100% samples less than 1.0	No	2016	0.16 (1/26/16) Range: 0.02-0.16	NTU	n/a	95% of samples < 1.0 NTU (TT)	Soil runoff
Carbon, Total (finished water)	No	Jan. – Dec. 2016	Range = <0.5 – 3.0	mg/l	n/a	n/a	Decomposition of natural organic matter
Inorganic Contaminants							
Barium	No	02/25 /16	0.014	mg/L	2	2(MCL)	Erosion of natural deposits.
Copper (2)	No	6/10/16	90 th =0.16 Range~ 0.029 to 0.23	mg/l	1.3	1.3 (AL)	Corrosion of household plumbing systems.
Fluoride (4)	No	monthly	Average 0.70 Range; 0.6-1.0	mg/L	n/a	2.2 (MCL)	Erosion of natural deposits.
Nitrate	No	02/25/16	0.18	mg/L	n/a	10 (MCL)	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Lead (3, 10)	No	6/10/16	90 th =.003 Range~.001 ND to .012	ug/L	0	15 (MCL)	Corrosion of household plumbing systems.
Sodium (5)	No	02/25/16	11	mg/L	n/a	See note (5)	Naturally occurring, road salt.
Chloride	No	02/25/16	16	mg/L	n/a	MCL = 250	Naturally occurring or road salt.
Sulfate	No	02/25/16	6.1	mg/l	n/a	MCL = 250	Naturally occurring
Stage 2 Disinfection by-products							
TTHM's (Total Trihalomethanes) (7) Location 1: SUNY Police	No	02/10/2016 05/10/2016 08/2/2016 11/9/2016	LRAA = 55.2 (8) Range = 29.8 – 87.1	ug/l	0	80	By-product of drinking water chlorination
TTHM's (Total Trihalomethanes) (7) Location 2: McDonald's Rt. 9	No	02/10/2016 05/10/2016 08/2/2016 11/9/2016	LRAA = 60.39 (8) Range = 36.3 – 90.1	ug/l	0	80	By-product of drinking water chlorination
TTHM's (Total Trihalomethanes) (7) Location 3: Water Pollution Plant	No	02/10/2016 05/10/2016 8/2/2016 11/9/2016	LRAA = 57.5 (8) Range = 34.1 – 86.4	ug/l	0	80	By-product of drinking water chlorination
TTHM's (Total Trihalomethanes) (7) Location 4: Lake Forest Retirement	No	02/10/2016 05/10/2016 08/2/2016 11/9/2016	LRAA = 69.75 (8) Range = 37.2-90.4	ug/l	0	80	By-product of drinking water chlorination
HAA5's (Total Haloacetic Acids) (7) Location 1: SUNY Police	No	02/10/2016 05/10/2016 08/2/2016 11/9/2016	LRAA = 33.15 (8). Range = 25.8 – 38.5	ug/l	n/a	60	By-product of drinking water chlorination
HAA5's (Total Haloacetic Acids) (7)	No	02/10/2016 05/10/2016 08/2/2016	LRAA = 37.2 (8) Range =	ug/l	n/a	60	By-product of drinking water chlorination

Location 2: McDonalds's Rt. 9		11/9/2016	28.4 – 41.8				
HAA5's (Total Haloacetic Acids) (7) Location 3: Water Pollution Plant	No	02/10/2016 05/10/2016 08/2/2016 11/9/2016	LRAA = 33.4 (8) Range = 26.2 – 36.6	ug/l	n/a	60	By-product of drinking water chlorination
HAA5's (Total Haloacetic Acids) (7) Location 4: Lake Forest Retirement	No	02/10/2016 05/10/2016 08/2/2016 11/9/2016	LRAA = 34.37 (8) Range = 30.2 – 38.7	ug/l	n/a	60	By-product of drinking water chlorination
Radiological Contaminants							
Radium 226 (9)	No	02/25/14	-0.04 Range: 0.01-0.18	pCi/l	N/A	See note (9)	Erosion of natural deposits
Radium 228 (9)	No	02/25/14	0.50 Range: 0.3-2.4	pCi/l	N/A	See note (9)	Erosion of natural deposits

Notes:

(1)-Turbidity is measure of the cloudiness of the water. We test it because it is good indicator of the effectiveness of our filtration system. In 2016, our highest turbidity measured 0.16 NTU occurred on 1/26/16 regulations require the turbidity must not exceed 5 NTU and that 95% of the turbidity samples collected must measure below 1.0 NTU. All of the measurements collected in 2016 were below 1.0 NTU.

(2)-The level presented represents the 90th percentile of the 30 sites tested. A percentile is a value on the scale of 100 that indicated 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, 30 samples were collected at your water system and the 90th percentile value for copper was the 4th highest sample (0.16 mg/l). The action level for copper was not exceeded at any of the sites tested in 2016.

(3) The level presented represents the 90th percentile of the 30 sites tested. In this case, 30 samples were collected at your water system and the 90th percentile value for lead was 0.003mg/L.

(4) We sample for Fluoride monthly. The level presented represents the average of all monthly samples.

(5)-Water containing more than 20 mg/L of sodium should not be used for drinking by people on very 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)-Four samples of water were collected each quarter and analyzed for TTHMs and HAA5s. The levels presented are the running annual average (RAA) of the average of the four quarterly samples collected.

(7)-Stage 2 sampling began with the 4th quarter of 2013 and compliance will be calculated using the LRAA.

(8) This level represents the highest locational running annual average calculated from data collected.

(9) For Radium 226 and Radium 228 COMBINED the MCL=5 pci/l.

(10) 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 City Of Plattsburgh is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been setting for several hours, you minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for 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 Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>

DEFINITIONS:

n/a: not applicable

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.

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.

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.

RAA- Running Annual Average- the average of all results collected over 4 consecutive quarters

LRAA – Locational Running Annual Average – the average of results collected at one specific location for 4 consecutive quarters.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no MCL 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.

The City of Plattsburgh water system is one of many systems in New York State that adds a low level of fluoride to drinking water in order to provide consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at levels that range from 0.7 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department 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 100% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride. Our fluoride addition facility is designed and operated to meet this optimal range.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2017, the City of Plattsburgh Water System was in compliance with applicable state drinking water regulations. Also, there were approximately 24 Boil Water Orders issued. Most, if not all, of these were issued as a precautionary measure due to system maintenance or repair.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immune-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 the 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 our household is using, and by looking for ways to use less water 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 and you can save almost 6,000 of water 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 advances, you have a leak.

SYSTEM IMPROVEMENTS AND OTHER PROGRAMS

- The dams at the City reservoirs were inspected and evaluated for compliance with existing and proposed regulations. The dams were found to be stable, in reasonable good condition, and well maintained. A program for performing maintenance and upgrades has been developed.
- The east wall on # 2 reservoir has been repaired and work on repairing the # 1 reservoir is done
- Emergency Action Plans for the City dams were updated as necessary.

CLOSING: Thank you for allowing us to continue to provide you with quality drinking water. 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 our office if you have questions.