

Annual Drinking Water Quality Report for 2016

Water Commissioners, Town of Waterford

127 Second Street, Waterford, NY 12188
(Public Water Supply Identification Number NY4500173)

INTRODUCTION

To comply with State regulations, the Water Commissioners of the Town of Waterford 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 drinking water met all State drinking water health standards. This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to New York State standards. Our constant goal is and always has been, to provide to you a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources.

On May 14, 2009 the Environmental Protection Agency (EPA) began its dredging of the Hudson River to remove the PCB's deposited there many years ago. On May 5, 2009 the Water Commissioners met with the Waterford Town Board and outlined the Commissioners' decision to shut down the Water Treatment Facility effective the first day of the EPA dredging (May 14, 2009) and to remain shut down during the dredging project. No water was obtained from the Hudson River since 2009. The Commissioners continue to purchase water from the City of Troy which obtains its water from the Tomhannock Reservoir and is unaffected by the dredging project.

The Commissioners receive several inquires each year regarding the ownership and maintenance of the water service that exists from the water main to an individuals home or business. The Commissioners long standing policy is that the Commissioners have ownership and maintenance responsibility for the water main and for the portion of the water service from the water main to the property line/curb stop of the property. The property owner is then responsible for the ownership and maintenance of the portion of the service from the property line/curb stop to the home or business.

If you have any questions concerning this report or concerning your drinking water please contact: *Water Commissioners of the Town of Waterford, PO Box 489, Waterford, NY 12188; Telephone (518) 237-0422*. We want our valued customers to be informed about their water service. If you want to learn more, please attend any of our regularly scheduled Water Board meetings. They are held on the 2nd Tuesday of each month, 6:30 PM at the Water Commissioners of the Town of Waterford, 127 Second Street, Waterford, NY 12188; *Telephone (518) 237-0422*.

FACTS AND FIGURES

The Water Commissioners of the Town of Waterford provide water through 3,000 service connections to a population of approximately 9,800 people, which includes two districts in Halfmoon. In 2016 Waterford Water Works purchased 373,840,000 gallons of water, while 326,464,709 gallons of water were recorded as metered usage by Waterford's customers. This discrepancy may be partially attributed to the fact that residential meters are read quarterly and the schedule for some areas of the Town does not match the same calendar year used to determine water purchased. Other water losses can typically be attributed to water usage of fire protection, flushing, and leaks. The Commissioners are in the process of evaluating options to decrease water losses in the system. In 2016, several leaks were found and repaired within the system. Our average daily demand was 1,024,200 gallons of water. Our highest monthly average daily flow was 1,281,600 gallons which occurred in July 2016. The current charge for water is \$3.96 per thousand gallons for residential and industrial customers. The minimum charge for water is \$31.05 per hundred cubic feet or 7480 gallons which is billed quarterly. The water system utilizes an emergency back-up supply from the City of Troy water system via the 126th Street Bridge. To facilitate the Environmental Protection Agency Dredging Project, a 24 inch water main was constructed under the Hudson River which reduces to a 16 inch line in front of the Waterford Water Treatment Plant. As of May 14, 2009, all water for Waterford was supplied by the City of Troy. In 2016, all water delivered was purchased from Troy.

WHERE DOES OUR WATER COME FROM?

Since the EPA Dredging Project began we have purchased water from Troy under a long term contract. Troy water has been our sole source of water since May 2009. We receive water that has been treated at the Troy Water Treatment Plant (TWTP). The water source for the city of Troy is the Tomhannock Reservoir, a man made reservoir 6 ½ miles northeast of the city. The reservoir is 5 ½ miles long and holds 12.3 billion gallons when full. The quality of the water from the Tomhannock Reservoir is good to excellent. Water flows from the reservoir by gravity where seasonally potassium permanganate is added and then at the Melrose Chlorination Station the water is pre-disinfected with chlorine dioxide. The water then flows to the John P. Buckley Water Treatment Plant (WTP) a conventional water treatment plant utilizing coagulation, flocculation, sedimentation, filtration, chlorination and fluoridation processes.

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 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.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

Water Commissioners of the Town of Waterford staff are responsible for testing the water in the distribution system. The water is tested monthly for Total Coliform bacteria (10 samples per month), quarterly for disinfection byproducts, and annually for lead and copper. Source water monitoring is completed by the City of Troy. The City of Troy tests the source water for inorganic compounds, volatile organic compounds, synthetic organic compounds, nitrate, and radiologicals. The tables presented below summarize what was detected in your drinking water. The State allows some contaminants to be tested less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old. For a listing of the parameters that were analyzed that were not detected along with the frequency of testing for compliance see the NYS Sanitary Code, Appendix A.

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 pose 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 the New York State Department of Health, Glens Falls District Office at (518) 793-3893.

WHAT DOES THIS INFORMATION MEAN?

As you can see from the table our system had no violations. We have learned through our monitoring and testing that some constituents have been detected; however, these compounds were detected below New York State requirements. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2015, our system was in compliance with applicable State drinking water operating, reporting, and monitoring requirements. An inspection completed by the NYS Department of Health on February 5, 2015 found no violations at the water works.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met all 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 microbiological pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION ON LEAD IN DRINKING WATER

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 Waterworks 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 or at <http://www.epa.gov/safewater/lead>.

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. Fluoride is added to your water by the Troy Water Department. 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 of 0.7 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 Waterford and Troy monitor fluoride levels on a daily basis. During 2016 monitoring showed fluoride levels in your water were in the optimal range 100 % of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

WATER CONSERVATION TIPS

The Water Commissioners of the Town of Waterford encourage water conservation. There are a lot of things you can do to conserve water in your own home. Conservation tips include:

- ◆ Only run the dishwasher and clothes washer when there is a full load
- ◆ Use water saving showerheads
- ◆ Install faucet aerators in the kitchen and the bathroom to reduce the flow from 4 to 2.5 gallons per minute
- ◆ Water gardens and lawn for only a couple of hours after sunset
- ◆ Check faucets, pipes and toilets for leaks and repair all leaks promptly
- ◆ Take shorter showers

CAPITAL IMPROVEMENTS

In 2016 the Water Commissioners of the Town of Waterford continued to make capital improvements to enhance the water treatment plant and distribution system. The following improvements were made:

- ◆ Replaced several fire hydrants throughout the Town.
- ◆ Completed the replacement of 2,300 linear feet of water pipe on Belanger Avenue and Clinton Street
- ◆ Began Construction of a water interconnection with the City of Cohoes (Expected Completion During 2017)

CLOSING

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit our customers. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.

WATERFORD WATERWORKS TABLE OF DETECTED CONTAMINANTS

Public Water Supply Identification Number NY4500173

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity in Distribution System	N	2.31	NTU	N/A	5.0 NTU	Iron Pipe, Tuberculation
Total Coliform	N	ND	N/A	0	Two or more positive samples ¹	Naturally present in the environment
Inorganic Contaminants						
Copper (samples from 7/16/2014-7/31/2014)	N	0.05 ²	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Range of copper concentrations		ND-0.11				
Lead (samples from 7/16/2014-7/31/2014)	N	2 ³	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Range of lead concentrations		ND-13				
Disinfection Byproducts Stage 2 (3/5/2015 to 12/1/2015)						
Haloacetic Acids (HAA5) (Highest)	N	42.0	ppb	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Range of values for HAA5		27.0-42.0				
Highest RAA ⁴		36.9				
TTHM[Total Trihalomethanes](Highest)	N	66.9	ppb	0	80	By-product of drinking water chlorination Needed to kill harmful organisms. TTHMs are formed when source water contains large Amounts of organic matter.
Range of values for TTHM		23.40-66.9				
Highest RAA ⁴		60.83				

FOOTNOTES-

1. A violation occurs at systems collecting less than 40 samples per month when two or more samples are total coliform positive in one month
2. The level presented represents the 90th percentile of 20 test sites. The action level for copper was not exceeded at any of the 20 sites
3. The level presented represents the 90th percentile of 20 test sites. The action level for lead was not exceeded at any of the 20 sites
4. The average is based on a running annual average (RAA). The level presented represents the running annual average calculated for 2014 and the range of the individual samples. The running annual average is calculated each quarter by taking the average of the four most recent samples collected.

Glossary of Terms

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is 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

Action Level - the concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow.

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal The "Goal" (MCLG) is 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

N/A-Not applicable

CITY OF TROY
TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date or Frequency of Sample	Level Detected			Unit Measurement	MCLG MRDLG	Regulatory Limit (MCL, TT, MRDL, AL)	Likely Source of Contamination
			Value or Average	Low	High				
Physical and Chemical Analytes									
pH	No	Daily	8.29	6.36	9.10	-	-	NDL	Adjusted at WTP
Temperature	No	Daily	14.1	4.1	23.5	° C	n/a	NDL	-
Color	No	Daily	8	2	27	color units	n/a	15	Naturally occurring
Turbidity	No	Daily	0.47	0.08	1.40	NTU	n/a	5	Soil runoff
Chlorine	No	Daily	0.79	0.57	1.27	mg/L	4	4.0	Added disinfectant
Chlorine Dioxide	No	Daily	0.001	0.00	0.14	mg/L	0.8	0.8	Added disinfectant
Fluoride	No	Daily	0.76	0.12	0.96	mg/L	n/a	2.2	Adjusted at WTP
Alkalinity, as CaCO ₃	No	Daily	40.0	20.1	48.8	mg/L	n/a	NDL	Naturally occurring
Hardness, as CaCO ₃	No	Weekly	59	58	60	mg/L	n/a	NDL	Naturally occurring
Iron	No	Weekdays	0.02	0.00	0.05	mg/L	n/a	0.3	Naturally occurring
Manganese	No	Weekdays	0.01	0.00	0.04	mg/L	n/a	0.3	Naturally occurring
Lead and Copper									
Lead * (Jan-June 2016)	No	Bi Annually	0.0055	<0.0010	0.035	mg/L	0.00	(AL) 0.015	Household plumbing corrosion, erosion of natural deposits.
Copper (Jan-June 2016)	No	Bi Annually	0.0378	<0.020	0.100	mg/L	1.30	(AL) 1.30	
Lead * (July-Dec 2016)	No	Bi Annually	0.0098	<0.0010	0.024	mg/L	0.00	(AL) 0.015	
Copper (July-Dec 2016)	No	Bi Annually	0.1410	0.0066	0.598	mg/L	1.30	(AL) 1.30	
Inorganic Chemicals									
Barium	No	7/12/2016	0.029	-	-	mg/L	2.0	2.0	Naturally occurring
Chloride	No	7/12/2016	26.2	-	-	mg/L	n/a	250.0	Naturally occurring or road salt
Nitrate-as N	No	7/12/2016	0.08	-	-	mg/L	10.0	10.0	Runoff from fertilizer
Sodium **	No	7/12/2016	13.0	-	-	mg/L	n/a	**	Naturally occurring
Sulfate	No	7/12/2016	19.0	-	-	mg/L	n/a	250.0	Naturally occurring
Radiological									
Gross Alpha Particles	No	3/11/2016	-0.840	1 sample every 6 years		pCi/l	0	15.0	Naturally occurring
Gross Beta Particles	No	3/11/2016	0.681			pCi/l	0	4.0	Naturally occurring
Radium 226	No	3/11/2016	0.456			pCi/l	0	5.0	Naturally occurring
Radium 228	No	3/11/2016	-0.144			pCi/l	0	5.0	Naturally occurring
Total Uranium	No	3/11/2016	0.167			ug/L	0	30.0	Naturally occurring

CITY OF TROY
TABLE OF NON-DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date or Frequency of Sample	Level Detected			Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	
			Value or Average	Low	High				
Inorganic Chemicals									
Antimony (Graphite)	No	7/12/2016	ND	-	-	mg/L	0.006	0.006	-
Arsenic	No	7/12/2016	ND	-	-	mg/L	n/a	0.05	-
Asbestos	No	3/24/2003	ND	-	-	MFL	0	7.0	-
Beryllium	No	7/12/2016	ND	-	-	mg/L	0.004	0.004	-
Cadmium	No	7/12/2016	ND	-	-	mg/L	0.005	0.005	-
Chromium	No	7/12/2016	ND	-	-	mg/L	0.10	0.10	-
Cyanide	No	7/12/2016	ND	-	-	mg/L	0.20	0.20	-
Mercury	No	7/12/2016	ND	-	-	mg/L	0.002	0.002	-
Nickel	No	7/12/2016	ND	-	-	mg/L	0.10	0.10	-
Nitrite-as N	No	7/12/2016	ND	-	-	mg/L	1.0	1.0	-
Selenium	No	7/12/2016	ND	-	-	mg/L	0.05	0.05	-
Silver	No	7/12/2016	ND	-	-	mg/L	n/a	0.1	-
Thallium	No	7/12/2016	ND	-	-	mg/L	0.005	0.002	-
Zinc	No	7/12/2016	ND	-	-	mg/L	n/a	5.0	-
Organic Chemicals									
2,4,5-TP (Silvex)	No	8/24/2016	ND	-	-	mg/L	n/a	0.01	-
2,4-D	No	8/24/2016	ND	-	-	mg/L	n/a	0.05	-
Alachlor	No	8/24/2016	ND	-	-	mg/L	0	0.002	-
Aldicarb	No	8/24/2016	ND	-	-	mg/L	0.001	0.003	-
Aldicarb Sulfone	No	8/24/2016	ND	-	-	mg/L	0.001	0.002	-
Aldicarb Sulfoxide	No	8/24/2016	ND	-	-	mg/L	0.001	0.004	-
Atrazine	No	9/30/2016	ND	-	-	mg/L	0.003	0.003	-
Carbofuran	No	8/24/2016	ND	-	-	mg/L	0.04	0.04	-
Chlordane	No	8/24/2016	ND	-	-	mg/L	n/a	0.002	-
Endrin	No	8/24/2016	ND	-	-	mg/L	0.002	0.002	-
Heptachlor	No	8/24/2016	ND	-	-	mg/L	0	0.0004	-
Heptachlor Epoxide	No	8/24/2016	ND	-	-	mg/L	0	0.0002	-
Lindane	No	8/24/2016	ND	-	-	mg/L	0.0002	0.0002	-
Methoxychlor	No	8/24/2016	ND	-	-	mg/L	0.04	0.04	-
PCBs	No	8/24/2016	ND	-	-	mg/L	0	0.0005	-
Pentachlorophenol	No	8/24/2016	ND	-	-	mg/L	0	0.001	-
Toxaphene	No	8/24/2016	ND	-	-	mg/L	0	0.003	-
Vinyl Chloride	No	8/24/2016	ND	-	-	mg/L	0	0.002	-

MICROBIOLOGICAL TABLE

Coliform	No	Weekdays	0.69%	-	-	%	0	5%	Naturally occurring
E.Coli ***	No	Weekdays	0	-	-	-	0	***	Human/animal fecal waste

** 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.

*** A violation occurs when a total coliform positive sample is positive for E. coli or when a total coliform positive sample is negative for E. coli but a repeat total coliform sample is positive and the sample is also positive for E. coli.