

Annual Drinking Water Quality Report for 2016
Town of Owasco
2 Bristol Avenue, Auburn, New York 13021
Public Water Supply ID#0501721

INTRODUCTION

To comply with State regulations, The Town of Owasco, 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 tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. 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 concerning your drinking water, please contact John Carter, Water Supervisor at 315-253-3284. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled town board meetings. The meetings are held on the second Thursday of each month at 5:00 p.m., 2 Bristol Avenue, Auburn, New York.

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.

Our water source is Owasco Lake. During 2016, our system did not experience any restriction of our water source. The water flows to the lower pump station from a line that is 450 feet out into the lake. The intake structure is located at a depth of 45 feet. The Town also protects its' raw water intake pipe from zebra mussels by adding potassium permanganate. From the lower pumping station the water is pumped from a 16 inch or 8 inch line to the filter plant where it is pre-chlorinated and polymer is added (ED461). It then goes to the Microfloc Trident System (TR-210 A), there it is post-chlorinated prior to distribution.

The NYS Department of Health has completed a source water assessment for the Town of Owasco, based on available information. Possible and actual threats to this drinking water source were evaluated. This 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 sub-surfaces to the lakes. The susceptibility rating is an estimate of the potential for contamination of the water source. It does not mean that the water delivered to consumers is, or will become, contaminated. (See the section of this document "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected in the drinking water.)

As mentioned before, our water is derived primarily from Owasco Lake. The source water assessment has rated this source as having an elevated susceptibility to protozoa and phosphorus due to the amount of agricultural land in the assessment area and the quantity of wastewater discharged from municipal wastewater treatment plants to surface water. In addition, this source water assessment rated Owasco Lake as having an elevated susceptibility to pesticide contamination due to the amount of agricultural land.

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 complete assessment is available for review by calling the Cayuga County Health Department at 315-253-1405.

FACTS AND FIGURES

Our water system serves 3000 people in the Town of Owasco with 1575 service connections and our water serves the Town of Fleming. The total water produced in 2016 was 151,518,636 gallons. The daily average of water treated and pumped into the distribution system was 413,985 gallons per day. Our highest single day was 788,744 gallons. The amount of water delivered to customers was 127,174,884 gallons. This leaves an unaccounted total of approximately 24.3 million gallons. This water was used to flush mains, fight fires, bulk water, and leakage, which accounts for the remainder of the water produced (16 per cent of the total amount produced). In 2016, water customers in the Town of Owasco were charged an average of \$3.35 per 1000 gallons of water and the annual average water charge per user was \$195.01

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, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds.

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.

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 (800-426-4791) or the Cayuga County Health Department at 315-253-1405.

TOWN OF OWASCO

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCL	MCLG	Sources in Drinking Water
BARIUM, TOTAL	No	12/8/16	0.021	mg/L	2	2	Discharge of drilling wastes; discharge from metal refineries, Erosions of natural deposits
NICKEL	No	12/8/16	0.001	mg/L	N/A	0	Geological; used in electroplating, battery production, ceramics
SULFATE	No	12/8/16	13.4	mg/L	250	n/a	Naturally occurring
TRIHALOMETHANES	No	2/10/16 5/11/16 8/9/16 11/9/16	Range 44.3-77.8 Average 71.68	ug/l	80	N/A	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	No	2/10/16 5/11/16 8/9/16 11/9/16	Range 37-57.4 Average 50.06	ug/L	60	N/A	By product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Chemical							
PH	No	Daily	7.7-8.4 SU				
COPPER	No	9/7/16	0.42 ² 0.098-0.53	mg/L	AL = 1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
LEAD	No	9/7/16	2 ³ <1-4	ug/L	AL =15	0	Corrosion of household plumbing systems; erosion of natural deposits
NITRATE	No	12/8/16	1.06	mg/L	10	10	Run off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural

							deposits
GROSS ALPHA	No	12/8/16	0.556	pCi/L	5	0	Erosion of natural deposits.
Physical	Owasco Lake						
Turbidity (NTU)¹	No	Daily	0.1180-0.1612 AVG-0.1353	NTU	TT=95 % of sample s less than 0.3 ntu	N/A	Soil Runoff
Turbidity (NTU)¹ (in distribution system)	No	Daily	0.182-0.523 AVG-0.244	NTU	TT=<5 NTU	N/A	Soil Runoff
Cyanotoxin							
Microcystin Finished water	No	9/22/16 9/25/16 9/26/16 9/27/16 9/28/16 9/29/16 10/5/16 10/7/16 10/8/16 10/10/16	0.17 0.17 0.18 0.15, 0.16 0.16 0.15, 0.19 0.17, 0.21 0.17, 0.19, 0.20, 0.21, 0.22 0.22 0.16	ppb	N/A ⁴	0	Naturally occurring due to algae blooms
Microcystin Raw Water	No	9/12/16- 11/14/16	Range ND-3.7	ppb	N/A	N/A	Naturally occurring due to algae blooms

The Table below lists contaminants that were tested for but not detected

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCL	MCL/G	Sources in Drinking Water
ANTIMONY – TOTAL	No	12/8/16	<0.001	mg/L			
ARSENIC	No	12/8/16	<0.001	mg/L			
ASBESTOS	No	12/15/11	<0.16	MFL			
BERYLLIUM, TOTAL	No	12/8/16	<0.001	mg/L			
CADMIUM, TOTAL	No	12/8/16	<0.001	mg/L			
CHROMIUM	No	12/8/16	<0.001	mg/L			
CYANIDE , TOTAL	No	12/8/16	<0.004	mg/L			
FLUORIDE	No	12/8/16	<0.10	mg/L			
MERCURY, TOTAL	No	12/8/16	<0.0002	mg/L			
SELENIUM, TOTAL	No	12/8/16	<0.001	mg/L			
THALLIUM, TOTAL	No	12/8/16	<0.001	mg/L			
RADIUM 228	No	8/19/2013	<1	pCi/L			
BENZENE	No	12/8/16	<0.50	ug/l			

BROMOBENZENE	No	12/8/16	<0.50	ug/l			
BROMOCHLOROMETHANE	No	12/8/16	<0.50	ug/l			
BROMODICHLOROMETHANE	No	12/8/16	<0.50	ug/L			
BROMOFORM	No	12/8/16	<0.50	ug/L			
BROMOMETHANE	No	12/8/16	<0.50	ug/l			
N-BUTYLBENZENE	No	12/8/16	<0.50	ug/l			
sec-BUTYLBENZENE	No	12/8/16	<0.50	ug/l			
TERT-BUTYLBENZENE	No	12/8/16	<0.50	ug/l			
CARBON TETRACHLORIDE	No	12/8/16	<0.50	ug/l			
CHLOROBENZENE	No	12/8/16	<0.50	ug/l			
CHLOROETHANE	No	12/8/16	<0.50	ug/l			
CHLOROFORM	No	12/8/16	<0.50	ug/L			
CHLOROMETHANE	No	12/8/16	<0.50	ug/l			
2-CHLOROTOLUENE	No	12/8/16	<0.50	ug/l			
4-CHLOROTOLUENE	No	12/8/16	<0.50	ug/l			
ISOPROPYLBENZENE (Cumene)	No	12/8/16	<0.50	ug/l			
4-ISOPROPYLTOLUENE (p-Cymene)	No	12/8/16	<0.50	ug/l			
CIS-1,3-DICHLOROPROPENE	No	12/8/16	<0.50	ug/l			
DIBROMOCHLOROMETHANE	No	12/8/16	<0.50	ug/L			
DIBROMOMETHANE	No	12/8/16	<0.50	ug/l			
1,2 -DIBROMOETHANE (EDB)	No	12/8/16	<0.01	ug/l			
DIBROMO-3-CHLOROPROPANE	No	9/28/15	<0.01	ug/l			
1,2-DICHLOROETHANE	No	12/8/16	<0.50	ug/l			
1,3-DICHLOROETHANE	No	12/8/16	<0.50	ug/l			
1,4-DICHLOROETHANE	No	12/8/16	<0.50	ug/l			
DICHLORODIFLUOROMETHANE	No	12/8/16	<0.50	ug/l			
CIS-1,2-DICHLOROETHENE	No	12/8/16	<0.50	ug/l			
1,1-DICHLOROETHANE	No	12/8/16	<0.50	ug/l			
1,2-DICHLOROETHANE	No	12/8/16	<0.50	ug/l			
1,1-DICHLOROETHENE	No	12/8/16	<0.50	ug/l			
TRANS-1,2-DICHLOROETHENE	No	12/8/16	<0.50	ug/l			
1,2-DICHLOROPROPANE	No	12/8/16	<0.50	ug/l			
1,3-DICHLOROPROPANE	No	12/8/16	<0.50	ug/l			
2,2-DICHLOROPROPANE	No	12/8/16	<0.50	ug/l			
1,1-DICHLOROPROPENE	NO	12/8/16	<0.50	ug/l			
TRANS-1,3-DICHLOROPROPENE	No	12/8/16	<0.50	ug/l			

ETHYLBENZENE	No	12/8/16	<0.50	ug/l			
HEXACHLOROBUTADIENE	No	12/8/16	<0.50	ug/l			
METHYLENE CHLORIDE	No	12/8/16	<0.50	ug/l			
Methyl-tert-Butyl Ether (MTBE)	No	9/28/15	<0.5	ug/l			
NAPHTHALENE	No	12/8/16	<0.50	ug/l			
N-PROPYLBENZENE	No	12/8/16	<0.50	ug/l			
STYRENE	No	12/8/16	<0.50	ug/l			
TOLUENE	No	12/8/16	<0.50	ug/l			
TRICHLOROETHENE	No	12/8/16	<0.50	ug/l			
TRICHLOROFLUOROMETHANE	No	12/8/16	<0.50	ug/l			
1,1,1,2-TETRACHLOROETHANE	No	12/8/16	<0.50	ug/l			
1,1,2,2-TETRACHLOROETHANE	No	12/8/16	<0.50	ug/l			
TETRACHLOROETHENE	No	12/8/16	<0.50	ug/l			
1,2,3-TRICHLOROBENZENE	No	12/8/16	<0.50	ug/l			
1,2,4-TRICHLOROBENZENE	No	12/8/16	<0.50	ug/l			
1,1,2-TRICHLOROETHANE	No	12/8/16	<0.50	ug/l			
1,2,3-TRICHLOROPROPANE	No	12/8/16	<0.50	ug/l			
Dibromo-3-chloropropane	No	9/28/15	<0.01	ug/L			
Trifluralin	No	9/28/15	<0.5	ug/L			
1,2,4-TRIMETHYLBENZENE	No	12/8/16	<0.50	ug/l			
1,3,5-TRIMETHYLBENZENE	No	12/8/16	<0.50	ug/l			
1,1,1-TRICHLOROETHANE	No	12/8/16	<0.50	ug/l			
VINYL CHLORIDE	No	12/8/16	<0.50	ug/l			
M/P XYLENE	No	12/8/16	<1.00	ug/l			
O-XYLENE	No	12/8/16	<0.50	ug/l			
Aldicarb Sulfoxide	No	9/28/15	<1.0	ug/l			
Aldicarb Sulfone	No	9/28/15	<1.0	ug/l			
Oxamyl	No	9/28/15	<1.0	ug/l			
Methomyl	No	9/28/15	<1.0	ug/l			
3 - Hydroxycarbofuran	No	9/28/15	<1.0	ug/l			
Aldicarb (Temik)	No	9/28/15	<1.0	ug/l			
Propoxur	No	9/28/15	<1.0	ug/L			
Carbofuran	No	9/28/15	<1.0	ug/l			
Carbaryl (Sevin)	No	9/28/15	<1.0	ug/l			
Methiocarb	No	9/28/15	<1.0	ug/L			
Hexachlorocyclopentadiene	No	9/28/15	<0.1	ug/L			

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Propachlor	No	9/28/15	<0.5	ug/L			
Trifluralin	No	9/28/15	<0.5	ug/L			
Hexachlorobenzene	No	9/28/15	<0.1	ug/l			
HCH,Alpha	No	9/28/15	<0.5	ug/l			
HCH,Gamma (Lindane)	No	9/28/15	<0.02	ug/l			
HCH,Beta	No	9/28/15	<0.5	ug/l			
HCH,Delta	No	9/28/15	<0.5	ug/l			
Heptachlor	No	9/28/15	<0.04	ug/l			
Aldrin	No	9/28/15	<0.5	ug/l			
Heptachlor Epoxide	No	9/28/15	<0.02	ug/l			
Endosulfan I	No	9/28/15	<0.5	ug/l			
4,4' – DDE	No	9/28/15	<0.5	ug/l			
Dieldrin	No	9/28/15	<0.5	ug/l			
Endrin	No	9/28/15	<0.01	ug/l			
4,4' -DDD	No	9/28/15	<0.5	ug/l			
Endosulfan II	No	9/28/15	<0.5	ug/l			
4,4' – DDT	No	9/28/15	<0.5	ug/l			
Endrin Aldehyde	No	9/28/15	<0.5	ug/l			
Endosulfan Sulfate	No	9/28/15	<0.5	ug/l			
Methoxychlor	No	9/28/15	<0.1	ug/l			
Toxaphene	No	9/28/15	<1.0	ug/l			
Chlordane	No	9/28/15	<0.2	ug/l			
Mirex	No	9/28/15	<0.5	ug/l			
Aroclor 1016	No	9/28/15	<0.08	ug/L			
Aroclor 1221	No	9/28/15	<5.0	ug/l			
Aroclor 1232	No	9/28/15	<0.5	ug/l			
Aroclor 1242	No	9/28/15	<0.3	ug/l			
Aroclor 1248	No	9/28/15	<0.1	ug/l			
Aroclor 1254	No	9/28/15	<0.1	ug/L			
Aroclor 1260	No	9/28/15	<0.2	ug/l			
Dalapon	No	9/28/15	<1.0	ug/L			
Dicamba	No	9/28/15	<0.1	ug/L			
2,4-D	No	9/28/15	<0.1	ug/l			
Pentachlorophenol	No	9/28/15	<0.04	ug/l			
Silvex (2,4,5-TP)	No	9/28/15	<0.2	ug/l			
2,4,5-T	No	9/28/15	<0.1	ug/l			
Dinoseb	No	9/28/15	<0.2	ug/l			
2,4-DB (Butoxone)	No	9/28/15	<1.0	ug/l			
Picloram (Tordon)	No	9/28/15	<0.1	ug/l			
Acifluorfen	No	9/28/15	<0.2	ug/l			
Acetone	No	9/28/15	<10.0	ug/l			
Methyl Ethyl Ketone	No	9/28/15	<10.0	ug/l			
Methyl Isobutyl Ketone	No	9/28/15	<10.0	ug/l			
PESTICIDES							
EPTC (Eptam)	No	10/31/12	<1.0	ug/l			
BUTYLATE (Sutan)	No	10/31/12	<1.0	ug/l			
DEET	No	10/31/12	<1.0	ug/l			

ATRAZINE	No	9/28/15	<1.0	ug/l			
DISULFOTON (Di-Syston)	No	10/31/12	<1.0	ug/l			
DIAZINON (Spectracide)	No	10/31/12	<1.0	ug/l			
ALACHLOR (Lasso)	No	9/28/15	<1.0	ug/l			
METHYL PARATHION	No	10/31/12	<1.0	ug/l			
METOLACHLOR (Dual)	No	9/28/15	<1.0	ug/l			
BUTACHLOR	No	9/28/15	<1.0	ug/l			
METRIBUZIN	No	9/28/15	<1.0	ug/l			
SIMAZINE	No	9/28/15	<1.0	ug/l			
Physical							
Color	No	Daily	<5	Units			
Odor	No	Daily	No Odor Present				

1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement (0.136 NTU) for the year occurred on October 12. State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU.

2 – The level presented represents the 90th percentile of the 10 sites tested. 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 copper values detected at your water system. In this case, 10 samples were collected at your water system and the 90th percentile value was the second highest value, 0.42 mg/L. The action level for copper was not exceeded at any of the sites tested.

3 – The level presented represents the 90th percentile of the ten samples collected. The action level for lead was not exceeded at any of the 10 sites tested.

4 – The United States Environmental Protection Agency 10 day health advisory level for microcystin is 0.3 ppb for children less than or equal to 5 years of age and vulnerable populations and 1.6 ppb for all other people.

Definitions:

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.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. We are required to present the following information on lead in drinking water:

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. The Town of Owasco 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>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2016, our system was in compliance with applicable State 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 (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 firefighting 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 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. Shine a flashlight on the meter head, if a blinking faucet icon is present, you have an intermittent leak. If a stationary faucet icon is present, the leak is continuous.

SYSTEM IMPROVEMENTS

An upgrade was made to the town's SCADA (System Control and Data Acquisition) computer and radio system was made.

CLOSING

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. Please call our office if you have questions.