Source Water Assessment

A source water assessment was prepared through the New York Department of Health in 2002. It evaluated possible and actual threats to Batavia's drinking water sources. 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 into 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 the section "Substances That Could be in 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. Our water is derived from two drilled wells and the Tonawanda Creek. The source water assessment has rated these wells as having a medium-high to very high susceptibility to microbials, nitrates, petroleum products, industrial solvents and other industrial contaminants. These ratings are due primarily to the close proximity of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into environment and are regulated by the state and/or federal government) to the wells and the associated industrial activity in the assessment area. In addition, the wells draw from an unconfined aquifer of unknown hydraulic conductivity. The source water assessment for the Tonawanda Creek has found an elevated susceptibility to contamination for this source of drinking water.

The amount of agricultural lands in the assessment area results in elevated potential for microbials, phosphorus, DBP precursors and pesticides contamination. In addition, the moderate density of CAFOs (Concentrated Animal Feeding Operations) in the assessment may add to the potential for contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water 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 is high enough to further raise the potential for contamination (particularly for protozoa). There is also noteworthy contamination susceptibility associated with other discrete contaminate resources. 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. While the source water assessment rates our Wells and the Tonawanda Creek as being susceptible to microbials, please note that Batavia's water is filtered and disinfected to ensure that the finished water delivered to your home meets New York State's drinking water standards for microbial contamination. A copy of the assessment, including a map of the assessment area, can be obtained by contacting the Genesee County Health Department **(585) 344-2580**, or Scott Allen at City of Batavia Bureau of Maintenance **(585) 345-6315**.

Community Participation

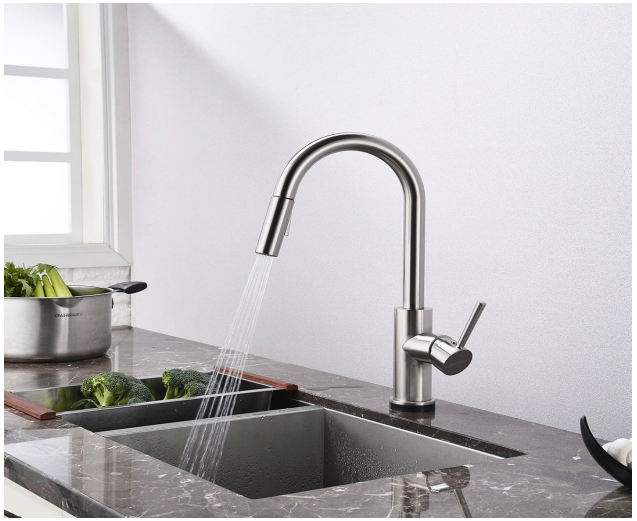
Major decisions concerning your drinking water are made by the Village of Oakfield Board of Trustees, which meets at the Village Office on the second Monday of each month at 6:30 p.m. You are invited to attend these Village Board Meetings to become more informed or voice your opinion in the decision making process affecting your water.

Water Conservation Tips

You can play a role in conserving water and save yourself money in the process 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. Here are a few tips:

- 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 an invisible toilet leak. Fix it and you can 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.

Village of Oakfield
37 Main St., Oakfield, NY 14125
585-948-5862



Annual WATER QUALITY REPORT

Reporting Year 2021

Village of Oakfield
And Town of Oakfield
37 Main Street
Oakfield, NY 14125

PWS ID#NY1800551
Town ID#NY1830042

Tel: 585-948-5862
Email: villageoffice@villageofoakfield.org

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The State requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken**.**

Non-Detected Substances

The following is a complete list of all the substances that we tested for in 2021 but did not detect in our water supply:

Inorganics: Antimony, Arsenic, Berylium, Cadmium, Chromium, Lead, (at system entry point), Selenium, Silver, Thallium, Iron, Manganese, Zinc, Sulfite, Nitrite, Copper, Nitrogen Ammonia.

SOCs: Alachlor, Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Total PCBs (Arochlor), Toxaphene, 2,4,5-TP(Silvex), 2,4-D, Dalapon, Dicamba, Dinoseb, Pentachlorophenol, Pichloram, Atrazine, Benzo(a)pyrene(PAH), bis(2-Ethylhexyl)adipate, Bis(2-ethylhexyl)phthalate, Butachlor, Metolachlor, Metribuzin, Propachlor, Simazine, 3-Hydroxycarbofuran, Aldicarb, Adlicarb sulfone, Aldicarb Sulfoxide, Carbaryl, Carbofuran, Methomyl, Oxamyl, PFOS-PFOA.

VOCs: Benzene, Bromobenzene, Bromochloromethane, Carbon tetrachloride, Chlorobenzene, Chloroethane, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,1-Dichloropropene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,3-Dichloropropane, 1,4-Dichlorobenzene, 2,2-Dichloropropane, 2/4-Chlorotoluene, 4-Isopropyltoluene, Dibromomethane, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, m,p,-Xylene, Methyl tert-butyl ether(MTBE), Methylene chloride, n-Butylbenzene, n-Propylbenzene, o-Xylene, sec-Butylbenzene, Styrene, tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, Vinyl chloride, Proypolene Glycol

Definitions

90th percentile *The levels reported for lead and copper represent the 90th percentile of the total number of 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 lead and copper values detected at your water system.*

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

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

MCLG (Maximum Contaminant Level Goal): *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.*

MRDL (Maximum Residual Disinfectant Level) *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.*

MRDLG (Maximum Residual Disinfectant Level Goal) *The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLDs do not reflect the benefits of the use of disinfectants to control microbial contamination.*

NA*: Not applicable.*

ND: (Not detected): *Indicates that the substance was not found by laboratory analysis.*

NTU (Nephelometric Turbidity Units): *Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.*

ppb (part per billion): *One part substance per billion parts water (or micrograms per liter).*

ppm (parts per million): *One part substance per million parts water (or milligram per liter).*

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

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW/HIGH	VIOLATION	TYPICAL SOURCE DETECTED
City of Batavia							
Cyanide (ppm)	8/3/21	0.2	0.2	0.015	NA	No	Can be produced in nature from certain bacteria, fungi, and algae
Nickel (ppm)	8/3/21	NA	NA	0.001	NA	No	Runoff from fertilizer use; Erosian of natural deposits
Chromium (ppm)	8/3/21	0.1	0.1	0.001	NA	No	A trace element that is naturally present in many foods.
Chloride (ppm)	8/3/21	250	NA	135	NA	No	Naturally occurring or indicative of road salt contamination. Chlorides are in nature as salts of sodium, potassium and calcium; potassium chloride is used in the production of farming fertilizers.
Barium (ppm)	8/3/21	2	2	0.014	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
1.4 Dioxane (ppb)	Quarterly	1	NA	.021	.021	No	Released from industrial & commercial sources and is associated with hazardous waste sites
Chlorine Residual (ppm)	Hourly	[4]	1.3	1.03-Avrg.	0.63/1.28	No	By-product of drinking water chlorination.
Fluoride (ppm)	8/3/21 Daily	2.2 2.2	NA NA	0.59 Yearly Avrg. 0.73	NA 0.42-1.07	No No	Erosion of natural deposits; Water additive to promote strong teeth; Discharge (from fertilizer and aluminum factories.
Nitrate as N (ppm)	8/3/21	10	10	.65	NA	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Sulfate (ppm)	8/3/21	250	NA	33.8	NA	No	Naturally occurring.
Total Organic Carbon (TOC) (ppm)	Monthly	TT	NA	1	ND-2.1	No	Organic contaminants (natural organic substances, insecticides, Herbicides and (Monthly) agricultural chemicals) enter waterways in rainfall run off; Domestic and industrial wastewaters also contribute organic contaminants in various amounts.
Sodium (ppm)	8/3/21	TT	NA	63.9	NA	No	Naturally occurring; Road salt, Water softeners; Animal waste.
Alkalinity as $CaCO^3$ (ppm)	8/3/21	NA	NA	40.5	NA	No	Natural minerals; lime softening process
Calcium (ppm)	8/3/21	NA	NA	16.2	NA	No	Mineral deposits
Magnesium (ppm)	8/3/21	NA	15	19.2	NA	No	Dissolution of nickel in well water.
Haloacetic Acids (ppb)	Quarterly	60	60	16.8	5.2-27.8	No	By-product of drinking water disinfection
TTHMs[6] (ppb)	Quarterly	80	80	45.9	18.3-64	No	By-product of drinking water disinfection
Turbidity[1] (NTU)	Daily	TT≤1.0	NA	0.01	0-0.92	No	Soil runoff.
Turbidity (lowest monthly Percent of samples meeting Limits) (NTU)	Daily	TT≤0.3 NTU[5]	NA	100%	NA	No	Soil runoff-July 2013 found the highest turbidity levels, but they were still well within tolerance levels of below 5.0 NTU.
Turbidity [Distrib. Sym] (NTU)	Weekly	<5	NA	0.053	0.01-0.80	No	Cloudiness in water main disruptions and breaks. *(See section on water main flushing)*
Copper (ppm)	7/17/19	1.3	1.3	0.0327	ND-0.118	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppm)	7/17/19	15	0	0.0032	ND-0.0141	No	Corrosion of household plumbing systems; erosion of natural deposits
Village of Oakfield							
Copper[3] (ppm)	9/8/21	1.3	1.3	.08	.009-28	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead[4] (ppm)	9/8/21	0.015	0	.001	ND-0.002	No	Corrosion of household plumbing systems; erosion of natural deposits
TTHMs[6] (ppb)	2021/qrtly	80	80	59.5	37-75	No	By-product of drinking water disinfection
Haloacetic Acids [6](ppb)	2021/qrtly	60	60	14.5	10-20	No	By-product of drinking water disinfection
Town of Oakfield							
Copper[3] (ppm)	9/8/21	1.3	1.3	.05	.005-14	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead[4] (ppm)	9/8/21	0.015	0	.001	ND-0.001	No	Corrosion of household plumbing systems; erosion of natural deposits
TTHMs[6] (ppb)	2021/qrtly	80	80	70	43-106	No	By-product of drinking water disinfection
Haloacetic Acids [6](ppb)	2021/qrtly	60	60	17.75	12-25	No	By-product of drinking water disinfection
Chlorine Residual	Daily	4	1.3	1.0	0.35-1.21	No	By-product of drinking water chlorination.

HOW IS OUR WATER TREATED AND PURIFIED?

Batavia's well water is very clear and requires little treatment other than softening. Soft water cleans better, and less soap is needed to wash effectively.

Tonawanda Creek water enters the water plant through mechanical screens. The screens prevent creek debris from getting into the plant. Creek water is then mixed with well water in the flash mixers where water treatment chemicals are added. Ferric sulfate is added as a coagulant, neutralizing the charges on particles suspended in the water, and thus allowing them to clump together and drop out. Calcium oxide, also called lime, is added to the raw water to soften it. Lime will cause compounds of calcium, magnesium, and other minerals to begin to precipitate or drop out of the water.

The water is then sent out to the softening tanks where paddles churn the chemically treated water forming a sludge layer of muddy water. The sludge is made up of added chemicals and compounds in the water, including dirt, clay, silt and microorganisms. Most of these impurities will now drop out of the water.

The next step is the settling basin where the water's velocity is reduced so that suspended matter can drop to the bottom. Carbon dioxide is added at this point to adjust the pH. Chlorine is added as a disinfectant, which will prevent growth of organisms in your drinking water.

From the settling basin, the water is directed to 12 rapid sand filters. The filters allow the water through while holding back virtually any remaining particles. The water is then very clear, usually having a finished turbidity of around 0.02 NTU. Also a small amount of fluoride (.07-.09 mg/l is added to promote good oral health.

Finally, we add a small amount of polyphosphate corrosion inhibitor to prevent minerals dissolved in the water from precipitating out onto your pipes. Pumps push the finished water out into the distribution system, into two elevated tanks and to your homes and businesses, at a pressure of around 70 pounds per square inch. When it reaches the Village of Oakfield's 500,000 gallon tank, the booster chlorination pump raises the residual to 1.1 ppm.

Turbidity is a measure of the cloudiness of the water. It is tested because it is a good indicator of the effectiveness of the filtration system. Our highest single turbidity measurement for the year occurred as indicated in the table. 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. (Note that TT is dependent upon filtration method: conventional, 0.3 NTU; slow sand, 1.0 NTU; or diatomaceous earth filtration 1.0 NTU.) Although the month as indicated In the Date column was the month when we had the fewest measurements meeting the treatment technique for turbidity, the levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation. [2]The highest measurement of the monthly average distribution results for the year occurred as indicated in the table. [3]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 or below it. The 90th percentile is equal to or greater than 90% of the copper values detected in Village and Town of Oakfield . Ten samples were collected in 2021. The Action Level of 1.3 ppm for copper was not exceeded at any of the sites tested. [4]The level listed represents the 90th percentile of the 10 samples collected in 2018. The Action Level for lead was 0 of the 10 sites tested. [5]Water containing more than 20 ppm of sodium should not be used for drinking by people on severely restricted sodium drew. Water containing more than 270 ppm of sodium should not be used for drinking by people on moderately restricted sodium diets. [6]This level represents the highest locational running annual average calculated from data collected.

Fluoridation of Our Water

Our system is one of the many New York water utilities providing drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the U.S. Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal level of 0.7 mg/L. To ensure optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. In 2021 the fluoride levels in your water were optimal range over 87% of the time. None of the monitoring results showed any levels of fluoride that approach the 2.2 ppm MCL for fluoride.

System Improvements

The Village is utilizing an antenna based reading signal to read residential meters on an daily basis, allowing quicker response time for leaks and potential issues. A more aggressive hydrant flushing program has been implemented to keep water quality high and ensure all hydrants are working properly. The Village tests for trihalomethane levels quarterly to show the success of the hydrant flushing program. The Village will be replacing all SR-2 residential meters to new low lead compliant ones and to help reduce water loss and track usage more accurately.

The sample site for the Village is 37 Main St. and 71 S. Main St.

The sample site for the Town is 3556 Lockport Rd.

Meeting the Challenge

We are once again proud to present our annual water *quality report covering all testing performed between January 1 and December* 31, 2021. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation and community education while continually to serve the needs of all our water users. Please share with us your thoughts or concerns about the information in this report. After all, well informed customers are our best allies. For more information about this report, or any questions relating to your drinking water, please Tom Mikolajczyk, DPW Supervisor at **(585) 331-3758** for both Village of Oakfield and Town of Oakfield.

FACTS & FIGURES

The Village of Oakfield purchased 162,854 million gallons of water during 2021. The Village serves a population of 1679 and supplies water to about 1033 connections with 662 in the Village and 371 in the Town. A total of 66 million gallons (40%) was not metered and unaccounted for. This is from hydrants, village maintenance, parks, or water lost in leaks or breaks. The charge for water billed in 2021 was $6.56 per thousand gallons. As in the past years the tap water met all state drinking water regulations and Health Department standards. The Village of Oakfield did not have any reporting violations throughout the year.

Important Health Information

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. Immunocompromised 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 **(800) 426-4791.**

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. We are responsible for providing high-quality drinking water, but we 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 **(800) 426-4791** or at **www.epa.gov/safewater/lead**.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the supply of fresh water with sufficient disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, , allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

The Village flushes hydrants every year, to ensure proper operation and the best water quality.

The Town usually flushes hydrants monthly and exercises all hydrants yearly.

Where Does My Water Come From?

The Village of Oakfield purchases water wholesale from the Genesee County Water Authority, which comes from two sources, the City of Batavia and Monroe County Water Authority (MCWA). The City of Batavia receives its water from two sources. Two wells located at Cedar Street draw water from the Tonawanda Valley Watershed, one of the largest underground aquifers in New York State. The well water is exceptionally clear with an average turbidity of less than 0.05 NTU. However, well water in this area is hard (containing dissolved minerals) and requires softening to bring it to a condition most residents find acceptable. The Tonawanda Creek is the other source of water. While the creek has provided an adequate quantity and quality of water for more than 90 years, it is a surface water source and is therefore susceptible to rapid changes in quality. Runoff can quickly increase levels of turbidity, making the creek water less cost-effective to process. Creek water is used to supplement our wells and as a back up water supply. The second sources, MCWA receives its water from Lake Ontario, Corfu NY well supply & Lake Erie, purchased thru Erie County Water Authority.

Substances That Could Be in Water

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: **Microbial Contaminants; Inorganic Contaminants; Pesticides and Herbicides; Organic Chemical Contaminants; and Radioactive Contaminants.**

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 water poses a health risk. In order to ensure that tap water is safe to drink the State and the U.S. EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Health Department and the U.S. FDA's regulations establish limits for contaminants in bottled water that must provide the same protection for public health. 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 Genesee County Health Department at **(585) 344-2580 ext. 5555**.

MCWA Water Quality Summary Table

2021 Calendar Year Results -

Detected Substances:	Supply Source -			MCWA Production Water:		MCWA Purchased Water:		Likely Sources in Drinking Water:	Water Quality Violation:
				SWTP & WWTP -	CWTP -	Rochester -	ECWA -		
	Source - (Source Type)			Lake Ontario (Surface Water)	Well Field (Groundwater)	Hemlock Lake (Surface Water)	Lake Erie (Surface Water)		
	Units	MCLG	MCL	Range of detected values:					Yes or No
Barium	mg/L	2	2	0.018 - 0.023	0.09 - 0.1	0.016	0.02	Erosion of natural deposits	No
Chloride	mg/L	NA	250	26 - 58	41 - 82	38 - 40	20 - 23	Naturally occurring	No
Fluoride	mg/L	NA	2.2	0.34 - 0.95	0.11 - 0.14	0.09 - 0.77	0.1 - 0.7	Naturally occuring & additive for dental health	No
Nitrate	mg/L	10	10	ND - 0.35	ND	ND	0.29	Erosion of natural deposits	No
1, 4-Dioxane	µg/L	NA	1	ND	ND	ND	ND - 0.086	Environmental releases from textile sources	No
Perfluorooctanesulfonic acid	ng/L	NS	10	ND - 2.8	ND	ND	ND	Environmental releases from textile sources	No
Perfluorooctanoic acid	ng/L	NS	10	ND - 2.3	ND	ND	ND	Environmental releases from textile sources	No
Sodium	mg/L	NA	NS	15 - 17	77 - 100 *	20 - 21 *	12 - 14	Naturally occurring	No
Sulfate	mg/L	NA	250	26 - 46	25 - 46	11 - 12	19 - 20	Naturally occurring	No
Turbidity - Turbidity is a measure of cloudiness or clarity of the water. Turbidity has no health effects. MCWA monitors turbidity because it is a good indicator of the effectiveness of our filtration systems and water quality. State regulations require that turbidity must always be below 1 NTU in the combined filter effluent. The regulations also require that 95% of samples collected from the entry point have measurements below 0.3 NTU and the highest monthly average for distribution system samples be below 5 NTU. Averages, annual ranges and lowest monthly percentages are listed.									
Turbidity - Entry Point	NTU	NA	TT	0.04 (0.02 - 0.11) 100% < 0.3 NTU	NR	0.05 (0.02 - 0.1) 100% < 0.3 NTU	0.11 (0.04 - 0.172) 100% < 0.3 NTU	Soil Runoff	No
Turbidity - Distribution	NTU	NA	5	2.91 - 6/10/2021	1.43 - 2/09/2021	2.91 - 6/10/2021	1.43 - 2/09/2021	Soil Runoff	No
Microbial Parameters - No more than 5% of monthly samples can be positive. The highest monthly % positive and number of samples is listed. Since we had 5 total coliform positive samples in September in the town of Darien, we triggered a Level 1 Assessment. This assessment is to assess the coliform contamination and take corrective action against defects in the water system.									
Total Coliform Bacteria	NA	0	TT	None Detected.	13.2% - September 5 samples	None Detected.	13.2% - September 5 samples	Naturally occurring	No
Disinfectant and Disinfectant By-products (DBPs) - Chlorine has a MRDL (Maximum Residual Disinfectant Level) and MRDLG (MRDL Goal) rather than an MCL and MCLG (Averages and ranges are listed). For the DBPs (Total Trihalomethanes and Haloacetic Acids) the annual system averages, ranges for all locations, and highest locational running annual averages for all locations are listed.									
Chlorine Residual - Entry Point	mg/L	NA	MRDL = 4	1.16 (0.34 - 1.34) 0.81 (0.48 - 1.05)	0.98 (0.58 - 1.59)	0.91 (0.46 - 1.67)	1.57 (1.25 - 1.91)	Additive for control of microbes	No
Chlorine Residual - Distribution	mg/L	NA	MRDL = 4	0.57 (ND - 2.7)	0.56 (ND - 1.41)	0.57 (ND - 2.7)	0.56 (ND - 1.41)	Additive for control of microbes	No
Total Trihalomethanes (TTHMs)	µg/L	NA	80	36.1 (7.9 - 64) Max. LRAA = 49	44.3 (22 - 66) Max. LRAA = 58.8	36.1 (7.9 - 64) Max. LRAA = 49	44.3 (22 - 66) Max. LRAA = 58.8	Byproduct of water chlorination	No
Haloacetic Acids (HAAs)	µg/L	NA	60	10.9 (ND - 30) Max. LRAA = 24	6.1 (ND - 14) Max. LRAA = 7.2	10.9 (ND - 30) Max. LRAA = 24	6.1 (ND - 14) Max. LRAA = 7.2	Byproduct of water chlorination	No

Lead and Copper - 90% of samples must be less than the Action Level (AL). The 90th Percentile, the number of samples exceeding the AL, and the range of results are listed.									
Copper - Customer Tap Samples	mg/L	1.3	AL = 1.3	0.130 (None) 0.008 - 0.47	0.142 (None) 0.004 - 0.29	0.130 (None) 0.008 - 0.47	0.142 (None) 0.004 - 0.29	Corrosion of household plumbing	No
Lead - Customer Tap Samples	µg/L	0	AL = 15	3.2 (Two) ND - 130	0.63 (None) ND - 2.8	3.2 (Two) ND - 130	0.63 (None) ND - 2.8	Corrosion of household plumbing	No

***** There is no MCL set for sodium in water. However, EPA recommends that 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

Unregulated Contaminant Monitoring (UCMR4) - The EPA issues a new list of no more than 30 unregulated contaminants to be monitored by public water systems. This provides baseline occurrence data that the EPA combines with toxicological research to make decisions about future drinking water regulations. UCMR4 was published in 2016 and required public water systems to participate in monotoring between 2018 - 2020. MCWA performed UCMR4 monitoring in 2018, 2019, and 2020.

Alcohols, Indicators, Metals, Pesticides, SVOCs, and Cyantoxins:	Entry Points:			Lake Ontario Supplies -		Purchased Water Supplies -		Groundwater Supply -	Water Quality Violation:
	Units	MCL		SWTP	WWTP	Rochester	ECWA	CWTP	Yes or No
Manganese	µg/L	NA		ND	ND	ND	3.5 (0.77 - 6.3)	8.0 (6 -10)	NA
Bromide	µg/L	NA		36.3 (36 - 37)	36 (34 - 37)	ND - 22	NR	NR	NA
Total Organic Carbon	mg/L	NA		2.3 (2 - 2.4)	2.2 (1.9 - 2.3)	2.48 - 2.68	NR	NR	NA
HAA Groups:	Distribution System:			Combined System Summary:					
Total HAA (5)	µg/L	60		14.1 (0.74 - 31)					No
Total HAA (6) Br	µg/L	NA		7.4 (ND - 12)					NA
Total HAA (9)	µg/L	NA		21 (7.4 - 42)					NA
Bromochloroacetic acid	µg/L	NA		2.2 (ND - 4.4)					NA
Bromodichloroacetic acid	µg/L	NA		3.1 (ND - 5.9)					NA
Chlorodibromoacetic acid	µg/L	NA		1 (ND - 1.6)					NA
Dibromoacetic acid	µg/L	NA		0.5 (ND - 1.4)					NA
Dichloroacetic acid	µg/L	NA		6 (0.74 - 15)					NA
Trichloroacetic acid	µg/L	NA		7.5 (ND - 15)					NA

Key Terms and Abbreviations used:

MCL = Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as possible.
MCLG = Maximum Contaminant Level Goal - The level of a contaminant below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MRDL = Maximum Residual Disinfectant Level - 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.
MRDLG = Maximum Residual Disinfectant Level Goal - 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.
LRAA = Locational Running Annual Average - The annual average contaminant concentration at a monitoring site.
pCi/L = picoCuries per liter.
TT = Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.
AL = Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
ND = Not Detected - Absent or present at less than testing method detection level. All testing methods are EPA approved with detection limits much less than the MCL.
NA = Not applicable. **NR** = Not required / Not reported. **NS** = No standard.
mg/L = milligram (1/1,000 of a gram) per liter = ppm = parts per million.
µg/L = microgram (1/1,000,000 of a gram) per liter = ppb = parts per billion.
ng/L = nanogram (1/1,000,000,000 of a gram) per liter = ppt = parts per trillion.
NTU = Nephelometric Turbidity Unit - A measurement of water clarity.
CWTP = Corfu Water Treatement Plant.
SWTP = Shoremnt Water Treatement Plant.
WWTP = Webster Water Treatment Plant.
MCWA = Monroe County Water Authority. **Rochester** = City of Rochester. **ECWA** = Erie County Water Authority.

Compounds Tested For But Not Detected:

Benzene
Bromobenzene
Bromochloromethane
Bromomethane
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloromethane
2-Chlorotoluene
4-Chlorotoluene
Dibromomethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1 Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
cis-1,2-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
1,3-Dichloropropane
2,2-Dichloropropane
1,1-Dichloropropene
1,3-Dichloropropene(cis)
1,3-Dichloropropene(trans)
Ethylbenzene
Hexachlorobutadiene
p-Isopropyltoluene
Methyl Tert-butyl ether (MTBE)
Methylene Chloride (Dichloromethane)
n-Propylbenzene
Styrene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethene
Toluene

1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
1,2,3-Trichloropropane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
Vinyl Chloride
o-Xylene
m, p-Xylene
Total Xylene
Alachlor
Aldicarb
Aldicarb sulfoxide
Aldicarb sulfone
Atrazine
Carbofuran
Chlordane
Dibromochloropropane
2, 4-D
Endrin
Ethylene Dibromide
Heptachlor
Heptachlor Epoxide
Lindane (gamma-BHC)
Methoxychlor
p,p' DDD
p,p' DDE
p,p' DDT
PCB's Total
Pentachlorophenol
Toxaphane
2, 4, 5-TP (Silvex)
Aldrin
Benzo(a)pyrene
Butachlor
Carbaryl
Dalapon

Di(2-Ethylhexyl) Adipate
Di(2-Ethylhexyl) phthalate (DEHP)
Dicamba
Dieldrin
Dinoseb
Diquat
Endothall
Glyphosate
Hexachlorobenzene
Hexachlorocyclopentadiene
3-Hydroxycarbofuran
Methomyl
Metolachlor
Metribuzin
Oxamyl (vydate)
Perchlorate
Picloram
Propachlor
Simazine
2, 3, 7, 8-TCDD (Dioxin)
Antimony
Beryllium
Chromium
Cyanide
Mercury
Nickel
Nitrite
Selenium
Silver
Thallium
Zinc
Surfactants (Foaming Agents)
Cryptosporidium
Giardia Lamblia
Germanium
alpha-Hexachlorocyclohexane
Chlorpyrfos
Dimethipin
Ethoprop
Oxyfluoren

Profenofos
Tebuconazole
Permethrin, cis & trans
Tribufos
Butylated hydroxyanisole
o-Toluidene
Quinoline
1-Butanol
2-Methoxyethanol
2-Propen-1-ol
Monobromoacetic acid
Monochloroacetic acid
Tribromoacetic acid
N-ethyl Perflurooctanesulfonamidoacetic acid
N-methyl Perflurooctanesulfonamidoacetic acid
Perfluorobutanesulfonic acid
Perfluorodecanoic acid
Perfluorododecanoic acid
Perfluoroheptanoic acid
Perfluorohexanoic acid
Perfluorononoic acid
Perfluorotetradecanoic acid
Perfluorotridecanoic acid
Perfluoroundecanoic acid
Total Microcystin
Microcystin-LA
Microcystin-LF
Microcystin-LR
Microcystin-LY
Microcystin-RR
Microcystin-YR
Nodularin
Anatoxin-A
Cylindrospermopsin
Nodularin
Gross Alpha Particles
Radium 226
Radium 228
Combined Radium 226/228
Uranium

For more information on MCWA's water quality monitoring program call Customer Service at 585-442-7200 or visit our website at www.mcwa.com.

TOWN OF BATAVIA – SAMPLING RESULTS

SUBSTANCE [UNITS]	MCL [MRDL]	MCLG	HIGHEST RUNNING ANN. AVG[1]	RANGE Low-High	DATE SAMPLED	MEETS EPA STANDARDS
Chlorine Residual [mg/L]	[4]	N/A	N/A	0.03 - 1.32	2021 (few times per week)	Yes
Haloacetic Acids (HAAs) [ug/L] *Batavia Consolidated PWS*	60	N/A	14.3	11.1 – 20.6	2021 (quarterly)	Yes
Haloacetic Acids (HAAs) [ug/L] *Alexander WD#2 PWS*	60	N/A	11.5	9.8 – 13.7	2021 (quarterly)	Yes
Haloacetic Acids (HAAs) [ug/L] *Townline Water PWS*	60	N/A	17.3	12.5 – 19.2	2021 (quarterly)	Yes
Haloacetic Acids (HAAs) [ug/L] *Alabama WD#2 PWS*	60	N/A	13.4	9.9 – 19.2	2021 (quarterly)	Yes
Haloacetic Acids (HAAs) [ug/L] *Elba WD#2 PWS*	60	N/A	16.6	11.1 – 21.1	2021 (quarterly)	Yes
Haloacetic Acids (HAAs) [ug/L] *Bethany WD#4 PWS*	60	N/A	N/A	8.8	8/4/2021	Yes
Total Trihalomethanes (TTHMs) [ug/L] *Batavia Consolidated PWS*	80	N/A	51.8	25.5 – 62.3	2021 (quarterly)	Yes
Total Trihalomethanes (TTHMs) [ug/L] *Alexander WD#2 PWS*	80	N/A	78.7	60.6 – 80.2	2021 (quarterly)	Yes
Total Trihalomethanes (TTHMs) [ug/L] *Townline Water PWS*	80	N/A	57.9	38.4 – 68.0	2021 (quarterly)	Yes
Total Trihalomethanes (TTHMs) [ug/L] *Alabama WD#2 PWS*	80	N/A	76.2	57.9 – 88.9	2021 (quarterly)	Yes
Total Trihalomethanes (TTHMs) [ug/L] *Elba WD#2 PWS*	80	N/A	61.4	40.3 – 68.7	2021 (quarterly)	Yes
Total Trihalomethanes (TTHMs) [ug/L] *Bethany WD#4 PWS*	80	N/A	N/A	72.6	8/4/2021	Yes
SUBSTANCE [UNITS]	AL	SITES SAMPLED	SITES DETECTED	RANGE Low-High	DATE SAMPLED	MEETS EPA STANDARDS
Asbestos Fibers [MFL] *Batavia Consolidated PWS*[2]	7.0	6	1	ND-0.2	12/29/14	Yes
SUBSTANCE [UNITS]	AL	MCLG	90TH %TILE RESULT[3]	RANGE Low-High	DATE SAMPLED	MEETS EPA STANDARDS
Copper [mg/L]	1.3	1.3	0.356	0.0061 – 1.25	July 2021	Yes
Lead [mg/L]	0.015	0	0.0035	ND-0.0078	July 2021	Yes

[1]These levels represent the highest locational running annual average calculated from data collected.
[2]Alexander WD#2, Townline Water, Alabama WD#2, and Elba WD#2 PWS's do not have asbestos cement pipes in the system and are waived from asbestos fibers sampling.
[3]The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system.