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# City of Batavia Water Bureau Annual Water Quality Report 2021

## Introduction

To comply with state regulations the City of Batavia issues our Annual Water Quality Report to inform the customers about the quality of their drinking water. A printed copy of this report is available upon request by calling 585-345-6400 Ext. 2

## Meeting the Challenge

Once again we are 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 continuing to serve the needs of all our water users.

For more information about this report or for any questions relating to your drinking water, please call Michael Ficarella, Superintendent of Water and Wastewater, at (585) 345-6324 or Nelson Weibel, Chief Water Plant Operator, at (585) 345-6400 Option-2.

## Where Does My Water Come From

Batavia receives its water from two sources. Two wells are located on Cedar St. that draw water from the Tonawanda Valley Watershed, one of the largest underground aquifers in New York State. Our 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 that customers find acceptable. The Tonawanda Creek is our other source of water. While the creek has provided us with an adequate quantity and quality of water for over 90 years, it is a surface water source and is susceptible to rapid changes in quality. Weather events and runoff can quickly increase turbidity, making the creek water harder and less cost-effective to treat. Creek water is used to supplement our wells and serve as a backup supply. In December of 2020, the City started purchasing water from Monroe County Water Authority on the east end in addition to city water to help supply the Agricultural Park.

## How is My Water Treated and Purified

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

Tonawanda Creek enters the water plant mechanical screens that prevent creek debris from getting into the water plant. The creek water is mixed with well water in a flash mixer where water treatment chemicals are added. Ferric sulfate is added as a coagulant to neutralize the charges on particles suspended in the water, allowing them to clump together and drop out. Calcium Oxide is added to the raw water to soften it. Lime will cause calcium magnesium and other minerals to precipitate or drop out of the water.

The water is then sent to large softening tanks where it is gently stirred by large paddles. The stirring allows the chemically treated water to form a sludge layer. The sludge is made up of chemicals we added to the water as well as compounds in the water including, clay, silt, dirt, and microorganisms and other minerals that allows most of the impurities to now drop out of the water.

The next step is the settling basin, where the water's velocity is reduced so that suspended particles can drop to the bottom and be removed. We add carbon dioxide at this point to reduce the pH, and then we add chlorine to disinfect the water as well as prevent the growth of organisms in the drinking water.

From the settling basin, the water is directed to 12 large rapid sand filters. The sand filters let the water through while holding back virtually any remaining particles, producing a very clear finished water usually with a turbidity of around 0.02 NTU. At this point, we also add a small controlled amount fluoride (0.07-0.09 mg/l) to help prevent cavities and promote good oral health.

Finally, we add a small amount of polyphosphate corrosion inhibitor to prevent minerals dissolved in the water from precipitating onto your pipes. Pumps then push our finished water out into the distribution system and two elevated tanks, and into your homes and businesses, at pressure of about 70 pounds per square inch.

## Fluoridation of our Water

Our system is one of the many water system throughout New York State with a controlled, low level of fluoride for consumer dental health protection. According to the United States Center for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range of 0.7 to 1.0 ppm. To ensure that the fluoride supplement in your water provides optimal dental health protection, the State Department of health requires that we monitor the fluoride level on a daily basis. During the reporting year, monitoring showed fluoride levels in your water were in the 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.

## Important Health Information

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 healthcare providers 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 will be higher than at other homes in the community because 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 two 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](http://www.epa.gov/safewater/lead).

## Substances That Could Be In Water

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and 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.

Drinking water, including bottled water, may be reasonably expected to contain a small amount of some contaminants. The presence of contaminants does not necessarily indicate that the 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, which limit the amount of certain contaminants in water provided by public water systems. The State Health Department and the FDA regulations establish limits for contaminants in bottled water, which 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.

## City of Batavia 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 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 the 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 land in the assessment area results in elevated potential for microbials, phosphorus, DBP precursors, and pesticides contamination. In addition, the moderate density of CAFOs (Concentration 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 in 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 contaminant resources; these facility types include mines. Finally, it should be noted that relatively high flow velocities makes 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 at (585) 344-2580 or Scott Allen at the City of Batavia Bureau of Maintenance at (585) 345-6315.

**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.

## Source of Substances in Water

1.4 Dioxane: Released from industrial or commercial sources and is associated with hazardous waste sites.

Alkalinity: Natural minerals, Lime softening

Barium: Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Calcium: Mineral deposits.

Chloride: Naturally occurring or indicative of road salt contamination.

Chlorine Residual: Water additive used to control microbes.

Chromium: A trace element that is naturally present in many foods.

Copper: Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.

Cyanide: Can be produced in nature from certain bacteria , fungi, and algae.

Fluoride: Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer

Haloacetic Acids (HAAs): By-product of drinking water disinfection needed to kill harmful organisms.

Lead: Corrosion of household plumbing systems; Erosion of natural deposits.

Magnesium: Dissolution on nickel in well water.

Manganese: Naturally occurring; Indicative of landfill contamination.

Nickel: Runoff from fertilizer use; Erosion of natural deposits.

Nitrate: Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Sodium: Naturally occurring; Road salt; Water softeners; Animal waste.

Sulfate: Naturally occurring.

Total Organic Carbon: Naturally present in the environment.

Total Trihalomethanes (TTHMs): By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.

Turbidity: Soil Runoff.

### Key Terms and Abbreviations

**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 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 contaminants.

**NA** – Not applicable

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

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

**ppb (parts 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 milligrams per liter).

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

## City of Batavia –Water Quality Table

Substance (Unit of measure)	Date Sampled	MCL (MRDL)*	MCLG (MRDLG)	Amount Detected	Range Low High	Violation
1,4 Dioxane (ppb)	Quarterly	1	NA	0.021	0.021	No
Cyanide (ppm)	8/3/2021	0.2	0.2	0.015	NA	No
Nickel (ppm)	8/3/2021	NA	NA	0.001	NA	No
Chromium (ppm)	8/3/2021	0.1	0.1	0.001	NA	No
Chloride (ppm)	8/3/2021	250	NA	135	NA	No
Barium (ppm)	8/3/2021	2	2	0.014	NA	No
Chlorine Residual (ppm)	Hourly	4*	1.3*	1.03-Avrg.	0.63/1.28	No
Fluoride (ppm)	8/3/2021	2.2	NA	0.59	NA	No
Fluoride (ppm)	Daily	2.2	NA	Yearly Ave. 0.73	0.42-1.07	No
Nitrate as N (ppm)	8/3/2021	10	10	0.65	NA	No
Sulfate (ppm)	8/3/2021	250	NA	33.8	NA	No
Total Organic Carbon (TOCs) (ppm)	Monthly	TT	NA	1	ND-2.1	No
Sodium (ppm)	8/3/2021	TT	NA	63.9	NA	No
Alkalinity as CaCO <sub>3</sub> (ppm)	8/3/2021	NA	NA	40.5	NA	No
Calcium (ppm)	8/3/2021	NA	NA	16.2	NA	No

Magnesium (ppm)	8/3/2021	NA	15	19.2	NA	No
Haloacetic Acids (ppb)	Quarterly	60	60	16.8	5.2-27.8	No
Total Trihalomethanes (TTHM) (ppb)	Quarterly	80	80	45.9	18.3-64	No
Turbidity (NTU)	Daily	TT<1.0	NA	0.01	0-0.92	No
Turbidity (lowest monthly percent of samples meeting limits (NTU)	Daily	TT<0.3NTU	NA	100%	NA	No
Turbidity (Distribution System) (NTU)	Weekly	<5	NA	0.053	0.01-0.80	No

## Detected Substances

Substance (Unit of measure)	Date Sampled	AL	MCLG	Amount Detected 90%(percentile)	Range Low -High	Sites Above AL Total Sites	Violation
Copper (ppm)	7/17//2019	1.3	1.3	0.0327	ND-0.118	0-30	No
Lead (ppm)	7/17/2019	15	0	0.0032	ND-0.0141	0-30	No

The City of Batavia Water is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator that your drinking water meets health standards. During the months of January through December 2021, we did not fully monitor or test for mercury and therefore cannot be sure of the quality of your drinking water during that time.

## 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, Beryllium, Cadmium, 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, Picloram, Atrazine, Benzo(a)pyrene(PAH), bis(2-Ethylhexyl)adipate, Bis(2-ethylhexyl)phthalate, Butachlor, Metolachlor, Metribuzin, Propachlor, Simazine, 3-Hydroxycarbofuran, Aldicarb, Aldicarb sulfone, Aldicarb sulfoxide, Carbaryl, Carbofuran, Methomyl, Oxamyl, PFOS-PFOA.

**POCs:** 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, Propylene Glycol.

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. The highest measurement of the monthly average distribution results for the year occurred as indicated in the table. The level presented represents the 90th percentile of the 30 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 Batavia. Thirty samples were collected in 2019. The Action Level of 1.3 ppm for copper was not exceeded at any of the sites tested. The level listed represents the 90th percentile of the 30 samples collected in 2019. The Action Level for lead was 0 of the 30 sites tested. TT=95% of samples are less than or equal to 0.3 NTU. Water containing more than 20 ppm of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 ppm of sodium should not be used for drinking by people on moderately restricted sodium diets. This level represents the highest locational running annual average calculated from data collected.

## Facility Modifications and Improvements for 2021

In 2021, the City of Batavia water plant team refurbished one of our large sand water filters, removing all of the old media and sand, cleaning, and inspecting the filter box then sanitizing it and putting in new media and sand. We emptied one of our large softeners for cleaning inspection and repair as well as replacing some of the internal piping that was over 50 years old while it was open. We replaced the electronic controls on our largest effluent pump as well as controls on our lime machine to make them more reliable and accurate. The City, in cooperation with Genesee County, drilled an additional well on Cedar Street to help increase our supply of raw water during times when the creek is turbid or experiencing extended dry spells.



## Facts and Figures for 2021

The City of Batavia Water Filtration Plant processed a total of 1.13 billion gallons of water during 2021, treating an average of 3.1 million gallons each day. We serve a city population of 15,600 and supply water to about 6,000 service connections. We sold a total of 947 million gallons of water in 2021. Of this amount 398 million gallons were sold through the Genesee County meters to the Town of Batavia, Elba, Oakfield, and Darien. In addition, 66.9 million gallons were used in the water plant for testing and processing. A total of 275 million gallons, or 23 %, was not metered and is unaccounted for. The unaccounted amount consists of water for fire hydrants, city maintenance, parks, the spray park at Austin Park, or water lost from leaks or water breaks. The average charge for water billed in 2021 was \$5.88 per thousand gallons. As in the past years, all of your 2021 tap water met all State drinking water regulations and Health Department standards. The City of Batavia Water Department is again proud to announce that it had no system, microbiological, or reporting violations throughout the year.

## 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 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 common to lose up to 100 gallons a day from an invisible toilet leak. 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 moved, you have a leak.

## Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and fire hydrants in your neighborhood. The water entering the pipes is very high quality, however, water quality can deteriorate in areas of the system over time. Water main flushing is the process of cleaning the inside of the water mains by sending a rapid flow of water through them.

Flushing maintains water quality in many ways. For example flushing removes sediments like iron and manganese. Although these do not pose a health risk, they can affect the taste and clarity of the water. Additionally, the sediment can shield microorganisms from the disinfecting power of chlorine contributing to the growth of microorganisms within the distribution system. Flushing helps remove stale water and ensure the supply of fresh water with sufficient levels of disinfectant and 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 your tap,

allow the cold water to run for a few minutes at full stream before use and avoid washing clothes or using hot water to prevent sediment entering your hot water tank.

Please contact us if you have any questions or want further information regarding flushing.

## MCWA Source Water Assessment

MCWA's primary water source is Lake Ontario which is treated at the Shoremont Plant in Greece and the Webster Plant. They also operate the Corfu Plant, a small well supply in the Village of Corfu, and purchase water from the City of Rochester and the Erie County Water Authority (ECWA). The New York State Department of Health has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP). In general, the Great Lakes sources used by Shoremont and ECWA are not very susceptible because of the size and quality of the Great Lakes. Hemlock and Canadice Lakes, used by the Hemlock Plant, are also not very susceptible because of their size and controlled watersheds. The well water used by the Corfu Plant is more susceptible but the confined nature of the aquifer provides protection against the few nearby potential contaminant sources. Because storm and wastewater contamination are potential threats to any source water, the water provided to MCWA's customers undergoes rigorous treatment and testing prior to its delivery. The Shoremont Plant and the purchased water producers all use a similar treatment process: coagulation, filtration and disinfection. Coagulants are added to clump together suspended particles, enhancing their removal during filtration. Chlorine is used to disinfect the water and to provide the residual disinfectant that preserves the sanitary quality of the water as it travels from each plant to your home. Fluoride is also added to help prevent tooth decay. The treatment process at the Corfu Water Plant consists of filtration, softening and disinfection with chlorine. These plants are in full compliance with all New York State and U.S. EPA operational and monitoring requirements. For more information on the State's Source Water Assessment plan and how you can help protect the source of your drinking water, contact MCWA Customer Service at (585) 442-7200 or visit their website at [www.MCWA.com](http://www.MCWA.com).



# 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:
	Source -			SWTP & WWTP -	CWTP -	Rochester -	ECWA -		
	(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 occurring & 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
<b>Turbidity</b> - 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
<b>Microbial Parameters</b> - 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
<b>Disinfectant and Disinfectant By-products (DBPs)</b> - 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
<b>Lead and Copper</b> - 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.									
<b>Unregulated Contaminant Monitoring (UCMR4)</b> - 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 monitoring 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	
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
<b>HAA Groups:</b>	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



## Community Participation

Major decisions concerning your drinking water are made by the Batavia City Council. Meeting are held in the Council Chambers of City Hall, at One Batavia City Centre, on the second and fourth Mondays of each month at 7p.m. You are invited to attend these meeting to become more informed or to voice your opinion in the decision-making process affecting your water.