



2021 Annual
Water Quality Report

MCWA PWSID# 2701047
MCWA GENESEE PWSID# 1800547
MCWA RICHMOND PWSID# 3401158



Monroe County
Water Authority

2021 Annual
Water Quality Report



The Monroe County Water Authority

is pleased to provide you this report on the quality of your drinking
water which describes its sources, treatment and test results.

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 - (Source Type)			Lake Ontario (Surface Water)	Well Field (Groundwater)	Hemlock Lake (Surface Water)	Lake Erie (Surface Water)		
	Units	MCLG	MCL	Range of detected values:					
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
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 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: Yes or No
	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
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 Used In Water Quality Table

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.

Level 1 Assessment = An evaluation of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

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

NS = No standard

mg/L = milligram (1/1,000 of a gram) per liter = ppm = parts per million

ug/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 measure of water clarity.

CWTP = Corfu Water Treatment Plant

SWTP = Shoremont Water Treatment Plant

WWTP = Webster Water Treatment Plant

MCWA = Monroe County Water Authority

Rochester = City of Rochester

ECWA = Erie Canal Water Authority

Compounds Tested For But Not Detected			
Benzene	1,2,3-Trichlorobenzene	Di(2-Ethylhexyl) Adipate	Profenofos
Bromobenzene	1,2,4-Trichlorobenzene	Di(2-Ethylhexyl) phthalate (DEHP)	Tebuconazole
Bromochloromethane	1,1,1-Trichloroethane	Dicamba	Permethrin, cis & trans
Bromomethane	1,1,2-Trichloroethane	Dieldrin	Triodos
n-Butylbenzene	Trichloroethene	Dinoseb	Butylated hydroxyanisole
sec-Butylbenzene	Trichlorofluoromethane	Diquat	o-Toluidene
tert-Butylbenzene	1,2,3-Trichloropropane	Endothall	Quinoline
Carbon Tetrachloride	1,2,4-Trimethylbenzene	Glyphosate	1-Butanol
Chlorobenzene	1,3,5-Trimethylbenzene	Hexachlorobenzene	2-Methoxyethanol
Chloroethane	Vinyl Chloride	Hexachlorocyclopentadiene	2-Propen-1-ol
Chloromethane	o-Xylene	3-Hydroxycarbolium	Monobromochloroacetic acid
2-Chlorotoluene	m, p-Xylene	Methomyl	Monochloroacetic acid
4-Chlorotoluene	Total Xylene	Metolachlor	Tribromoacetic acid
Dibromomethane	Alachlor	Metribuzin	N-ethyl Perfluorooctanesulfonamidoacetic acid
1,2-Dichlorobenzene	Aldicarb	Oxamyl (vydate)	N-methyl Perfluorooctanesulfonamidoacetic acid
1,3-Dichlorobenzene	Aldicarb sulfide	Perchlorate	Perfluorobutanesulfonic acid
1,4-Dichlorobenzene	Aldicarb sulfone	Picloram	Perfluorodecanoic acid
Dichlorodifluoromethane	Atrazine	Propachlor	Perfluorododecanoic acid
1,1-Dichloroethane	Carboluran	Simazine	Perfluoroheptanoic acid
1,2-Dichloroethane	Chlordane	2, 3, 7, 8-TCDD (Dioxin)	Perfluorohexanoic acid
1,1-Dichloroethene	Dibromochloropropane	Antimony	Perfluorononanoic acid
cis-1,2-Dichloroethene	2, 4-D	Beryllium	Perfluorooctadecanoic acid
trans-1,2-Dichloroethene	Endrin	Chromium	Perfluorostridecanoic acid
1,2-Dichloropropane	Ethylene Dibromide	Cyanide	Perfluoroundecanoic acid
1,3-Dichloropropane	Heptachlor	Mercury	Total Microcystin
2,2-Dichloropropane	Heptachlor Epoxide	Nickel	Microcystin-LA
1,1-Dichloropropene	Lindane (gamma-BHC)	Nitrite	Microcystin-LF
1,3-Dichloropropene(cis)	Methoxychlor	Selenium	Microcystin-LR
1,3-Dichloropropene(trans)	p,p' DDD	Silver	Microcystin-LY
Ethylbenzene	p,p' DDE	Thallium	Microcystin-RR
Hexachlorobutadiene	p,p' DDT	Zinc	Microcystin-YR
p-Isopropyltoluene	PCB's Total	Surfactants (Foaming Agents)	Nodularin
Methyl Tert-butyl ether (MTBE)	Pentachlorophenol	Cryptosporidium	Anatoxin-A
Methylene Chloride (Dichloromethane)	Toxaphene	Giardia Lamblia	Cylindrospermopsis
n-Propylbenzene	2, 4, 5-TP (Silvex)	Germanium	Gross Alpha Particles
Styrene	Aldrin	alpha-Hexachlorocyclohexane	Radium 226
1,1,1,2-Tetrachloroethane	Benzaldehyde	Chlorpyrifos	Radium 228
1,1,2,2-Tetrachloroethane	Butachlor	Dimethipin	Combined Radium 226/228
Tetrachloroethene	Carbaryl	Ethoprop	Uranium
Toluene	Dalapon	Oxyfluoren	

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.

MONROE COUNTY WATER AUTHORITY



Abundant. Inexpensive. Pure.

The Monroe County Water Authority is the third largest water supplier in New York State, producing and delivering an average of 20 billion gallons of drinking water every year. As a public benefit corporation organized in 1950 under the New York State Public Authorities Law, our sole purpose is to provide you with quality water and reliable service at an affordable price.

Many communities have been unable to or unwilling to make the investments necessary to maintain their water systems. That's not the case with the Monroe County Water Authority. In 2021 we invested \$22.16 million in infrastructure improvements. Our commitment to efficiency and cost control is shown in our water rate history. Our rates are below the national average and the lowest 25% for northeast U.S. suppliers. It costs an average Authority residential customer about \$27 a month for all the water they need.

The Monroe County Water Authority's 205 employees are dedicated to providing you all the clean, safe drinking water you need, whenever you need it.

This annual water quality report is being provided to all of our customers in compliance with U.S. Environmental Protection Agency (USEPA) and New York State



Department of Health regulations. For more information check our website at www.MCWA.com.

Source and Treatment

Our primary water source is Lake Ontario which is treated at our Shoremont Plant in Greece and at our Webster Plant in Webster. We 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 Service Area Map in this report shows the typical service area for each of the treatment plants. The boundaries between the service areas change day to day as we manage the sources to optimize water delivery to our customers.

The New York State Health Department 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 MCWA 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 waste water contamination are potential threats to any source water, the water provided to our customers undergoes rigorous treatment and testing prior to its delivery.

The Shoremont and Webster plants 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 water treatment plants are in full compliance with all New York State and USEPA 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 our website at www.MCWA.com.

MCWA STATISTICS

WATER WITHDRAWN FROM LAKE ONTARIO	55 Million Gallons Per Day
AVERAGE SYSTEM USE	57.6 Million Gallons Per Day
NON-BILLABLE WATER (MAINTENANCE, FLUSHING, FIREFIGHTING, LEAKS)	7.78 Million Gallons Per Day
ANNUAL COST FOR AVERAGE RESIDENTIAL CUSTOMER	\$324.11 Per Year
POPULATION SERVED	783,696 Wholesale and Retail
NUMBER OF ACCOUNTS	188,821
MILES OF WATER MAINS	3,397
NUMBER OF FIRE HYDRANTS	27,000

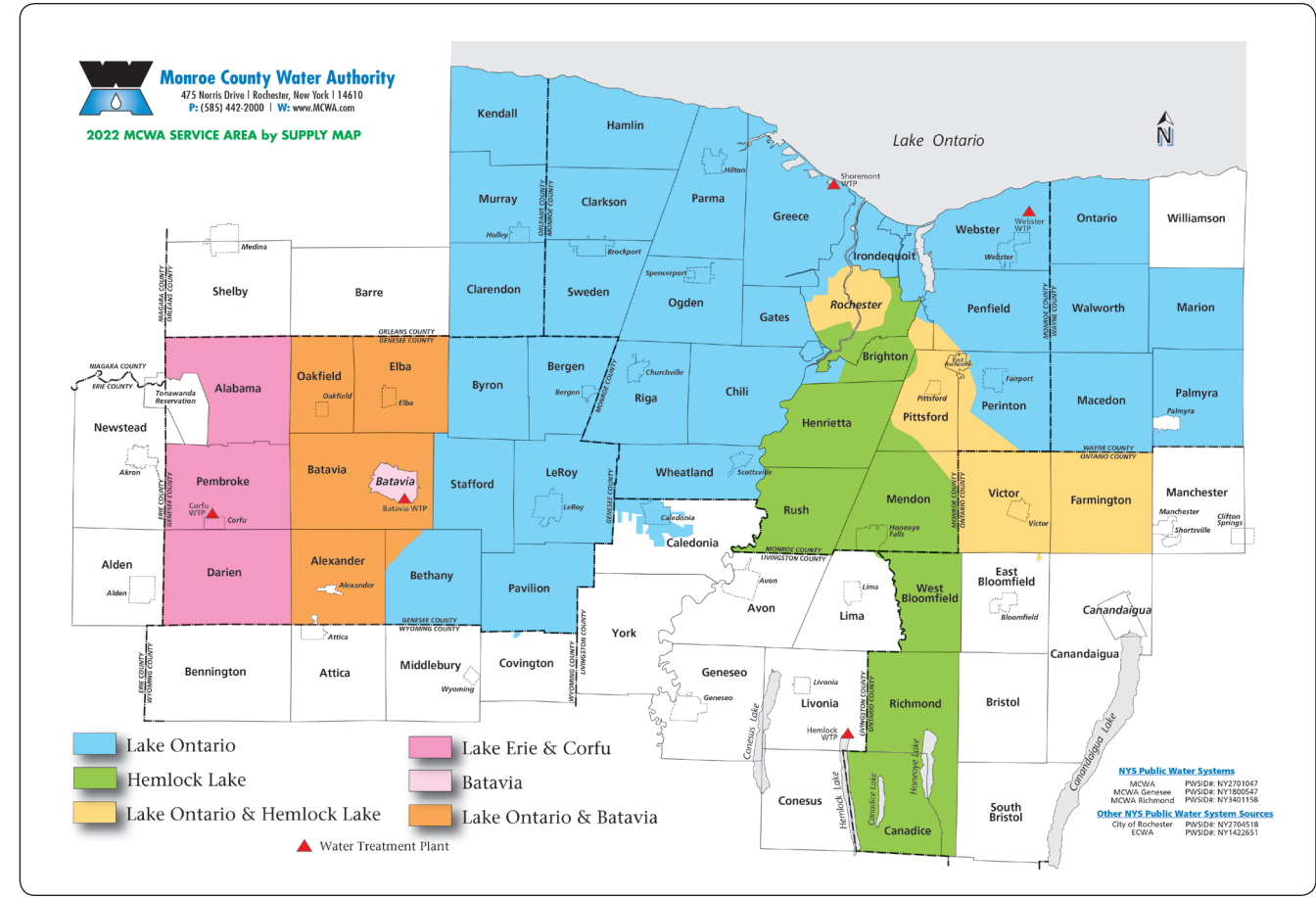
When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.mcwa.com/my-water/water-quality/my-water-lead-in-drinking-water/ or from the USEPA's Safedrinking Water Hotline (800-426-4791) and website (www.epa.gov/safewater/lead).

Fluoride

MCWA is one of the many New York state 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 and Prevention, fluoride is very effective in preventing cavities when present in drinking water at an optimum level of 0.7 mg/L. To ensure optimal dental protection, the NYSDOH requires that we monitor fluoride levels on a daily basis. In 2021 the fluoride levels in your water were within 0.2 mg/L of the CDC's recommended optimal level 99.9% of the time. The highest monitoring level was 0.95 mg/L, below the 2.2 mg/L MCL for fluoride.

FOR MORE INFORMATION

If you have questions about this report, your bill, or Monroe County Water Authority operations, call Customer Service at (585) 442-7200. To view the MCWA Board of Directors meeting schedule, visit us online at www.MCWA.com.



Water Quality

Last year, as in years past, your tap water met all State drinking water health standards. MCWA is proud to report that our system did not violate a maximum contaminate level or any other water quality standard. This report is an overview of last year's water quality. Drinking water sources (both tap and bottled water) include lakes, reservoirs, rivers and streams, springs and wells. As water travels over land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from animal or human activity. Contaminants that may be present in untreated water include inorganic and organic chemicals, pesticides and herbicides, and radioactive and microbiological contaminants. In order to ensure that your tap water is safe to drink, the State and the USEPA established regulations that set limits on contaminant levels in water provided by public water systems. These limits are known as Maximum Contaminant Levels (MCLs). The regulations also specify testing, reporting, and public notification requirements for each contaminant. MCWA's monitoring program substantially exceeds USEPA and State Health Department requirements. Departments of health also review our operating and monitoring data for compliance and independently monitors our distribution system.

Some constituents we tested for were detected, but at levels well below the allowable MCL. It's important to remember all 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 the water poses a health risk. Additional information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791.

We found the presence of total coliform indicating the need to look for problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and correct any problems found during these assessments.

During the past year, we were required to conduct one Level 1 Assessment in the town of Darien. Resulting from the assessment, we determined the problem could be corrected through distribution system adjustments and chlorine residual increases. Total coliform was not detected in additional samples. It should be noted that E. Coli bacteria, associated with human and animal fecal wastes, was not detected in any of the samples collected.

Some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as chemotherapy patients, organ transplant recipients, 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 providers about drinking water. EPA/CDC (U.S. Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia, and other microbiological contaminants are available from the Safe Drinking Water Hotline (800) 426-4791 or the Monroe County Department of Public Health, 111 Westfall Road, Rochester, NY 14620, (585) 753-5564.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. There is no detectable lead in the water we deliver to your home. Lead in the drinking water is primarily from lead-bearing materials and components associated with service lines and home plumbing. Although our testing indicates this is not a problem for our customers, it is possible that lead levels at your home might be higher than at other homes in the community as a result of materials used in your home's plumbing. The Monroe County Water Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

Taste and Odor

Sometimes you may find your water tastes or smells like chlorine. The water is safe to drink. We are required to maintain a chlorine residual in the distribution system to prevent the growth of bacteria. To eliminate or reduce the taste of chlorine in your water, simply store tap water in a container overnight in your refrigerator. An inexpensive carbon filter can be used for this also.

Home Treatment Units

There are businesses that sell home treatment units by telling you water supplied by the Monroe County Water Authority is not safe. Save your money. The water we provide is consistently better than the drinking water regulations require and we can prove it.

Conservation

Lake Ontario provides an abundance of water to the communities we serve, and our customers greatly benefit by having this natural resource close to home. However, it takes power to treat and move the water to your houses. Therefore, conserving energy is helpful to providing clean, safe water to you.

Although our water rates are below the national average, no one wants to pay for water that is wasted whether by accident or on purpose. To save water, fix leaky faucets and toilets promptly, replace washers when garden hoses start to drip, and water your lawn in the early morning. After 10 a.m. the sun's heat draws water from the lawn through evaporation. When you water early, you can water less because more of the water is absorbed into the lawn. To find more water saving tips, visit us online at www.MCWA.com.