MCWA Water Quality Summary Table

2022 Calendar Year Results -

Detected Substances:	*Supply Source -* Source - (Source Type)			*MCWA Production Water:* SWTP & WWTP - Lake Ontario (Surface Water)	*MCWA Production Water:* CWTP - Well Field (Groundwater)	*MCWA Purchased Water:* Rochester - Hemlock Lake (Surface Water)	*MCWA Purchased Water:* ECWA - Lake Erie (Surface Water)	Likely Sources in Drinking Water:	Water Quality Violation:
	Units	MCLG	MCL	Range of detected values:					Yes or No
Barium	mg/L	2	2	0.019 - 0.023	0.09 - 0.2	0.014	0.02	Erosion of natural deposits	No
Chloride	mg/L	NA	250	25 - 29	49 - 93	27 - 38	19 - 24	Naturally occurring	No
Fluoride	mg/L	NA	2.2	0.42 - 1.15	0.12 - 0.13	0.09 - 0.85	0.11 - 0.71	Naturally occuring & additive for dental health	No
Manganese	µg/L	NA	300	ND	2.9 - 8.5	ND	ND	Naturally occurring	No
Nitrate	mg/L	10	10	ND - 0.4	ND	ND	0.55	Erosion of natural deposits	No
Perfluorooctanesulfonic acid (PFOS)	ng/L	NS	10	ND - 2.1	ND	ND	ND	Environmental releases from textile sources	No
Perfluorobutanoic acid (PFBA)	ng/L	NS	10	ND - 2.8	ND	ND	ND - 2.7	Environmental releases from textile sources	No
Sodium	mg/L	NA	NS	15 - 17	36 - 87 *	16 - 21 *	12 - 15	Naturally occurring	No
Sulfate	mg/L	NA	250	25 - 27	44 - 48	10 - 26	19 - 22	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	0.06 (ND - 0.15) 100% < 0.3 NTU	0.07 (0.01 - 0.26) 100% < 0.3 NTU	Soil Runoff	No
Turbidity - Distribution	NTU	NA	5	4.22 - 3/24/2022	0.97 - 2/22/2022	4.22 - 3/24/2022	0.97 - 2/22/2022	Soil Runoff	No
Microbial Pararmeters - No more than 5% of monthly samples can be positive. The highest monthly % positive and number of samples is listed.									
Total Coliform Bacteria	NA	0	TT	1.9% - August 7 samples	2.9% - October 1 sample	1.9% - August 7 samples	2.9% - October 1 sample	Naturally present in the environment	No
Source Water Microbial Pathogens - The highest positive month and number of samples is listed. In our treatment processes, Cryptosporidium is removed / inactivated through a combination of filtration and disinfection or by disinfection alone.									
Cryptosporidium	Cysts/L	0	TT	SWTP - 1 (Feb. & Nov.) 2 Samples	NR	ND	ND (2017)	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	1.14 (0.71 - 1.44) 0.83 (0.35 - 1.26)	1.11 (0.5 - 1.69)	0.83 (0.69 - 1.85)	1.54 (1.33 - 1.74)	Additive for control of microbes	No
Chlorine Residual - Distribution	mg/L	NA	MRDL = 4	0.59 (ND - 1.85)	0.6 (ND - 1.55)	0.59 (ND - 1.85)	0.6 (ND - 1.55)	Additive for control of microbes	No
Total Trihalomethanes (TTHMs)	µg/L	NA	80	38.6 (13 - 73) Max. LRAA = 55.8	41.5 (20 - 55) Max. LRAA = 46.5	38.6 (13 - 73) Max. LRAA = 55.8	41.5 (20 - 55) Max. LRAA = 46.5	Byproduct of water chlorination	No
Haloacetic Acids (HAAs)	µg/L	NA	60	11.3 (ND - 30) Max. LRAA = 18.8	7.4 (ND - 32) Max. LRAA = 11.8	11.3 (ND - 30) Max. LRAA = 18.8	7.4 (ND - 32) Max. LRAA = 11.8	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. (2021 monitoring period)									
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 - SWTP	Lake Ontario Supplies - WWTP	Purchased Water Supplies - Rochester	Purchased Water Supplies - ECWA	Groundwater Supply - CWTP	Water Quality Violation:
	Units	MCL							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

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**.

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 Disnfectant 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
Acifluorfen
Alachlor
Aldicarb
Aldicarb sulfoxide
Aldicarb sulfone
Atrazine
Baygon
Bentazon
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
3,5-Dichlorobenzoic Acid
Methomyl
Metolachlor
Metribuzin
Oxamyl (vydate)
Paraquat
Perchlorate
Picloram
Propachlor
Simazine
2, 3, 7, 8-TCDD (Dioxin)
Antimony
Beryllium
Chromium
Cyanide
Mercury
Nickel
Nitrite
Selenium
Silver
Thallium
Zinc
Surfactants (Foaming Agents)
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
Gross Alpha Particles
Radium 226
Radium 228
Combined Radium 226/228
Uranium
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)
4,8-dioxa-3H-perfluorononanoic acid (ADONA)
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)
Hexafluoropropylene oxide dimer acid (HFPO-DA)(GenX)
N-ethyl Perfluorooctanesulfonamidoacetic acid (NEtFOSAA)
N-methyl Perfluorooctanesulfonamidoacetic acid (NMeFOSAA)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
Perfluoro-3-methoxypropanoic acid (PFMPA)
Perfluoro-4-methoxybutanoic acid (PFMBA)
Perfluorobutanesulfonic acid (PFBS)
Perfluorodecanoic acid (PFDA)
Perfluorododecanoic acid (PHDoA)
Perfluoroheptanesulfonic acid (PFHpS)
Perfluoroheptanoic acid (PFHpA)
Perfluorohexanesulfonic acid (PFHxS)
Perfluorohexanoic acid (PFHxA)
Perfluorononanoic acid (PFNA)
Perfluorooctanoic acid (PFOA)
Perfluoropentanesulfonic acid (PFPeS)
Perfluoropentanoic acid (PFPeA)
Perfluorotetradecanoic acid (PFTA)
Perfluorotridecanoic acid (PFTA)
Perfluoroundecanoic acid (PFUnA)
Total Microcystin
Microcystin-LA
Microcystin-LF
Microcystin-LR
Microcystin-LY
Microcystin-RR
Microcystin-YR
Nodularin
Anatoxin-A
Cylindrospermopsin

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