



Monroe County Water Authority

2021 Water Quality Monitoring Program Summary

Water Quality Monitoring Parameters				MCWA - SWTP			MCWA - WWTP			MCWA - CWTP			Rochester			ECWA - VWTP		
				Source - Lake Ontario			Source - Lake Ontario			Source - Groundwater Well(s)			Source - Hemlock Lake			Source - Lake Erie		
	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021
Inorganics, Metals, & Physical Parameters:																		
Asbestos (Distribution System)	7	7	MF/L	ND		1 (2016)	ND		1 (2016)	ND		1 (2016)	ND		1 (2014)	ND		30 (2015)
Aluminum	NS	NS	µg/L	65.8	30 - 140	4	70	38 - 120	4	ND		4	ND		4	170	50 - 360	4
Antimony	6	6	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Arsenic	10	NA	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Barium	2	2	mg/L	0.02	0.018 - 0.022	4	0.021	0.019 - 0.023	4	0.1	0.09 - 0.1	4	0.016	0.016	1	0.02	0.02	1
Beryllium	4	4	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Bromide	NS	NS	µg/L	0.02	0.019 - 0.024	4	0.02	0.021 - 0.028	4	NR			0.01	0.01	1	0.01	0.01	1
Cadmium	5	5	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Calcium	NS	NS	mg/L	33.8	33 - 34	4	33.8	33 - 34	4	43.3	39 - 46	4	26.5	26 - 27	4	32.8	31 - 34	4
Chromium	100	100	µg/L	ND		4	ND		4	ND		4	ND		3	ND		1
Copper (Distribution System Samples)	NS	NS	µg/L	ND		4	ND		4	14.5	13 - 16	4	2.9	ND - 8.2	4	ND		4
Copper (Customer Tap Samples)	AL* = 1300	1300	µg/L	130	8.1 - 470	50	130	8.1 - 470	50	142	3.8 - 290	22	130	8.1 - 470	50	142	3.8 - 290	22
Cyanide	200	200	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Fluoride	2.2	NA	mg/L	0.73	0.34 - 0.9	2,184	0.69	0.51 - 0.95	2,112	0.13	0.11 - 0.14	4	0.69	0.09 - 0.77	1,086	0.62	0.1 - 0.7	51
Iron	300	NA	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Lead (Distribution System)	NS	NS	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Lead (Customer Tap Samples)	AL* = 15	0	µg/L	3.2	ND - 130	50	3.2	ND - 130	50	0.63	ND - 2.8	22	3.2	ND - 130	50	0.63	ND - 2.8	22
Magnesium	NS	NS	mg/L	9	9	1	8.2	8.2	1	15	15	1	6.6	6.6	1	8.3	8.3	1
Manganese	300	NA	µg/L	ND		4	ND		4	9.9	3.1 - 22	4	ND		4	2.7	2.7	1
Mercury	2	2	µg/L	ND		4	ND		4	ND		4	ND		4	ND		1
Nickel	100	NA	µg/L	ND		4	ND		4	ND		4	ND		4	ND		1
Nitrate	10	10	mg/L	0.28	0.21 - 0.35	4	0.14	ND - 0.31	4	ND		4	ND		1	0.29	0.29	1
Nitrite	1	1	mg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Potassium	NS	NS	mg/L	1.3	1.3	1	1.2	1.2	1	ND		1	1.0	1.0	1	1.0	1.0	1
Selenium	50	50	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Silica	NS	NS	mg/L	0.50	0.36 - 0.67	4	0.51	0.43 - 0.65	4	7.88	7.4 - 8.1	4	0.85	0.5 - 1.1	4	0.48	0.35 - 0.71	4

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021
Silver	100	NA	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Sodium	NS	NS	mg/L	15.8	15 - 16	4	16.3	15 - 17	4	91.3	77 - 100	4	20.8	20 - 21	4	13	12 - 14	4
Sulfate	250	NA	mg/L	26.5	26 - 27	4	31.0	26 - 46	4	41	25 - 46	4	11.8	11 - 12	4	19.8	19 - 20	4
Thallium	2	0.5	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Zinc	5	NA	mg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Alkalinity	NS	NA	mg/L	90.3	90 - 91	4	89.8	89 - 91	4	253	250 - 260	4	73	72 - 74	4	93.3	91 - 95	4
Chloride	250	NA	mg/L	28.8	26 - 37	4	35.3	26 - 58	4	56	41 - 82	4	38	38 - 40	4	21	20 - 23	4
Color	15	NA	Color Units	ND		4	ND		4	ND		4	ND		4	ND		4
Conductivity	NS	NS	µmhos/cm	300.6	290 - 310	49	306.3	290 - 330	48	746.0	507 - 897	55	300.5	280 - 330	56	287.2	271 - 300	51
pH	NS	NS	pH units	7.48	7.07 - 7.83	365	7.48	7.12 - 8.03	357	7.4	7.24 - 7.58	203	7.82	7.37 - 8.14	365	7.92	7.43 - 8.24	1,029
Total Dissolved Solids	NS	NS	mg/L	170	160 - 190	4	185.0	170 - 200	4	430.0	380 - 480	4	150	120 - 190	4	160	150 - 170	4
Total Hardness	NS	NS	mg/L	120	120	4	117.5	110 - 120	4	178	160 - 180	4	92.8	91 - 94	4	117.5	110 - 120	4
Total Organic Carbon	TT	NS	mg/L	1.83	1.7 - 2.0	4	1.55	1.2 - 1.8	4	1.29	0.87 - 2.3	4	2.5	2.3 - 2.6	4	1.98	1.8 - 2.1	4
Surfactants	NS	NS	mg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Turbidity - Entry Point	TT **	NA	NTUs	0.04	0.02 - 0.09	2,190	0.04	0.02 - 0.11	2,183	0.47	0.04 - 1.9	55	0.05	0.02 - 0.1	2,182	0.11	0.09 - 0.172	1,027
Turbidity - Distribution System	TT ***	NA	NTUs	0.12	0.03 - 2.91	3,947	0.12	0.03 - 2.91	3,947	0.14	0.02 - 1.43	387	0.12	0.03 - 2.91	3,947	0.14	0.02 - 1.43	387
Chlorine Residual - Entry Point	4	NA	mg/L	1.16	0.34 - 1.37	2,190	0.81	0.48 - 1.05	2,095	0.98	0.58 - 1.59	202	0.91	0.46 - 1.67	2,171	1.57	1.25 - 1.91	1,029
Chlorine Residual - Retail Distribution System	4 ****	NA	mg/L	0.57	ND - 2.7	3,949	0.57	ND - 2.7	3,949	0.56	ND - 1.41	388	0.57	ND - 2.7	3,949	0.56	ND - 1.41	388
Microbiological Parameters:																		
Coliform - Retail Distribution System	TT *****	0	% Positive	0 positive samples - 0%.		3,949	0 positive samples - 0%.		3,949	5 positive samples - 1.3%.		388	0 positive samples - 0%.		3,949	5 positive samples - 1.3%.		388
				None Detected.			None Detected.			September: 5 positive samples - 13.2%.			None Detected.			September: 5 positive samples - 13.2%.		
Cryptosporidium (source water prior to treatment)	TT	0	OoCysts/L	ND		4	ND		4	NR		NR	ND		1	NR		NR
				None detectd.			None Detected.			NR			None Detected.			NR		
Giardia Lamblia (source water prior to treatment)	TT	0	Cysts/L	ND		4	ND		4	NR		NR	ND		1	NR		NR
				None detected.			None detected.			NR			None Detected.			NR		
Radionuclides:																		
Gross Alpha Particle	15	0	pCi/L	ND		1	ND		1	ND		1	ND		1	ND		1
Gross Beta Particle / Photon Emitters	50	0	pCi/L	NR		0	NR		0	NR		0	NR		0	NR		0
Radium 226	NS	NA	pCi/L	ND		1	ND		1	ND		1	ND		1	ND		1
Radium 228	NS	NA	pCi/L	ND		1	ND		1	ND		1	ND		1	ND		1
Combined Radium 226/228	5	0	pCi/L	ND		1	ND		1	ND		1	1.06		1	ND		1
Uranium	30	0	pCi/L	ND		1	ND		1	ND		1	ND		1	ND		1

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021														
Volatile Organic Compounds:				Not Detected			Not Detected			Not Detected			Not Detected			Not Detected																
Benzene	5	0	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Bromobenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Bromochloromethane	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Bromomethane	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
n-Butylbenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
sec-Butylbenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
tert-Butylbenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Carbon Tetrachloride	5	0	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Chlorobenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Chloroethane	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Chloromethane	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
2-Chlorotoluene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
4-Chlorotoluene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Dibromomethane	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
1,2-Dichlorobenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
1,3-Dichlorobenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
1,4-Dichlorobenzene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
Dichlorodifluoromethane	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
1,1 Dichloroethane	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
1,2-Dichloroethane	5	0	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
1,1-Dichloroethene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
cis-1,2-Dichloroethene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
trans-1,2-Dichloroethene	5	NA	µg/L																4	4	4	4	4	4	4	4	4	4	4	4	4	4
1,2-Dichloropropane	5	0	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
1,3-Dichloropropane	5	NA	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
2,2-Dichloropropane	5	NA	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
1,1-Dichloropropene	5	NA	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
1,3-Dichloropropene (Cis)	5	NA	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
1,3-Dichloropropene (Trans)	5	NA	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
Ethylbenzene	5	NA	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
Hexachlorobutadiene	5	NA	µg/L	4	4	4	4	4	4	4	4	4	4	4	4	4	4															

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021		
Isopropylbenzene	5	NA	µg/L	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4		
p-Isopropyltoluene	5	NA	µg/L			4			4											
Methyl Tert-butyl ether (MTBE)	10	NA	µg/L			4			4											
Methylene Chloride (Dichloromethane)	5	0	µg/L			4			4											
n-Propylbenzene	5	NA	µg/L			4			4											
Styrene	5	NA	µg/L			4			4											
1,1,1,2-Tetrachloroethane	5	NA	µg/L			4			4											
1,1,2,2-Tetrachloroethane	5	NA	µg/L			4			4											
Tetrachloroethene	5	0	µg/L			4			4											
Toluene	5	NA	µg/L			4			4											
1,2,3-Trichlorobenzene	5	NA	µg/L			4			4											
1,2,4-Trichlorobenzene	5	NA	µg/L			4			4											
1,1,1-Trichloroethane	5	NA	µg/L			4			4											
1,1,2-Trichloroethane	5	3	µg/L			4			4											
Trichloroethene	5	0	µg/L			4			4											
Trichlorofluoromethane	5	NA	µg/L			4			4											
1,2,3-Trichloropropane	5	NA	µg/L			4			4											
1,2,4-Trimethylbenzene	5	NA	µg/L	4	4															
1,3,5-Trimethylbenzene	5	NA	µg/L	4	4															
Vinyl Chloride	2	0	µg/L	4	4															
Xylenes	5	NA	µg/L	4	4															
Organics, Pesticides, & Herbicides:				Not Detected			Not Detected			Not Detected			Not Detected			Not Detected				
1, 2-Dibromo-3-Chloropropane (DBCP)	200	0	ng/L																1	1
1, 2-Dibromoethane (EDB)	50	0	ng/L																1	1
2, 4, 5-TP (Silvex)	10	NA	µg/L																1	1
2, 4-D	50	NA	µg/L																1	1
3-Hydroxycarbofuran	50	NS	µg/L																1	1
Alachlor	2	0	µg/L																4	4
Aldicarb	3	1	µg/L																1	1
Aldicarb Sulfone	2	1	µg/L																1	1
Aldicarb Sulfoxide	4	1	µg/L																1	1
Aldrin	5	NA	µg/L																4	4

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021				
Atrazine	3	3	µg/L	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4				
Benzo(a)pyrene	200	0	ng/L			4			4			4			4			4		4		4
Bis(2-Ethylhexyl)Phthalate (DEHP)	6	0	µg/L			4			4			4			4			4		4		4
Butachlor	50	NA	µg/L			4			4			4			4			4		4		4
Carbaryl	50	NA	µg/L			1			1			1			1			1		1		1
Carbofuran	40	40	µg/L			1			1			1			1			1		1		1
Chlordane	2	NA	µg/L			4			4			4			4			4		4		4
Dalapon	50	NA	µg/L			1			1			1			1			1		1		1
DCPA, Mono & Di-Acid Degradate	50	NS	µg/L			1			1			1			1			1		1		1
Di(2-Ethylhexyl) Adipate	50	NA	µg/L			4			4			4			4			4		4		4
Dicamba	50	NA	µg/L			1			1			1			1			1		1		1
Dieldrin	5	NA	µg/L			4			4			4			4			4		4		4
Dinoseb	7	7	µg/L			1			1			1			1			1		1		1
1, 4-Dioxane	1	NA	µg/L	ND		4	ND		4	ND		8	ND		4	ND	ND - 0.086	4				
Dioxin	30	0	pg/L	Not Detected		1	Not Detected		1	Not Detected		1	Not Detected		1	Not Detected		1				
Diquat	20	20	µg/L			1			1			1			1			1		1		1
Endothall	50	NA	µg/L			1			1			1			1			1		1		1
Endrin	2	2	µg/L			4			4			4			4			4		4		4
Glyphosate	50	700	µg/L			1			1			1			1			1		1		1
Heptachlor	400	0	ng/L			4			4			4			4			4		4		4
Heptachlor Epoxide	200	0	ng/L			4			4			4			4			1		1		1
Hexachlorobenzene	1	0	µg/L			4			4			4			4			4		4		4
Hexachlorocyclopentadiene	5	NA	µg/L			4			4			4			4			4		4		4
Isophorone	50	NA	µg/L			4			4			4			4			4		4		4
Lindane (gamma-BHC)	200	200	ng/L			4			4			4			4			4		4		4
Methomyl	50	NA	µg/L			1			1			1			1			1		1		1
Methoxychlor	40	40	µg/L			4			4			4			4			4		4		4
Metolachlor	50	NA	µg/L			4			4			4			4			4		4		4
Metribuzin	50	NA	µg/L			4			4			4			4			4		4		4
Oxamyl	50	NA	µg/L			1			1			1			1			1		1		1
p,p' DDD	5	NA	µg/L			4			4			4			4			4		4		4
p,p' DDE	NS	NS	µg/L		4		4		4		4		4		4		4					

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021
p,p' DDT	5	NA	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
PCB's Total	500	0	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Pentachlorophenol	1	0	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perchlorate	NS	NS	µg/L	ND		1	ND		1	ND		1	ND		1	ND		1
Perfluorooctanesulfaonic Acid (PFOS)	10	NA	ng/L	2.7	2.4 - 2.8	4	0.7	ND - 2.8	4	ND		4	ND		4	ND		4
Perfluorooctanoic Acid (PFOA)	10	NA	ng/L	2.2	2.1 - 2.3	4	0.5	ND - 2.2	4	ND		4	ND		4	ND		4
Pichloram	50	NA	µg/L	ND		1	ND		1	ND		1	ND		1	ND		1
Propachlor	50	NA	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Simazine	4	4	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Total Chlordane	2	0	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Toxaphene	3	0	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Disinfection By-products:																		
Total Trihalomethanes (TTHMs)	80	NA	µg/L	36.1	7.9 - 64	52	36.1	7.9 - 64	52	44.3	22 - 66	8	36.1	7.9 - 64	52	44.3	22 - 66	8
				Maximum LRAA = 49			Maximum LRAA = 49			Maximum LRAA = 58.8			Maximum LRAA = 49			Maximum LRAA = 58.8		
Haloacetic Acids (HAA5)	60	NA	µg/L	10.9	ND - 30	52	10.9	ND - 30	52	6.1	ND - 14	8	10.9	ND - 30	52	6.1	ND - 14	8
				Maximum LRAA = 24			Maximum LRAA = 24			Maximum LRAA = 7.2			Maximum LRAA = 24			Maximum LRAA = 7.2		
Emerging Contaminants - Per & Polyfluorinated Alkyl Acids (PFAS):																		
N-ethyl Perfluorooctanesulfonamidoacetic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
N-methyl Perfluorooctanesulfonamidoacetic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorobutanesulfonic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorodecanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorododecanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluoroheptanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorohexanesulfonic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorohexanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorononanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorotetradecanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluorotridecanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4
Perfluoroundecanoic acid	NS	NS	ng/L	ND		4	ND		4	ND		4	ND		4	ND		4

Water Quality Monitoring Parameters				MCWA - SWTP			MCWA - WWTP			MCWA - CWTP			Rochester			ECWA - VWTP											
				Source - Lake Ontario			Source - Lake Ontario			Source - Groundwater Well(s)			Source - Hemlock Lake			Source - Lake Erie											
	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021									
UCMR4 - Alcohols, Metals, Pesticides, SVOCs & Cyanotoxins: Data from 2019 and 2021				Not Detected			Not Detected			Not Detected			Not Detected			Not Detected											
Manganese	NS	NS	µg/L																4	4	8	6 - 10	2	4	3.49	0.77 - 6.3	4
Germanium	NS	NS	µg/L																4	4			2	4			4
alpha-Hexachlorocyclohexane	NS	NS	µg/L																4	4			2	4			4
Chlorpyrifos	NS	NS	µg/L																4	4			2	4			4
Dimethipin	NS	NS	µg/L																4	4			2	4			4
Ethoprop	NS	NS	µg/L																4	4			2	4			4
Oxyfluoren	NS	NS	µg/L																4	4			2	4			4
Profenofos	NS	NS	µg/L																4	4			2	4			4
Tebuconazole	NS	NS	µg/L																4	4			2	4			4
Permethrin, cis & trans	NS	NS	µg/L																4	4			2	4			4
Tribufos	NS	NS	µg/L																4	4			2	4			4
Butylated hydroxyanisole	NS	NS	µg/L																4	4			2	4			4
o-Toluidene	NS	NS	µg/L																4	4			2	4			4
Quinoline	NS	NS	µg/L																4	4			2	4			4
1-Butanol	NS	NS	µg/L																4	4			2	4			4
2-Methoxyethanol	NS	NS	µg/L																4	4			2	4			4
2-Propen-1-ol	NS	NS	µg/L																4	4			2	4			4
Total Microcystin	NS	NS	µg/L																8	8			0	8			8
Microcystin-LA	NS	NS	µg/L																8	8			0	8			8
Microcystin-LF	NS	NS	µg/L	8	8			0	8			8															
Microcystin-LR	NS	NS	µg/L	8	8			0	8			8															
Microcystin-LY	NS	NS	µg/L	8	8			0	8			8															
Microcystin-RR	NS	NS	µg/L	8	8			0	8			8															
Microcystin-YR	NS	NS	µg/L	8	8			0	8			8															
Nodularin	NS	NS	µg/L	8	8			0	8			8															
Anatoxin-A	NS	NS	µg/L	8	8			0	8			8															
Cylindrospermopsin	NS	NS	µg/L	8	8			0	8			8															
UCMR4 - HAA Groups Indicators: Data from 2019.																											
Bromide	NS	NS	µg/L	36.3	36 - 37	4	36	34 - 37	4			NR			NR			NR									
Total Organic Carbon	TT	NS	µg/L	2.3	2 - 2.4	4	2.2	1.9 - 2.3	4			NR	2.6	2.6	4	2	2	4									

Water Quality Monitoring Parameters				MCWA - SWTP Source - Lake Ontario			MCWA - WWTP Source - Lake Ontario			MCWA - CWTP Source - Groundwater Well(s)			Rochester Source - Hemlock Lake			ECWA - VWTP Source - Lake Erie			
	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	Average	Range	Samples in 2021	
UCMR4 - HAA Groups: Data from 2019.				Combined Distribution System Data															
Total HAA (5)	60	NS	µg/L	14.1	0.74 - 31	60													
Total HAA (6) Br	NS	NS	µg/L	7.4	ND - 12	60													
Total HAA (9)	NS	NS	µg/L	21	0.74 - 42	60													
Bromochloroacetic acid	NS	NS	µg/L	2.2	ND - 4.4	60													
Bromodichloroacetic acid	NS	NS	µg/L	3.1	ND - 5.9	60													
Chlorodibromoacetic acid	NS	NS	µg/L	1.0	ND - 1.6	60													
Dibromoacetic acid	NS	NS	µg/L	0.5	ND - 1.4	60													
Dichloroacetic acid	NS	NS	µg/L	6.0	0.74 - 15	60													
Monobromoacetic acid	NS	NS	µg/L	ND	ND - 0.47	60													
Monochloroacetic acid	NS	NS	µg/L	ND	ND - 2.3	60													
Tribromoacetic acid	NS	NS	µg/L	0.5	ND - 2.7	60													
Trichloroacetic acid	NS	NS	µg/L	7.5	ND - 15	60													

Key Terms and Abbreviations:	
<p>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.</p> <p>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.</p> <p>TT = Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.</p> <p>AL* = Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. If >10% of results are greater than 15 µg/l for lead or 1300 µg/L for copper, remediative steps are required. MCWA's combined retail area, 90% of the samples were less than 3.2 µg/L for lead and 142 µg/L for copper.</p> <p>LRAA = Locational Running Annual Average - The annual average contaminant concentration at a monitoring site.</p> <p>mg/L = Milligram (1/1,000 of a gram) per Liter = ppm = parts per million</p> <p>NA = Not Applicable NR = Not Required / Not Reported NS = No Standard NT = Not Tested</p> <p>Not Detected = ND = Absent or present at less than the testing method detection level. All testing methods are EPA-approved with detection limits much less than the MCL.</p> <p>NTU = Nephelometric turbidity Unit. A measure of the clarity of water.</p> <p>µg/L = Microgram (1/1,000,000 of a gram) per Liter = ppb = parts per billion</p> <p>ng/L = Nanogram (1/1,000,000,000 of a gram) per Liter = ppt = parts per trillion</p> <p>pg/L = Picogram (1/1,000,000,000,000 of a gram) per Liter = ppq = parts per quadrillion</p> <p>pCi/L = PicoCuries per Liter</p>	<p>MCWA - SWTP = Monroe County Water Authority - Shoremont Water Treatment Plant.</p> <p>MCWA - WWTP = Monroe County Water Authority - Webster Water Treatment Plant.</p> <p>MCWA - CWTP = Monroe County Water Authority - Corfu Water Treatment Plant.</p> <p>Rochester = City of Rochester - Hemlock Water Filtration Plant. MCWA purchases water from Rochester's water system.</p> <p>ECWA - VWTP = Erie County Water Authority - Van de Water Water Treatment Plant. MCWA purchases water from ECWA's water system.</p> <p>MF/L = Million Fibers per Liter. A measure of the presence of asbestos fibers longer than 10 micrometers.</p> <p>(year) = Most recent testing. Monitoring frequency requirements vary depending on compound.</p> <p>UCMR4 = Unregulated Contaminant Monitoring Rule 4 - Periodic EPA required monitoring of up to 30 unregulated water quality parameters to establish baseline occurrence data. EPA combines this data with research to establish future regulations.</p> <p>µmhos/cm = Microohms per Centimeter</p> <p>Cont = Continuously monitored via online measurements.</p> <p>** = 95% of measurements within a given month must be less than 0.3 NTUs.</p> <p>*** = Average of monthly distribution system turbidity samples must be less than 5.0 NTUs.</p> <p>**** = 95% of monthly distribution system samples must have a measurable chlorine residual.</p> <p>***** = No more than 5% of monthly samples can be positive.</p> <p>Note: Total Hardness is also expressed in grains per gallon. The Total Hardness of the Ontario, Hemlock, & Erie supplies are 7.0, 6.9, 5.4, and 6.9 grains per gallon respectively. The Total Hardness of the Corfu supply is 10.4 grains per gallon.</p>