



Monroe County Water Authority

SCAN CODE FOR AWQR REPORT:



2022 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 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022
<u>Inorganics, Metals, & Physical Parameters:</u>																		
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	73.3	32 - 140	4	49	25 - 93	4	ND		4	ND		4	113	59 - 180	3
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	0.019	0.019 - 0.02	4	0.02	0.019 - 0.023	4	0.12	0.09 - 0.2	4	0.014	0.014	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	ND - 0.021	4	0.02	0.019 - 0.023	4	NR			0.008	0.008	1	0.009	0.009	1
Cadmium	5	5	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Calcium	NS	NS	mg/L	34.5	32 - 36	4	34	32 - 35	4	61.3	46 - 79	4	28.5	25 - 35	4	34.3	32 - 36	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	17	15 - 21	4	3	ND - 12	4	ND		4
Copper (Customer Tap Samples)	AL* = 1300	1300	µg/L	130	8.1 - 470	50 (2021)	130	8.1 - 470	50 (2021)	142	3.8 - 290	22 (2021)	130	8.1 - 470	50 (2021)	142	3.8 - 290	22 (2021)
Cyanide	200	200	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Fluoride	2.2	NA	mg/L	0.70	0.51 - 1.15	2,144	0.67	0.42 - 0.97	2,024	0.13	0.12 - 0.13	4	0.69	0.09 - 0.85	1,074	0.59	0.11 - 0.71	53
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 (2021)	3.2	ND - 130	50 (2021)	0.63	ND - 2.8	22 (2021)	3.2	ND - 130	50 (2021)	0.63	ND - 2.8	22 (2021)
Magnesium	NS	NS	mg/L	8.9	8.9	1	8.8	8.8	1	17	17	1	6.4	6.4	1	9	9	1
Manganese	300	NA	µg/L	ND		4	ND		4	4.8	2.9 - 8.5	4	ND		1	ND		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	0.24	0.1 - 0.34	4	0.23	ND - 0.4	4	ND		4	ND		1	0.55	0.55	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	1.1	1.1	1	ND		1	1	1	1	1.3	1.3	1
Selenium	50	50	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Silica	NS	NS	mg/L	0.48	0.32 - 0.67	4	0.47	0.32 - 0.66	4	8	7.9 - 8.1	4	0.70	0.4 - 1	4	0.42	0.27 - 0.8	4
Silver	100	NA	µg/L	ND		4	ND		4	ND		4	ND		1	ND		1
Sodium	NS	NS	mg/L	15.8	15 - 17	4	16	15 - 17	4	66.5	36 - 87	4	19.5	16 - 21	4	13	12 - 15	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 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022
Sulfate	250	NA	mg/L	26	25 - 27	4	25.5	25 - 26	4	47	44 - 48	4	14.5	10 - 26	4	20	19 - 22	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	87.3	86 - 89	4	88.3	87 - 91	4	248	240 - 250	4	76	72 - 86	4	92.5	89 - 95	4
Chloride	250	NA	mg/L	26.5	25 - 27	4	28.0	27 - 29	4	64	49 - 93	4	34	27 - 38	4	21	19 - 24	4
Color	15	NA	Color Units	ND		4	ND		4	ND		4	ND		4	ND		4
Conductivity	NS	NS	µmhos/cm	305	290 - 340	48	312.5	300 - 360	46	761	530 - 875	56	295	279 - 320	54	293	275 - 314	53
pH	NS	NS	pH units	7.48	7.13 - 8.31	365	7.44	7.12 - 8.65	341	7.39	7.24 - 7.58	188	7.84	7.45 - 8.25	353	7.89	7.46 - 8.11	1,078
Total Dissolved Solids	NS	NS	mg/L	180	170 - 190	4	175	160 - 190	4	452.5	430 - 520	4	160	150 - 170	4	170	160 - 180	4
Total Hardness	NS	NS	mg/L	123	120 - 130	4	120	120	4	245	180 - 320	4	94.3	94 - 95	3	123.3	120 - 130	3
Total Organic Carbon	TT	NS	mg/L	1.7	1.6 - 1.9	4	1.70	1.6 - 1.9	4	0.93	0.81 - 1	4	2.3	1.6 - 2.6	4	2.1	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	2,025	0.39	0.03 - 1.4	56	0.06	ND - 0.15	2,179	0.07	0.01 - 0.26	1,078
Turbidity - Distribution System	TT ***	NA	NTUs	0.11	0.02 - 4.22	4,097	0.11	0.02 - 4.22	4,097	0.12	0.03 - 0.97	397	0.11	0.02 - 4.22	4,097	0.12	0.03 - 0.97	397
Chlorine Residual - Entry Point	4	NA	mg/L	1.14	0.71 - 1.44	2,190	0.83	0.35 - 1.26	2,024	1.11	0.5 - 1.69	185	0.83	0.69 - 1.85	1,412	1.54	1.33 - 1.74	1,078
Chlorine Residual - Retail Distribution System	4 ****	NA	mg/L	0.59	ND - 1.85	4,098	0.59	ND - 1.85	4,098	0.6	ND - 1.55	397	0.59	ND - 1.85	4,098	0.60	ND - 1.55	397
Microbiological Parameters:																		
Coliform - Retail Distribution System	TT *****	0	% Positive	12 positive samples - 0.3%		4,098	12 positive samples - 0.3%		4,098	1 positive sample - 0.3%		397	12 positive samples - 0.3%		4,098	1 positive samples - 0.3%		397
				August: 7 positive samples - 1.9%			August: 7 positive samples - 1.9%			October: 1 positive samples - 2.9%			August: 7 positive samples - 1.9%			October: 1 positive samples - 2.9%		
Cryptosporidium (source water prior to treatment)	TT	0	OoCysts/L	0.05	0.05	2	ND		4	NR		NR	ND		1	NR		NR
				February, November - 2 positive samples.			None Detected.			NR			None Detected.			NR		
Giardia Lamblia (source water prior to treatment)	TT	0	Cysts/L	ND		2	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 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)
Gross Beta Particle / Photon Emitters	50	0	pCi/L	NR		0 (2021)	NR		0 (2021)	NR		0 (2021)	NR		0 (2021)	NR		0 (2021)
Radium 226	NS	NA	pCi/L	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)
Radium 228	NS	NA	pCi/L	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)
Combined Radium 226/228	5	0	pCi/L	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	1.06		1 (2021)	ND		1 (2021)
Uranium	30	0	pCi/L	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)	ND		1 (2021)
Volatile Organic Compounds:																		
Benzene	5	0	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Bromobenzene	5	NA	µg/L	ND		4	ND		4	ND		4	ND		4	ND		4

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022
Bromochloromethane	5	NA	µg/L	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4
Bromomethane	5	NA	µg/L			4			4									
n-Butylbenzene	5	NA	µg/L			4			4									
sec-Butylbenzene	5	NA	µg/L			4			4									
tert-Butylbenzene	5	NA	µg/L			4			4									
Carbon Tetrachloride	5	0	µg/L			4			4									
Chlorobenzene	5	NA	µg/L			4			4									
Chloroethane	5	NA	µg/L			4			4									
Chloromethane	5	NA	µg/L			4			4									
2-Chlorotoluene	5	NA	µg/L			4			4									
4-Chlorotoluene	5	NA	µg/L			4			4									
Dibromomethane	5	NA	µg/L			4			4									
1,2-Dichlorobenzene	5	NA	µg/L			4			4									
1,3-Dichlorobenzene	5	NA	µg/L			4			4									
1,4-Dichlorobenzene	5	NA	µg/L			4			4									
Dichlorodifluoromethane	5	NA	µg/L			4			4									
1,1 Dichloroethane	5	NA	µg/L			4			4									
1,2-Dichloroethane	5	0	µg/L			4			4									
1,1-Dichloroethene	5	NA	µg/L			4			4									
cis-1,2-Dichloroethene	5	NA	µg/L			4			4									
trans-1,2-Dichloroethene	5	NA	µg/L			4			4									
1,2-Dichloropropane	5	0	µg/L			4			4									
1,3-Dichloropropane	5	NA	µg/L			4			4									
2,2-Dichloropropane	5	NA	µg/L			4			4									
1,1-Dichloropropene	5	NA	µg/L			4			4									
1,3-Dichloropropene (Cis)	5	NA	µg/L			4			4									
1,3-Dichloropropene (Trans)	5	NA	µg/L			4			4									
Ethylbenzene	5	NA	µg/L			4			4									
Hexachlorobutadiene	5	NA	µg/L			4			4									
Isopropylbenzene	5	NA	µg/L			4			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													

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022		
n-Propylbenzene	5	NA	µg/L	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		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		1	Not Detected		1	Not Detected		1	Not Detected		1	Not Detected		1		
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
3, 5-Dichlorobenzoic Acid	50	NS	µg/L																1	1
Acifluorfen	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
Atrazine	3	3	µg/L																4	4
Baygon	50	NS	µg/L																1	1
Bentazon	50	NS	µg/L																1	1

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022
Benzo(a)pyrene	200	0	ng/L	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4
Bis(2-Ethylhexyl)Phthalate (DEHP)	6	0	µg/L			4			4									
Butachlor	50	NA	µg/L			4			4									
Carbaryl	50	NA	µg/L			1			1									
Carbofuran	40	40	µg/L			1			1									
Chlordane	2	NA	µg/L			4			4									
Dalapon	50	NA	µg/L			1			1									
DCPA, Mono & Di-Acid Degradate	50	NS	µg/L			1			1									
Di(2-Ethylhexyl) Adipate	50	NA	µg/L			4			4									
Dicamba	50	NA	µg/L			1			1									
Dieldrin	5	NA	µg/L			4			4									
Dinoseb	7	7	µg/L			1			1									
1, 4-Dioxane	1	NA	µg/L			3			3									
Dioxin	30	0	pg/L			1			1									
Diquat	20	20	µg/L			1			1									
Endothall	50	NA	µg/L			1			1									
Endrin	2	2	µg/L			4			4									
Glyphosate	50	700	µg/L			1			1									
Heptachlor	400	0	ng/L			4			4									
Heptachlor Epoxide	200	0	ng/L			4			4									
Hexachlorobenzene	1	0	µg/L			4			4									
Hexachlorocyclopentadiene	5	NA	µg/L			4			4									
Isophorone	50	NA	µg/L			4			4									
Lindane (gamma-BHC)	200	200	ng/L			4			4									
Methomyl	50	NA	µg/L			1			1									
Methoxychlor	40	40	µg/L			4			4									
Metolachlor	50	NA	µg/L			4			4									
Metribuzin	50	NA	µg/L			4			4									
Oxamyl	50	NA	µg/L	1	1													
p,p' DDD	5	NA	µg/L	4	4													
p,p' DDE	NS	NS	µg/L	4	4													
p,p' DDT	5	NA	µg/L	4	4													
PCB's Total	500	0	ng/L	4	4													

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	EPA / NYS MCL	EPA / NYS MCLG	UNITS	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022
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	1.5	ND - 2.1	4	0.5	ND - 2	4	ND		8	ND		4	ND		4
Perfluorooctanoic Acid (PFOA)	10	NA	ng/L	ND		4	ND		4	ND		8	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	38.6	13 - 73	52	38.6	13 - 73	52	41.5	20 - 55	8	38.6	13 - 73	52	41.5	20 - 55	8
				Maximum LRAA = 55.8			Maximum LRAA = 55.8			Maximum LRAA = 46.5			Maximum LRAA = 55.8			Maximum LRAA = 46.5		
Haloacetic Acids (HAA5)	60	NA	µg/L	11.3	ND - 30	52	11.3	ND - 30	52	7.4	ND - 32	8	11.3	ND - 30	52	7.4	ND - 32	8
				Maximum LRAA = 18.8			Maximum LRAA = 18.8			Maximum LRAA = 11.8			Maximum LRAA = 18.8			Maximum LRAA = 11.8		
Emerging Contaminants - Per & Polyfluorinated Alkyl Acids (PFAS):																		
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NS	NS	ng/L	Not Detected		2	Not Detected		2	Not Detected		4	Not Detected		2	Not Detected		2
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	NS	NS	ng/L			2			2			4			2			
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	NS	NS	ng/L			2			2			4			2			
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	NS	NS	ng/L			2			2			4			2			
4, 8-dioxa-3H-perfluorononanoic acid (ADONA)	NS	NS	ng/L			2			2			4			2			
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	NS	NS	ng/L			2			2			4			2			
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	NS	NS	ng/L			2			2			4			2			
N-ethyl Perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NS	NS	ng/L			2			2			4			2			
N-methyl Perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NS	NS	ng/L			2			2			4			2			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NS	NS	ng/L			2			2			4			2			
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	NS	NS	ng/L			2			2			4			2			
Perfluoro-3-methoxypropanoic acid (PFMPA)	NS	NS	ng/L			2			2			4			2			
Perfluoro-4-methoxybutanoic acid (PFMBA)	NS	NS	ng/L			2			2			4			2			
Perfluorobutanesulfonic acid (PFBS)	NS	NS	ng/L			4			4			8			4			
Perfluorobutanoic acid (PFBA)	NS	NS	ng/L			1.2			ND - 2.3			2			1.4			ND - 2.8
Perfluorodecanoic acid (PFDA)	NS	NS	ng/L	ND		4	ND		4	8	8	4	ND		4	4		
Perfluorododecanoic acid (PHDdOA)	NS	NS	ng/L	ND		4	ND		4	8	8	4	ND		4	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 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022
Perfluoroheptanesulfonic acid (PFHpS)	NS	NS	ng/L	Not Detected		2	Not Detected		2	Not Detected		4	Not Detected		2	Not Detected		2
Perfluoroheptanoic acid (PFHpA)	NS	NS	ng/L		4	4		4	8		4							
Perfluorohexanesulfonic acid (PFHxS)	NS	NS	ng/L		4	4		4	8		4							
Perfluorohexanoic acid (PFHxA)	NS	NS	ng/L		4	4		4	8		4							
Perfluorononanoic acid (PFNA)	NS	NS	ng/L		4	4		4	8		4							
Perfluoropentanesulfonic acid (PFPeS)	NS	NS	ng/L		2	2		2	4		2							
Perfluoropentanoic acid (PFPeA)	NS	NS	ng/L		2	2		2	4		2							
Perfluorotetradecanoic acid (PFTA)	NS	NS	ng/L		2	2		2	4		2							
Perfluorotridecanoic acid (PFTTrDA)	NS	NS	ng/L		2	2		2	4		2							
Perfluoroundecanoic acid (PFUnA)	NS	NS	ng/L		4	4		4	8		4							
UCMR4 - Alcohols, Metals, Pesticides, SVOCs & Cyanotoxins: Test data from 2019 and 2020.																		
Manganese	NS	NS	µg/L	Not Detected		4	Not Detected		4	8	6 - 10	2	Not Detected		4	3.49	0.77 - 6.3	4
Germanium	NS	NS	µg/L		4	4		2	4									
alpha-Hexachlorocyclohexane	NS	NS	µg/L		4	4		2	4									
Chlorpyrifos	NS	NS	µg/L		4	4		2	4									
Dimethipin	NS	NS	µg/L		4	4		2	4									
Ethoprop	NS	NS	µg/L		4	4		2	4									
Oxyfluoren	NS	NS	µg/L		4	4		2	4									
Profenofos	NS	NS	µg/L		4	4		2	4									
Tebuconazole	NS	NS	µg/L		4	4		2	4									
Permethrin, cis & trans	NS	NS	µg/L		4	4		2	4									
Tribufos	NS	NS	µg/L		4	4		2	4									
Butylated hydroxyanisole	NS	NS	µg/L		4	4		2	4									
o-Toluidene	NS	NS	µg/L		4	4		2	4									
Quinoline	NS	NS	µg/L		4	4		2	4									
1-Butanol	NS	NS	µg/L		4	4		2	4									
2-Methoxyethanol	NS	NS	µg/L		4	4		2	4									
2-Propen-1-ol	NS	NS	µg/L		4	4		2	4									
Total Microcystin	NS	NS	µg/L		8	8		0	8									
Microcystin-LA	NS	NS	µg/L		8	8		0	8									
Microcystin-LF	NS	NS	µg/L		8	8		0	8									
Microcystin-LR	NS	NS	µg/L	8	8	0	8											
Microcystin-LY	NS	NS	µg/L	8	8	0	8											

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 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	
Microcystin-RR	NS	NS	µg/L	Not Detected		8	Not Detected		8	Not Detected		0	Not Detected		8	Not Detected		8	
Microcystin-YR	NS	NS	µg/L			8			8			0			8				
Nodularin	NS	NS	µg/L			8			8			0			8				
Anatoxin-A	NS	NS	µg/L			8			8			0			8				
Cylindrospermopsin	NS	NS	µg/L			8			8			0			8				
UCMR4 - HAA Groups Indicators: Test 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	
UCMR4 - HAA Groups: Test 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													

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 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022	Average	Range	Samples in 2022

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. In 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 the 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 - 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 7.2, 7.0, 5.5, and 7.2 grains per gallon respectively. The Total Hardness of the Corfu supply is 14.3 grains per gallon.</p>
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