



Monroe County Water Authority

2015 Water Quality Monitoring Program Summary

Parameter	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Shoremont WTP Lake Ontario			Webster WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie		
				Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015
Inorganics, Metals, Physical Parameters																		
Aluminum	NS	NS	ug/L	47	ND-75	4	68	51-110	4	ND	ND-54	4	23	ND-70	4	175	40-320	4
Antimony	6	6	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Arsenic	10	0	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Barium	2	2	mg/L	0.020	0.018-0.021	4	0.021	0.019-0.021	4	0.143	0.14-0.16	4	0.016	0.015-0.017	4	0.022	0.019-0.024	4
Beryllium	4	4	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Cadmium	5	5	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Calcium	NS	NS	mg/L	34	33-36	4	34	33-35	4	66	57-79	4	26	24-28	4	33	31-34	4
Chromium	100	100	ug/L	ND	ND-1.4	4	ND		4	ND	ND-1	4	ND		4	ND		4
Copper (Distribution System)	NS	NS	ug/L	ND		4	ND		4	26	ND-36	4	ND	ND-3.6	4	1.1	ND-2.4	4
Copper (Customer Tap Samples)	AL* = 1300	1300	ug/L	94	4.6-500	53	94	4.6-500	53	120	ND-550	20	94	4.6-500	53	120	ND-550	20
Cyanide	200	200	ug/l	ND		4	ND		4	ND		4	ND		3	ND		4
Fluoride	2.2	NA	mg/L	0.8	0.1-1.3	2175	0.7	0.1-1.5	1849	NR		NR	0.7	0.5-1.0	1083	0.5	0.1-1.0	46
Iron	300	NA	ug/L	ND		4	ND		4	ND	ND-0.03	4	ND		4	ND		4
Lead (Distribution System)	NS	NS	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Lead (Customer Tap Samples)	AL* = 15	0	ug/L	5.9	ND-63	53	5.9	ND-63	53	<1	ND-3.8	20	5.9	ND-63	53	<1	ND-3.8	20
Magnesium	NS	NS	mg/L	9.2	8.9-9.7	4	9	8.8-9.1	4	9.0	8.8-9.1	4	27	23-32	4	8.4		1 (2104)
Manganese	300	NA	ug/L	ND		4	ND		4	30	11-63	3	ND		1	2.1	ND-6	4
Mercury	2	2	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Nickel	100	NA	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Nitrate	10	10	mg/L	0.33	0.27-0.36	4	0.3	0.26-0.32	4	ND		4	ND	ND-0.21	4	0.13	ND-0.22	4
Nitrite	1	1	mg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Potassium	NS	NS	mg/L	1.6		2	1.5		1	1		1	1.3		1	1.5		1
Selenium	50	50	ug/L	ND		4	ND		4	ND		4	ND		1	ND		4
Silica	NS	NS	mg/L	0.58	0.45-0.65	4	0.57	0.49-0.58	4	8.8	8.6-9.2	4	1.22	1.0-1.3	4	0.5	0.35-0.73	4
Silver	100	NA	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Sodium	NS	NS	mg/L	15		4	16	15-17	4	44	25-64	4	20			12		1
Sulfate	250	NA	mg/L	29	28-31	4	28		4	46		1	12.5	12-13	4	22	21-22	3
Thallium	2	0.5	ug/L	ND		4	ND		4	ND		4	ND		4	ND		4
Zinc	5	NA	mg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Alkalinity	NS	NA	mg/L	87	84-90	4	88	85-91	4	235	220-250	4	68	65-72	4	89	82-93	4
Chlorides	250	NA	mg/L	26	25-27	4	27	25-28	4	48	40-65	4	35	33-37	4	22	21-23	4

Parameter				Shoremont WTP Lake Ontario			Webster WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie		
	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015
Color	15	NA	Color Units	ND		4	ND		4	ND		4	ND		4	ND		4
Conductivity	NS	NS	umhos/cm	300	290-310	38	NR		NR	710	550-800	45	270	250-300	52	310	290-320	50
pH	NS	NS	pH units	7.5	7.1-7.9	364	7.5	6.8-7.9	321	7.5	7.4-7.8	197	7.8	7.2-8.5	363	7.9	7.32-8.3	4380
Total Dissolved Solids	NS	NS	mg/L	185	160-200	4	195	190-200	4	405	370-430	4	160	130-180	4	170	160-180	4
Total Hardness	NS	NS	mg/L	123	120-130	4	120		4	275	240-330	4	90	85-96	4	110		1(2014)
Total Organic Carbon	NS	NS	mg/L	1.6	1.5-1.7	4	1.6	1.5-1.6	4	0.9	0.8-1.0	4	2.3	2.1-2.4	4	1.8	1.7-1.9	4
Surfactants	NS	NS	mg/L	ND		4	ND		4	ND		4	ND		4	ND		4
Turbidity - Entry Point	TT **	NA	NTUs	0.04	0.03-0.13	2189	0.04	0.03-0.08	1898	NR		NR	0.07	0.04-0.16	2158	0.06	0.10-0.83	4380
Turbidity - Distribution System	TT ***	NA	NTUs	0.10	0.03-4.6	4305	0.10	0.03-4.6	4305	0.09	0.03-1.0	365	0.10	0.03-4.6	4305	0.09	0.04-0.76	52
Chlorine Residual - Entry Point	NA	NA	mg/L	1.1	0.6-2.2	2190	0.9	0.3-1.6	1907	0.7	0.4-1.2	198	0.9	0.6-1.9	2164	1.5	0.70-1.86	4380
Chlorine Residual - Retail Dist.System	TT ****	NA	mg/L	0.6	ND-1.9	4307	0.6	ND-1.9	4307	0.4	ND-1.2	366	0.6	ND-1.9	4307	0.4	ND-1.2	366
Coliform - Retail Dist.System	TT *****	0	%Positive	0.20%		4305	0.20%		4305	0.0%		366	0.20%		4305	0.0%		366
Cryptosporidium	NS	NS	#Positive	ND		9	ND		9	NR		NR	ND		11	ND		18
Giardia	NS	NS	#Positive	ND		9	ND		9	NR		NR	ND		11	ND		18
Asbestos (Distribution System)	7	7	MF/L	ND		1 (2007)	ND		1(2007)	ND		1 (2007)	ND		1 (2007)	ND		1 (2007)
Radionuclides																		
Gross Alpha	15	0	pCi/L	ND		1 (2012)	ND		3	ND		1 (2012)	ND		1 (2012)	ND		1 (2013)
Gross Beta	50	0	pCi/L	ND		1 (2012)	ND		3	ND		1 (2012)	ND		1 (2012)	ND		1 (2013)
Combined Radium 226/228	5	0	pCi/L	ND		1 (2012)	ND		3	ND		1 (2012)	ND		1 (2012)	ND		1 (2013)
Uranium	30	0	pCi/L	ND		1 (2012)	ND		3	ND		1 (2012)	ND		1 (2012)	NR		
Volatile Organics																		
Benzene	5	0	ug/L			4			4			4			4			2
Bromobenzene	5	NA	ug/L			4			4			4			4			2
Bromochloromethane	5	NA	ug/L			4			4			4			4			2
Bromomethane	5	NA	ug/L			4			4			4			4			2
n-Butylbenzene	5	NA	ug/L			4			4			4			4			2
sec-Butylbenzene	5	NA	ug/L			4			4			4			4			2
tert-Butylbenzene	5	NA	ug/L			4			4			4			4			2
Carbon Tetrachloride	5	0	ug/L			4			4			4			4			2
Chlorobenzene	5	NA	ug/L			4			4			4			4			2
Chloroethane	5	NA	ug/L			4			4			4			4			2
Chloromethane	5	NA	ug/L			4			4			4			4			2
2-Chlorotoluene	5	NA	ug/L			4			4			4			4			2
4-Chlorotoluene	5	NA	ug/L			4			4			4			4			2
Dibromomethane	5	NA	ug/L			4			4			4			4			2
1,2-Dichlorobenzene	5	NA	ug/L			4			4			4			4			2
1,3-Dichlorobenzene	5	NA	ug/L			4			4			4			4			2

Parameter	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Shoremont WTP Lake Ontario			Webster WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie		
				Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015
1,4-Dichlorobenzene	5	NA	ug/L	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		4	Not Detected		2
Dichlorodifluoromethane	5	NA	ug/L			4			4			2						
1,1-Dichloroethane	5	NA	ug/L			4			4			2						
1,2-Dichloroethane	5	0	ug/L			4			4			2						
1,1-Dichloroethene	5	NA	ug/L			4			4			2						
cis-1,2-Dichloroethene	5	NA	ug/L			4			4			2						
trans-1,2-Dichloroethene	5	NA	ug/L			4			4			2						
1,2-Dichloropropane	5	0	ug/L			4			4			2						
1,3-Dichloropropane	5	NA	ug/L			4			4			2						
2,2-Dichloropropane	5	NA	ug/L			4			4			2						
1,1-Dichloropropene	5	NA	ug/L			4			4			2						
1,3-Dichloropropene(Cis)	5	NA	ug/L			4			4			2						
1,3-Dichloropropene(Trans)	5	NA	ug/L			4			4			2						
Ethylbenzene	5	NA	ug/L			4			4			2						
Hexachlorobutadiene	5	NA	ug/L			4			4			2						
Isopropylbenzene	5	NA	ug/L			4			4			2						
p-Isopropyltoluene	5	NA	ug/L			4			4			2						
Methyl Tert-butyl ether (MTBE)	10	NA	ug/L			4			4			2						
Methylene Chloride (Dichloromethane)	5	0	ug/L			4			4			2						
n-Propylbenzene	5	NA	ug/L			4			4			2						
Styrene	5	NA	ug/L			4			4			2						
1,1,1,2-Tetrachloroethane	5	NA	ug/L			4			4			2						
1,1,1,2,2-Tetrachloroethane	5	NA	ug/L			4			4			2						
Tetrachloroethene	5	0	ug/L			4			4			2						
Toluene	5	NA	ug/L			4			4			2						
1,2,3-Trichlorobenzene	5	NA	ug/L			4			4			2						
1,2,4-Trichlorobenzene	5	NA	ug/L			4			4			2						
1,1,1-Trichloroethane	5	NA	ug/L			4			4			2						
1,1,1,2-Trichloroethane	5	3	ug/L	4	4	2												
Trichloroethene	5	0	ug/L	4	4	2												
Trichlorofluoromethane	5	NA	ug/L	4	4	2												
1,2,3-Trichloropropane	5	NA	ug/L	4	4	2												
1,2,4-Trimethylbenzene	5	NA	ug/L	4	4	2												
1,3,5-Trimethylbenzene	5	NA	ug/L	4	4	2												
Vinyl Chloride	2	0	ug/L	4	4	2												
Xylenes	5	NA	ug/L	4	4	2												

Parameter	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Shoremont WTP Lake Ontario			Webster WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie															
				Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015													
Organics, Pesticides, Herbicides																															
1, 2-Dibromo-3-Chloropropane	200	0	ng/L	Not Detected			Not Detected			Not Detected			Not Detected			Not Detected															
1, 2-Dibromoethane (EDB)	50	0	ng/L																1	1	1	1	1	1	1	1	1	1	1	1	1
2, 4, 5-TP (Silvex)	10	NA	ug/L																2	2	2	2	2	2	2	2	2	2	2	2	2
2, 4-D	50	NA	ug/L																4	4	4	4	4	4	4	4	4	4	4	4	4
3-Hydroxycarbofuran	50	NS	ug/L																4	4	4	4	4	4	4	4	4	4	4	4	4
Alachlor	2	0	ug/L																1	1	1	1	1	1	1	1	1	1	1	1	1
Aldicarb	3	1	ug/L																1	1	1	1	1	1	1	1	1	1	1	1	1
Aldicarb Sulfone	2	1	ug/L																1	1	1	1	1	1	1	1	1	1	1	1	1
Aldicarb Sulfoxide	4	1	ug/L																1	1	1	1	1	1	1	1	1	1	1	1	1
Aldrin	5	NA	ug/L																4	4	4	4	4	4	4	4	4	4	4	4	4
Atrazine	3	3	ug/L																4	4	4	4	4	4	4	4	4	4	4	4	4
Benzo(a)pyrene	200	0	ng/L																4	4	4	4	4	4	4	4	4	4	4	4	4
Bis(2-Ethylhexyl)Phthalate	6	0	ug/L																4	4	4	4	4	4	4	4	4	4	4	4	4
Butachlor	50	NA	ug/L																4	4	4	4	4	4	4	4	4	4	4	4	4
Carbaryl	50	NA	ug/L																1	1	1	1	1	1	1	1	1	1	1	1	1
Carbofuran	40	40	ug/L																1	1	1	1	1	1	1	1	1	1	1	1	1
Dalapon	50	NA	ug/L																4	4	4	4	4	4	4	4	4	4	4	4	4
DCPA, Mono & Di-Acid Degradate	50	NS	ug/L	ND	ND-0.13	4	ND	ND-0.13	4	1	1	1	1	1	1	2															
Di(2-Ethylhexyl) Adipate	50	NA	ug/L	Not Detected			Not Detected			Not Detected			Not Detected																		
Dicamba	50	NA	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Dieldrin	5	NA	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Dinoseb	7	7	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Dioxin	30	0	pg/L													1	1	1	1	1	1	1	1	1	1	1	1	1			
Diquat	20	20	ug/L													1	1	1	1	1	1	1	1	1	1	1	1	1			
Endothall	50	NA	ug/L													1	1	1	1	1	1	1	1	1	1	1	1	1			
Endrin	2	2	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Glyphosate	50	NA	ug/L													1	1	1	1	1	1	1	1	1	1	1	1	1			
Heptachlor	400	0	ng/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Heptachlor Epoxide	200	0	ng/L													4	4	4	4	4	4	4	4	4	4	4	4	1			
Hexachlorobenzene	1	0	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	3			
Hexachlorocyclopentadiene	5	NA	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	3			
Isophorone	50	NA	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Lindane (gamma-BHC)	200	200	ng/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Methomyl	50	NA	ug/L													1	1	1	1	1	1	1	1	1	1	1	1	1			
Methoxychlor	40	40	ug/L													4	4	4	4	4	4	4	4	4	4	4	4	4			
Metolachlor	50	NA	ug/L	4	4	4	4	4	4	4	4	4	4	4	4	4															

Parameter	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Shoremont WTP Lake Ontario			Webster WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie												
				Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015	Average	Range	Samples in 2015										
Metribuzin	50	NA	ug/L	Not D		4	Not D		4	Not D		4	Not D		4	Not D		4										
Oxamyl	50	NA	ug/L			1			1			1			1			1	1	1	1	1	1	1	1	1	1	1
p,p' DDD	5	NA	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	4
p,p' DDE	NS	NS	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	4
p,p' DDT	5	NA	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	4
PCB's Total	500	0	ng/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	1
Pentachlorophenol	1	0	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	4
Perchlorate	NS	NS	ug/L			1			1			1			1			1	1	1	1	1	1	1	1	1	1	1
Pichloram	50	NA	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	2
Propachlor	50	NA	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	4
Simazine	4	4	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	4
Total Chlordane	2	0	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	4
Toxaphene	3	0	ug/L			4			4			4			4			4	4	4	4	4	4	4	4	4	4	1
Disinfectant Byproducts																												
Total THMs	80	NA	ug/L	43	19-80	52	43	19-80	52	41	19-74	8	43	19-80	52	41	19-74	8										
Haloacetic Acids	60	NA	ug/L	10	ND-24	52	10	ND-24	52	10	ND-18	8	10	ND-24	52	10	ND-18	8										
Key																												
<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 ug/l for lead or 1300 ug/L for copper, remediative steps are required. In MCWA's combined retail area, 90% of the samples were less than 12 ug/L for lead and 94 ug/L for copper.</p> <p>mg/l = milligram (1/1,000 of a gram) per liter = ppm = parts per million</p> <p>ug/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>NTU = Nephelometric turbidity Unit, a measure of the clarity of water.</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>Not Detected = ND = absent or present at less than testing method detection level. All testing methods are EPA approved with detection limits much less than the MCL.</p> <p>NA = Not applicable NR = Not required NS = No standard NT = Not Tested</p> <p>umhos/cm = micro ohms per centimeter</p> <p>Cont = Continuously monitored via online instrumentation.</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 and Hemlock supplies are 7.6 and 5.6 grains per gallon respectively.</p>																			