



Monroe County Water Authority

2009 Water Quality Monitoring Program Summary

If you have any questions on this report, please call our Customer Service Department at (585) 442-7200.

Parameter				Shoremont WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie		
	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Average	Range	samples in 2009	Average	Range	samples in 2009	Average	Range	samples in 2009	Average	Range	samples in 2009
Inorganics, Metals, Physical Parameters															
Aluminum	NS	NS	ug/L	58	27-110	4	ND		3	65	32-92	4	136	53-350	4
Antimony	6	6	ug/L	ND		4	ND		3	ND		4	ND		4
Arsenic	10	NA	ug/L	ND		4	ND		3	ND		4	ND		4
Barium	2	2	mg/L	0.022	0.021-0.023	4	0.09	0.058-0.15	3	0.016	0.015-0.016	4	0.021	0.020-0.023	4
Beryllium	4	4	ug/L	ND		4	ND		3	ND		4	ND		4
Cadmium	5	5	ug/L	ND		4	ND		3	ND		4	ND		4
Calcium	NS	NS	mg/L	35	32-36	4	44	31-71	3	25	24-25	4	33	32-34	4
Chromium	100	100	ug/L	ND	ND-2.1	4	ND	ND-4.5	3	ND		4	ND	ND-3.2	4
Copper (Distribution System)	NS	NS	mg/L	ND		4	0.026	ND-0.042	3	ND	ND-3.1	4	ND	ND-2.6	4
Copper (Customer Tap Samples)	AL* = 1.3	1.3	mg/L	0.055	ND-0.37	51	0.09	ND-0.54	20	0.055	ND-0.37	51	0.09	ND-0.54	20
Cyanide	200	200	ug/l	ND		4	ND		3	ND		4	ND		4
Fluoride	2.2	NA	mg/L	0.8	0.1-1.1	2136	NA		NR	0.8	0.58-1.01	1078	0.8	0.2-1.0	51
Iron	300	NA	ug/L	ND		4	ND	ND-0.027	3	ND	ND-0.066	4	ND		4
Lead (Distribution System)	NS	NS	ug/L	ND		4	ND		3	ND		4	0.6	ND-1.3	4
Lead (Customer Tap Samples)	AL* = 15	0	ug/L	1.9	ND-8	51	0.6	ND-2.7	20	1.9	ND-8	51	0.6	ND-2.7	20
Magnesium	NS	NS	mg/L	9.1	8.4-9.4	4	17.0	12-28	3	6.5	6.1-6.8	4	8.9		1
Manganese	300	NA	ug/L	ND		4	9	5-18	3	ND		1	7	3.1-12	4
Mercury	2	2	ug/L	ND		4	ND		3	ND		4	ND		4
Nickel	100	NA	ug/L	ND		4	ND		3	ND		4	ND		4
Nitrate	10	10	mg/L	0.34	0.28-0.4	4	ND		3	0.17	0.10-0.28	4	0.16	0.02-0.23	4
Nitrite	1	1	mg/L	ND		4	ND		3	ND		4	ND		4
Potassium	NS	NS	mg/L	1.6		1	NA		-	1.3		1	1.6		1
Selenium	50	50	ug/L	ND		4	ND		3	ND		1	ND		4
Silica	NS	NS	mg/L	0.77	0.36-1.7	4	8.9	8.7-9.3	3	2	0.53-3.3	4	0.8	0.33-2.0	4
Silver	100	NA	ug/L	1.3	ND-4.1	4	ND	ND-17	3	ND		4	ND		4
Sodium	NS	NS	mg/L	14	13-15	3	86	18-120	3	19	18-20	4	13	13-14	4
Sulfate	250	NA	mg/L	25		1	57		1	14		1	23		1
Thallium	2	0.5	ug/L	ND		4	ND		3	ND		4	ND		4
Zinc	5	NA	mg/L	ND		4	ND		3	ND		4	ND		3
Alkalinity	NS	NA	mg/L	85	83-88	4	243	240-250	3	67	62-75	4	92	90-95	4
Chlorides	250	NA	mg/L	25	24-27	4	45	41-53	3	35	34-36	4	22	22-23	4
Color	15	NA	Color Units	ND		4	ND		3	ND	ND-3	4	ND	ND-3.2	4
Conductivity	NS	NS	umhos/cm	310	290-340	47	680	600-740	26	260	230-290	103	300	280-330	44
pH	NS	NS	pH units	7.4	7.1-7.6	360	7.5	7.4-7.7	122	7.7	7.4-8.2	361	8.0	7.4-8.2	4369
Total Dissolved Solids	NS	NS	mg/L	164	156-180	4	400	370-430	3	145	130-160	4	165	150-180	4
Total Hardness	NS	NS	mg/L	122	110-129	4	180	120-290	3	89	85-91	4	110		1
Total Organic Carbon	NS	NS	mg/L	1.9	1.4-2.3	4	0.9	0.7-1.1	3	2	2.2-2.6	4	2.2	1.9-2.5	4
Surfactants	NS	NS	mg/L	ND		4	ND		3	ND		4	ND		4
Turbidity - Entry Point	TT **	NA	NTUs	0.05	0.04-0.12	2190	NR			0.07	.04-0.23	2188	0.08	0.04-0.64	4369
Turbidity - Distribution System	TT ***	NA	NTUs	0.12	0.04-7.0	4372	0.11	.04-2.5	368	0.12	0.04-7	4372	0.11	.04-2.5	368
Chlorine Residual - Entry Point	NA	NA	mg/L	1.1	0.8-1.5	2190	0.65	0.48-0.89	122	0.8	0.4-1.1	Continuous	1.4	1.0-1.8	4369
Chlorine Residual - Retail Dist.Sys	TT ****	NA	mg/L	0.5	ND-1.9	8760	0.4	ND-1.9	368	0.5	ND-1.9	4379	0.4	ND-1.9	368
Coliform - Retail Dist.System	TT *****	0	%Positive	0.30%		4376	0.00%		368	0.3%		4376	0.00%		368
Cryptosporidium	NS	NS	#Positive	ND		2			NA	ND		4	ND		24
Giardia	NS	NS	#Positive	ND		2			NA	ND		4	ND		24
Asbestos (Distribution System)	7	7	MFL	ND		1 (2007)	ND		1 (2007)	ND		1 (2007)	ND		1 (2007)
Radionuclides															
Gross Alpha	15	0	pCi/L	ND		1(2003)	ND		1(2003)	ND		1(2005)	0.4		4(2003)
Gross Beta	50	0	pCi/L	ND		1(2003)	ND		1(2003)	ND		1(2005)	1.7		4(2003)
Tritium	NS	NS	pCi/L	ND		1(2003)	ND		1(2003)	NR			NR		NR
Combined Radium226/228	5	0	pCi/L	ND		1(2003)	ND		1(2003)	NR			0.45	ND - 1.4	8(2004)
Uranium	30	0	ug/L	ND		4(2004)	ND		3(2003)	NR			0.4	0.3 - 0.5	8(2004)

Parameter	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Shoremont WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie						
				Average	Range	samples in 2009	Average	Range	samples in 2009	Average	Range	samples in 2009	Average	Range	samples in 2009				
Volatile Organics																			
Benzene	5	0	ug/L	Not Detected		4	Not Detected		3		4	Not Detected		4	2				
Bromobenzene	5	NA	ug/L													4	3	4	2
Bromochloromethane	5	NA	ug/L													4	3	4	2
Bromomethane	5	NA	ug/L													4	3	4	2
n-Butylbenzene	5	NA	ug/L													4	3	4	2
sec-Butylbenzene	5	NA	ug/L													4	3	4	2
tert-Butylbenzene	5	NA	ug/L													4	3	4	2
Carbon Tetrachloride	5	0	ug/L													4	3	4	2
Chlorobenzene	5	NA	ug/L													4	3	4	2
Chloroethane	5	NA	ug/L													4	3	4	2
Chloromethane	5	NA	ug/L													4	3	4	2
2-Chlorotoluene	5	NA	ug/L													4	3	4	2
4-Chlorotoluene	5	NA	ug/L													4	3	4	2
Dibromomethane	5	NA	ug/L													4	3	4	2
1,2-Dichlorobenzene	5	NA	ug/L													4	3	4	2
1,3-Dichlorobenzene	5	NA	ug/L													4	3	4	2
1,4-Dichlorobenzene	5	NA	ug/L													4	3	4	2
Dichlorodifluoromethane	5	NA	ug/L													4	3	4	2
1,1 Dichloroethane	5	NA	ug/L													4	3	4	2
1,2-Dichloroethane	5	0	ug/L													4	3	4	2
1,1-Dichloroethene	5	NA	ug/L													4	3	4	2
cis-1,2-Dichloroethene	5	NA	ug/L													4	3	4	2
trans-1,2-Dichloroethene	5	NA	ug/L													4	3	4	2
1,2-Dichloropropane	5	0	ug/L													4	3	4	2
1,3-Dichloropropane	5	NA	ug/L													4	3	4	2
2,2-Dichloropropane	5	NA	ug/L													4	3	4	2
1,1-Dichloropropene	5	NA	ug/L													4	3	4	2
1,3-Dichloropropene(Cis)	5	NA	ug/L													4	3	4	2
1,3-Dichloropropene(Trans)	5	NA	ug/L													4	3	4	2
Ethylbenzene	5	NA	ug/L													4	3	4	2
Hexachlorobutadiene	5	NA	ug/L													4	3	4	2
Isopropylbenzene	5	NA	ug/L													4	3	4	2
p-Isopropyltoluene	5	NA	ug/L													4	3	4	2
Methyl Tert-butyl ether (MTBE)	50	NA	ug/L													4	3	4	2
Methylene Chloride (Dichloromet	5	0	ug/L													3	1	3	NR
n-Propylbenzene	5	NA	ug/L													4	3	4	2
Styrene	5	NA	ug/L													4	3	4	2
1,1,1,2-Tetrachloroethane	5	NA	ug/L													4	3	4	2
1,1,2,2-Tetrachloroethane	5	NA	ug/L													4	3	4	2
Tetrachloroethene	5	0	ug/L													4	3	4	2
Toluene	5	NA	ug/L	4	3	4	2												
1,2,3-Trichlorobenzene	5	NA	ug/L	4	3	4	2												
1,2,4-Trichlorobenzene	5	NA	ug/L	4	3	4	2												
1,1,1-Trichloroethane	5	NA	ug/L	4	3	4	2												
1,1,2-Trichloroethane	5	3	ug/L	4	3	4	2												
Trichloroethene	5	0	ug/L	4	3	4	2												
Trichlorofluoromethane	5	NA	ug/L	4	3	4	2												
1,2,3-Trichloropropane	5	NA	ug/L	4	3	4	2												
1,2,4-Trimethylbenzene	5	NA	ug/L	4	3	4	2												
1,3,5-Trimethylbenzene	5	NA	ug/L	4	3	4	2												
Xylenes	5	NA	ug/L	4	3	4	2												
Vinyl chloride	2	0	ug/L	4	3	4	2												

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				Average	Range	samples in 2009	Average	Range	samples in 2009	Average	Range	samples in 2009	Average	Range	samples in 2009
				Not Detected			Not Detected			Not Detected			Not Detected		
Organics, Pesticides, Herbicides															
1, 2-Dibromo-3-Chloropropane	200	0	ng/L			1			1			1			1
1, 2-Dibromoethane (EDB)	50	0	ng/L			1			1			1			1
2, 4, 5-TP (Silvex)	10	NA	ug/L			1			1			1			1
2, 4-D	50	NA	ug/L			1			1			1			1
3-Hydroxycarbofuran	50	NS	ug/L			1			1			1			1
Alachlor	2	0	ug/L			4			3			4			4
Aldicarb	3	1	ug/L			1			1			1			1
Aldicarb Sulfone	2	1	ug/L			1			1			1			1
Aldicarb Sulfoxide	4	1	ug/L			1			1			1			1
Aldrin	5	NA	ug/L			4			3			4			4
Atrazine	3	3	ug/L			4			3			4			4
Benzo(a)pyrene	200	0	ng/L			4			3			4			4
Bis(2-Ethylhexyl)Phthalate	6	0	ug/L			4			3			4			4
Butachlor	50	NA	ug/L			4			3			4			4
Carbaryl	50	NA	ug/L			1			1			1			1
Carbofuran	40	40	ug/L			1			1			1			1
Dalapon	50	NA	ug/L			1			1			1			1
DCPA, Mono & Di-Acid Degradate	50	NS	ug/L			1			1			1			1
Di(2-Ethylhexyl) Adipate	50	NA	ug/L			4			3			4			4
Dicamba	50	NA	ug/L			1			1			1			1
Dieldrin	5	NA	ug/L			4			3			4			4
Dinoseb	7	7	ug/L			1			1			1			1
Dioxin	30	0	pg/L			1			1			1			1
Diquat	20	20	ug/L			1			1			1			1
Endothall	50	NA	ug/L			1			1			1			1
Endrin	2	2	ug/L			4			3			4			4
Glyphosate	50	NA	ug/L			1			1			1			1
Heptachlor	400	0	ng/L			4			3			4			4
Heptachlor Epoxide	200	0	ng/L			4			3			4			4
Hexachlorobenzene	1	0	ug/L			4			3			4			4
Hexachlorocyclopentadiene	5	NA	ug/L			4			3			4			4
Isophorone	50	NA	ug/L			4			3			4			4
Lindane (gamma-BHC)	200	200	ng/L			4			3			4			4
Methomyl	50	NA	ug/L			1			1			1			1
Methoxychlor	40	40	ug/L			4			3			4			4
Metolachlor	50	NA	ug/L			4			3			4			4
Metribuzin	50	NA	ug/L			4			3			4			4
Oxamyl	50	NA	ug/L			1			1			1			1
p,p' DDD	5	NA	ug/L			4			3			4			4
p,p' DDE	NS	NS	ug/L			4			3			4			4
p,p' DDT	5	NA	ug/L			4			3			4			4
PCB's Total	500	0	ng/L			4			3			4			2
Pentachloropheno	1	0	ug/L			4			3			4			4
Perchlorate	NS	NS	ug/L			1			1			1			1
Pichloram	50	NA	ug/L			1			1			1			1
Propachlor	50	NA	ug/L			4			3			4			4
Simazine	4	4	ug/L			4			3			4			4
Total Chlordane	2	0	ug/L			4			3			4			4
Toxaphene	3	0	ug/L			4			3			4			2
Disinfectant Byproducts															
Total THMs	80	NA	ug/L	33	17-52	16	41	21-66	4	36	20-58	16	41	21-66	4
Haloacetic Acids	60	NA	ug/L	11	4-28	16	14	8-19	4	19	8-19	16	14	8-19	4

Parameter	Shoremont WTP Lake Ontario			Corfu WTP Well			Hemlock WTP Hemlock Lake			ECWA Lake Erie		
	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Average	Range	samples in 2009	Average	Range	samples in 2009	Average	Range	samples in 2009
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.</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>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 (year) = Most recent testing. Monitoring frequency requirements vary depending on</p> <p>*Action level: If >10% of results are greater than 15 ug/l for lead or 1.3 mg/L for copper, remediative steps are required. In MCWA's combined retail area, 90% of the samples were less than 4.3 ug/L for lead and 0.100 mg/L for copper.</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>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>				