



# Monroe County Water Authority

## 2004 Water Quality Monitoring Program Summary

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

Parameter	EPA/MS MCL			Shoremont WTP			Corfu WTP			Hemlock WTP			ECWA			City of Batavia WTP			Town of Ontario WTP			
	EPA/MS MCL	EPA/MS MCLG	UNITS	Lake Ontario		Samples in 2004	Well		Samples in 2004	Hemlock Lake		Samples in 2004	Lake Erie		Samples in 2004	Ground Water		Samples in 2004	Lake Ontario		Samples in 2004	
				Average	Range		Average	Range		Average	Range		Average	Range		Average	Range		Average	Range		Average
<b>Inorganics, Metals, Physical Parameters</b>																						
Aluminum	NS	NS	ug/L	41	ND - 89	4	4	ND - 7	3	4	30 - 81	4	130	59 - 250	4					NR		
Antimony	6	6	ug/L	ND		4	ND		3	ND		4	ND		4					ND	1	
Arsenic	10	NA	ug/L	ND		4	ND		3	ND		4	ND		4					ND	1	
Barium	2	2	mg/L	0.02	0.020-0.021	4	0.05	0.038-0.07	3	0.016	0.016-0.020	4	0.022	0.021-0.023	4					0.027	1	
Beryllium	4	4	ug/L	ND		4	ND		3	ND		4	ND		4					ND	1	
Cadmium	5	5	ug/L	ND		4	ND		3	ND		4	ND		4					ND		
Calcium	NS	NS	mg/L	34	32 - 35	4	24	19 - 34	3	24.3	19 - 34	3	35	34 - 35	4					NR		
Chromium	100	100	ug/L	ND		4	ND		3	ND		4	ND		4					NR		
Copper (Distribution System)	NS	NS	mg/L	ND		4	0.24	0.11 - 0.36	3	0.013	ND - 0.025	4	0.003	0.002-0.006	4					NR		
Copper (Customer Tap Samples)	AL* = 1.3	1.3	mg/L	0.1	0.01 - 0.57	37 (2003)	0.15	0.02 - 0.62	22 (2003)	0.09	0.04 - 0.17	15 (2003)	0.15	0.02 - 0.62	22 (2003)	0.015	0.001 - 0.053	30 (2003)	0.106	0.008-0.119	13 (2002)	
Cyanide	200	200	ug/l	ND		4	ND		3	ND		4	ND		4					ND		
Fluoride	2.2	NA	mg/L	1	0.1 - 1.2	1766	NR		3	0.7	0.1 - 1.0	300	0.9	0.8 - 1.0	50	0.9	0.5 - 1.0	47	0.9		1	
Iron	300	NA	ug/L	ND		4	ND		3	ND		1	ND		4					NR		
Lead (Distribution System)	NS	NS	ug/L	ND		4	ND		3	ND		4	ND	ND - 1.7	4					NR		
Lead (Customer Tap Samples)	AL* = 15	0	ug/L	2.8	ND - 19	37 (2003)	1	ND - 6	22 (2003)	3	ND - 11	15 (2003)	1	ND - 6	22 (2003)	2	ND - 25	30 (2003)	5.7	3.5-6.3	13 (2002)	
Magnesium	NS	NS	mg/L	8.6		1	14		1 (2003)	6.2	6.2 - 6.3	1	8.4		1					NR		
Manganese	300	NA	ug/L	1	ND - 2.1	4	5.9	3.8 - 9.1	3	2.9		1	4.7		1					NR		
Mercury	2	2	ug/L	ND		4	ND		3	ND		4	ND		1					ND		
Nickel	100	NA	ug/L	0.6	0.5 - 0.7	4	0.1	ND - 0.2	3	1.1	ND - 2.1	4	0.7		1					NR		
Nitrate	10	10	mg/L	0.34	0.32 - 0.39	4	0.04	ND - 0.13	3	0.16	0.12 - 0.24	4	0.26		1					NR		
Nitrite	1	1	mg/L	ND		4	ND	ND - 0.23	3	ND	ND - 0.16	4	ND		1					NR		
Potassium	NS	NS	mg/L	1.8		1	NA			1.6		1	1.7		1					NR		
Selenium	50	50	ug/L	ND		4	ND		3	ND		1	ND		1					ND		
Silica	NS	NS	mg/L	0.45	0.08 - 0.66	4	8.2	8.1 - 8.3	3	1.1	0.8 - 1.3	4	0.4		1					NR		
Silver	100	NA	ug/L	ND		4	ND		3	ND		4	ND		1					NR		
Sodium	NS	NS	mg/L	12	12 - 13	2	130		1	17		2	13		1					NR		
Sulfate	250	NA	mg/L	29		1	59	54 - 68	3	18		1	24		1					NR		
Thallium	2	0.5	ug/L	ND		4	ND		3	ND		4	ND		1					ND		
Zinc	5	NA	mg/L	ND		4	0.15	0.08 - 0.21	3	ND		4	0.01		1					NR		
Alkalinity	NS	NA	mg/L	91	86 - 98	4	270	260 - 280	3	69	66 - 75	4	99.5	95 - 110	4					NR		
Chlorides	250	NA	mg/L	23	21 - 24	4	39	35 - 47	3	31	30 - 32	4	20	17 - 22	4					NR		
Color	15	NA	Color Units	ND		4	ND		3	ND		4	ND		4					NR		
Conductivity	NS	NS	umhos/cm	280	230 - 420	2059	340	260 - 660	151	260	220 - 310	1208	340	260 - 660	151	410	340 - 490	52			NR	
pH	NS	NS	pH units	7.4	7.1 - 7.8	366	7.6	7.4 - 8.1	41	7.6	7.3 - 8.1	366	8.0	7.7 - 8.4	732					7.6	7.4 - 7.8	Continuous
Total Dissolved Solids	NS	NS	mg/L	170	120 - 190	4	430	360 - 460	4	120	67 - 170	4	170		1					NR		
Total Hardness	NS	NS	mg/L	125	120 - 127	2*2003	80	20 - 140	3	90		1	120		1					NR		
Total Organic Carbon	NS	NS	mg/L	1.4	1.2 - 1.4	4	ND		1	2	1.9 - 2.0	4	1.7	1.4 - 2.0	3					NR		
Surfactants	NS	NS	mg/L	ND		4	ND		3	ND		4	ND		4					NR		
Turbidity - Entry Point	TT **	NA	NTUs	0.08	0.06 - 0.19	2190	0.13	0.01 - 0.07	34	0.06	0.03 - 0.25	2136	0.10	0.04 - 0.19	1098					0.04	0.04 - 0.12	2196
Turbidity - Distribution System	TT ***	NA	NTUs	0.16	0.07 - 5.4	3278	0.18	0.08 - 1.1	179	0.18	0.08 - 3.3	1231	0.18	0.08 - 1.1	179	0.12	0.08	52		NA		
Chlorine Residual - Entry Point	NA	NA	mg/L	1.2	1 - 1.6	366	1.1	0.3 - 1.8	45	0.88	0.5 - 1.2	2136	1.3	0.9 - 1.6	1098					1	0.9 - 1.1	Continuous
Chlorine Residual - Retail Dist.Sys	TT ****	NA	mg/L	0.8	ND - 2.2	3296	0.9	0.1 - 2.6	179	0.6	ND - 2.1	1231	0.9	0.1 - 2.6	179	0.6	0.4 - 1.0	52		NA		
Coliform - Retail Dist.System	TT *****	0	%Positive	1.5% Nov		3296	ND		179	ND		1231	ND		179	ND		52		NA		
Cryptosporidium	NS	NS	#/10L	ND		12	NR		179	ND		12	1 of 24 samples positive (raw water)		NA					ND	2	
Giardia	NS	NS	#/10L	ND		12	NR		179	ND		12	6 of 24 samples positive (raw water)		NA					ND	2	
Asbestos (Distribution System)	7	7	MFL	ND		1(1998)	ND		2	ND		1(2002)	NR		NR					NR		
<b>Radionuclides</b>																						
Gross Alpha	15	0	pCi/L	ND		1*2003	ND		1*2003	ND		1	0.4		4*2003	0.029		1*2001	0.47		1*2003	
Gross Beta	50	0	pCi/L	ND		1*2003	ND		1*2003	ND		1	1.7		4*2003	1.2		1*2001	1.1		1*2003	
Tritium	NS	NS	pCi/L	ND		1*2003	ND		1*2003	NR			NR		NR					NR		
Combined Radium226/228	5	0	pCi/L	ND		1*2003	ND		1*2003	NR			0.45	ND - 1.4						NR		
Uranium	30	0	ug/L	ND		4	ND		3	NR			0.4	0.3 - 0.5	8					NR		
<b>Volatile Organics</b>																						
Benzene	5	0	ug/L			4			3			4			1						1	
Bromobenzene	5	NA	ug/L			4			3			4			1						1	
Bromochloromethane	5	NA	ug/L			4			3			4			1						1	
Bromomethane	5	NA	ug/L			4			3			4			1						1	
n-Butylbenzene	5	NA	ug/L			4			3			4			1						1	
sec-Butylbenzene	5	NA	ug/L			4			3			4			1						1	
tert-Butylbenzene	5	NA	ug/L			4			3			4			1						1	
Carbon Tetrachloride	5	0	ug/L			4			3			4			1						1	
Chlorobenzene	5	NA	ug/L			4			3			4			1						1	
Chloroethane	5	NA	ug/L			4			3			4			1						1	
Chloromethane	5	NA	ug/L			4			3			4			1						1	
2-Chlorotoluene	5	NA	ug/L			4			3			4			1						1	
4-Chlorotoluene	5	NA	ug/L			4			3			4			1						1	
Dibromomethane	5	NA	ug/L			4			3			4			1						1	
1,2-Dichlorobenzene	5	NA	ug/L			4			3			4			1						1	
1,3-Dichlorobenzene	5	NA	ug/L			4			3			4			1						1	
1,4-Dichlorobenzene	5	NA	ug/L			4			3			4			1						1	
Dichlorodifluoromethane	5	NA	ug/L			4			3			4			1						1	
1,1-Dichloroethane	5	NA	ug/L			4			3			4			1						1	
1,2-Dichloroethane	5	0	ug/L	</																		

Parameter				Shoremont WTP			Corfu WTP			Hemlock WTP			ECWA			City of Batavia WTP			Town of Ontario WTP		
	EPA/NYS MCL	EPA/NYS MCLG	UNITS	Lake Ontario		Samples in 2004	Well		Samples in 2004	Hemlock Lake		Samples in 2004	Lake Erie		Samples in 2004	Ground Water		Samples in 2004	Lake Ontario		Samples in 2004
Perchlorate	NS	NS	ug/L			1					1				1						NR
<b>Disinfectant Byproducts</b>																					
Total THMs	80	NA	ug/L	43	14 - 96	16	NR			44	29 - 56	16	41	20 - 64	4	51	39 - 64	4	31	18 - 48	4
Haloacetic Acids	60	NA	ug/L	19	3 - 49	16	NR			28	5 - 58	16	19	16 - 21	4	13	9 - 16	4	11	19 - 48	4
<b>Key</b>																					
<p><b>MCL</b> = 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><b>MCLG</b> = 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><b>TT</b> = Treatment Technique, a required process intended to reduce the level of a contaminant in drinking water.</p> <p><b>AL</b> = Action Level, the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.</p> <p><b>Not Detected = ND</b> = 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><b>NA</b> = Not applicable    <b>NR</b> = Not required    <b>NS</b> = No standard    <b>NT</b> = Not Tested</p> <p><b>mg/l</b> = milligram (1/1,000 of a gram) per liter = <b>ppm</b> = parts per million</p> <p><b>ug/l</b> = microgram (1/1,000,000 of a gram) per liter = <b>ppb</b> = parts per billion</p> <p><b>ng/L</b> = nanogram (1/1,000,000,000 of a gram) per liter = <b>ppt</b> = parts per trillion</p> <p><b>pg/L</b> = picogram (1/1,000,000,000,000 of a gram) per liter = <b>ppq</b> = parts per quadrillion</p> <p><b>pC/L</b> = picroCuries per liter</p>											<p><b>NTU</b> = Nephelometric turbidity Unit, a measure of the clarity of water.</p> <p><b>MF/L</b> = million fibers per liter, a measure of the presence of asbestos fibers longer than 10 <sup>μ</sup>(year) = Most recent testing. Monitoring frequency requirements vary depending on</p> <p><b>*Action level:</b> If &gt;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 7 ug/L for lead and 0.140 mg/L for copper.</p> <p><b>**</b> = 95% of measurements within a given month must be less than &lt;0.3 NTUs.</p> <p><b>***</b> = Average of monthly distribution system turbidity samples must be less than 5.0 NTUs.</p> <p><b>****</b> = 95% of monthly distribution system samples must have a measurable chlorine</p> <p><b>Note:</b> 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>										