

**Item 18**

**LRA ER Reference 2.3-5**

**Monroe County Water Authority, 2000 Water Quality Monitoring Program  
Summary, MCWA 2000 Annual Water Quality Report, 2001**



### 2000 Water Quality Monitoring Program Summary

(Click [here](#) for key to abbreviations)




Parameter				Shoremont WTP			Brockport WTP			Purchased Water		
				Lake Ontario			Lake Ontario			Hemlock Lake		
	EPA/NYS MCL	EPA/NYS MCGL	UNITS	Average	Range	Samples In 2000	Average	Range	Samples In 2000	Average	Range	Samples In 2000
<b>Inorganics, Metals, Physical Parameters</b>												
Aluminum	NS	NS	ug/L	76	52- 115	4	110	50- 265	4	40	ND-60	4
Antimony	6	6	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Arsenic	50	NS	ug/L	Not Detected		4	Not Detected	ND- 1.2	4	Not Detected		4
Barium	2	2	mg/L	0.02	0.017 - 0.022	4	0.022	0.020- .022	4	0.017	0.016- 0.017	4
Beryllium	4	4	ug/L	Not		4	Not		4	Not		4

				Detected			Detected			Detected		
Bromide	NS	NS	mg/L	Not Detected		4	Not Detected	ND-0.09	4	Not Detected	ND-0.04	4
Cadmium	5	5	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Calcium	NS	NS	mg/L	36	34-37	4	36	35-37	4	26.	26-27	4
Chromium	100	100	ug/L	Not Detected		4	4	ND-7	4	2.8	ND-4.7	4
Copper (Distribution System)	NS	NS	mg/L	Not Detected		4	Not Detected		4	0.004	ND-0.009	4
Copper (Customer Tap Samples)	AL*=1.3	1.3	mg/L	0.05	ND-0.14	32	0.08	ND-0.23	8^(1997)	0.15	ND-0.78	18
Cyanide	200	200	ug/l	Not Detected		4	Not Detected		4	Not Detected		4
Fluoride	2.2	NA	mg/L	0.98	0.2 - 1.31	2065	0.97	0.2-1.44	2123	0.89	0.66-1.18	1095
Iron	300	NA	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Lead (Distribution System)	NS	NS	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Lead (Customer Tap Samples)	AL*15	0	ug/L	2	ND-26	32	0.6	ND-4	8^(1997)	5	ND-33	18
Magnesium	NS	NS	mg/L	8.8	8.4-9.3	4	8.9	8.6-9.1	4	6	5.6-6.4	4
Manganese	300	NA	ug/L	Not Detected		4	Not Detected		4	2.6	ND-7.6	4
Mercury	2	2	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Nickel	100	NS	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Nitrate	10	NA	mg/L	0.34	0.25 - 0.41	4	0.32	0.16 - 0.43	4	Not Detected	ND - 0.12	4
Nitrite	1	1	mg/L	Not		4	Not		4	Not		4

				Detected			Detected			Detected		
Ammonia Nitrogen	NS	NS	mg/L	Not Detected		4	Not Detected		4	Not Detected		4
Potassium	NS	NS	mg/L	1.6		1	Not required		0	1.3		1
Selenium	50	50	mg/L	Not Detected		4	Not Detected		4	Not Detected		4
Silver	100	NA	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Sodium	NS	NS	mg/L	12		1	12		1	16		4
Sulfate	250	NA	mg/L	28	27-29	4	26	24 - 29	4	17	17-19	4
Thallium	2	0.5	ug/L	Not Detected		4	Not Detected		3	Not Detected		4
Vanadium	NS	NS	ug/L	Not Detected		2	Not Detected		1	Not Required		0
Zinc	5	NA	mg/L	Not Detected		4	Not Detected		4	Not Detected		4
Alkalinity	NS	NS	mg/L	83	77 - 88	19	85	75 - 98	20	63	61-65	4
Chlorides	250	NA	mg/L	22	22-23	4	24	23-25	4	25	24-25	4
Color	15	NA	Color Units	Not Detected	ND - 3	4	Not Detected	ND - 3	4	3	ND - 5	4
Conductivity	NS	NS	umhos/cm	300	250 - 340	21	310	250 - 370	21	250	220 - 260	12
pH	NS	NS	pH units	7.6	7.1- 7.8	366	7.4	7.0- 7.9	366	7.7	7.2- 8.2	366
Total Dissolved Solids	NS	NS	mg/L	160	130- 190	4	160	140 - 180	4	150	120- 170	4
Total Hardness	NS	NS	mg/L	125	123- 131	4	126	123 - 130	4	90	89 - 94	4
Total Organic Carbon	NS	NS	mg-L	1.6	1.4 - 2.0	4	1.7	1.5 - 2.0	4	2.2	2.1- 2.6	4

Turbidity - Entry Point	TT**	NA	NTUs	0.09	0.04-0.30	2105	0.03	0.001-0.19	2162	0.10	0.06-0.24	8760
Turbidity - Distribution System	TT***	NA	NTUs	0.14	0.05-3.9	1442	0.21	0.07-0.89	87	0.017	0.05-2.0	1309
Chlorine Residual - Entry Point	NS	NS	mg/L	1.17	0.55-1.7	8784	1.25	0.9-1.58	366	0.87	0.4-1.6	8784
Chlorine Residual - Retail Dist.System	TT****	NA	mg/L	0.8	0-1.8	1453	0.74	0.12-1.18	88	0.7	0-2.9	1317
Cryptosporidium & Giardia	NS	NS	#/100L	Not Detected		6	Not Detected		12	Not Detected		4
Asbestos (Distribution System)	7	7	MFL	Not Detected		1^(1998)	Not Required		1	Not Detected		1^(1998)
<b>Radionuclides</b>												
Gross Alpha	15	0	pC/L	Not Detected		4	Not Detected		4	Not Detected		1^(1997)
Gross Beta	50	0	pC/L	Not Detected		4	Not Detected		4	Not Detected		1^(1997)
Tritium	NS	NS	pC/L	Not Detected		4	Not Detected		4	NT		
<b>Volatile Organics</b>												
Benzene	5	0	ug/L	Not Detected		4	Not Detected		4	Not Detected		4
Bromobenzene	5	NA	ug/L		4	4						
Bromochloromethane	5	NA	ug/L		4	4						
Bromomethane	5	NA	ug/L		4	4						
2-Butanone (MEK)	50	NA	ug/L		3	3						
n-Butylbenzene	5	NA	ug/L		4	4						
sec-Butylbenzene	5	NA	ug/L		4	4						
tert-Butylbenzene	5	NA	ug/L		4	4						

Carbon Tetrachloride	5	0	ug/L		4		4		4
Chlorobenzene	5	NA	ug/L		4		4		4
Chloroethane	5	NA	ug/L		4		4		4
Chloromethane	5	NA	ug/L		4		4		4
2-Chlorotoluene	5	NA	ug/L		4		4		4
4-Chlorotoluene	5	NA	ug/L		4		4		4
dibromomethane	5	NA	ug/L		4		4		4
1,2-Dichlorobenzene	5	NA	ug/L		4		4		4
1,3-Dichlorobenzene	5	NA	ug/L		4		4		4
1,4-Dichlorobenzene	5	NA	ug/L		4		4		4
Dichlorodifluoromethane	5	NA	ug/L		4		4		4
1,1 Dichloroethane	5	NA	ug/L		4		4		4
1,2-Dichloroethane	5	0	ug/L	Not Detected	4	Not Detected	4	Not Detected	4
1,1-Dichloroethene	5	NA	ug/L		4		4		4
cis-1,2-Dichloroethene	5	NA	ug/L		4		4		4
trans-1,2-Dichloroethene	5	NA	ug/L		4		4		4
1,2-Dichloropropane	5	0	ug/L		4		4		4
1,3-Dichloropropane	5	NA	ug/L		4		4		4
2,2-Dichloropropane	5	NA	ug/L		4		4		4
1,1-Dichloropropene	5	NA	ug/L		4		4		4
1,3-Dichloropropene(Cis)	5	NA	ug/L		4		4		4
1,3-Dichloropropene(Trans)	5	NA	ug/L		4		4		4
2,4-dinitrotoluene	50	NA	ug/L						
Ethylbenzene	5	NA	ug/L	Not Detected	4	Not Detected	4	Not Detected	4
Hexachlorobutadiene	5	NA	ug/L		4		4		4
Isopropylbenzene	5	NA	ug/L		4		4		4
p-Isopropyltoluene	5	NA	ug/L		4		4		4
4-Methyl-2-Pentanone(MIBK)	50	NA	ug/L		3		3		3

Methyl Tert-butyl ether (MTBE)	5	NA	ug/L	 Not Detected	4	 Not Detected	3	 Not Detected	4
Methylene Chloride (Dichloromethane)	5	0	ug/L		3		3		
Naphthalene	50	NA	ug/L		4		4		
n-Propylbenzene	5	NA	ug/L		4		4		
Styrene	5	NA	ug/L		4		4		
1,1,1,2-Tetrachloroethane	5	NA	ug/L		4		4		
1,1,2,2-Tetrachloroethane	5	NA	ug/L		4		4		
Tetrachloroethene	5	0	ug/L		4		4		
Toluene	5	NA	ug/L		4		4		
1,2,3-Trichlorobenzene	5	NA	ug/L		4		4		
1,2,4-Trichlorobenzene	5	NA	ug/L		4		4		
1,1,1-Trichloroethane	5	NA	ug/L		4		4		
1,1,2-Trichloroethane	5	3	ug/L		4		4		
Trichloroethene	5	0	ug/L		4		4		
Trichlorofluoromethane	5	NA	ug/L		4		4		
1,2,3-Trichloropropane	5	NA	ug/L		4		4		
1,2,4-Trimethylbenzene	5	NA	ug/L		4		4		
1,3,5-Trimethylbenzene	5	NA	ug/L		4		4		
Xylenes	5	NA	ug/L		4		4		
Vinyl chloride	2	0	ug/L	Not Detected	4	Not Detected	4	Not Detected	4

				↓			↓			↓	
<b>Organics, Pesticides, Herbicides</b>											
Bis(2-Ethylhexyl)phthalate	6	0	ug/L	Not Detected	ND-1.2	4	Not Detected	4	Not Detected	2	
1, 2-Dibromo-3-Chloropropane	200	0	ng/L	↓		1	↓	1	↓	1	
1, 2-Dibromoethane (EDB)	50	0	ng/L		1	1					
2, 4, 5-TP (Silvex)	10	NA	ug/L		4	4					
2, 4-D	50	NA	ug/L		4	4					
Acenaphthylene	50	NA	ug-L		4	4					
Alachlor	2	0	ug/L		4	4					
Aldicarb	3	1	ug/L		1	1					
Aldicarb Sulfone	2	1	ug/L		1	1					
Aldicarb Sulfoxide	4	1	ug/L		1	1					
Aldrin	5	NA	mg/L		4	4					
Alpha-BHC (Alpha	5	NA	ug/L			4		4		4	



Lindane)									
Anthracene	50	NA	ug/L	Not Detected	4	Not Detected	4	Not Detected	2
Atrazine	3	3	ug/L	↓	4	↓	4	↓	2
Benzo(a)pyrene	200	0	ng/L		4		4		2
Benz(a)Anthracene	50	NA	ug/L		4		4		2
Benzo(b)Flouranthene	50	NA	ug/L		4		4		2
Benzo(g,h,i) Perylene	50	NA	ug/L		4		4		2
Benzo(k)Fluoranthene	50	NA	ug/L		4		4		2
Beta-BHC	5	NA	ug/L		4		4		4
Bromacil	50	NA	ug/L		4		4		2
Butachlor	50	NA	ug/L		4		4		2
Butybenzylphthalate	50	NA	ug/L		4		4		2
Carbaryl	50	NA	ug/L	Not Detected	1	Not Detected	1	Not Detected	1
Carbofuran	40	40	ug/L	↓	1	↓	1	↓	1
Chrysene	50	NA	ug/L		4		4		2
Dacthal(DCPA)	50	NA	ug/L		4		4		4
Dalapon	50	NA	ug/L		4		4		4
Di(2-Ethylhexyl) Adipate	50	NA	ug/L		4		4		2
Di-n-butylphalate	50	NA	ug/L		4		4		2
Dibenz(a,h)Anthracene	50	NA	ug/L		4		4		2
Dicamba	50	NA	ug/L		4		4		2
Dieldrin	5	NA	ug/L		4		4		4
Diethylphalate	50	NA	ug/L		4		4		2
Dimethoate	50	NA	ug/L	4	4	2			
Dimethylphthalate	50	NA	ug/L	4	4	2			
Dinoseb	7	7	ug/L	Not Detected	4	Not Detected	4	Not Detected	4
Dioxin	30	0	pg/L		1		1		1
Diquat	20	20	ug/L		1		1		1

Endosulfan I (alpha)	50	NA	ug/L		4		4		4
Endosulfan II (beta)	50	NA	ug/L		4		4		4
Endosulfan Sulfate	50	NA	ug/L		4		4		4
Endothall	50	NA	ug/L		1		1		1
Endrin	2	2	ug/L		4		4		4
Glyphosate	50	NA	ug/L		1		1		1
Heptachlor	400	0	ng/L		4		4		4
Heptachlor Epoxide	200	0	ng/L		4		4		4
Hexachlorobenzene	1	0	ug/L		4		4		4
Hexachlorocyclopentadiene	5	NA	ug/L		4		4		2
Indeno(1,2,3,c,d)Pyrene	50	NA	ug/L		4		4		2
Isophorone	50	NA	ug/L		4		4		2
Lindane (gamma-BHC)	200	200	ng/L		4		4		4
Methomyl	50	NA	ug/L	Not Detected	1	Not Detected	1	Not Detected	1
Methoxychlor	40	40	ug/L		4		4		4
Metolachlor	50	NA	ug/L		4		4		2
Metribuzin	50	NA	ug/L		4		4		2
Mirex	5	NA	mg/L		4		4		2
Molinate	50	NA	ug/L		4		4		2
Oxamyl	50	NA	ug/L		1		1		1
Paraquat	50	NA	ng/L		1		1		1
PCB's Total	500	0	ng/L		4		4		4
Pentachlorophenol	1	0	ug/L		4		4		4
Phenanthrene	50	NA	ug/L		4		4		2
Pichloram	50	NA	ug/L	Not Detected	4	Not Detected	4	Not Detected	4
p,p' DDD	5	NA	ug/L		4		4		4
p,p' DDT	5	NA	ug/L		4		4		4
Propachlor	50	NA	ug/L		4		4		4
Pyrene	50	NA	ug/L		4		4		2

Simazine	4	4	ug/L			4			4			2
Total Chlordane	2	0	ug/L			4			4			4
Toxaphene	3	0	ug/L			4			4			4
Trifluralin	50	NA	ug/L			4			4			4
Perchlorate	NS	NS	ug/L			1^(1999)	NR			NR		
<b>Disinfectant Byproducts</b>												
Total THMs	80	NA	ug/L	29	13-58	24	26	12-35	16	35	24-50	4
Halooacetic Acids	60	NA	ug/L	10	5-21	24	15	2-34	16	20	12-29	4
Halacetilenitriles	50	NA	ug/L	4.4	3.4-5.5	16^(1998)	Not Required			3.9	1.5-5.3	16^(1998)
Haloketones	50	NA	ug/L	1.8	0.9-3.4	16^(1998)	Not Required			4.5	1.2-7.6	16^(1998)
Chloropicrin	NS	NS	ug/L	Not Detected		16^(1998)	Not Required			0.5	ND-0.8	16^(1998)
Chloral Hydrate	NS	NS	ug/L	4.6	1.6-12	16^(1998)	Not Required			8.5	1.6-13	16^(1998)
Total Organic Halides	NS	NS	ug/L	101	54-158	16^(1998)	Not Required			245	110-350	16^(1998)

*( To print this table use landscape mode )*

## 1999 Water Quality Monitoring Program Summary

### Key to Abbreviations

**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.

**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.

**TT** = Treatment Technique, a required process intended to reduce the level of a contaminant in drinking water.

**AL** = Action Level, the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**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.

**NA** = Not applicable

**NR** = Not required

**NS** = No standard

**NT** = Not Tested

**mg/l** = milligram (1/1,000 of a gram) per liter = ppm = parts per million

**ug/l** = microgram (1/1,000,000 of a gram) per liter = ppb = parts per billion

**ng/L** = nanogram (1/1,000,000,000 of a gram) per liter = ppt = parts per trillion

**pg/L** = picogram (1/1,000,000,000,000 of a gram) per liter = ppq = parts per quadrillion

**pC/L** = picoCuries per liter

**NTU** = Nephelometric turbidity Unit, a measure of the clarity of water.

**MF/L** = million fibers per liter, a measure of the presence of asbestos fibers longer than 10 micrometers

**^(year)** = Most recent testing. Monitoring frequency requirements vary depending on compound.

**\*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 8 ug/L for lead and 0.151 mg/L for copper.

**\*\*** = 95% of measurements within a given month must be less than <.5 NTUs.

**\*\*\*** = Average of monthly distribution system turbidity samples must be less than 5.0 NTUs.

**\*\*\*\*** = 95% of monthly distribution system samples must have a measurable chlorine residual.

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.

**Back to Water Quality Report**



*Bringing you our most precious resource!*



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