MCWA Water Quality Summary Table

Detected Substances — 2018 results except as noted

Supply				Shoremont & Webster WTPs	Corfu WTP	*Purchased Water* Hemlock WTP	*Purchased Water* ECWA		Water Quality Violation
Source (Source Type)				Lake Ontario (Surface Water)	Well Field (Groundwater)	Hemlock Lake (Surface Water)	Lake Erie (Surface Water)		
Substances	Units	MCLG	MCL	Range of detected values				Likely Source	Yes or No
Arsenic	µg/L	0	10	ND - 2.6	ND	ND	ND	Erosion of natural deposits	No
Barium	mg/L	2	2	0.018 - 0.024	0.007 - 0.014	0.014 - 0.018	0.022 - 0.023	Erosion of natural deposits	No
Chloride	mg/L	NA	250	25 - 30	35 - 78	36 - 38	21 - 24	Naturally occurring	No
Combined Radium (226+228)	pCi/L	0	5	ND (2012)	ND (2012)	1.08	1.15 - 1.25 (2013)	Erosion of natural deposits	No
Fluoride	mg/L	NA	2.2	0.13 - 1.03	0.11 - 0.33	0.1 - 1.05	0.61 - 0.78	Natural and additive - promotes strong teeth	No
Nitrate	mg/L	10	10	0.18 - 0.34	ND	ND - 0.22	ND - 0.23	Erosion of natural deposits	No
Sodium	mg/L	NA	NS	13 - 17	56 - 94*	20 - 21*	10 - 14	Naturally occurring	No
Sulfate	mg/L	NA	250	25 - 27	41 - 50	12 - 13	20 - 21	Naturally occurring	No
Turbidity - Turbidity is a measure of cloudiness of the water. Turbidity has no health effects. MCWA monitors turbidity because it is a good indicator of the effectiveness of our filtration systems and water quality. State regulations require that turbidity must always be below 1 NTU in the combined filter effluent. The regulations also require that 95% of samples collected from the entry point have measurements below 0.3 NTU and the monthly average for distribution system samples be below 5 NTU. Averages, ranges and lowest monthly percentages are listed.									
Turbidity - Entry Point	NTU	NA	TT	0.05 (0.01 - 0.12) 100% < 0.3 NTU	NR	0.05 (0.03 - 0.26) 100% < 0.3 NTU	0.1 (0.05 - 0.23) 100% < 0.3 NTU	Soil Runoff	No
Turbidity - Distribution	NTU	NA	5	3.51 - March	2.99 - August	3.51 - March	2.99 - August	Soil Runoff	No
Microbiological - No more than 5% of monthly samples can be positive. The highest monthly % positive and number of samples is listed. Since we had 2 total coliform positive samples in September in the town of Richmond, we triggered a Level 1 assessment. This assessment is to assess the coliform contamination and take corrective action against defects in the water system.									
Total Coliform Bacteria	NA	0	TT	1.2% - September 4 samples	ND	1.2% - September 4 samples	ND	Naturally occurring	No
Disinfectant and Disinfectant By-products (DBPs) - Chlorine has a MRDL (Maximum Residual Disinfectant Level) and MRDLG (MRDL Goal) rather than an MCL and MCLG (Averages and ranges are listed). For the DBPs (Total Trihalomethanes and Haloacetic Acids) the annual system average, range for all locations, and highest locational running annual average for all locations are listed.									
Chlorine Residual - Entry Point	mg/L	NA	MRDL = 4	1.17 (0.9 - 1.42) 0.76 (0.53 - 1.39)	0.8 (0.45 - 1.49)	0.89 (0.7 - 1.75)	1.40 (0.53 - 1.98)	Additive for control of microbes	No
Chlorine Residual - Distribution	mg/L	NA	MRDL = 4	0.55 (ND - 2.09)	0.45 (ND - 1.4)	0.55 (ND - 2.09)	0.45 (ND - 1.4)	Additive for control of microbes	No
Total Trihalomethanes (TTHMs)	µg/L	NA	80	38.6 (16 - 73) Max. LRAA = 50.8	42.6 (19 - 62) Max. LRAA = 47.8	38.6 (16 - 73) Max. LRAA = 50.8	42.6 (19 - 62) Max. LRAA = 47.8	Byproduct of water chlorination	No
Haloacetic Acids (HAAs)	µg/L	NA	60	12.8 (ND - 30) Max. LRAA = 21.3	9.1 (ND - 20) Max. LRAA = 13.3	12.8 (ND - 30) Max. LRAA = 21.3	9.8 (ND - 20) Max. LRAA = 13.3	Byproduct of water chlorination	No
Lead and Copper - 90% of samples must be less than the Action Level (AL). The 90th Percentile, the number of samples exceeding the AL, and the range of results are listed.									
Copper - Customer Tap Samples	mg/L	1.3	AL = 1.3	0.160 (None) 0.005 - 0.200	0.110 (None) 0.005 - 0.240	0.160 (None) 0.005 - 0.200	0.110 (None) 0.005 - 0.240	Corrosion of household plumbing	No
Lead - Customer Tap Samples	µg/L	0	AL = 15	7.2 (Two) ND - 29	3.0 (One) ND - 76	7.2 (Two) ND - 29	3.0 (One) ND - 76	Corrosion of household plumbing	No

*There is no MCL set for sodium in water. However, EPA has recommended that water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

Unregulated Contaminant Monitoring (UCMR4) - Every few years the USEPA issues a new list of up to 30 unregulated contaminants for which public water systems must monitor. This provides baseline occurrence data that the EPA combines with toxicological research to make decisions about future drinking water regulations. MCWA began monitoring for the fourth list (UCMR 4) in 2018. For more information on this process go to https://drinktap.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR.

Alcohols, Indicators, Metals, Pesticides, SVOCs, and Cyantoxins	Entry Points			Lake Ontario Supply		Purchased Water Supplies		Groundwater Supply	Water Quality Violation
	Units	MCL		Shoremont WTP	Webster WTP	Hemlock Lake	Lake Erie	Corfu WTP	Yes or No
Manganese	µg/L	NA		ND	ND	ND	2.0 (2.0)	10 (10)	NA
Bromide	µg/L	NA		37 (37)	37 (37)	22 (22)	ND (ND)	NR	NA
Total Organic Carbon	mg/L	NA		2.4 (2.4)	2.2 (2.2)	2.6 (2.6)	2.0 (2.0)	NR	NA
HAA Groups	Distribution System			Combined System Summary					
Total HAA (5)	µg/L	60		9.5 (3.2 - 15)					No
Total HAA (6) Br	µg/L	NA		0.49 (0.54 - 7.4)					NA
Total HAA (9)	µg/L	NA		14.04 (3.8 - 19)					NA
Bromochloroacetic acid	µg/L	NA		1.43 (0.54 - 2.3)					NA
Bromodichloroacetic acid	µg/L	NA		2.25 (ND - 3.2)					NA
Chlorodibromoacetic acid	µg/L	NA		0.8 (ND - 1.4)					NA
Dibromoacetic acid	µg/L	NA		0.42 (ND - 1.3)					NA
Dichloroacetic acid	µg/L	NA		3.6 (2.1 - 5.1)					NA
Trichloroacetic acid	µg/L	NA		5.52 (0.95 - 10)					NA

Key Terms and Abbreviations used

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.

MRDL = Maximum Residual Disinfectant Level - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG = Maximum Residual Disnfectant Level Goal - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

LRAA = Locational Running Annual Average - The annual average contaminant concentration at a monitoring site.

pCi/L = picoCuries per liter.

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

Level 1 Assessment = A level 1 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

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

ND = Not Detected - 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.

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

µg/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.

NTU = Nephelometric Turbidity Unit - A measurement of water clarity.

Compounds Tested For But Not Detected

Benzene	Methyl Tert-butyl ether (MTBE)	Butachlor	Nitrite
Bromobenzene	Ethylbenzene	Chlordane	Selenium
Bromochloromethane	Hexachlorobutadiene	Di(2-Ethylhexyl) Adipate	Silver
Bromomethane	p-Isopropyltoluene	Dieldrin	Thallium
n-Butylbenzene	Methyl Tert-butyl ether (MTBE)	Endrin	Zinc
sec-Butylbenzene	Methylene Chloride (Dichloromethane)	Heptachlor	Surfactants (Foaming Agents)
tert-Butylbenzene	n-Propylbenzene	Heptachlor Epoxide	Gross Alpha
Carbon Tetrachloride	Styrene	Hexachlorobenzene	Total Uranium
Chlorobenzene	1,1,1,2-Tetrachloroethane	Hexachlorocyclopentadiene	Germanium
Chloroethane	1,1,2,2-Tetrachloroethane	Isophorone	alpha-Hexachlorocyclohexane
Chloromethane	Tetrachloroethene	Lindane (gamma-BHC)	Chlorpyrfos
2-Chlorotoluene	Toluene	Methoxychlor	Dimethipin
4-Chlorotoluene	1,2,3-Trichlorobenzene	Metolachlor	Ethoprop
Dibromomethane	1,2,4-Trichlorobenzene	Metribuzin	Oxyfluoren
1,2-Dichlorobenzene	1,1,1-Trichloroethane	p,p' DDD	Profenofos
1,3-Dichlorobenzene	1,1,2-Trichloroethane	p,p' DDE	Tebuconazole
1,4-Dichlorobenzene	Trichloroethene	p,p' DDT	Permethrin, cis & trans
Dichlorodifluoromethane	Trichlorofluoromethane	PCB's Total	Tribufos
1,1 Dichloroethane	1,2,3-Trichloropropane	Pentachlorophenol	Butylated hydroxyanisole
1,2-Dichloroethane	1,2,4-Trimethylbenzene	Propachlor	o-Toluidene
1,1-Dichloroethene	1,3,5-Trimethylbenzene	Simazine	Quinoline
cis-1,2-Dichloroethene	Vinyl Chloride	Total Chlordane	1-Butanol
trans-1,2-Dichloroethene	o-Xylene	Toxaphane	2-Methoxyethanol
1,2-Dichloropropane	m, p-Xylene	Antimony	2-Propen-1-ol
1,3-Dichloropropane	Total Xylene	Beryllium	Monobromoacetic acid
2,2-Dichloropropane	Aldrin	Chromium	Monochloroacetic acid
1,1-Dichloropropene	Atrazine	Cyanide	Tribromoacetic acid
1,3-Dichloropropene(Cis)	Benzo(a)pyrene	Mercury	
1,3-Dichloropropene(Trans)	Bis(2-Ethylhexyl)Phthalate	Nickel	

For more information on MCWA's water quality monitoring program call Customer Service at 585-442-7200 or visit our website at www.mcwa.com.