

Monroe County Water Authority  
475 Norris Drive  
Rochester, New York 14610

MCWA Annual Water Quality Report



MCWA Shoremont W.D. PWSID# 2701047  
MCWA Upland W.D. PWSID# 2715672  
MCWA Genesee East PWSID# 1800547  
MCWA Genesee West PWSID# 1804542  
N. Bloomfield W.D. PWSID# 3401167

**Monroe County Water Authority**

**2007 Annual Water Quality Report**



**Only Tap Water Delivers<sup>SM</sup>**

**• Public Health Protection**

The availability of safe drinking water is one of the greatest public health advances of the 20th century and one of the most important reasons people are living longer. In the United States you can drink safely from virtually any public tap.

**• Fire Protection**

A well-maintained water system is critical for fire protection. The ability to suppress fires influences new home construction, business location decisions, insurance rates and your personal safety. MCWA provides and maintains over 23,000 fire hydrants to help protect you and your property.

**• Support for the economy**

Our homes and businesses can not do without a safe and reliable water supply. Unlike many places around the world and the U.S., our area is fortunate to have ample water resources.

The **Monroe County Water Authority** is pleased to provide you this report on the quality of your drinking water which describes its sources, treatment and test results.

**MCWA — Water Quality Table**

Detected Substances											2007 results except as noted	
Supply (Source)				Shoremont WTP (L.Ontario)	Corfu WTP (Well)	Purchased Water Hemlock WTP (Hemlock L.)	Purchased Water C.Batavia WTP (Well & Tonawanda Cr.)	Purchased Water ECWA (L. Erie & Niagara R.)	Purchased Water T.Ontario WTP (L.Ontario)		Meets EPA Standards	
Substances	Units	MCLG	MCL	Range of detected values						Likely Source		
Arsenic	ug/L	NA	10	ND - 1.1	ND	ND	ND	ND	ND	Erosion of natural deposits	Yes	
Barium	mg/L	2	2	0.02-0.021	0.041 - 0.041	0.016	0.015	0.019 - 0.020	0.019	Erosion of natural deposits	Yes	
Chloride	mg/L	NA	250	21 - 26	39 - 49	30 - 34	80	21 - 24	NR	Naturally occurring	Yes	
Fluoride	mg/L	NA	2.2	0.2 - 1.2	NR	0.14 - 1.2	ND - 1.46	0.1 - 1.0	0.9 - 1.1	Natural and additive - promotes strong teeth	Yes	
Manganese	ug/L	NA	300	ND	3.2 - 13	ND	ND	ND - 11	NR	Naturally occurring	Yes	
Nitrate	mg/L	10	10	0.28 - 0.40	ND - 0.10	0.1 - 0.31	0.65	0.11 - 0.33	0.47	Erosion of natural deposits	Yes	
Sodium	mg/L	NA	NS	13 - 14	27 - 130	18 - 20	39	13 - 15	NR	Naturally occurring	Yes	
Sulfate	mg/L	NA	250	29	61	15	29	23	NR	Naturally occurring	Yes	
Radionuclides Gross Alpha	pCi/L	NA	15	ND (2003)	ND (2003)	ND (2005)	0.029 (2000)	ND - 1.7 (2004)	ND	Erosion of natural deposits	Yes	
Radionuclides Gross Beta	pCi/L	NA	50	ND (2003)	ND (2003)	ND (2005)	1.2 (2000)	ND - 2.2 (2004)	ND	Decay of natural deposits and man-made emissions	Yes	
<b>Organics, Pesticides, Herbicides</b>												
Atrazine	ug/L	3	3	ND	ND	ND	ND	ND - 0.1	ND	Runoff from cropland	Yes	
<b>Treatment Requirements - 95% of samples each month must be less than 0.3 NTU. Range and lowest monthly percentage are listed. Turbidity is a measure of water clarity and is used to gauge filtration performance.</b>												
Turbidity - Entry Point	NTUs	NA	TT	0.03 - 0.10 100%	NA	0.05 - 0.22 100%	0.02 - 0.04 100%	0.05 - 0.35 100%	0.03 - 0.07 100%	Soil runoff	Yes	
<b>Microbial - For systems collecting 40 or more samples a month, no more than 5% a month can be positive. For systems collecting less than 40 samples per month, no more than one sample a month can be positive. For systems with more than 40 samples, the highest monthly % positive is listed. For systems with less than 40, the number of positives is listed.</b>												
Coliform	% Positive	0	5%	0.8% Nov	1 of 14 Sept	0.7% July	ND	1 of 14 Sept	ND	Naturally occurring	Yes	
<b>Disinfectant and Disinfectant By-products (DBPs) - Average and Range are listed. * Chlorine has a MDRL (Maximum Disinfectant Residual Level) and MDRLG (MDRL Goal) rather than an MCL and MCLG.</b>												
Chlorine Residual - Entry Pt	mg/L	4 *	4 *	1.0 (0.6-1.3)	0.7 (0.2-1.2)	0.9 (0.3-1.1)	1.0 (0.6 - 1.4)	1.0 (0.4 - 1.4)	0.8 (0.7 - 1.0)	Additive for control of microbes	Yes	
Total THMs	ug/L	NA	80	33 (14-54)	40 (32-47)	40 (23-62)	46 (31 - 57)	43 (28-65)	35 (28 - 43)	By-product of water chlorination	Yes	
Haloacetic Acids	ug/L	NA	60	9 (3-23)	12 (7-18)	20 (9-36)	11 (8 - 13)	18 (16-20)	12 (1.4 - 22)	By-product of water chlorination	Yes	
<b>Lead and Copper - 90% of samples must be less than the Action Level (AL). 90th Percentile and the number of samples exceeding AL are listed.</b>												
Copper (Customer Tap Samples)	mg/L	1.3	AL=1.3	0.091 None (2006)	0.025 None (2006)	0.091 None (2006)	0.036 None	0.25 None (2006)	0.106 None (2005)	Corrosion of household plumbing	Yes	
Lead (Customer Tap Samples)	ug/L	0	AL=15	4.8 None (2006)	3 None (2006)	4.8 None (2006)	3.8 Two	3 None (2006)	6 None (2005)	Corrosion of household plumbing	Yes	

**Note: The following contaminants were tested for but not detected:** 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,1-Dichloropropene, EDB, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,3-Dichloropropane, 1,3-Dichloropropene(Cis), 1,3-Dichloropropene(Trans), 1,4-Dichlorobenzene, 2,2-Dichloropropane, Dioxin, 2,4-D, 2-4-5 TP, 2-Chlorotoluene, 3-Hydroxycarbofuran, 4,4'-DDT, 4-Chlorotoluene, Alachlor, Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Aluminum, Antimony, Benzene, Benzo(a)pyrene, Beryllium, Bis(2-Ethylhexyl)Phthalate, Bromobenzene, Bromochloromethane, Bromomethane, Butachlor, Cadmium, Carbaryl, Carbofuran, Carbon Tetrachloride, Chlordane, Chlorobenzene, Chloroethane, Chloromethane, Chromium, cis-1,2-Dichloroethene, Cyanide, Dalapon, DCPA, DBCP, Di(2-Ethylhexyl) Adipate, Dibromomethane, Dicamba, Dichlorodifluoromethane, Dichloromethane (Methylene Chloride), Dieldrin, Dinoseb, Diquat, Endothall, Endrin, Ethylbenzene, Glyphosate, Heptachlor, Heptachlorepoxyde, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Isophorone, Isopropyl Benzene, Lindane, Mercury, Methomyl, Methoxychlor, Metolachlor, Metribuzin, MTBE, n-Butylbenzene, Nickel, n-Propylbenzene, Oxamyl, PCB's, Pentachlorophenol, Perchlorate, Pichloram, p-Isopropyltoluene, Propachlor, sec-Butylbenzene, Selenium, Silver, Simazine, Styrene, tert-Butylbenzene, Tetrachloroethene, Thallium, Toluene, Toxaphene, trans-1,2-Dichloroethene, Trichloroethene, Trichlorofluoromethane, Vinyl Chloride, Xylene

**Key Terms Used In Water Quality Table**

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 Disinfectant 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.

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.

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

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

NTU = Nephelometric Turbidity Unit, a measure of water clarity.

pCi/L = Picocuries per liter, a measure of the radioactivity in water.

A detailed summary of our monitoring program is available on our website at www.mcwa.com or through Customer Service at 442-7200.



The Monroe County Water Authority is the third largest water supplier in New York State and one of the 60 largest in the country. The Authority is a public benefit corporation organized in 1950 under the New York State Public Authorities Law. Our sole purpose is to provide you with quality water and reliable service at an affordable price.

**Source and Treatment**

Our primary water source is Lake Ontario which is treated at our Shoremont Plant in Greece. We also operate the Corfu Plant, a small well supply in the Village of Corfu. In addition, we purchase water from the City of Rochester, Erie County Water Authority (ECWA), the Town of Ontario, and the City of Batavia. The Distribution System Map to the right shows the typical service area for each of the treatment plants.

The New York State Health Department has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP). In general the Great Lakes sources used by Shoremont, ECWA and the Town of Ontario are not very susceptible because of the size and quality of the Great Lakes. Hemlock and Canadice Lakes which are used by the Hemlock plant are also not very susceptible because of size and the system's controlled watershed. The well water used by the Corfu Plant is more susceptible but the confined nature of the aquifer provides protection against the few nearby potential contaminant sources. Tonawanda Creek and the well water used by the City of Batavia plant are much more susceptible because of the smaller watershed and the number of potential contaminant sources in it. Because storm and waste water contamination are potential threats to any source water, the water provided to our customers undergoes rigorous treatment and testing prior to its delivery.

The Shoremont Plant and the purchased water producers all use a similar treatment process: coagulation, filtration and disinfection. Coagulants are added to clump together suspended particles, enhancing their removal during filtration. Chlorine is used to disinfect the water and to provide the residual disinfectant that ensures the sanitary quality of the water as it travels from each plant to your home. Fluoride is also added to help prevent tooth decay. The treatment process at the Corfu Water Plant consists of filtration, softening and disinfection with chlorine.

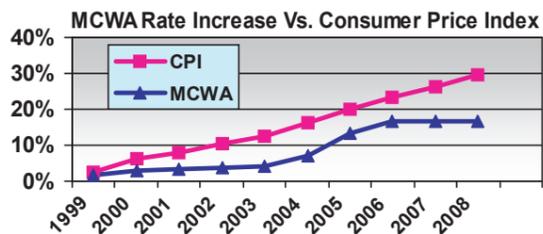
MCWA Statistics	
Average System Use	62.6 Million Gallons per Day
Unaccounted For Water (Maintenance, Flushing, Firefighting, Leaks)	8.1 Million Gallons Per Day
Annual Cost for Average Residential Customer	\$213 Per Year
Population Served	650,000 Wholesale and Retail
Accounts	170,000
Miles of Water Mains	2,600
Number of Fire Hydrants	23,175

These plants are in full compliance with all New York State and U.S. Environmental Protection Agency (USEPA) operational, monitoring, and reporting requirements.

For more information on the State's Source Water Assessment plan and how you can help protect the source of your drinking water contact MCWA Customer Service at 585- 442-7200 or check our website at [www.mcwa.com](http://www.mcwa.com).

**News**

For the last 10 years our residential water rate increases have averaged less that 1.6% a year, much less than inflation. In fact, in 2007 and 2008 there was no rate increase at all. For more news check our website's Annual Report link at [www.mcwa.com](http://www.mcwa.com).



**Water Quality**

Drinking water sources (both tap and bottled water) include lakes, reservoirs, rivers and streams, springs and wells. As water travels over land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from animal or human activity. Contaminants that may be present in untreated water include inorganic and organic chemicals, pesticides and herbicides, and radioactive and microbiological contaminants. In order to ensure that your tap water is safe to drink, the State and the U.S. Environmental Protection Agency (EPA) have established regulations that set limits on contaminant levels in water provided by public water systems. These limits are known as Maximum Contaminant Levels (MCLs). The regulations also

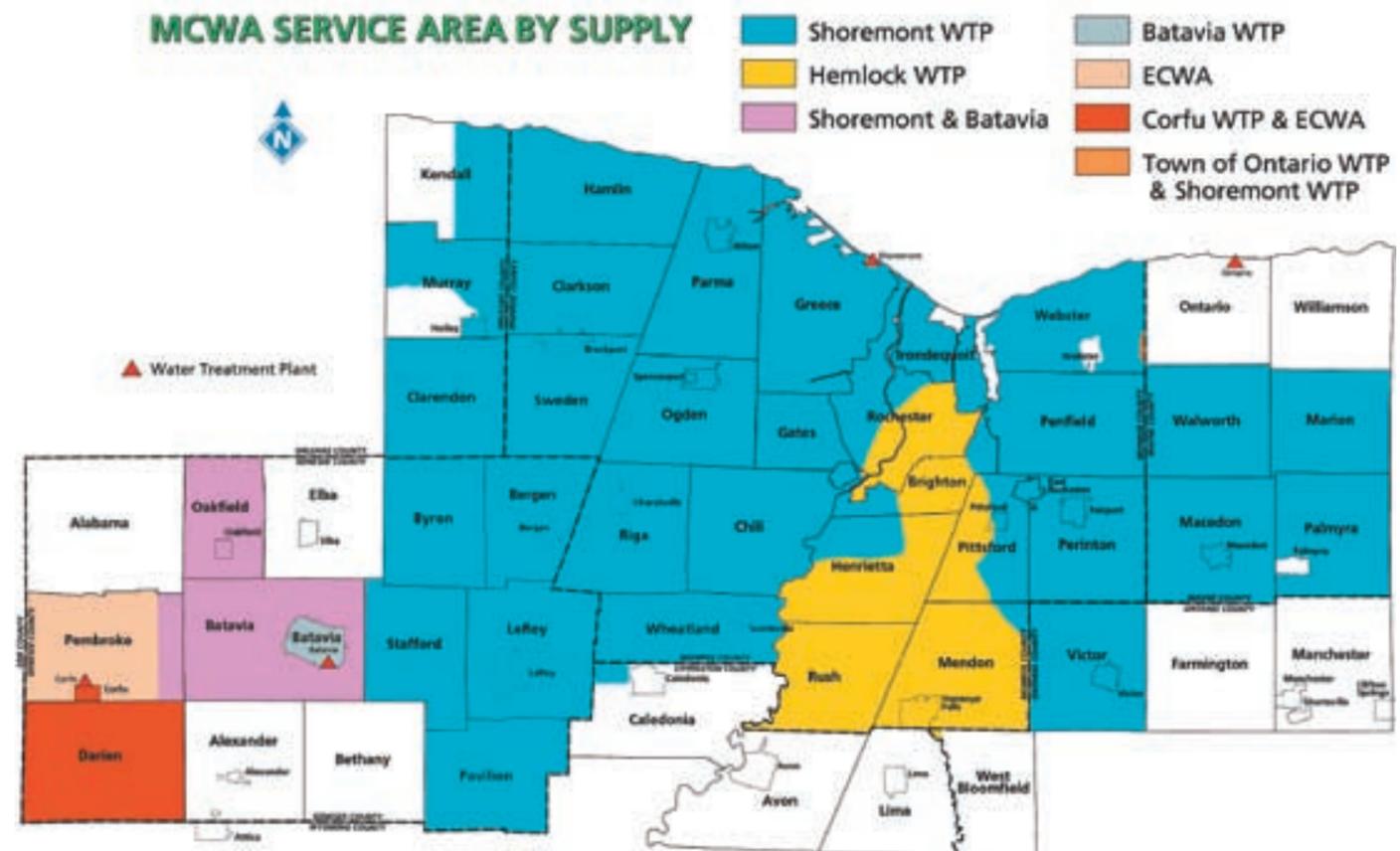
specify testing, reporting, and public notification requirements for each contaminant. MCWA's monitoring program substantially exceeds EPA and State Health Department requirements. The Health Department also reviews our operating and monitoring data for compliance and independently monitors our distribution system.

Some constituents we tested for were detected, but at levels well below the allowable MCL. A table of these detected contaminants is provided on the next page. It's important to remember all drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. Additional information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

Two of the contaminants we test for are Cryptosporidium and Giardia, parasitic protozoans that have caused outbreaks of intestinal diseases in the U.S. and overseas. They are common

in surface waters and represent a potential health problem for anyone drinking untreated or poorly treated water. In 2007, Cryptosporidium and Giardia were not detected in any of the samples collected at the Shoremont, ECWA or Town of Ontario Plants. No special precautions are needed by the general population to use our water.

Some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as chemotherapy patients, organ transplant recipients, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. EPA/ CDC (Center for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia, and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791) or the Monroe County Health Department, 111 Westfall Road, Rochester, NY 14692 (585-753-5469).



**If you have questions on this report, your water bill, or MCWA operations, call our Customer Service Department at (585) 442-7200. Our Board meeting schedule is available on our website at [www.mcwa.com](http://www.mcwa.com)**

**Taste and Odor**

You may occasionally notice a chlorinous taste and odor in your water. Although some people may find this objectionable, we're required to maintain a chlorine residual in the distribution system to prevent the growth of bacteria. Simply storing water drawn from your tap in a container overnight in your refrigerator will eliminate or reduce the taste. Alternatively, an inexpensive carbon filter will do the same thing but should be replaced regularly.

**Hardness**

Water hardness is a measure of the mineral content of water. Our water, which has a Total Hardness of between 5.6 and 7.6 grains per gallon, is considered "moderately hard". By way of comparison, before they switched to MCWA, many local communities used ground water supplies with Total Hardness values of more than 20 grains per gallon.

**Home Treatment Units**

Don't let anyone pressure you into buying something by telling you your water is not safe. The water we provide to you is consistently better than drinking water regulations require.

**Conservation**

Lake Ontario is our direct connection to the Great Lakes which contain 20 % of the world's fresh water. Even with this abundance, we need to use water wisely. It takes energy and resources to treat and deliver the water to your home. You can save hundreds and sometimes thousands of gallons of water. How?

- 💧 Fix leaky faucets and toilets.
- 💧 Replace washers when garden hoses start to drip.
- 💧 Water your lawn in the early morning rather than the afternoon to reduce the amount of water lost to evaporation.



If you're interested in more information on water saving tips call our Customer Service Department at (585) 442- 7200 or visit our website at [www.mcwa.com](http://www.mcwa.com).