

## 2005 System Improvements

During the past year, the ECWA completed several system-wide improvements in its efforts to maintain a safe and dependable water supply and to improve service delivery.

In 2005, the ECWA spent \$14 million to upgrade its system. This included the replacement of water lines in Lackawanna, Cheektowaga and West Seneca. As part of these improvements, the ECWA set an unofficial record for horizontal iron pipe installation. A portion of our installation of new 36" transmission lines in Amherst was recognized as being the largest such project to utilize new techniques which limit environmental impact, limit disruptions to the public, and save money.

Construction of a new water tower in the Town of Newstead progressed substantially in 2005. Also, refurbishing took place at our East Aurora, Pine Hill, and Ball Pump Station water tanks.

The ECWA will continue to maintain its aggressive system-wide improvement program with an additional \$15.5 million capital spending plan included in the 2006 budget.

## Questions?

If you would like additional copies of this report, please contact the Public Affairs Office at 849-8406 or email to [dnemoyer@ecwa.org](mailto:dnemoyer@ecwa.org).

Thank you for allowing the ECWA to continue to provide you with quality drinking water. The ECWA is committed to providing you with information about your water supply. Customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

Any member of the public may participate in decisions affecting the quality of water. The ECWA's Board of Commissioners ultimately makes those decisions on behalf of our customers. Board meetings take place every other Thursday at 4:00 p.m. in the board meeting room, Erie County Water Authority, 350 Ellicott Square Building, 295 Main Street, Buffalo, New York 14203. Occasionally a board meeting is rescheduled. Call 849-8484 or visit [www.ecwa.org](http://www.ecwa.org) for updated board meeting information.



## PUBLIC WATER SYSTEMS IDENTIFICATION NUMBERS ECWA PWS# NY 1400443

PWS#	Name	PWS#	Name
NY1400397	AKRON VILLAGE	NY1400493	CAMP ROAD LAKESHORE WD
NY1400398	ALDEN VILLAGE	NY1400494	CLARK STREET WD
NY1400399	AMHERST WD#1	NY1400495	CLOVER BANK WD
NY1400400	AMHERST WD#2	NY1400496	EAST FRONTIER DRIVE WD
NY1400401	AMHERST WD#3	NY1400497	GLENDALE HEIGHT WD
NY1400402	AMHERST WD#4	NY1400498	HOLLYWOOD WATER DISTRICT
NY1400403	AMHERST WD#5	NY1400499	LAKESHORE WD
NY1400404	AMHERST WD#6	NY1400500	LYTH WD
NY1400405	AMHERST WD#7	NY1400501	MOUNT VERNON WD
NY1400406	AMHERST WD#8	NY1400502	SALEM DR WD
NY1400407	AMHERST WD#9	NY1400503	WINDOVER WATER DISTRICT
NY1400408	AMHERST WD#10	NY1400504	WOODLAWN WD
NY1400409	AMHERST WD#11	NY1400506	LACKWANNA CITY
NY1400410	AMHERST WD#12	NY1400508	LANCASTER WD#1
NY1400411	ANGOLA VILLAGE	NY1400509	LANCASTER WD#2
NY1400412	AURORA WD#1	NY1400510	LANCASTER WD#3
NY1400415	AURORA WD#4	NY1400511	LANCASTER WD#4
NY1400417	AURORA WD#6	NY1400512	LANCASTER WD#5
NY1400418	AURORA WD#7	NY1400513	LANCASTER WD#6
NY1400419	AURORA WD#8	NY1400514	LANCASTER WD#7
NY1400421	BOWNAMSVILLE WD	NY1400515	LANCASTER WD#8
NY1400424	BELLVUE WD	NY1400518	ORCHARD PARK WD#1
NY1400425	CHEEKTOWAGA WD#9	NY1400519	ORCHARD PARK WD#2
NY1400426	DOYLE WD	NY1400520	WEBSTERS CORNER WD
NY1400427	CHEEKTOWAGA WD#10	NY1400521	WINDHAM ABBOTT ROAD WD
NY1400428	CHEEKTOWAGA WD#8	NY1400523	ORCHARD PARK WD#4
NY1400289	CHEEKTOWAGA WD#11	NY1400524	ORCHARD PARK WD#5
NY1400432	DEPEW VILLAGE	NY1400525	ORCHARD PARK WD#6
NY1400434	EAST HAMBURG WD#1	NY1400526	ORCHARD PARK WD#7
NY1400435	EDEN WD#1	NY1400527	ORCHARD PARK WD#8
NY1400436	EDEN WD#2	NY1400528	ORCHARD PARK WD#9
NY1400437	EDEN WD#3	NY1400529	ORCHARD PARK WD#10
NY1400438	EDEN WD#4	NY1400530	ORCHARD PARK WD#11
NY1400439	EDEN WD#5	NY1400531	ORCHARD PARK WD#12
NY1400440	EDEN WD#6	NY1400532	ORCHARD PARK WD#13
NY1400441	EDEN WD#7	NY1400533	ORCHARD PARK WD#15
NY1400442	EDEN WD#8	NY1400534	ORCHARD PARK WD#17
NY1400445	EVANS WD#2	NY1400535	ORCHARD PARK WD#19
NY1400446	EVANS WD#2	NY1404543	WEST SENECA WD NO1
NY1400447	EVANS, TOWN WATER DEP.	NY1404544	WEST SENECA WD NO2
NY1400448	FARNHAM VILLAGE	NY1404545	WEST SENECA WD NO3
NY1400462	ABBOTT HIGHLAND WD	NY1404546	WEST SENECA WD NO4
NY1400463	BURKE WD	NY1404547	WEST SENECA WD NO5
NY1400464	CENTRAL HAMBURG WD	NY1404548	WEST SENECA WD NO6
NY1400465	CHESTNUT RIDGE WATER	NY1404549	WEST SENECA WD NO7
NY1400466	HAMBURG WD#1	NY1404550	WEST SENECA WD NO8
NY1400467	HAMBURG WD#2	NY1404551	WEST SENECA WD NO9
NY1400468	BAYVIEW ROAD WD	NY1404562	MEADOWBROOK WD#12
NY1400469	BEACON HILL WD	NY1404566	CLEVELAND HILL WD
NY1400470	BEETOW DRIVE WD	NY1410128	ORCHARD PARK WD#3
NY1400471	BONNIE LANE WD	NY1410142	KENMORE VILLAGE
NY1400472	HAMBURG ORCHARD PARK	NY1419099	ORCHARD PARK WD #18
NY1400473	KNOB LILLYDALE BENZ WD	NY1419527	EVANS WD#4
NY1400474	LAKEVIEW WD	NY1419528	EVANS WD#5
NY1400475	LEWIS DRIVE WD	NY1420549	ELMA WATER DISTRICT
NY1400476	MEADOWBROOK GREENFIELD	NY1420550	AURORA WD#1A
NY1400477	OCKLER CAMP ROAD WD	NY1420551	AURORA WD#9
NY1400478	OLD LAKEVIEW ROAD WD	NY1420767	CLARENCE, TOWN WATER
NY1400479	MCKINLEY WD#1	NY1421651	ALDEN WD#1
NY1400480	OSBORNE SAGAMORE HEIGHTS	NY1421652	ALDEN WD#2
NY1400481	PARKER BIG TREE ROAD WD	NY1421653	ALDEN WD#3
NY1400482	PICTURE LAKE WD	NY1421761	ORCHARD PARK WD#14
NY1400483	SHORE HEIGHTS WD	NY1421897	BOSTON WD#1
NY1400484	SOUTH TOWN WATER DIST	NY1421898	BOSTON WD#2
NY1400485	STALEY DRIVE WD	NY1422651	NEWSTEAD WD#1
NY1400486	THRUWAY WD	NY1422652	NEWSTEAD WD#2
NY1400487	VAIL WD	NY1422653	NEWSTEAD WD#3
NY1400488	ATHOL SPRINGS LOCKSLEY	NY1422654	NEWSTEAD WD#4
NY1400489	BAIN WD	NY1430016	NEWSTEAD #8
NY1400490	BETHFORD LAKE WD	NY1443000	NEWSTEAD WD#6
NY1400491	BIG TREE GARDEN WD	NY1404557	TONAWANDA CON. WATER
NY1400492	BRISTOL WD	NY1400538	CITY OF TONAWANDA

## 2005 Water Quality Report



**Erie County Water Authority**  
Administrative Offices  
350 Ellicott Square Building  
Buffalo, NY 14203  
716/849-8484 • [www.ecwa.org](http://www.ecwa.org)

Presorted Standard  
U.S. Postage  
PAID  
Permit No. 3825  
Buffalo, NY

## Dear Customer,

Water quality is essential to all of us – and the quality of our water affects the quality of our lives.

Since the Erie County Water Authority (ECWA) began operations in 1953, it has significantly enhanced the quality of life throughout Western New York by meeting the growing need for safe, clean, drinking water in the communities we serve.

The ECWA is committed to providing its customers safe, high quality drinking water. That is why the ECWA maintains a rigorous quality control program and continues to invest substantial financial resources to improve our two treatment facilities, distribution system and nationally recognized water quality lab. Our water is constantly monitored and tested. Each year ECWA strives to provide its customers with the high quality drinking water that they deserve.

As we enter a new year, the ECWA has positioned itself to continue to achieve its mission of providing a high-quality product and reliable, cost-effective service at an affordable rate to the more than 550,000 consumers that rely on us every day, 24 hours a day, 365 days a year.

Therefore, it is with pleasure that we provide you with the ECWA's 2005 Annual Water Quality Report (AWQR). This report provides an overview of the ECWA's water quality during the past year. It shows the source of your water, how it compares to standards set by regulatory agencies, how your water is treated and tested, discusses ECWA programs to improve your water quality and answers common questions asked by our customers. This report fulfills the United States Environmental Protection Agency's requirement to prepare and deliver a Consumer Confidence Report (CCR) and the New York State Department of Health's requirement to prepare and deliver an Annual Water Quality Report (AWQR).

The ECWA's highly trained staff looks forward to continuing to bring our most abundant, our most precious, our most natural resource into the homes, the businesses and the lives of the residents of Western New York. Your comments and questions about this report are important to us. Please forward them to:

Dan NeMoyer, Public Affairs Officer, 295 Main Street, 350 Ellicott Square Building, Buffalo, N.Y. 14203, phone 849-8406, or email to [dnemoyer@ecwa.org](mailto:dnemoyer@ecwa.org).

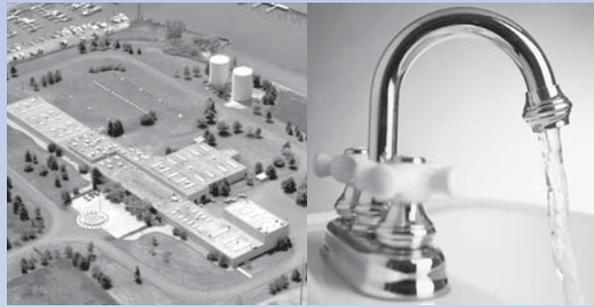
Sincerely,

### Board of Commissioners

Frank E. Swiatek, Chairman

Robert J. Lichtenthal Jr., Vice-Chairman

Acea Mosey-Pawlowski, Treasurer



## What is the Erie County Water Authority?

The ECWA was created in 1949 by a special act of the New York State Legislature to ensure that the people and industry of Erie County would have a safe, plentiful supply of water for the future.

Since 1953, the ECWA has produced and reliably delivered to its customers water of the highest quality at an affordable rate.

As an independent public-benefit corporation, the ECWA is a financially self-sustaining business enterprise, and pays all operating expenses from revenues generated by the sale of water to its 155,057 customers. The ECWA is not an agency of New York State and is totally independent of Erie County government.

Annually, the ECWA treats and distributes roughly 25 billion gallons of high-quality water for residential, commercial, and industrial use in 34 municipalities throughout Western New York.

The ECWA owns and operates two water treatment plants, a nationally recognized water quality lab, 35 pump stations, 41 water storage tanks and maintains 2,374 miles of water mains, 16,149 fire hydrants, 29,828 valves and numerous appurtenances.

The ECWA's current residential rate of \$2.70 per 1,000 gallons of delivered water is one of the lowest in New York State.



## Who Sets and Enforces Drinking Water Standards?

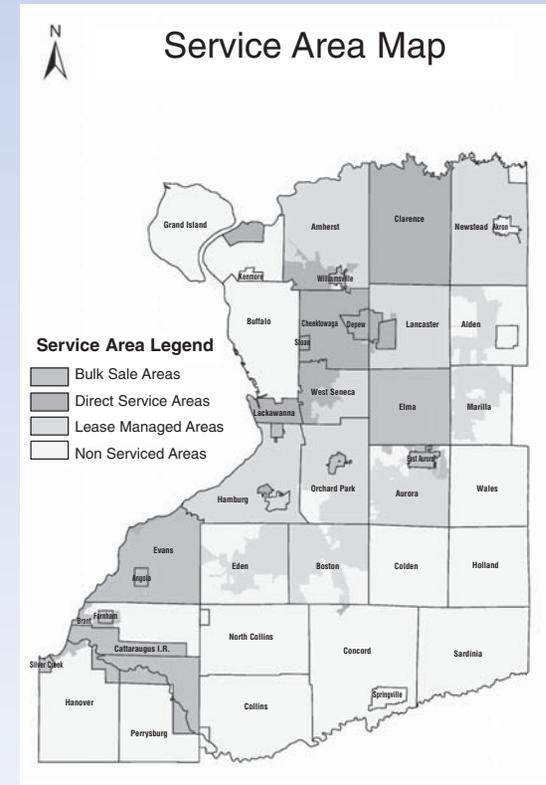
The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of your drinking water. Under the SDWA, the United States Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. In New York, the State Health Department enforces the EPA's regulations and often makes them even more stringent.

The EPA sets standards for approximately 150 regulated contaminants in drinking water. For each of these contaminants, EPA sets a legal limit, called a maximum contaminant level (MCL). EPA regulations specify strict testing and reporting requirements for each contaminant. Water suppliers may not provide water that doesn't meet these standards. Water that does meet these standards is safe to drink.

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. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline at 800-426-4791.

## Where Does My Water Come From?

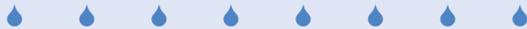
Your water comes from two sources. The ECWA's Sturgeon Point Treatment Plant in the Town of Evans draws water from Lake Erie to supply the southern part of Erie County and communities in Cattaraugus County. The Van de Water Treatment Plant in Tonawanda draws water from the "mighty" Niagara River and services municipalities in northern Erie County and Genesee County. These two plants serve more than a half million people in Western New York. In each plant, the water is rigorously treated then sent through the ECWA's extensive distribution system until it arrives at your tap - fresh, pure and ready for you to enjoy.



## How Is My Water Treated?

The ECWA's two water treatment facilities use the conventional filtration method. At the plants, water undergoes the following treatment steps:

- ◆ Raw water flows by gravity through a large intake tunnel to the raw water building.
- ◆ Pumps draw the water through traveling screens to prevent large objects such as driftwood and fish from entering the system.
- ◆ A chemical, polyaluminum chloride, is added to the water, which causes suspended particles in the water to clump together to form floc.
- ◆ Floc particles then settle to the bottom of large sedimentation basins.
- ◆ The water is filtered through layers of anthracite, sand, and gravel, to remove any remaining particles.
- ◆ Chlorine is added for disinfection to kill bacteria. Small amounts of fluoride are added to help prevent tooth decay.
- ◆ Caustic soda is added to stabilize the alkalinity of the water and prevent corrosion in home plumbing.
- ◆ Powdered activated carbon is added in summer months to help remove unpleasant tastes and odors.
- ◆ Water is temporarily stored in clearwells or storage tanks before it is pumped to the public.
- ◆ High service pumps deliver the clean water through more than 2,300 miles of pipeline to homes and businesses. The ECWA closely monitors its 35 pump stations and 41 water storage tanks to assist in the distribution process. On average, the ECWA delivers 72 million gallons a day to customers.



## Should I Buy Bottled Water or a Home Filter System to be Safe?

No!! Your water is extremely safe to drink and very inexpensive. ECWA water far exceeds even the most stringent governmental standards. Your water is rigorously treated and is fluoridated to prevent tooth decay. All this is provided to you for only \$2.70 per 1,000 gallons.

The bottled water industry is far less regulated than public water suppliers. The standards which govern the quality of the ECWA's water, and which are established by the EPA and enforced by the New York State Health Department, are more stringent than the regulations that govern the bottled water industry and are enforced by the Food and Drug Administration (FDA).

Water treatment devices also are not needed to make your water safe. In fact, if not properly maintained, these devices may cause an adverse affect on your water quality.

In addition, the average cost for a 16-ounce bottle of water is \$1.25 and a home filter system can cost several hundred dollars plus maintenance expenses.

ECWA customers spend very little money to receive the same quality water that entrepreneurs try to sell to consumers with fancy packaging and advertisements.

## How Is My Water Tested and Who Is Responsible for Making Sure It's Safe?

The ECWA conducts more than 70,000 tests annually to make sure all federal and state drinking water regulations are met. Our water is tested 24 hours a day, 365 days a year to assure the delivery of safe, clean water to every customer's tap. The ECWA operates three New York State-certified laboratories, one located at each water treatment plant and a nationally recognized water quality laboratory in Lackawanna, which contains state-of-the-art testing equipment. The National Environmental Laboratory Accreditation Program (NELAP) certifies each of these laboratories. NELAP is a national accrediting body, made up of state, federal and commercial laboratory accreditation officials, that sets strict standards for public and commercial laboratories across the country.

Highly trained water treatment plant operators perform hourly tests at each phase of the treatment process. Our professional water quality staff also collects over 200 samples a month from the distribution system and test for organic and inorganic compounds, and microbial contaminants. The results are sent to both the New York State and Erie County Health Departments to confirm that the ECWA is meeting all of its regulatory requirements.

The ECWA employs 252 dedicated professionals who continuously participate in educational training, licensing programs and professional associations to develop their skills to the highest possible levels.

These people live in your communities, are your friends and drink the same water you do. No wonder they are committed to making sure that your water is pure, safe and affordable.



## Conservation Tips

Except for the air we breathe, water is the single most important element in our lives. It's too precious to waste. In an effort to make the most efficient use of our water resources, the ECWA encourages customers to practice the following water conservation measures to preserve our most precious resource:

- ◆ Use the clothes washer for full loads only.
- ◆ Instead of letting the water run in the sink when you want a cold drink, keep a jug or pitcher in the refrigerator.
- ◆ Turn the water off while you brush your teeth.
- ◆ Take shorter showers. A shower uses about 10 gallons a minute. Time yourself.
- ◆ Check your toilet for leaks by putting a few drops of food coloring in your tank. If the color shows up in your toilet bowl without flushing, you have a leak that is costing you money and wasting water.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 20 gallons a day.
- ◆ Sweep outside with a broom, not a hose.
- ◆ Only water your lawn when necessary. If the grass springs back after you step on it, then it does not need to be watered.

## Is the Public Informed If the Water Is Not Safe to Drink?

EPA regulations mandate the ECWA notify its customers if water is not safe to drink. Water is not safe to drink when testing reveals that contaminants in the water exceed national limits for contaminant levels. In the unlikely event that water becomes unsafe to drink, the ECWA will issue a "boil water order" and notify the public by newspaper, television and radio announcements.

## Cryptosporidium and Giardia Analysis?

The ECWA's Water Quality Laboratory is recognized as one of the most well equipped labs in North America that is capable of testing for Giardia and Cryptosporidium. In fact, our lab was one of the first labs in the country to gain EPA approval for the analysis of Cryptosporidium and Giardia, and continues to participate in the EPA's Laboratory Quality Assurance Evaluation Program for the analysis of Cryptosporidium. The ECWA also tests for these protozoa for several other major public water suppliers throughout the country.

These microscopic protozoa are widely present in the environment and most surface water sources throughout the United States. They can cause intestinal illnesses if ingested. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the illnesses within a couple of weeks. However, both can be serious for people with weak immune systems such as those undergoing chemotherapy, dialysis or transplant patients and people with Crohn's disease or HIV infection.

In 2005, the ECWA analyzed 48 water samples for Giardia and Cryptosporidium. No positive samples were detected in the ECWA's treated water supply.

The ECWA encourages immune compromised individuals to consult their physicians regarding appropriate precautions to avoid infection. Both protozoa must be ingested to cause disease, and they may spread through other means than drinking water. For additional information on Cryptosporidiosis or Giardiasis, please contact the Erie County Health Department at 858-6964.

## ECWA's Test Results for 2005

The ECWA's water system operated under "NO VARIANCE OR EXEMPTION" from any federal or state regulatory requirements.

To comply with EPA mandated requirements, water quality data tables of detected regulated and unregulated contaminants are detailed in this report. The tables summarize test results for the past year or from the most recent year that tests were conducted in accordance with regulatory requirements. They also list the maximum contaminant levels (MCL). The EPA is responsible for establishing the MCL standards. For your convenience, important terms and abbreviations are defined throughout this document.

More information regarding all substances tested for, but not detected, can be obtained by calling the Customer Service Department at 849-8484.

# ECWA...Providing Water You Can Trust!

## ECWA 2005 WATER QUALITY MONITORING REPORT / ANNUAL WATER QUALITY REPORT SUPPLEMENT DETECTED CONTAMINANTS

Terms and abbreviations are defined at the end of data tables.

Metals, Inorganics, Physical Tests	MCL	MCLG	Level Detected	Sources in Drinking Water
Barium	2 mg/liter	NE	0.021 mg/liter	Erosion of natural deposits; drilling and metal wastes
Chloride	250 mg/liter	NE	12-22 mg/liter; Average = 17	Naturally occurring in source water
Chlorine	MRDL = 4.0 mg/liter	MRDLG = 4 mg/liter	<0.20 to 1.82 mg/liter; Average = 0.78	Added for disinfection
Copper	1.3 mg/liter (AL)	1.3 mg/liter (AL)	0.002-0.07 mg/liter, 90 <sup>th</sup> percentile 0.03 mg/liter, 0 of 97 above AL	Home plumbing corrosion; natural erosion
Fluoride	2.2 mg/liter	2.2 mg/liter	0.04 -1.29 mg/liter; Average = 0.86	Added to water to prevent tooth decay
Lead*	15 ug/liter	0 ug/liter	ND-14 ug/liter, 90 <sup>th</sup> percentile 4 ug/liter, 0 of 97 above AL	Home plumbing corrosion; natural erosion
Nitrate	10 mg/liter	10 mg/liter	0.27 to 0.31 mg/liter; Average = 0.29	Runoff from fertilizer use
pH	NR	NE	6.2-8.4 SU; Average = 8.0	Naturally occurring; adjusted for corrosion control
Turbidity**	TT	NE	1.27 NTU highest detected; 98.4% lowest monthly % ≤ 0.30 NTU	Soil runoff

\*Lead. Infants and young children are typically more vulnerable to lead in drinking water than the general population. Lead is not present in the drinking water that is treated and delivered to your home. However, it is possible that lead levels at your home may be higher than at other homes in the community as a result of the corrosion of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested for lead. To minimize exposure to lead in your drinking water flush your tap for 30 seconds to 2 minutes before using it. Additional information on lead in drinking water is available from the Safe Drinking Water Hotline (800-426-4791) or on the web at the EPA website [www.epa.gov/safewater/lead/index.html](http://www.epa.gov/safewater/lead/index.html).

\*\*Turbidity is a measure of the cloudiness of water. ECWA monitors turbidity because it is a good indicator of the effectiveness of our filtration system. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for bacterial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. On July 4, 2005 a single 4-hour turbidity reading at the Van de Water Treatment Plant exceeded 1 NTU in the combined filter effluent. Additional testing was performed to insure that microbial quality was maintained.

Organic Compounds	MCL(ug/liter)	MCLG(ug/liter)	Level Detected (ug/liter)	Sources in Drinking Water
Total Trihalomethanes	RAA≤80	NE	10-75 ug/liter ; RAA = 32.5	By-product of water disinfection (chlorination)
Total Haloacetic Acids	RAA≤60	NE	ND-30 ug/liter ; RAA = 14.5	By-product of water disinfection (chlorination)
MIB and Geosmin	NR	NE	ND-7.0 ng/liter; Average < 2 (ND)	Taste and odor compounds from algae decomposition

Radioactive Parameters	MCL	MCLG	Level Detected	Sources in Drinking Water
Gross Alpha	15.0 pCi/liter	0 pCi/liter	ND-1.7 pCi/liter	Erosion of natural deposits
Gross Beta	50** pCi/liter	0 pCi/liter	ND-2.2 pCi/liter	Decay of natural and man-made deposits
Combined Radium 226/Radium 228	5.0 pCi/liter	0 pCi/liter	ND	Erosion of natural deposits
Radon-222	NR	300 pCi/liter	3 pCi/liter	Natural radioactive gas
Total Uranium	30 ug/liter	0 ug/liter	ND-0.48 ug/liter	Erosion of natural deposits

\*\* New York State Department of Health considers 50 pCi/liter to be the level of concern for beta particles.

Microbiological Parameters	MCL (CFU/100ml)	MCLG (CFU/100ml)	Level Detected	Sources in Drinking Water
Total Coliform Bacteria *	95% <1/100mL	0.0	1.3% = highest % monthly positives	Naturally present in environment
E. coli Bacteria	<1/100mL	0.0	No samples tested positive in 2005	Human and animal fecal waste

\*Compliance is based upon no greater than 5% of monthly samples being positive.

GIARDIA AND CRYPTOSPORIDIUM	Number of Samples Tested	Number of Samples Testing Positive	
		Giardia	Cryptosporidium
Source Water	24	8	0
Treated Drinking Water	24	0	0

*Cryptosporidium* is a microscopic pathogen found in surface waters throughout the United States, as a result of animal waste runoff. It can cause abdominal infection, diarrhea, nausea, and abdominal cramps if ingested. Our filtration process effectively removes *Cryptosporidium*. *Cryptosporidium* was not detected in any raw source water or treated drinking water samples taken in 2005. *Giardia* is a microbial pathogen present in varying concentrations in many surface waters. In 2005, *Giardia* was detected in 8 of 24 raw source water samples but was not detected in any treated drinking water samples. *Giardia* is removed/inactivated through a combination of filtration and disinfection or by disinfection alone.

UNREGULATED SUBSTANCES			
Parameter	MCL	MCLG	Level Detected (mg/liter)
Alkalinity	NR	NE	88.0
Hardness	NR	NE	118
Total Dissolved Solids	NR	NE	144
Total Organic Carbon	NR	NE	2.0

The seal of the Partnership for Safewater as seen on this document indicates that we are part of a select group of water systems nationwide who have voluntarily committed themselves toward a proactive approach to strengthen the safety of drinking water for our customers above and beyond the current regulatory requirements. For additional information on the Partnership for Safewater visit [www.awwa.org/science/partnership](http://www.awwa.org/science/partnership).



## NON-DETECTED CONTAMINANTS The following contaminants were NOT detected in ECWA water in 2005 or in the most recent year analyzed:

Compounds or Elements Not Detected		
	Antimony	Hexachlorobenzene
4-Chlorotoluene	Arsenic	Hexachlorobutadiene
2,4-D	Atrazine	Hexachlorocyclopentadiene
4,4'-DDE	Benzene	Isopropylbenzene
1,2-Dibromo-3-Chloropropane	Benzo(a)pyrene	p-Isopropyltoluene
1,2-Dibromoethane	Beryllium	Lindane
1,2-Dichlorobenzene	Bromobenzene	Manganese
1,3-Dichlorobenzene	Bromochloromethane	Mercury
1,4-Dichlorobenzene	Bromomethane	Methiocarb
1,1-Dichloroethane	Butachlor	Toxaphene
1,2-Dichloroethane	n-Butylbenzene	Xylenes
1,1-Dichloroethylene	sec-Butylbenzene	Methomyl
cis-1,2-Dichloroethylene	t-Butylbenzene	Methoxychlor
trans-1,2-Dichloroethylene	Cadmium	Methyl t-butyl ether (MTBE)
1,2-Dichloropropane	Carbaryl	Methylene Chloride
1,3-Dichloropropane	Carbofuran	Metolachlor
2,2-Dichloropropane	Carbon Tetrachloride	Metribuzin
1,1-Dichloropropene	Chlordane	Molinate
cis-1,3-Dichloropropene	Chlorobenzene	Naphthalene
trans-1,3-Dichloropropene	Chloroethane	Nitrite
2,4-Dinitrotoluene	Toluene	Nitrobenzene
2,6-Dinitrotoluene	Vinyl Chloride	Oxamyl (Vydate)
3-Hydroxycarbofuran	Chloromethane	PCB 1016
1-Naphthol	Chromium	PCB 1221
2,3,7,8-TCDD (Dioxin)	Cyanide	PCB 1232
2,4,5-TP (Silvex)	DCPA Diacid degradate	PCB 1242
1,1,1,2-Tetrachloroethane	DCPA Monoacid degradate	PCB 1248
1,1,2,2-Tetrachloroethane	Dalapon	PCB 1254
1,2,3-Trichlorobenzene	Di[2-ethylhexyl] adipate	PCB 1260
1,2,4-Trichlorobenzene	Di(2-ethylhexyl) phthalate	Pentachlorophenol
1,1,1-Trichloroethane	Dibromomethane	Perchlorate
Thallium	Dicamba	Phosphate
Trichlorofluoromethane	Dichlorodifluoromethane	Pichloram
1,1,2-Trichloroethane	Dieldrin	Propacchlor
1,2,3-Trichloropropane	Dinoseb	Propoxur
1,1,2-Trichlorofluoroethane	Diquat	n-Propylbenzene
1,2,4-Trimethylbenzene	EPTC	Selenium
1,3,5-Trimethylbenzene	Endothal	Silver
Acetochlor	Endrin	Simazine
Alachlor	Ethylbenzene	Styrene
Aldicarb	Free Ammonia	Terbacil
Aldicarb Sulfone	Glyphosate	Tetrachloroethylene
Aldicarb Sulfoxide	Heptachlor	Trichloroethylene
Aldrin	Heptachlor Epoxide	Zinc

### New York State Department of Health Source Water Assessment

The New York State Department of Health completed a draft Source Water Assessment of the supply's raw water sources under the state's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies, which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels - intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage areas deemed most likely to impact drinking water quality at this public water supply's raw water intakes. Separate assessments were completed for the Lake Erie source and the Niagara River source. The assessment found a moderate susceptibility to contamination for the Lake Erie source. The amount of agricultural land in the assessment area results in elevated potential of disinfection byproduct precursors and pesticides contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: landfills. The assessment found an elevated susceptibility to contamination for the Niagara River source. The amount of agricultural (and to a lesser extent residential) lands in the assessment area results in elevated potential for microbials, disinfection byproduct precursors, and pesticides contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for all contaminant categories. Non-sanitary wastewater discharges may also contribute to contamination. There is also considerable contamination susceptibility associated with other discrete contaminant sources, and these facility types include: chemical bulk storage, inactive hazardous waste sites, landfills, Resource Conservation and Recovery Act facilities and Toxics Release Inventory facilities.

If you have any questions about New York State's Source Water Assessment Program, please contact Ms. Dolores Funke, P.E., Senior Public Health Engineer, Erie County Health Department at 858-6966.

### Contaminants that may be present in source water before we treat it include:

- **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic Contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and Herbicides**, which may come from a variety of sources such as urban storm water runoff, agricultural and residential uses.
- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive Contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

### Abbreviations and Terms

AL: Action Level – the concentration of a contaminant that when exceeded triggers treatment or other requirements, which a water system must follow.

CFU/100 ml: Colony Forming Units per 100 milliliters

MCL: Maximum Contaminant Level – the highest level of a contaminant allowed in drinking water.

MCLG: Maximum Contaminant Level Goal - the level of a contaminant in drinking water below which there is no known or expected risk.

mg/liter: milligrams per liter (parts per million)

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.

mrem/yr: millirems per year

ND: Not Detected – absent or present at less than testing method detection limit.

ng/liter: nanograms per liter = parts per trillion

NE: Not Established

NR: Not Regulated

NTU: Nephelometric Turbidity Units

pCi/liter: picocuries per liter

RAA: Running Annual Average

SU: Standard Units (pH measurement)

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

ug/liter: micrograms per liter (parts per billion)

Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

< : Less Than

≤ : Less Than or Equal To

Results are from 2005 analyses or from the most recent year that tests were conducted in accordance with regulatory requirements. Some tests are not required to be performed on an annual basis. Information can be obtained upon request from the ECWA Water Quality Laboratory (716) 826-6230 or on the Internet at [www.ecwa.org](http://www.ecwa.org).