

Annual Drinking Water Quality Report for 2008
East Aurora Water Dept
571 Main St. East Aurora, NY 14052
(Public Water Supply ID# 1400433)

INTRODUCTION

To comply with State regulations, East Aurora Water Dept will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Laurence Hebel Jr., Water Dept Foreman at 652-6057. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings on the 1st and 3rd Monday of the month. The meetings are held at the Village Hall Board room at 7:00pm.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water is purchased from Erie County Water Authority. The Water is stored in two 1 million gallon tanks, one is located on Center Street and the other is located on Castle Hill. During 2008, our system did not experience any restriction of our water source.

FACTS AND FIGURES

Our water system serves 6610 people through 2700 connections. The total water purchased in 2008 was 247 million gallons. The amount of water delivered to customers was 191 million gallons. This leaves an unaccounted for total of 83 million gallons. This water was used to flush mains, fight fires and lost due leakage. In 2008, water customers were charged on average \$ 3.26 per 100 cubic feet of water.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes. The attached report from The Erie County Water Authority depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by

calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Erie County Health Department at 716-858-7671

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2008, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- ◆ Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

SYSTEM IMPROVEMENTS

NYS DOT is currently reconstructing Main Street, which will include new water mains, line valves and fire hydrants.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions. (East Aurora Water Dept 652-6057)



ERIE COUNTY WATER AUTHORITY
2008 WATER QUALITY MONITORING REPORT
ANNUAL WATER QUALITY REPORT SUPPLEMENT



DETECTED CONTAMINANTS

Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date (or date of highest detected)	MCL	MCLG	Level Detected	Sources In Drinking Water
Arsenic	No	10/08	10 ug/liter	NE	0.71 - 0.78 ug/liter, Average = 0.74	Erosion of natural deposits; orchard runoff, glass, electronic production waste
Asbestos	No	8/07	7 MFL	7 MFL	ND - 0.2 MFL, Average = ND	Erosion of natural deposits; decay of asbestos cement water mains
Chloride	No	2/08	250 mg/liter	NE	17 - 39 mg/liter, Average = 21	Naturally occurring in source water
Chlorine	No	9/08	MRDL = 4.0 mg/liter	MRDLG = 4 mg/liter	<0.20 to 2.2 mg/liter, Average = 0.77	Added for disinfection
Fluoride ¹	No	5/08	2.2 mg/liter	2.2 mg/liter	0.11 - 1.71 mg/liter, Average = 0.97	Added to water to prevent tooth decay
Lead ²	No	9/07	15 ug/liter (AL)	0 ug/liter (AL)	ND - 38 ug/liter, 90th percentile 4 ug/liter, 1 of 97 above AL	Home plumbing corrosion; natural erosion
Nitrate	No	10/08	10 mg/liter	10 mg/liter	0.13 to 0.15 mg/liter, Average = 0.14	Runoff from fertilizer use
pH	No	10/08	NR	NE	6.4 - 8.7 SU, Average = 7.8	Naturally occurring; adjusted for corrosion control
Turbidity ³	No	9/08	TT	NE	0.22 NTU highest detected; 100% was lowest monthly % < 0.3 NTU	Soil runoff

¹ Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the Erie County Water Authority monitor fluoride levels on a daily basis. During the addition of fluoride in 2008, monitoring showed fluoride levels in your water were in the optimal range 100% of the time. However, due to supply issues, the fluoride addition to your water was interrupted during the months of August, October and November. None of the monitoring results during fluoride addition showed fluoride at levels that approached the 2.2 mg/l MCL for fluoride.

² Lead is not present in the drinking water that is treated and delivered to your home. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The Erie County Water Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>. The level presented represents the 90th percentile of the 97 sites tested. A percentile is a value on a scale of 100 that indicates a percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead or copper values detected in the water system. In this case, 97 samples were collected in the water system and the 90th percentile value for lead was the sixth highest value (4 ug/L). The action level for lead was exceeded at only one of the sites tested (38 ug/L). The action level for copper was not exceeded at any of the sites tested.

³ 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. Our highest single turbidity measurement (0.22 NTU) for the year occurred on 9/14/08. State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. All measurements met the treatment technique for turbidity. The levels recorded were always within the acceptable range allowed and did not constitute a treatment technique violation.

Organic Compounds	Violation Yes/No	Sample Date (or date of highest detected)	MCL (ug/liter)	MCLG (ug/liter)	Level Detected (ug/liter)	Sources In Drinking Water
Total Trihalomethanes ⁴	No	8/08	RAA <80	NE	19 - 85 ug/liter, RAA = 42 ug/liter	By-product of water disinfection (chlorination)
Total Haloacetic Acids ⁵	No	8/08	RAA <60	NE	6 - 50 ug/liter, RAA = 19 ug/liter	By-product of water disinfection (chlorination)
MIB and Geosmin	No	9/08	NR	NE	ND - 4.5 ng/liter, Average < 2 (ND)	Taste and odor compounds from algae decomposition

⁴ Trihalomethanes are byproducts of the water disinfection process that occur when natural organic compounds react with the chlorine required to kill harmful organisms in the water. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. The level detected represents the highest running annual average of quarterly results. This result (42 ug/L) is below the MCL.

⁵ Haloacetic acids are byproducts of the water disinfection process required to kill harmful organisms. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. The level detected represents the highest running annual average of quarterly results. This result (19 ug/L) is below the MCL.

Radioactive Parameters	Violation Yes/No	Sample Date (or date of highest detected)	MCL	MCLG	Level Detected	Sources In Drinking Water
Gross Alpha	No	1/05	15.0 pCi/liter	0 pCi/liter	ND - 1.7 pCi/liter	Erosion of natural deposits
Gross Beta	No	9/04	50** pCi/liter	0 pCi/liter	ND - 2.2 pCi/liter	Decay of natural and man-made deposits
Combined Radium 226/Radium 228	No	1/05	5.0 pCi/liter	0 pCi/liter	ND	Erosion of natural deposits
Total Uranium	No	6/04	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	Violation Yes/No	Sample Date (or date of highest detected)	MCL	MCLG	Level Detected	Sources In Drinking Water
Total Coliform Bacteria	No ⁶	8/08 ⁷	>5% of samples positive	NE	0.81% = highest percentage of monthly positives	Naturally present in environment
<i>E. coli</i> Bacteria	No ⁸	NA	Any confirmed positive sample	0	No samples tested positive in 2008	Human and animal fecal waste

⁶ A violation occurs when more than 5% of the total coliform samples collected per month are positive.

⁷ In August 2008, two of the 247 samples taken in the distribution system indicated the presence of total coliform. Follow-up sampling, testing and reporting were performed as required, and the results were negative for both total coliform and *E. coli*.

⁸ A violation occurs when a total coliform positive sample is positive for *E. coli* and a repeat total coliform sample is positive or when a total coliform positive sample is negative for *E. coli* but a repeat total coliform sample is positive and the sample is also positive for *E. coli*.

During 2008, a total of only four samples tested positive for total coliform out of a total of 4,951 drinking water samples that were analyzed. Follow-up sampling, testing and reporting were performed as required by regulation, and the results were negative for both total coliform and *E. coli* in all cases. Since total coliforms were detected in less than 5% of the samples collected during any one month, the water system did not have any MCL violations. It should also be noted that *E. coli* was not detected in any of these samples.

GIARDIA AND CRYPTOSPORIDIUM	Violation Yes/No	Sample Date (or date of highest detected)	Number of Samples Testing Positive		Number of Samples Tested
			Giardia	Cryptosporidium	
Source Water	No	3/08	3	0	21
Treated Drinking Water	No	NA	0	0	21

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*. No *Cryptosporidium* was detected in any samples taken in 2008.

Giardia is a microbial pathogen present in varying concentrations in many surface waters. In 2008 *Giardia* was detected in 3 of 21 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.

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.

UNREGULATED SUBSTANCES

Parameter	MCL	MCLG	Level Detected (mg/liter)	Range (mg/liter)
Alkalinity	NR	NE	91	55 - 133
Calcium Hardness	NR	NE	94	73 - 140
Total Dissolved Solids	NR	NE	158	144 - 173
Total Organic Carbon	NR	NE	2.1	1.63 - 3.85

COMPOUNDS TESTED FOR BUT NOT DETECTED

2-Chlorotoluene	1,1,2-Trichloroethane	Cadmium	Isopropylbenzene	Phosphate
4-Chlorotoluene	2,4,6-Trinitrotoluene	Carbaryl	p-Isopropyltoluene	Picloram
2,4-D	2,2',4,4'-tetrabromodiphenyl ether	Carbaryl	Lindane	Propacchlor
4,4'-DDE	2,2',4,4',5,5'-pentabromodiphenyl ether	Carbon Tetrachloride	Manganese	Propoxur
DCPA monoacid degradate	2,2',4,4',5,5'-hexabromobiphenyl ether	Chlordane	Mercury	n-Propylbenzene
DCPA monoacid degradate	2,2',4,4',5,5'-hexabromodiphenyl ether	Chlorobenzene	Methiocarb	Selenium
1,2-Dibromo-3-Chloropropane	2,2',4,4',6-pentabromodiphenyl ether	Chloroethane	Methomyl	Silver
1,2-Dichloroethane	1,1,2-Trichloroethane	Chloromethane	Methoxychlor	Simazine
1,3-Dichlorobenzene	1,2,3-Trichloropropane	Chromium	Methyl Isobutyl ether (MTBE)	Styrene
1,1-Dichloroethane	1,2,4-Trimethylbenzene	Copper	Methylene Chloride	Terbacil
1,1-Dichloroethane	1,2,4-Trimethylbenzene	Cyanide	Methochlor	Tetrachloroethylene
1,2-Dichloroethane	1,3,5-Trimethylbenzene	DCPA Monoacid degradate	Methochlor	Toluene
1,2-Dichloroethane	Acetochlor	Dieldrin	Methochlor	Toxaphene
1,1-Dichloroethylene	Acetochlor ethane sulfonic acid	Ethylbenzene	Methochlor ethane sulfonic acid(ESA)	Trichloroethylene
cis-1,2-Dichloroethylene	Acetochlor oxanilic acid	Free Ammonia	Methochlor oxanilic acid (OA)	Trichlorofluoromethane
trans-1,2-Dichloroethylene	Alachlor	Glyphosate	Methobenzin	Vinyl Chloride
1,2-Dichloropropane	Alachlor ethane sulfonic acid	Heptachlor	Naphthalene	Xylenes
1,3-Dichloropropane	Alachlor oxanilic acid	Heptachlor Epoxide	Nitrobenzene	Zinc
2,2-Dichloropropane	Aldicarb	Hexachlorobenzene	N-nitroso-diethylamine (NDEA)	
1,1-Dichloropropane	Aldicarb Sulfone	Hexachlorocyclopentadiene	N-nitroso-dimethylamine (NDMA)	
cis-1,3-Dichloropropane	Aldicarb Sulfoxide	Hexachlorocyclopentadiene	N-nitroso-d-n-butylamine (NDBA)	
trans-1,3-Dichloropropane	Aldrin	Hexachlorocyclopentadiene	N-nitroso-d-n-propylamine (NDPA)	
1,3-Dinitrobenzene	Anitrimony	Hexachlorocyclopentadiene	N-nitroso-methylamine (NMMA)	
2,4-Dinitrotoluene	Atrazine	Hexachlorocyclopentadiene	N-nitroso-pyrrolidine (NPYR)	
2,6-Dinitrotoluene	Benzene	Hexachlorocyclopentadiene	Oxamyl (Vydate)	
3-Hydroxycarbofuran	Benz(a)pyrene	Hexachlorocyclopentadiene	PCB 1016	
1-Naphthol	Beryllium	Hexachlorocyclopentadiene	PCB 1221	
2,3,7,8-TCDD (Dioxin)	Bromobenzene	Hexachlorocyclopentadiene	PCB 1232	
2,4,5-TP (Silvex)	Bromochloromethane	Hexachlorocyclopentadiene	PCB 1242	
1,1,1,2-Tetrachloroethane	Bromomethane	Hexachlorocyclopentadiene	PCB 1248	
1,1,2,2-Tetrachloroethane	Butachlor	Hexachlorocyclopentadiene	PCB 1254	
1,2,3-Trichlorobenzene	n-Butylbenzene	Hexachlorocyclopentadiene	PCB 1260	
1,2,4-Trichlorobenzene	sec-Butylbenzene	Hexachlorocyclopentadiene	Pentachlorophenol	
1,1,1-Trichloroethane	t-Butylbenzene	Hexachlorocyclopentadiene	Perchlorate	

ABBREVIATIONS AND TERMS

- AL = Action Level: the concentration of a contaminant which, 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.
- MFL = Million fibers/liter (Asbestos)
- 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 (ug/L) = micrograms per liter (parts per billion)
- Variations 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 2008 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) 685-8570 or on the Internet www.ecwa.org.