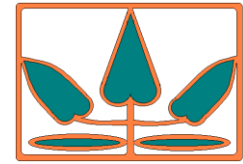




Annual Drinking Water Quality Report for 2015 *Seneca Nation of Indians*



INTRODUCTION

To comply with Federal regulations, the Seneca Nation of Indians (SNI), annually issues 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 federal 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 Federal standards.

The Environmental Health and Engineering division of the SNI Health System, with cooperation from the Utility Departments on the Cattaraugus and Allegany Territories, is tasked with sampling, testing and monitoring drinking water quality.

If you have any questions about this report or concerning your drinking water, please contact Joel Merrill, PE, Civil Engineer or Shannon Seneca, Sanitarian, both at (716) 945-5894.

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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water sources are:

- 1.) Cattaraugus Territory:
 - a. Groundwater Wells: drawn from two drilled wells which are located on Richardson Road. Richardson Road is one of the many systems that adds a low level of fluoride to drinking water in order to provide 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 levels that range from 0.8 mg/l (parts per million). Our fluoride addition facility is designed and operated to meet this optimal range. This source is also disinfected prior to being pumped to two storage tanks and distribution. This source was not operational in 2015.
 - b. Intercommunity Water main: Water is purchased in bulk from Erie County Water Authority (ECWA). The connection is located at Routes 5/20 in Irving. This water is fluoridated and disinfected by ECWA. ECWA's water quality report is attached. See page 2 of the ECWA supplement for the types of water treatment ECWA utilizes.
- 2.) Allegany Territory:

- a. Groundwater Wells: drawn from two drilled wells which are located on Hiller Rd in Jimersontown. This water is disinfected and pumped to an elevated storage tank prior to distribution.
- b. Groundwater Wells: drawn from two drilled wells which are located on North Authority Road in Sullivan Hollow, Killbuck. This water is disinfected and filtered prior to usage.
- c. Groundwater Wells: drawn from two drilled wells which are located on South Loop Road in Steamburg. This water is disinfected and pumped to an elevated storage tank prior to distribution.
- d. City of Salamanca: Groundwater wells: Salamanca Board of Public Utilities (BPU) report is available at: <http://www.salamancabpu.com>

During 2015, the Richardson Road wells have been offline undergoing repairs.

Each source has undergone a risk analysis to determine the source water's susceptibility to contamination. Except for farming on the Cattaraugus territory, all sources have a low risk of contamination. Source water assessments are available from SNI Health. Efforts are underway to further protect SNI water sources.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the Federal regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, and radiological compounds. A full list of the contaminants tested follows as table 3. The tables 1 and 2 presented below depict which compounds were detected in your drinking water. The regulations allow 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. See also Erie County Water Authority's water quality monitoring report supplement attached for their detected contaminants

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 SNI Health Department at (716) 945-5894.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the tables, 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 EPA.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, 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 provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of

infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION ON FLUORIDE ADDITION

The Cattaraugus system is one of the many drinking water systems that provide 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 a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.8 mg/l. During 2015 monitoring showed that fluoride levels in your water were within 0.2 mg/l of the target level for 100% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l NY State Department of Health MCL for fluoride. EPA's Fluoride MCL is 4 mg/l and EPA's secondary standard for fluoride is 2 mg/l.

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 firefighting 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 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.

SYSTEM IMPROVEMENTS

In 2015, a capital project was started to replace the Indian Hill water tank. In addition, a project to renovate the Cattaraugus Water System Pump Stations was started. These improvements are funded by EPA and IHS drinking water grants and will provide secure storage and delivery of treated water in compliance with federal regulations. In addition other projects are planned to protect aging infrastructure and provide treated water to areas not currently served.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our consumers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.

TABLE 1
2015 Water Quality Monitoring Report-Annual Water Quality Report Supplement-CATTARAUGUS SYSTEM

DETECTED CONTAMINANTS						
Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Barium	See Erie County Water Authority Supplement for these test results as ECWA was the sole water source in 2015					
Chloride						
Nitrate						
Chromium						
Fluoride						
Lead ³	No	Various (2013)	0.002 mg/l	0	AL=15	Household plumbing, corrosion, natural sources, wood preservatives
Copper ³	No	Various (2013)	0.0906 mg/l	0	AL=1,300	Home plumbing corrosion, natural erosion
Organic Compounds	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Trihalomethanes	No	quarterly	LRAA=0.033 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	quarterly	LRAA=0.018 mg/l	NE	MCL=0.06	Disinfection By-Product
Radiological Parameters	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Gross Alpha	See Erie County Water Authority Supplement for these test results as ECWA was the sole water source in 2015					
Radium 228						
Radium 226						
Microbiological Parameters ²	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Total coliform bacteria	N	Various	None	NE	5% of samples positive	Naturally present in the environment

¹ 90th percentile

² Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2015.

³ There were 17 lead and copper samples collected and analyzed in 2013. The minimum number of samples was 20 samples. Lead & Copper sampling will be conducted again in 2016.

TABLE 2
2014 Water Quality Monitoring Report-Annual Water Quality Report Supplement-JIMERTONTOWN SYSTEM

DETECTED CONTAMINANTS						
Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Barium	No	9/29/15	229 ug/l	2,000	MCL = 2,000	Erosion of natural deposits, drilling and metal wastes
Chloride	No	9/29/15	115 mg/l	NE	250 mg/l	Naturally occurring in source water
Nitrate	No	9/29/15	1.87 mg/l	10	MCL = 10	Agricultural runoff; natural sources
Copper	No	9/5,9/6,9/13 (2013)	<0.01-0.127 mg/l, 0.105 mg/l ¹ , 0 of 5 above AL	AL=1.30	AL=1.30	Home plumbing corrosion, natural erosion
Lead	No	9/5,9/6,9/13 (2013)	<0.001-0.004 mg/l, 0.003 mg/l ¹ , 0 of 5 above AL	AL = 0.015	AL = 0.015	Household plumbing, corrosion, natural sources, wood preservatives
Chromium	No	9/29/15	<0.010 mg/l	0.1 mg/l	0.1 mg/l	Erosion of natural deposits
Fluoride	No	9/29/15	<0.1	NA	2.2 mg/l	Erosion of natural deposits

Organic Compounds	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Trihalomethanes	No	8/18/15	0.031 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	8/18/15	<0.001 mg/l	NE	MCL=0.06	Disinfection By-Product

Radiological Parameters	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Gross Alpha	No	9/29/15	3.37 ±1.8 pCi/l	0	MCL=15	Natural sources
Gross Beta	No	9/29/15	1.79 ±0.922 pCi/l	0	MCL=15	Natural sources
Radium 228	No	9/29/15	0.248 +0.331pCi/l	NE	NE	Natural sources
Radium 226	No	9/29/15	0.297 +0.513pCi/l	NE	NE	Natural sources
Microbiological Parameters ²	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Total coliform bacteria	N	Various	None	NE	5% of samples positive	Naturally present in the environment

¹ 90th percentile

²Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2015.

TABLE 3
2015 Water Quality Monitoring Report-Annual Water Quality Report Supplement-STEAMBURG SYSTEM

DETECTED CONTAMINANTS						
Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Barium	No	9/29/15	216 ug/l	2,000	MCL = 2,000	Erosion of natural deposits, drilling and metal wastes
Chloride	No	9/29/15	21.7 mg/l	NE	250 mg/l	Naturally occurring in source water
Nitrate	No	9/29/15	2.08 mg/l	10	MCL = 10	Agricultural runoff; natural sources
Copper	No	9/5,9/6,9/9, 9/11, 9/12 (2013)	0.014-0.91 mg/l, 0.4945 mg/l ¹ , 0 of 5 above AL	AL=1.30	AL=1.30	Home plumbing corrosion, natural erosion
Lead	No	9/5,9/6,9/9, 9/11, 9/12 (2013)	<0.001-0.002 mg/l, 0.0015 mg/l ¹ , 0 of 5 above AL	AL = 0.015	AL = 0.015	Household plumbing, corrosion, natural sources, wood preservatives
Chromium	No	9/29/15	0.01 mg/l	0.1 mg/l	0.1 mg/l	Erosion of natural deposits
Fluoride	No	9/29/15	<0.1 mg/l	2.2 mg/l	202 mg/l	Erosion of natural deposits

Organic Compounds	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Trihalomethanes	No	8/18/15	<0.0037 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	8/18/15	<0.001 mg/l	NE	MCL=0.06	Disinfection By-Product

Radiological Parameters	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Gross Alpha	No	9/29/15	-0.433 ±0.759 pCi/l	0	MCL=15	Natural sources
Gross Beta	No	9/29/15	1.81 ±1.34 pCi/l	0	MCL=15	Natural sources
Radium 228	No	9/29/15	-0.00276 ±0.335pCi/l	NE	NE	Natural sources
Radium 226	No	9/29/15	0.266 ±0.522pCi/l	NE	NE	Natural sources

Microbiological Parameters ²	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Total coliform bacteria	N	Various	None	NE	5% of samples positive	Naturally present in the environment

¹ 90th percentile

² Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2015.

TABLE 4: 2015 Water Quality Monitoring Report-Report Supplement-SULLIVAN HOLLOW SYSTEM

DETECTED CONTAMINANTS						
Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Barium	No	9/29/15	127 ug/l	2,000	MCL = 2,000	Erosion of natural deposits, drilling and metal wastes
Chloride	No	9/29/15	3.32 mg/l	NE	250 mg/l	Naturally occurring in source water
Nitrate	No	9/29/15	<0.2 mg/l	10	MCL = 10	Agricultural runoff; natural sources
Copper	No	8/18/15, 8/20/15	<0.01-0.103 mg/l, 0.0665 mg/l ¹ , 0 of 5 above AL	AL=1.30	AL=1.30	Home plumbing corrosion, natural erosion
Lead	No	8/18/15, 8/20/15	<0.001-0.0013 mg/l, 0.0012 mg/l ¹ , 0 of 5 above AL	AL = 0.015	AL = 0.015	Household plumbing, corrosion, natural sources, wood preservatives
Chromium	No	9/29/15	<0.01 mg/l	0.1 mg/l	0.1 mg/l	Erosion of natural deposits
Fluoride	No	9/29/15	<0.1 mg/l	2.2 mg/l	202 mg/l	Erosion of natural deposits

Organic Compounds	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Trihalomethanes	No	8/18/15	<0.005 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	8/18/15	<0.001 mg/l	NE	MCL=0.06	Disinfection By-Product

Radiological Parameters	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Gross Alpha	No	9/29/15	0.948 \pm 1.21 pCi/l	0	MCL=15	Natural sources
Gross Beta	No	9/29/15	0.302 \pm 0.95 pCi/l	0	MCL=15	Natural sources
Radium 228	No	9/29/15	0.0938 \pm 0.339 pCi/l	NE	NE	Natural sources
Radium 226	No	9/29/15	0.00 \pm 0.325 pCi/l	NE	NE	Natural sources

Microbiological Parameters ²	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Total coliform bacteria	N	Various	None	NE	5% of samples positive	Naturally present in the environment

¹ 90th percentile

² Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2015.

TABLE 5: 2015 Water Quality Monitoring Report-Report Supplement-SHELTON PARK SYSTEM

DETECTED CONTAMINANTS						
Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Barium	No	4/1/15	139 ug/l	2,000	MCL = 2,000	Erosion of natural deposits, drilling and metal wastes
Chloride	No	4/1/15	78.8 mg/l	NE	250 mg/l	Naturally occurring in source water
Nitrate	No	4/1/15	0.7 mg/l	10	MCL = 10	Agricultural runoff; natural sources
Copper	No	8/18/15, 8/20/15	<0.01-0.03 mg/l, 0.027 mg/l ¹ , 0 of 6 above AL	AL=1.30	AL=1.30	Home plumbing corrosion, natural erosion
Lead	No	8/18/15, 8/20/15	<0.001-0.0021 mg/l, 0.0017 mg/l ¹ , 0 of 6 above AL	AL = 0.015	AL = 0.015	Household plumbing, corrosion, natural sources, wood preservatives
Chromium	No	4/1/15	<0.001 mg/l	0.1 mg/l	0.1 mg/l	Erosion of natural deposits
Fluoride	No	4/1/15	<0.1 mg/l	2.2 mg/l	202 mg/l	Erosion of natural deposits

Organic Compounds	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Trihalomethanes	No	8/20/15	<0.005 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	8/20/15	<0.005 mg/l	NE	MCL=0.06	Disinfection By-Product

Radiological Parameters	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Gross Alpha	No	4/1/15	2.23 pCi/l	0	MCL=15	Natural sources
Gross Beta	No	4/1/15	1.85 pCi/l	0	MCL=15	Natural sources
Radium 228	No	4/1/15	-0.34 pCi/l	NE	NE	Natural sources
Radium 226	No	4/1/15	0.1 pCi/l	NE	NE	Natural sources

Microbiological Parameters ²	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Total coliform bacteria	N	Various	None	NE	5% of samples positive	Naturally present in the environment

¹ 90th percentile

² Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2015.

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 a drinking water

MCLG= Maximum contaminant level goal: the level of contaminant in a 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 Residential Disinfectant Level: the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of 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

uS/cm= Microseimens per centimeter (a unit of conductivity measurement)

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/L= Picocuries per liter

LRAA= Location Running Annual Average

SU = Standard Units (ph measurement)

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

Ug/liter (ug/L) = micrograms per liter (parts per billion)

Variances and Exemption = State or EPA permission not to meet an MCL or treatment techniques under certain conditions.

< = less than

≥ = less than or equal to

TYPES OF CONTAMINANTS

**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 the 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

TABLE 3

COMPOUNDS TESTED FOR BUT NOT DETECTED		
2-Chlorotoluene	Bromochloromethane	Manganese
4-Chlorotoluene	Bromomethane	Mercury
2,4-D	Butachlor	Methomyl
1,2-Dichlorobenzene	n-Butylbenzene	Methoxychlor
1,3-Dichlorobenzene	sec-Butylbenzene	Meth t-butyl ether (MTBE)
1,4-Dichlorobenzene	t-Butylbenzene	Methylene Chloride
1,1-Dichloroethane	Cadmium	Metolachor
1,2-Dichloroethane	Carbaryl	Metribuzin
1,1-Dichloroethylene	Carbofuran	Nickel
cis-1,2-Dichloroethylene	Carbon Tetrachloride	N-nitroso-diethylamine (NDEA)
trans-1,2-Dichloroethylene	Chlordane	N-nitroso-dimethylamine (NDMA)
1,2-Dichloropropane	Chlorobenzene	N-nitroso-di-n-butylamine (NDBA)
1,3-Dichloropropane	Chloroethane	N-nitroso-di-n-propylamine (NDPA)
2,2-Dichloropropane	Chloromethane	N-nitroso-methylethylamine (NMEA)
1,1-Dichloropropene	Chromium	N-nitroso-pyrrolidine (NPYR)
cis-1,3-Dichloropropene	Cyanide	Oxamyl (Vydate)
trans-1,3-Dichloropropene	Dalapon	PCB 1016
3-Hydroxycarbofuran	Di(2-ethylhexyl)adipate	PCB 1221
2,3,7,8-TCDD (Dioxin)	Di(2-ethylhexyl)phthalate	PCB 1232
2,4,5-TP (Silvex)	Dibromochloropropane	PCB 1242
1,1,1,2-Tetrachloroethane	Dibromomethane	PCB 1248
1,1,1,2,2-Tetrachloroethane	Dicamba	PCB 1254
1,2,3-Trichlorobenzene	Dichlorodifluoromethane	PCB 1260
1,2,4-Trichlorobenzene	Dieldrin	Pentachlorophenol
1,1,1-Trichloroethane	Dinoseb	Pichloram
1,1,2-Trichloroethane	Diquat	Propachlor
1,2,3-Trichloropropane	Endothall	n-Propylbenzene
1,2,4-Trimethylbenzene	Endrin	Radium 226
1,3,5-Trimethylbenzene	Ethylbenzene	Selenium
Alachlor	Ethylene Dibromide (EDB)	Simazine
Aldicarb	Glyphosate	Styrene
Aldicarb sulfone	Gross Alpha Particles	Tetrachloroethylene
Aldicarb Sulfoxide	Gross Beta Particles	Thallium
Aldrin	Heptachlor	Toluene
Aluminum	Heptachlor Epoxide	Toxaphene
Antimony	Hexachlorobenzene	Trichlorofluoromethane
Arsenic	Hexachlorobutadiene	Vinyl Chloride
Atrazine	Hexachlorocyclopentadiene	Xylenes
Benzene	Iron	
Benzo(a)pyrene	Isopropylbenzene	
Beryllium	p-Isopropyltoluene	
Bromobenzene	Lindane	

WATER CONSERVATION TIPS

The ECWA encourages water conservation. Although Lake Erie and the Niagara River are a vast source of high quality fresh water, it must not be wasted. A few simple steps will preserve this precious resource for future generations:

- Use low flow shower heads and faucets.
- Repair all leaks in your plumbing system.
- Water your lawn sparingly in early morning or late evening.
- Do only full loads of laundry and dishes.
- Wash your car with a bucket and hose with a nozzle.
- Don't cut the lawn too short; longer grass saves water.

CRYPTOSPORIDIUM & GIARDIA ANALYSIS

Cryptosporidium and Giardia are microscopic protozoa that are widely present in the environment and to some degree in 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. Although filtration removes Cryptosporidium, even the most commonly used filtration methods cannot guarantee 100 percent removal. Giardia is removed by a combination of filtration and disinfection.

In 2015, the ECWA analyzed a total of 18 source water samples for Giardia and Cryptosporidium as part of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. No Cryptosporidium or Giardia were detected in any samples.

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 means others than drinking water. For additional information on Cryptosporidiosis or Giardiasis, please contact the Erie County Health Department at (716) 961-6800.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline at (800) 426-4791.

2015

Water Quality Report



Erie County Water Authority
Administrative Offices
295 Main Street, Room 350
Buffalo, New York 14203

PUBLIC WATER SYSTEMS IDENTIFICATION NUMBERS ECWA PWS# NY 1400443

PWS#	NAME	PWS#	NAME
NY1400399	ECWA AMHERST	NY1400515	ECWA HAMBURG (V)
NY1450033	ECWA AURORA	NY1400421	ECWA LANCASTER
NY1421897	ECWA BOSTON	NY1430016	ECWA MARILLA
NY1400443	ECWA DIRECT	NY1422651	ECWA NEWSTEAD
NY1400435	ECWA EDEN	NY1421762	ECWA ORCHARD PARK
NY1400447	ECWA EVANS	NY1404543	ECWA WEST SENECA
NY1400488	ECWA HAMBURG (T)		

**If you would like additional copies of this report,
please contact Customer Service at
(716) 849-8444 or e-mail questionscomments@ecwa.org.**

FREQUENTLY ASKED QUESTIONS

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. In Erie County, the Erie County Health Department is the agency that administers and enforces these standards. Their phone number is (716) 961-6800.

Where does my water come from?

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 New York State Department of Health (NYSDOH) and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The NYSDOH and the Food and Drug Administration (FDA) set regulations that limit contaminants in bottled water, which must provide the same protection for public health.

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 some communities in Chautauqua and Cattaraugus Counties. The Van de Water Treatment Plant in Tonawanda draws water from the Niagara River and services municipalities in northern Erie County as well as some in Genesee and Wyoming Counties. These two plants serve more than 500,000 consumers in Western New York.

How is my water treated?

Both ECWA treatment facilities use the conventional filtration method. First, 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, poly-aluminum 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 may be 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 3,574 miles of water mains to homes and businesses. The ECWA closely monitors its 38 pump stations and 38 water storage tanks to assist in the distribution process. On average, the ECWA delivered 70.5 million gallons a day in 2015 to serve more than 500,000 consumers in Western New York.

Are there contaminants in our water? Do I need to take special precautions?

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 or the Erie County Health Department at (716) 961-6800.

Although our drinking water met or exceeded all state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, 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 provider about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia* and other microbial pathogens are available from the Safe Drinking Water Hotline at (800) 426-4791.

How will I know if my water is not safe to drink?

In the unlikely event that water becomes unsafe to drink, the EPA mandates the ECWA notify its customers. Water is not safe to drink when testing reveals that contaminants in the water exceed federal or state limits for contaminant levels. If the water is not safe to drink, ECWA will alert the public through proper media channels and electronic communications that a "boil water order" has been issued, along with advice regarding measures that should be taken to protect your health.

Does ECWA add fluoride to drinking water?

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. During mid 2015 the New York State Health Department (NYSDOH) recommended a reduction in the target fluoride level to 0.7 mg/l (parts per million). ECWA's target fluoride level has now been reduced from 1.0 mg/L to 0.7 mg/L. To ensure that the fluoride supplement in your water provides optimal dental protection, the NYSDOH requires that the ECWA monitor fluoride levels on a daily basis. In 2015, monitoring showed fluoride levels in your water were in the optimal range 99.8% of the time. None of the monitoring results during fluoride addition showed fluoride at levels that approached the 2.2 mg/l maximum contaminant level (MCL).

Why is my water sometimes cloudy or "milky"?

In the winter months the water becomes colder than your home's air temperature. When you pour cold water from the tap the water begins to warm to room temperature immediately. This rapid change in temperature causes the release of millions of tiny air bubbles which temporarily give the water a cloudy or "milky" appearance. After a few minutes the water reaches room temperature, the bubbles release their air and a cloudy glass of water will clear starting from the bottom to the top. This is normal. It does not affect the water's quality.

How can I participate in decisions that affect drinking water quality?

Any member of the public may participate in decisions affecting their water quality. The ECWA's Board of Commissioners ultimately makes those decisions on behalf of our customers. Board meetings take place in the board meeting room, Erie County Water Authority, 295 Main Street, Room 350, Buffalo, New York 14203. Call (716) 849-8444 or visit www.ecwa.org for updated board meeting information.

In 2015, your tap water met all federal and state drinking water standards for quality and safety.

ABOUT 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 water of the highest quality to its customers at an affordable rate.

As an independent public-benefit corporation, ECWA is not an agency of New York State and is totally independent of Erie County government. ECWA operates as a financially self-sustaining public utility and pays all operating expenses from revenues generated by the sale of water to its 168,477 customers.

In 2015, the ECWA produced approximately 25.7 billion gallons of high-quality water for residential, commercial, and industrial use in 35 municipalities throughout Western New York. Some of this was unmetered water (35.8%) used for flushing water mains, fighting fires, training firefighters, filter backwashing, plant processes, equipment and hydrant testing and lost to leaks. Approximately 16.5 billion gallons were sold to our customers.


The ECWA owns and operates two water treatment plants, a nationally recognized Department of Water Quality, 38 pump stations, 38 water storage tanks and maintains 3,574 miles of water mains, 18,911 fire hydrants, 35,608 valves and numerous appurtenances.

The cost per thousand gallons of water for residential customers was \$3.05 in 2015. The average customer who used 18,750 gallons of water per quarter paid a total of \$290.78 in 2015, or about 80 cents per day, to be provided with a plentiful supply of safe, high quality drinking water.

IMPROVEMENTS TO YOUR WATER SYSTEM

In 2015 the Authority invested more than \$16.75 million in system-wide infrastructure upgrades, including:

- \$5.8 million on water mains, hydrants, and service connection replacements in West Seneca, Williamsville and Cheektowaga.
- \$2.0 million on system-wide water meter replacements
- Continued ongoing inspections of water storage tanks.
- Refurbishing and painting of the Chestnut Ridge water tank.
- \$3.5 million on upgrades to the residual pump station and wastewater system at the Sturgeon Point Treatment Plant.
- \$1.9 million on high voltage electrical system upgrades at the Van de Water Treatment Plant and Ball Pump Station.

 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.

Dear Customer,

Thank you for allowing the Erie County Water Authority (ECWA) to supply you with high quality drinking water. We are committed to not only providing you with an excellent product and reliable service, but also affording you with detailed information about the drinking water you consume and use every day.

It is with great pleasure that we provide you with the ECWA's 2015 Annual Water Quality Report (AWQR). Included are details about where your water comes from, how your water is treated and tested, and how it compares to standards set by regulatory agencies. This report fulfills the United States Environmental Protection Agency's (EPA) requirement to prepare and deliver a Consumer Confidence Report (CCR) and the New York State Department of Health's (DOH) requirement to prepare and deliver an AWQR.

Each year, ECWA delivers on our promise to supply customers with safe, high quality drinking water and professional service they deserve. To ensure that we meet our commitments, we maintain a rigorous quality control program through constant monitoring and testing and continue to invest substantial financial resources to improve our two treatment facilities, distribution system infrastructure, and nationally recognized department of water quality.

As we enter a new year, the ECWA is positioned to continue to achieve our mission of providing all of its customers a plentiful supply of safe, high quality and affordable drinking water through a reliable infrastructure to the more than 500,000 consumers that rely on us 24 hours a day, 365 days a year.

We appreciate you taking the time to learn about your water supply. We believe that well-informed customers are our best allies in supporting improvements necessary to maintain high quality drinking water. You can learn more about the quality of your water and ECWA's mission at www.ecwa.org.

If you have comments or questions about your 2015 Annual Water Quality Report, please submit them by e-mail to questionscomments@ecwa.org.

Sincerely,

BOARD OF COMMISSIONERS

Earl L. Jann Jr., Chairman

Jerome D. Schad, Vice-Chairman

Robert Anderson, Treasurer

ECWA'S TEST RESULTS FOR 2015

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. Some tests are not required to be performed on an annual basis. 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 upon request from the ECWA Department of Water Quality by calling (716) 685-8580 or at www.ecwa.org.

2015 Water Quality Monitoring Report - Annual Water Quality Report Supplement

DETECTED CONTAMINANTS

Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date (or date of highest detection)	MCL	MCLG	Level Detected	Sources in Drinking Water
Barium	No	9/15	2 mg/liter	2 mg/liter	0.020 - 0.020 mg/liter; Average = 0.020	Erosion of natural deposits; drilling and metal wastes
Chloride	No	5/15	250 mg/liter	NE	17 - 29 mg/liter; Average = 21	Naturally occurring in source water
Chlorine	No	6/15	MRDL = 4.0 mg/liter	NA	<0.2 - 2.0 mg/liter; Average = 0.82	Added for disinfection
Copper	No	7/13	1.3 mg/liter (AL)	1.3 mg/liter (AL)	0.003 - 0.10 mg/liter; 90th percentile 0.04mg/liter, 0 of 63 above AL	Home plumbing corrosion natural erosion
Fluoride ⁴	No	4/15	2.2 mg/liter	NA	<0.2 - 1.19 mg/liter; Average = 0.85	Added to water to prevent tooth decay
Lead ²	No	7/13	15 ug/liter (AL)	0 ug/liter (AL)	ND - 82 ug/liter; 90th percentile 2 ug/liter, 1 of 63 above AL	Home plumbing corrosion; natural erosion
Nitrate	No	6/15	10 mg/liter	10 mg/liter	0.22 - 0.23 mg/liter; Average = 0.22	Runoff from fertilizer use
pH	No	10/15	NR	NE	7.32 - 8.30; Average = 7.94 SU	Naturally occurring; adjusted for corrosion control
Distribution Turbidity ³	No	10/15	TT - 5 NTU	NE	0.03 - 0.65; Average = 0.20 NTU	Soil runoff
Entry Point Turbidity ³	No	10/15	TT - 0.3 NTU	NE	0.83 NTU highest detected; 99.5% was lowest monthly % < 0.30 NTU	Soil runoff

⁴ 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, the addition of fluoride is a very effective means of preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target value of 0.7 mg/l. This level was reduced from 1.0 mg/l to 0.7 mg/l in June 2015. During 2015, monitoring showed fluoride levels in your water were within 0.2 mg/l of the target level 99.8% of the time. 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 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 63 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, 63 samples were collected in the water system and the 90th percentile value for lead was the seventh highest value (2 ug/L).

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. State regulations require that the delivered water turbidity must always be below 1 NTU in the combined filter effluent. The regulations also require that 95% of the turbidity samples collected from that point have measurements below 0.3 NTU. The maximum turbidity allowed in the distribution system is 5 NTU.

Organic Compounds	Violation Yes/No	Sample Date (or date of highest detection)	MCL (ug/liter)	MCLG (ug/liter)	Level Detected (ug/liter)	Sources in Drinking Water
Total Trihalomethanes ⁴	No	8/15	LRAA = 80	NE	12 - 85 ug/liter; LRAA = 53	By-product of water disinfection (chlorination)
Total Haloacetic Acids ⁵	No	8/15	LRAA = 60	NE	7 - 56 ug/liter; LRAA = 51	By-product of water disinfection (chlorination)

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 is the highest single location's running annual average (53 ug/L).

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 system's highest single location's running annual average (51 ug/L).

Radiological Parameters	Violation Yes/No	Sample Date (or date of highest detection)	MCL (pCi/liter)	MCLG (pCi/liter)	Level Detected (pCi/liter)	Sources in Drinking Water
Radium 228	No	4/13	NE	NE	0.99 - 1.10 pCi/liter; Average = 1.05	Erosion of Natural Deposits
Combined Radium 226/228	No	4/13	5.0	0	1.15 - 1.25 pCi/liter; Average = 1.2	Erosion of Natural Deposits

Microbiological Parameters	Violation Yes/No	Sample Date (or date of highest detection)	MCL	MCLG	Level Detected	Sources in Drinking Water
Total Coliform Bacteria	No ⁶	6/15 and 10/15 ⁷	5% of samples positive	0	0.44% = highest percentage of monthly positives	Naturally present in the environment

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

⁷ During June and October 2015, one sample in the system tested positive for total coliform, but negative for E.coli. Follow-up sampling and testing were performed as required by regulation, and the results were negative for both total coliform and E.coli.

New York State Department of Health Source Water Assessment

Giardia and Cryptosporidium	Violation Yes/No	Sample Date (or date of highest detection)	Number of Samples Testing Positive		Number of Samples Tested
			Giardia	Cryptosporidium	
Source Water	No	ND	0	0	18

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 2015.

Giardia is a microbial pathogen present in varying concentrations in many surface waters. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection alone. No Giardia was detected in any samples taken in 2015.

DETECTED UNREGULATED CONTAMINANTS

Parameter	MCL	MCLG	Average Level Detected (ug/liter)	Range (ug/liter)
Chlorate	NR	NE	43	ND - 180
Chromium ⁶⁺	NR	NE	0.13	ND - 0.13
Molybdenum	NR	NE	1.1	1.1 - 1.2
Strontium	NR	NE	159	150 - 190

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., Director of Environmental Health, Erie County Health Department at (716) 961-6800.

Results presented here are from 2015 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 at (716) 685-8570 or on the Internet at www.ecwa.org.

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.

LRAA = Locational Running Annual Average

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 feasible.

MCLG = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety

MFL = Million Fibers per 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.

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

NE = Not Established

NR = Not Regulated

NTU = Nephelometric Turbidity Units

pCi/liter = Picouries per liter

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)

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

< = Denotes Less Than

≤ = Denotes Less Than or Equal To

TYPES OF CONTAMINANTS

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 domestic waste water 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.

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.

COMPOUNDS TESTED FOR BUT NOT DETECTED

4-Androstene-3,17-dione	1,3,5-Trimethylbenzene	Di(2-ethylhexyl) adipate	Methylene Chloride
2-Chlorotoluene	Alachlor	Di(2-ethylhexyl) phthalate	Metolachlor
4-Chlorotoluene	Aldicarb	Dibromochloropropane	Metribuzin
17-beta-Estradiol	Aldicarb Sulfone	Dibromomethane	Oxamyl (Vydate)
17-alpha-Ethinyl estradiol	Aldicarb Sulfoxide	Dicamba	PCB 1016
2,4-D	Aldrin	PCB 1221	Dichlorodifluoromethane
1,3-Butadiene	Aluminum	Dieldrin	PCB 1232
1,2-Dichlorobenzene	Antimony	Dinoseb	PCB 1242
1,3-Dichlorobenzene	Arsenic	Diquat	PCB 1248
1,4-Dichlorobenzene	Atrazine	Endothal	PCB 1254
1,1-Dichloroethane	Benzene	Endrin	PCB 1260
1,2-Dichloroethane	Benzof(a)pyrene	Equilin	Pentachlorophenol
1,1-Dichloroethylene	Beryllium	Estril	Perfluorobutanesulfonic acid
cis-1,2-Dichloroethylene	Bromobenzene	Estrone	Perfluoroheptanoic acid
trans-1,2-Dichloroethylene	Bromochloromethane	Ethylbenzene	Perfluorooxanesulfonic acid
1,2-Dichloropropane	Bromomethane	Ethylene Dibromide (EDB)	Perfluorooxanoic acid
1,3-Dichloropropane	Butachlor	Glyphosate	Perfluorooctane sulfonate
2,2-Dichloropropane	n-Butylbenzene	Gross Alpha Particles	Perfluorooctanoic acid
1,1-Dichloropropene	sec-Butylbenzene	Gross Beta Particles	Pichloram
cis-1,3-Dichloropropene	t-Butylbenzene	Heptachlor	Propachlor
trans-1,3-Dichloropropene	Cadmium	Heptachlor Epoxide	n-Propylbenzene
1,4-Dioxane	Carbaryl	Hexachlorobenzene	Radium 226
3-Hydroxycarbofuran	Carbofuran	Hexachlorobutadiene	Selenium
2,3,7,8-TCDD (Dioxin)	Carbon Tetrachloride	Hexachlorocyclopentadiene	Simazine
2,4,5-TP (Silvex)	Chlordane	Iron	Styrene
1,1,1,2-Tetrachloroethane	Chlorobenzene	Isopropylbenzene	Tetrachloroethylene
1,1,2,2-Tetrachloroethane	Chlorodifluoromethane	p-Isopropyltoluene	Thallium
1,2,3-Trichlorobenzene	Chloroethane	Lindane	Toluene
1,2,4-Trichlorobenzene	Chloromethane	Manganese	Toxaphene
1,1,1-Trichloroethane	Chromium	Mercury	Trichloroethylene
1,1,2-Trichloroethane	Cobalt	Methomyl	Trichlorofluoromethane
1,2,3-Trichloropropane	Cyanide	Methoxychlor	Vinyl Chloride
1,2,4-Trimethylbenzene	Dalapon	Methyl t-butyl ether (MTBE)	Xylenes

For a large-print copy of ECWA's 2015 Water Quality Report, please visit www.ecwa.org or email your request to questionscomments@ecwa.org

As you can see by the tables, 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.

TABLE 3

COMPOUNDS TESTED FOR BUT NOT DETECTED		
2-Chlorotoluene	Bromochloromethane	Manganese
4-Chlorotoluene	Bromomethane	Mercury
2,4-D	Butachlor	Methomyl
1,2-Dichlorobenzene	n-Butylbenzene	Methoxychlor
1,3-Dichlorobenzene	sec-Butylbenzene	Meth t-butyl ether (MTBE)
1,4-Dichlorobenzene	t-Butylbenzene	Methylene Chloride
1,1-Dichloroethane	Cadmium	Metolachor
1,2-Dichloroethane	Carbaryl	Metribuzin
1,1-Dichloroethylene	Carbofuran	Nickel
cis-1,2-Dichloroethylene	Carbon Tetrachloride	N-nitroso-diethylamine (NDEA)
trans-1,2-Dichloroethylene	Chlordane	N-nitroso-dimethylamine (NDMA)
1,2-Dichloropropane	Chlorobenzene	N-nitroso-di-n-butylamine (NDBA)
1,3-Dichloropropane	Chloroethane	N-nitroso-di-n-propylamine (NDPA)
2,2-Dichloropropane	Chloromethane	N-nitroso-methylethylamine (NMEA)
1,1-Dichloropropene	Chromium	N-nitroso-pyrrolidine (NPYR)
cis-1,3-Dichloropropene	Cyanide	Oxamyl (Vydate)
trans-1,3-Dichloropropene	Dalapon	PCB 1016
3-Hydroxycarbofuran	Di(2-ethylhexyl)adipate	PCB 1221
2,3,7,8-TCDD (Dioxin)	Di(2-ethylhexyl)phthalate	PCB 1232
2,4,5-TP (Silvex)	Dibromochloropropane	PCB 1242
1,1,1,2-Tetrachloroethane	Dibromomethane	PCB 1248
1,1,1,2,2-Tetrachloroethane	Dicamba	PCB 1254
1,2,3-Trichlorobenzene	Dichlorodifluoromethane	PCB 1260
1,2,4-Trichlorobenzene	Dieldrin	Pentachlorophenol
1,1,1-Trichloroethane	Dinoseb	Pichloram
1,1,2-Trichloroethane	Diquat	Propachlor
1,2,3-Trichloropropane	Endothall	n-Propylbenzene
1,2,4-Trimethylbenzene	Endrin	Radium 226
1,3,5-Trimethylbenzene	Ethylbenzene	Selenium
Alachlor	Ethylene Dibromide (EDB)	Simazine
Aldicarb	Glyphosate	Styrene
Aldicarb sulfone	Gross Alpha Particles	Tetrachloroethylene
Aldicarb Sulfoxide	Gross Beta Particles	Thallium
Aldrin	Heptachlor	Toluene
Aluminum	Heptachlor Epoxide	Toxaphene
Antimony	Hexachlorobenzene	Trichlorofluoromethane
Arsenic	Hexachlorobutadiene	Vinyl Chloride
Atrazine	Hexachlorocyclopentadiene	Xylenes
Benzene	Iron	
Benzo(a)pyrene	Isopropylbenzene	
Beryllium	p-Isopropyltoluene	
Bromobenzene	Lindane	

WATER CONSERVATION TIPS

The ECWA encourages water conservation. Although Lake Erie and the Niagara River are a vast source of high quality fresh water, it must not be wasted. A few simple steps will preserve this precious resource for future generations:

- Use low flow shower heads and faucets.
- Repair all leaks in your plumbing system.
- Water your lawn sparingly in early morning or late evening.
- Do only full loads of laundry and dishes.
- Wash your car with a bucket and hose with a nozzle.
- Don't cut the lawn too short; longer grass saves water.

CRYPTOSPORIDIUM & GIARDIA ANALYSIS

Cryptosporidium and Giardia are microscopic protozoa that are widely present in the environment and to some degree in 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. Although filtration removes Cryptosporidium, even the most commonly used filtration methods cannot guarantee 100 percent removal. Giardia is removed by a combination of filtration and disinfection.

In 2015, the ECWA analyzed a total of 18 source water samples for Giardia and Cryptosporidium as part of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. No Cryptosporidium or Giardia were detected in any samples.

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 means others than drinking water. For additional information on Cryptosporidiosis or Giardiasis, please contact the Erie County Health Department at (716) 961-6800.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline at (800) 426-4791.

2015

Water Quality Report



Erie County Water Authority
Administrative Offices
295 Main Street, Room 350
Buffalo, New York 14203

PUBLIC WATER SYSTEMS IDENTIFICATION NUMBERS ECWA PWS# NY 1400443

PWS#	NAME	PWS#	NAME
NY1400399	ECWA AMHERST	NY1400515	ECWA HAMBURG (V)
NY1450033	ECWA AURORA	NY1400421	ECWA LANCASTER
NY1421897	ECWA BOSTON	NY1430016	ECWA MARILLA
NY1400443	ECWA DIRECT	NY1422651	ECWA NEWSTEAD
NY1400435	ECWA EDEN	NY1421762	ECWA ORCHARD PARK
NY1400447	ECWA EVANS	NY1404543	ECWA WEST SENECA
NY1400488	ECWA HAMBURG (T)		

**If you would like additional copies of this report,
please contact Customer Service at
(716) 849-8444 or e-mail questionscomments@ecwa.org.**

FREQUENTLY ASKED QUESTIONS

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. In Erie County, the Erie County Health Department is the agency that administers and enforces these standards. Their phone number is (716) 961-6800.

Where does my water come from?

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 New York State Department of Health (NYSDOH) and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The NYSDOH and the Food and Drug Administration (FDA) set regulations that limit contaminants in bottled water, which must provide the same protection for public health.

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 some communities in Chautauqua and Cattaraugus Counties. The Van de Water Treatment Plant in Tonawanda draws water from the Niagara River and services municipalities in northern Erie County as well as some in Genesee and Wyoming Counties. These two plants serve more than 500,000 consumers in Western New York.

How is my water treated?

Both ECWA treatment facilities use the conventional filtration method. First, 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, poly-aluminum 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 may be 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 3,574 miles of water mains to homes and businesses. The ECWA closely monitors its 38 pump stations and 38 water storage tanks to assist in the distribution process. On average, the ECWA delivered 70.5 million gallons a day in 2015 to serve more than 500,000 consumers in Western New York.

Are there contaminants in our water? Do I need to take special precautions?

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 or the Erie County Health Department at (716) 961-6800.

Although our drinking water met or exceeded all state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, 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 provider about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia* and other microbial pathogens are available from the Safe Drinking Water Hotline at (800) 426-4791.

How will I know if my water is not safe to drink?

In the unlikely event that water becomes unsafe to drink, the EPA mandates the ECWA notify its customers. Water is not safe to drink when testing reveals that contaminants in the water exceed federal or state limits for contaminant levels. If the water is not safe to drink, ECWA will alert the public through proper media channels and electronic communications that a "boil water order" has been issued, along with advice regarding measures that should be taken to protect your health.

Does ECWA add fluoride to drinking water?

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. During mid 2015 the New York State Health Department (NYSDOH) recommended a reduction in the target fluoride level to 0.7 mg/l (parts per million). ECWA's target fluoride level has now been reduced from 1.0 mg/L to 0.7 mg/L. To ensure that the fluoride supplement in your water provides optimal dental protection, the NYSDOH requires that the ECWA monitor fluoride levels on a daily basis. In 2015, monitoring showed fluoride levels in your water were in the optimal range 99.8% of the time. None of the monitoring results during fluoride addition showed fluoride at levels that approached the 2.2 mg/l maximum contaminant level (MCL).

Why is my water sometimes cloudy or "milky"?

In the winter months the water becomes colder than your home's air temperature. When you pour cold water from the tap the water begins to warm to room temperature immediately. This rapid change in temperature causes the release of millions of tiny air bubbles which temporarily give the water a cloudy or "milky" appearance. After a few minutes the water reaches room temperature, the bubbles release their air and a cloudy glass of water will clear starting from the bottom to the top. This is normal. It does not affect the water's quality.

How can I participate in decisions that affect drinking water quality?

Any member of the public may participate in decisions affecting their water quality. The ECWA's Board of Commissioners ultimately makes those decisions on behalf of our customers. Board meetings take place in the board meeting room, Erie County Water Authority, 295 Main Street, Room 350, Buffalo, New York 14203. Call (716) 849-8444 or visit www.ecwa.org for updated board meeting information.

In 2015, your tap water met all federal and state drinking water standards for quality and safety.

ABOUT 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 water of the highest quality to its customers at an affordable rate.

As an independent public-benefit corporation, ECWA is not an agency of New York State and is totally independent of Erie County government. ECWA operates as a financially self-sustaining public utility and pays all operating expenses from revenues generated by the sale of water to its 168,477 customers.

In 2015, the ECWA produced approximately 25.7 billion gallons of high-quality water for residential, commercial, and industrial use in 35 municipalities throughout Western New York. Some of this was unmetered water (35.8%) used for flushing water mains, fighting fires, training firefighters, filter backwashing, plant processes, equipment and hydrant testing and lost to leaks. Approximately 16.5 billion gallons were sold to our customers.


The ECWA owns and operates two water treatment plants, a nationally recognized Department of Water Quality, 38 pump stations, 38 water storage tanks and maintains 3,574 miles of water mains, 18,911 fire hydrants, 35,608 valves and numerous appurtenances.

The cost per thousand gallons of water for residential customers was \$3.05 in 2015. The average customer who used 18,750 gallons of water per quarter paid a total of \$290.78 in 2015, or about 80 cents per day, to be provided with a plentiful supply of safe, high quality drinking water.

IMPROVEMENTS TO YOUR WATER SYSTEM

In 2015 the Authority invested more than \$16.75 million in system-wide infrastructure upgrades, including:

- \$5.8 million on water mains, hydrants, and service connection replacements in West Seneca, Williamsville and Cheektowaga.
- \$2.0 million on system-wide water meter replacements
- Continued ongoing inspections of water storage tanks.
- Refurbishing and painting of the Chestnut Ridge water tank.
- \$3.5 million on upgrades to the residual pump station and wastewater system at the Sturgeon Point Treatment Plant.
- \$1.9 million on high voltage electrical system upgrades at the Van de Water Treatment Plant and Ball Pump Station.

 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.

Dear Customer,

Thank you for allowing the Erie County Water Authority (ECWA) to supply you with high quality drinking water. We are committed to not only providing you with an excellent product and reliable service, but also affording you with detailed information about the drinking water you consume and use every day.

It is with great pleasure that we provide you with the ECWA's 2015 Annual Water Quality Report (AWQR). Included are details about where your water comes from, how your water is treated and tested, and how it compares to standards set by regulatory agencies. This report fulfills the United States Environmental Protection Agency's (EPA) requirement to prepare and deliver a Consumer Confidence Report (CCR) and the New York State Department of Health's (DOH) requirement to prepare and deliver an AWQR.

Each year, ECWA delivers on our promise to supply customers with safe, high quality drinking water and professional service they deserve. To ensure that we meet our commitments, we maintain a rigorous quality control program through constant monitoring and testing and continue to invest substantial financial resources to improve our two treatment facilities, distribution system infrastructure, and nationally recognized department of water quality.

As we enter a new year, the ECWA is positioned to continue to achieve our mission of providing all of its customers a plentiful supply of safe, high quality and affordable drinking water through a reliable infrastructure to the more than 500,000 consumers that rely on us 24 hours a day, 365 days a year.

We appreciate you taking the time to learn about your water supply. We believe that well-informed customers are our best allies in supporting improvements necessary to maintain high quality drinking water. You can learn more about the quality of your water and ECWA's mission at www.ecwa.org.

If you have comments or questions about your 2015 Annual Water Quality Report, please submit them by e-mail to questionscomments@ecwa.org.

Sincerely,

BOARD OF COMMISSIONERS

Earl L. Jann Jr., Chairman

Jerome D. Schad, Vice-Chairman

Robert Anderson, Treasurer

ECWA'S TEST RESULTS FOR 2015

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. Some tests are not required to be performed on an annual basis. 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 upon request from the ECWA Department of Water Quality by calling (716) 685-8580 or at www.ecwa.org.

2015 Water Quality Monitoring Report - Annual Water Quality Report Supplement

DETECTED CONTAMINANTS

Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date (or date of highest detection)	MCL	MCLG	Level Detected	Sources in Drinking Water
Barium	No	9/15	2 mg/liter	2 mg/liter	0.020 - 0.020 mg/liter; Average = 0.020	Erosion of natural deposits; drilling and metal wastes
Chloride	No	5/15	250 mg/liter	NE	17 - 29 mg/liter; Average = 21	Naturally occurring in source water
Chlorine	No	6/15	MRDL = 4.0 mg/liter	NA	<0.2 - 2.0 mg/liter; Average = 0.82	Added for disinfection
Copper	No	7/13	1.3 mg/liter (AL)	1.3 mg/liter (AL)	0.003 - 0.10 mg/liter; 90th percentile 0.04mg/liter, 0 of 63 above AL	Home plumbing corrosion natural erosion
Fluoride ⁴	No	4/15	2.2 mg/liter	NA	<0.2 - 1.19 mg/liter; Average = 0.85	Added to water to prevent tooth decay
Lead ²	No	7/13	15 ug/liter (AL)	0 ug/liter (AL)	ND - 82 ug/liter; 90th percentile 2 ug/liter, 1 of 63 above AL	Home plumbing corrosion; natural erosion
Nitrate	No	6/15	10 mg/liter	10 mg/liter	0.22 - 0.23 mg/liter; Average = 0.22	Runoff from fertilizer use
pH	No	10/15	NR	NE	7.32 - 8.30; Average = 7.94 SU	Naturally occurring; adjusted for corrosion control
Distribution Turbidity ³	No	10/15	TT - 5 NTU	NE	0.03 - 0.65; Average = 0.20 NTU	Soil runoff
Entry Point Turbidity ³	No	10/15	TT - 0.3 NTU	NE	0.83 NTU highest detected; 99.5% was lowest monthly % < 0.30 NTU	Soil runoff

⁴ 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, the addition of fluoride is a very effective means of preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target value of 0.7 mg/l. This level was reduced from 1.0 mg/l to 0.7 mg/l in June 2015. During 2015, monitoring showed fluoride levels in your water were within 0.2 mg/l of the target level 99.8% of the time. 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 63 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, 63 samples were collected in the water system and the 90th percentile value for lead was the seventh highest value (2 ug/L).

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. State regulations require that the delivered water turbidity must always be below 1 NTU in the combined filter effluent. The regulations also require that 95% of the turbidity samples collected from that point have measurements below 0.3 NTU. The maximum turbidity allowed in the distribution system is 5 NTU.

Organic Compounds	Violation Yes/No	Sample Date (or date of highest detection)	MCL (ug/liter)	MCLG (ug/liter)	Level Detected (ug/liter)	Sources in Drinking Water
Total Trihalomethanes ⁴	No	8/15	LRAA = 80	NE	12 - 85 ug/liter; LRAA = 53	By-product of water disinfection (chlorination)
Total Haloacetic Acids ⁵	No	8/15	LRAA = 60	NE	7 - 56 ug/liter; LRAA = 51	By-product of water disinfection (chlorination)

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 is the highest single location's running annual average (53 ug/L).

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 system's highest single location's running annual average (51 ug/L).

Radiological Parameters	Violation Yes/No	Sample Date (or date of highest detection)	MCL (pCi/liter)	MCLG (pCi/liter)	Level Detected (pCi/liter)	Sources in Drinking Water
Radium 228	No	4/13	NE	NE	0.99 - 1.10 pCi/liter; Average = 1.05	Erosion of Natural Deposits
Combined Radium 226/228	No	4/13	5.0	0	1.15 - 1.25 pCi/liter; Average = 1.2	Erosion of Natural Deposits

Microbiological Parameters	Violation Yes/No	Sample Date (or date of highest detection)	MCL	MCLG	Level Detected	Sources in Drinking Water
Total Coliform Bacteria	No ⁶	6/15 and 10/15 ⁷	5% of samples positive	0	0.44% = highest percentage of monthly positives	Naturally present in the environment

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

⁷ During June and October 2015, one sample in the system tested positive for total coliform, but negative for E.coli. Follow-up sampling and testing were performed as required by regulation, and the results were negative for both total coliform and E.coli.

New York State Department of Health Source Water Assessment

Giardia and Cryptosporidium	Violation Yes/No	Sample Date (or date of highest detection)	Number of Samples Testing Positive		Number of Samples Tested
			Giardia	Cryptosporidium	
Source Water	No	ND	0	0	18

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 2015.

Giardia is a microbial pathogen present in varying concentrations in many surface waters. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection alone. No Giardia was detected in any samples taken in 2015.

DETECTED UNREGULATED CONTAMINANTS

Parameter	MCL	MCLG	Average Level Detected (ug/liter)	Range (ug/liter)
Chlorate	NR	NE	43	ND - 180
Chromium ⁶⁺	NR	NE	0.13	ND - 0.13
Molybdenum	NR	NE	1.1	1.1 - 1.2
Strontium	NR	NE	159	150 - 190

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., Director of Environmental Health, Erie County Health Department at (716) 961-6800.

Results presented here are from 2015 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 at (716) 685-8570 or on the Internet at www.ecwa.org.

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.

LRAA = Locational Running Annual Average

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 feasible.

MCLG = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety

MFL = Million Fibers per 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.

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

NE = Not Established

NR = Not Regulated

NTU = Nephelometric Turbidity Units

pCi/liter = Picouries per liter

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)

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

< = Denotes Less Than

≤ = Denotes Less Than or Equal To

TYPES OF CONTAMINANTS

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 domestic waste water 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.

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.

COMPOUNDS TESTED FOR BUT NOT DETECTED

4-Androstene-3,17-dione	1,3,5-Trimethylbenzene	Di(2-ethylhexyl) adipate	Methylene Chloride
2-Chlorotoluene	Alachlor	Di(2-ethylhexyl) phthalate	Metolachlor
4-Chlorotoluene	Aldicarb	Dibromochloropropane	Metribuzin
17-beta-Estradiol	Aldicarb Sulfone	Dibromomethane	Oxamyl (Vydate)
17-alpha-Ethynyl estradiol	Aldicarb Sulfoxide	Dicamba	PCB 1016
2,4-D	Aldrin	PCB 1221	PCB 1211
1,3-Butadiene	Aluminum	Dieldrin	PCB 1232
1,2-Dichlorobenzene	Antimony	Dinoseb	PCB 1242
1,3-Dichlorobenzene	Arsenic	Diquat	PCB 1248
1,4-Dichlorobenzene	Atrazine	Endothal	PCB 1254
1,1-Dichloroethane	Benzene	Endrin	PCB 1260
1,2-Dichloroethane	Benzof(a)pyrene	Equilin	Pentachlorophenol
1,1-Dichloroethylene	Beryllium	Estril	Perfluorobutanesulfonic acid
cis-1,2-Dichloroethylene	Bromobenzene	Estrone	Perfluoroheptanoic acid
trans-1,2-Dichloroethylene	Bromochloromethane	Ethylbenzene	Perfluorooxanesulfonic acid
1,2-Dichloropropane	Bromomethane	Ethylene Dibromide (EDB)	Perfluorooxanoic acid
1,3-Dichloropropane	Butachlor	Glyphosate	Perfluorooctane sulfonate
2,2-Dichloropropane	n-Butylbenzene	Gross Alpha Particles	Perfluorooctanoic acid
1,1-Dichloropropene	sec-Butylbenzene	Gross Beta Particles	Pichloram
cis-1,3-Dichloropropene	t-Butylbenzene	Heptachlor	Propachlor
trans-1,3-Dichloropropene	Cadmium	trans-1,3-Dichloropropene	n-Propylbenzene
1,4-Dioxane	Carbaryl	1,4-Dioxane	Radium 226
3-Hydroxycarbofuran	Carbofuran	3-Hydroxycarbofuran	Hexachlorobenzene
2,3,7,8-TCDD (Dioxin)	Carbon Tetrachloride	2,3,7,8-TCDD (Dioxin)	Hexachlorobutadiene
2,4,5-TP (Silvex)	Chlordane	2,4,5-TP (Silvex)	Hexachlorocyclopentadiene
1,1,1,2-Tetrachloroethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Iron
1,1,2,2-Tetrachloroethane	Chlorodifluoromethane	1,1,2,2-Tetrachloroethane	Isopropylbenzene
1,2,3-Trichlorobenzene	Chloroethane	1,2,3-Trichlorobenzene	p-Isopropyltoluene
1,2,4-Trichlorobenzene	Chloromethane	1,2,4-Trichlorobenzene	Lindane
1,1,1-Trichloroethane	Chromium	1,1,1-Trichloroethane	Manganese
1,1,2-Trichloroethane	Cobalt	1,1,2-Trichloroethane	Mercury
1,2,3-Trichloropropane	Cyanide	1,2,3-Trichloropropane	Methomyl
1,2,4-Trimethylbenzene	Dalapon	1,2,4-Trimethylbenzene	Methoxychlor
			Methyl t-butyl ether (MTBE)
			Xylenes

For a large-print copy of ECWA's 2015 Water Quality Report, please visit www.ecwa.org or email your request to questionscomments@ecwa.org

As you can see by the tables, 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.