



## *2022 Annual Drinking Water Quality Report* *Seneca Nation*



### **INTRODUCTION**

To comply with Federal regulations, the Seneca Nation (SN), 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 SN 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 Rosalind Ground, 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 resumed operation in early 2019.
  - 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 table is attached.

- 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>

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 SN Health. Efforts are underway to further protect SN 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. The tables 1 through 5 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 SN Health System 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 2022 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**

Various watermain projects are planned for 2023. These improvements are funded by SN, EPA, 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**  
**2022 Water Quality Monitoring Report-Annual Water Quality Report Supplement-CATTARAUGUS SYSTEM<sup>4</sup>**

DETECTED CONTAMINANTS						
Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Barium	No	6/20	1.18 ug/l	2,000	MCL=2,000	Erosion of natural deposits, drilling and metal wastes
Chloride	No	7/19	20.1 mg/l	0	MCL=250	Naturally occurring in source water
Nitrate	No	6/20	0.09 mg/l	10	MCL=10	Agricultural runoff; natural sources
Chromium	No	2/26/19	<0.02 mg/l	0.1 mg/l	MCL=0.1	Erosion of natural deposits
Fluoride	No	2/19	0.69 mg/l	N/A	2.2 mg/l	Erosion of natural deposits and added for dental health
Lead <sup>3</sup>	No	Various (2022)	0.003 mg/l	0	AL=0.015	Household plumbing, corrosion, natural sources, wood preservatives
Copper <sup>3</sup>	No	Various (2022)	0.115 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=0.059 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	quarterly	LRAA=0.013 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	3/21	0.0224 ±0.758 pCi/l	0	MCL=15	Natural sources
Gross Beta	No	3/21	0.618 ±1.34 pCi/l	0	MCL=15	Natural sources
Radium 228	No	3/21	0.301 pCi/L	NE	NE	Natural sources
Radium 226	No	3/21	0.0558 pCi/L	NE	NE	Natural sources

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

<sup>1</sup> 90<sup>th</sup> percentile

<sup>2</sup> Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2022.

<sup>3</sup> There were 20 lead and copper samples collected and analyzed in 2022. The minimum number of samples was 20 samples.

<sup>4</sup> Erie County Water Authority (ECWA) and Richardson Road wells were sources in 2022. Results indicate highest level detected in either source. See ECWA table for ECWA source results.

**TABLE 2**  
**2022 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	10/2/18	259 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	6/6/22	1.67 mg/l	10	MCL = 10	Agricultural runoff; natural sources
Copper	No	12/1/16	0.07 mg/l <sup>1</sup>	AL=1.30	AL=1.30	Home plumbing corrosion, natural erosion
Lead	No	10/2/18	<0.002 mg/l <sup>1</sup>	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	10/2/18	<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	2022	0.065 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	2022	0.003 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 <sup>2</sup>	Violation Yes/No	Sample Date	Level Detected	MCLG	MCL	Sources in Drinking Water
Total coliform bacteria	No	Various	None	NE	5% of samples positive	Naturally present in the environment

<sup>1</sup> Maximum result

<sup>2</sup>Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2022.

**TABLE 3**  
**2022 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	10/1/18	230 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	6/6/22	1.87 mg/l	10	MCL = 10	Agricultural runoff; natural sources
Copper	No	9/28/16	0.09 mg/l <sup>1</sup>	AL=1.30	AL=1.30	Home plumbing corrosion, natural erosion
Lead	No	10/1/18	<0.02 mg/l <sup>1</sup>	AL = 0.015	AL = 0.015	Household plumbing, corrosion, natural sources, wood preservatives
Chromium	No	10/1/18	<0.007 mg/l	0.1 mg/l	0.1 mg/l	Erosion of natural deposits
Fluoride	No	10/1/18	<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	2022	0.004 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	2022	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	9/24/18	0.507 ±0.123 pCi/l	0	MCL=15	Natural sources
Gross Beta	No	9/24/18	0.995 ±0.78 pCi/l	0	MCL=15	Natural sources
Radium 228	No	9/24/18	0.104 ±0.384pCi/l	NE	NE	Natural sources
Radium 226	No	9/24/18	0.0767 ±0.390pCi/l	NE	NE	Natural sources

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

<sup>1</sup> Maximum result

<sup>2</sup> Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2022.

**TABLE 4: 2022 Water Quality Monitoring 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	6/24/19	120 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	6/6/22	0.018 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 <sup>1</sup> , 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 <sup>1</sup> , 0 of 5 above AL	AL = 0.015	AL = 0.015	Household plumbing, corrosion, natural sources, wood preservatives
Chromium	No	6/24/19	ND	0.1 mg/l	0.1 mg/l	Erosion of natural deposits
Fluoride	No	9/17/22	0.2 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	2022	<0.02 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	2022	0.0005 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 <sup>2</sup>	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

<sup>1</sup> 90<sup>th</sup> percentile

<sup>2</sup> Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2022.

**TABLE 5: 2022 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	6/24/19	154 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	6/6/22	1.05 mg/l	10	MCL = 10	Agricultural runoff; natural sources
Copper	No	12/27/22	0.026 mg/l	AL=1.30	AL=1.30	Home plumbing corrosion, natural erosion
Lead	No	12/27/22	0.0016 mg/l	AL = 0.015	AL = 0.015	Household plumbing, corrosion, natural sources, wood preservatives
Chromium	No	6/24/19	0.009 mg/l	0.1 mg/l	0.1 mg/l	Erosion of natural deposits
Fluoride	No	9/1/22	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	2022	0.002 mg/l	NE	MCL=0.08	Disinfection By-Product
Haloacetic Acids	No	2022	ND <sup>3</sup>	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 <sup>2</sup>	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

<sup>1</sup> 90<sup>th</sup> percentile

<sup>2</sup> Coliform bacteria is an indicator for possible bacteriological contamination. No coliform bacteria were detected in any samples in 2022.

<sup>3</sup>Not Detected



#### 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

# ERIE COUNTY WATER AUTHORITY

## 2022 ANNUAL WATER QUALITY REPORT



### 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 the 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 independent of Erie County government. ECWA operates as a financially self-sustaining public utility and pays all its operating expenses from revenues generated by the sale of water to its over 500,000 customers.

To comply with State Regulations, ECWA, 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 New York State drinking water health standards. We are proud to report 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 Sabrina Figler, Director of Water Quality, @ 716-685-8574. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Board meetings. The schedule may be found on [www.ecwa.org](http://www.ecwa.org). Board meetings are also streamed live and archived for later viewing from this website.

### WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water, both tap and bottled, 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 animal or human activities. Contaminants that may be present in source water include microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants, and radioactive contaminants. To ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the number of certain contaminants in water provided by public systems. The State Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our source waters are Lake Erie and the Niagara River. The ECWA's Sturgeon Point Treatment Plant in the Town of Evans draws water from Lake Erie to supply the southern area of Erie County and some communities in Chautauqua and Cattaraugus Counties. The Van de Water Treatment Plant in the Town of Tonawanda draws water from the Niagara River and provides water to northern area of Erie County and to some customers of Monroe County Water Authority (MCWA) through an interconnection at the border to Genesee County. The MCWA operates in Genesee County. We do not directly serve any customers within Monroe County. These two plants serve more than 500,000 people in Western New York. The water is treated by conventional treatment and filtration and chlorine disinfection. During 2022, our system did not experience any restriction of our water source.

### FACTS AND FIGURES

In 2022, the ECWA produced approximately 27.2 billion gallons of high-quality water for residential, commercial, and industrial use in 36 municipalities. The highest single day produced 96.2 million gallons. Some of this was unmetered water, 39.4%, used for flushing water mains, fighting fires, training firefighters, plant processes, equipment and hydrant testing and loss due to leaks. Approximately 16.5 billion gallons were sold to our customers. In 2022, residential water customers paid \$3.80/1000 gallons. The 2022 residential average customer bill was \$93.96 per quarter or \$375.84 for the year.

### 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, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The state allows for us to test for some contaminants less than once per year because the concentration of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. The sample date is directly noted.

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 @ 1-800-426-4791 or the Erie County Health Department @ 716-961-6800.

**ERIE COUNTY WATER AUTHORITY  
2022 ANNUAL WATER QUALITY REPORT**



**DETECTED CONTAMINANTS**

CONTAMINANT	VIOLATION YES/NO	DATE OF SAMPLE	LEVEL DETECTED (Avg/Max); (Range)	UNIT MEASUREMENT	MCLG	REGULATORY LIMIT (MCL, TT OR AL)	LIKELY SOURCE OF CONTAMINATION
<b>Inorganic Contaminants &amp; Physical Tests</b>							
Barium	No	10/22	0.0185-0.0197 mg/L; Average=0.019mg/L	mg/L	2.0 mg/L	2.0 mg/L	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries.
Chloride	No	4/22	15.4-27.7 mg/L; Average=19.5 mg/L	mg/L	NE	250 mg/L	Naturally occurring or indicative of road salt contamination
Chlorine	No	8/22	0.80-2.08 mg/L; Average=1.51 mg/L	mg/L	NA	MRDL=4.0 mg/L	Added for disinfection.
Copper <sup>2</sup>	No	6/22	ND-162 ug/L; 90 <sup>th</sup> percentile=43 ug/L, 0 of 100 above AL	ug/L	1300 ug/L	AL=1300 ug/L	Corrosions of home plumbing systems; natural erosion; leaching from wood preservatives
Fluoride	No	12/22	0.09-1.03 mg/L; Average=0.65 mg/L	mg/L	NA	2.2 mg/L	Erosion of natural deposits; water additive that promotes strong teeth; discharge from aluminum and fertilizer facilities.
Lead <sup>3</sup>	No	6/22	ND-46 ug/L; 90 <sup>th</sup> percentile =9.8 ug/L, 7 of 100 above AL	ug/L	0 ug/L	AL=15 ug/L	Home plumbing corrosion; natural erosion.
Nickel	No	10/22	0.83-0.85 ug/L; Average=0.84 ug/L	ug/L	NE	NR	Nickel enters ground water and surface water by dissolution of rocks and soils, from atmospheric fall out; from biological decay and from waste disposal.
Manganese	No	2/22	0.0-12.6 ug/L; Average=2.32 ug/L	ug/L	NE	NR	Naturally occurring, indication of landfill contamination.
pH	No	3/22	7.41-8.42; Average=7.95	SU	NE	NR	Naturally occurring; adjusted for corrosion control.
Distribution System Turbidity	No	5/22	0.05-0.73 NTU; Average=0.17 NTU	NTU	NA	TT =/<5 NTU	Soil runoff
Entry Point Turbidity <sup>1</sup>	No	5/22	0.513 NTU highest level detected; Lowest monthly % <0.30 NTU=100%	NTU	NA	TT=95% of samples <= 0.30 NTU	Soil runoff
Total Organic Carbon	No	5/22	1.45-2.28 mg/L; Average =1.86 mg/L	mg/L	NA	TT	Naturally occurring in the environment
<b>Synthetic Organic Contaminants</b>							
Bis(2-ethylhexyl) phthalate	No	11/21	0.74 – 1.0 ug/L; Average=0.87 ug/L	ug/L	0 ug/L	6 ug/L	Used in plastic products such as PVC, plastic toys, vinyl upholstery, adhesives, and coatings. Compound likely to be released to the environment during production & waste disposal of these products. Also used in inks, pesticides, cosmetics and vacuum oil.
<b>Disinfection By-products</b>							
Total Trihalomethanes	No	8/22	15-80 ug/L; LRAA = 63 <sup>4</sup>	ug/L	NE	LRAA = 80	By-product of water disinfection (chlorination)
Total Haloacetic Acids	No	8/22	6-54 ug/L; LRAA = 40 <sup>4</sup>	ug/L	NE	LRAA = 60	By-product of water disinfection (chlorination)
<b>Radiological Contaminants</b>							
Radium 228	No	7/19	ND	pCi/L	NE	NE	Erosion of natural deposits.
Combined Radium 226/228	No	7/19	ND	pCi/L	0	5.0	Erosion of natural deposits.

# ERIE COUNTY WATER AUTHORITY 2022 ANNUAL WATER QUALITY REPORT



Microbiological Contaminants							
Total Coliform Bacteria	No	9/22	1 CFU	NA	0	TT =/ < 2 positive	Naturally occurring in the environment

1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. State regulations require that turbidity must always be below 1 NTU in the combined filter effluent. The regulations require that 95% of the entry point turbidity samples collected have measurements below 0.3 NTU. Our highest single system turbidity measurement, 0.513 NTU, for the year occurred in November 2022.

2 – The level presented represents the 90th percentile of the 100 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 100 samples were collected at your water system and the 90th percentile value was the eleventh highest sample at 43 ug/L. The second highest sample from 90<sup>th</sup> percentile was the ninth highest with a value of 48 ug/L. The action level for copper was not exceeded at any of the sites tested.

3 - The 90th percentile value was the eleventh highest sample at 9.8 ug/L. The second highest sample from the 90<sup>th</sup> percentile was the ninth highest with a value of 11.5 ug/L. The action limit for lead was exceeded at 7 of the 100 sites tested.

4 – This level represents the highest locational running annual average calculated from data collected.

### Definitions and Abbreviations:

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

**Maximum Contaminant Level Goal (MCLG):** 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.

**Maximum Residual Disinfectant Level (MRDL):** 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.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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.

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity more than 5 NTU is just noticeable to the average person.

**Milligrams per liter (mg/l):** Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/l):** Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**Nanograms per liter (ng/l):** Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion - ppt).

**Picocuries per liter (pCi/L):** A measure of the radioactivity in water.

**AL** = Action Level: The concentration of the highest contaminant

**LRAA** = Locational Running Annual Average

**ND** = Not Detected: Laboratory analysis indicates the constituent is not present

**NE** = Not Established                      **NR** =Not Regulated

**NA** = Not Applicable                      **SU** = Standard Units

# ERIE COUNTY WATER AUTHORITY 2022 ANNUAL WATER QUALITY REPORT



## 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. It should be noted that the action level for lead was exceeded, meaning the concentration was greater than 15 ppb, in 7% of the samples. We are required to present the following information on lead in drinking water: Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Erie County Water Authority is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the ECWA Water Quality Laboratory's Director of Water Quality at 716-685-8574. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

## IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2022, our system was in compliance with applicable State drinking water operating, monitoring, and reporting requirements.

## INFORMATION ON RADON

Radon is a naturally occurring radioactive gas found in soil and outdoor air that may also be found in drinking water and indoor air. Some people exposed to elevated radon levels over many years in drinking water may have an increased risk of getting cancer. The main risk is lung cancer from radon entering indoor air from soil under homes.

In 2019, we collected a sample from each water treatment plant that were analyzed for radon. The results showed no detection of the radiological parameters. For additional information call your state radon program (1-800-458-1158) or call EPA's Radon Hotline (1-800-SOS-Radon).

## DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded 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 (800-426-4791).

## INFORMATION ON FLUORIDE ADDITION

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 a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels daily to make sure fluoride is maintained at a target level of 0.7 mg/L. During 2022, monitoring showed that fluoride levels in your water were within 0.2 mg/l of the target level for 99% of the time. During 2022 Fluoride application was online, except during the following days due to supply issues: @ Sturgeon Point WTP, fluoride was not added 01/01/2022 – 01/19/2022 and @ Van de Water WTP, fluoride was not added 11/24/2022 – 12/31/2022.

**ERIE COUNTY WATER AUTHORITY  
2022 ANNUAL WATER QUALITY REPORT**



**INFORMATION ON UNREGULATED CONTAMINANTS**

COMPOUNDS TESTED FOR BUT NOT DETECTED				
Arsenic	Alachlor	Di-n-butyl phthalate	Metribuzin	Radium 226
4-Androstene-3,17-dione	Aldicarb	Di(2-ethylhexyl) adipate	Oxamyl (Vydate)	1,1-Dichloroethylene
Baygon	Aldicarb Sulfone	1,2-Dibromo-3-chloropropane	Oxyfluorfin	cis-1,2-Dichloroethylene
2-Chlorotoluene	Aldicarb Sulfoxide	Dibromomethane	PCB 1016	trans-1,2-Dichloroethylene
4-Chlorotoluene	Aldrin	Dicamba	PFDA	1,2-Dichloropropane
17beta-Estradiol	alpha -BHC	Dichlorodifluoromethane	PFDaA	1,3-Dichloropropane
17alpha-Ethynyl estradiol	Anatoxin-a	Dieldrin	PFHxA	2,2-Dichloropropane
2,4-D	Asbestos	Isopropylbenzene	PFTA	1,1-Dichloropropene
1,3 Butadiene	Atrazine	p-Isopropyltoluene	PFTTrDA	cis-1,3-Dichloropropene
1,2-Dichlorobenzene	Benzene	Lindane	PFUnA	trans-1,3-Dichloropropene
1,3-Dichlorobenzene	Benzo(a)pyrene	Mercury	Permethrin	1,4-Dioxane
1,4-Dichlorobenzene	Chlorpyrifos	Methiocarb	Pichloram	3-Hydroxycarbofuran
1,1-Dichloroethane	Chromium, Total	Methomyl	Profenofos	2,3,7,8-TCDD (Dioxin)
1,2-Dichloroethane	Cobalt	Methoxychlor	Propachlor	2,4,5-TP (Silvex)
1,2,3-Trichloropropane	Cyanide	MTBE	Propylene Glycol	1,1,1,2-Tetrachloroethane
1,2,4-Trimethylbenzene	Cylindrospermopsin	Methylene Chloride	n-Propylbenzene	1,1,2,2-Tetrachloroethane
1,3,5-Trimethylbenzene	Dalapon	Metolachlor	Quinoline	1,2,3-Trichlorobenzene
Chlordane	Heptachlor	9CL-PF30NS	Xylenes (o,m and p)	Chlorobenzene
1,2,4-Trichlorobenzene	Di-Chlorodifluoromethane	Hexachlorobenzene	N-E-t-FOSAA	Heptachlor Epoxide
1,1,1-Trichloroethane	Chloroethane	Hexachlorobutadiene	N-MeFOSAA	ADONA

# ERIE COUNTY WATER AUTHORITY 2022 ANNUAL WATER QUALITY REPORT



## COMPOUNDS TESTED BUT NOT DETECTED

1,1,2-Trichloroethane	Chloromethane	Hexachlorocyclopentadiene	HFPO-DA	
Beryllium	Dimethipin	PCB 1221	Selenium	
Bromide	Dinoseb	PCB 1232	Simazine	
Bromobenzene	Diquat	PCB 1242	Styrene	
Bromochloromethane	Endothall	PCB 1248	Tebuconazole	
Bromomethane	Endrin	PCB 1254	Tetrachloroethylene	
Butachlor	Equillin	PCB 1260	Thallium	
Butylated hydroxyanisole	Estriol	Pentachlorophenol	Toluene	
n-Butylbenzene	Estrone	Perfluorobutanesulfonic acid	o-Toluidine	
sec-Butylbenzene	Ethoprop	Perfluoroheptanoic acid	Total Mircocystin	
t-Butylbenzene	Ethylbenzene	Perfluorohexanesulfonic acid	Toxaphene	
Cadmium	Ethylene Dibromide (EDB)	Perfluoronanoic acid	Tribufos	
Carbaryl	Glyphosate	Perfluorooctane sulfonate	Trichloroethylene	
Carbofuran	Gross Alpha Particles	Perfluorooctanoic acid	Trichlorofluoromethane	
Carbon Tetrachloride	Gross Beta Particles	11Cl-PF3OUDS	Vinyl Chloride	

### WHY SAVE WATER AND HOW TO AVOID WASTING IT

The Erie County Water Authority encourages water conservation. Although the Lake Erie and the Niagara River are unlimited sources of a good supply of water, it must not be wasted. 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.

# ERIE COUNTY WATER AUTHORITY 2022 ANNUAL WATER QUALITY REPORT



- ✦ 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.
- ✦ 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

ECWA spent 45.6 million dollars in system-wide infrastructure upgrades including:

- ✦ Scada Server and Storage Upgrades - \$447,551
- ✦ Sturgeon Point Sedimentation Basin Effluent Valve Replacement and Automation - \$878,035
- ✦ Van de Water Residuals Handling Improvements - \$2,371,822
- ✦ Van de Water Delivered Water Pump Replacement - \$179,880
- ✦ Van de Water Electric Supply Cable Replacement - \$481,671
- ✦ Design of Transmission Main Replacement Project from Van de Water to Ball Pump Station - \$783,197
- ✦ 42" & 48" Transmission Main Condition Assessment - \$2,366,838
- ✦ Various Pump Station Valve and Pump Replacements - \$103,217
- ✦ Pump Station Chlorine Residual Boosting Equipment - \$135,936
- ✦ Guenther Pump Station Rehabilitation Project - \$4,328,925
- ✦ Newstead Pump Station Improvement Project - \$400,745
- ✦ Excavated Material Storage Refurbishment Project - \$117,050
- ✦ Borden Road Betterment Project partnered with Erie County (Town of Cheektowaga) - \$909,689
- ✦ Waterline Replacement (Town of Amherst) - \$4,252,223
- ✦ Waterline Replacement (Town of Cheektowaga) - \$3,219,130
- ✦ Waterline Replacement (Town of Clarence) - \$2,961,919
- ✦ Waterline Replacement (Town of Hamburg) - \$2,589,389
- ✦ Waterline Replacement (Town of Hamburg, City of Lackawanna) - \$1,856,637
- ✦ Waterline Replacement (City of Tonawanda) - \$734,011

## AREAS SERVED

PUBLIC WATER SUPPLY NAME	PWS ID	POPULATION
ECWA Direct	NY1400443	335,000
ECWA Amherst	NY1400399	80,228
ECWA Boston	NY1421897	6,604
ECWA Hamburg Town	NY1400488	11,314
ECWA Hamburg Village	NY1400515	41,538
ECWA Lancaster	NY1400421	21,428
ECWA Newstead	NY1422651	5,319
ECWA Orchard Park	NY1421762	23,387
ECWA West Seneca	NY1404543	23,181

## 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.

For additional or large print copies of this report, please call 716-849-8444, or visit [www.ecwa.org](http://www.ecwa.org) or email your request to [questionscomments@ecwa.org](mailto:questionscomments@ecwa.org).



# ERIE COUNTY WATER AUTHORITY 2022 ANNUAL WATER QUALITY REPORT



## New York State Department of Health Source Water Assessment

The New York State Department of Health completed a draft Source Water Assessment of the supply's raw water sources under the state's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies, which use these sources include storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g., zebra mussels – intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage areas deemed most likely to impact drinking water quality at this public water supply's raw water intakes. Separate assessments were completed for the Lake Erie source and the Niagara River source. The assessment found a moderate susceptibility to contamination for the Lake Erie source. The amount of agricultural land in the assessment area results in elevated potential of disinfection byproduct precursors and pesticides contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: landfills. The assessment found an elevated susceptibility to contamination for the Niagara River source. The amount of agricultural (and to a lesser extent residential) lands in the assessment area results in elevated potential for microbials, disinfection byproduct precursors, and pesticides contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for all contaminant categories. Non-sanitary wastewater discharges may also contribute to contamination. There is also considerable contamination susceptibility associated with other discrete contaminant sources, and these facility types include: chemical bulk storage, inactive hazardous waste sites, landfills, Resource Conservation and Recovery Act facilities and Toxics Release Inventory facilities. If you have any questions about New York State's Source Water Assessment Program, please contact the Director of Environmental Health, Erie County Health Department at (716) 961-6800.



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