

# **Annual Drinking Water Quality Report for 2009**

## **The Seneca Nation of Indians**

### **Introduction**

The Seneca Nation of Indians (SNI) will be issuing an annual report describing the quality of the drinking water delivered to your tap during the previous year. The purpose of this report is to help you understand what you are using in your daily lives, and to make you more educated consumers.

We are proud to tell you that last year, the water provided for your use met every United States Environmental Protection Agency (USEPA) standard for safety, except for one non-repeatable violation in the Shelton Park Water System (numerous resampling and reanalysis showed the water was safe to drink). This report contains information to help everyone understand more about their drinking water.

If, after reading this report, you have any questions about your drinking water, please contact Steve Tome, Sanitarian, at 716-945-5894.

### **Sources of Water**

#### Cattaraugus Territory

In 2009, drinking water was produced by the Richardson Road Well as well as purchased from the Erie County Water Authority (ECWA), which like the Nation, had no drinking water quality violations (the Annual Water Quality Report from the ECWA is available for review at the offices of the Health Department in Irving, NY and in Salamanca, NY). All water purchased from the ECWA is disinfected and fluoridated by the ECWA prior to distribution to consumers.

A sanitary survey of the facilities used to provide drinking water to residents of the Cattaraugus Territory was conducted on August 18, 2010. The results of this survey indicate that there are no issues in this system which would adversely affect the quality of the water that is distributed to consumers.

#### Allegany Territory

Jimersontown Community Water System: For most of 2009, drinking water distributed to Jimersontown consumers was bought solely from the Salamanca Board of Public Utilities, which also had no water quality violations during the year (their annual report is

also available for review at the same locations mentioned above. This water was disinfected and then distributed to consumers.

On November 2, 2009, the Jimersontown Water Treatment Plant was placed on line, providing disinfected groundwater to customers in the administrative complex, Casino and Jimersontown community.

Steamburg Community Water System: There were no detectable comments for the Steamburg Community Water system during 2009.

Sullivan Hollow Water System: There were no detectable contaminants for the Sullivan Hollow system during 2009.

Shelton Park: On June 25, 2009, there was a positive result for coliform bacteria, an indicator of possible bacterial contamination, at the Shelton Park water system. The owner was notified as the water was deemed unsafe as sampled. In accordance with USEPA standards, numerous follow-up samples were collected in the days following, and all results were non-detect, indicating that the water was safe. The cause of this event was most likely a chlorine residual that was temporarily too low.

A sanitary survey of the community water system facilities used to provide drinking water to residents of the Allegany Territory was conducted on August 17, 2010. The results of this survey indicate that there are no issues in these water systems which would adversely affect the quality of the water distributed to consumers.

### **Contaminants in Drinking Water**

Drinking water, including bottled water, may reasonably be expected to contain at least trace amounts of some contaminants. The presence of contaminants does not necessarily indicate 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).

Some people may be more vulnerable to contaminants in drinking water than the general population. People with compromised immune systems, 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 about drinking water from their health care providers.

On a monthly basis, all SNI water facilities are sampled and tested for microbiological quality and chlorine residual. Our drinking water was in complete compliance with the associated standards, as no microorganisms were ever detected, and a chlorine residual

was always detected (a chlorine residual is important in the distribution system to prevent the growth of any microorganisms).

Other analyses were performed on a less frequent basis, as required, including organic chemicals, radioactivity, and lead and copper. There were no violations of these standards.

The following table summarizes contaminants detected in both territories.

TABLE OF DETECTED CONTAMINANTS							
Contaminant	Violation Y/N	Date of Sample	Level Detected	Unit of Measurement	MCLG	Regulatory Limit (MCL, AL)	Likely Source of Contamination
Cattaraugus (1) Copper	N	9/22/2009	116	ug/l	1 300	AL = 1 300	Corrosion of household plumbing; natural sources
Lead	N	9/22/2009	6	ug/l	0	AL = 15	Corrosion of household plumbing; natural sources; wood preservatives
Barium	N	8/26/2009	184	ug/l	2 000	MCL = 2	Natural sources
Gross Alpha	N	8/26/2009	2.58 ± 2.21	pCi/l	0	MCL = 15 pCi/l	Natural sources
Radium 228	N	8/26/2009	0.248 ± 0.331	pCi/l	0	MCL = 5 pCi/l	Natural sources
Nitrate	N	8/26/2009	2.77	mg/l	10	MCL = 10	Agricultural runoff; natural sources
Allegany Coliform	Y	9/26/2009	> 1	n/a	0	AL = 0	Insufficient chlorine residual
(Shelton) Lead	N	9/28/2009	5.1	ug/l	0	AL = 15	Corrosion of household plumbing; natural sources; wood preservatives
(JCWS) Copper	N	9/11/2009	183	ug/l	1 300	AL = 1 300	Corrosion of household plumbing; natural sources
(JCWS)							

## **Definitions**

**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 using the best available treatment technology.

**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.

**mg/l:** milligrams per liter, which corresponds to one part of contaminant in one million parts of water.

**ug/l:** micrograms per liter, which corresponds to one part of contaminant in one billion parts of water.

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

**pCi/l:** picocuries per liter, which is a measurement of radioactivity in water.

**Shelton:** Shelton Park System.

**JCWS:** Jimersontown Community Water System.

**Note (1):** All data are from the Richardson Road Water System.

## **What Does All of This Mean?**

The information presented in this report is meant to make you aware of the importance placed on providing safe drinking water. This quality water is not produced by accident. Certified operators, licensed by the New York State Department of Health, are responsible for operating the facilities that produce your water. Samples are taken by trained professionals and are analyzed and certified by contract laboratories. It is up to you, the consumer, to help us continue to provide water of excellent quality by informing us if you are experiencing problems with taste, odor, color, or lack of pressure in your homes or businesses.

## **Salamanca and Erie County Water Reports**

Since these utilities provided some of the water to The Seneca Nation during 2009, their annual water reports are included for your review.

**Annual Drinking Water Quality Report for 2009**  
Salamanca Board of Public Utilities  
225 Wildwood Avenue, Salamanca, New York 14779

City of Salamanca, Public Water Supply ID#NY0400349  
Town of Great Valley WD #1, Public Water Supply ID#NY0412218  
Town of Great Valley WD #4, Public Water Supply ID#NY0430052

**Introduction**

To comply with State and Federal regulations, the Salamanca Board of Public Utilities 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 calendar year, your tap water met all State drinking water quality standards. We are proud to report that our system did not violate any maximum contaminant levels or any other water quality standards. 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 Keith King, General Manager, (716) 945-3130. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Salamanca Board of Public Utilities' Monthly Commission Meetings.

**What are the sources of our water?**

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

Our water originates from fourteen wells, ranging in depth from 50 feet to more than 80 feet. Thirteen wells (WF) are located near Water Street in the center of the City of Salamanca. Another well (GV) is located at the extreme eastern boundary of the City near Great Valley Creek. Since natural filtration of the ground water through an extensive sand and gravel aquifer occurs, only chlorination prior to distribution to our customers is required. The storage reservoir, which is located in Newton Run in the City of Salamanca, usually contains between 3.5 and 4 million gallons, which equates to 3.5 to 4 days reserve capacity. During 2009, our system did not experience any restriction of our water source.

The NYS DOH has completed a source water assessment for our water system, based on available information. Possible and actual threats to the drinking waters sources were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility rating is an estimate of the potential contamination of the source water. It does not mean that

the water delivered to consumers is, or will become contaminated. See section **“Are contaminants in our drinking water?”** for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As was mentioned before, our water is derived from fourteen wells. The source water assessment has rated the combined susceptibility to contamination for these wells as high from cations/anions (salts, sulfate), enteric viruses, halogenated solvents, herbicides/pesticides, nitrates, other industrial organics and petroleum products; and medium high from enteric bacteria, metals and protozoa. These ratings for the wells are due to their proximity to industrial activities. While the assessment rates our source as being susceptible to enteric bacteria, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State’s drinking water standards.

A copy of this assessment, including a map of the assessment area, can be obtained by contacting us, as noted above.

### **Facts and Figures**

The Salamanca Board of Public Utilities is the supplier of potable water to Customers in the City of Salamanca and in portions of the Townships of Salamanca and Great Valley. There are presently 2,693 service connections, representing an estimated 7,500 potable water users.

The total water produced in 2009 was 470 million gallons. The daily average of water treated and pumped into the distribution system is 1,290,000 gallons per day. Our highest single day was 2,150,000 gallons. The amount of water delivered to customers was nearly 60% of the actual production. The additional quantity of water was used to flush mains, fight fires, for fire training, and leakage. In 2009, water customers were charged \$1.45 per 1,000 gallons of water. Average monthly potable water charges for a family of three should be about \$11.47, or about 38 cents per day. Charges for customers residing in the Townships of Salamanca and Great Valley are presently 175% of those of the City of Salamanca.

### **Are contaminants in our drinking water?**

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include total coliform, inorganic compounds, nitrate, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiologicals and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. All of this data, though representative, may be more than one year old. Also available at the Salamanca Board of Public Utilities business office, is a list of analytical results for parameters where there were no detections.

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 Cattaraugus County Health Department at (716) 373-8050.

<b>Table of Detected Contaminants</b>
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Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
<b>Inorganic Contaminants</b>							
Copper * - City of Salamanca	N	08/25/08	210 (42-380)	ug/l	1,300	AL = 1,300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead ** - City of Salamanca	N	08/25/08	3 (<1-9)	ug/l	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
Copper * - Town Districts	N	09/30/09	68 (44-93)	ug/l	1,300	AL = 1,300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead ** - Town Districts	N	09/30/09	1 (.7-1.6)	ug/l	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate - WF - GV	N N	5/14/09 5/27/09	2,150 1,540	ug/l	10,000	MCL = 10,000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Radioactive Contaminants</b>							
Gross alpha activity -WF	N	3/10/09	2.8	pCi/L	0	MCL = 15	Erosion of natural deposits.
-GV	N	3/10/09	0.9				
Radium 226 -WF	N	3/10/09	0.18	pCi/L	0	MCL = 5	Erosion of natural deposits.
-GV	N	3/26/07	.01				
Radium 228 -WF	N	3/10/09	2.4	pCi/L	0	MCL = 5	Erosion of natural deposits.
-GV	N	2/5/08	1.3				
<b>Disinfection By-Products</b>							
Dist. System - East Dist. System - West	N N	08/25/08 08/25/08	3.2 3.2	ug/l	N/A	MCL = 80	By-product of drinking water disinfection needed to kill harmful organisms. TTHms are formed when source water contains large amounts of organic matter.
Total Trihalo- methanes (chloro- form, bromodichloro- methane, dibromo- chloromethane and bromoform)							

**Notes:**

\* - The levels presented represent the 90<sup>th</sup> percentile of the 20 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 90<sup>th</sup> percentile is equal to or greater than 90% of the

copper or lead values detected at your water system. In this case, a minimum of twenty samples were collected in the City and the 90<sup>th</sup> percentile value for copper was the third highest value, 210 ug/l. In the Town Districts a total of five samples were collected and the 90<sup>th</sup> percentile value was determined to be 68 ug/l for copper. The action level for copper was not exceeded at any of the sites tested.

\*\* - The 90<sup>th</sup> percentile values for lead in the City System and the Town Districts were 3 ug/l and 1 ug/l, respectively. None of the samples exceeded the action level of 15 ug/l for lead.

**Definitions:**

**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.

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

**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).

**N/A:** Not applicable

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

**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 at values well below the level allowed by the State. We are required to provide the following information on lead in drinking water. If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. The City of Salamanca 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

**Do I need to take special precautions?**

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 some infants can be particularly at risk from infections. These people should seek advice from their health

care provider about their drinking water. EPA/DCD 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.

### **Why saving water is a good idea.**

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 costs 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 and helps to avoid severe water use restrictions so that essential fire fighting needs are met.

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

Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes, to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of those 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**

The Board of Public Utilities is committed to serving the community by revamping and modernizing the water production and treatment process to take advantage of the most effective and economical technology available. Improvements have recently taken place and more will be undertaken in the near future in response to the changing environment and stricter government regulations.

Development of an additional groundwater source, for additional production capability, is now underway.

### **Water System Security**

The Board of Public Utilities would like to remind residents to remain vigilant of any suspicious activity regarding the water distribution system. Please report any suspicious activity to the Board of Public Utilities or the Salamanca Police Department.

### **Closing**

Thank you for allowing us to continue to provide you and 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 and our way of life. Please call our Office if you have questions.

The United States Environmental Protection Agency maintains a toll-free hotline for Customers with questions regarding Safe Drinking Water: (800) 426-4791.

## ERIE COUNTY WATER AUTHORITY ANNUAL REPORT

# 2009

### **WATER CONSERVATION TIPS**

The ECWA encourages water conservation. Although Lake Erie and the Niagara River are an unlimited source of good quality water, it must not be wasted. A few simple steps will preserve the resource for future generations.

- Use low flow shower heads and faucets.
- Repair all leaks in your plumbing system.
- Water your lawn sparingly early morning or late evening.
- Do only full loads of wash 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**

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

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

In 2009, the ECWA analyzed 47 total water samples for Giardia and Cryptosporidium. No positive samples were detected in the ECWA's treated water supply. Giardia was found to be present in our source water. Specific test results are listed in the table below.

The ECWA encourages immune compromised individuals to consult their physicians regarding appropriate precautions to avoid infection. Both protozoa must be ingested to cause disease, and they may spread through other means than drinking water. For additional information on Cryptosporidiosis or Giardiasis, please contact the Erie County Health Department at (716) 858-6089.

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.

If you would like additional copies of this report,  
please contact the Public Affairs Office at  
(716) 849-8406 or e-mail [bbray@ecwa.org](mailto:bbray@ecwa.org).

**For 2009, your tap water met all State drinking water standards. Our system did not violate a maximum contaminant level or any other water quality standard.**

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 with furnishing you with detailed information about the drinking water you consume and use everyday.

It is with great pleasure that we provide you with the ECWA's 2009 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 requirement to prepare and deliver a Consumer Confidence Report (CCR) and the New York State Dept. of Health's requirement to prepare and deliver an Annual Water Quality Report.

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

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

Thank you for taking the time to learn about your water supply. Customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

If you have comments and questions about the report, please contact:

**Brian C. Bray, Public Affairs Officer, ECWA, 295 Main Street, Room 350, Buffalo, NY 14203, phone 716-849-8406, or e-mail [bbray@ecwa.org](mailto:bbray@ecwa.org).**

Sincerely,

**BOARD OF COMMISSIONERS**

Frank E. Swiatek, Chairperson

Kelly M. Vacco, Vice-Chair

Francis G. Warthling, Treasurer

**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.

The ECWA is not an agency of New York State and is totally independent of Erie County government. Rather, it is an independent public-benefit corporation. As a financially self-sustaining public utility, the ECWA pays all operating expenses from revenues generated by the sale of water to its 158,069 customers.

In 2009, the ECWA produced about 24.7 billion gallons of high-quality water for residential, commercial, and industrial use in 35 municipalities throughout Western New York. Some of this water was used for flushing water mains, fighting fires, training firefighters, filter backwashing and plant processes, equipment and hydrant testing and some of this water was lost to leaks. Approximately 17.5 billion gallons were sold to our residential customers.

The ECWA owns and operates two water treatment plants, a nationally recognized water quality lab, 38 pump stations, 40 water storage tanks and maintains 3,383 miles of water mains, 17,177 fire hydrants, over 30,000 valves and numerous appurtenances.

The cost per thousand gallons of water for residential customers was \$2.86 in 2009.

The rate increased 10 cents per thousand gallons on January 1, 2010 and continues to be one of the lowest rates in New York State. In 2010, for the average rate-payer who uses 19,750 gallons of water per quarter, it will cost \$233.84 per year, or about 64 cents per day, to be provided with safe, high quality drinking water.

### **IMPROVEMENTS TO YOUR WATER SYSTEM**

In 2009, the ECWA invested nearly \$30 million in system-wide infrastructure upgrades:

- Upgrades continued at the Sturgeon Point Water Treatment Plant that will result in the continued production of high-quality water at that facility. Work included upgrades to the flash mixers, five coagulation basins, the coagulant chemical feed system, the coagulant-aid polymer feed, coagulant filter-aid feed, and associated electrical and instrumentation. This project began in 2008 and is scheduled to be completed in the spring of 2010.
- Permanent backup power generators have been purchased and installed at ECWA's water treatment plants and two largest pumping stations. Fourteen additional ECWA sites have been upgraded so that portable generators can power those locations. By the end of 2010, the ECWA will have backup power at its most vital locations, which will help ensure that an adequate supply of high-quality water is continually available during emergency situations resulting from power outages.
- Waterline improvements were undertaken in the cities of Tonawanda and Lackawanna, and the towns of Cheektowaga and West Seneca.

### **ECWA'S TEST RESULTS FOR 2009**

The ECWA's water system operated under "NO VARIANCE OR EXEMPTION" from any federal or state regulatory requirements. To comply with EPA mandated requirements, water quality data tables of detected regulated and unregulated contaminants are detailed in this report. The tables summarize test results for the past year or from the most recent year that tests were conducted in accordance with regulatory requirements. They also list the maximum contaminant levels (MCL). The EPA is responsible for establishing the MCL standards. For your convenience, important terms and abbreviations are defined throughout this document. More information regarding all substances tested for, but not detected, can be obtained by calling the Customer Service Department at 849-8484.

**To learn more about the ECWA and water quality, please visit**

**[www.ecwa.org](http://www.ecwa.org)**

# FREQUENTLY ASKED QUESTIONS

## **Does the 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 at an optimal range from 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the Erie County Water Authority monitor fluoride levels on a daily basis. During the addition of fluoride in 2009, monitoring showed fluoride levels in your water were in the optimal range 91% 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) for fluoride.

## **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 Dept. is the agency that administers and enforces these standards. Their phone number is (716) 858-6089.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline at (800) 426-4791.

## **Where does my water come from?**

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

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 County. 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 County and Wyoming County. These two plants serve more than a half-million people in western New York.

## **How is my water treated?**

Both the 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, polyaluminum chloride, is added to the water, which causes suspended particles in the water to clump together to form floc. Floc particles then settle to the bottom of large sedimentation

basins. The water is filtered through layers of anthracite, sand, and gravel, to remove any remaining particles. Chlorine is added for disinfection to kill bacteria. Small amounts of fluoride are added to help prevent tooth decay. Caustic soda is added to stabilize the alkalinity of the water and prevent corrosion in home plumbing. Powdered activated carbon is added in summer months to help remove unpleasant tastes and odors. Water is temporarily stored in clearwells or storage tanks before it is pumped to the public. High service pumps deliver the clean water through more than 3,383 miles of pipeline to homes and businesses. The ECWA closely monitors its 38 pump stations and 40 water storage tanks to assist in the distribution process. On average, the ECWA delivers 67.6 million gallons a day to serve more than a half million people 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 858-6089.

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: 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 national limits for contaminant levels. If the water is not safe to drink, the ECWA will notify the public by newspaper, television and radio announcements that a “boil water order” has been issued.

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

Any member of the public may participate in decisions affecting the quality of water. The ECWA's Board of Commissioners ultimately makes those decisions on behalf of our customers. Board meetings take place every other Thursday in the board meeting room, Erie County Water Authority, 350 Ellicott Square Building, 295 Main Street, Buffalo, New York 14203. Occasionally a board meeting is rescheduled. Call (716) 849-8484 or visit [www.ecwa.org](http://www.ecwa.org)



ERIE COUNTY WATER AUTHORITY

2009 WATER QUALITY MONITORING REPORT  
ANNUAL WATER QUALITY REPORT SUPPLEMENT

DETECTED CONTAMINANTS

Metals, Inorganics, Physical Tests	Violation Yes/No	Sample Date (or date of highest detected)	MCL	MCLG	Level Detected	Sources in Drinking Water
Asbestos	No	8/8	7 MFL	7 MFL	ND - 0.2 MFL, Average = 0.08	Erosion of natural deposits; decay of asbestos cement
Barium	No	8/8	2 mg/liter	NE	0.02 mg/liter	Erosion of natural deposits; drilling and metal waste
Chloride	No	3/8	250 mg/liter	NE	17 - 33 mg/liter, Average = 21	Naturally occurring in source water
Chlorine	No	3/8	MROD = 4.0 mg/liter	MROD = 4 mg/liter	+0.20 to 2.2 mg/liter, Average = 0.79	Added for disinfection
Fluoride <sup>1</sup>	No	4/8	2.0 mg/liter	2.0 mg/liter	0.90 to 1.21 mg/liter, Average = 0.94	Added to water to prevent tooth decay
Lead <sup>2</sup>	No	8/7	15 ug/liter (AL)	0 ug/liter (AL)	ND - 38 ug/liter, 90th percentile 4 ug/liter, 1 of 87 above AL	From plumbing corrosion; natural erosion
Nitrate	No	11/09	10 mg/liter	10 mg/liter	0.17 to 0.19 mg/liter, Average = 0.18	Run-off from fertilizer use
pH	No	04/09	NE	NE	7.1 - 8.9 SU, Average = 7.8	Naturally occurring; adjusted for corrosion control
Turbidity <sup>3</sup>	No	06/09	TT	NE	0.04 NTU highest detected; 99.5% was lowest monthly % = 0.3 NTU	Soil runoff

<sup>1</sup> Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.6 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the Erie County Water Authority monitor fluoride levels on a daily basis. During the addition of fluoride in 2006, monitoring showed fluoride levels in your water were in the optimal range 91% 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.

<sup>2</sup> 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 (800-426-4787) or at <http://www.epa.gov/leadwaterlead>.

The level presented represents the 90th percentile of the 87 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, 87 samples were collected in the water system and the 80th percentile value for lead was the sixth highest value (4 ug/l). The action level for lead was exceeded at only one of the sites tested (36 ug/l). The action level for copper was not exceeded at any of the sites tested.

<sup>3</sup> Turbidity is a measure of the cloudiness of water. ECWA monitors turbidity because it is a good indicator of the effectiveness of our filtration system. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for bacterial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Our highest single turbidity measurement (0.64 NTU) for the year occurred on 8/10/09 when the Sturgeon Point Water Treatment Plant encountered a treatment upset which caused the combined effluent turbidity to exceed 0.3 NTU for a period of time. Corrective actions were taken until the plant returned to the 0.3 NTU MCL. 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 have measurements below 0.3 NTU. The combined filter turbidities were < 0.3 NTU for the month of August 2009. The turbidity levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation. Additional testing was performed to insure that the microbial quality of the water was maintained.

Organic Compounds	Violation Yes/No	Sample Date (or date of highest detected)	MCL (ug/liter)	MCLG (ug/liter)	Level Detected (ug/liter)	Sources in Drinking Water
Total Trihalomethanes <sup>4</sup>	No	8/8	RAA = 80	NE	12 - 74 ug/liter, RAA = 40 ug/liter	By-product of water disinfection (chlorination)
Total Haloacetic Acids <sup>5</sup>	No	8/8	RAA = 80	NE	6 - 52 ug/liter, RAA = 18 ug/liter	By-product of water disinfection (chlorination)

<sup>4</sup> Trihalomethanes are byproducts of the water disinfection process that occur when natural organic compounds react with the chlorine required to kill harmful organisms in the water. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. The level detected represents the highest running annual average of quarterly results. This result (40 ug/l) is below the MCL.

<sup>5</sup> Haloacetic acids are byproducts of the water disinfection process required to kill harmful organisms. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. The level detected represents the highest running annual average of quarterly results. This result (18 ug/l) is below the MCL.

Radioactive Parameters	Violation Yes/No	Sample Date (or date of highest detected)	MCL	MCLG	Level Detected	Sources in Drinking Water
Gross Alpha	No	1/05	15.0 pCi/liter	0 pCi/liter	ND - 1.7 pCi/liter	Erosion of natural deposits
Gross Beta	No	8/04	50** pCi/liter	0 pCi/liter	ND - 2.2 pCi/liter	Decay of natural and man-made deposits
Combined Radium 226/Radium 228	No	1/05	5.0 pCi/liter	0 pCi/liter	ND	Erosion of natural deposits
Total Uranium	No	8/04	30 ug/liter	0 ug/liter	ND - 0.68 ug/liter	Erosion of natural deposits

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

Microbiological Parameters	Violation Yes/No	Sample Date (or date of highest detected)	MCL	MCLG	Level Detected	Sources in Drinking Water
Total Coliform Bacteria	No <sup>6</sup>	8/09 <sup>7</sup>	>5% of samples positive	NE	0.44% = highest percentage of monthly positives	Naturally present in environment
E. coli Bacteria	No <sup>8</sup>	8/09 <sup>7</sup>	Any confirmed positive sample	0	1 sample tested positive in 2009, but did not confirm	Human and animal fecal waste

<sup>6</sup> A violation occurs when more than 5% of the total coliform samples collected per month are positive. Only 2 samples were total coliform positive out of 458 samples taken during August.

<sup>7</sup> During August, one distribution system sample tested positive for total coliform only, and one entry point sample at the Sturgeon Point plant tested positive for both total coliform and E. coli. For both cases, follow-up sampling, testing and reporting were performed as required by regulation, and the negative for both total coliform and E. coli in each case.

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