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.
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.

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.
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’s and the EPA’s regulations which limit the amount of 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 855-8089.

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 Elicott Square Building, 295 Main Street, Buffalo, New York 14203. Occasionally a board meeting is rescheduled. Call (716) 849-8484 or visit www.ecwa.org for updated board meeting information.
ERIE COUNTY WATER AUTHORITY - PROVIDING WATER YOU CAN TRUST


Microsiemens per centimeter (a unit of electrical conductivity) is a measure of the total dissolved solids present in a water sample. The SI unit for electrical conductivity is siemens per meter (S/m). The table below shows the level of electrical conductivity detected in the water samples.

<table>
<thead>
<tr>
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<th>Average Level Detected (mg/l)</th>
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<tbody>
<tr>
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<td>1.5</td>
<td>T1</td>
<td>1.5 mg/liter</td>
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Not Established (NE)

- Not Established
- Not Regulated

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

New York State Department of Health Source Water Assessment

The New York State Department of Health completed a State Water Source Assessment of the supply’s raw water source for the Water Quality Management Plan (WQMP) of the Erie County Water Authority. The State Water Source Assessment Program (SWAS) is a state program to comply, organize, and evaluate information regarding potential and actual threats to the water supply of public water systems (PWS). It is important to note that although water source 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 the drinking water delivered to the consumer. The Great Lakes’ water is exceptionally large and too big for a detailed evaluation in the SWAS. General drinking water concerns for public water supplies in several studies and others, and the SWAS does not address the contamination levels or the water supplies’ susceptibility to contamination. For more information about the contamination assessment compiled for the drainage areas deemed most likely to impact drinking water quality in this public water supply, please contact your local health department or your water utility.

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

For more information about the SWAS, visit the New York State Department of Health’s website at www.health.state.ny.us/doh/water/index.htm.

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 that have voluntarily committed to the Partnership for SafeWater. Most water systems throughout the United States are not participating in this program. As a result, we have learned more about our customers and above and beyond the current regulatory requirements. For additional information on the Partnership for SafeWater visit www.epa.gov/science/partnership.

REFERENCES


ABBRVIATIONS AND TERMS

- AL = Action level: the concentration of a contaminant in water, when exceeded, triggers further investigation or enforcement actions.
- MCLG = Maximum Contaminant Level Goal
- MCL = Maximum Contaminant Level
- NTU = Nephelometric Turbidity Unit
- ppm = parts per million
- µg/liter = micrograms per liter
- mg/liter = milligrams per liter
- TTHM = Total Trihalomethanes
- TSC = Total Stationary Chlorination
- TVOC = Total Volatile Organic Compounds
- TCVOC = Total Volatile Chlorinated Organics

Variations and Exceptions

- State or EPA permission for the implementation of an alternative treatment technology under certain conditions.
- ‡ Denotes Less Than
- $ Denotes More Than

TYPES OF CONTAMINANTS

Micronutrients, such as vitamins and minerals, which may be removed from drinking water systems in New York State. Major drinking water systems are monitored for lead and copper level daily to ensure compliance with the federal guidelines of the Safe Drinking Water Act. This level represents the 90th percentile of the 75 sites tested. The action level for copper was not exceeded at any of the sites tested.

** Leads to a measurable increase in water. DMICP 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. Some organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. This highest standard turbidity measurement was 0.1 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percentile standard turbidity is 0.01 NTU. The 97th percent