Conservation Tips

Except for the air we breathe, water is the single most important element in our lives. It’s too precious to waste. In an effort to make the most efficient use of our water resources, the ECWA encourages customers to practice the following water conservation measures to preserve our most precious resource:

- Use the clothes washer for full loads only.
- Instead of letting the water run in the sink when you want a cold drink, keep a jug or pitcher in the refrigerator.
- Turn the water off while you brush your teeth.
- Take shorter showers. A shower uses about 10 gallons a minute. Time yourself.
- Check your toilet for leaks by putting a few drops of food coloring in your tank. If the color shows up in your toilet bowl without flushing, you have a leak that is costing you money and wasting water.
- Check every faucet in your home for leaks. Just a slow drip can waste 20 gallons a day.
- Sweep outside with a broom, not a hose.
- Only water your lawn when necessary. If the grass springs back after you step on it, then it does not need to be watered.

Questions?

If you would like additional copies of this report, please contact the Public Affairs Office at (716)849-8406 or email to dmoyer@ecwa.org.

Thank you for allowing the ECWA to continue to provide you with quality drinking water. The ECWA is committed to providing you with information about your water supply. Customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

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)849-8404 or visit www.ecwa.org for updated board meeting information.

2008 System Improvements

In 2008, the ECWA invested over $33 million into Improvements to our water system. This included the ongoing reconstruction and improvements to the Sturgeon Point Water Treatment Plant; setting basins and power system; the installation of more efficient and effective variable drives at our Van De Water Treatment Plant and Ball Pumping Station; the replacement of numerous, large system valves; the purchase of additional standby power generators for our secondary and remote facilities; and waterline improvements. Waterline improvements were undertaken in the towns of Cheektowaga, Clarence, Lancaster; the Village of Depew, and the Cities of Lackawanna and Tonawanda. The ECWA also continues a change to new, radio read water meters which will offer convenience to customers as well as ensure more accurate billing.

The ECWA will continue to maintain its aggressive system wide improvement program with an additional $25 million capital spending plan included in the 2009 Budget.
Dear Customer,

For 2008, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. The Erie County Water Authority (ECWA) is committed to providing its customers safe, high quality drinking water. That is why the ECWA maintains a rigorous quality control program and continues to invest substantial financial resources to improve our two treatment facilities, distribution system and nationally recognized water quality lab. Our water is constantly monitored and tested. 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.

Therefore, it is with pleasure that we provide you with the ECWA’s 2008 Annual Water Quality Report (AWQR). This report provides an overview of the ECWA’s water quality during the past year. It shows the source of your water, how it compares to standards set by regulatory agencies, how your water is treated and tested, discusses ECWA programs to improve your water quality and answers common questions asked by our customers. 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 Department of Health’s requirement to prepare and deliver an Annual Water Quality Report (AWQR).

The ECWA’s highly trained staff looks forward to continuing to bring our most precious, our most natural resource into the homes, the businesses and the lives of the residents of Western New York. Your comments and questions about this report are important to us. Please forward them to: Dan NeMoyer, Director of Human Resources, ECWA, 295 Main Street, Room 350, Buffalo, N.Y. 14203, phone 716-849-8406, or email to dmemoyer@ecwa.org.

Sincerely,

BOARD OF COMMISSIONERS
Frank E. Swiatek, Chairman
Kelly M. Vacco, Vice-Chair
Francis C. Warthing, Treasurer

Where Does My Water Come From?

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

Your water comes from two sources. The ECWA’s Steuben 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 “mighty” 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.

What is 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 to its customers water of the highest quality at an affordable rate. As an independent public-benefit corporation, the ECWA is a financially self-sustaining business enterprise, and pays all operating expenses from revenues generated by the sale of water to its 157,571 customers. The ECWA is not an agency of New York State and is totally independent of Erie County government.

In 2008 the ECWA produced just over 2 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 customer.

The ECWA owns and operates two water treatment plants, a nationally recognized water quality lab, 38 pump stations, 40 water storage tanks and maintains 5,380 miles of water mains, 17,134 fire hydrants, over 30,000 valves and numerous appurtenances.

The ECWA’s current residential rate of $2.86 per 1,000 gallons of delivered water is one of the lowest in New York State.

Who Sets and Enforces Drinking Water Standards?

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of your drinking water. Under the SDWA, the United States Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. In New York, the State Health Department enforces the EPA’s regulations and often makes them even more stringent.

The EPA sets standards for approximately 150 regulated contaminants in drinking water. For each of these contaminants, EPA sets a legal limit, called a maximum contaminant level (MCL). EPA regulations specify strict testing and reporting requirements for each contaminant. Water suppliers may not provide water that doesn’t meet these standards. Water that does meet these standards is safe to drink. In Erie County, the Erie County Health Department is the agency that administers and enforces these standards. Their phone number is (716) 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.

Service Area Map
**How Is My Water Treated?**

The ECWA’s two water treatment facilities use the conventional filtration method. At the plants, water undergoes the following treatment steps:

- 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, polyaluminium chloride, is added to the water, which causes suspended particles in the water to clump together to form floc.
- Flocculated 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 cleanwells or storage tanks before it is pumped to the public.
- High service pumps deliver the clean water through more than 3,380 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 69 million gallons a day to customers.

**How Is My Water Tested and Who Is Responsible for Making Sure It’s Safe?**

The ECWA conducts more than 70,000 tests annually to make sure all federal and state drinking water regulations are met. Our water is tested 24 hours a day, 365 days a year to assure the delivery of safe, clean water to every customer’s tap. The ECWA operates three New York State-certified laboratories, one located at each water treatment plant and a nationally recognized water quality laboratory in Lackawanna, which contains state-of-the-art testing equipment. The National Environmental Laboratory Accreditation Program (NELAP) certifies each of these laboratories. NELAP is a national accrediting body, made up of state, federal and commercial laboratory accreditation officials, that sets strict standards for public and commercial laboratories across the country.

Highly trained water treatment plant operators perform hourly tests at each phase of the treatment process. Our professional water quality staff also collects over 220 samples a month from the distribution system and tests for organic and inorganic compounds, and microbial contaminants. The results are sent to both the New York State and Erie County Health Departments to confirm that the ECWA is meeting all of its regulatory requirements.

The ECWA employs 254 dedicated professionals who continuously participate in educational training, licensing programs and professional associations to develop their skills to the highest possible levels.

These people live in your communities, are your friends and drink the same water you do. No wonder they are committed to making sure that your water is pure, safe and affordable.

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

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (800-426-4791) or the Erie County Health Department at 858-6089.

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 those 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.

**Fluoride**

Our water 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 of 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the New York State Department of Health requires that the Erie County Water Authority monitor fluoride levels on a daily basis. During the addition of fluoride in 2008, monitoring showed fluoride levels in your water were in the optimal range 100% of the time. However, due to supply issues, the fluoride addition to your water was interrupted during the months of August, October and November. None of the monitoring results during fluoride addition showed fluoride at levels that approached the 2.2 mg/l MCL for fluoride.

**Cryptosporidium and 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 protzoa 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 2008, the ECWA analyzed 42 water samples for Giardia and Cryptosporidium. No positive samples were detected in the ECWA’s treated water supply. Giardia were 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.

**Is the Public Informed If the Water Is Not Safe to Drink?**

EPA regulations mandate the ECWA notify its customers if water is not safe to drink. Water is not safe to drink when testing reveals that contaminants in the water exceed national limits for contaminant levels. In the unlikely event that water becomes unsafe to drink, the ECWA will issue a “boil water order” and notify the public by newspaper, television and radio announcements.

**ECWA’s Test Results for 2008**

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.
## DETECTED CONTAMINANTS

### Organic Compounds

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 10/8</td>
<td>2.2</td>
<td>6.78 ug/liter</td>
<td>Arsenic: Neurological effects; cancer; kidney effects</td>
</tr>
<tr>
<td>No 9/07</td>
<td>1.2</td>
<td>4.82 ug/liter</td>
<td>Cadmium: Neurological effects; kidney effects; cancer</td>
</tr>
</tbody>
</table>

### Metals, Inorganics, Physical Tests

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 10/8</td>
<td>9.3</td>
<td>8.75 ug/liter</td>
<td>Copper: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>No 10/8</td>
<td>1.2</td>
<td>4.82 mg/liter</td>
<td>Lead: Neurological effects; kidney effects; cancer</td>
</tr>
</tbody>
</table>

### Inorganic Compounds

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 10/8</td>
<td>8.0</td>
<td>7.64 ug/liter</td>
<td>Cesium: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>No 9/07</td>
<td>2.0</td>
<td>1.35 mg/liter</td>
<td>Magnesium: Neurological effects; kidney effects; cancer</td>
</tr>
</tbody>
</table>

### Biological Parameters

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 10/8</td>
<td>0.2</td>
<td>0.13 ug/liter</td>
<td>E. coli: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>No 9/07</td>
<td>0.1</td>
<td>0.07 mg/liter</td>
<td>Fecal Coliform: Neurological effects; kidney effects; cancer</td>
</tr>
</tbody>
</table>

### Radiological Parameters

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 10/8</td>
<td>0.0</td>
<td>0.01 pCi/liter</td>
<td>Radon: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>No 9/07</td>
<td>0.0</td>
<td>0.00 pCi/liter</td>
<td>Thorium: Neurological effects; kidney effects; cancer</td>
</tr>
</tbody>
</table>

### Microbiological Parameters

<table>
<thead>
<tr>
<th>Sample Date</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 10/8</td>
<td>0.0</td>
<td>0.01 CFU/ml</td>
<td>Bacteria: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>No 9/07</td>
<td>0.0</td>
<td>0.00 CFU/ml</td>
<td>Virus: Neurological effects; kidney effects; cancer</td>
</tr>
</tbody>
</table>

### ABBREVIATIONS AND TERMS

- AL: Action Level: the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- ARA: Action Level Reduction: the level below which a contaminant in drinking water below which there is no known or expected risk to health. MCLs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- CL: Control Level: the level of a drinking water disinfectant below which there is no known or expected risk to health. MCLs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- MCL: Maximum Contaminant Level: the highest level of a contaminant in drinking water below which there is no known or expected risk to health. MCLs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- MCLG: Maximum Contaminant Goal: the level of a drinking water disinfectant below which there is no known or expected risk to health. MCLs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- MRDL: Maximum Residual Disinfectant Level: the level of a drinking water disinfectant below which there is no known or expected risk to health. MCLs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- MRDLG: Maximum Residual Disinfectant Goal: the level of a drinking water disinfectant below which there is no known or expected risk to health. MCLs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- MRV: Maximum Residual Value: the concentration of a contaminant in drinking water above which treatment is required.
- MRV: Maximum Residual Value: the concentration of a contaminant in drinking water above which treatment is required.
- MU: Maximum Uniform Disinfectant: the level of a drinking water disinfectant below which there is no known or expected risk to health. MCLs do not reflect the benefits of the use of disinfectants to control microbial contamination.
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### COMPOUNDS OR ELEMENTS TESTED FOR BUT NOT DETECTED

<table>
<thead>
<tr>
<th>Source Water</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York State Department of Health Source Water Assessment</td>
<td>2.0</td>
<td>1.0 mg/liter</td>
<td>Dichloroacetic Acid: Disinfectant by-products</td>
</tr>
</tbody>
</table>

### New York State Department of Health State Water Source Assessment

The New York State Department of Health completed a draft Source Water Assessment of the supply's raw water sources to determine if the public water supply is meeting its goals of providing water that is safe to drink. The report is based on a review of data collected during 2008 and 2009. The results met all federal and state standards for drinking water quality.

### UNREGULATED SUBSTANCES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MCLG</th>
<th>Level Detected</th>
<th>Sources in Drinking Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acidity</td>
<td>10</td>
<td>5.0 ug/liter</td>
<td>Alum: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>Calcium</td>
<td>200</td>
<td>100 mg/liter</td>
<td>Calcium: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>Hardness</td>
<td>120</td>
<td>60 mg/liter</td>
<td>Calcium: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>Total Dissolved Solids</td>
<td>150</td>
<td>75 mg/liter</td>
<td>Calcium: Neurological effects; kidney effects; cancer</td>
</tr>
<tr>
<td>Total Organic Carbon</td>
<td>20</td>
<td>10 mg/liter</td>
<td>Calcium: Neurological effects; kidney effects; cancer</td>
</tr>
</tbody>
</table>

### TURBIDITY

- Turbidity is a measure of the cloudiness of water. ECWA monitors turbidity because it is a good indicator of the quality of the water. Turbidity may indicate the presence of industrial or agricultural runoff, or the presence of naturally occurring substances such as algae, mud, and silt.
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