



# Elyria Water Department

## 2010 Annual Water Quality Report

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### Elyria's Superintendents:

Samuel F. Jacob

Elyria Waterworks

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Harold Connerth

Water Distribution

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Sherman Jones

Public Utilities

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Roger Lehman

Backflow

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### Want to know more??

For more information

On this report

Contact the

Elyria Water

Pumping Plant

At 440-324-7669

Office Hours

7:00am-3:30pm

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The Elyria Water  
Plant

has received the

AWWA Safety

Award since 2005

\*\*\*\*\*

Dear Fellow Citizens:

I am pleased to present to you our 2010 Water Quality Report. The City of Elyria Water Pumping Plant has once again met and surpassed all Federal and State standards for drinking water. Water is critical to our daily life. We depend on it to drink, prepare food, and bath as well sanitation, fire protection and recreational uses.

We have once again been granted an unconditional license to operate our water plant in 2011. Water is one of our most valuable assets. Our forefathers had the foresight to purchase land in Lorain on Lake Erie so that a Water Plant could be constructed assuring the Citizens of Elyria with an unlimited supply of water.

Our staff of the Elyria Water Plant work 24 hours a day, 7 days a week to produce over 4 billion gallons of water a year for our citizens and customers. Our operators and lab technicians run thousands of test, yearly on the untreated lake water and finished water to ensure the highest quality of drinking water is pumped. I am very proud of our professional staff that produces the drinking water.

We will start construction on a new High Service water pumping station this year along with other plant improvements and studies. We are continuing to invest money into our critical infrastructure so that we can ensure a continued flow of the highest quality drinking water to you our citizens and customers now and in the future.

Our goal is and always has been, to provide our citizens and customers with a safe and dependable supply of drinking water. This report provides information on the water supplied to you in 2010. Please take a minute to review this report.

Sincerely,

*William M. Grace*

Mayor of Elyria

## LAKE ERIE our WATER SUPPLY

The United States has one of the safest water supplies in the world. However, national statistics don't tell you specifically about the quality and safety of the water coming out of your tap. That's because drinking water quality varies from place to place, depending on the condition of the source water from which it is drawn and the treatment it receives. Therefore we are providing to you as per the Safe Drinking Water Act, this water quality report which includes information obtained from evaluating the results of our water tests performed last year. This report includes a chart showing you all the contaminants that were detected.

Did you know that the Great Lakes are the best source of fresh water in the world? We are very fortunate to have Lake Erie as our source of water. The Elyria Water Works is a conventional surface water treatment plant having a capacity of producing 22 millions gallons of drinking water per day. The Water Works operates 24 hours per day, 365 days a year following the rules and regulations of the Ohio Environmental Protection Agency and the Ohio Administrative Code. Over 80,000 tests are performed each year by certified personnel at various stages in the treatment process and Distribution system.

## HISTORY OF OUR WATER SYSTEM

In 1871, Elyria's first Water Plant was built in Elyria on the Black River. In the late 1800's, the forefathers of the City of Elyria decided to build a water plant on the shores of Lake Erie. One reason given at that time was that the Black River in Elyria was becoming too polluted to be used as a reliable source of water. In 1904, the Elyria Water Works began to pump water to the citizens of Elyria from the shores of Lake Erie located on a 13-acre site in Lorain, Ohio. Elyria is believed to be the first inland city in the United States to pump treated water from the Great Lakes.

In 1922, a completely new plant was built on the same site, with major renovations in 1954 and 1969. Today Elyria owns and operates a state of the art Class IV surface water treatment plant that utilizes modern water treatment practices and has a state of the art computer system that monitors the plant and distribution system.



Original Water Plant 1871, -Mussey Ave-  
Elyria



Elyria's present day Water Plant located on Lake Erie in Lorain



## **Compliance with Applicable Laws**

As a condition for receiving utility services, water and sanitary sewer, from the City of Elyria, the owner and occupants of the property agree to comply with any applicable City, State and Federal laws, rules and regulations,

Installation and service of taps, service laterals or lines, curb stops, meters, meter pits and any plumbing fixtures or devices shall comply with City, State and Federal laws, rules and regulations. The work is to be completed by a licensed contractor in the City of Elyria. The owner/occupant shall provide access for City employees or representatives to inspect the completed work. Failure to comply with these regulations are grounds for turn off or denial of services to the service address.

## Lead Educational Information

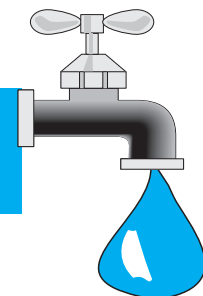
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Elyria Water Works is responsible for providing high quality 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 for the Safe Drinking Water Hotline at <http://www.epa.gov/safewater/lead>.

Young children are particularly susceptible to the effects of high levels of lead. To avoid exposure to lead:

Always use water from the cold tap for making baby formula, drinking or cooking and let the water run for a minute or more if the water hasn't been turned on for six or more hours.

**The City of Elyria has a current unconditioned license to operate  
our public water system.**



# Water Quality Table 2010

**This Table indicates that the City of Elyria's drinking water has met or exceeded all standards in 2010**

Contaminant	Date	Unit	MCL	MCLG	Maximum Detected	Range Detected	Violation	Typical Source of contaminants
<b>Inorganic Contaminantes</b>								
Arsenic	2010	ppb	50	N/A	< 3.0	< 3.0	no	Erosion of natural deposits, runoff from grass and electronics, production waste
Barium	2010	ppm	2	2	0.017	0.017	no	Discharge of drilling wastes. Discharge from metal refineries, erosion of natural deposits
Fluoride	2010	ppm	4	4	1.18	0.88-1.18	no	Erosion of natural resources, additive which promotes strong teeth
Nitrates	2010	ppm	10	10	1	0.0-1.08	no	Runoff from fertilizer use, leachng from septic tanks, sewage, erosion of natural deposits
<b>Microbiological</b>								
Turbidity	2010	NTU	100% <0.3 NTU	NA	0.2	0.06-0.20	no	soil runoff
Total Organic Carbon (TOC)*1	2010	none	N/A	TT removal > 1.0	1	1	no	normally present in environment
Total Coliform Bacteria	2010	TC	0	0	0	0	no	normally present in environment
<b>Residual Disenfectant</b>								
Total Chlorine	2010	ppm	4.0 (MRDL)	4.0 (MRDLG)	2.6	1.7-2.6	no	water additive used to control microbes
<b>Radiologicals</b>								
Gross Alpha	2009	pCi/l	15		3.0	3.0	no	erosion of natural deposits
<b>Volatile Organic Contaminants</b>								
Total Trihalomethanes	2010	ppb	80	N/A	58.7	17.5-58.7	no	byproduct of drinking water chlorination
Haloacetic Acids	2010	ppb	60	N/A	32.6	13.4-38.5	no	byproduct of drinking water chlorination
Bromodichlormethane	2010	ppb	N/A	N/A	11.8	5.9-13.7	no	byproduct of drinking water chlorination
Chloroform	2010	ppb	N/A	N/A	40.7	9.4-40.7	no	byproduct of drinking water chlorination
Dibromochloromethane	2010	ppb	N/A	N/A	4.4	2.2-4.4	no	byproduct of drinking water chlorination
<b>Synthetic Organic Chemicals</b>								
Alachlor	2010	ppm	0.002		<0.00021			Runoff from herbicides used on crops
Atrazine	2010	ppm	0.003		<0.00032			Runoff from herbicides used on crops
Simazine	2010	ppm	0.004		<0.00042			Runoff from herbicides used on crops
pH	2010		7.0-10.5	no goal set	7.5	7.3-7.5	no	Treatment Process
Hardness	2010	ppm	No level	No level set	146	119-146	no	Naturally occuring

**Maximum Contaminant Level or 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

**Maximum Contaminant Level Goal or 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.

**TOC:** The monthly TOC removal ratio is calculated as the ratio between the actual TOC removal and the TOC rule removal requirements. The ratio shown is the average of the ratios for 12 months

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

**N/A:** symbol meaning “not applicable”

**90th Percentile:** 90% of samples are equal to or less than the number in the chart.

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

**NTU** = Nephelometric Turbidity Units

**ppm** = parts per million, or milligrams per liter (mg/L)

**ppb** = parts per billion, or micrograms per liter (µg/L)

**<=** = A symbol meaning LESS THAN      **>=** = A symbol meaning GREATER THAN

**pCi/l** =picoCuries per liter, a measure of radioactivity in water

**\*1** Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1.0 NTU at any time. As reported above the Elyria Wter Plant's highest recored turbidity for 2010 was 0.2 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100%.



## More About Your Drinking Water

The EPA requires regular sampling to ensure drinking water safety. We conducted sampling for bacteria, inorganic, radiological, synthetic organic, and volatile organic contaminants sampling during 2010. Samples were collected for a total of 83 different contaminants, most of which were not in our water supply. The OEPA requires us to monitor for some contaminants less than once per year because their concentrations do not change frequently. Some of our data, though accurate, are more than one year old.

Our water system uses surface water drawn from two intakes in Lake Erie. For the purpose of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. By their nature, surface waters are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel time from source to intake.

Although the City of Elyria's surface water intakes are located offshore in Lake Erie, the proximity of Beaver Creek and Martin's Run increases the susceptibility of the source water to contamination. The City of Elyria's drinking water source protection area is susceptible to contamination from municipal wastewater treatment discharges, air contamination deposition, runoff from residential, agricultural and urban areas, oil and gas production and transportation, leaking underground storage

tanks and accidental releases and spills from rail and vehicular traffic as well as from commercial shipping and recreational boating.

The City of Elyria's public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie, Beaver Creek, and Martin's Run. More detailed information is provided in the City of Elyria's Drinking Water Source Assessment report, which can be obtained by calling Elyria Water Works, 440-324-7669.



## Important Health Information

**Some people may be more vulnerable** to contaminants 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 about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

**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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 activity.

Contaminants that may be present in source water include:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife,

**Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides**, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems

**Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

## **Frequently Asked Questions**

### **How often is my water tested?**

- \*\* Elyria Water Works (EWW) priority is safe drinking water. We perform test 24 hours a day 7 days a week on the tap water and throughout out the system to ensure safe drinking water.
- \*\* The lake water is tested hourly to detect containments before they enter the treatment plant.
- \*\* Lab techs test the water after each stage of the treatment process.
- \*\* Water samples are collected in the distribution system to monitor the quality of water once it has left the plant.
- \*\* Monitors are located through out our treatment plant and in the distribution system to continuously monitor the water quality.

**Why is fluoride added to my water?** Fluoride is added to the water to protect teeth, as required by state law passed in 1969. According to the American Dental Association, people who drink fluoridated water have a 20% to 40% reduction in the number of cavities that would have occurred without fluoride. Some home filtration devices remove fluoride from the water. Bottled water may not contain fluoride.

**Sometime the water is reddish-brown. Is this safe?** The reddish-brown color can be caused by rust from corrosion in EWW's pipes, the pipes in your home, or from corrosion in your home's water heater. This is not a health concern; the water meets all health based regulations.

If you have any questions, or your laundry is stained from rusty water , call Elyria Public Utilities at (440) 326-1570. They will deliver a laundry aid to remove the rust. **Do NOT** put stained laundry in the dryer. If you have rusty water, try running cold water slowly for several minutes.

**Why does drinking water sometimes look cloudy?** Cloudy water which clears quickly from the bottom up is caused by tiny air bubbles in the water similar to gas bubbles in soda. After a while, the bubbles rise to the top and disappear. This cloudiness occurs more often in the winter when the drinking water is cold. Air does not affect the safety of the water.

## **Elyria Public Utilities**

The office of Public Utilities is responsible for the billing and collection of water, sewer and sanitation receivables. The office records meter reads and processes all transactions relative to each account.

The Utility Billing Service department and Water Distribution department share the emergency response functions, we provide emergency response to main breaks and problems as the result of broken pipes, 24 hours a day 7 days a week.

Service and Office staffs respond to calls relating to service quality, connects, disconnects and meter repairs. The office also handles the termination of service for the non-payment of bills.

The Elyria Public Utilities office began an active "BACKFLOW" program in September of 1999. The focus of this program is to ensure that proper safeguards are in place to protect our drinking (potable) water system from the potential contamination risks through cross connections. Our Commercial Backflow program has completed over 5000 surveys to commercial and industrial sites; resulting in the installation of over 2,600 new devices and annual testing of nearly 5,000 devices.

The Utilities billing web site is online at [www.cityofelyria.org](http://www.cityofelyria.org) You may pay your Utility bill online, by check or credit card.

The Elyria Public Utilities office may be contacted at 440-326-1570, the office hours are 8:00am to 4:30pm, Monday –Friday.

The office is closed on weekends and all major holidays. If there is an emergency after hours contact the Elyria Police Dispatch. at 440-323-3302.

## **SEWER BACK-UP**

**Do you have problems with sewer back-ups in your Elyria home?**

**Call the City of Elyria Wastewater Plant 24 hours a day 7 days a week, at 440-366-2211-option 0.**



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## YOUR 2010 ANNUAL WATER QUALITY REPORT



### ***WATER: The Pure Facts***

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- ♦ *Water constitutes 40% of the reported daily beverage consumption in the USA*
- ♦ *You can survive about a month without food, but only 5-7 days without water.*
- ♦ *The average five minute shower uses between 15-25 gallons of water.*
- ♦ *Each person uses about 100 gallons of water a day at home.*
- ♦ *You can refill an 8oz. Glass of water approximately 15,000 times for the same cost as a six pack of soda pop.*
- ♦ *Of all the earth's water 97% is salt water 2% is frozen water and only 1% is available for drinking water.*

### **Come on Man, put it in the can!**



The careless and casual handling of waste creates litter. One person, one business, one organization can positively affect the behavior of others in their community. **YOU can make a difference!**



No matter where litter starts, it moves. From streets and highways to parks and waterways. Wind and weather moves litter around a community.

#### **Help prevent litter:**

Set an example for others by always using trash receptacles and Don't Litter

Never throw anything from your vehicle windows.



**SAVE THE FISH**



Grass clippings, leaves, pop cans and other forms of litter in the roadway cause plugging of the storm drains along the sides of the road resulting in the flooding of streets when it rains. Some of these materials wash into the storm sewers with the rain and end up in the Black River increasing the amount of solid materials in the river and detract from the beauty of the river. Some of these solids break down, using up oxygen in the river in the process leaving less oxygen in the water for the fish and other aquatic life. You can do your part by keeping grass clippings and litter out of the streets.