

2012



Samuel F. Jacob

Elyria Water Works Superintendent

Dave Rothgery

Water Distribution

Department Head

Sherman Jones

Public Utilities

Department head

Terry Korzan

Wastewater Superintendent

**Water Service
Contact Numbers**

Water Billing

440-326-1570

Sewer Problems

440-366-2211 Option-0

Water Main Breaks (daytime)

440-322-2927

Non-emergency Elyria Police

440-323-3302

Elyria Water Department Annual Water Quality Report

Dear Fellow Elyrian,

I am pleased to present this report on the quality of water we purify and deliver from Lake Erie to your doorstep and several surrounding communities. While this report meets a regulatory requirement, it also offers us the opportunity to share information about steps we are taking to ensure the integrity of our water system, and improve the quality of other services in the City of Elyria.

Keeping our water supply pure takes a team approach. This past year that took on a whole new meaning as the Elyria Fire Department (EFD) Dive Team joined forces with the Elyria Water Works Department to address a problem with zebra mussels clogging the Water Treatment Plant's two water intake pipes that extend out into Lake Erie.

With the assistance of **REEFY**, a small dive boat named after Elyria's visionary Mayor Philip D. Reefy (1900-1904) who bought the Lake Erie coastal land and built Elyria's Water Treatment Plant in 1901, the EFD Dive Team now makes regular runs - inspecting, videotaping and scraping the invading zebra mussels from the pipes. This team work saved the city \$15,000 last year, or the equivalent of three runs by a private dive team that in the past has cost the city \$5,000 per dive. This new practice, combined with other improvements at the plant like the continued work on the new High Service Pumping Station, two new partially grant-funded low service pumps, and a new Raw Water Screen that screens out large particles and fish before they reach the plant, all contribute to our high water quality.

The City of Elyria is working hard to deliver the best possible city services at the lowest possible cost. You can read more about other practices that we have put in place to save you, the taxpayer, over \$1 million in 2012 by reading the city's **2012 Elyria State of the City Report: Keep the Momentum Going**, located on the City's website at www.cityofelyria.org.

The report highlights a number of other accomplishments some of which include: our new partnerships including the Cascade Park/Lorain County Metro Parks Agreement; our new Economic Development Tool Kit to attract and retain businesses; new strategies to promote safety and stronger neighborhoods; \$7 million of infrastructure improvements; and our new focus on volunteerism and philanthropy that produced free summer camps for 500 children, more volunteer auxiliary police, summer concerts, and the holiday lighting at Finwood Estate and Ely Square.

The momentum is building towards a brighter future for Elyria. Working together, we can ensure the highest quality city services at the most affordable cost. Thank you in advance for your consideration.

Sincerely,

Holly C. Brinda, MPA
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.

The Great Lakes are the best source of fresh water in the world? We are fortunate to have Lake Erie as are 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.

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 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 Water Plant located on Lake Erie in Lorain

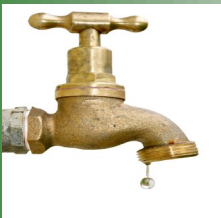


Water tower on Murray Ridge

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, it is responsible for your home plumbing materials or faucet fixtures.

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 at the Safe Drinking Water Hotline at <http://www.epa.gov/safewater/lead>.

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

Water Quotes

"Water is the driving force in nature" - Leonardo Da Vinci

"We forget that the water cycle and the life cycle are one." - Jacques Cousteau

Water Quality Table 2012

Contaminant	Date	Unit	MCL	MCLG	Detected	Range	Violation	Typical Source of contaminants
<i>Inorganic Contaminants</i>								
Barium	2012	ppm	2	2	0.02	0.02	no	Discharge of drilling wastes. Discharge from metal refineries, erosion of natural deposits
Fluoride	2012	ppm	4	4	1.3	0.80-1.30	no	Erosion of natural resources, additive which promotes strong teeth
Nitrates	2012	ppm	10	10	1.08	<0.1-1.08	no	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits

Microbiological

Turbidity	2012	NTU	100% <0.3 NTU	NA	0.5	0.05-0.5	no	soil runoff
Total Organic Carbon (TOC)	2012	none	N/A	TT removal > 1.0	2.5	1.7-2.5	no	normally present in environment

Residual Disinfectant

Total Chlorine	2012	ppm	4.0 (MRDL)	4.0 (MRDLG)	2.49	1.66-2.49	no	water additive used to control microbes
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Volatile Organic Contaminants

Total Trihalomethanes	2012	ppb	80	N/A	58.38	28.7-78	no	byproduct of drinking water chlorination
Haloacetic Acids	2012	ppb	60	N/A	35.75	11.4-48	no	byproduct of drinking water chlorination

Other Water Quality Parameters of interest

pH	2012		7.0-10.5	no goal set	7.95	7.36-7.95	no	Treatment Process
Hardness	2012	ppm	No level	No level set	143	103-143	no	Naturally occurring

<i>Lead and Copper</i>			Action level	MCLG	Concentration at 90th percentile	Range	# of sites above action level	
Lead	2012	ppb	15	0	2.3	<2.0-43	0	Corrosion of household plumbing fixtures , erosion of natural deposits
Copper	2012	ppm	1.3	1.3	0.056	<0.002-0.087	0	Corrosion of household plumbing fixtures , erosion of natural deposits

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 technology.

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 GREATER THAN

< = A symbol meaning LESS THAN

MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants

"Maximum residual disinfectant level" or "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.

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 2012 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 maybe in the water source:

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.



Testing Lab At Elyria Water Works

*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 water plant.

*Monitors are located through out the 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.

Do the zebra mussels in the Lake Erie pose any danger to water quality? NO, they don't. These mullusks multiply very quickly and can block water intact screens, but pose no threat at all to the public health.

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.

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

If there is an emergency after hours contact the Elyria Police Dispatch at 440-323-3302.





City of Elyria

131 Court Street

Elyria, Ohio 44035

www.cityofelyria.org

2012 ANNUAL WATER QUALITY REPORT



WATER: The Pure Facts

- ♦ *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.



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!



SAVE THE FISH



Grass clippings, leaves, pet waste, 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.