Elyria Water Department
2011 Annual Water Quality Report

Elyria's Department

Heads

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For more

Information

On this report

Contact the

Elyria Water

Pumping Plant

At 440-324-7669

Office Hours

7:00am-3:30pm

Dear Fellow Elyrian,

I am pleased to present to you this full report on the quality of water we purify and deliver from Lake Erie to Elyria and three surrounding communities. Providing you with this report is a regulatory requirement, but it is also our way of sharing the steps we are taking to ensure that our community and others we serve have a continuous flow of pure, high quality drinking water now and in the future.

Among current steps we are taking to ensure the integrity our water system include the construction of a new High Service Pumping Station and installation of security fencing, alarms, and other technology that protects the plant from intruders and immediately notifies the Plant Manager in the case of a problem.

In addition to steps taken by the City, citizens also have a shared responsibility to protect our drinking water. Here are just a few ways you can help.

- Identify your watershed and learn where the water goes that is draining off of your property.
- Test your soil before applying fertilizers or other nutrients to avoid over-application.
- Patch bare soil areas in your yard to prevent erosion and runoff.
- Sweep, rather than hose down sidewalks, driveways, and other hard surface areas.
- Replace paved surfaces, such as garden paths or driveways, with porous material to allow water to seep into the ground.
- Use a funnel for pouring when filling your lawn mower or other gasoline-powered tools to prevent spillage that will contaminate the ground water.
- Dispose of paint and household hazardous waste at the Lorain County Collection Center, 540 South Abbe Road, Elyria.

Thank you in advance for your consideration and cooperation. Working together, we can ensure a safe and dependable supply of high quality drinking water for our community.

Sincerely,

Holly C. Brinda

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. This report includes a chart showing you all the contaminants that were detected

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 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.

The City of Elyria has a current unconditioned license to operate

our public water system.

Water Quality Table 2011

Contaminant	Date	Unit	MCL	MCLG	Detected	Detected	Violation	Typical Source of contaminants
Inorganic Contaminantes								
Barium	2011	ppm	2	2	0.018	0.018	no	Discharge of drilling wastes. Discharge from metal refrineries, erosion of natural deposites
Fluoride	2011	ppm	4	4	1.3	0.81-1.30	no	Erosion of natural resources, additive which promotes strong teeth
Nitrates	2011	ppm	10	10	1.21	<0.1-1.21	no	Runoff from fertilizer use, leachng from septic tanks, sewage, erosion of natural deposits
Microbiological								
Turbidity*1	2011	NTU	100% <0.3 NTU	NA	97% <0.3 NTU	0.1-6.1	yes *1, *2	soil runoff
Total Organic Carbon (TOC)	2011	none	N/A	TT removal > 1.0	2.2	1.4-2.2	no	normally present in environment
Total Coliform Bacteria	2011	TC	0	0	0	0	no	normally present in environment
Residual Disenfectant								
Total Chlorine	2011	ppm	4.0 (MRDL)	4.0 (MRDLG)	2.58	1.70-2.58	no	water additive used to control microbes
Volatile Organic Contaminants								
Total Trihalomethanes	2011	ppb	80	N/A	44	18.1-61.8	no	byproduct of drinking water chlorination
Haloacetic Acids	2011	ppb	60	N/A	29	17.3-38.0	no	byproduct of drinking water chlorination
pH	2011		7.0-10.5	no goal set	7.57	7.27-7.57	no	Treatment Process
Hardness	2011	ppm	No level	No level	150	116-150	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

"Maximum residual disenfectant level goal" or "MRDLG": the level of drinking water disinfectant below which tghere is no known or expected risk to Health. MRDLGs do not reflect the benefits of the use of disenfectants to control microbaial contaminants

"Maximum residual disenfectant level" or "MRDL": the highest level of a disenfectant allowed in drinking water. There is convincing evidence that addition of a disenfectant is necessary for control of microbial contaminants.

*1 The City of Elyria water system had an acute turbidity treatment technique violation during the month of December 2011. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial 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. The City of Elyria has taken the following steps to correct this violation and prevent future violations from occurring: the equipment malfunction was repaired and safeguards were installed in the system to correct this problem. Extensive sampling in the distribution system was done to ensure that bacteria was not present during the time period.

*2 We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. In accordance with Ohio Administrative Code 3745-81-74 (A), turbidity measurements shall be performed on representative samples of filtered water at least every 4 hours that the water treatment plant is in operation. If using grab sampling for turbidity monitoring, samples shall be obtained within the first and last house of the filter operation and at least every 4 hours in between. Between 12:00 am 2/12/2012 and 12:00 am 2/13/2012, the water plant was operated for 24 contiguous hours which requires that 6 samples be collected; however, only 5 samples were taken. We failed to collect the correct number of combined filter effluent turbidity samples in violation of rule 3745-81-74 (A) of the Ohio Administrative Code.

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 2011. 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. 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 (1-800-426-4791).

Frequently Asked Questions

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.

Why is Chlorine added to my water? is added to drinking water as a disinfectant. Treatment plants add chlorine at a constant dosage to maintain an adequate concentration throughout the distribution system, as required by the Environmental Protection Agency.

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.

How often is my water tested? Our priority is safe drinking water. We perform tests on the water 24 hours a day, seven days a week, Samples from the tap and the distribution system ate tested daily. Plant operators check the water quality hourly to ensure compliance with all standards as set by the EPA.

Why does drinking water often look cloudy when first taken from a faucet and then clear up?
The cloudy water is caused by tiny air bubbles in the water similar to the gas bubbles in carbonated soft drinks. After a while, the bubbles rise to the top and are gone. This type of cloudiness occurs more often in the winter, when the drinking water is cold.

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 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.

City of Elyria

131 Court Street

Elyria, Ohio 44035

www.cityofelyria.org

2011 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!

Only Rain in the Drain

By practicing healthy household habits, residents can decrease the amount of common storm water pollutants from entering our storm sewers and eventually the Black River.

- Pick up pet waste and dispose of properly.
- Use pesticides and fertilizers sparingly. Avoid application if the forecast calls for rain.
- Sweep up grass clippings and other yard debris and compost or dispose of properly.
- Vegetate bare spots in your yard to prevent soil erosion.