2017 City of Elyria Water Plant

Consumer Confidence Report

Dear Fellow Elyrians and Other Water Customers,

As Mayor of Elyria, it is my great privilege to present to you this 2016 Water Quality Report during this very important 200th year Bicentennial Celebration of the City of Elyria. Just like Heman Ely capitalized on the many assets in and around Elyria to build his dream in 1817, today's city leaders are also making the most of those assets as we work to preserve the best of the past, while making way for the new.

Not surprisingly, water has always played an important role in Elyria's evolution. In March of 1817 Heman Ely set foot upon a parcel of untamed countryside 12,500 acres in size and teeming with endless possibility. It was a land rich with potential, replete with fertile soil and churning with the opportunity for free power from the majestic Black River and its two waterfalls. In 1824, the Old Red Mill was built at the East Falls, an icon that to this day sits proudly on the patch worn by every Elyria police officer.

Industry began to pop up and in 1879 Elyria erected its first real water system stemming from the west branch of the Black River, just west of the 15th Street Bridge. The water system included a low dam creating a pool in the river, from which water was diverted through pipes into two settling chambers made of brick and cement. A pump house on the riverbank housed machinery which pumped the water into a wooden tank atop a 90' tower. Remnants of the tower's stone block walls still stand today as a monument to when Elyria drew water from the Black River instead of Lake Erie.

Elyria made the switch from river water to lake water in 1902. Having the foresight to purchase this lakefront property, now within the City of Lorain, the City of Elyria became the first inland city in the United States to pump treated water from the Great Lakes. A water plant was built and the 20" cast iron main that originally pumped water from the Lake Erie to Elyria is still in use today. Elyria supplies over 12.3 million gallons of water to Elyria and a number of neighboring communities.

As you will see from the report, Elyria continues to lead the way in providing safe, affordable, accessible high quality drinking water. One of the reasons for our success is the ongoing steps taken by our highly educated and trained staff to improve the facilities. In 2016 a $4.6 million Solid Dewatering Facility was built at the lakefront plant. The addition improves process efficiency of removing debris and sludge from the water while reducing the cost of the operation by condensing the byproduct and lowering the cost of its removal from the plant.

I hope you've enjoyed learning a little but more about Elyria's past and how we continue to set the stage for future success. To learn more about how Elyria has been a pioneer and the first at many endeavors, and about all of the exciting events and activities planned for our Bicentennial, please visit the city's website at www.cityofelyria.org. Best wishes for a safe, healthy and pleasant 2017. I hope to see you at many of the Bicentennial events!

Sincerely,

Holly C. Brinda, MPA
Mayor

City of Elyria Water Plant

2017 Water Quality Report

The City of Elyria is proud to present our 2017 Water quality report that covers all testing from January 1, 2016 to December 31, 2016. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

The City of Elyria Water Pumping Plant has been making clean drinking water for customers since 1902, over 115 years. We work 24 hours a day, seven days a week to ensure that you, our customer, has a ready, unlimited source of drinking water that meets all of the Ohio EPA's standards. We operate and maintain a state of the art conventional surface water plant, located in Lorain, on the shore of Lake Erie. We have five water towers and two remote pump stations located in the City of Elyria. Over 4.4 billion gallons of water was pumped in 2016. We serve over 120,000 people in a number of communities. We are truly a Regional Water plant serving the needs of our customers.

Where does your water come from?

The United States has one of the safest water supplies in the world. Elyria's water comes from Lake Erie. 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.

What are sources of contamination to drinking water?

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: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and

can also come from gas stations, urban Storm water runoff, and septic systems; (E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Protecting our drinking water source from contamination is the responsibility of all area residents. Please dispose of hazardous chemicals in the proper manner and report polluters to the appropriate authorities. Only by working together can we ensure an adequate safe supply of water for future generations.

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.

In order to ensure that tap water is safe to drink, USEPA 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. 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.

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 Federal Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

The City of Elyria Water Plant also has an emergency connection with the Lorain County Rural Water District which is only used when the Water Treatment Plant is not operating properly or during problems with the system. During 2016 we did not use any water from Lorain County Rural Water District.

Who needs to take special precautions?

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

About your drinking water.

The EPA requires regular sampling to ensure drinking water safety. The City of Elyria Water Plant conducted sampling for bacteria, inorganic, synthetic organic, and volatile organic contaminants during 2016. Samples were collected for a total of 83 different contaminants most of which were not detected in the City of Elyria Water Plant water supply. The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

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 City of Elyria Water*** 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 from the Safe Drinking Water Hotline at 800-426-4791or at http://www.epa.gov/safewater/lead.

Revised Total Coliform Rule (RTCR) Information

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems were required to comply with the Total Coliform Rule from 1989 to March 31, 2016, and begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the Public Water System (PWS).

How can I learn more or what if I have any questions?

You can contact Samuel F. Jacob, Water Plant Superintendent who has prepared this report. Mr. Jacob has over 41 years of experience in Water Treatment, and Class IV Water Plants. He currently holds an Ohio EPA Class IV Water Certificate. If you have any questions, concerns or would like additional information, please contact him at 440-324-7669 or 440-244-4310 extension 201.

How to Participate in Decisions Concerning Your Drinking Water

Elyria City Council meets the first and third Mondays, January through December, except for June, July and August, when they meet only on the first Monday. The meetings take place at 7:00 PM at Elyria City Hall. Please visit http://www.cityofelyria.org/ for access to city Council meeting information.

License to Operate (LTO) Status Information

In 2016 we had an unconditioned license to operate our water system

Compliance with Applicable Laws

As a condition for receiving utility services, water, sanitary sewer and trash pickup, 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 as well as the City of Elyria's Water Rules and Regulations Chapter 939.

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, as well as the City of Elyria's Water Rules and Regulations Chapter 939.

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 is grounds for turn off or denial of services to the service address.

Water Quality Table 2016

Contaminant	Date	Unit	MCL	MCLG	Detected	Detected	Violation	Typical Source of contaminants
Inorganic Contaminants								
Barium	2016	ppm	2	2	0.02	0.02	no	Discharge of drilling wastes. Discharge from metal refineries, erosion of natural deposits
Fluoride	2016	ppm	4	4	1.29	0.84-1.29	no	Erosion of natural resources, additive which promotes strong teeth
Nitrates	2016	ppm	10	10	0.67	0.10-0.98	no	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
Microbiological								
Turbidity	2016	NTU	100% <0.3 NTU	NA	0.16 & 100%	0.06-0.16	no	soil runoff
Total Organic Carbon (TOC)	2016	none	N/A	TT removal > 1.0	1.08	1.0-1.76	no	normally present in environment
Total Coliform	2016	% positive	5%	0	0%	0	no	Bacteria Present in environment
Residual Disinfectant								
Total Chlorine	2016	ppm	4.0 (MRDL)	4.0 (MRDLG)	1.54	1.11-1.76	no	water additive used to control microbes
Volatile Organic Contaminants								
Total Trihalomethanes	2016	ppb	80	N/A	46	14.5-72.7	no	byproduct of drinking water chlorination
Haloacetic Acids	2016	ppb	60	N/A	24.2	6.7-49.4	no	byproduct of drinking water chlorination

Lead and Copper	**Action level (AL)**	**Individual Results over the AL**	**90% of test results were less than**	**Violation**	**Year Sampled**	**Typical Source of Contaminants**
Lead (ppb)	15 ppb	0	ND	NO	2015	Corrosion of household plumbing fixtures, erosion of natural deposits
	0 out of 30 samples were found to have levels in excess of the lead action level of 15 ppb					
Copper (ppm)	1.3 ppm	0	0.11	NO	2015	
	0 out of 30 samples were found to have levels in excess of the copper action level of 1.3 ppm					Corrosion of household plumbing fixtures, erosion of natural deposits
Microcystins						
Microcystins	2016	0.3 Children under 6 years 1.6 anyone 6 or older	ND	NA	no	Toxins produced by harmful algal blooms
Radioactive Substances (PCI/L						
Gross Alpha	2015	pCi/L	15	0	ND	N/A	no	Erosion of natural deposits
Radium 228	2015	pCi/L	15	0	ND	N/A	no	Erosion of natural deposits

How to read the water quality table: the EPA establishes the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The table shows the concentrations of detected substances in comparison to regulatory limits. Substances not detected are not included in the table

Definitions of some terms contained in this report:

Maximum Contaminant Level Goal (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.

Maximum Contaminant level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Parts per Million (ppm) or Milligrams per Liter (mg/L): are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

Parts per Billion (ppb) or Micrograms per Liter (µg/L): are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (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.

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

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

The "<"symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

Picocuries per liter (pCi/L): A common measure of radioactivity.

NTU: Nephelometric Turbidity Units A measurement of the clarity of the water.

N/D: Non-Detects: Laboratory analysis indicates the contaminant is not present

TOC (Total Organic Carbon): 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

Turbidity: 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 5 NTU at any time. As reported above, the City of Elyria's highest recorded turbidity result for *2016* was *0.16* NTU and lowest monthly percentage of samples meeting the turbidity limits was *100%.*

Microcystins: Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin.

Come on man, put it in the can!

The careless and casual handling of waste creates litter. Knowing more about the causes of liter and where it comes from is a good place to start in addressing litter prevention. One person, one business, one organization can positively affect the behavior of other in the 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.

What can YOU do?

Each person must accept responsibility for their actions and influence the actions of others around them in their home, school, and community. By modeling proper trash and waste disposal, you will cause others to consider their actions, too.

Help prevent litter:

Set an example for others by always using receptacles and NOT littering.

Carry a litter bag in your vehicle and use it!

Newer throw anything from your vehicle windows!

Please don't litter!

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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.

Elyria Water Pumping Plant

The Elyria Water Pumping Plant is actually located in Lorain Ohio on the lakefront. In the late 1800's, the City of Elyria purchased property on the shore of Lake Erie, which is now inside the city limits of Lorain, to build a water plant and pump treated water to its citizens. The original Water Plant on West 15th Street in Elyria was sold to the Elyria Iron and Steel Company in 1904 and the new water plant began pumping treated water from Lake Erie to Elyria in a 20″ cast iron main, still in use today. Elyria is believed to be the first inland City in the United States to pump treated water from the Great Lakes.

Elyria supplies water not only to its citizens, but surrounding Townships, North Ridgeville, Amherst, and the Northern Ohio Rural Water Authority. We treat an average of 12.3 million gallons of water a day. Because of the water plant capacity, water use restrictions are not required during the hot summer months when demands increase.

The Elyria Water Works is a conventional surface water treatment plant using Lake Erie as its only source of water. Two water intakes are used to bring lake water into the plant, a 24″ diameter line installed in 1903 and a 42″ installed in 1946. Zebra mussels which first became a threat of clogging water intakes in 1987 have been seen on Elyria's intakes but annual maintenance and inspections have prevented the mussels from becoming a problem. The raw lake water is pumped into the Rapid Mix tanks and flows by gravity through the rest of the treatment process before being pumped to the force mains. The principle steps through the treatment process are rapid mixing, flocculation, coagulation, sedimentation, rapid sand filters, and clearwells. Water from the Clearwells is pumped to the consumers through three force mains, 20, 30, and 48 inches in diameter at a pressure leaving the water plant of approximately 110psi. 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.

Elyria Public Utilities

The office of Public Utilities is responsible for the billing and collection of Water, Sewer, and Sanitation Services. The office records meter reads and processes all transactions relative to each individual account.

The Public Utilities department and the Water Distribution department provide emergency response to main breaks and other water problems 24 hours a day, 7 days a week.

The Elyria Public Utilities office has an active "BACKFLOW" program. The focus of this program is to ensure that the proper safeguards are in place to protect our drinking water system from possible contamination through cross connections. Our Commercial Backflow program has completed over 5,000 surveys to commercial and industrial sites; resulting in the installation of over 3,105 new devices and annual testing of nearly 5,000 devices.

As an Elyria Public Utilities customer you may appreciate the convenience of our Automatic Bill Payment System. Visit our website for details or call our office for additional information. We would be glad to answer any questions you may have.

The Elyria Public Utilities Office is located at 131 Court Street - Suite 102, Elyria, OH 44035

Water Billing Phone (440) 326-1570 Fax (440) 326-1588
Website: www.cityofelyria.org

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Water Distribution

Water Service Contact Numbers
Water Main Breaks (daytime) 440-326-1570
After Hour Water Emergencies: Elyria Police 440-323-3302

Starting at the City of Elyria Waterworks on the shore of Lake Erie, the City of Elyria Water Distribution Dept. maintains over 230 miles of water mains ranging from 4" to 48" diameters. Features include 2600 fire hydrants and 5043 valves. The Department leadership holds all applicable and necessary certificates issued by the Ohio EPA.

For more information on the functions of Water Distribution and related topics see us on the web at www.cityofelyria.org under the Department tab.

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Did You Know?

Many sewer backups in homes each year can be prevented by not disposing of cooking grease down the drain. For information about easy ways to dispose of cooking grease call:

Wastewater Pollution Control at: (440) 366-2211 Ext. 0

Sewer Problems: 440-366-2211 Ext. 0

Pollution Prevention Tip

Grass clippings, leaves, plastic bags, beverage cans, food wrappers and other forms of litter in the roadway can cause plugging of the storm drains along the sides of the road, resulting in the flooding of streets when it rains. A lot 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 detracting from its inherent natural beauty. As these solids break down, they use up oxygen in the river, leaving less oxygen for the fish and other aquatic life. Do your part to protect our environment and our neighborhoods. The City of Elyria instituted a new waste and recycling program to allow for convenient, safe, and responsible disposal of recyclable goods from home, and recently initiated a partnership with Barnes Nursery to establish the Elyria Regional Compost Facility, located at 45 Chestnut Street, where grass clippings, leaves, and other yard waste can be taken for easy disposal. Visit www.sort4elyria.com for more information. Please don't litter.

City of Elyria Wastewater Pollution

Control (440)366-2211

Have you ever?

- **Failed to pick up after your dog while out on a walk**? Dog waste washes from the ground and streets into storm drains, and flows straight to the rivers, streams and lake — untreated. When walking your pet, remember to pick up the waste and dispose of it properly. Leaving pet waste on the ground increases public health risks.

Remember to bring a bag and clean up after your dog....they're not pooper scoopers.

- **Overwatered your lawn after applying fertilizers/pesticides**? Do not overwater after fertilizing. Overflow water and your fertilizer will run into the street, down the storm drain and into the rivers, streams and lake — untreated. Do not fertilize before a rain.

- **Disposed of used motor oil, household hazardous wastes in the street, gutter or garbage?** Take them to a recycling center.

REMEMBER THE STORM DRAINS ARE FOR THE RAIN!!!

These actions pollute our neighborhoods, contaminate our lake and area waterways, kill marine life and cause beach closures. Remember, storm drains lead straight to the rivers, streams and lakes without treatment.

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New 250,000 thousand gallon sludge holding and dewatering tank and Centrifudge building at Elyria Water Pumping plant in Lorain Set to go into operation in June of 2017

The City of Elyria Water Pumping Plant is constructing a 4.6 million dollar sludge project. It includes a 250,000 gallon sludge holding and dewatering tank and centrifuge to remove solids from the sludge. Sludge at 2-4% solids enter the centrifuge where it is the sludge is spun and the solids are separated from the water. Solids are then dumped into a trailer for disposal in local landfill facilities.

Citizens have two resources that can be utilized for receiving important messages from the City of Elyria and other local government agencies:

Nixle:

The Nixle Community Information Service allows us to create and publish messages to be delivered to subscribed residents instantly via secure text message and/or email. Notifications can also be accessed online at Nixle's web site at: http://local.nixle.com/city-of-elyria-ohio/

Nixle keeps you up-to-date with relevant information from many public safety agencies and is a free service.

Sign up to receive alerts from your local agencies at http://local.nixle.com/register/
...or text your **ZIP CODE** to **888777** for mobile alerts.

Lorain County Emergency Alert Registration

Sign up for **Lorain County Alerts!** By signing up, you will receive Lorain County emergency alerts and public service announcements. In the event of an emergency, an alert may be sent to the phone number(s) you provide and/or your email address.

This is a free service provided by Lorain County and your local jurisdiction; however normal messaging fees may apply. To receive text messages to your cell phone, your cell phone must have text messaging capabilities. Notifications are dependent upon external providers (phone carrier, cell phone, email). Lorain County cannot guarantee notifications will be received by the intended recipient. By registering below, you will not receive unsolicited calls, and neither Lorain County, your local jurisdiction, nor the system vendor sells the contact number database.

Sign up for Lorain County Emergency Alerts at https://entry.inspironlogistics.com/lorain_oh/wens.cfm