



Erie County

Vermilion District

2022 Water Quality Report

Erie County Water Division
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Dear Valued Customer,

The Erie County Water Division has prepared the following report to provide information to you, the consumer, on the quality of our drinking water for the year 2022. 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.

Water provided by Erie County Water meets or exceeds water quality standards set by the Ohio Environmental Protection Agency (OEPA) and we have a current, unconditional license to operate our water system. If you have any questions or concerns about your drinking water, please call the Erie County Water Division, Monday through Friday 7:00 a.m. to 3:00 p.m. at (419) 627-7666.

We encourage public interest and participation in our community's decisions affecting drinking water. We are open and look forward to learning public opinion from 7:00 a.m. to 3:00 p.m., Monday through Friday at the Huron Basin Wastewater Treatment Plant, 554 River Road, Huron. Regular Erie County Commission meetings are also held every Thursday at 9:00 a.m. in the Commissioners' Chambers on the 3rd Floor of the Service Center at 2900 Columbus Avenue, Sandusky.

Overview

The Erie County Water Distribution System is split into six different Public water systems per the Ohio EPA:

- *Perkins District* - serving Perkins Township and parts of Huron, Milan, Groton, Margareta, and Oxford Townships.
- *Margaretta District* - serving Margareta Township and the villages of Bay View and Castalia.
- *Huron South* - serving Berlin Heights, and Berlin and Huron Townships
- *Huron East* - serving Huron and Vermilion Townships
- *Vermilion and Vermilion West* - serving Vermilion Township

The Erie County Water Division operates 10 pump stations and 8 water storage tanks which deliver water through 372 miles of water mains ranging in size from 4 inches to 24 inches. In 2022 Erie County Water distributed more than 2.2 billion gallons of water to its customers.

Substances Expected To Be In My Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Erie County purchases treated water from the City of Sandusky, the City of Huron, the City of Vermilion and Northern Ohio Rural Water Authority. The sole source of drinking water comes from Lake Erie. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can, in some cases, pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include, but are not limited to:

- *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 stormwater 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, urban stormwater runoff, and residential uses;
- *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 stormwater runoff, and septic systems;
- *Radioactive Contaminants* - which can be naturally-occurring or be the result of oil and gas production and mining activities.

Source Water Assessment - Where does your water come from?

City of Elyria - Our water system uses surface water drawn from two intakes in Lake Erie. 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. For the purpose of source water assessments, in Ohio, all surface waters are to be 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.

Based on information compiled for this assessment, the City of Elyria's drinking water source protection area is susceptible to immediate and future contamination from municipal wastewater treatment discharges, air contamination, deposition, runoff from residential, agricultural, and urban areas, oil and gas production, transportation, leaking underground storage tanks, accidental releases and spills from railcars and vehicular traffic as well as from commercial shipping operations 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 at (440) 324-7669.

City of Lorain - The Lorain Water System uses surface water drawn from Lake Erie. For purposes 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 easily contaminated by chemicals and pathogens. Compared to ground water, contaminants in surface water tend to move swiftly, so an upstream spill may rapidly arrive at the public drinking water intake with little warning or time to prepare.

The City of Lorain's surface water intake is located close to the Black River which increases the susceptibility of the source water to contamination. The City of Lorain's drinking water source protection area contains a moderate number of potential contaminant sources. These include accidental spills, releases associated with commercial shipping and recreational boating, air contaminant deposition, contaminants from industries and agricultural runoff, contaminants associated with oil and gas production and transportation, sediments from river dredging and disposal operations, natural erosional processes, contaminated stormwater runoff from urban areas, municipal and home sewerage treatment system discharges, and combined sewer overflows.

The City of Lorain's Public Water System treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. Implementing measures to protect Lake Erie and the Black River can further decrease the potential for negative impacts on water quality. More detailed information is provided in the City of Lorain's Drinking Water Source Assessment report, which can be obtained by contacting Superintendent Neuronsy C. Adams at (440) 204-2280.

Additional Health Information

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits of 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 the potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline, toll free at (800) 426-4791.

Important Health Information About Lead

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 Erie County Water Division 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 or at www.epa.gov/safewater/lead.

Immuno-Compromised Persons

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immune-compromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, anyone with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their 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 at (800) 426-4791.

Erie County Water Quality Table

The table below shows the results of our water quality analyses. It includes all the contaminants that were actually detected in Erie County's drinking water. It also contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the unusual sources of such contamination, and footnotes explaining our findings.

Water Quality, Definitions, And Measurement Units

You may find some of the table terms and abbreviations unfamiliar. To help you better understand the terminology, we're providing the following definitions and measurement units:

- **AL** – Action Level – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a system must follow.
- **MCL** – Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG as feasible using the best available treatment technology.
- **MCLG** – Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's allow for a margin of safety.
- **MRDL** – Maximum Residual Disinfectant Level - 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.
- **MRDLG** – Maximum Residual Disinfectant Level Goal - 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.
- **N/A** – Not Applicable.
- **NTU** – Nephelometric Turbidity Unit - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **PPB** – Parts Per Billion - One part per billion (or micrograms per liter, ug/L), corresponds to one penny in \$10,000,000.
- **PPM** – Parts Per Million - One part per million (or milligrams per liter, mg/L), corresponds to one penny in \$10,000.
- **TOC** – Total Organic Carbon - The value reported under "Level Found" is the lowest ratio between the percentages of TOC actually removed to the percentages of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of the TOC removal requirements.
- **TT** – Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.
- "**<**" – A symbol which means less than.
- "**>**" – A symbol which means greater than.

Water Quality Table – VERMILION DISTRICT			Source Water - Lake Erie – Elyria Water Works and Lorain Water Purification Plant					
Contaminants	Date Tested	Unit	MCL (MRDL)	MCLG (MRDLG)	Level Found	Range	Typical Source of Contaminants	Violation
Inorganic Contaminants								
Copper*	2022	ppm	AL=1.3	1.3	0.161	N/A	Corrosion of household plumbing systems	NO
Lead*	2022	ppb	AL=15	0	1.9	N/A	Corrosion of household plumbing systems	NO
Volatile Organic Contaminants								
TTHM's (Total Trihalomethanes)	Quarterly	ppb	80	0	62.9	48.3-77.5	By-product of drinking water chlorination	NO
HAA 5 (Haloacetic Acid)	Quarterly	ppb	60	0	17.9	16.2-19.6	By-product of drinking water chlorination	NO
Residual Disinfectants								
Free Chlorine	Continuous	ppm	(4)	(4)	1.4	1.1-1.7	Water additive used to control microbes	NO
ELYRIA WATER WORKS								
Inorganic Contaminants								
¹ Nitrate	2022	ppm	10	10	0.075	<0.1-0.75	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NO
² Fluoride	2022	ppm	4	4	1.028	0.84-1.13	Erosion of natural deposits; additive which promotes strong teeth	NO
Barium	2022	ppm	2	2	0.019	0.019	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	NO
Microbiological Contaminants								
³ Turbidity	2022	NTU	<0.3	N/A	0.13	0.05-0.13	Soil runoff	NO
Total Organic Carbon (TOC)	2022	TOC	removal >1	N/A	1.24	1-1.44	Normally present in the environment	NO
LORAIN WATER PURIFICATION PLANT								
Inorganic Contaminants								
¹ Nitrate	2022	ppm	10	10	0.87	0-0.87	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NO
² Fluoride	2022	ppm	2	2	1.05	0.36-1.14	Erosion of natural deposits; water additive which promotes strong teeth	NO
Barium	2022	ppm	2	2	0.019	N/A	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	NO
Orthophosphate	2022	ppb	N/A	N/A	0.94	0.72-1.32	Corrosion inhibitor	NO
Microbiological Contaminants								
³ Turbidity	2022	NTU	TT	N/A	1.26	0.02-1.26	Soil runoff; sediment from the lake bottom	NO
Turbidity (% meeting standard)	2022	%	TT=95%	N/A	99.6%	N/A	Soil runoff; sediment from the lake bottom	NO
Total Organic Carbon (TOC)	2022	TOC	TT	N/A	1.44	1-2.3	Naturally present in the environment	NO
Total Microcystins	2022	ppb	0.3 AL	N/A	0.133	0-0.133	Produced by some naturally occurring cyanobacteria, also known as blue-green algae, which, under certain conditions, may produce microcystins	NO

Water Quality Table – Important Health Information

- ¹Nitrate: Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
- ²Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth. It occurs in developing teeth before they erupt from the gums.
- ³Turbidity: A measure of the cloudiness of the water and an indication of the effectiveness of the 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.
- ⁴90th: Results from 10 samples collected for lead and copper in 2022 were used to calculate the 90th percentile. None of the 10 homes sampled exceeded the Action Level for an individual tap water sample of 15 ppb. State Law requires 90% of homes test less than 15 ppb for lead. None of the 10 homes sampled exceeded the copper MCLG of 1.3 ppm.

Backflow Prevention and Cross-Connection Control - Backflow refers to when water flows in the opposite direction through its intended system. It creates the potential for contaminants from private plumbing systems to enter the main water distribution system through a cross-connection. A cross-connection is a link between a possible source of contamination, such as a garden hose submerged in a bucket, and any public potable water system. The installation of a backflow preventer protects the drinking water system from possible contamination. Clean drinking water is every consumer's business. By taking the proper precautions, you can help us protect our drinking water. For more information on backflow prevention and cross-connection control, please view our pamphlet at www.eriecounty.oh.gov/BackflowPrevention.aspx or call the Erie County Water Division at (419) 627-7666.