

2020 Water Quality Report for Erie County Vermilion West Water District

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 2020. 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, unconditioned 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 7:30 a.m. to 4:00 p.m. at (419) 627-7666. We encourage public interest and participation in our community's decisions affecting drinking water. Regular Erie County Commission meetings are 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. You may also attend the Commission meetings on the third Monday of each month at 9:00 a.m. in the Commissioners' Chambers on the 3rd Floor at 247 Columbus Avenue, Sandusky.

Overview - The Erie County Water Distribution System is divided into three major districts: Perkins District, serving Perkins Township and parts of Huron, Milan and Oxford townships; Margaretta District, serving the villages of Bay View and Castalia; and East Erie District, serving the village of Berlin Heights and Berlin Township, the southern, eastern and western portions of Huron Township and Vermilion Township south of the City of Vermilion. The Erie County Water Division operates 10 pump stations and 8 water storage tanks which deliver water through 312 miles of water mains ranging in size from 4 inches to 24 inches. In 2020, Erie County Water distributed 1.7 billion gallons of water to its customers.

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. Erie County purchases treated water from the City of Sandusky, 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 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**—May come from a variety of sources such as agriculture, storm water runoff and residential use. **D) Organic Chemical Contaminants**—Including synthetic and volatile organics, 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**—Can be naturally occurring or the result of oil and gas production and mining activities.

Source Water Assessment

Where does your water come from? Erie County purchases and distributes treated water from Northern Ohio Rural Water Authority, who purchases and distributes water from the City of Elyria and the City of Lorain and the City of Vermilion. 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.

City of Elyria – 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 impacts can be further decreased by implementing measures to protect Lake Erie, Beaver Creek, and Martin 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 – Although the City of Lorain's surface water intake is located offshore in Lake Erie, the proximity of the Black River 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 the river dredging and disposal operations, natural erosion processes, contaminated storm water runoff from urban areas, municipal and home sewage 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 calling Lorain Water Purification Plant at 440-204-2280.

City of Vermilion – The City of Vermilion public water system uses surface water drawn from an intake in Lake Erie. The City of Vermilion's drinking water source protection area contains potential contaminant sources such as underground storage tanks, automotive service stations and marinas, as well as accidental releases and spills, especially from commercial shipping operations and recreational boating. The City of Vermilion treats the water to meet drinking water quality standards. More detailed information is provided in the City of Vermilion's Drinking Water Assessment report and can be obtained by calling the City of Vermilion Water Plant at 440-204-2450.

Additional Health Information - In order to ensure that tap water is safe to drink, 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 1-800-426-4791.

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 <http://www.epa.gov/safewater/lead>.

Immune-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 1-800-426-4791.

Water Quality Test Results - On the following pages are the results of our water quality analyses. The table includes all the contaminants that were actually detected in Erie County's drinking water. The table 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.

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.

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

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. Maximum Contaminant Levels are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected health risk.

N/A - Not Applicable.

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.

Definitions and Measurement Units (continued)

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

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

(<) - 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.

(>) - A symbol which means greater than. A result of >1 means that at the very least two units were detected.

Water Quality Measurement Units

Parts Per Million (ppm) - A part per million corresponds to 1 second in approximately 11.5 days.

Parts Per Billion (ppb) - A part per billion corresponds to 1 second in 31.7 years.

Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

2020 WATER QUALITY TABLES OF DETECTED CONTAMINANTS

| ERIE COUNTY WATER VERMILION WEST DISTRICT | | | | | | | | |
|---|-------------|-------|--------|-------|-------------|--------------------|--|-----------|
| Contaminants | Date Tested | Units | MCL | MCLG | Level Found | Range of Detection | Typical Source of Contaminants | Violation |
| Copper | 2018 | ppm | AL=1.3 | 1.3 | 0.0975 | N/A | Corrosion of household plumbing systems | NO |
| TTHM's (Total Trihalomethanes) | 2020 | ppb | 80 | 0 | 49.3 | 42.6-49.3 | By-product of drinking water chlorination | NO |
| HAA5 (Haloacetic Acid) | 2020 | ppb | 60 | 0 | 22.8 | 15.5-22.8 | By-product of drinking water chlorination | NO |
| Contaminant | Date Tested | Units | MRDL | MRDLG | Level Found | Range of Detection | Typical Source of Contamination | Violation |
| Total Chlorine | 2020 | ppb | 4 | 4 | 0.9 | 0.5-1.0 | Water additive used to control microbes. | NO |
| CITY OF VERMILION WATER DEPARTMENT | | | | | | | | |
| Contaminants | Date Tested | Units | MCL | MCLG | Level Found | Range of Detection | Typical Source of Contaminants | Violation |
| Inorganic Contaminants | | | | | | | | |
| Nitrate | 2020 | ppm | 10 | 10 | 1.24 | 0-1.24 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. | NO |
| Barium | 2020 | ppm | 2 | 2 | 0.018 | 0.018 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. | NO |
| Fluoride | 2020 | ppm | 4 | 4 | 1.24 | 0.94-1.24 | Erosion of natural deposits; Water additive which prevents dental cavities. | NO |
| Contaminants | Date Tested | Units | MCL | MCLG | Level Found | *Low % | Typical Source of Contaminants | Violation |
| Microbiological Contaminants | | | | | | | | |
| Turbidity | 2020 | NTU | TT | N/A | 0.14 | 0.04-0.14 | Soil Runoff | NO |
| Turbidity (% samples meeting standard) | 2020 | % | TT | N/A | 100% | 100% | Soil Runoff | NO |
| ELYRIA WATER WORKS | | | | | | | | |
| Contaminants | Date Tested | Units | MCL | MCLG | Level Found | Range of Detection | Typical Source of Contaminants | Violation |
| Inorganic Contaminants | | | | | | | | |
| Barium | 2020 | ppm | 2 | 2 | 0.018 | 0.018 | Discharge of drilling wastes, discharge from metal refineries. | NO |
| Fluoride | 2020 | ppm | 4 | 4 | 1.077 | 0.83-1.21 | Erosion of natural deposits; Water additive which prevents dental cavities. | NO |
| Nitrate | 2020 | ppm | 10 | 10 | 0.95 | <0.1-0.95 | Runoff from fertilizer use and erosion of natural deposits. | NO |
| Contaminants | Date Tested | Units | MCL | MCLG | Level Found | *Low % | Typical Source of Contaminants | Violation |
| Microbiological Contaminants | | | | | | | | |
| Turbidity | 2020 | NTU | 0.3 | N/A | 0.18 | 0.06-0.18 | Soil Runoff | NO |
| Turbidity (% samples meeting standard) | 2020 | % | TT | N/A | 100% | 100% | Soil Runoff | NO |
| LORAIN WATER DEPARTMENT | | | | | | | | |
| Contaminants | Date Tested | Units | MCL | MCLG | Level Found | Range of Detection | Typical Source of Contaminants | Violation |
| Inorganic Contaminants | | | | | | | | |
| Barium | 2020 | ppm | 2 | 2 | 0.016 | N/A | Discharge of drilling wastes, discharge from metal refineries. | NO |
| Fluoride | 2020 | ppm | 4 | 4 | 1.01 | 0.9-1.08 | Erosion of natural deposits; Water additive which prevents dental cavities. | NO |
| Nitrate | 2020 | ppm | 10 | 10 | 0.99 | 0.0-0.99 | Runoff from fertilizer use and erosion of natural deposits. | NO |
| Contaminants | Date Tested | Units | MCL | MCLG | Level Found | *Low % | Typical Source of Contaminants | Violation |
| Microbiological Contaminants | | | | | | | | |
| Turbidity | 2020 | NTU | TT | N/A | 0.18 | 0.06-0.18 | Soil Runoff | NO |
| Turbidity (% samples meeting standard) | 2020 | % | TT | N/A | 100% | 100% | Soil Runoff | NO |

Footnotes

Turbidity is a measure of the cloudiness of water and is 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 1 NTU at any time.

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