# Annual Drinking Water Quality Report
# Geauga County Bainbridge PWS 2024
# OH2804003

We are pleased to present to you the 2024 Annual Quality Water Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand our continual efforts to protect our water. Included with this report is general health information, water quality test results, how to participate in decisions concerning your drinking water, and water system contacts.

## Source Water

The water source for the Geauga County Bainbridge Water System (GCBW) is treated surface water from Lake Erie that we purchase from the City of Cleveland. Cleveland Water has four water intakes that pull water from Lake Erie's Central Basin and send it to their water treatment plants. These intakes are spread out over 15 miles and are 3 to 5 miles offshore where the water is cleaner and is less impacted by tributary runoff and coastal activities.

The State of Ohio performed an assessment of Cleveland's four water intakes in the late 1990s. An updated Drinking Water Source Assessment and Protection Report was completed by Cleveland Water and Ohio EPA in July 2021. For the purposes of source water assessments, 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 from an upstream spill. Because Cleveland Water's intakes are located a considerable distance offshore, potential contamination from the Cuyahoga River and nearshore sources is minimized to a great degree. As a result, Ohio EPA considers Cleveland Water's source water (Lake Erie) to have a low susceptibility to contamination due to the location of their intakes.

Cleveland Water treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. To address this, Cleveland Water uses the multiple barrier approach for protecting and treating their source water. Protection of source water is one of the barriers they use. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie. More detailed information is provided in the Cleveland Water Drinking Water Source Assessment Report which can be obtained by calling their Risk Management Section at 216.664.2444 x 75838.

The Bainbridge Water System has an interconnect with The Village of Chagrin Falls, which is for emergency use only. This interconnect is designed to provide water in an emergency. The Bainbridge Water System received no emergency water in 2024.



DEPARTMENT OF WATER RESOURCES

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## Water Contamination Sources

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.

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.

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).

## 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 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).

## Important 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. Geauga County Bainbridge 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 800-426-4791 or at http://www.epa.gov/safewater/lead.

Our distribution system has no lead, galvanized requiring replacement, or lead status unknown service lines. To determine this, we used the following sources: historical department records and all service lines were installed after the lead ban.

## For More Information

For questions about this Consumer Confidence Report, the Source Water Assessment Report (SWAR), or concerning the Department's Water Section, please contact the Geauga County Department of Water Resources (GCDWR) at (440) 279-1970 or visit our website at www.gcdwr.org. Our office hours are Monday-Friday from 8:00 AM to 4:00 PM and our office is located at 12611 Ravenwood Drive, Suite 390, Chardon, Oh. 44024. Public participation and comments are encouraged and while we do not hold regular meetings, customers are encouraged to participate in discussions about their drinking water. Please contact Brian Cain at (440) 279-1970 for more information.

Available at our offices and on our website are pamphlets explaining what, you the consumer, can do to help protect our sources and minimize water use through leak detection and water conservation. These pamphlets are free to the public and can be picked up or requested to be mailed to our customers by calling the office Monday-Friday at the number listed above.

## Assistance

We ask that all our customers help us protect our water sources and supplies by reporting any unusual activity around any of our facilities including fire hydrants. All reports should be made to our office during working hours and after hours can be made to our answering service at 1-877-902-2359 or the Geauga County Sheriff's office at (440) 286-1234. Any unauthorized use is against Department Policy, The Ohio Revised Code, and the Federal Law. The possibility of damage, requiring a boil advisory or worse yet an outage that cannot be repaired quickly, would be a major inconvenience to all.

## Testing Results

The EPA requires regular sampling to ensure drinking water safety. The Geauga County Bainbridge Water System conducted sampling for bacteria, chlorine residual, Lead & Copper, and disinfection byproducts during 2024**.** Samples were collected for a total of 14 different contaminants most of which were not detected in the Geauga Bainbridge 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.

Cleveland Water monitors for more than 200 regulated and unregulated contaminants, the significant majority of which are not detected. Throughout 2024, they conducted sampling for bacteria, and for inorganic, synthetic organic, and volatile organic contaminants. They were not required to monitor for radiological parameters. Many substances that they test for do not appear in this report because they are not found in your drinking water, including cyanotoxins and most Per- and Polyfluoroalkyl Substances (PFAS) compounds. They have been monitoring for cyanotoxins in source and finished water since 2010. Cyanotoxins have never been detected in their finished water, therefore results are not included in this report.

Note that we have a current, unconditioned license to operate Geauga County Bainbridge as does Cleveland Water.

Listed below is information on those contaminants that were found in the Geauga Bainbridge drinking water.

**GEAUGA COUNTY – BAINBRIDGE & CLEVELAND DISTRIBUTION TABLE OF DETECTED CONTAMINANTS**

| Contaminant (units) | MCLG or [MRDLG] | MCL or [MRDL] | Geauga - Bainbridge | | Cleveland Water | | Violation ? | Year Sampled | Typical Source of Contaminants |
|---|---|---|---|---|---|---|---|---|---|
| | | | Level Found | Range of Detections | Level Found | Range of Detections | | | |
| **Residual Disinfectants and Disinfection Byproducts** | | | | | | | | | |
| Total Chlorine (ppm) | [4] | [4] | 1.11 | 0.8 – 1.5 | See Table Below | See Table Below | No | 2024 | Water additive used to control microbes |
| Haloacetic Acids [HAA5] (ppb) | N/A | 60 | 13.3 | 10.3-13.3 | 11.8 | 3.9 – 18.6 | No | 2024 | By-Product of drinking water chlorination |
| Total Trihalomethanes [TTHMs] (ppb) | N/A | 80 | 78.8 | 62-78.8 | 27.9 | 9.4 – 51.1 | No | 2024 | By-Product of drinking water chlorination |
| **Lead and Copper** | | | | | | | | | |
| **Contaminant (units)** | **Action Level (AL)** | **MCLG** | **Individual Results over the AL** | **90TH Percentile Value** | **Individual Results over the AL** | **90TH Percentile Value** | **Violation ?** | **Year Sampled** | **Typical Source of Contaminants** |
| Lead (ppb) | 15 ppb | 0 | NA | 3.0 | 1997 | 3.15 | No | 2023 | Corrosion of household plumbing systems: erosion of natural deposits |
| Copper (ppm) | 1.3 ppm | 1.3 | NA | 0.13 | NA | 0.06 | No | 2023 | Erosions of natural deposits; leaching from wood preservatives' Corrosions of household plumbing systems |

Geauga County – Bainbridge had 0 of 10 samples in excess of the lead action level of 15ppb and 0 of 10 samples in excess of the copper action level of 1.3ppm

Cleveland Water had 1 of 52 samples in excess of the lead action level of 15 ppb and 0 of 52 samples in excess of the copper action level of 1.3ppm

## CLEVELAND WATER - BALDWIN & NOTTINGHAM WATER PLANTS TABLE OF DETECTED CONTAMINANTS

| Contaminant (units) | MCLG or [MRDLG] | MCL or [MRDL] | Baldwin Water Plant | | Nottingham Water Plant | | Violation ? | Year Sampled | Typical Source of Contaminants |
|---|---|---|---|---|---|---|---|---|---|
| | | | Level Found | Range of Detections | Level Found | Range of Detections | | | |
| **Microbiological** | | | | | | | | | |
| Turbidity *(NTU) | NA | TT* (<1 NTU) | 0.15 | 0.02-0.15 | 0.09 | 0.05-0.09 | No | 2024 | Soil Runoff |
| Turbidity* (% meeting standard) | NA | TT* (%) | 100% | NA | 100 % | NA | No | 2024 | Soil Runoff |
| **Inorganic** | | | | | | | | | |
| Fluoride (ppm) | 4 | 4 | 1.07 | 0.84 - 1.26 | 0.96 | 0.80 – 1.18 | No | 2024 | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Nitrate as Nitrogen (ppm) | 10 | 10 | 0.71 | ND – 0.71 | 0.72 | ND – 0.72 | No | 2024 | Run off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Cyanide (ug/L) | 200 | 200 | ND | NA | ND | NA | No | 2024 | Run off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| **Organic** | | | | | | | | | |
| Total Organic Carbon | NA | TT** | 1.43 | 1.41 – 1.87 | 1.33 | 1.31 – 1.61 | No | 2024 | Naturally present in the environment |
| **Residual Disinfectants** | | | | | | | | | |
| Total Chlorine (ppm) | [4] | [4] | 1.08 | 0.94 – 1.26 | 1.19 | 0.97 – 1.29 | No | 2024 | Water additive used to control microbes. |

*Turbidity is a measure of the cloudiness of water and an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the samples analyzed each month and shall not exceed 1 NTU at any time for each of our water treatment plants. As reported above, Cleveland Water's highest recorded treated water turbidity result for 2024 was 0.15 NTU and we met the turbidity limits 100% of the time.

**The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest running annual average ratio between the percent of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates compliance with TOC removal requirements. A value less than 1 indicates a violation of the TOC removal requirements. The values reported under the "Range of Detections" for TOC is the lowest monthly ratio to the highest monthly ratio.

## Unregulated Contaminant Monitoring Rule (UCMR) Sampling Results

Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of these contaminants in drinking water and whether future regulation is warranted. Between August 2024 and December 2024, Cleveland Water participated in the fifth round of the Unregulated Contaminant Monitoring Rule (UCMR5). For a copy of the results please contact the Water Quality Line at 216-664-2639

| Contaminants (Units) | Year Sampled | MCLG | Level Found | Range | Typical Source of Contaminant |
|---|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) (ppt) | 2024 | NA | 2.3 | ND – 2.3 | Discharge from PFAS production facility |

## Definitions

- **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.
- **Cyanotoxin**: Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as "algal toxin".
- **PFAS**: Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals applied to many industrial, commercial and consumer products to make them waterproof, stain resistant, or nonstick. PFAS are also used in products like cosmetics, fast food packaging, and a type of firefighting foam called aqueous film forming foam (AFFF) which are used mainly on large spills of flammable liquids, such as jet fuel. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing.
- **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.
- **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.
- **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.
- **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.
- **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.