

City of Bedford

2019 Water Quality Report



The City of Bedford is proud to present this 2019 Water Quality Report to you, the customer, on the quality of your drinking 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.

Bedford purchases its water from the City of Cleveland. Cleveland Water is the 10th largest public water system in the United States. Every day, they treat and deliver up to 300 million gallons of water to more than 1.45 million people and thousands of businesses, schools, churches and recreation centers through more than 446,000 customer accounts. They provide water to our 640-square mile service area through 5,300 miles of mains in 80 communities in Cuyahoga County and parts of four surrounding counties – Geauga, Medina, Portage and Summit. In 2019, our average demand was 205.3 million gallons per day, which is 75 billion gallons of water for the year. Bedford received no emergency water in 2019.

Lake Erie – Our Source Water and Assessment

Cleveland draws source water from four intakes located far offshore in Lake Erie’s Central Basin. These intakes are spread out over 15 miles and are each 3 to 5 miles offshore where the water is cleaner and has been minimally impacted from tributary runoff and coastal activities. Lake Erie is considered to be a surface water source. Cleveland Water also has interconnections with other area water systems, but these are for emergency use only. These interconnections are designed for Cleveland Water to assist other water systems if needed. Cleveland received no emergency water in 2019.

The state of Ohio performed an assessment of our four source water intakes in the late 1990s. A Drinking Water Source Assessment Report was completed in 2003. 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 our intakes.

Cleveland Water public water system 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 our 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 provide in the Cleveland Water Drinking Water Source Assessment Report which can be obtained by calling our Risk Management Section at 216-664-2444 x75838.

Bedford Division of Water

The City of Bedford purchases all of its water from Cleveland on a wholesale basis and resells it to all customers in its service area. The water purchased from Cleveland is measured by 16 master meters located at various boundary points in Bedford. There are approximately 5,000 water service accounts in the Bedford service area. Water is distributed to those accounts through about 50 miles of water mains that are maintained by the City of Bedford. Because Bedford has its own Water Department, it must adhere to all E.P.A. regulations, submit monthly reports to the E.P.A., and have the E.P.A inspect all operations on a regular basis.

**In 2019 The City of Bedford currently has an unconditioned license to operate our water system.

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.

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).

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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Cleveland Water treats source water to remove contaminants using conventional water treatment processes at each of four treatment plants. 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 byproducts 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.

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 our drinking water.

The EPA requires regular sampling to ensure drinking water safety. Cleveland Water conducted sampling for bacteria, inorganic, synthetic organic, and volatile organic contaminants during 2019. They were not required to monitor for radiological parameters in 2019. During the year, more than 160,000 samples were analyzed for different and specific contaminants, most of which were not detected in the Cleveland 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 is in compliance with all Maximum Contaminant Levels and Treatment Techniques for drinking water. Cleveland Water had a 2019 unconditioned license to operate our water system. The license is issued by the Ohio Environmental Protection Agency.

DEFINITIONS OF SOME TERMS CONTAINED WITHIN 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.

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.

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

- For lead, the action level is exceeded if the concentration of lead in more than 10% of tap water samples collected during a monitoring period is greater than 0.015 ppm, i.e., if the 90th percentile lead levels is at or greater than 0.015 ppm.
- For copper, the action level is exceeded if the concentration of copper in more than 10% of the tap samples collected during a monitoring period is at or greater than 1.3 ppm.

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

Turbidity: *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 samples analyzed each month and shall not exceed 1 NTU at any time.*

Parts per Million (ppm) or milligrams per Liter (mg/L): Units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days or 1 drop in a 10-gallon aquarium.

Parts per Billion (ppb) or micrograms per Liter (µg/L): Units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years or 1 drop in 21,000-gallons.

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.

TABLES OF DETECTED CONTAMINANTS

Cleveland Water is presenting water quality data for each of our four treatment plants in individual tables. The results in each table were either collected during 2019 or were used for compliance in 2019. Typical sources are shown for each contaminant. TTHMs, HAA5s, and TOC also include 9 months of 2018 data as required for the compliance calculations.

The abbreviations below apply to all water quality reporting tables

AL = Action Level

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

NTU = Nephelometric Turbidity Units

MRDL = Maximum Residual Disinfectant Level

MRDLG = Maximum Residual Disinfectant Level Goal

n/a = not applicable

ND = Not Detected

ppm = parts per million; milligrams per liter (mg/L)

ppb = parts per billion; or micrograms per liter ($\mu\text{g/L}$)

< = a symbol which means less than. A result of <5 means the lowest level that can be detected is 5 and the contaminant in that sample was not detected.

TT = Treatment Technique

What's NOT in Your Water.

Cleveland Water performs thousands of tests each year to ensure drinking water quality. Many substances that they test for do not appear in this report because they were *not* found in your drinking water. For example, there are 51 volatile organic chemicals like benzene and 1,2,3-Trichloropropane (TCP), as well as metals like arsenic, chromium and mercury (just to name a few) that are NOT found in your drinking water, therefore are NOT listed in this report. They have tested for the six main PFAS chemicals in our source water (Lake Erie) and our finished drinking water as it leaves our treatment plants numerous times, including two-rounds of testing in 2019. They have not had reportable detection level for any PFAS chemicals in more than 280 tests. Additionally, they have been monitoring for cyanotoxins in source and finished water since 2010. Cyanotoxins were not detected in our finished water, therefore sampling results are not included in this report. If you have questions about what parameters they monitor or would like a copy of our Average Chemical Values Summary for 2019, please call our Water Quality Line at 216-664-2639 or visit our Water Quality webpage at clevelandwater.com/your-water/water-quality-and-treatment/water-quality.

BALDWIN WATER TREATMENT PLANT

Monitored in **2019**. There were no violations.

| Contaminants (Units) [Typical Sources in Drinking Water] | | MCLG | MCL | Level Found | Range of Detections | Violation |
|---|--|-------|------------------------|-------------------|---------------------|-----------|
| Microbiological | Turbidity (NTU) [soil runoff] | n/a | TT* (< 1 NTU) | 0.19 | 0.02 - 0.19 | No |
| | Turbidity (% meeting standard) [soil runoff] | n/a | TT* (%) | 100% compliant | n/a | No |
| Inorganic | Fluoride (ppm) [water additive which promotes strong teeth] | 4 | 4 | 1.05 | 0.84 - 1.28 | No |
| | Nitrate as Nitrogen (ppm) [runoff from farm fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits] | 10 | 10 | 0.68 | ND - 0.68 | No |
| Organic | TTHMs (ppb)** [total Trihalomethanes are a byproduct of drinking water chlorination] | n/a | 80 | 36.35 | 11 - 51.9 | No |
| | HAA5 (ppb)** [haloacetic Acids are a byproduct of drinking water chlorination] | n/a | 60 | 22.38 | 6.1 - 24 | No |
| | Total Organic Carbon# [naturally present in the environment] | n/a | TT** | 1.28 | 1.18 - 1.40 | No |
| Disinfectant | Total Chlorine (ppm) [water additive used to control microbes] | MRDLG | MRDL | 1.14 | 1.10 - 1.18 | No |
| | | 4 | 4 | | | |

* 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 turbidity result for 2019 was 0.19 NTU and they meet 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 percent 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.

#Cleveland Water has a combined distribution system. Data listed represents this and therefore is identical for each treatment plant.

NOTTINGHAM WTP

Monitored in **2019**. There were no violations.

| Contaminants (Units) [Typical Sources in Drinking Water] | | MCLG | MCL | Level Found | Range of Detections | Violation |
|---|--|-------|---------------------|----------------|---------------------|-----------|
| Microbiological | Turbidity (NTU) [soil runoff] | n/a | TT* (< 1 NTU) | 0.08 | 0.02 - 0.08 | No |
| | Turbidity (% meeting standard) [soil runoff] | n/a | TT* (%) | 100% compliant | n/a | No |
| Inorganic | Fluoride (ppm) [water additive which promotes strong teeth] | 4 | 4 | 0.97 | 0.8 - 1.14 | No |
| | Nitrate as Nitrogen (ppm) [runoff from farm fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits] | 10 | 10 | 0.61 | ND - 0.61 | No |
| Organic | TTHMs (ppb)** [total Trihalomethanes are a byproduct of drinking water chlorination] | n/a | 80 | 36.35 | 11 - 51.9 | No |
| | HAA5 (ppb)** [haloacetic Acids are a byproduct of drinking water chlorination] | n/a | 60 | 22.38 | 6.1 - 24 | No |
| | Total Organic Carbon# [naturally present in the environment] | n/a | TT** | 1.28 | 1.26 - 1.45 | No |
| Disinfectant | Total Chlorine (ppm) [water additive used to control microbes] | MRDLG | MRDL | 1.21 | 1.14 - 1.25 | No |
| | | 4 | 4 | | | |

* 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.

** 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 percent 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.

#Cleveland Water has a combined distribution system. Data listed represents this and therefore is identical for each treatment plant.

| Disinfection Byproducts - City of Bedford | | | | | | | |
|---|-----------------|-----------|----------|-------------|------------|-----------|--|
| Contaminants | When We Checked | MCLG | MCL | Level Found | Range | Violation | Typical Source of Contaminant |
| Total Trihalomethanes (TTHM) (µg/L) | 2019 | n/a | 80 | 31.2 | 16.10-41.6 | No | Byproduct of drinking water chlorination |
| Haloacetic Acids (HAA5) (µg/L) | 2019 | n/a | 60 | 11.9 | 8.2-14.6 | No | Byproduct of drinking water chlorination |
| Total Chlorine (mg/L) | 2019 | 4 (MRDLG) | 4 (MRDL) | 1.07 | .76-1.28 | No | Water additive used to control microbes |

| Lead and Copper - City of Bedford | | | | | | |
|-----------------------------------|---|--------------------------------|-----------------------------------|-----------|--------------|---------------------------------|
| Contaminants (units) | Action Level (AL) | Individual Results over the AL | 90% of test levels were less than | Violation | Year Sampled | Typical source of Contaminants |
| Lead (ppb) | 15 ppb | 0 | 3.7 | No | 2019 | Corrosion of household plumbing |
| | 0 out of 30 samples were found to have lead levels in excess of the lead action level of 15 ppb. | | | | | |
| Copper (ppm) | 1.3 ppm | 0 | 0.099 | No | 2019 | Corrosion of household plumbing |
| | 0 out of 30 samples were found to have copper levels in excess of the copper action level of 1.3 ppm. | | | | | |

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. {Name of Water System} 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>.

Unregulated Contaminant Monitoring Rule (UCMR) Sampling

Unregulated contaminants are substances for which USEPA has no established drinking water standards. USEPA requires public water systems to monitor these substances in order to determine where certain substances occur and whether the USEPA needs to regulate those substances in the future. In 2019, the City of Bedford participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR4). Please contact John Sokolowski for a copy of the full report at (440) 735-6588.

| Table of Unregulated Contaminants | | | |
|-----------------------------------|-------------|---------------------|---------------------|
| Contaminants (Units) | Sample Year | Average Level Found | Range of Detections |
| Manganese (ppb) | 2019 | 2.09 | 1.4-2.78 |
| Germanium (ppb) | 2019 | 0.15 | nd-.30 |
| Haloacetic Acids (HAA5) (ppb) | 2019 | 11.73 | 9.2-15.9 |
| Haloacetic Acids (HAA9) (ppb) | 2019 | 7.68 | 6.56-8.3 |
| Haloacetic Acids (HAA6Br) (ppb) | 2019 | 19.06 | 16.9-22.4 |
| 1-Butanol | 2019 | 2.26 | 2.2-2.52 |
| 2-Methoxyethanol | 2019 | 0.2 | nd-0.4 |
| 2-Propen-1-ol | 2019 | 0.25 | nd-.05 |

Keep Your Home's Water Healthy

Flush, Clean and Consume Cold are the actions all customers should implement to help ensure the highest quality of water is coming out of your tap, especially if there is the possibility of lead in your plumbing system. In some situations, a water system repair/replacement may temporarily increase lead levels in water and/or cause discoloration. As a standard practice the USEPA recommends these actions (flush, clean, consume cold) which are important to take when water has been restored after a disruption of service



Flush your cold water lines before consuming water when water has not been used for 6 or more hours. The goal is to have cold, fresh water from the main in the street come out of your tap before drinking the water. To flush the plumbing, run water until you feel a temperature change then run water for an additional 30 seconds to 3 minutes. The time depends on the length of your service line. When in doubt, flush it out.



Clean your faucet aerator screens regularly. Small particles of solder and other material can accumulate in faucet aerators and in some circumstances can release lead into the water. Aerators should be cleaned at least twice a year, and more frequently after work on your plumbing system.



Always use cold water for cooking, drinking and preparing baby formula. Hot water corrodes pipes faster and is more likely to contain lead. If you need hot water for food or drinks, get water from the cold water tap then heat the water.

How do I participate in decisions concerning my drinking water?

This City of Bedford holds regular council meetings at City Hall, where public participation and comments are encouraged. Dates and times are posted inside City Hall located at 165 Center Road. If you are interested in learning more about the quality of your water, contact John Sokolowski, Water Department Superintendent, at (440) 735-6588.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.