2020 | WATER QUALITY REPORT

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www.bedfordoh.gov

165 Center Rd. Bedford, OH 44146

Bedford City PWS
2020 Drinking Water Consumer Confidence Report

The City of Bedford is proud to present our 2020 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 all of its water from the City of Cleveland. Cleveland Water is the 10th largest public water system in the United States, largest system in Ohio and largest system sourcing Lake Erie. 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 442,000 customer accounts. They provide water to our 640-square mile service area through nearly 5,400 miles of mains in 80 communities in Cuyahoga County and parts of four surrounding counties – Geauga, Medina, Portage and Summit. In 2020, our average demand was 201 million gallons per day, which is 73.4 billion gallons of water for the year. Bedford has a current unconditioned license to operate our public water system.

Lake Erie – Our Source Water

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. Although Bedford has 16 different supply connections from Cleveland Water, we received no emergency water in 2020.

Water enters Lake Erie from precipitation over the lake and watershed. Precipitation on land runs off and flows down streams and rivers into our source water. About 90% of the water entering Lake Erie flows down the Detroit River from Lake St. Clair; another 4% drains from the Maumee River. Both rivers flow into the lake's shallow Western Basin. The remaining runoff drains through dozens of rivers and streams into the lake or off the land along the shore directly into the water. The actions of people on land in Lake Erie's 30,149 square mile watershed can impact the quality of water in Lake Erie. Protecting our drinking water source from contamination is the responsibility of all area residents.

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 our 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 we 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 (216) 664-2444 ext. 75838.

What to expect from Public Water Systems in the United States

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 stormwater 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 stormwater 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 stormwater 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. Food and Drug Administration (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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Who needs to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 at 1-800-426-4791.

About Your Drinking Water

The EPA requires regular sampling to ensure drinking water safety. The City of Bedford and Cleveland Water conducted sampling for bacteria, and for inorganic, synthetic organic, and volatile organic contaminants during 2020. Both were not required to monitor for radiological parameters in 2020.

To confirm the water is safe, Cleveland Water continuously monitor more than 20,000 parameters in the water treatment process to ensure each of their four plants is functioning properly. They also collect more than 350 samples each month from the distribution system and perform over 160,000 tests each year to ensure proper treatment and disinfection in order to keep customers safe. Samples are analyzed for contaminants, most of which were not detected in the Cleveland Water supply. Per the Ohio EPA, a number of systems are required to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though accurate, are more than one year old. Listed in the table (page 5-7) is information on those contaminants that were found.

Table of Detected Contaminants

EPA establishes the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The tables shows the concentrations of detected substances in comparison to regulatory limits. Listed below is information on those contaminants that were found in Cleveland and Bedford's drinking water.

Definitions of some terms contained within this report:

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 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 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 90^{th} percentile lead levels is at or greater than 0.015 ppm.
- For copper, the action level is exceed 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.

Lead Threshold Level (LTL): The concentration of lead in an individual tap water sample that is at or greater than 0.015 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 an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the monthly samples 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 which is like a drop in a 30-foot diameter pool that is 4-feet deep.

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.

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 (µg/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

Contaminants (Units) [Typical Source of Contaminant]	When We Checked	MCLG	MCL	**Baldwin Plant**		**Nottingham Plant**		Violation
				Level Found	Range	Level Found	Range	
Turbidity (NTU) * [Soil runoff]	2020	n/a n/a	TT * (<1 NTU) TT *(%)	0.16 100%	0.02-0.16	0.1 100%	0.02-0.1	No
Barium [Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits]	2020	2	2	0.0156	n/a	0.148	n/a	No
Total Chlorine (mg/L) [Water additive used to control microbes]	2020	4 (MRDLG)	4 (MRDL)	1.11	1.06-1.15	1.19	1.15-1.24	No
Total Organic Carbon [Naturally present in the environment]	2020	n/a	TT **	1.33	1.42-1.51	1.4	1.22-1.52	No
Fluoride (mg/L) [Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.]	2020	4	4	1.03	0.86-1.30	0.98	0.82-1.19	No
Nitrate as Nitrogen (mg/L) [Run off from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits]	2020	10	10	0.7	ND - 0.70	0.55	ND - 0.55	No

* 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 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.

Disinfection Byproducts - City of Bedford							
Contaminants	When We Checked	MCLG	MCL	Level Found	Range	Violation	Typical Source of Contaminant
Total Trihalomethanes (TTHM) (µg/L)	2020	n/a	80	29.83	15-38.2	No	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (µg/L)	2020	n/a	60	14	8.7-16.5	No	Byproduct of drinking water chlorination
Total Chlorine (mg/L)	2020	4 (MRDLG)	4 (MRDL)	1.22	1.16-1.35	No	Water additive used to control microbes

Unregulated Contaminants

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. Between December 2019 and September 2020, Bedford Water participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR4). Contaminants in the below table were detected during UCMR4. Additional contaminants were monitored and not detected. For additional information on UCMR4 results, please call the Bedford Water Department (440-735-6588) for more information. More information about UCMR monitoring requirements is found on the USEPA website: epa.gov/dwucmr.

Table of Unregulated Contaminants				
Contaminants (Units)	Sample Year	Average Level Found	Range of Detections	Typical Source of Contaminant
Maganese (ppb)	2020	1.45	1.4-1.5	Naturally occuring in water
Germanium (ppb)	2020	nd	nd	Naturally occuring in water
Haloacetic Acids (HAA5) (ppb)	2020	13.05	6.6-19.5	Byproducts of drinking water disinfection
Haloacetic Acids (HAA9) (ppb)	2020	20.8	12.9-28.3	Byproducts of drinking water disinfection
Haloacetic Acids (HAA6Br) (ppb)	2020	8.325	6.7-9.7	Byproducts of drinking water disinfection
1-Butanol	2020	nd	nd	Byproducts of drinking water disinfection
2-Methoxyethanol	2020	nd	nd	Byproducts of drinking water disinfection
2-Propen-1-ol	2020	nd	nd	Byproducts of drinking water disinfection

What's NOT in Your Water

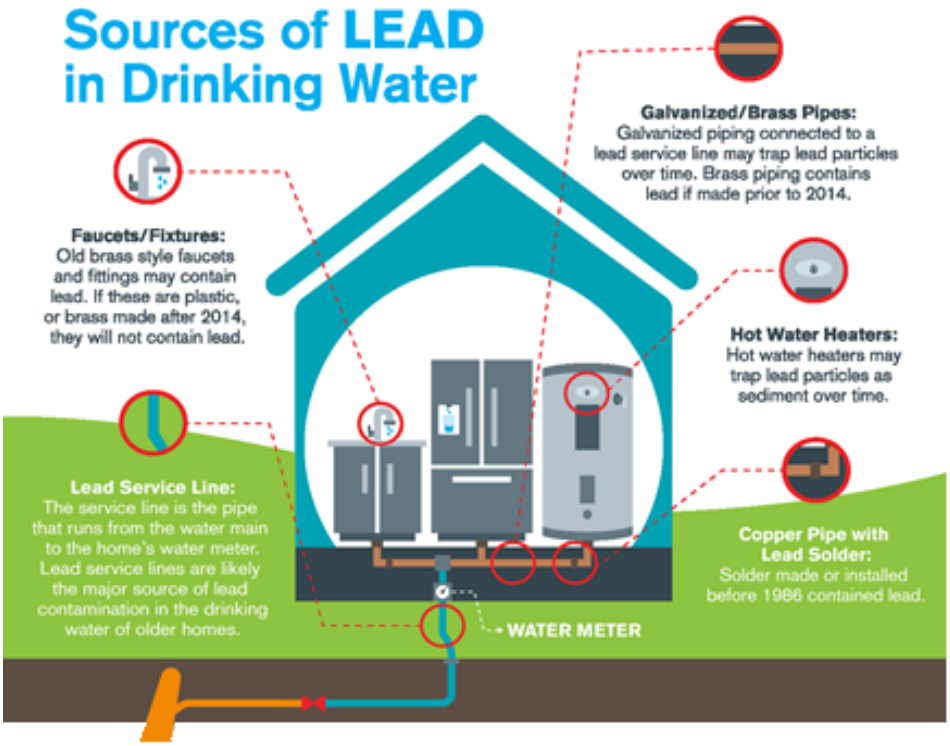
Thousands of tests are performed each year to ensure drinking water quality. Many substances that are tested for do not appear in this report because they are *not* found in your drinking water. For example, there are 51 volatile organic chemicals like benzene and 1,2,3-Trichloropropane (TCP) , as well 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.

Cleveland tested for the six main PFAS chemicals in our source water (Lake Erie) and our finished drinking water as it leaves their treatment plants numerous times. There has not been a reportable detection level for any PFAS chemicals in nearly 300 tests of Cleveland Water. In 2020, the Cleveland PWS was sampled as part of the State of Ohio's Drinking Water Per- and Polyfluoroalkyl Substances (PFAS) Sampling Initiative. Six PFAS compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS, please visit pfas.ohio.gov.

Lead and Copper Monitoring

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	3.4 ppb	No	2020	Corrosion of household plumbing systems; Erosion of natural deposits.
	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	0.1 ppm	No	2020	Corrosion of household plumbing systems; Erosion of natural deposits
	0 out of 30 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

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. Bedford 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. 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.gob/safewater/lead.



If you are concerned about lead in your water, you may wish to have your water tested. A list of laboratories certified in the state of Ohio to test for lead may be found at http://www.epa.ohio.gov/ddagw. Information on potential lead in drinking water, testing methods, and numerous steps we can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

Keep Your Home's Water Healthy

Clean, Flush 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 (clean, flush, consume cold) which are important to take when water has been restored after a disruption of service

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 is done to your plumbing system.

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 and diameter of your service line. The farther your home is from the street, the longer you need to flush. When in doubt, flush it out.

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.

Test your service line material. If a magnet sticks to the service line where it enters your home, it is galvanized steel. If you scratch the pipe with a penny and the metal is shiny like a penny, it is copper. If the scratched metal is shiny silver and flakes off, it is lead. You can record your results online or call us at 216-664-2882 and we will record the results for you.

The date on plumbing components in your home were made/installed is important. Homes built after 1954 should not have a lead service line or lead plumbing. Before 1986, the level of lead in solder used to join copper pipes was usually 50%. In 1986, the allowable level of lead in solder was reduced to less than 0.2% and the allowable level in brass components in potable water faucets was reduced to less than 8%. In 2014, the allowable level of lead in brass alloy used for potable water faucets, fittings and meters was reduced to less than 0.25%.

Public Participation

Cleveland Water does not hold regular public meetings. However, the public may participate through attending the Public Utilities Committee meetings. Meetings are generally held every other Tuesday at 1:30 pm at Cleveland City Hall. During the Covid-19 pandemic, council is meeting virtually during the City of Cleveland's emergency declaration and in accordance with Ohio's Open Meetings Law under H.B. 404. Committee and council meetings are listed on the Cleveland City Council calendar at https://clevelandcitycouncil.org/calendar and can be watched live on TV20 and YouTube.

This City of Bedford holds regular council meetings at City Hall, where public participation and comments are encouraged. Dates and times are posted at www.bedfordoh.gov/departments/city-council.

Additional Information

- To learn more about our supplier, Cleveland Water visit *clevelandwater.com*
- Questions or concerns regarding information within this report should be directed to John Sokolwski, Superintendent of Water, at (440) 735-6588.

Please Share This Report

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