

City of Brighton

2023 Water Quality Report

This report offers valuable information for all our customers, including water service provided to Pine Creek Ridge, Pine Creek Bluffs, Dillon Area, and the Northstar Development located in Brighton, Genoa & Hamburg Townships about the drinking water quality for the Brighton water system for the 2023 calendar year. Included are details about where your water comes from, what it contains, and how it compares to United States Environmental Protection Agency (USEPA) and State of Michigan Environmental, Great Lakes, and Energy (EGLE) standards. The City of Brighton is pleased to report our water quality standards have complied with all USEPA and EGLE standards for 2023.

Water System Overview:

The City of Brighton's water supply comes to you from three groundwater wells which is treated and distributed. Treatment includes the following processes:

- Iron removal
- Addition of chlorine for disinfection
- Addition of fluoride, to reduce tooth decay
- Addition of polyphosphate for corrosion control

After the treatment process, treated water is pumped to one of three storage tanks, providing 1,620,000 gallons of water for normal system demand and reserve water for fire protection needs.

In September 2002, the City of Brighton identified our source water protection area and submitted a Wellhead Protection Program to EGLE, which outlined management strategies to minimize the contamination threat to the municipal water supply. In August 2019, the City of Brighton completed a plan update, identifying new goals and guidelines within the plan to continue to protect one of our most precious resources, your Drinking Water.

A safe and reliable source of drinking water is essential for life. Because our water supply is limited, you can help protect this valuable resource by:

- Disposing of all household and hazardous waste in a proper and safe manner. Information on the proper disposal of household and hazardous waste is available at www.brightoncity.org or you may contact the Department of Public Services Office at (810) 225-8001, and we will be more than happy to assist you.
- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water.
- Do not dump anything down a storm drain; storm water dumps directly into your local water body.

Customer Service Information:

Water Plant Superintendent
(810) 844-5115

Utility Billing Clerk
(810) 227-0179

Request for Emergency Service:

Monday – Friday
7:00 am – 3:30 pm (810) 227-2968 or
(810) 227-9479

After hours, holidays, and weekends you can call either of the above numbers and press 1, following the greeting.



Contaminants and Their Presence in Water:

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 (EPA) Safe Drinking Water Hotline at (800) 426-4791.

Vulnerability of Subpopulations:

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 infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on

appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline at (800) 426-4791.

What is Groundwater?

Groundwater is the water that fills the small spaces between rock particles (sand, gravel, etc.) or cracks in solid rock. Rain, melting

snow, or surface water becomes groundwater by seeping into the ground and filling these spaces. The top of the water-saturated zone is called the **water table**.

Water movement is cyclical and moves from the ground to the surface (springs, rivers, lakes, wells), to the air (evaporation) and back to the surface (precipitation) where it seeps into the ground and into an aquifer.

An **aquifer** is any type of geologic material, such as sand or sandstone, which can supply water to wells or springs.

Groundwater, which supplies wells, often comes from within a short distance (a few miles) of the well. How fast the groundwater moves depends both on how

much the well is pumped and what type of rock particles or bedrock it is moving through.

Sources of Drinking Water:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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

The City of Brighton routinely monitors for contaminants in your drinking water according to Federal and State standards. The State of Michigan and the USEPA require us to test our water on a regular basis to ensure its safety. The table below shows the results of our monitoring for the period of January 1 to December 31, 2023. The presence of these contaminants in the water does not necessarily indicate that water poses a health risk. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than a year old.

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers – a five-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving to save up to 500 gallons a month.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation. Turn off your irrigation system when it rains or install a rain sensor to avoid any unnecessary water waste.
- Cut your lawn 3” or higher each time you mow. Tall Grass retains more moisture longer, shades out weeds, and is more resistant to pests.
- Teach your kids about water conservation to ensure the future generation uses water wisely. Make it a family effort to reduce next month's water bill! Visit www.epa.gov/watersense for more information.

Terms and abbreviations used below:

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.

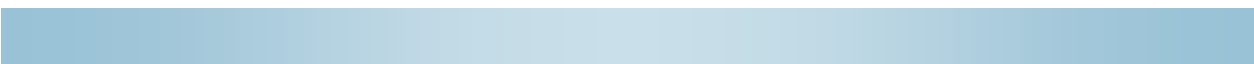
Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Residual Disinfection Level (MRDL) – means 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 Disinfection Level Goal (MRDLG) – means 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.

N/A: not applicable.

ND: not detectable at testing limit.



ppb: parts per billion or micrograms per liter.

ppm: parts per million or milligrams per liter.

ppt: parts per trillion or nanograms per liter

pCi/l: picocuries per liter (a measure of radiation).

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

Level 1 Assessment: A study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria has been found in our water system.

Level 2 Assessment: A very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria has been found in our water system on multiple occasions.

Running Annual Average (RAA): Highest Quarterly Average for 12-Months

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

Water Quality Data:								
Contaminants	MCLG or MRDL	MCL, TT, or MRDLG	Your Water	Low	High	Date	Violation	Typical Source
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)								
Chlorine (as Cl ₂) (ppm)	4	4	0.39 RAA	0.27	.43	2023	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	2	2	2	2023	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	40.8	40.8	40.8	2023	No	By-product of drinking water disinfection
Microbiological Contaminants								
Total Coliform (positive samples/month)	N/A	TT	N/A	N/A	N/A	2023	No	Naturally present in the environment
<i>E. coli</i> in the Distribution System (Positive Samples)	N/A	1	0	0	0	2023	No	Human and animal fecal waste
Fecal Indicator – <i>E. coli</i> at the Source (Positive Samples)	N/A	1	0	0	0	2023	No	Human and animal fecal waste



Radioactive Contaminants								
Radium (combined 226/228) (pCi/l)	0	5	ND	ND	ND	2016	No	Erosion of natural deposits
Alpha Emitters (pCi/L)	0	15	1.31	1.31	1.31	2023	No	Erosion of natural deposits
Inorganic Contaminants								
Arsenic (ppb)	0	10	ND	ND	ND	2021	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.295	0.22	0.37	2021	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	ND	ND	ND	2021	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	.70	.70	.70	2023	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate as N (ppm)	10	10	ND	ND	ND	2023	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (optional) (ppm)		Unregulated contaminants	60	60	60	2023	No	Erosion of natural deposits; Leaching
Per-and Polyfluoroalkly Substances (PFAS)								

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation (Yes/No)	Typical Source of Contaminant
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)	370	N/A	<2	<2	2023	No	Discharge and waste from industrial facilities utilizing the Gen X chemical process
Perfluorobutane sulfonic acid (PFBS) (ppt)	420	N/A	<2	<2	2023	No	Discharge and waste from industrial facilities; stain-resistant treatments

Perfluorohexane sulfonic acid (PFHxS) (ppt)	51	N/A	<2	<2	2023	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) (ppt)	400,000	N/A	<2	<2	2023	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) (ppt)	6	N/A	<2	<2	2023	No	Discharge and waste from industrial facilities; breakdown of precursor compounds
Perfluorooctane sulfonic acid (PFOS) (ppt)	16	N/A	<2	<2	2023	No	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities

**Copper and Lead Monitoring
January 1, 2023 thru June 30, 2023**

<u>Inorganic Contaminant Subject to Action Levels (AL)</u>	<u>Action Level</u>	<u>MCLG</u>	<u>Your Water ¹</u>	<u>Range of Results</u>	<u>Year Sampled</u>	<u>Number of Samples Above AL</u>	<u>Typical Source of Contaminant</u>
Lead (ppb)	15	0	1	0 – 3	2023	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.2	1.3	1.2	0 – 1.7	2023	2	Corrosion of household plumbing systems; Erosion of natural deposits

**Copper and Lead Monitoring
July 1, 2023 thru December 31, 2023**

<u>Inorganic Contaminant Subject to Action Levels (AL)</u>	<u>Action Level</u>	<u>MCLG</u>	<u>Your Water ¹</u>	<u>Range of Results</u>	<u>Year Sampled</u>	<u>Number of Samples Above AL</u>	<u>Typical Source of Contaminant</u>
Lead (ppb)	15	0	2	0-3	2023	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	1.0	0.0 – 1.9	2023	1	Corrosion of household plumbing systems; Erosion of natural deposits

Additional Information for 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 City of Brighton 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 have a lead service line, it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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 1-800-426-4791 or <http://water.epa.gov/safewater/lead>.

Infants and children who drink water containing lead could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Our water supply has zero lead service lines, including 4,564 service lines of unknown material “that likely do not contain lead” out of a total of 4,564 service lines, as in accordance with EGLE guidelines for service line determination. The City is actively verifying service line material to reassure that there are no active lead lines in service.

Additional Information for Copper:

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water-containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.

Copper in Drinking Water

What is copper?

Copper is found naturally in the environment in ground water and in surface water that is used for drinking water. It also comes from human-made sources, such as farming, mining and wastewater release. Copper is needed for all living things to survive. A person’s diet should include small amounts of copper. While copper is important to our health, high amounts can be harmful.

What health problems can copper cause?

Drinking water with high amounts of copper can cause:

- Upset stomach.
- Vomiting.
- Diarrhea.
- Stomach cramps.
- Severe illness, such as kidney and liver damage (when consumed over a period of time).

Infants may be more sensitive to elevated copper levels. Formula-fed children under 12 months already get their needed copper from infant formula.



In addition, people with rare diseases, like Wilson Disease, can have problems getting rid of copper from their body. They should follow their doctor's recommendations, which may include avoiding extra sources of copper in certain foods, multivitamins and drinking water.

How does copper get into my drinking water?

While copper can be found naturally in drinking water, it often comes from a home's pipes or faucets. When copper pipes get older, they may start to break down, letting the metal get into the water.

How much copper is permitted in my water?

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) and the U.S. Environmental Protection Agency (EPA) limits how much copper and other chemicals can be in municipal drinking water. Currently, the action level is 1.3 parts per million (ppm) for copper in drinking water. When at least 10 percent of tested homes on the same public water supply have copper above 1.3 ppm, the water supplier takes action to lower the amount of copper.

How do I know if copper is in my drinking water?

- Copper in water can cause blue-green stains on plumbing, such as sinks, faucets and pipes. It can cause a metallic or bitter taste in drinking water.
- Testing is the best way to know if copper is in your drinking water.
- Call your local health department or a certified laboratory to get a test kit. To learn more about test kit availability, fees and instructions, visit Michigan.gov/EGLElab and click on "Drinking Water Laboratory."

How can I reduce copper in my drinking water?

Keep your water moving

Keeping water moving through the lines keeps fresh water in your home's plumbing and flowing through the larger water distribution system as a whole. When tap water has not been used for several hours, you can reduce copper in your drinking water by **running the water from the faucet for two minutes before using it, or use filtered water for:**

- Drinking, cooking and rinsing foods.
- Making baby formula (You can also choose to use bottled water for this purpose).

You can move your water through the pipes by doing any of the following:

- Turning the cold-water faucet on all the way and running the water for at least two minutes.
- Taking a shower.
- Running a load of laundry.
- Running a load of dishes in a dishwasher.

After you move your water, turning on the faucet for 5 to 10 seconds before using water from that faucet will clear out any remaining water that was sitting in the pipes.

Using a filter can reduce copper in drinking water.

Identifying the right filter for your household is important. If you have questions, call your local health department or the MDHHS Drinking Water Hotline. They can help you identify a filter that fits your household needs and budget.

- You can consider a filter that reduces copper at the point water is used, such as a faucet. This is called a **point-of-use** filter.
- A filter that removes copper at the point where the water enters your home may also be an option. This is called a **point-of-entry** filter.
- When buying a filter, look for the certification number **NSF/ANSI Standard 53** for copper reduction and **NSF/ ANSI Standard 42** for particulate reduction (Class 1). Make sure the box says that it reduces copper. Follow the manufacturer's instructions for filter installation and maintenance.

Do not use hot water for drinking or cooking

- Do not cook with or drink water from the hot water tap. Copper dissolves more easily into hot water.

Clean your aerator.

- Aerators (the mesh screens on your sink faucet) can trap pieces of copper.
- Clean your drinking water faucet aerator at least every six months.
 - If there is construction or repairs to the public water system or pipes near your home, clean your drinking water faucet aerator every month until the work is done.

When can I use water from a faucet that has not been running for at least two minutes or is not filtered?

If you have copper in your drinking water, you can use water that is not cold or filtered for:

- Showering or bathing.
- Washing your hands, dishes and clothes.
- Cleaning.

For More Information

Michigan Department of Health and Human Services

MI-TOXIC Hotline 800-648-6942

[Michigan.gov/EnviroHealth](https://www.michigan.gov/EnviroHealth)

click "Care for Mi Drinking Water."

List of Michigan Local Health Departments

[Malph.org/Resources/Directory](https://www.michigan.gov/Resour/Direct)

Michigan Department of Environment, Great Lakes, and Energy

[Michigan.gov/EGLE](https://www.michigan.gov/EGLE)

Laboratory Services

[Michigan.gov/EGLELab](https://www.michigan.gov/EGLELab), choose "Drinking Water Laboratory"



One useful number you need to know when programming your water softener is the hardness of the water. The hardness of the City of Brighton's water is 25-27 grains, so set your softener to the proper settings and you will always have soft water and prevent over cycling of your system, saving on softening salt.

We will update this report annually and will keep you informed of any problems that may occur throughout the year. Individual copies of this report will not be mailed; copies are available at City Hall – 200 N. First Street, the DPW Office – 420 S. Third Street, or on the City's web site – <https://www.brightoncity.org>.

We invite public participation in decisions that affect drinking water quality. City Council meetings are every 2nd and 4th Tuesday of each month beginning at 6:30 PM. For more information about your drinking water, or the contents of this report, contact our Water Department at (810) 844-5115 or email dps@brightoncity.org.

For more information about safe drinking water, visit the U.S. Environmental Protection Agency at <http://www.epa.gov/safewater/>.



You can extend the life of your hot water heater by flushing the sediments from your hot water tank twice a year (follow the recommended procedure in your owner's manual).

When replacing a hot water heater, the cheapest is not always the best bargain compare warranties and annual operating cost before purchasing.