

2022 Water Quality Report for CITY OF BANGOR

Water Supply Serial Number: 0380

This report covers the drinking water quality for the CITY OF BANGOR for the 2022 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2022. Included are details about where your water comes from, what it contains, and how it compares to United States Environmental Protection Agency (U.S. EPA) and state standards.

Your water comes from #3, #7, #8, and #9 groundwater wells, each over 70 to 219 feet deep. The State performed an assessment of our source water to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based on geologic sensitivity, well construction, water chemistry and contamination sources. The susceptibility of our source is HIGHLY SUSCEPTIBLE.

There are significant sources of contamination including OLD ABANDON WELLS, OLD FUEL TANKS, AND OLD INDUSTRIAL SITES in our water supply. We are making efforts to protect our sources by SECURING MONIES TO CAP OFF OLD WELLS AND CLEAN UP SITES, AND WE PARTICIPATE IN A WELLHEAD PROTECTION PROGRAM.

If you would like to know more about this report, please contact: CITY MANAGER TOMMY SIMPSON @ 427-5831 OR WATER DEPARTMENT SUPERVISOR STEVEN LOWDER @ 312-4298

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 U.S. EPA's Safe Drinking Water Hotline (800-426-4791).

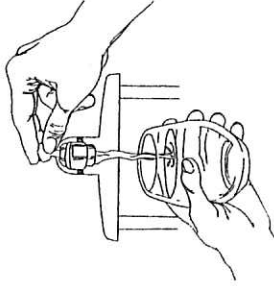
Vulnerability of sub-populations: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing

chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems 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. U.S. EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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, 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 stormwater 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 and residential uses.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- **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 stormwater runoff, and septic systems.



In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the levels of certain contaminants in water provided by public water systems. Federal Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2022 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2022. 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 the data is representative of the water quality, but some are more than one year old.

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 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 a 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.
- N/A: Not applicable
- ND: not detectable at testing limit
- ppm: parts per million or milligrams per liter
- ppb: parts per billion or micrograms per liter
- ppt: parts per trillion or nanograms per liter
- pCi/l: picocuries per liter (a measure of radioactivity)
- 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 have 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 have been found in our water system on multiple occasions

1 Monitoring Data for Regulated Contaminants

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Arsenic (ppb)	10	0	4.3 ppb	3.6 to 4.3	2021	no	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.098 ppm	.011 to .098	2021	no	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
Nitrate (ppm)	10	10	ND	ND	2022	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	.77 ppm	.17 to .77 ppm	2022	no	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium ¹ (ppm)	N/A	N/A	14 ppm	8.5 to 14 ppm	2021	no	Erosion of natural deposits
TTHM Total Trihalomethanes (ppb)	80	N/A					Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A					Byproduct of drinking water disinfection
Chlorine ² (ppm)	4	4					Water additive used to control microbes
Alpha emitters (pCi/L)	15	0	2.25 pCi/L	.546 to 2.25 pCi/L	2022	no	Erosion of natural deposits
Combined radium (pCi/L)	5	0	.522 pCi/L	0 to .522 pCi/L	2022	no	Erosion of natural deposits
Total Coliform	TT	N/A	N/A	N/A	2022	no	Naturally present in the environment
E. coli in the distribution system (positive samples)	See E. coli note ³	0	pos	N/A	2022	yes	Human and animal fecal waste
Fecal Indicator – E. coli at the source (positive samples)	TT	N/A	0	N/A	2022	no	Human and animal fecal waste

¹ Sodium is not a regulated contaminant.

² The chlorine "Level Detected" was calculated using a running annual average.

³ *E. coli* MCL violation occurs if: (1) routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or (2) the supply fails to take all required repeat samples following *E. coli*-positive routine sample, or (3) the supply fails to analyze total coliform-positive repeat sample for *E. coli*.

Per- and polyfluoroalkyl 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	123 ppt	113 to 123 ppt	2022	no	Discharge and waste from industrial facilities utilizing the Gen X chemical process
Perfluorobutane sulfonic acid (PFBS) (ppt)	420	N/A	< 2 ppt	<2 ppt	2022	no	Discharge and waste from industrial facilities; stain-resistant treatments
Perfluorohexane sulfonic acid (PFHxS) (ppt)	51	N/A	< 2 ppt	< 2 ppt	2022	no	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) (ppt)	400,000	N/A	< 2 ppt	< 2 ppt	2022	no	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) (ppt)	6	N/A	< 2 ppt	< 2 ppt	2022	no	Discharge and waste from industrial facilities; breakdown of precursor compounds
Perfluorooctane sulfonic acid (PFOS) (ppt)	16	N/A	< 2 ppt	< 2 ppt	2022	no	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Perfluorooctanoic acid (PFOA) (ppt)	8	N/A	< 2 ppt	< 2 ppt	2022	np	Discharge and waste from industrial facilities; stain-resistant treatments
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water ⁴	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	2 ppb	ND to 5	2020		Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.3ppm	ND to 0.53	2020		Corrosion of household plumbing systems; Erosion of natural deposits

⁴ Ninety (90) percent of the samples collected were at or below the level reported for our water.

Additional Monitoring

Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. Monitoring helps the U.S. EPA determine where certain contaminants occur and whether regulation of those contaminants is needed.

Unregulated Contaminant Name	Average Level Detected	Range	Year Sampled	Comments
[Name of Unregulated Contaminant] (unit)				Results of monitoring are available upon request
[Name of Unregulated Contaminant] (unit)				Results of monitoring are available upon request

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. The City of Bangor 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 or at <http://www.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.

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.

Our water supply has an estimated 700 lead service lines and 250 service lines of unknown material out of a total of 1350 service lines with about 400 disconnected at the main or shut off.

Monitoring and Reporting to the Department of Environment, Great Lakes, and Energy (EGLE) Requirements: The State of Michigan and the U.S. EPA require us to test our water on a regular basis to ensure its safety. We use Paw Paw Lab and Trace Lab for our sample testing. We did not met all the monitoring and reporting requirements for 2022.

The City of Bangor is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the monitoring period of August 1, 2022, to August 31, 2022, we did not complete monitoring/reporting for chlorine residuals taken with bacteriological samples and therefore, cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do currently. This is not an emergency. You do not need to boil water or use an alternative source of water currently. Even though this is not an emergency, as our customers, you have a right to know what happened and what is being done to correct the situation.

Chlorine residuals were taken from two of five sample locations. We collected routine bacteriological samples on September 7, 2022, and took the required chlorine residuals, recorded and reported to EGLE which met the drinking water standards set by the Safe Drinking Water Act. Our staff is making every effort to ensure this does not happen again.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct the problems that were found during these assessments.

In September of 2022 we had to complete a Level 1 Assessment Form for EGLE. This form was completed and returned to them. It consists of sample sites, sample collection, wells, treatment, water tank storage, distribution system, operation and maintenance questions. This form can be discussed with me at any time and is attached at the end of the report. Now all personnel have been trained and are required to take samples by disinfecting the area of the sample source, letting the water run for a minimum of 5 minutes, getting a free and total chlorine test, taking the sample, and then recording all the information.

In September 1, 2022 we were out of compliance and returned back into compliance on September 7, 2022 when the routine coliform samples and chlorine disinfectant residuals were collected. See last sheet for more information.

During the past year we have been required to conduct a Level 1 Assessment. This form was completed and sent to EGLE on August 31, 2022. The assessment was reviewed by EGLE and cleared with a recommendation to talk about having the storage tank cleaned and inspected. This was sent back to us on September 14, 2022, and can be reviewed with me in my office.

For more information, please contact Steven Lowder Operator at 269-312-4298 and see the attached last page of this report.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at City Hall 257 West Monroe Street and Public Works 421 West Arlington Street. This report can be found on the City of Bangor website and will be in the Vav Buren Reminder. This report will not be sent to you.

We invite public participation in decisions that affect drinking water quality. The city council meets on the first and third Monday of every month at 7:00 pm in the council chambers. For more information about your water, or the contents of this report, contact Tommy Simpson city manager 269-427-5831 or Steven Lowder water operator 269-312-4298 or visit our website www.bangormi.org . For more information about safe drinking water, visit the U.S. EPA at <http://www.epa.gov/safewater>.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for the City of Bangor

The City of Bangor is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the monitoring period of August 1, 2022 to August 31, 2022, we did not complete monitoring/reporting for chlorine residuals taken with bacteriological samples and therefore, cannot be sure of the quality of your drinking water during that time.

What should I do? There is nothing you need to do at this time. This is not an emergency. You do not need to boil water or use an alternative source of water at this time. Even though this is not an emergency, as our customers, you have a right to know what happened and what we are doing to correct the situation.

The table below lists the samples we did not properly test for, how often we are supposed to sample, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date we collected follow-up samples.

Contaminants	Required sampling frequency	Number of samples reported/total number collected	Date samples should have been collected	Date samples were collected
Chlorine Residual	1 sample per distribution bacteriological sample.	2 of 5	08/01/2022 – 08/31/2022	09/07/2022

What happened? What is being done? Chlorine residuals were taken from two of five sample locations. We collected routine bacteriological samples on September 7, 2022, and took the required chlorine residuals, recorded and reported to EGLE which met the drinking water standards set by the Safe Drinking Water Act. Our staff is making every effort to assure this does not happen again.

For more information, please contact Steven Lowder at 269 312 4298.

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.

This notice is being sent to you by the City of Bangor.

CERTIFICATION:

WSSN: 00380

I certify that this water supply has fully complied with the public notification regulations in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature: Steven Lowder Title: Operator in Charge Date Distributed: 05/24/2023