



2020 Water Quality Report for Benton Harbor

Water Supply Serial Number: 00600

This report covers the drinking water quality for Benton Harbor for the 2020 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2020. 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 Lake Michigan. The MDEQ performed an assessment of our source water in 2003 to determine the susceptibility of potential contamination. The susceptibility rating is on a six-tiered scale from “very low” to “high” based on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of Benton Harbor’s water is moderately high. This is due the potential urban and agricultural runoff in the St. Joseph River watershed to the St. Joseph River.

For more information about your water, or the contents of this report, contact Ellis Mitchell, City Manager, Benton Harbor City Hall, 200 East Wall Street, Benton Harbor, Michigan, 49022. You can also contact Mr. Mitchell by email at emitchell@bhcity.us or by phone at (269) 927-8457.

We invite public participation in decisions that affect your drinking water quality. City Commission Meetings are held the 1st and 3rd Monday of every month at 7 p.m. in the Commission Chambers at City Hall.

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)**.

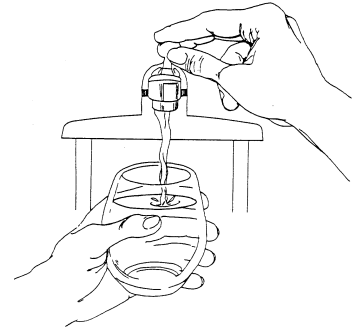
Vulnerability of sub-populations: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems 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. 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **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.
- **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 2020 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, 2020. 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.

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
Nitrate (ppm)	10	10	0.3	N/A	2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium ¹ (ppm)	N/A	N/A	14	N/A	2020	No	Erosion of natural deposits

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
TTHM Total Trihalomethanes (ppb)	80	N/A	47	30.9-60.2	2020	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	36	18.7-49	2020	No	Byproduct of drinking water disinfection
Chlorine ² (ppm)	4	4	1.1	1.01-1.27	2020	No	Water additive used to control microbes
Alpha emitters (pCi/L)	15	0	1.2	N/A	2020	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	0.85	N/A	2020	No	Erosion of natural deposits
Turbidity ³	TT = 1 NTU	0	0.33 NTU	N/A	2020	No	Soil runoff
	TT= % of samples <0.3 NTU		99%	N/A			

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	23	0 - 440	Jan - Jun 2020	9	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0	0-0.2	Jan - Jun 2020	0	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	15	0	24	0-240	Jul - Dec 2020	11	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0	0-0.2	Jul - Dec 2020	0	Corrosion of household plumbing systems; Erosion of natural deposits

¹ Sodium is not a regulated contaminant.

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

³ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

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

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. Benton Harbor 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.

Free Water Filter Distribution: The use of water filters is recommended in any residence served by the City of Benton Harbor water system that is home to a child or a pregnant woman. However, free filters are being provided by the Berrien County Health Department to any City of Benton Harbor resident who would like one. For more information, please visit the Berrien County Health Department website at <http://bchdmi.org/1599/City-of-Benton-Harbor> or call (269) 926-7121.

Our water supply has 824 lead service lines and 4,349 service lines of unknown material out of a total of 5,877 service lines.

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.

Violations: The City of Benton Harbor has received the following Safe Drinking Water Act violations.

- We received a violation for failing to provide Public Education (PE) to all our consumers after we had a lead Action Level Exceedance in the two monitoring periods of July 1, 2019 to December 31, 2019, and January 1, 2020 to June 30, 2020. We distributed the PE to most, but not all our consumers, by the deadlines of March 1, 2020 and August 29, 2020, respectively. To return to compliance, we distributed PE to all our customers by March 1, 2021.
- For the monitoring periods of January 1, 2020 to March 31, 2020, and April 1, 2020 to June 30, 2020, we failed to collect our Synthetic Organic Chemicals (SOC) sample from the compliance location. We took a follow-up sample in September 2020, which brought us back into compliance. This sample met the health standards for all SOCs that were analyzed.
- During September 2020, we received a Treatment Technique violation because our chlorine monitoring equipment failed. We returned to compliance on October 5, 2020. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort. We received a violation for failing to also report this loss of monitoring equipment to the Department of Environment, Great Lakes, and Energy on our Monthly Operations Report.
- In November of 2020, our treatment plant ran for a few hours without an essential treatment chemical, aluminum sulfate. To rule out microbial contamination, we conducted flushing, sampling, and continued disinfection of the water system. A precautionary boil water advisory was issued on November 5, 2020 and lifted on November 10, 2020 after contamination was ruled out. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.
- For the monitoring period of August 3, 2020 to February 3, 2021, we failed to collect a PFAS (Per- and polyfluoroalkyl substances) sample as required. We collected a sample on March 22, 2021, which brought us back into compliance. This sample showed that all results met acceptable limits.

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 Benton Harbor City Hall, 200 East Wall Street.

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 Benton Harbor

We are 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. We routinely monitor your water for turbidity (cloudiness) and chlorine disinfectant residuals at many locations. This tells us whether we are effectively filtering and disinfecting the water supply. We had an equipment failure that did not properly record the 15-minute individual filter turbidity results and maintain the records for three years as required by law. We observe the turbidities every hour and did not observe any water quality issues.

We also had a failure of the chlorine monitoring equipment, which continuously provides the chlorine levels entering the system. Low chlorine levels, if measured, become a concern over lack of disinfection. We also measure chlorine residual manually and did not find any low levels of chlorine to raise concerns over disinfection levels. However, the manual measurements are not collected continuously.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

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 did to correct the situation.

What happened? What is being done? Our individual turbidity monitoring equipment has been operating continuously but the 15-minute readings have not been recorded and maintained as required. We are making upgrades to the computer equipment to assure this does not happen again. We will begin recording these results again as soon as the equipment is functional. We also worked to fix the chlorine analyzer and now have two methods for verifying adequate disinfection of your water.

For more information, please contact the City of Benton Harbor, at (269) 927-8400.

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 Benton Harbor.

CERTIFICATION:

WSSN: 00600

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: _____ Title: City Manager Date Distributed: 6/30/2021

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for the City of Benton Harbor

*We are 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 first 3 quarters of 2020 we did not monitor or test for Synthetic Organic Compounds (SOC) from the correct location and therefore cannot be sure of the quality of our drinking water during that time. However, this violation **does not** pose a threat to your supply's water.*

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 did to correct the situation.

The table below lists the contaminants we did not properly test for, how often we are supposed to sample for these contaminants, 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.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been taken	Date additional samples were (or will be) taken
SOC	1 sample per quarter from the treatment plant	1 sample per quarter before the water went through treatment	Quarterly through September	9/22/2020

What happened? What is being done? We inadvertently missed taking samples within the required sampling periods. We are making every effort to make sure this does not happen again. Samples taken since this time show that all results are within acceptable limits.

For more information, please contact the City of Benton Harbor at (269) 927-8400.

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Monitoring Requirements Not Met for the City of Benton Harbor

*We are 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 six-month period of August 3, 2020 through February 3, 2021 we did not monitor or test for PFAS (Per- and polyfluoroalkyl substances) and therefore cannot be sure of the quality of our drinking water during that time. However, this violation **does not** pose a threat to your supply's water.*

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 did to correct the situation.

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Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been taken	Date additional samples were taken
PFAS Compounds	1 sample per 6 months	0	08/03/2020 to 02/03/2021	03/22/2021

What happened? What is being done? We inadvertently missed taking a sample within this required sampling period. We took a sample on March 22, 2021. We are making every effort to prevent this from happening again. Samples taken since then show that all results met acceptable limits.

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