

# City of Big Rapids Water Quality Report

April 2024

## Why Do You Get This Report?

The Environmental Protection Agency (EPA) requires every community water supply throughout the United States to report specific details regarding water quality along with any contaminants which may be found in our tap water and source water. This report identifies our source water and the results of our January – December 2023 water tests. In order to ensure this information reaches all of our customers, the EPA requires this report be made available to each household and business we supply at the City link <http://cityofbr.org/water/forms/Water Quality Report.pdf>. A copy of this 2023 Consumer Confidence Report will be mailed to anyone by calling Steve Cook at 231-796-6231 and requesting one.

## Do I Need To Take Special Precautions?

The EPA sets legal limits and regulates the amount of contaminants allowed in drinking water provided by all public water systems. Sources of drinking water worldwide (both tap and bottled) may reasonably be expected to contain at least small amounts of some contaminants. Though contaminants are present, it does not necessarily indicate that the water poses any kind of health risk. We treat our water according to EPA regulations.

While EPA's health-based standards for drinking water are generally safe, some people may be more sensitive to contaminants in drinking water than the general population. Some infants, children or elderly, individuals who have undergone organ transplants, people with HIV/AIDS or persons receiving chemotherapy can be at risk for infections. These people should seek advice from their health care providers. More information on potential health effects of specific contaminants can be obtained by contacting the EPA's Safe Drinking Water hotline at 1(800)426-4791 or at their website at <http://www.epa.gov/safewater/dwhealth.html>.

## About Contaminants

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 animal or 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 storm water runoff, industrial or domestic wastewater discharges, and residential uses; 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 storm water runoff and septic systems; and Radioactive contaminants which can be naturally-occurring or be the result of oil and gas production and mining activities.

## Lead and Drinking Water

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 Big Rapids 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. 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. 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 at <http://water.epa.gov/drink/info/lead>. In

the period between July 1 and December 31, 2023, the City was issued a violation for Failure to maintain corrosion control treatment within required ranges. This failure was caused by faulty testing equipment and was not a water quality issue. The testing equipment was replaced immediately, and all other test results were well within required ranges. The 2020-year service line data, Number of Lead service lines: 33. Number of unknown material service lines: 960. Total number of service lines: 2,386. The 2021-year service line data, Number of lead service lines: 16. Number of unknown service lines: 528. Total number of service lines: 2,386. The 2022 service line data, Number of Lead service lines: 143. Number of unknown service lines 0. Total number of service lines: 2,386. The 2023 – year service line data, Number of Lead service lines: 8. Number of unknown material service lines: 0. Total number of service lines: 2,386. The city has identified the materials used in the service lines that are not documented, if these materials have or did have Lead components they have been replaced, 49 service lines were replaced in 2021, another 16 were identified in 2021, and 127 more were identified in 2022 and all but eight service lines were replaced in 2023. The eight that were not replaced is due to the owners not allowing the city permission to do the required replacement.

### **Source Water Assessment**

The Big Rapids water supply system provides residents of the City of Big Rapids and parts of Big Rapids Township with high-quality drinking water, drawn from four groundwater wells at Roben-Hood Airport. Big Rapids has initiated a Wellhead Protection Program to study the quality of our groundwater and the steps we as a community can take to protect it.

In addition, the Michigan Department of Environment, Great Lakes, and Energy recently performed a Source Water Assessment (SWA) of the Big Rapids water system; our source water susceptibility to contamination was determined to be “moderate”.

In June of 2023 the Big Rapids water system was tested for PFOS and PFOA and none of the related compounds were detected.

A copy of both the Wellhead Protection Plan and the Source Water Assessment can be viewed at City Hall, Department of Public Works, 226 N. Michigan. Or call Public Works Director Heather Bowman at (231) 592-4018.

If you are interested in learning more about the water department and water quality, contact Water Plant Superintendent Steve Cook at (231) 796-6231. Should you seek more information about our water supply, the City Commission meets the first and third Mondays of each month at 6:30 pm in Big Rapids City Hall.

	Test Date	Violation (Y/N)	Level Detected	Unit of Meas.	MCLG	MCL	Likely Source of Contamination
<b>Regulated Contaminates</b>							
<b>Microbiological Contaminants</b>							
Turbidity	2023	N	Max: 0.13 NTU Lowest Monthly Average 0.03 meeting limits = 100%	NTU	0	1 NTU: 99% of samples less than 0.05 NTU	Soil runoff
Total Coliform	2023	N	0		0	> 1 Positive Monthly sample (5% of monthly samples Positive)	Naturally present in environment
Bacterial							
<b>Radioactive Contaminants</b>							
Gross Alpha	2023	N	0.410	pCi/L	0	15 pCi/L	Decay of uranium and thorium
Radium 226	2023	N	0.240	pCi/L	0	5 pCi/L	Decay of uranium and thorium
Radium 228	2023	N	0.160	pCi/L	0	5 pCi/L	Decay of uranium and thorium
<b>Inorganic Contaminants</b>							
Arsenic	2017	N	0	ppb	0	10	Erosion of natural deposits: run off from orchards, glass, & electronic production waste
Barium	2017	N	0.05	ppm	2	2	By-product of drilling waste, discharge from metal refineries, erosion of natural deposits
Chlorine	2023	N	Highest Monthly AVE. = 1.0 Range: .7 to 1.4	ppm	MRDLG equals 4	MRDL=4	Water additive to control microbes
Copper 90th Percentile	2023	N	0.5 ppm (90th Percentile) Range: 0-1.1 ppm 0 sites exceed the AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride	2023	N	0.57	ppm	4	4	Additive that promotes strong teeth, erosion of natural deposits
Lead 90th percentile	2023	N	1.0 ppb (90th Percentile) Range: 0-30 ppb 1 sites exceeded the AL	ppb	0	AL=15	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
PFAS							
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)	2023	N	Not Detected	ng/l	N/A	370	Discharge and waste from industrial facilities utilizing the Gen X chemical process
Perfluorobutane sulfonic acid (PFBS) (ppt)	2023	N	Not Detected	ng/l	N/A	420	Discharge and waste from industrial facilities; Stain resistant treatments
Perfluorohexane sulfonic acid (PFHxS) (ppt)	2023	N	Not Detected	ng/l	N/A	51	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) (ppt)	2023	N	Not Detected	ng/l	N/A	400,000	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) (ppt)	2023	N	Not Detected	ng/l	N/A	6	Discharge and waste from industrial facilities; breakdown of precursor compounds

Perfluorooctane sulfonic acid PFOS) (ppt)	2023	N	Not Detected	ng/l	N/A	16	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Perfluorooctanoic acid (PFOA) (ppt)	2023	N	Not Detected	ng/l	N/A	8	Discharge and waste from industrial facilities; stain-resistant treatments
<b>Volatile Organic Contaminants</b>							
Haloacetic Acids (HAAS)	2023	N	4	ppb	n/a	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2023	N	7.1	ppb	n/a	80	By-product of drinking water disinfection
<b>Unregulated Contaminants / Water Characteristics</b>							
Chloride	2023	N	Not Detected	ppm	n/a	250	Salt, naturally present
Hardness as CaCo3	2023	N	178	ppm	n/a	n/a	Naturally occurring minerals, controlled by water treatment process
Iron	2023	N	Highest Monthly AVE. = 20 Range: 0.0 to 50	ppb	n/a	300	Naturally present in environment
Manganese	2023	N	Highest Monthly AVE. = 12 Range: 0 to 43	ppb	n/a	50	Naturally present in environment
Sodium	2023	N	5.4	ppm	n/a	n/a	Naturally present in environment
Cyanide- available	2023	N	Not Detected	ppm	n/a	0.2	Naturally present in environment
Asbestos	2022	N	Not Detected	MFL	n/a	7MFL	Asbestos cement pipe

### Key

**MRDL** Maximum Residual Disinfection Level - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG** Maximum Residual Disinfection Level Goal - 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 contamination.

**MCLG** Maximum Contaminant Level Goal - The level of a substance below which there is no known or expected risk to human health.

**AL** Action Level - The amount of a substance when exceeded requires a treatment change or other response by a water system.

**n/a** Not applicable

**n.d.** Not detected

**MCL** Maximum Contaminant Level - This is the highest level of a substance allowed in drinking water.

**NTU** Nephelometric Turbidity Units - Measurements of the minute suspended particles in the water. Used to judge water clarity.

**ppm** Parts Per Million - You win one million dollars in the lottery. You give a friend one dollar. That's 1 ppm.

**ppb** Parts Per Billion - You inherit \$10 million dollars. When counting it you discover that one cent is missing. That is 1 ppb.

**PPT** Parts Per Trillion or nanograms per liter

**TT** Treatment Technique - A required process intended to

**NR** Reduce the level of a substance in drinking water. Monitoring not required, but recommended.

**MNR** Monitored Not Regulated  
State Assigned Maximum Permissible

**MPL** Level

**MFL** Million fibers per liter