2022 Annual Drinking Water Quality Report

PWSID#MT0000155
1540 Popelka Drive
Billings, MT 59105

We're very pleased to provide you with the annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is, and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is surface water from the Yellowstone River.

We're pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water, please contact **Peyton Brookshire**. He can be reached at **252-0539**. If you want to learn more about our water, please attend any of our regularly scheduled meetings. They are held on **the third Wednesday of the month at 6:00 pm at the District Office located at 1540 Popelka Drive, Billings, MT 59105.**

Heights Water purchases water from the City of Billings. The City of Billings and Heights Water routinely monitor for constituents in your drinking water according to Federal and State laws. This report shows the results of the monitoring by Heights Water for the period of **January 1st to December 31st, 2022.** For information concerning the monitoring done by the City of Billings, copies of their Water Quality Report are available at the District Office, or online at City of Billings, MT - Official Website - Water Quality Reports. For constituents that are not monitored yearly, we have reviewed our records back to the last five years.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of that the drinking water has or has not met health standards. We will not conduct monitoring for asbestos because we have been granted a waiver by DEQ. This waiver is based on our analytical result. This waiver is in effect from 2020 through 2028.

We have monitored for lead and copper, and all our samples have been in compliance with the Lead and Copper Rule. 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. Heights 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. 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.

Parameter	Date	90th % value	Units	Action level	Source of Contamination
Lead	2021	3	ppb	15	Household plumbing
Copper	2021	0.126	ppm	1.3	Household plumbing

In the tables above and below you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Parts per billion (ppb) or Micrograms per liter (ug/l) - one part per billion corresponds to one minute in 2000 years or a single penny in $10,000,00.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Action Level - the concentration of a contaminant which if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - (mandatory language) a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - (mandatory language) The "Maximum Allowed" (MCL) is 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 Contaminant Level Goal - (mandatory language) The "Goal" MCLG is 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.

Nephelometric Turbidity Unit (NTU)-nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Picocuries per liter (pCi/L)- picocuries per liter is a measure of the radioactivity in water.

TEST RESULTS								
Contaminant	**Violation Y/N**	**Sample Date**	**Highest Level Detected**	**Range**	**Unit Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
Disinfection By-products								
Chlorine	N	2022	0.8	0.7 - 0.8	ppm	MRDLG 4	MRDL 4	Water additive used to control microbes
Total Trihalomethanes (TTHMs)	N	2022	52*	30-60	ppb	0	80	By-product of drinking water chlorination
Haloacetic Acids (HAAs)	N	2021	35*	21-49	ppb	0	60	By-product of drinking water chlorination

*Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future

Our system had no violations.

We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water **IS SAFE** at these levels.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials.

All 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 the 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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

City of Billings
2022 Annual Drinking Water Quality Report
Your Water - Our Responsibility

What is this Report?

The City of Billings Water Quality Division is pleased to provide you with our 2022 Annual Drinking Water Quality Report. We want to keep you informed about the excellent water and service we have delivered to you over the past year. Our goal is and always has been, to provide to you a superior and dependable supply of drinking water. We continually monitor our finished (tap) water to ensure it has no regulated contaminant at a level considered to be a health issue by either EPA or the Montana Department of Environmental Quality. Your water meets or exceeds the requirements of the Federal Safe Drinking Water Act.

All of the water we provide to you comes from the Yellowstone River. A study of the susceptibility of the Yellowstone River to contamination has been conducted. The analysis showed that our source water's susceptibility to contamination is low. The Source Water Protection plan is available through the Billings Public Works, Environmental Affairs Division, (**406-247-8517) or on the State of Montana Department of Environmental Quality website at** SOURCE WATER Delineation and Assessment Report - Billings, Laurel, and Lockwood (mt.gov)

SPECIAL NOTE TO OWNERS/MANAGERS OF ASSOCIATIONS AND/OR INCOME PROPERTIES: To ensure the City of Billings 2021 Annual Drinking Water Quality Report reaches **ALL** consumers, please post for residents.

Where Can I Get More Information?

- **Water Quality Laboratory at 406-657-8346**
- The goal of the Water Quality Division is to provide to you the best water possible. We work hard to protect your water resources and to treat your drinking water to the highest standards. We want to meet your expectations but cannot identify issues without your help. If you would like more information or have any water quality concerns, please contact the Water Quality Laboratory.

- Montana Dept. of Environmental Quality (MDEQ) – Public Water Supply Bureau **(406) 444-4400**

- **WANT TO LEARN MORE?** Group tours of the water treatment plant are available. To schedule your tour - Education Outreach & Facility Tours | Billings Public Works, MT (billingsmtpublicworks.gov)

• Special Population Advisory

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people 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/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the EPA **Safe Drinking Water Hotline (800-426-4791).**

EPA Safe Drinking Water Information:

https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline

EPA National Primary Drinking Water Regulations

http://epa.gov/sites/production/files/2016-06/documents/npwdr_complete_table.pdf

Environmental Protection Agency (EPA) Regulations

The City of Billings Water Quality Division routinely monitors for contaminants in your drinking water according to Federal and State regulations. The following tables show the results of our monitoring for the period of January 1st to December 31st, 2022. (Some of our data may be more than one year old because the state allows us to monitor for some contaminants less often than once per year.)

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. 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. The presence of contaminants does not necessarily indicate that water poses a health risk.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Long Term 2 - Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)

From April 2015-March 2017, the City of Billings completed a second round of monitoring for *Cryptosporidium* in the Yellowstone River in accordance with the EPA Long Term 2 Surface Water Treatment Rule (LT2).

Samples were collected monthly for two years; the results from this testing were favorable and the City is not required to add additional treatment processes to meet the requirements of the rule.

Water Quality Data Table Definitions

The tables on the next two pages list all of the drinking water contaminants detected for the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables is from testing done in the calendar year of the report.

In the following section you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

ppm or mg/l - Parts per million or Milligrams per liter - or one ounce in 7,812 gallons of water.

ppb or µg/l - Parts per billion or Micrograms per liter - or one ounce in 7,812,000 gallons of water.

ND - Not Detected

NTU - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

TT - Treatment Technique - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - The MCL is 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 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.

Secondary Maximum Contaminant Level (SMCL) - The SMCL represents reasonable goals for drinking water quality and provide a guideline for public water suppliers. Secondary contaminants affect mainly the aesthetic qualities such as undesirable taste or odors.

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 contamination.

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 contamination.

WATER QUALITY DATA						
Contaminant	Violation Yes/No	Highest Level Detected	Range Detected	MCL	MCLG	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria	No	0 positive samples out of 1302 samples collected	--	5% positive	0	Naturally present in the environment
Turbidity (NTU)	No	0.063	0.014 - 0.063	TT=95% of samples <0.3	N/A	Soil runoff. Turbidity is a measure of the cloudiness of the water. This is monitored because it is a good indicator of water quality.
Inorganic Contaminants						
Arsenic (ppb)	No	7	ND - 7	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Distribution System Free Chlorine (ppm)	No	0.80 Compliance is based on a running annual average of all distribution samples collected.	0.08– 1.58	MRDL=4	MRDLG=4	Water additive used to control microbes
Fluoride (ppm)	No	0.60	0.15 – 0.60	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate - NO_3 (ppm)	No	0.42	ND – 0.42	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Copper (ppm)	No	0.27 = 90th percentile No sites above AL (2020 sampling data)		AL=1.3 Action Level—90% of samples must be below this level.	1.3	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	No	3 = 90th percentile No sites above AL (2020 sampling data)		AL=15 Action Level—90% of samples must be below this level.	0	Corrosion of household plumbing systems, erosion of natural deposits
Volatile Organic Contaminants						
Haloacetic Acids (HAA5) (ppb)	No	34	30 - 34	60	N/A	By-product of drinking water chlorination
Total trihalomethanes (TTHM) (ppb)	No	47	31 - 47	80	N/A	By-product of drinking water chlorination
Total Organic Carbon (TOC)	No	The percentage of (TOC) removal was measured each month and all removal requirements were met.		TT	N/A	Naturally present in the environment and has no health effects.

SECONDARY CONTAMINANTS			
Contaminant	Range Detected*	SMCL	Noticeable Effects at Elevated Levels
Aluminum (ppb)	ND - 24	50 - 200	Colored Water
Chloride (ppm)	5.1 – 13.0	250	Salty Taste
Sulfate (ppm)	15.5 – 77.1	250	Salty Taste
Total Dissolved Solids (ppm)	94 - 398	500	Hardness; deposits; colored water; staining; salty taste
pH (s.u.)	7.5 – 8.4	6.5 - 8.5	**Low pH**: bitter metallic taste; corrosion **High pH**: slippery feel; soda taste; deposits
Other Parameters			
Total Hardness (ppm)	60 - 202	None	Spots; Deposits
Alkalinity (ppm)	39 - 172	None	None
Potassium (ppm)	1.62 – 5.36	None	None
Sodium (ppm)	7.9 – 29.0	None	None
Magnesium (ppm)	4.3 – 17.0	None	None

The concentration of these contaminants varies seasonally with the highest values in the winter and the lowest values during spring run-off.* ***As you can see by the table, our system had no violations. We are proud that your drinking water meets or exceeds all Federal and State requirements.*

Items of Interest

Asbestos

On July 20, 2021, the Montana Department of Environmental Quality issued an asbestos monitoring waiver to the City of Billings through the year 2028. The City of Billings distribution system contains no asbestos cement pipe.

Asbestos-Waiver-Letter-2020-PDF (billingsmtpublicworks.gov)

Arsenic

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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 Billings Water Quality Facility 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 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 (800-426-4791)** or at http://www.epa.gov/safewater/lead

To find out if your water service line is comprised of lead or a different material, please click on the link below. It will provide directions for testing your line and a form for you to input your findings. This data that you provide on the form will assist the City of Billings in keeping a more comprehensive inventory of privately owned water service lines. This information helps us serve you better by knowing what potential risks factors may or may not exist from your water service line.

Form Center • Billings Public Works, MT • CivicEngage (billingsmtpublicworks.gov)

Cryptosporidium

Microscopic organism that, if ingested, can cause fever and gastrointestinal symptoms. Cryptosporidium is removed from water through a successful treatment combination of sedimentation and filtration.

The Mission of the City of Billings Water Quality Division is TO BE A TRUSTED STEWARD OF THE COMMUNITY, ENVIRONMENT AND FINANCIAL RESOURCES WE MANAGE BY PROVIDING EFFICIENT, EFFECTIVE, AND RELIABLE WATER AND WASTEWATER UTILITY SERVICES.