This report was prepared for Montana State University by the City of Bozeman Water Treatment Plant personnel.

Pure and Fresh

We are pleased to present our 2023 Water Quality Report for MSU-Bozeman. We want to inform you about the water we deliver every day.

We are proud to say the MSU-Bozeman's drinking water meets or exceeds all applicable federal and state requirements. The water system for MSU-Bozeman had zero violations for 2023. Our goal continues to be to provide you with a safe and dependable supply of drinking water.

All sources of drinking water are subject to potential contamination by constituents which occur naturally or are manmade. These constituents include microbes, organic and inorganic chemicals, or radioactive chemicals. In order to ensure safe drinking water, the Environmental Protection Agency established regulations limiting the amount of certain contaminants for public water supplies.

This report contains a list of all ***detected*** contaminants found in MSU-Bozeman's drinking water.

Through a cooperative effort between MSU-Bozeman and the City of Bozeman, all required monitoring and reporting is conducted by the City of Bozeman Water Treatment Plant operators to ensure MSU-Bozeman's drinking water is safe and reliable.

Water Source

Montana State University-Bozeman is a consecutive system to the City of Bozeman. This means all drinking water for MSU-Bozeman comes from the City of Bozeman Water Treatment Plant. The sources of the City of Bozeman's drinking water are the following:

Hyalite Creek

The water from Hyalite Creek flows into the Middle Creek Reservoir (Hyalite Reservoir) where it is stored for current and future use. This is a surface water source.

Sourdough Creek

The creek water is drawn from the watershed in Sourdough Canyon. No storage reservoir exists since the breaching of Mystic Lake Dam in 1985. This is also a surface water source.

Water from Hyalite Creek is diverted via an underground pipeline and is mixed with water from Sourdough Creek at the City of Bozeman Water Treatment Plant located on Sourdough Canyon Road.

The Sourdough and Middle Creek water sources are utilized at a 22 million gallon per day (MGD) microfiltration membrane plant with robust pretreatment. This plant allows the City to meet the service demands and comply with the Environmental Protection Agency (EPA) and Montana Department of Environmental Quality (MTDEQ) regulations.

Source Water Assessment

Bozeman's watersheds are devoid of significant potential sources of contamination. The exception is the transportation corridor along Hyalite Creek, which has a high susceptibility to contamination by transportation of chemicals, especially vehicle fluids on Hyalite Road.

Water & Your Health

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.

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

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer under going 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 for 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 microbial contaminants are available from Safe Drinking Water Hotline (800-426-4791).

For More Information
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Visit www.bozeman.net/waterquality for the City of Bozeman's Water Quality Report

DEFINITIONS AND TABLE OF CONTAMINANTS

Chlorine and Fluoride are added and pH is adjusted by the City of Bozeman Water Treatment Plant as water exits the treatment plant. Chlorine is added to maintain a measurable chlorine residual throughout the entire distribution system. The chlorine residual is measured daily in the MSU-Bozeman distribution system. Fluoride is naturally occurring in nearly all water. Fluoride is dosed to meet EPA requirements (0.70 ppm). It is measured daily in the MSU-Bozeman distribution system. The pH is adjusted for corrosion control of lead and copper piping. The target pH is between 8.00 and 8.60 depending on the time of year. The pH is measured daily in the MSU-Bozeman distribution system. Total Trihalomethanes and Haloacetic Acids are measured at the Miller Dining Complex and the Plew Building. They are measured quarterly as part of the MSU-Bozeman distribution system for compliance with the Stage 2 Disinfection Byproducts Rule.

* Lead sampling was performed in July 2021 for MSU-Bozeman. 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. MSU-Bozeman and the City of Bozeman are 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 at (800) 426-4791 or http://www.epa.gov/safewater/lead.

Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements, which a water system must follow. Ninety percent of samples must be at, or below, this level. Lead and copper are measured at the 90th percentile.
Maximum Contaminant Level (MCL)	The highest level of a contaminant 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 contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfection Level (MRDL):	The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants (4.0 mg/l).
Maximum Residual Disinfectant Level Goal (MRDLG)	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination (4.0 mg/l).
Nephelometric Turbidity Units (NTU)	Level of turbidity in filtered water.
ppm	parts per million
ppb	parts per billion
pCi/L	Picocuries per liter (a measure of radioactivity)
uS/cm	microsiemens per centimeter
Treatment Technique (TT)	Required process intended to reduce the level of contaminant in drinking water.
Running Annual Average (RRA)	Average of the results for the most recent four quarters.
Locational Running Annual Average (LRAA)	Average of the results for a location for the most recent four quarters.
UCMR	Unregulated Contaminant Monitoring Rule.
Variances and Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

MSU - Bozeman	Location	Range		Your Water	Year collected	MCL	AL	MCLG	Typical Contaminant Source
Trihalomethanes (THMs) (ppb)	DBP1 - Miller	11.0	36.0	21.3	2023	80		N/A	By-product of drinking water chlorination
	DBP2 - Plew	8.2	43.0	22.6					
Haloacetic Acids (HAA5s) (ppb)	DBP1 - Miller	9.5	21.0	16.1		60		N/A	By-product of drinking water chlorination
	DBP2 - Plew	7.6	22.0	16.2					
Total Coliform	MSU - Bozeman Distribution System		243	1 positive sample		<5% of samples/mo		0	Naturally present in the environment
Free Chlorine (ppm)		0.18	1.06	0.70		4 (MRDL)		4 (MRDLG)	Water additive used to control microbes
Turbidity * (NTU)		0.015	0.574	0.042		TT= 1 NTU TT= 95% < 0.15 NTU			Natural result of soil runoff
Alkalinity (ppm)		62.4	102.4	85.1		NA			
Calcium Hardness (ppm)		46.0	100.0	64.2		NA			
Total Hardness (ppm)						NA			
Specific Conductivity (uS/cm)		81.5	198.5	147.1		NA			
pH (SU)		7.71	8.90	8.43		6.5-9.3			
Temperature (Celsius)		5.8	17.8	12.1		NA			
Fluoride (ppm)		0.36	0.89	0.56		4		4	Erosion of natural deposits; water additive which promotes strong teeth
Lead* (ppb)			Zero Sites exceeded A.L.	2 (90th percentile)	2021		15	0	Erosion of natural deposits; corrosion of household plumbing systems
Copper* (ppm)			Zero Sites exceeded A.L.	0.042 (90th percentile)	2021		1.3	0	Erosion of natural deposits; corrosion of household plumbing systems
Asbestos (MFL)				<0.2	2020	7			Decay of asbestos cement water mains; erosion of natural deposits