FLATHEAD COUNTY WATER DISTRICT 101

Montana Public Water Supply ID number 00184

2023 Water Quality Report

In compliance with the EPA's Safe Drinking Water Act and in an effort to keep you informed about the quality of water and services we provide to you each day, we're pleased to provide you with our Annual Water Quality Report. This report is a snapshot of the quality of water we provided you last year. It includes details regarding the source of your water, what your water contains and how it compares to EPA and the State of Montana standards.

Our drinking water comes from two wells that are 316 and 297 feet deep. We have 83 service connections and added no new connections last year. A sanitary survey inspection of our water system was conducted in December of last year. It was found that we need to drain and clean the tank at Well #1, one bad pressure tank needs to be replaced, and routine maintenance should be performed on the generator at Well #1 twice per year.

We want you, our valued customers, to be informed about your water utility. If you want to learn more, please attend our any of our quarterly meetings to be held the first Tuesday of March, June, September and December at 6:00 p. m. at the Badrock Fire Hall on Highway 206.

We are pleased to report that our drinking water is safe and meets all federal and state requirements. If you have any questions about this report or concerning your water utility, please contact Jeff Soyland at (406) 249-8386. Jeff is our certified operator with three years of experience. He attends periodic training sessions to meet continuing education requirements. The most recent courses he attended were in May and September of last year and the topics were trenching and confined space.

DID YOU KNOW? The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and in some cases radioactive elements. Water can also pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in water include:

1) Microbial contaminants such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
2) Inorganic contaminants, such as salts and metals which can be naturally occurring or result from urban storm water runoff, industrial or domestic waste water discharges, oil and gas production, mining and farming.
3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
4) Volatile organic chemicals, which are byproducts of industrial processes, petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
5) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the 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. We routinely monitor for contaminants in your drinking water according to Federal and State laws. We take all of our water samples to Montana Environmental Laboratory in Kalispell (406-755-2131). They are a private laboratory that is certified by the State of Montana and the EPA to analyze drinking water. Our sampling frequency complies with EPA and state drinking water regulations. The following tests were performed to identify possible contaminants in our system during the period of January 1 to December 31, 2023:

- 12 coliform bacteria tests.
- One nitrate plus nitrite test – result was within EPA guidelines.

The Montana Department of Environmental Quality requires that we test for asbestos in our drinking water. As our distribution system contains no asbestos cement pipe, we have applied for and been granted a monitoring waiver for asbestos. This waiver allows our system to not test for this contaminant. This waiver covers the period from 2020 to 2028.

The following table lists the contaminants detected during recent testing. Some of the data in this table may be more than one year old, since certain chemical contaminants are monitored less than once per year.

Regulated Contaminants

CONTAMINANT	VIOLATION Y/N	SAMPLE DATE	HIGHEST LEVEL DETECTED	UNIT MEASURE-MENT	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Total Coliform Bacteria	N	10-6-23	One Positive Sample	Positive Sample	0	0	Naturally occurring in the environment
Arsenic	N	1-3-22	1	ppb	0	10	Erosion of natural deposits; Runoff from orchards, Runoff from glass and electronics production wastes
Copper	N	8-22-21	90th % is 0.09	ppm	1.3	AL= 1.3	Corrosion of Household plumbing systems: Erosion of natural deposits: Leaching from wood preservatives
Barium	N	1-3-22	0.32	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	N	1-3-22	0.09	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth: Discharge from fertilizer and aluminum factories
Lead	N	8-22-21	90th % is 1	ppb	0	AL= 15	Corrosion of Household plumbing: Erosion of natural deposits
Nitrate + Nitrite	N	6-16-23	0.02	ppm	10	10	Naturally occurring at this level
Uranium	N	2-1-22	1.6	ppb	0	30	Erosion of natural deposits

DEFINITIONS:

MCL - Maximum Contaminant Level - The "Maximum Allowed" 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.

MCLG - Maximum Contaminant Level Goal - The "Goal" 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.

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

PPB - Parts per billion or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

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

pCi/L - Pico Curies per Liter - a very small unit of measurement of radioactivity.

What does this table tell us?

As you can see our system had no MCL violations. MCL's are set at very stringent levels. To understand the possible health effects of exceeding the MCL, a person would have to drink two liters of water every day at the MCL for a lifetime to have a one in a million chance of having any adverse health effects. Although 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.

Our testing did uncover the possible presence of coliform bacteria during October. Although coliform bacteria are usually harmless, their presence in water is an indication that other harmful bacteria may be present. When coliform bacteria are found, special follow up tests are conducted to determine if harmful bacteria are present. In our case all repeat samples were coliform free. We performed a Level 1 assessment of our system, and we believe that the positive sample was due to calcification of the aerator on the sample tap.

We received a violation from the Montana Department of Environmental Quality (MTDEQ) because we failed to provide you, our drinking water customers, an annual report (like this one) that informs you about the quality of our drinking water and characterizes the risks from exposure to contaminants detected in our drinking water. We are required to write this "Consumer Confidence Report" by July 1st of the following calendar year. Due to an administrative oversight, we did not submit a copy of our 2022 CCR to MTDEQ on time. We were in violation of state and federal law. In order to comply with our requirements we submitted our report in October.

All sources of drinking water are subject to potential contamination by contaminants that are naturally occurring or manmade. Those contaminants 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, or online at www.epa.gov/safewater.

Lead in drinking water comes primarily from materials and components of the service lines and home plumbing systems. It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. Our water system is responsible for providing high quality drinking water, but we cannot control the variety of materials used in private home plumbing systems. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested by a certified laboratory like the one we send our samples to (Montana Environmental Laboratory, 406-755-2131). When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap until the water temperature has stabilized (usually for 30 seconds to 2 minutes) before you use the water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure to lead is available from the Safe Drinking Water Hotline 1-800-426-4791, or online at www.epa.gov/safewater/lead.

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, or online at www.epa.gov/safewater.

In January of 2005, the Montana Department of Environmental Quality conducted a source water assessment of our system. This report provides additional information on the potential vulnerability of our wells to contamination. This report is available for review online at https://deq.mt.gov/water/programs/dw#accordion1-collapse2. The report can be summarized in the table on the following page.

Our water system is committed to providing our customers with safe, pure water and we are pleased that our water meets or exceeds all established state and federal standards. Thank you for reviewing this report.

Prepared by Montana Environmental Lab, LLC 2/24

Significant Potential Contaminant Sources

Source	Contaminant	Hazard	Hazard Rating	Barriers	Susceptibility	Management
Localized Areas of High and Moderate Septic Density (density of private onsite septic systems) around both wellheads	Pathogens, nitrates, other organic and inorganic chemicals	Failure of individual systems, with wastewater discharged to drain fields that may contain chemicals, nitrates, and pathogens	**High Hazard**	- Thickness of unsaturated sediments above the water table - Depth of water intakes below the water table	**Moderate Susceptibility**	Promote the design and installation of advanced septic systems in the area, education (including posters and placards) to reduce improper disposal of chemicals, and possible creation of a community sewer district and the development of a wastewater treatment plant for Columbia Heights. Involvement of PWS managers/operators in this process is critical.
Large Capacity Septic Systems (for businesses, restaurants, and hotels) in town and around both wellheads	Pathogens, nitrates, other organic and inorganic chemicals	Failure of individual systems, with wastewater discharged to drain fields that may contain chemicals, nitrates, and pathogens	**High Hazard**	- Thickness of unsaturated sediments above the water table - Depth of water intakes below the water table	**Moderate Susceptibility**	Promote the design and installation of advanced septic systems in the area, education (including posters and placards) to reduce improper disposal of chemicals, and possible creation of a community sewer district and the development of a wastewater treatment plant for Columbia Heights. Involvement of PWS managers/operators in this process is critical.
Two Montana CECRA Sites (Larry's Post and Treating Co. and Beaver Wood Products)	SOCs, VOCs, metals	Past releases that have contaminated soil and groundwater, with possible migration of contamination from the site	**High Hazard**	- Thickness of unsaturated sediments above the water table - Depth of water intakes below the water table - Facilities appear to be located lateral along the groundwater flow direction and are not upgradient from the PWS wells -Beaver Wood Products has a removal action taken by the EPA to reduce soil and sediment contamination at the site	**Moderate Susceptibility**	Stabilize sediments, remediation or removal of contamination as possible, manipulate pH or other method to reduce metals solubility, promote community oversight and site monitoring and remedial activities
MDT Maintenance Facility in Columbia Heights	SOCs, VOCs, petroleum hydrocarbons, other contaminants	Past or present mishandling and management of bulk materials or shop related hazardous materials may impact groundwater or allow migration of these materials offsite	**High Hazard**	- Thickness of unsaturated sediments above the water table - Depth of water intakes below the water table - Facility is located some distance downgradient from the wells (southwest) - Current Best Management Practices involving recycling and recent shift toward dry shops with recycled and non-hazardous solvents - Floor drains in the shop were cemented closed	**Moderate Susceptibility**	Promote a dry shop with solvent recycling, plug shop floor drains, promote Best Management Practices, train personnel, and promote county health department oversight
U. S. Highway 2 and MT Highway 206 (the highways run through the region)	Hazardous materials (VOCs, SOCs, metals, other)	Large scale spills of hazardous materials, these are very infrequent but high probability occurrences that can be devastating to water systems	**High Hazard**	- Thickness of unsaturated sediments above the water table - Depth of water intakes below the water table - Local and regional emergency response measures, including training of responders and resources set aside for spill cleanup in the area.	**Moderate Susceptibility**	Emergency planning, training of local emergency response personnel, and allocation of resources/funding for emergency response
UST sites and/or LUST sites	VOCs, petroleum hydrocarbons	Accidental spills or releases of petroleum to soil and groundwater	**High Hazard**	- Thickness of unsaturated sediments above the water table - Depth of water intakes below the water table - Secondary contaminant of tanks - Spill response planning and preparation	**Moderate Susceptibility**	Careful monitoring of USTs in the IR and promotion of good management practices
Agricultural Land (48% of land in IR)	SOCs, nitrates	Over-application and spills of pesticides and/or fertilizers followed by irrigation	**Low Hazard (<20% of region)**	- Thickness of unsaturated sediments above the water table - Depth of water intakes below the water table+ - Most agricultural land (pasture and continuously cropped land) is located downgradient from the wells - Agricultural land does not appear to be heavily irrigated in the area	**Very Low Susceptibility**	Promotion of Best Management Practices and good cropping practices, coordination with owners of agricultural land to ensure awareness and cooperation with PWS operators to protect groundwater