2022 Annual Drinking Water Quality Report

Miles City

PWSID#MT0000291
Box 910
Miles City, MT 59301

We're very pleased to provide you with this year's 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 source of water is surface water from the Yellowstone River. We have completed a source water protection plan that provides more information such as potential sources of contamination to our drinking water supply. This plan can be found online at https://deq.mt.gov/water/Programs/dw#accordion1-collapse2

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 EPA's Safe Drinking Water Hotline (800-426-4791).

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 include:
Microbial contaminants, such as viruses and bacteria that 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, oil and gas production, mining, or farming;
Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, 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;
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, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 **David Harris.** He can be reached at **406-234-1905** or attend any of our regularly scheduled meetings. They are held on **the second and fourth Tuesday of each month at City Hall at 6:00 pm.**

The Miles City WTP routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of any detects in our monitoring for the period of **January 1st to December 31st, 2022.** For constituents that are not monitored yearly, we have reviewed our records back 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.

We will also not conduct monitoring for antimony, barium, beryllium, cadmium, chromium, fluoride, mercury, nickel, selenium, and thallium because we have been granted a reduced monitoring waiver by DEQ. This waiver is based on the analytical results for these chemicals. These waivers are in effect from 2020 through 2028.

We have monitored for lead and copper, and 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. The Miles City WTP 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	2022	2	ppb	15	Household plumbing
Copper	2022	0.077	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 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.

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 $10,000,000.

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.

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.

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).

TEST RESULTS								
Contaminant	**Violation Y/N**	**Sample Date**	**Highest Level Detected**	**Range**	**Unit Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
Inorganic Contaminants								
Fluoride	N	2022	0.9	0.5 - 0.9	ppm	4	4	Erosion of natural deposits. Water additive for teeth
Nitrate + Nitrite as N	N	2022	0.22	NA	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium	N	2020	2	NA	ppb	50	50	Erosion of natural deposits
Total Organic Carbons								
Contaminant	Violation	Average	Range	Unit	TT Minimum Ratio	Likely Source of Contamination		
Total Organic Carbon (TOC)	N	2022	1.21-2.22	Ratio	1.00	Naturally present in the environment- Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects		
Disinfection By-Products								
Chlorine	N	2022	1.48	0.031 - 1.48	ppm	MRDLG 4	MRDL 4	Water additive used to control microbes
Total trihalomethanes (TTHMs)	N	2022	48*	15 - 68	ppb	0	80	By-product of drinking water chlorination
Haloacetic Acids (HAAs)	N	2022	27*	14 - 47	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								
Radioactive Contaminants								
Gross Alpha	N	2017	2.3	0-2.3	pci/L	0	15	Erosion of natural deposits
Uranium	N	2017	3	3-3	ppb	0	30	Erosion of natural deposits

Turbidity					
	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination	
Highest single Measurement	1.0 NTU	0.278 6/17/2022	N	Soil runoff	
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil Runoff	
Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration					

Surface Water Treatment Rule (SWTR)			
The Surface Water Treatment Rule seeks to prevent waterborne diseases caused by viruses, Legionella, and Giardia lamblia. The rule requires that water systems filter and disinfect water from surface water sources to reduce the occurrence of unsafe levels of these microbes.			
Violation Type	Violation Begin	Violation End	Violation Explanation
Failure to monitor/Failure to report chlorine residual (SWTR)	08/01/2022	08/31/2022	Disinfection residual fell below the required minimum and was not reported in the required time frame. Adequate disinfection is required to ensure safe drinking water. This violation was returned to compliance with proper documentation and or maintaining disinfection the following month.
Failure to maintain Disinfection (SWTR)	09/01/2022	09/30/2022	Water Treatment Plant failed to continuously feed chlorine into processed water. Adequate disinfection is required to ensure safe drinking water. This violation was returned to compliance continuously feeding chlorine and maintaining disinfection the following month.
Failure to monitor chlorine residual (SWTR)	12/01/2022	12/31/2022	Chlorine Analyzers data logger failed and files were not available for the month of December. This violation was returned to compliance with proper documentation the following month.

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.