Annual Drinking Water Quality Report

Town of Virginia City
110 W Wallace
Virginia City, MT 59755
PWSID MT0000353

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 from two developed springs, one in the northeast portion of town, and the second is east of the city limits.

This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

If you have any questions about this report or concerning your water, please contact Roger Williams, Public Works Supervisor, at 406-843-5321. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Council meetings. They are generally held on the 1st Thursday of the month at 7:00 pm at the Rehearsal Hall. Meeting agendas and schedules are posted in the Virginia City Post Office. You can also go to our Web site TownofVirginiaCity.com.

The Town of Virginia City 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, 2024.** For constituents that are not monitored yearly, we have reviewed our records back to the last time the constituent was monitored.

Parameter	Date	90th % value	Units	Action Level	# Over Action AL	Source of Contamination
Lead	09/20/23	1	ppb	15	0	Household plumbing
Copper	09/20/23	0.11	ppm	1.3	0	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 $10,000,000.

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

Maximum Contaminant Level - 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 - 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.

Maximum residual disinfection level goal or MRDLG: The level of a drinking water disinfection 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 contaminates.

Maximum residual disinfectant level or 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 contaminates.

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

Level 1 Assessment- A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment- A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

TEST RESULTS

Contaminant	Violation Y/N	Sample Date	Highest Level Detected	Range	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
Nitrate + Nitrite as N	N	2024	1.28	1.28-1.28	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride	N	2022	0.2	0.2-0.2	ppm	4	4	Water additive which promotes strong teeth, erosion of natural deposits
Chlorine	N	2024	0.50	0.2-0.51	ppm	4	4	Water additive used to control microbes.
Arsenic	N	2022	3	3-3	ppb	0	10	Erosion of natural deposits
Volatile Organic Contaminants								
TTHMs (total trihalomethanes)	N	2024	9.4	9.4-9.4	ppb	NA	80	By-product of drinking water chlorination
HAA5 (Haloacetic acids)	N	2023	1	1.4-1.4	ppb	NA	60	Discharge from petroleum factories and By-product of drinking water chlorination
Microbial Contaminants								
Parameter	**Violation Y/N**	**Sample Date**	**Highest Number of Positive samples in a month**	**Unit Measurement**		**MCLG**	**MCL**	**Likely Source of Contamination**
Coliform	N	Monthly	0	Present/ Absent		0	1	Soil Runoff

Violation- Violation for Ground Water Rule-The Ground Water Rule specifies the appropriate use of disinfection while addressing other components of ground water systems to ensure public health protection. Our system failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. The violation period of 07/01/2024 to 07/31/2024. The violation was returned to compliance once the system submitted one full months of data by 10th of the following month, and for said month, the system did not have any days with a chlorine residual below the mandatory level. The violation ended on 09/05/2024.

Our system failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. The violation period of 10/01/2024 to 10/31/2024. The violation was returned to compliance once the system submitted one full months of data by 10th of the following month, and for said month, the system did not have any days with a chlorine residual below the mandatory level. The violation ended on 12/10/2024

Our system failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. The violation

period of 11/01/2024 to 11/30/2024. The violation was returned to compliance once the system submitted one full months of data by 10th of the following month, and for said month, the system did not have any days with a chlorine residual below the mandatory level. The violation ended on 01/07/2025.

Measurements of disinfectant indicate that adequate disinfection did not occur for the period indicated. Adequate disinfection is required to ensure safe drinking water. This violation began on 02/01/2024 to 02/29/2024. The violation was returned to compliance once the system submitted one full months of data by 10th of the following month, and for said month, the system did not have any days with a chlorine residual below the mandatory level. The violation ended on 04/02/2024

Violation for Revised Total Coliform Rule- The Revised Total Coliform Rule (RTCR) seeks to prevent waterborne diseases caused by E. coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.
Our system failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. The violation began 11/01/2024 to 11/30/2024. This violation was returned to compliance when the required number of routine total coliform samples were collected and reported to the State of Montana DEQ. The violation ended on 12/23/2024.

Asbestos- The Town of Virginia City did test for Asbestos in water on 09/06/11. Results were less than <0.2 MRL.

Alpha Emitters- Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

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.

Fluoride- Some people who drink water that contains fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Nitrates- As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

TTHMs [Total Trihalomethanes]- Some people who drink water that contains trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer

Copper- Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink the water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Lead- Infants and children who drink water that contains lead in excess of the action level 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 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. Town of Virginia City 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 the 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.

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.

This report was revised by Energy Laboratories, Inc – Helena, Montana-May 2025