

HILL COUNTY WATER DISTRICT
Montana Public Water Supply ID number 00249
2016 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 an infiltration gallery next to the Marias River, south of Inverness. As the water flows from the river into the infiltration gallery (the well) the water is purified by natural riverbank filtration. To disinfect the water we treat it by running it past a powerful ultraviolet light (UV) and then to insure it's purity throughout the distribution system, we add a small amount of chlorine. Recently the Montana Department of Environmental Quality classified this water source as ground water, rather than surface water. This reduces the amount of testing we have to do on our raw (untreated) water. We have 697 service connections in the communities of Kremlin, Gilford, Hingham, Rudyard, North Rudyard, North Kremlin, Inverness, Joplin, and east towards Havre to Sage Creek. We added two new service connections last year.

We want you, our valued customers to be informed about your water utility. If you want to learn more, please attend any of our regularly scheduled meetings held on the first Wednesday of each month at 7:30 p.m. at the HCWD office at 104 Second St. in Hingham. If you have any questions about this report or concerning your water, please contact Scott Decker at (406) 397-3387. Scott is our certified operator with 19 years of experience. He attends periodic training sessions to meet continuing education requirements.

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. We routinely monitor for contaminants in your drinking water according to Federal and State laws. We send 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. During 2016 the following tests were performed to identify possible contaminants in our system:

- X 72 coliform bacteria tests - all were coliform free.
- X 1 Nitrate plus Nitrite test - result was within EPA guidelines.
- X Tests to determine the possible presence of 10 disinfection byproducts in our distribution system. - results were within EPA guidelines.

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 MEASUREMENT	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Alpha Emitters	N	9-12-11	4.5 +/- 1.9	pCi/L	0	15	Erosion of natural deposits
Copper	N	7-7-15	90 th % is 0.83	ppm	1.3	AL= 1.3	Corrosion of Household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Fluoride	N	2-6-14	0.25	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead	N	7-7-15	90 th % is 2	ppb	0	AL= 15	Corrosion of Household plumbing; Erosion of natural deposits
Nitrate + Nitrite	N	7-20-16	0.09	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium	N	2-6-14	2	ppb	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Total Haloacetic Acids (HAA's)	N	8-11-16	6.1	ppb	0	60	By product of drinking water chlorination
Total Trihalomethanes (TTHM)	N	8-11-16	37	ppb	0	80	By product of drinking water chlorination

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.

All sources of drinking water are subject to potential contamination by contaminants that are naturally occurring or man made. 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 2007 Montana Rural Water Systems completed a source water protection plan for our system. This report provides additional information on the potential vulnerability of our wells to contamination. This report is available for review from Scott Decker. It is also available online at <http://svc.mt.gov/deq/dst/#/app/swp>. The report can be summarized in the following table:

Significant Potential Contaminant Sources

Source	Contaminant	Hazard Rating	Barriers	Susceptibility	Management
Septic Systems (Marias)	Sewage, Nitrate, Nitrite, Pathogens	Low	None	Low	Growth management
Cultivated Cropland (Marias)	Pesticides and Nitrate	Moderate	Dilution, clay soils	Moderate	Best management practices

We have been working hard to improve our water. The Hill County Water District is committed to providing our customers with safe, pure water. Thank you for reviewing this report.

Prepared by Montana Environmental Lab, LLC 1/17