

TOWN OF SUNBURST
Montana Public Water Supply ID number 00338
2015 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 475 and 159 feet deep. In order to maintain its purity, we treat our water with a small amount of chlorine. We have 202 service connections and added no new 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 city council meetings held on the second Tuesday of each month at 7:00 p.m. at City Hall.

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 Phil Iverson at (406) 450-1390. Phil is our certified operator with two years of experience. He attends periodic training sessions to meet continuing education requirements. The most recent training course he attended was at the Montana Rural Water Systems Annual Conference held in Great Falls in February of this year.

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 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. The following tests were performed to identify possible contaminants in our system during the period of January 1 to December 31, 2015:

- 12 coliform bacteria tests - all were coliform free.
- 1 Nitrate plus Nitrite test - result was within EPA guidelines.

Due to the purity of our water, we have applied for and been issued a monitoring waiver for 10 inorganic contaminants. This waiver allows our system to sample only once every nine years for these contaminants. Past sampling has shown that these contaminants are either not present in our water or occur in such small amounts that they do not warrant a health hazard. This waiver covers the period from 2011 to 2019.

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	7-30-13	3.6 +/- 3.0	pCi/L	0	15	Erosion of natural deposits
Arsenic	N	7-30-13	4	ppb	10	10	Erosion of natural deposits; Runoff from orchards, Runoff from glass and electronics production wastes
Barium	N	9-27-11	0.017	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	N	7-10-13	90 th % is 0.02	ppm	1.3	AL= 1.3	Corrosion of Household plumbing / naturally occurring
Fluoride	N	9-27-11	1.13	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate + Nitrite	N	12-15-15	0.24	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radium 226	N	7-30-13	0.2 +/- 0.1	pCi/L	0	5	Natural deposits
Selenium	N	9-27-11	2	ppb	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Uranium	N	7-30-13	2	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.

To ensure its purity, we disinfect our water with chlorine. The Montana Department of Environmental Quality (MTDEQ) requires we record the level of chlorine daily. Every month we are required to submit a copy of the daily chlorine log to MTDEQ. Due to an administrative oversight we submitted our chlorine log to the wrong email address at MTDEQ for January of 2015. We received a failure to monitor violation for that month. We submitted our logs to the correct address and the violation has been lifted.

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.

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.

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.

In October of 2003, 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 <http://svc.mt.gov/deq/dst/#/app/swp>. 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 3/16

Significant Potential Contaminant Sources

Source	Potential Contaminant	Hazard	Hazard Rating	Barriers	Susceptibility	Management Recommendations
Control and Inventory Zone						
Agricultural Land Use (<20% of Inventory Region)	SOCs, nitrates, pathogens	Contaminants leaching into groundwater	<i>Low</i> <i>Low</i>	Hard Water Well - Clay-rich surface soils Soft Water Well - Clay-rich surface soils - Aquifer depth >100 ft	<i>Very Low Susceptibility</i> <i>Very Low Susceptibility</i>	Encourage use of best management practices (BMPs)
Old water wells	Total dissolved solids, sulfur, petroleum products	Old wells may act as a conduit for poor-quality shallow groundwater to enter deeper Virgelle Sandstone drinking water.	<i>High</i> <i>Moderate</i>	Hard Water Well None Soft Water Well - New construction with adequate casing seal - Well 15 properly abandoned - R. Swanson well is hydraulically downgradient	<i>Very High Susceptibility</i> <i>Low Susceptibility</i>	Continue efforts to assess all old wells, remove petroleum products (if present), and properly abandon or renovate failing wells.
Oil and Gas Well(s)	Total dissolved solids, petroleum hydrocarbons	Improperly sealed or abandoned wells may facilitate contaminant transport to shallow or deeper aquifers.	<i>Not Applicable</i> <i>Moderate</i>	Hard Water Well - None identified within the Inventory Region for the Hard Water Well Soft Water Well - Clay rich surface soils - Aquifer depth >100 ft	<i>Not Applicable</i> <i>Low Susceptibility</i>	Encourage monitoring of drilling activities and oil field development.
Potential Sources located in Recharge Area						
Agricultural Land Use (28% of Recharge Region)	SOCs, nitrates, pathogens	Contaminants leaching into groundwater	Moderate to Low	- Clay-rich surface soils	Not Rated – outside the Inventory Region	Encourage use of best management practices (BMPs)
Oil and Gas Wells and Test Holes	Total dissolved solids, petroleum hydrocarbons	Improperly sealed or abandoned wells may facilitate contaminant transport to shallow or deeper aquifers.	High to Moderate	- Clay-rich surface soils	Not Rated – outside the Inventory Region	Encourage monitoring of drilling activities and oil field development near or adjacent the Recharge Region
Petroleum Pipelines	Petroleum hydrocarbons	Spills, leaks, and releases may impact groundwater	High to Moderate for the New Soft Water Well only	- Leak detection - Emergency response - Clay-rich surface soils - Aquifer depth >100 ft.	Not Rated – outside the Inventory Region	Support the county's effort to maintain preparedness of local emergency personnel through active training. Encourage groundwater monitoring, spill prevention, BMPs, and ongoing remediation of soil or groundwater at leak sites.
Other Water Wells	Total dissolved solids, sulfur, petroleum products	Old wells may provide a direct conduit for poor quality shallow groundwater to enter deeper groundwater / drinking water source.	High to Moderate	None	Not Rated – outside the Inventory Region	Educate public on proper maintenance and replacement of on-site systems; promote advanced treatment systems; annex into community sewer system.

Notes on Susceptibility Determination table:

- Town of Sunburst PWS wells are assumed to be drawing water from a confined aquifer and the Hard Water Well is not clearly sealed into or through the confining unit above the confined aquifer because the lithologic log does not indicate sealing occurred. It is a conservative assumption that the Hard Water Well is not sealed, which increases the hazard of contaminant source within the Inventory Region for this well.
- BMPs – Best Management Practices
- VOCs – Volatile organic Compounds (i.e. solvents, fuel components)
- SOC – Synthetic Organic Compounds (i.e. pesticides, herbicides, plasticizers)