

CITY OF TROY
Montana Public Water Supply ID number 00348
2016 Water Quality Report

In a continuing effort to keep you informed about the quality of water and services we provide to you each day, we're once again 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. Included are details about where your water comes from, what it contains, and how it compares to EPA and State standards.

Our water comes from two wells. Well #1 is 186 feet deep. Well #2 is 57 feet deep. Our wells deliver water to the distribution system and our 125,000 gallon water tower. We currently have 527 service connections on our system and added no new connections last year. In 2016 we installed 500 feet of new water main.

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 supply, please contact David Norman at (406) 295-4151. David and Dennis Countryman are our certified operators. They have 20 and 19 years of experience respectively. They attend periodic training sessions to meet continuing education requirements. The most recent training course Dennis attended was in March of 2016.

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 constituents 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 fully complies with EPA and State drinking water regulations. The following tests were conducted during the period of January 1, to December 31, 2016:

- 24 coliform bacteria tests - all were coliform free
- 2 Nitrate plus Nitrite tests - results were 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 sample only once every nine years for this contaminant.

Due to the purity of our water, we have applied for and been issued a monitoring waiver for ten 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 shows any contaminants found in recent testing. Some of our data in the table is more than a year old, since certain chemical contaminants are monitored less than once a year.

Regulated Contaminants

| CONTAMINANT | VIOLATION Y/N | SAMPLE DATE | HIGHEST LEVEL DETECTED | UNIT MEASURE -MENT | MCLG | MCL | LIKELY SOURCE OF CONTAMINATION |
|---|---------------|-------------|----------------------------|--------------------|------|------------|---|
| Alpha Emitters Well #1 Well #2 | N | 8-31-09 | 3.7 +/- 1 4.7 +/- 1.3 | pCi/L | 0 | 15 | Erosion of natural deposits |
| Copper | N | 8-20-15 | 90th % is 0.06 | ppm | 1.3 | AL= 1.3 | Corrosion of Household plumbing / naturally occurring |
| Fluoride Well #1 Well #2 | N | 2-4-14 | 0.04 0.05 | ppm | 4 | 4 | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Lead | N | 8-20-15 | 90th % is 3 | ppb | 0 | AL= 15 | Corrosion of Household plumbing / naturally occurring |
| Nitrate + Nitrite Well #1 Well #2 | N | 8-4-16 | 0.12 1.61 | ppm | 10 | 10 | Naturally occurring at this level |
| Radium 228 Well #1 Well #2 | N | 8-31-09 | 0.3 +/- 0.8 1.6 +/- 0.8 | pCi/L | 0 | 5 | 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 - 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 constituents that are naturally occurring or 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 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.

A source water assessment of our system has been conducted by the state. It is available for review at City Hall or the City of Troy Public Works office. It is also available online at: <http://svc.mt.gov/deq/dst/#/app/swp>. This report provides information on the potential vulnerability of our wells to contamination. The report can be summarized in the following table:

Significant Potential Contaminant Sources

| Source | Contaminant | Hazard | Rating | Barriers | Susceptibility | Management |
|-----------------------------------|--|---------------|---------------|-------------------------------|-----------------------|--------------------|
| Municipal Sewers | Pathogens and nitrates | Leaks | High | Well grout | Moderate | Routine monitoring |
| Callahan Creek | Run off | Infiltration | Low | Well grout, distance to creek | Moderate | Routine monitoring |
| Highway & city streets | Volatile organic chemicals, synthetic organic chemicals, other chemicals | Spills | High | None | Very low | Routine monitoring |
| Septic systems | Pathogens and nitrates | Infiltration | Low | Distance to well | Low | Routine monitoring |
| Railroad | Spills | Infiltration | High | None | Very high | Emergency plan |

Our water district 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 1/17