

CITY OF RONAN WATER DEPARTMENT

Montana Public Water Supply ID number 00318

2013 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. 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 water comes from two wells and from Crow Creek. The shop well is 454 feet deep and the north well is 380 feet deep. The water from Crow Creek is filtered and disinfected with a powerful ultraviolet light. Then we add a small amount of chlorine to maintain the disinfection in our distribution system. We currently have 932 service connections on our system. We added two new services connections last year. The Montana Department of Environmental Quality (MTDEQ) has issued us a compliance order that will force us to add filtration to our water from Crow Creek. We are in the preliminary planning stages and seeking funding for this improvement to our water system. 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 and third Mondays of each month at 6:00 p.m. at City Hall (207 Main Street SW Suite A).

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 Mark Clary at (406) 676-4231. Mark Clary, Dan Miller, and Dave Maimon are our certified operators with over 40 years of combined experience. The most recent training course they attended was in October of 2013 and the topics included ultraviolet disinfection, maintenance, safety and security.

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. The City of Ronan routinely monitors 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. In keeping with our monitoring schedule, the following tests were conducted from January 1st to December 31st 2013:

- 24 Coliform bacteria tests - all were coliform free.
- 1 Nitrate plus Nitrite test on each of our water sources - results were within EPA guidelines.
- Tests on all three of our water sources to determine the possible presence of 61 organic contaminants - results were within EPA guidelines.
- Tests on all three of our water sources to determine the possible presence of 40 pesticides & herbicides - none were detected.
- Tests on the north well (EP505) to determine the possible presence of radiological contaminants - results were within EPA guidelines.
- Tests on the north well (EP505) to determine the possible presence of eleven inorganic contaminants - results were within EPA standards.
- An arsenic test on Crow Creek (EP502) and on the north well (EP505) - results were within EPA guidelines.
- 10 tests on the water from our customers' homes to determine the possible presence of lead and copper leaching out of the faucets and fixtures - 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.

The following table lists the contaminants detected during 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 MEASUREMENT	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Alpha Emitters EP502 EP505	N	11-19-12 11-4-13	2.5 +/- 0.9 1.4 +/- 1.2	pCi/L	0	15	Erosion of natural deposits
Arsenic EP505	N	11-4-13	1	ppb	10	10	Erosion of natural deposits; Runoff from orchards, Runoff from glass and electronics production wastes
Copper	N	8-13-13	90th % is 0.27	ppm	1.3	AL= 1.3	Corrosion of Household plumbing/ naturally occurring
Barium EP505	N	11-4-13	0.05	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride EP502 EP503 EP505	N	9-13-11 11-4-13	0.02 0.08 0.04	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate + Nitrate EP502 EP503 EP505	N	8-13-13	0.08 0.20 0.20	ppm	10	10	Naturally occurring at this level
Radium 228 EP502 EP503	N	11-19-12	1.6 2.2	pCi/L	0	5	Natural deposits
Total Trihalomethanes (TTHM)	N	8-13-13	12	ppb	0	80	By product of drinking water chlorination
Turbidity	N	2013	0.69	NTU	N/A	TT	Soil runoff
Uranium EP503	N	11-19-12	1	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.

NTU - Nephelometric Turbidity Unit - A unit of measurement of the turbidity or "cloudiness" of water.

TT- Treatment Technique - a required process intended to reduce the level of a contaminant in drinking water.

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.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the third quarter of 2013 we did not test for radiological contaminants in the north well and therefore cannot be sure of the quality of our drinking water during that time. We were notified of this and received a failure to monitor violation letter from the Montana Department of Environmental Quality. We sampled for radiological contaminants during the fourth quarter, and results were within EPA guidelines.

As of December 27th 2011, The MTDEQ has mandated that we install a membrane filtration system at our surface water treatment plant. Since we have not yet installed this treatment, we are in violation of our requirements. We received a violation letter from the MTDEQ on January 3rd 2012. We are currently negotiating with DEQ on this requirement and seeking funding to complete the project. Our new ultraviolet disinfection plant was built to upgrade to a membrane filtration plant in the future.

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.

We are pleased to report that a June 2000 assessment of our aquifer by the Montana Department of Environmental Quality indicated that due to the natural conditions of the aquifer our wells are generally well protected from possible contamination. This report is available for review online at http://apps.msl.mt.gov/Geographic_Information/Data/SourceWaterProtectionProgram/. This report can be summarized in the following table:

**Susceptibility assessment for significant potential contaminant sources
in the control zone and inventory region for the PWS wells.**

Source	Contaminant	Hazard	Hazard Rating	Barriers	Susceptibility	Management
Sanitary sewer main	Pathogens and Nitrates	Leak	Low	Clay rich soils; upward hydraulic gradient	Very low	Monitor integrity of sewer lines
Septic systems	Pathogens and Nitrates	Leak	Low	Clay rich soils; upward hydraulic gradient	Very low	Connect to sanitary sewer system
UST sites	Petroleum hydrocarbons	Spill, Leak	Low	Compliance with 1998 upgrades, Clay rich soils; upward hydraulic gradient	Very low	Monitor compliance results
LUST sites	Petroleum hydrocarbons	Ground water impacts	Low	Clay rich soils; upward hydraulic gradient	Very low	Monitor status of remediation
Machine and auto repair shops	Various chemicals	Spills	Low	Clay rich soils; upward hydraulic gradient	Very low	Educate shop owners and staff on BMP's in waste management and reduction
Lake County weed district	Pesticides and herbicides	Spills	Low	Clay rich soils; upward hydraulic gradient	Very low	Work with staff for BMPs for chemical use and storage
Ronan Public Works shop area	Petroleum hydrocarbons and other chemicals	Spills	Low	Clay rich soils; upward hydraulic gradient	Very low	Work with staff for BMPs for chemical use and storage
US HWY 93, and MT Hwy 211	Various	Spills	Low	Clay rich soils; upward hydraulic gradient	Very low	Develop emergency response protocols
Railroad lines	Various	Spills	Low	Clay rich soils; upward hydraulic gradient	Very low	Develop emergency response protocols
Agricultural land use	Pesticides and herbicides, Nitrates	Non point source, concentration	Low	Clay rich soils; upward hydraulic gradient	Very low	Educate community on BMPs for agriculture
Storm water urban land use	Various	Spills	Low	Clay rich soils; upward hydraulic gradient	Very low	Develop storm water management plan

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.