Annual Drinking Water Quality Report

PWSID #MT0001784
EASTGATE VILLAGE WATER AND SEWER
PO BOX 1220
East Helena, MT 59635

Potable water is one of the most vital services provided to community residents. All of us depend on water for drinking, cooking, washing, carrying away wastes, and other domestic needs. For the most part, we don't think about how drinking water gets to our homes or where that water comes from. We just want to be sure that our water is safe and keeps flowing to our taps.

The goal of the Eastgate Water and Sewer is to provide you with a safe and dependable supply of drinking water. Because of our commitment to ensuring the quality of your drinking water, we want to keep you informed about the activities and testing we do to assure that your water is safe. We are pleased to present to you this year's Water Quality Report.

WATER SOURCE

Our subdivision water system is comprised of 7 wells that come together in a common header before distribution. Wells 1, 2, and 3, and 6 are located on land between the Fire Station and the water tank. Well 4 is located within a park area South of the Basketball court. Wells 5 and 7 are located on our 20-acre parcel North of Wildfire Drive and West of Lake Helena Drive, by our Water and Sewer Building. If you have any questions about this report or concerning your water utility, please contact Brian Palkovich at 227-7033 or 406-449-1015. Meetings are usually scheduled for the second week of the month. Please call or email egws@eastgatevillage.org to confirm dates and times. Anyone is welcome to attend. We want our customers to be informed about their water utility.

SOURCE WATER SUSCEPTIBILITY

A Source Water Assessment was completed in 2000. The susceptibility of our Public Water Supply wells to potential contaminant sources was assessed and susceptibility ratings for the significant potential contaminant sources and each associated contaminant are presented in the table below. Management recommendations indicate how significant potential contaminant sources could be better managed to prevent impacts to the Public Water Supply wells. The State website to view the full Source Water Assessment is:

https://svc.mt.gov/deq/dst/#/app/swp

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

Source	Contaminant	Origin of Contaminant	Hazard Rating	Barriers	Susceptibility	Management
Septic Systems	Nitrate and Pathogens	Ground-water seepage	Moderate to High (Septic density ranges from 50 to more than 300 per square mile.	None	High to very High	Modify zoning codes and expand sanitary sewer service.
Sewer Mains	Nitrate and Pathogens	Leaking mains to ground-water seepage	High – Sewered area is about 65% of inventory Zone.	None	Very High	Maintain system.
Highway and Railway Crossings	Hazardous Materials including VOCs and SOCs	Accidental spills and direct discharge onto the aquifer	High for Both. routes are within the inventory and recharge zones.	None	High to very High	Establish emergency response plan.
Class V Injection Wells	Hazardous Materials including VOCs	Direct discharge to aquifer in unsewered areas.	High –Sites located within the inventory zone.	None	Very High	Eliminate floor drains when identified.
Underground Fuel Pipeline	Fuels	Accidental leaks.	Low- Outside the recharge zone but large volumes of product are transported.	Distance from source wells	Low to Moderate	Establish emergency response plan.
Class II Landfill	Decomposable household and construction wastes and mixed solid wastes.	Leaching of wastes into groundwater.	Low to Moderate - (Close to outer edge of Well 4's Inventory Region)	-Operating within license regulations and restrictions, - Located on relatively fine grained Tertiary deposits	Low to Moderate	Maintain monitoring and maintenance of facilities.
UST, LUST, Smelter, and lawn/soil disposal site.	Fuels and Hazardous Materials	Accidental leaks and ground-water seepage.	Low – Outside of inventory region.	Distance and position relative to inventory region. Ground-water flow direction is away from Eastgate wells.	Low	Maintain monitoring and maintenance of facilities.

MONITORING

Eastgate Water and Sewer routinely monitors for constituents in your drinking water according to Federal and State regulations. The State of Montana requires monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some data in the tables, though representative, may be more than one year old. Our sampling frequency complies with EPA and State regulations. The table includes the results of our monitoring for the period of **January 1st to December 31st, 2018**.

In the results table and the following information, you may find terms and abbreviations with which you might not be familiar. To help you better understand these terms, we've provided the following definitions:

ppm (Parts per million): one part per million corresponds to one minute in two years or a single penny in $10,000.
ppb (Parts per billion): one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
MFL (Million Fibers per Liter): The measure of the presence of asbestos fibers that are longer than 10 micrometers.
pCi/L (Picocuries per liter): A measure of the radioactivity in water.
MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health.
MCL (Maximum Contaminant Level): The highest allowable amount of a contaminant that is allowed in drinking water.
AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
90th Percentile Value: The concentration of lead or copper in tap water exceeded by 10 percent of the sites sampled during a monitoring period.
Waivers: Reduction or exclusion of monitoring requirements for certain compounds. Waivers are granted by the State of Montana, based on a water system's previous monitoring history.
Level I Assessment: 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.

TEST RESULTS

Contaminant	Violation Y/N	Sample Date	Result	Units	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	N N	10/18/2018 10/19/2018	Coliforms Present		0	one positive monthly sample	Naturally present in the environment
Nitrate (as Nitrogen)	N	01/23/2018	1.38	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Arsenic	N	05/04/2016	2	ppb	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	10/14/2013	0.052	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	N	10/14/2013	0.4	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Selenium	N	10/14/2013	3	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Copper	N	09/12/2016	90th Percentile Value 0.041	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Alpha emitters *(excluding Radon and Uranium)*	N	05/04/2016	5.4	pCi/L	0	15	Erosion of natural deposits
Uranium	N	05/04/2016	7	ppb	0	30	Erosion of natural deposits

Bacteriological Monitoring – We monitor our water supply for total coliform and E. coli bacteria on a monthly basis. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogen may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

In 2018 monitoring, coliform bacteria were detected in one routine sample taken in **October**. One of three follow-up samples in **October** showed contamination from coliform bacteria. Additionally, one sample was taken directly from each well; this source sample showed no contamination.

During the past year we were required to conduct one Level 2 assessment which was completed November 11, 2018. The outcome of the assessment was that four potential problems were identified. In addition, we were required to take four corrective actions, and we completed one of these actions on November 8, 2018. Other actions will be addressed later. After the level 2 assessment, three special samples were taken in October that showed no bacteria contamination.

Nitrate – Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you may wish to ask advice from your health care provider. In **2018** testing, Nitrate was detected in our water system but in concentrations less than the Maximum

Contamination Level set by the EPA.

Inorganic Compounds (IOCs) – In **2013** testing, the heavy metals Cadmium, Chromium, and Mercury were not detected in our water system; Fluoride, Barium, and Selenium were detected, but in concentrations less than the Maximum Contamination Level set by the EPA. We currently have waivers for testing Barium, Cadmium, Chromium, Fluoride, Mercury, and Selenium through **2019**. In **2016** testing, Beryllium, Nickel, Antimony, and Thallium were not detected in our water.

Arsenic in Drinking Water – The US EPA has revised the regulations governing the amount of arsenic allowable in public drinking water supplies. Beginning January 23, 2006, the MCL for arsenic is 10 ppb and the MCLG is 0 ppb. In **2016** testing, Arsenic was detected in our water system but in concentrations less than the Maximum Contamination Level set by the EPA. 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.

Lead and Copper – **Lead:** 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. Eastgate Village Water and Sewer 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 lead in your water, you may wish to have your water tested. Information on 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. **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 that water contains 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. In **2016** testing, Lead was not detected in our water system, and Copper was detected but below the Action Level set by the EPA.

Volatile Organic Compounds (VOCs) – VOCs are petroleum byproducts, including fuels such as gasoline and diesel; lighter fluid; fuel additives; solvents such as benzene and toluene; cleaning compounds such as dry-cleaning solution, degreasers, refrigerants and adhesives. The EPA regulates the amount of certain VOCs in drinking water, while the EPA and the State monitor for the presence of other VOCs in drinking water. Over 60 organic compounds were tested in **2016**, and none were detected in our water system.

Synthetic Organic Compounds (SOCs) – SOCs encompass a wide range of organic compounds, including pesticides and herbicides used for crops and lawns; wood preservatives; PCBs from electrical transformers; and byproducts from PVC and other plastics, including phthalates and adipates. SOCs may be released during manufacturing processes, runoff from fields where herbicides or pesticides have been used, and disposal of industrial wastes. Nearly 40 different compounds were tested in **2016**, and none was detected in our water system.

Radionuclides – Alpha emitters are certain minerals which are radioactive and which may emit a form of radiation known as alpha radiation. Radium-226 and Radium-228 are naturally occurring radioactive contaminants that occur primarily in ground water. In **2013** testing, combined Radium-226/228 was not detected in our system. In **2016**, gross Alpha was tested and detected but in concentrations less than the Maximum Contamination Level set by the EPA.

Uranium is a naturally-occurring element found at low levels in virtually all rock, soil, and water. Significant concentrations of uranium occur in some substances such as phosphate rock deposits, and minerals such as uraninite in uranium-rich ores. Uranium can enter the body when it is inhaled or swallowed in water or food. In **2016** testing, Uranium was detected in our water but in concentrations less than the Maximum Contamination Level set by the EPA.

INTERPRETATION

We constantly monitor for various constituents in the water supply to meet all regulatory requirements. Although some constituents have been detected, the EPA has determined that your water **IS SAFE** at these levels. If you would like more information about these contaminants, you may contact EPA's Safe Drinking Water Hotline (800-426-4791).

Thank you for allowing us to continue providing your family with clean, quality water this year. We at Eastgate Village Water and Sewer work around the clock to provide top quality water to every tap. 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. Please call our office if you have any questions.

About Drinking Water….

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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.

MCLs 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.

Did you know…?

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).

Prepared by the Department of Public Health and Human Services Environmental Laboratory (406) 444-2642