

Annual Drinking Water Quality Report

City of East Helena

PWSID# MT0000196

PO Box 1170

East Helena, MT 59635

We're very pleased to provide you with the annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

WATER SOURCE AND SUSCEPTIBILITY INFORMATION

The City of East Helena obtains its drinking water from 5 sources. These sources are 3 wells located along Wyle Drive and 2 horizontal wells along McClellan Creek. A source Water assessment was completed for our water system in 2002 and is available through the internet link at <http://deq.mt.gov/wginfo/swp>. The 2002 assessment indicates that the valley fill aquifer from which the Wyle Drive wells draw water has a high to very high susceptibility to contamination from onsite septic systems, sanitary sewage treatment and disposal, USTs and LUSTs, transportation lines, an oil pipeline, and the former ASARCO smelter. Further evaluation indicates there are multiple barriers that lower the susceptibility of the aquifer and wells down to moderate. The shallow alluvium from which the McClellan Creek intakes draw water has a moderate susceptibility to septic systems and agricultural land. In 2013 concentrations of all potential contaminants in water samples were consistently low or below laboratory detection limits. These low levels appear to represent background for the aquifers and are far below state or federal standards for drinking water. The assessment can be reviewed during normal business hours at the East Helena City Hall.

This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

If you have any questions about this report or concerning your water, please contact Public Works Director, or James Schell, Mayor, at 406-227-5321. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on the first and third Tuesday of the each month at the City Hall, 306 E Main Street. Water quality issues are often discussed at these meetings.

The City of East Helena Municipal Water System routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of any detects in our monitoring for the period of **January 1st to December 31st, 2015**. For constituents that are not monitored yearly, we have reviewed our records back to the last time the constituent was monitored and maybe older than one year.

Parameter	Date	90th % value	Units	Action level	Source of Contamination
Lead	09/11/15	2	ppb	15	Household plumbing
Copper	09/11/15	0.631	ppm	1.3	Household plumbing

In the tables above and below you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Parts per billion (ppb) or Micrograms per liter (ug/l) - one part per billion corresponds to one minute in 2000 years or a single penny in \$10,000,000.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Action Level - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - The “Maximum Allowed” (MCL) 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.

Maximum Contaminant Level Goal - The “Goal”(MCLG) 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.

Nephelometric Turbidity Unit (NTU)-nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Picocuries per liter (pCi/L)-picocuries per liter is a measure of the radioactivity in water.

TEST RESULTS

Contaminant	Violation Y/N	Sample Date	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants							
Nitrate + Nitrite as N EP502 EP503	N	02/04/15	0.51	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
	N	02/04/16	0.10				
Fluoride EP502	N	11/07/13	0.22	ppm	4	4	
Arsenic	N	11/6/13	1	ppb	0	10	
Barium EP502 EP503	N	09/24/13	0.036	ppm	2	2	
	N	12/12/13	0.013				
Selenium EP502	N	12/12/13	0.001	ppb	50	50	
Uranium	N	11/06/13	6	ppb	0	30	
Synthetic Organic Contaminants							
Di(2-ethylhexyl)Phthalate- EP503	N	01/28/15	0.92	ppb	0	6	
Volatile Organic Contaminants							
TTHMS (total trihalomethane) DBP1 DBP2	N	08/12/15	1.3	ppb	0	80	By-product of drinking water chlorination
	N	09/12/15	4.6				
HAA5 (Haloacetic acids) DBP2	N	08/12/15	4.0	ppb	0	60	

Radioactive Contaminants							
Gross Alpha-505	N	08/12/11	1.8	pCi/L	0	15	Erosion of natural deposits
Combined Uranium EP502 EP503	N N	08/12/11 08/12/11	3 2	ug/L ug/L	0	30	Erosion of natural deposits.
Combined Radium 226/228	N	08/12/11	0.9	pCi/L	0	5	Erosion of natural deposits.
Microbial Contaminants							
Parameter	Violation Y/N	Sample Date	Highest Number of Positive samples in a month	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Coliform	N	Monthly	0	Present/ Absent	0	1	Soil Runoff

Violations- The City of East Helena continues working with the MT DEQ to become compliant with the Safe Drinking Water Act. We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results. Compliance was achieved in February 2016.

Nitrates - As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

Arsenic - 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.

Barium-Some people who drink water containing Barium in excess of the MCL over many years could experience an increase in their blood pressure.

Fluoride- Some people who drink water containing Fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Selenium- Selenium is an essential nutrient. However, some people who drink water containing Selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

Uranium- Some people who drink water containing uranium in excess of the MCL over many years have increased risk of getting cancer and kidney toxicity.

TTHMs [Total Trihalomethanes]- Some people who drink water that contains trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer

HAA5 (Haloacetic Acids)- Some people who drink water containing Haloacetic Acids in excess of the MCL over many years may have an increased risk of getting cancer.

Radionuclides- Our water system tested for Alpha Emitters (Gross Alpha) and Radium-226 and Radium 228 in 2011. Alpha emitters are certain minerals which are radioactive and which may emit a form of radiation known as alpha radiation. Gross Alpha was not detected in the Wiley Well System and was detected at a very low level (1.8 pCi/L) in the McClellan Well System. Radium 226/228 is a naturally

occurring radioactive contaminants that occurs primarily in ground water. Combined Radium 226/228 was detected in EP503. Alpha Emitters **were detected** EP505 and uranium was detected in EP502 and EP503 in 2011 but below the MCL.

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.

Lead - Infants and children who drink water that contains lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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. The City of East Helena 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 the 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>.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are 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.

MCL's 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.

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).

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.

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