



Annual Drinking Water Quality Report
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 TOWN OF LIMA
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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 Town of Lima 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.

If you have any questions about this report or concerning your water utility, please contact Pete Brown at 276-3333. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our scheduled city council meetings. They are generally held the second Monday of the month at 7pm at the Town Hall. Please contact Carla Weidinger at 276-3521 to confirm meeting dates and times.

WATER SOURCE

Lima relies on groundwater from Alder Spring for its water supply. Alder Spring is located along the east side of Alder Creek approximately ¾ mile south of Lima where the creek emerges from the hills along the north side of the Tendoy Mountains.

SOURCE WATER ASSESSMENT

A Source Water Assessment was performed in 2002. The Town of Lima has identified significant potential contaminant sources within the spill response region. A Susceptibility Assessment was conducted and our susceptibility to potential contaminant sources is summarized in the table below (Table 4 in the assessment report). The State website to view the full Source Water Assessment is: <https://deq.mt.gov/water/Programs/dw#accordion1-collapse2>

Table 4. Susceptibility assessment for significant potential contaminant sources in the Control Zone and Inventory Region

Source	Contaminant	Hazard	Hazard Rating	Barriers	Susceptibility	Management
Septic systems	Nitrates and pathogens	Effluent leaching to groundwater	Low	Distance downgradient from spring	Very low	Monitor for proper function
Agricultural land	Nitrates and pathogens	Contaminant laden surface water leaching to groundwater	Low	Distance downgradient from spring	Very low	Best Management Practices
I-15	VOCs, ag chemicals	Hazardous chemical spills	Low	Distance downgradient from spring	Very low	Emergency Response Plan
Railroad	VOCs, ag chemicals	Hazardous chemical spills	Low	Distance downgradient from spring	Very low	Emergency Response Plan

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.
- N/A**: Not applicable.
- 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.
- Level II Assessment**: A very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

MONITORING

The Town of Lima 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 constituents detected by our monitoring for the period of **January 1st to December 31st, 2021**.

TEST RESULTS							
Contaminant	Violation Y/N	Sample Date	Result	Units	MCLG	MCL	Likely Source of Contamination
Copper	N	08/18/2020	90th Percentile Value 0.1	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	N	008/18/2020	90th Percentile Value 2	ppb	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits
Barium	N	08/06/2019	0.012	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	N	08/06/2019	0.232	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	N	01/12/2021	0.077	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	08/06/2019	2	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Combined Radium	N N	08/01/2016 08/01/2016	0.606 0.48	pCi/L	0	5	Erosion of natural deposits

Bacteriological Monitoring – We monitor our water supply for total coliform and E. coli bacteria monthly. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, we always perform special follow-up tests to determine if harmful bacteria are present in the water supply. In **2021** monitoring, **no** coliform bacteria were detected in our water.

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 **2021** testing, Nitrate was detected in our water system but in concentrations less than the Maximum Contamination Level set by the EPA.

Inorganic Compounds (IOCs) – Testing for Antimony, Barium, Beryllium, Cadmium, Chromium, Fluoride, Mercury, Nickel, Selenium, and Thallium was done in **2019**. Barium, Fluoride, and Selenium were detected in our water but in concentrations less than the Maximum Contamination Level set by the EPA. We have a waiver for testing Barium, Cadmium, Chromium, Fluoride, Mercury, and Selenium in effect through 2025

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 **2019** testing, Arsenic was not detected in our water system.

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. The *Town of Lima* 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 **2020** testing, Lead and Copper were detected in our water system but below the Action Levels 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 concentration 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 during **2019**, and none were detected in our water system.

Synthetic Organic Compounds (SOCs) – SOC's 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. SOC's 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 **2019**, and none were 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 occurs primarily in ground water. Our water system tested for Radium-226, Radium-228, and Alpha emitters in **2016**. Gross Alpha was not detected, and combined Radium 226+228 was detected but in concentrations less than the Maximum Contamination Level set by the EPA.

INTERPRETATION

We continually monitor for various constituents in the water supply to meet all regulatory requirements. Some constituents have been detected in our water, as described above. 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 the Town of Lima 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.

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