

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available. If you are interested in examining the results, please contact Bruce Martin at 307-235-8213 or by mail at 200 N David Street, Casper, Wyoming 82601.

As part of an on-going evaluation program, the EPA has required us to monitor for some contaminants in drinking water that are not currently regulated. Under the Fifth Unregulated Contaminant Monitoring Rule (UCMR5), EPA is gathering information on the occurrence of 29 per- and polyfluoroalkyl substances (PFAS) and lithium in drinking water. UCMR5 is intended to improve understanding about the presence and quantity of these substances in public drinking water systems, and EPA often does not have full knowledge of the health effects for these unregulated contaminants. The UCMR5 data collected on PFAS and lithium from drinking water systems will help the EPA make determinations about future regulations and other actions to protect public health under the Safe Drinking Water Act. The process of developing regulatory standards is careful, deliberative, and data based. Monitoring for contaminants that are not regulated also helps federal, state, and other researchers prioritize studies for health effects information, identify data gaps, and determine the need for future studies to improve our understanding of the possible health risks associated with these contaminants in public drinking water. Information collected through the monitoring of these contaminants will help to ensure that future decisions on drinking water standards are based on sound science. For more information about UCMR5, visit <https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule>.

UCMR5 TEST RESULTS (only detects listed)				
Contaminant	Level Detected	Unit Measurement	UCMR MRL (ppb)	Likely Source of Contamination
Lithium				
Average	40.76	ppb	9	Lithium is a naturally occurring metal and may be found at higher concentrations in certain parts of the country, particularly in groundwater sources in arid locations in the Western U.S.
Range of Results	29.9-54.9			

1. UCMR MRL – EPA-established UCMR Minimum Reporting Level. The lowest concentration that laboratories may report to the EPA during UCMR 5 monitoring. MRLs are not associated with health effects information. More specifically, an MRL is the quantitation limit for a contaminant that is considered achievable, with 95% confidence, by at least 75% of laboratories nationwide using a specified analytical method (recognizing that individual laboratories may be able to measure at lower levels). [Note that the Agency for Toxic Substances and Disease Registry (ATSDR) uses the term “MRL” for a different purpose (i.e., to describe “Minimal Risk Level”). The UCMR term and the ATSDR term have no relationship to each other.]

Lithium is a naturally occurring metal and may be found at higher concentrations in certain parts of the country, particularly in groundwater sources in arid locations in the Western U.S.

Lithium has been used in pharmaceuticals for a long time to treat certain medical conditions under the care of a physician. Despite the abundance of information on patients receiving lithium at therapeutic levels, there has historically been limited information available to evaluate health risks in people at the levels associated with typical drinking water consumption, which are thought to be much lower than patients prescribed lithium as a therapy. Getting a better understanding of how much environmental lithium the public may be exposed to is one of the reasons the EPA is choosing to monitor for the presence and levels of lithium in drinking water systems around the country.

At present, EPA cannot confidently estimate the risk for people with lithium exposures from drinking water between the UCMR5 reporting limit of 9 µg/L (micrograms per liter) and a much higher concentration equivalent to a therapeutic dose. Therapeutic doses of lithium generally range from 600 to 1,200 mg/day (milligrams per day), which would be the equivalent of drinking water containing ≥ 240,000 µg/L lithium. The science on the potential for lithium's effects on human health, and at what levels including those which may be present in the environment, is still evolving. For more information on lithium, visit <https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule#lithium>.

IMMUNO-COMPROMISED SPECIAL HEALTH INFORMATION

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, and some elderly and infants, can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. Guidelines from the Environmental Protection Agency and the Centers for Disease Control on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

NEED MORE INFORMATION?

Your questions, concerns, and observations are important to us. Contact Casper Public Utilities at 235-8213 or on the web at www.casperwy.gov.

For more information about potential health effects of water contaminants, contact the U.S. Environmental Protection Agency at 800-227-8917; the Safe Drinking Water Hotline, 800-426-4791; or on the web at www.epa.gov/safewater.



DRINKING WATER QUALITY REPORT

2023

The City of Casper is proud to provide you with our 2023 Drinking Water Quality Report. This report lets you know that our drinking water is safe and that it meets or exceeds all the stringent drinking water quality standards set forth by the Environmental Protection Agency (EPA).

The 2023 Drinking Water Quality Report summarizes the results of the water testing we performed on the water we provided you in 2023. The information should look familiar. As part of the Safe Drinking Water Act, the City of Casper is required to report this information to you on an annual basis.

Congress, the EPA, and the City of Casper want people to know what is in their drinking water. The more you know about your drinking water—its source, its treatment and its quality—the better equipped you are to participate in water related discussions. Providing you with a safe and dependable supply of drinking water is our mission.

We at the City of Casper work around the clock to protect our water and provide top quality water to every tap. We ask that you help us protect our water too.

SOURCES OF CASPER'S DRINKING WATER

The City of Casper purchases wholesale water from the Central Wyoming Regional Water System for your use. The water comes from two sources:

66% GROUNDWATER

Groundwater provides an average of 66% of Casper's water. Groundwater is pumped from the North Platte River alluvial aquifer via 29 wells and is treated with ozone and chloramines for disinfection and a corrosion inhibitor to reduce corrosion of water mains and residential plumbing systems.

34% SURFACE WATER

An average of 34% of Casper's water is surface water drawn from the North Platte River. This water originates as snowmelt from the upper North Platte River basin and is clarified, disinfected with ozone, filtered, disinfected with chloramines and treated with a corrosion inhibitor before it is released into the distribution system.

LEAD & COPPER

In 2023, the City of Casper conducted tests for lead and copper in its water distribution system. These are required samples that are done every three years. The City of Casper is proud to report that the results show we are below the Action Level for both lead and copper.

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 Casper 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 www.epa.gov/safewater/lead.

HOW CAN I GET INVOLVED IN WATER QUALITY DECISIONS?

We want our customers to be informed about their water utility. If you want to learn more, please attend any of the regularly scheduled meetings of the following groups:

Casper Public Utilities Advisory Board meets as needed on the fourth Wednesday of the month at 7:00 a.m. in the Downstairs Meeting Room at Casper City Hall, 200 North David Street (call 307-235-8213 to check if there is a meeting scheduled for the current month).

Central Wyoming Regional Water System on the third Tuesday of every month at 11:30 a.m. in the Conference Room at the Regional Water Treatment Plant, 1500 S.W. Wyoming Blvd.

ATTENTION PROPERTY OWNERS AND MANAGERS:

Please share this report with your tenants.

Find this report online at www.casperwy.gov

A MESSAGE FROM THE CENTRAL WYOMING REGIONAL WATER SYSTEM

As part of the Interim Enhanced Surface Water Treatment Rule (IESWTR) regulation governing treatment for the pathogen cryptosporidium (40 CFR Part 141, Subpart P), the U.S. Environmental Protection Agency (EPA) requires a treatment technique for 99% removal of cryptosporidium. Water systems using surface water or ground water under the direct influence of surface water (GWUDI) have been required to comply with this treatment technique since January 2002.

Currently, the Central Wyoming Regional Water System utilizes GWUDI from collection devices along the North Platte River: vertical wells, horizontal wells, or caissons. This water is not treated in a filtration plant, but it is ozonated and disinfected with chloramines. Alternative filtration occurs through these devices, such as riverbank filtration occurring from the wells. On Dec. 10, 2001, EPA granted conditional removal credit to the Central Wyoming Regional Water system GWUDI system while a detailed study was conducted to demonstrate the effectiveness of the alternative filtration technologies to remove cryptosporidium. During the study period, the Central Wyoming Regional Water System implemented interim measures designed to ensure public health protection. The study was completed and a final report provided to EPA in January 2005.

EPA granted approval to the GWUDI system as an alternative filtration technology on March 18, 2005, based upon the preponderance of these study results, previous studies, and knowledge of the GWUDI system. This decision has been predicated on the primary goals of protecting public health and ensuring compliance with the Safe Drinking Water Act while utilizing sound science and recognizing cost considerations for the Central Wyoming Regional Water System.

This approval is contingent upon the Central Wyoming Regional Water System complying with several operational and performance requirements to improve pathogen removal including abandoning or filtering water from the infiltration gallery and ongoing monitoring of water quality. The Central Wyoming Regional Water System will also continue to provide inactivation of this GWUDI water with ozonation and chloramines and will meet all other monitoring and treatment technique requirements of the surface water treatment rules.

CRYPTOSPORIDIUM & GIARDIA

Cryptosporidium and giardia are microscopic organisms that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. In recent years, these have been found in surface water across the country. Cryptosporidium must be ingested for it to cause disease.

Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. Our monitoring indicates a low level of these organisms was detected in our untreated source water. Once our source water is treated, it is safe for consumption.

Current test methods do not allow us to determine if the organisms that were detected are dead or if they are capable of causing disease. Most healthy individuals are able to overcome the disease within a few weeks. However, immune-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to avoid infection.

FROM THE EPA

All drinking water (both tap and bottled) comes from sources that include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and, in some cases, radioactive materials. It can also pick up substances resulting from the presence of animal or human activity.

Contaminants that may be present in source water before it is treated include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural operations and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic waste water discharges, oil and gas production, mining or farming.
- Pesticides and herbicides that can come from agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants that can come from industrial processes, gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants that can be naturally occurring or the result of oil and gas production and mining activities.

IN OUR WATER

The 18 substances listed in the table on the right were detected in Casper’s water during 2023. All are below levels allowed by federal regulations. We tested for 64 other contaminants. They are not listed because they were not detected. These include volatile organic contaminants and synthetic organic contaminants like pesticides and herbicides.

Your water is monitored 365 days a year. Tests are done before and after treatment and while your water is in the distribution system. The results are compared to the stringent contaminant level limits and goals set by the Environmental Protection Agency to ensure that your drinking water is safe.

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 mean water may be 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.

TURBIDITY

Turbidity is a measure of water clarity. It measures how much suspended materials, such as clay, sand, algae, plankton, microbes and other substances, are in water. Turbidity can affect the color of water. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

DEFINITIONS

AL: Action Level—The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. Action Levels are reported at the 90th percentile for homes at greatest risk.

CFU: Colony Forming Units—The number of visible growths of microorganism in a nutrient medium.

MCL: Maximum Contaminant Level—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 technology.

MCLG: Maximum Contaminant Level Goal—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.

MFL: Million Fibers per Liter—A measure of the presence of asbestos fibers that are longer than 10 micrometers.

2-log Removal: 99% removal of protozoan through filtration.

SUBSTANCE	VIOLATION	HIGHEST LEVEL ALLOWED (MCL)	HIGHEST LEVEL DETECTED	IDEAL GOALS (MCLG)	POTENTIAL SOURCES OF CONTAMINANT
REGULATED AT THE GROUNDWATER SOURCES AND TREATMENT PLANT					
Bromate Running Annual Average	No	10 PPB (MCL based on Running Annual Average)	6.3 ppb	0	Drinking water ozonation by-product
Highest Level Detected			16 ppb		
Nitrate (As Nitrogen)	No	10 ppm	0.76 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride	No	4 ppm	0.4 ppm	4 ppm	Erosion of natural deposits
Sodium	No	Not regulated	50.5 ppm	None set	Erosion of natural deposits
Turbidity	No	0.2 NTU	<0.2 NTU	n/a	Soil runoff
Cryptosporidium	No	2-log removal	<1 oocysts/L	n/a	Animal and human fecal waste
Alpha Emitters	No	15 pCi/L	5.7 pCi/L	0	Erosion of natural deposits
Combined Radium	No	5 pCi/L	1.5 pCi/L	0	Erosion of natural deposits
Uranium	No	30 ppb/L	7.8 ppb/L	0	Erosion of natural deposits
REGULATED AT THE CONSUMER’S TAP					
Lead	No	15 ppb AL	1 ppb No site exceeded AL	0	Corrosion of household plumbing
Copper	No	1.3 ppm AL	0.87 ppm No site exceeded AL	1.3 ppm	Corrosion of household plumbing
REGULATED AT THE DISTRIBUTION SYSTEM					
Asbestos	No	7 MFL	<0.20 MFL	7 MFL	Decay of asbestos cement water mains; erosion of natural deposits
Total Trihalomethanes	No	80 ppb	50 ppb	n/a	Drinking water chlorination by-product
Haloacetic Acids (5)	No	60 ppb	27 ppb	n/a	Drinking water chlorination by-product
Total Organic Carbon	No	TT	5.2 ppm	n/a	Naturally present in environment
% TOC Removal		Greater than 25% removal	48%		
Chloramines Running Annual Average	No	4 ppm	1.56 ppm	n/a	Water additive used to control microbes
Total Coliform Bacteria	No	5% of Monthly samples are Positive	0.16% March 0% Rest of Months	0	Naturally present in the environment
Selenium	No	50 ppb	6 ppb	50 ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

n/a: Not applicable—The EPA has not requested monitoring for this contaminant.

ND: Nondetects—The contaminant was monitored but not detected.

NTU: Nephelometric Turbidity Unit—The measurement of the clarity of water.

pCi/L: pico Curies per liter—A measure of the radioactivity in water.

ppm: One part per million—The measurement corresponds to 1 minute in 2 years or 1 penny in \$10,000.

ppb: One part per billion—The measurement corresponds to 1 minute in 2,000 years or 1 penny in \$10,000,000.

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

Oocysts/L: Number of Cryptosporidium per liter.