



## Colorado Springs Utilities (PWSID # CO0121150) 2019 Water Quality Report Information for:

Cascade Metropolitan District No.1 (PWSID # CO0121100)

### Water Sources

Your water is blended from multiple sources and treated at the Pine Valley and McCullough water treatment facilities.

#### Mountain Water Sources

With no major water source nearby, much of Colorado Springs Utilities raw water collection system originates from nearly 200 miles away, near Aspen, Leadville, and Breckenridge. Almost 75 percent of our water originates from mountain streams. Water from these streams is collected and stored in numerous reservoirs along the Continental Divide. Collection systems in this area consist of the Homestake, Fryingpan-Arkansas, Twin Lakes, and Blue River systems.

The majority of this raw water is transferred to our city through pipelines that help protect it from contamination, such as herbicides, pesticides, heavy metals and other chemicals. After the long journey, water is stored locally at Rampart Reservoir and the Catamount reservoirs on Pikes Peak.

#### Local Surface Sources

To supplement the water received from the mountain sources, Colorado Springs Utilities is able to divert water from local surface water collection systems including:

- North and South Slopes of Pikes Peak – Catamount Reservoirs, Crystal Reservoir, South Slope Reservoirs and tributaries
- North and South Cheyenne Creeks
- Fountain Creek
- Monument Creek – Pikeview Reservoir
- Northfield Watershed – Rampart and Northfield Reservoirs
- Pueblo Reservoir

#### Local Ground Water Sources

We used to pump water from wells drilled into two different aquifers. We have two wells on the Denver aquifer (500-700 feet deep) and two wells on the Arapahoe aquifer (900-1,000 feet deep). These wells were deactivated in July 2015.

#### Purchased Water Source

Fountain Valley Authority or FVA (PWSID#CO0121300) receives water from the Fryingpan-Arkansas Project – a system of pipes and tunnels that collects water in the Hunter- Fryingpan Wilderness Area near Aspen. Waters collected from this system are diverted to the Arkansas River, near Buena Vista, and then flow about 150 miles downstream to Pueblo Reservoir. From there, the water travels through a pipeline to a water treatment plant before being delivered to Colorado Springs.

All water sources are treated at one of our treatment plants (or in the case of FVA water at FVA's treatment plant) prior to entering our drinking water distribution system; an intricate system of tanks, pumps and pipes that ultimately deliver water to your home or business. Want more source water information click <https://www.csu.org/pages/watershed-r.aspx>.

### Colorado Source Water Assessment and Protection

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit <https://www.colorado.gov/cdphe/ccr>. The report is located under "Guidance: Source Water Assessment Reports." Search the table using 121150, COLORADO SPRINGS UTILITIES, or by contacting Laboratory Services at 719-668-4560. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that **could** occur. It **does not** mean that the contamination **has or will** occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help

us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area are listed below.

#### **Potential sources of contamination to our source water areas may come from:**

- EPA Superfund Sites
- EPA Abandoned Contaminated Sites
- EPA Hazardous Waste Generators
- EPA Chemical Inventory/Storage Sites
- EPA Toxic Release Inventory Sites
- Permitted Wastewater Discharge Sites
- Aboveground, Underground and Leaking Storage Tank Sites
- Solid Waste Sites
- Existing/Abandoned Mine Sites
- Concentrated Animal Feeding Operations
- Other Facilities
- Commercial/Industrial Transportation
- High-and-Low-Intensity Residential
- Urban Recreational Grasses
- Quarries/Strip Mines/Gravel Pits
- Agricultural Land (row crops, small grain, pasture/hay, orchards/vineyards, fallow and other)
- Forest
- Septic Systems
- Oil/Gas Wells
- Road Miles

The results of the source water assessment are not a reflection of our treated water quality or the water you receive, but rather a rating of the susceptibility of source water contamination under the guidelines of the Colorado SWAP program.

#### **General Information**

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:

#### **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 operation and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides that may come from a variety of sources, such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants that 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 Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

#### **Immunocompromised Persons Advisory**

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 (1-800-426-4791) or by visiting <http://water.epa.gov/drink/contaminants>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health

effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (1-800-426-4791).

### Information About Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). 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. If you are concerned about lead in your water, you may wish to have your water tested. 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. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

### Information about Fluoride

Fluoride is a compound found naturally in many places, including soil, food, plants, animals and the human body. It is also found naturally at varying levels in all Colorado Springs' water sources. Colorado Springs Utilities does not add additional fluoride to your drinking water. Any fluoride in the drinking water comes naturally from our source waters. For more fluoride information click <https://www.csu.org/pages/water-quality-r.aspx>

### Information about Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. No cryptosporidia were detected in Colorado Springs Utilities' source water in 2018. Current test methods do not allow us to determine if the organisms found in the source water are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing the life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

### Terms, Abbreviations & Symbols

- **Maximum Contaminant Level (MCL)** – The highest level of a contaminant allowed in drinking water.
- **Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.
- **Health-Based** – A violation of either a MCL or TT.
- **Non-Health-Based** – A violation that is not a MCL or TT.

- **Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **Maximum Residual Disinfectant Level (MRDL)** – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Maximum Contaminant Level Goal (MCLG)** – 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.
- **Maximum Residual Disinfectant Level Goal (MRDLG)** – The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Violation (No Abbreviation)** – Failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** – Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.
- **Variance and Exemptions (V/E)** – Department permission not to meet a MCL or treatment technique under certain conditions.
- **Gross Alpha (No Abbreviation)** – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
- **Picocuries per liter (pCi/L)** – Measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **Compliance Value (No Abbreviation)** – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90<sup>th</sup> Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).
- **Average (x-bar)** – Typical value.
- **Range (R)** – Lowest value to the highest value.
- **Sample Size (n)** – Number or count of values (i.e. number of water samples collected).
- **Parts per million = Milligrams per liter (ppm = mg/L)** – One part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Parts per billion = Micrograms per liter (ppb = ug/L)** – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Not Applicable (N/A)** – Does not apply or not available.
- **Level 1 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 2 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.

## Data Presented in the Water Quality Report

Colorado Springs Utilities routinely monitors for contaminants in your drinking water according to Federal and State laws. The table on the following pages shows the combined results of our monitoring for the Ute Pass water treatment plants for the period of January 1 through December 31, 2018, unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than a year old. Only detected contaminants sampled within the last 5 years appear in this report. If no table appears in this section, then no contaminants were detected in the last round of monitoring.

### Detected Contaminants Tables

Colorado Springs Utilities (PWSID CO0121150)

#### Inorganic Contaminants

Monitored at the Ute Pass Treatment Plant (entry point to the distribution system)

Contaminant	MCL	MCLG	Units	Level Detected	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Barium	2	2	ppm	0.14	No	April 2018	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.51	No	April 2018	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Sodium	N/A	N/A	ppm	4.91	No	April 2018	Erosion of natural deposits

#### Organic Contaminants

Monitored at the Ute Pass Treatment Plant (entry point to the distribution system)

Contaminant	MCL	MCLG	Units	Average	Range Detected	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Ethylbenzene	700	700	ppb	0.68	0 – 0.79	No	Jan, Jun, Jul, Oct	Discharge from petroleum refineries
Xylenes	10,000	10,000	ppb	4.8	0 – 7.9	No	Jan, Jun, Jul, Oct	Discharge from petroleum factories; discharge from chemical factories

### Turbidity

Continuously monitored at Ute Pass Treatment Plant (entry point to the distribution system)

Contaminant	TT Requirement	Level Detected	TT Violation	Sample Dates	Possible Source(s) of Contamination
Turbidity	Maximum 1 NTU for any single measurement	Highest Single Measurement: 0.13 NTU	No	May 2018	Soil Runoff
Turbidity	In any month, at least 95% of samples must be less than 0.3NTU	Lowest Monthly percentage of samples meeting TT requirement: 100%	No	Dec 2018	Soil Runoff

### Disinfectants

Continuously monitored at Ute Pass Treatment Plant (entry point to the distribution system)

Contaminant	MRDL/ TT Requirement	Units	Level Detected	MRDL/TT Violation	Sample Dates	Possible Source(s) of Contamination
Chlorine	TT= No more than 4 hours with a sample below 0.2 ppm	ppm	0 samples above or below the level	No	Jan – Dec 2018	Water additive used to control microbes

### Total Organic Carbon (Disinfection Byproducts Precursor)

Monitored at raw source before it enters Ute Pass Treatment Plant

Contaminant	MCL	MCLG	Units	Average	Range Low - High	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Total Organic Carbon (TOC)	TT-demonstrated compliance with alternative criteria	N/A	N/A	N/A	N/A	No	Quarterly- Running Annual Average	Naturally present in the environment

### Disinfection Byproducts

Monitored in the distribution system

Contaminant	MCL	MCLG	Units	Average	Range Low - High	MCL Violation	Highest Compliance Value	Sample Dates	Possible Source(s) of Contamination
Total Haloacetic Acids (HAA5)	60	N/A	ppb	33.42	10.2 – 55.0	No	53.6	Jan, Apr, Jul, Oct 2018	Byproduct of drinking water disinfection

Total Trihalomethanes (TTHM)	80	N/A	ppb	42.56	20.3 – 66.5	No	55.5	Jan, Apr, Jul, Oct 2018	Byproduct of drinking water disinfection
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**Long Term 2 Enhanced Surface Water Treatment Rule Monitoring**  
Monitored raw source water before it enters Ute Pass Treatment Plant

Contaminant	Units	Range Detected	MCL	Sample Dates	Possible Source(s) of Contamination
Cryptosporidium	oocysts	0	0	Jan – Mar 2017	Naturally occur in the environment
E. coli	MPN	0	N/A	Jan – Mar 2017	Naturally occur in the environment

**Disinfectants in the Distribution System**

Contaminant	MRDL/TT	Lowest TT Percentage	Number of samples below 0.2	Units	TT Violation	Sample Dates	Possible Source(s) of Contamination
Chlorine	MRDL = 4 ppm TT= At least 95% of samples per month must be at least 0.2ppm	99.11 August 2018	2	ppm	No	2018	Drinking water disinfectant used to control microbes

**Lead and Copper**

Monitored in the distribution system

Contaminant	AL at the 90 <sup>th</sup> Percentile	MCLG	Units	90 <sup>th</sup> Percentile	Sample Size	Sample Sites Above AL	AL Exceedance	Sample Dates	Possible Source(s) of Contamination
Copper	1.3	1.3	ppm	0.20	102	0	No	Mar – May 2018	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Lead	15	0	ppb	4.4	102	2	No	Mar – May 2018	Corrosion of household plumbing systems; erosion of natural deposits
Copper	1.3	1.3	ppm	0.13	100	0	No	Sept – Nov 2018	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	ppb	3.6	100	0	No	Sept – Nov 2018	Corrosion of household plumbing systems; erosion of natural deposits

#### Violations and Formal Actions

Contaminant	Category	Time Period	Health Effects	Compliance Value	TT Level or MCL
Xylenes, Total <sup>1</sup>	Failure to monitor and/or report – non-health based	04/01/2018 – 06/30/2018	NA	NA	NA
Ethylbenzene <sup>1</sup>	Failure to monitor and/or report – non-health based	04/01/2018 – 06/30/2018	NA	NA	NA

#### Additional Violation Information

<sup>1</sup>The Colorado Department of Public Health and Environment requires that Colorado Springs Utilities Ute Pass Treatment Plant monitor for the Volatile Organic Chemicals (VOCs) Total Xylene and Ethylbenzene quarterly. Colorado Springs Utilities collected the required sample in May 2018. The sample was sent to a contract lab for analysis. Upon receipt of the results it was noticed that the lab had not analyzed for all required VOCs including Total Xylenes and Ethylbenzene. Another sample was collected and sent off for analysis in the beginning June 2018. Results from that sampling event were received by Utilities on July 11<sup>th</sup>, 2018, which was past the required deadline resulting in a violation of timely reporting for Ethylbenzene. Also, upon receipt of this report, it was discovered that there was a quality control failure on Xylenes which invalidated the sample. Utilities was not notified of this failure until the monitoring period had ended and was unable to recollect the sample which is a violation of a drinking water monitoring requirement. Colorado Springs Utilities collected and analyzed the samples and were back in compliance for third quarter.

### Unregulated Contaminant Monitoring Regulation (UCMR)

The 1996 amendments to the Safe Drinking Water Act required that EPA establish criteria for a program to monitor unregulated contaminants and to identify no more than 30 unregulated contaminants to be monitored every five years.

Unregulated contaminants are those contaminants that do not have a drinking water standard (maximum contaminate level) established by EPA. The purpose of the UCMR is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

The fourth round of the UCMR required monitoring for 30 contaminants. Colorado Springs Utilities was required to monitoring for these contaminants starting in January 2018. The results for any contaminants detected thus far are listed below. For further information on UCMR please visit <https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule>

Monitored at the Treatment Plants (entry point to the distribution system)



Contaminant	Average Level Detected	Range	Units	Sample Dates	Potential Sources of Contamination
Manganese	1.2	ND - 11	ppb	Jan, Apr, Jul, Oct 2019	Naturally occurring element, commercially available in combination with other elements and minerals, a byproduct of zinc ore processing, used in infrared optics, fiber optic systems electronics and solar applications
1-Butanol	1.07	ND – 13	ppb	Jan, Mar, Apr, Jul, Oct 2019	Used as a solvent, food additive, and in the production of other chemicals
Quinoline	0.002	ND – 0.0318	ppb	Jan, Mar, Apr, Jul, Oct 2019	Used as a pharmaceutical and flavoring agent, produced as a chemical intermediate, component of coal

#### Monitored in the Distribution System

Contaminant	Average Level Detected	Range	Units	Sample Dates	Potential Sources of Contamination
Haloacetic Acids 5 (HAA5)	33.9	10.2 – 55.0	ppb	Jan, Apr, Jul, Oct 2018	Byproduct of drinking water disinfection
Brominated Haloacetic Acids 6 (HAABr6)	3.18	0.79 – 9.10	ppb	Jan, Apr, Jul, Oct 2018	Byproduct of drinking water disinfection
Haloacetic Acids 9 (HAA9)	36.4	14.5 – 57.0	ppb	Jan, Apr, Jul, Oct 2018	Byproduct of drinking water disinfection

## Customers Have a Voice in Decisions

We encourage customer participation in decisions affecting our drinking water.

- Utilities Board – our governing body – meets the Wednesday between City Council meetings, 1 p.m. at the Plaza of the Rockies, South Tower, 121 S. Tejon St., Fifth floor.
- Call 719-668-4800 or click <https://www.csu.org/pages/ub-r.aspx> for information.

## General Information

To request a printed copy of this report or for questions call 719-668-4560.

For more water quality information or to access past Drinking Water Quality Reports click <https://www.csu.org/pages/water-quality-r.aspx>