

Esta es información importante.  
Si no la pueden leer, necesitan que  
alguien se la traduzca.

**City of Cripple Creek**  
**Cripple Creek, CO**  
PO Box 430  
Cripple Creek, CO 80813

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact Mickey Groves at 719-355-4369 with any questions or for public participation opportunities that may affect water quality.

# 2017 ANNUAL DRINKING WATER QUALITY REPORT

City of  
**Cripple Creek**

PWS ID# CO0160100



## All Drinking Water May Contain Contaminants

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

## Important Health Information

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).

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.

## Substances that Could be in 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: viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants: 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: may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- Radioactive contaminants: can be naturally occurring or be the result of oil and gas production and mining activities.
- Organic chemical contaminants: including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

## 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>.

## Source Water Assessment and Protection (SWAP)

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 <http://wqcdcompliance.com/ccr>. The report is located under "Source Water Assessment Reports", and then "Assessment Report by County". Select Teller County and find 160100; City of Cripple Creek or by contacting Mickey Groves at 719-355-4369. 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 on the next page.

## How can I learn more about our drinking water?

Please contact us to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Quality Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day. The City Council meets on the first and third Wednesday of every month at 5:30 PM at City Hall, 347 E. Bennett Avenue, Cripple Creek, to discuss issues affecting our community, including, the water department as needed.

## Our Water Sources

Source	Source Type	Water Type	Potential Source(s) of Contamination
BEAVER CREEK RESERVOIR 3 UPPER	Intake	Surface Water	Deciduous forests, evergreen forests, septic tanks and road miles.
BEAVER CREEK RESERVOIR 2 LOWER	Intake	Surface Water	
NO 2 WELL	Well	Groundwater	
WELL 5	Well	Groundwater UDI Surface Water	
WELL NO 4	Well	Groundwater UDI Surface Water	



The city of Cripple Creek routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show all detections found in the period of January 1 to December 31, 2017 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 one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report. Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section then no contaminants were detected in the last round of monitoring.

## Disinfectants Sampled In the Distribution System

Contaminant (Units)	Collection Date	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL	Likely Source of Contamination
Chlorine (ppm)	12/2017	Lowest period percentage of samples meeting TT requirement: 100% *	0	7	No	4.0 ppm	Naturally present in the environment

\* TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm OR if sample size is less than 40 no more than 1 sample is below 0.2 ppm

## Lead and Copper Sampled in the Distribution System

Contaminant (Units)	Time Period	90th Percentile	Sample Size	90th Percentile AL	Sample Sites over AL	90th Percentile AL Exceedance	Likely Source of Contamination
Copper (ppm)	06/21/2017 to 09/14/2017	0.02	20	1.3	0	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	06/21/2017 to 09/14/2017	6.3	20	15	1	No	Corrosion of household plumbing systems; erosion of natural deposits

## Disinfection Byproducts Sampled in the Distribution System

Contaminant (Units)	Year	Average	Range	Sample Size	MCL	MCLG	Highest Compliance Value	Violation (Yes/No)	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	2017	22.06	12.9 to 51.6	7	60	N/A	51.6	No	By-product of drinking water chlorination
TTHMs (Total Trihalomethanes) (ppb)	2017	26.01	13.3 to 68.7	7	80	N/A	68.7	No	By-product of drinking water chlorination

## Disinfectants Sampled at the Entry Point to the Distribution System

Contaminant	Year	Number of Samples Above or Below Level	Sample Size	TT / MRDL Requirement	TT/MRDL Violation	Likely Source of Contamination
Chlorine/Chloramine	2017	0	2190	TT = No more than 4 hours with a sample below 1 Ratio	No	Water additive used to control microbes

Inorganic Contaminants Sampled at the Entry Point to the Distribution System

## Inorganic Contaminants Sampled at the Entry Point to the Distribution System

Contaminant (Units)	Year	Average	Range of Levels Detected	Sample Size	MCL	MLG	Violation (Yes/No)	Likely Source of Contamination
Antimony (ppb)	2017	1.6	1.6 to 1.6	1	6	6	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Fluoride (ppm)	2017	2.8	2.8 to 2.8	1	4	4	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	2017	0.18	0.18 to 0.18	1	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

*Fluoride: This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 parts per million (ppm) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system has a fluoride concentration above 2 parts per million (ppm), but below 4 parts per million (ppm). Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine years of age should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.*

*Drinking water containing more than 4 parts per million (ppm) of fluoride (the Colorado Department of Public Health and Environment's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 parts per million (ppm) of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 parts per million (ppm) because of this cosmetic dental problem.*

*For more information, please contact us. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at (1-877-8-NSF-HELP).*

## Summary of Turbidity Sampled at the Entry Point to the Distribution System

Contaminant	Sample Date	Level Found	TT Requirement	TT Violation	Likely Source of Contamination
Turbidity	Aug. 2017	Highest single measurement: 0.674 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff
Turbidity	Apr. 2017	Lowest Monthly percentage of samples meeting TT requirements for our technology: 98%	In any month, at least 95% of the samples must be less than 0.3 NTU	No	Soil Runoff

## Radionuclides Sampled at the Entry Point to the Distribution System

Contaminant (Units)	Year	Average	Range	Sample Size	MCL	MCLG	Violation (Yes/No)	Likely Source of Contamination
Gross Alpha (pCi/L)	2014	0.87	0.2-1.7	3	15	0	No	Erosion of natural deposits
Combined Radium (pCi/L)	2014	0.33	0-0.8	3	5	0	No	Erosion of natural deposits

## Secondary Contaminants\*

Contaminant (Units)	Year	Average	Range	Sample Size	Secondary Standard
Sodium (ppm)	2017	10.5	10.5 to 10.5	1	N/A

## Violations, Significant Deficiencies, Backflow/Cross-Connection, and Formal Enforcement Actions

Name	Category	Time Period	Health Effects	Compliance Value	TT Level or MCL
Disinfection By-products	FAILURE TO MONITOR AND/OR REPORT - NON-HEALTH-BASED	07/01/2017 - 09/30/2017	N/A	N/A	N/A

### Additional Violation Information

\*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. \*

Explanation of the violation(s), the steps taken to resolve them, and the anticipated resolved date:

Our system was required to sample two different sites in the distribution system and analyze both samples for Trihalomethanes and Haloacetic acid. Both sites were sampled but one analyzed for haloacetic acid and the other for trihalomethanes. A change in the monitoring schedule went unnoticed and contributed to the mix up. The violation was resolved immediately, once it was brought to our attention.

## Definitions

In the data tables, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

**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 90th 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.