



# Fort Carson Army Base

*Drinking Water Quality Report for Calendar Year 2015*



**FORT CARSON ARMY BASE 2016 Drinking Water Quality Report  
for Calendar Year 2015 – *Public Water System ID:* CO0221445**

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

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 HAROLD NOONAN at 719-526-1730 with any questions about the Drinking Water Consumer Confidence Report (CCR) or for public participation opportunities that may affect the water quality.

**General Information** – 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>. 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). 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.

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.

**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 two 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 (SWAP)," and then "Find your county's water report." Select "D-G" and then select the "elpaso" folder. Source water information for Fort Carson is located in the "121150cospringsutilities" pdf document. 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 in the table below. Please contact us to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence 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.

Source	Source	Water	Potential Source(s) of Contamination	
PURCHASED FROM COLORADO SPRINGS UTILITIES 121150	Consecutive Connection	Surface Water	<ul style="list-style-type: none"> <li>▪ EPA Superfund Sites</li> <li>▪ EPA Abandoned Contaminated Sites</li> <li>▪ EPA Hazardous Waste Generators</li> <li>▪ EPA Chemical Inventory/Storage Sites</li> <li>▪ EPA Toxic Release Inventory Sites</li> <li>▪ Permitted Wastewater Discharge Sites</li> <li>▪ Aboveground, Underground and Leaking Storage Tank Sites</li> <li>▪ Solid Waste Sites</li> <li>▪ Existing/Abandoned Mine Sites</li> <li>▪ Concentrated Animal Feeding Operations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Commercial/Industrial Transportation</li> <li>▪ High and Low Intensity Residential</li> <li>▪ Urban Recreational Grasses</li> <li>▪ Quarries/Strip Mines/Gravel Pits</li> <li>▪ Agricultural land (row crops, small grain, pasture/hay, orchards/vineyards, &amp; fallow)</li> <li>▪ Forest</li> <li>▪ Septic Systems</li> <li>▪ Oil/Gas Wells</li> <li>▪ Road Miles</li> <li>▪ Other Facilities</li> </ul>

### Terms and Abbreviations

- **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.
- **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.
- **Locational Running Annual Average (LRAA)** – the average of sample results for samples collected at a particular monitoring location during the most recent four calendar quarters.
- **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.
- **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.
- **Non-detect (ND)** – Analytical result is below the reportable level for the analysis.

**Detected Contaminants** – COLORADO SPRINGS UTILITIES & FORT CARSON ARMY BASE routinely monitor for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2015 for both systems 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. Colorado Springs Utilities has been issued waivers for asbestos, cyanide, dioxin, glyphosate, nitrate and all unregulated inorganic contaminants. The tables on the following pages show the

combined results of monitoring for Ft. Carson, McCullough, Pine Valley, Mesa and FVA water treatments plants for the period of January 1 through December 31, 2015, unless otherwise noted. **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.

### Colorado Springs Utilities (PWSID # CO0121150)

Monitored at the McCullough, Pine Valley, Mesa and FVA Water Treatment Plants (entry points to the distribution system)							
Contaminant	MCL	MC LG	Units	Highest Level Detected (Range)	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Barium	2	2	ppm	0.058 (0.016-0.058)	No	April 2015	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	1.54 (0.24-1.54)	No	April 2015	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Hexachlorocyclopenta	50	50	ppb	0.06 (ND-.06)	No	June 2015	Discharge from chemical factories
Nitrate (as Nitrogen)	10	10	ppm	0.33 (ND-0.33)	No	April 2015	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radium, Combined 226, 228	5	0	pCi/L	1.9 (ND-1.9)	No	Mar 2011, May and June 2014	Erosion of natural deposits
Selenium	50	50	ppb	3.9 (ND-3.9)	No	April 2015	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N/A	N/A	ppm	15.5 (5.55-15.5)	No	April 2015	Erosion of natural deposits
Total Organic Carbon (TOC) <sup>1</sup>	TT	N/A	N/A	N/A	No	Running Annual Average	Naturally present in the environment
Turbidity <sup>2</sup> (95%)	Cannot exceed 5% above .3	N/A	NTU	1% above 0.3	No	Jan – Dec 2015	Soil Runoff
Turbidity <sup>2</sup> (Max)	Cannot exceed 1	N/A	NTU	.53 (0.04-0.53)	No	Jan – Dec 2015	Soil Runoff
Uranium	30	0	ppb	10 (ND-10)	No	Mar 2011, May and Jun 2014	Erosion of natural deposits
<p><sup>1</sup>The Disinfectants and Disinfection Byproducts Rule provides several alternative compliance criteria besides the TOC removal ratios. CSU did not report TOC removal ratios because we demonstrated compliance with alternative criteria. The alternative compliance criteria that we use is 40CFR §141.135(a)(2)(ii); our treated water TOC levels are &lt;2.0ppm calculated quarterly as a running annual average.</p> <p><sup>2</sup>Turbidity is a measure of the cloudiness of the water and has no known health effects. CSU monitors turbidity because it is a good indicator of the effectiveness of our filtration system. Compliance with the TT of 95% of samples ≤0.3NTU is calculated using combined filter effluent turbidity results taken 6 times per day at 1:00, 5:00 and 9:00 a.m. and p.m.</p>							

Monitored raw source water before it enters the Treatment Plant-Long Term 2 Enhanced Surface Water Treatment Rule Monitoring							
Contaminant Name	MCL	MCLG	Units	Range	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Cryptosporidium	N/A	N/A	Oocyst s/L	0 - 1	N/A	Apr - Dec 2015	Naturally present in the environment
Turbidity	N/A	N/A	NTU	0.33 – 50	N/A	Apr - Dec 2015	Soil Runoff
<b>Unregulated Contaminants***</b>							
<p>EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. CSU performs monitoring and reported the analytical results of the monitoring to EPA in accordance with its Third Unregulated Contaminant Monitoring Rule (UCMR3). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (<a href="http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod">http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod</a>) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR3 sampling and the corresponding analytical results are provided below.</p>							
Contaminant	Average Level Detected (Range)	Units	Samples Dates	Typical Sources			
Chlorate	3.7 (ND-63)	ppb	Jul, Oct 2013 & Jan, Apr, May 2014	Powerful oxidizer once used in pyrotechnics. Can be chemically bound to make metal salts.			
Chromium-6	0.001 (ND-0.041)			Used for chrome plating, dyes and pigments, leather tanning, and wood preserving.			
Molybdenum	0.42 (ND-1.4)			Used to make steel alloys, and in high-pressure and high-temperature applications, as pigments and catalysts.			
Strontium	79.4 (46-110)			Used in making ceramics and glass products, pyrotechnics, paint pigments, fluorescent lights, and medicines.			
Vanadium	0.02 (ND-0.31)	ppb		Used to make metal alloys. Used in making rubber, plastics, ceramics, and other chemicals.			
<p>***More information about the contaminants that were included in UCMR3 monitoring can be found at: <a href="http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx">http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx</a>. Learn more about the EPA UCMR at: <a href="http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule">http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule</a> or contact the Safe Drinking Water Hotline at (800) 426-4791 or <a href="http://water.epa.gov/drink/contact.cfm">http://water.epa.gov/drink/contact.cfm</a>.</p>							

### Fort Carson Army Base (PWSID # CO0221445)

#### Summary of Disinfectants Sampled in the Distribution System

Contaminant Name	Month	Results	Sample Size	TT Requirement	TT Violation	Typical Sources
Chlorine	Jan	Lowest monthly percentage of samples meeting TT requirement: 98.18%	55	For any two consecutive months, At least 95% of samples (per month) must be detectable	No	Water additive used to control microbes

**Lead and Copper Sampled in the Distribution System**

Contaminant Name	Time Period	90 <sup>th</sup> Percentile	Sample Size	Unit of Measure	90 <sup>th</sup> Perce	Sample Sites	90 <sup>th</sup> Percentile AL Exceedance	Typical Sources
Copper	05/01/2013 to 05/01/2013	0.3	60	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	09/18/2013 to 09/20/2013	4.9	60	ppb	15	1	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	09/18/2013 to 09/20/2013	0.37	60	ppm	1.3	1	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	05/01/2013 to 05/01/2013	3.9	60	ppb	15	1	No	Corrosion of household plumbing systems; Erosion of natural deposits

**Disinfection Byproducts Sampled in the Distribution System**

Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	Highest Compliance	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2015	34.62	8.1 to 67.8	16	ppb	60	N/A	40.3	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2015	69.32	34.2 to 108	16	ppb	80	N/A	77.8	No	Byproduct of drinking water disinfection

**Violations, Significant Deficiencies, and Formal Enforcement Actions-** No Violations or Formal Enforcement Actions

**Significant Deficiencies**

Date Identified	Deficiency Description	Steps Taking to Correct and Progress	Estimated Completion Date
04/02/2015	R540 - DESIGN APPROVAL; System has not received plans and specs approval for the system or for renovations to the system, including the addition of new sources, changes in treatment or changes in the distribution system. This is an alleged violation of CPDWR 1.1;	Designs were submitted to the Colorado Department of Public Health and Environment (CDPHE) in 2015. CDPHE approved these designs in February 2016.	Completed

**Additional Deficiency Information**

**More Information** - Have questions regarding this report? Please call DPW Environmental Division Water Programs at (719) 526-1730. Questions regarding our source water from Colorado Springs Utilities (CSU) can be found at <http://www.csu.org> or by calling (719) 668-4560. A copy of CSUs Water Quality Report can be found at <https://www.csu.org/CSUDocuments/waterqualityreport2016.pdf>. The CSU board meets Wednesday between City Council Meetings.