US AIR FORCE ACADEMY 2018 Drinking Water Quality Report
For Calendar Year 2017

Public Water System ID: CO0121845

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 the Bioenvironmental Engineering office at 719-333-4825 with any questions or for public participation opportunities that may affect 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 storm water 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 storm water 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. In 2017 all samples taken indicated that contaminants were in acceptable limits.

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 www.colorado.gov/cdphe/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 121845, US AIR FORCE ACADEMY, or by contacting Bioenvironmental Engineering at 719-333-4825. 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. 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.

Our Water Sources

Source	Source Type	Water Type	Potential Source(s) of Contamination
PURCHASED COLORADO SPRINGS 121150 SW	Consecutive Connection	Surface Water	• 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 • Forest • Septic Systems • Oil/Gas Wells • Concentrated animal Feeding Operations • Other Facilities • Commercial/Industrial Transportation • High and Low Intensity Residential • Urban Recreational Grasses • Quarries/Strip Mines/Gravel Pits • Agricultural Land Road Miles

Commented [SP1]: This column must be completed for each source. CCRs are not considered complete if this is left blank.

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.
- **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.

Detected Contaminants

US AIR FORCE ACADEMY routinely monitors 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, 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
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
Typical Sources: Water additive used to control microbes

Disinfectant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2017	Lowest period percentage of samples meeting TT requirement: 100%	0	15	No	4.0 ppm

Lead and Copper Sampled in the Distribution System								
Contaminant Name	**Time Period**	**90th Percentile**	**Sample Size**	**Unit of Measure**	**90th Percentile AL**	**Sample Sites Above AL**	**90th Percentile AL Exceedance**	**Typical Sources**
Copper	09/22/2017 to 09/25/2017	0.26	30	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	09/22/2017 to 09/25/2017	1.6	30	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 Value**	**MCL Violation**	**Typical Sources**
Total Haloacetic Acids (HAA5)	2017	35.93	19.9 to 46.5	12	ppb	60	N/A		No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2017	53.64	36.4 to 68.5	12	ppb	80	N/A		No	Byproduct of drinking water disinfection

Colorado Springs Utilities (PWSID CO0121150)

Monitored at the McCullough and Pine Valley Water Treatment Plants (entry points to the distribution system)

Contaminant	MCL	MCLG	Units	Range	Average	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Barium	2	2	ppm	0.02 – 0.02	0.02	No	April 2017	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.15 – 0.23	0.19	No	April 2017	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Sodium	N/A	N/A	ppm	6.5 – 7.0	6.8	No	January, April 2017	Erosion of natural deposits

Organic Contaminants

Monitored at McCullough and Pine Valley Treatment Plants (entry point to the distribution system)

Contaminant	MCL	MCLG	Units	Range	Average	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Di(2-ethylhexyl) phthalate	6	0	ppb	0.11	0 – 0.67	No	Jan, Apr, Jul, Nov 2017	Discharge from rubber and chemical factories
Hexachlorocyclopentadiene	50	50	ppb	0 – 0.07	0.02	No	Jan, Apr, Jul, Nov 2017	Discharge from chemical factories

Turbidity

Continuously monitored at McCullough and Pine Valley Treatment Plants (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: 0.18 NTU	No	July 2017	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 2017	Soil Runoff

Disinfectants

Continuously monitored at McCullough and Pine Valley Treatment Plants (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: 0.18 NTU	No	July 2017	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 2017	Soil Runoff

Disinfectants

Continuously monitored at McCullough and Pine Valley Treatment Plants (entry point to the distribution system)

Contaminant	MRDL/TT Requirements	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 2017	Water additive used to control microbes

Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio and Finished Water

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

Contaminant	MCL	MCLG	Units	Range	Average	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Total Organic Carbon (TOC)	6 TT = compliance met through 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	Range	Average	MCL Violation	Highest Compliance Value	Sample Dates	Possible Source(s) of Contamination
Total Haloacetic Acids (HAA5)	60	N/A	ppb	0.11	39.54	No	50.7	Jan, Apr, Jul, Oct 2017	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	80	N/A	ppb	0 – 0.07	45.09	No	60.7	Jan, Apr, Jul, Oct 2017	Byproduct of drinking water disinfection

Long term 2 Enhanced Surface Water Treatment Rule Monitoring

Monitored raw source water before it enters the Treatment Plant

Contaminant	Units	Range Detected	MCL	Sample Dates	Possible Source(s) of Contamination
Cryptosporidium	oocysts	0	0	Jan - Dec 2017	Naturally occur in the environment
E. coli	MPN	0 - 49	N/A	Jan - Dec 2017	Naturally occur in the environment

Disinfectants in the Distribution System

Contaminant	MCL/TT	Lowest TT Percentage	Annual Average	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	98% in July	0.51	Ppm	No	2017	Drinking water disinfectant used to control microbes

Lead and Copper

Monitored in the distribution system

Contaminant	AL @ 90th Percentile	MCLG	Units	90th Percentile	Sample Size	Sample Sites above AL	AL Exceedance	Sample Dates	Possible Source(s) of Contamination
Copper	1.3	1.3	ppm	0.18	105	0	No	Jan – Jun 2017	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	ppb	4.7	105	0	No	Jan – Jun 2017	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper	1.3	1.3	ppm	0.20	102	0	No	Jul – Dec 2017	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	Ppb	3.8	102	0	No	Jul – Dec 2017	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Unregulated Contaminants***

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. We performed 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) (http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod) 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.

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure

***More information about the contaminants that were included in UCMR3 monitoring can be found at: http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx. Learn more about the EPA UCMR at: http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule or contact the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/contact.cfm.

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

Violations					
Name	**Category**	**Time Period**	**Health Effects**	**Compliance Value**	**TT Level or MCL**
STORAGE TANK RULE	FAILURE TO MEET STORAGE TANK REQUIREMENTS - NON-HEALTH-BASED	08/09/2017 - Open	N/A	N/A	N/A
STORAGE TANK RULE	FAILURE TO MEET STORAGE TANK REQUIREMENTS - HEALTH-BASED	08/09/2017 - 12/11/2017	May pose a risk to public health.	N/A	N/A
PUBLIC NOTICE	FAILURE TO NOTIFY THE PUBLIC - NON-HEALTH-BASED	09/09/2017 - 09/22/2017	N/A	N/A	N/A
DISINFECTION BYPRODUCTS	FAILURE TO MONITOR AND/OR REPORT - NON-HEALTH-BASED	10/01/2017 - 12/31/2017	N/A	N/A	N/A
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION/BACKFLOW REQUIREMENTS - NON-HEALTH-BASED	08/09/2017 - 12/11/2017	N/A	N/A	N/A