



2017 Water Quality Report

PUBLIC WATER SYSTEM I.D. CO0101140



The Consumer Confidence Report (CCR) is prepared in accordance with federal and state regulations of the Safe Drinking Water Act.

Esta información acerca de su agua potable es importante. Si no la pueden leer, necesitan que alguien se la traduzca.

WHAT IS THIS REPORT ABOUT?

The Environmental Protection Agency (EPA) requires South Adams County Water & Sanitation District (District) and all other public water suppliers to provide consumer confidence reports (CCR) to their customers. These reports are also known as annual water quality reports. This report summarizes the quality of the water that the District provided last year (2016). It includes information about where the District's water comes from, what it contains, and how it compares to the standards set by the EPA and the Colorado Department of Public Health and Environment (CDPHE).

WHERE DOES YOUR WATER COME FROM?

The District's water consists of groundwater from eleven wells which draw from the alluvial aquifer tributary to the South Platte

River, eight deep wells which draw from the Arapahoe formation, and treated surface water from Denver Water. Eight of the District's shallow wells are first pumped to the Klein Water Treatment Facility for treatment, then mixed with Denver Water before delivery to storage reservoirs. The Denver Water portion comes entirely from surface sources over a watershed covering 3,100 square miles on both sides of the Continental Divide. The sources include the South Platte River and its tributaries, the streams that feed Dillon Reservoir and creeks and canals above the Fraser River.

SOURCE WATER ASSESSMENT (SWAP)

State and Federal regulations require safe handling of chemicals and protection of our environment. The Source Water Assessment Report (prepared by the Colorado Department of Public Health and Environment) provides a screening-level evaluation of potential contamination that could occur. It does not mean that contamination has or will

occur. As a part of the assessment, the CDPHE identified potential sources of contamination in our source water, such as District customers and neighbors with chemical storage tanks, EPA hazardous waste generators, chemical inventory storage sites and Superfund sites (e.g. Rocky Mountain Arsenal, Chemical Sales Co). We use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This helps us ensure that quality finished water is delivered to your home.

You may obtain a copy of the Assessment Phase Report at www.sacwsd.org/SWAP

Information about Denver Water monitoring violation.

Water delivered to District customers normally contains Denver Water in some proportion. Because of this, we are notifying customers of a monitoring violation by Denver Water. This oversight poses no safety risk and does not require immediate action by customers.

Denver Water is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. From Jan. 1, 2013, to Dec. 31, 2016, Denver Water did not complete all monitoring for synthetic organic chemicals (SOCs) in accordance with compliance schedules.

The Colorado Department of Public Health and Environment required that Denver Water monitor water from its treatment plants for SOC's in the 2013 to 2016 time-frame. The regulation requires us to collect two sample sets, each in different quarters during one of the three years. Denver Water is required to monitor 31 SOC compounds triennially. With the exception of two compounds (diquat and endothall), the remaining SOC compounds were monitored per the required schedule. Because the correct sampling frequency was not followed for diquat and endothall, this caused Denver Water to have an SOC monitoring violation per the Colorado Primary Drinking Water Regulations. Denver Water has had an active monitoring program for more than 10 years and we have not detected SOC's in our system in past compliance cycles.

For more information, you can contact Denver Water Customer Care at 303-893-2444 or 1600 West 12th Avenue, Denver, CO, 80204. You may obtain a copy of this report <http://www.sacwsd.org/DocumentCenter/View/1075>

Devoted to Water Quality



South Adams County Water and Sanitation District serves a population of over 58,000 people (18,006 water connections) and delivers over 2.7 billion gallons of water per year. South Adams distributes drinking water to its customers traveling across a 65 sq-mile area throughout an extensive network of 350 miles of pipe.

The District tests for over 241 compounds on a regular basis. Some compounds, such as free-chlorine, are tested continuously. Our Water Operators and Water Chemists collect and analyze

samples throughout our water system - from production wells to customer taps. The Water Quality Lab and Water Operations conduct over 1,240 tests every month resulting in 14,886 tests performed every year! For a complete list of the contaminants tested for - but not detected, please call the District's Water Quality Lab at 303.286.0447, or send an email to cseedle@sacwdsd.org.

Protection of our water sources is a continuous process at the District. We are doing everything we can to safeguard

our water supplies. In fact, it is so important to us that we would like your help! All residents and business owners are encouraged to report suspicious behavior that may affect our water resources.

For specific questions or comments, please contact the Water Systems Manager or the Water Quality Supervisor at 303.286.0447.

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WATER AT A GLANCE

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. It can also pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include:

- Microbial contaminants
Example: viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants
Example: salts and metals, which can be naturally-occurring or can result from urban storm water runoff, industrial or domestic

wastewater discharges, oil and gas production, mining and farming.

- Pesticides and herbicides
Example: may come from a variety of sources including agricultural applications, urban storm water runoff and residential uses.
- Organic chemical contaminants
Example: synthetic and volatile organic chemicals which are by-products of industrial processes, and petroleum production. These also may come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants
Example: may be naturally-occurring or may be the result of oil and gas production and mining activities.

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. 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, some elderly, and infants can be particularly at risk of infections. These people should seek drinking water advice from their healthcare 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 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 or online at <http://water.epa.gov/drink/contaminants>.

The South Adams Board of Directors meets at 7:00 PM on the second Wednesday of each month in the Board Room at the Stevenson Administrative Offices located at 6595 East 70th Avenue in Commerce City.

Board Meetings are open to the public. Please visit the District's Website at www.sacwsd.org for additional information.



Water Quality Data

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. The State permits monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data, though representative, is more than one year old. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

HARD WATER

The District has hard water. The typical total hardness detected in 2016 was 19 grains per gallon (325mg/L). The high hardness is due to the groundwater source of our water supply. The water pumped from our wells has been exposed to nontoxic, naturally occurring minerals containing calcium and magnesium as it travels underground making it “hard.” Although the hard water contributes these minerals to your daily dietary needs, it has its drawbacks as well. Hard water

can leave spots on dishes, films on shower doors, and clog faucet aerators if not cleaned regularly. Commercial products can be purchased to reduce the effects of hardness in your dishwasher or remove scale and calcium deposits from fixtures. Another option for dealing with hard water may be installation of a water softener in your home.

SOFTENERS AND IN-HOME TREATMENT

Personal preferences for water hardness vary greatly. If lowering hardness is desired, it can be managed by installing a residential water softening system. There are various types of residential softening systems including whole house, and under sink varieties. Softening of water used for outdoor irrigation is not efficient or recommended. Different types of softening systems include salt-based ion exchange systems or reverse osmosis (RO) systems. Due to the sodium or potassium addition that occurs when using a salt-based system, individuals on a sodium-restricted diet may want to seek the advice of their physician prior to using this type of system.

The water sent to your home or business meets all EPA water quality requirements. If you choose to install a softening system or other point of use treatment in your home please follow the recommendations below.

- Make sure you do your research or talk to a knowledgeable and reputable dealer. Different devices include softeners, carbon adsorption systems, particulate filters, and reverse osmosis systems. These technologies are designed to

treat for different things so make sure you get the right system for the concerns you have.

- Know what you are doing or hire a qualified professional to do the work. Softener and treatment systems installed by a plumber will need to have a permit issued by the Commerce City Building department. Proper installation will ensure the system is safe and any hazards such as contamination due to drain-line backflow or cross-connections are avoided.
- Follow all manufacturer’s instructions for proper maintenance and use. Filters become depleted, cartridges need changing, and resins need regenerated. Proper maintenance will ensure your system is doing what it is intended to do.
- Make sure the unit you purchase is tested and validated against accepted standards such as those of the National Science Foundation (NSF), Water Quality Association, or Underwriters Laboratories (UL).

For more information on hardness in home water treatment systems, please see the District’s website www.sacwsd.org/hardnessupdates.

Water Quality Data Continued

LEAD IN DRINKING WATER

The District has tested water inside homes within its distribution system considered at risk for lead and copper contamination, per EPA standards. The District's water leaving the treatment plants and water in the distribution system have no detectable lead and trace levels of copper. Lead can get into water through lead - containing household or building plumbing. Softened water is more aggressive toward household plumbing.

NITRATE

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels in groundwater may rise quickly for short periods of time because of rainfall or agricultural activity.

If you are caring for an infant, you should ask advice from your healthcare provider.

CRYPTOSPORIDIUM AND GIARDIA

Cryptosporidium (Crypto) and Giardia are microscopic organisms that, when ingested, can result in

diarrhea, cramps, fever and other gastrointestinal symptoms. The

District analyzed all shallow wells that supply drinking water for microscopic particulates in 2012. The results indicate a low risk for ever seeing Crypto or Giardia in the source water. Denver Water has tested for Crypto in its source water supplies and its treated water since the 1980s and has never detected a viable indication of either in its drinking water.

If you have any questions concerning your water quality please contact our Water Quality Supervisor Charlene Seedle at 303.286.0447.



The District is committed to delivering water that meets or exceeds all state and federal drinking water standards. Providing you with safe, high quality drinking water is our priority every day.

Water Quality Data

REGULATED SUBSTANCES

Substance	Sample Year	MCLG	MCL	SACWSD - substance with One or More Detections			Common Source of Substance	
				Average	# Samples	Range		
Barium	2015	2 ppm	2 ppm	0.044	1	0.044	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	2015	4 ppm	4 ppm	1.62	1	1.62	ppm	Natural deposit erosion; water additive which promotes strong teeth; discharge from fertilizer, aluminum factories
Cadmium	2014	5 ppb	5 ppb	0.2	1	0.2	ppb	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Nitrate	2016	10 ppb	10 ppb	4.26	12	0.62-7.14	ppm	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Selenium	2015	50 ppb	50 ppb	1.5	1	1.5	ppb	Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines
1,1-Dichloroethylene	2016	7 ppb	7 ppb	J	10	BDL - J	ppb	Discharge from industrial chemical factories
1,1,1-Trichloroethane	2016	200 ppb	200 ppb	J	10	BDL - J	ppb	Discharge from metal degreasing sites and other factories
cis-1,2 Dichloroethylene	2016	70 ppb	70 ppb	J	10	BDL - J	ppb	Discharge from industrial chemical factories
Trichloroethylene	2016	0 ppb	5 ppb	J	10	BDL - J	ppb	Discharge from metal degreasing sites and other factories
Tetrachloroethylene	2016	0 ppb	5 ppb	0.3	10	BDL - 0.8	ppb	Discharge from factories and dry cleaners
Xylenes	2016	10,000 ppb	10,000 ppb	J	10	BDL - J	ppb	Discharge from petroleum and chemical factories
Beta/Photon Emitters	2007	0 pCi/L	50 pCi/L	3.6 pCi/L	1	3.3 - 3.8	pCi/L	Decay of natural and man-made deposits
Uranium	2015	0 µg/L	30 µg/L	15.28	10	2.8-21	µg/L	Erosion of natural deposits
Gross Alpha	2015	0 pCi/L	15 pCi/L	3.0	10	1-5	pCi/L	Erosion of natural deposits
Combined Radium (226 + 228)	2012	0 pCi/L	5 pCi/L	0.1 pCi/L	7	BDL - 0.2	pCi/L	Erosion of natural deposits

No Violations

REGULATED AT THE CUSTOMER'S TAP

Substance	Sample Year	ALG	AL	Number of Samples	Samples exceeding Action Level	90th % Value	Common Source of Substance
Copper	2014	1.3 ppm	1.3 ppm	30	0	0.47 ppm	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives
Lead	2014	0 ppb	15 ppb	30	0	2.3 ppb	Corrosion of household plumbing systems; Erosion of natural deposits

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). 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 method, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://epa.gov.safewater/lead>.

REGULATED IN THE DISTRIBUTION SYSTEM

Substance	Sample Year	MCLG	MCL Locational RAA	Number of Locational RAA	Highest Locational RAA	Range of Samples	Number of Samples	Samples Average	Common Source of Substance	
Total Trihalomethanes*	2016	No Violations	n/a	80 ppb	8	61.07 ppb	4.69 - 84.38 ppb	32	40.07 ppb	By-product of drinking water chlorination
Haloacetic Acids	2016		n/a	60 ppb	8	32.41 ppb	BDL - 43.72 ppb	32	23.27 ppb	By-product of drinking water disinfection
Free-Chlorine	2016		4 ppm	12	0.78 ppb	0.15 - 1.85 ppm	720	0.75 ppm	Water additive used to control microbes	

*Total Trihalomethanes are by-products of the disinfection process that are potential cancer risks at levels at or above the regulated levels over an extended period of time. The District samples its distribution system each quarter. Some people who drink water containing Trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

UNREGULATED SUBSTANCES

Substance	Sample Year	MCLG	MCL Locational RAA	SACWSD - substance with One or More Detections			Common Source of Substance	
				Average	# Samples	Range		
1,1 Dichloroethane	2016	No Violations	No MCL	J	10	BDL - J	ppb	Discharge from metal degreasing sites and other factories
1, 4- Dioxane	2016			1.25	59	0.16 - 2.47	ppb	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Nickel	2014			100 ppb	8	4.50 - 8.50	ppb	Leaching from contact with pipes and fittings. Dissolution from ore-bearing rock formations.
Sodium	2015				1	81.4	ppm	Natural geology
Sulfate	2015			250 ppm	1	83.1	ppm	Natural geology

The Colorado Department of Health & Environment (CDPHE) has issued our system monitoring waivers for the following compounds: Cyanide, Asbestos, Glyphosate and Unregulated Inorganic Substances.

1,4-Dioxane was detected in the District's groundwater sources during District sampling in 2012. 1,4-Dioxane is a man-made substance used as an industrial solvent. It is still used today as a solvent in paints and varnishes and can be found in some cosmetics, deodorants, toothpastes and soaps. Upon detection of the substance in some of the District's source water wells, the District notified customers, as well as the Colorado Department of Public Health and the Environment (CDPHE) and EPA. SACWSD has been working with these agencies since 2013 in determining the source of the substance and what action might be necessary regarding the District's drinking water.

The EPA has established safe levels for over one hundred substances that may be in public drinking water sources. There is no federal or State of Colorado drinking water standard for 1,4-dioxane. The EPA has set a health advisory level of 35 parts per billion for 1,4-dioxane. (A health advisory is a guideline that represents an estimated acceptable level for a substance in drinking water based on health effects information.) The average 1,4-dioxane concentration in the districts drinking water (1.3 parts per billion average for 2016) is much lower than the EPA health advisory level.

The Unregulated Contaminant Monitoring Regulation (UCMR4) began in 2016. This EPA regulation requires all public water systems serving more than 10,000 people to conduct assessment monitoring for 32 contaminants (3 lists, spread over 3 years).

This regulation is part of the EPA's response to the Safe Drinking Water Act, which requires the EPA to identify up to 30 contaminants every five years that are not currently regulated. The results from UCMR4 will help EPA decide whether the contaminants should have a health-based standard set under the Safe Drinking Water Act. Data from the UCMR4 sampling and analyzes will be included in the annual CCR when available.



For additional information about 1,4-Dioxane from the CDC ATSDR website:	https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=199
EPA Safe Drinking Water Hotline:	1.800.426.4791 or http://water.epa.gov/drink/contaminants
CDPHE information online:	http://www.coepht.dphe.state.co.us/#

DEFINITIONS

This report contains water industry terms and abbreviations that may be unfamiliar. The following definitions will provide a general understanding of the water industry and this water quality report.

AL - Action Level *The concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow.*

ALG - Action Level Goal *The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.*

BDL - Below Detectable Limit *The compound was below detectable limits.*

Gross Alpha *(including RA, excluding RN & U) - The gross alpha particle activity compliance value includes radium-226, but excludes radon 222 and uranium.*

J value *- Compound is present, however, the result falls between the MDL and MRL.*

MCL - Maximum Contaminant Level *The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.*

MCLG - Maximum Contaminant Level Goal *The "goal" is 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.*

MDL - Method Detection Limit *The minimum detection level capable with the laboratory method.*

MPA - Microscopic Particulate Analysis *An analysis of surface water organisms and indicators in water. This analysis can be used to determine the existence of surface water influence on a ground water well.*

MRDL - Maximum Residual Disinfectant Level *The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.*

MRDLG - Maximum Residual Disinfectant level GOAL *The "goal" is the level of 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.*

MRL - Minimum Reporting Level *The minimum quantified value that can be reported by a laboratory. The MRL must be no lower than the lowest calibration standard.*

ppm - parts per million or mg/L *milligrams per liter - Corresponds to one minute in 2 years or a single penny in \$10,000.*

ppb - parts per billion or µg/L *micrograms per liter - Corresponds to one minute in 2000 years or a single penny in \$10,000,000.*

pCi/L - picocuries per Liter *A measure of radioactivity in water.*

RAA - Running Annual Average *An average of monitoring results for the previous 12 calendar months.*

Waiver *- State permission not to test for a contaminant.*