

Water Quality Report

East Cherry Creek Valley Water & Sanitation District

6201 S. Gun Club Road • Aurora, CO 80016

Drinking Water Quality Report/
Consumer Confidence Report (CCR)
PWSID #103035, Calendar Year 2018

Esta es información importante. Si no pueden leer esta información en inglés, le sugerimos que alguien se la traduzca.



January 1 - December 31, 2018



At East Cherry Creek Valley Water and Sanitation District (ECCV), our mission is sustaining our community, by providing safe, reliable water. The quality of the water in your home is of the utmost importance to us.



This report is intended to give you valuable information about your water. It will help you to understand where the water you use comes from, and how water contributes to your family's health. ECCV wants its customers to be informed about the services we provide, and the quality of the water we deliver to you every day. If you have any questions about this report or concerns about water quality, please contact **Serenity Valdez, Water Quality Analyst at 303-693-3800 ext 191** or visit our website: www.eccv.org.

Where Does My Water Come From?

In 2018, ECCV received its water supply from three distinct sources:

- 1) *Groundwater from deep aquifers in the Denver Basin (non-renewable water).*
- 2) *Groundwater from the Beebe Draw aquifer (renewable water).*
- 3) *Surface water from Denver Water and Aurora Water (renewable water).*

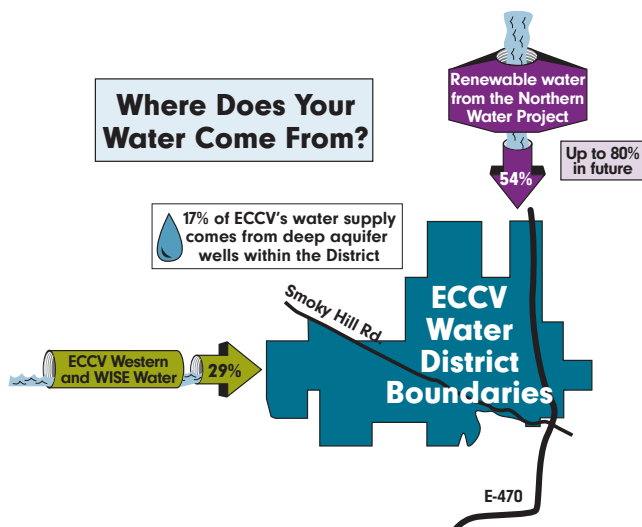
Deep Aquifers: ECCV uses approximately 86 wells within the District and in its Western Well Field. In-district wells produce roughly 17 percent of the District's overall water supply. The Western Well Field produces 19 percent of the District's water supply delivered through the WISE Authority. Deep aquifers are the source of approximately 36 percent of ECCV's water. Aquifers are open spaces, typically filled with gravel and sand, in underground bedrock layers that contain water. Groundwater from aquifers typically needs little treatment to meet drinking water standards because it is not exposed to environmental

pollutants. Deep aquifers are considered a "non-renewable" source because they cannot be replenished with rainfall or snow melt as quickly as the water is withdrawn

ECCV Northern Project: This project delivers renewable water near the South Platte River and comprises 54 percent of ECCV's annual water supply. ECCV stores this water in the Beebe Draw aquifer near Brighton. When needed, ECCV's Northern Water Treatment Plant uses twelve wells to extract the water. ECCV then treats the water with reverse osmosis and disinfection. Once treated, the water is transported through a 31-mile pipeline to our distribution system.

Sustainability Partners: In order to improve sustainability and redundancy, ECCV receives 10 percent of its water from Denver Water and 19 percent from the South Metro WISE Authority pipeline. Denver Water treats surface water from five reservoirs that receive water from the South Platte River and the sources that feed Dillon Reservoir and the Fraser River. The WISE Authority is a water wholesaler that does not have any of its own sources. The WISE Authority delivers water from ECCV's western well field and Aurora Water. Aurora Water treats surface water from 12 reservoirs and lakes that receive water from the Colorado, Arkansas and South Platte River basins.

All of the water sources are tested regularly and meet all State and Federal drinking water regulations.



Unique Characteristics Of ECCV's Water

The mineral content of ECCV's water varies from the three sources—enough to cause taste and odor differences in the water as wells are rotated and supplies blended. ECCV's treatment plant provides more consistency to the water supply and less variation in the taste and odor of the water.



More Information About Your 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**, such as viruses and bacteria: These may come from wastewater treatment facilities, septic systems, agricultural and/or livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals: These 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**, which may originate from a variety of sources, such as: agriculture, urban storm-water runoff and residential uses.
- **Organic chemical contaminants** (including synthetic and volatile organic chemicals): These are byproducts of industrial processes and petroleum production. They may also come from gas stations, urban storm-water runoff, and septic systems.
- **Radioactive contaminants**: These can be naturally occurring or the result of oil and gas production and mining activities.

ECCV ensures that your tap water is safe to drink by adhering to EPA regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulates limits for contaminants in bottled water that must provide the same protection for public health.

Does ECCV Have Hard Water?

ECCV's annual average of water hardness is approximately 100 parts per million (ppm). "Hardness" in drinking water is caused by two minerals: calcium and magnesium, both of which dissolve naturally. Hard water is safe to drink, but it can have undesired effects on cleaning and bathing. Soaps and detergents lather less in hard water. In addition, hard water can form a residue when combined with detergents, which can stay behind on dishes and laundry. Hard water can also form "scale" on fixtures and appliances, resulting in energy inefficiencies. In the United States, water hardness may range from 0 to 500 parts per million (ppm), depending on the source of the water and level of treatment. A level of 500 ppm is considered extremely hard water.

Guarding Against Lead in Your Home's Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. ECCV is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

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. If you are concerned about lead in your water, you may wish to have your water tested. 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://water.epa.gov/drink/info/lead>.



Drinking Water and Your Health

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

The presence of these contaminants does not necessarily mean 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, persons with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice concerning 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.

Source Water Protection

The Colorado Department of Public Health & Environment (CDPHE) has provided ECCV with a Source Water Assessment Report for the District's water supply. To obtain a copy of the report or for information about Denver or Aurora Water's potential sources of contamination, visit the CDPHE website: <https://www.colorado.gov/pacific/cdphe/swap-assessment-phase> or contact ECCV at 303-693-3900 ext 191.

Potential sources of contamination in our source water area come from commercial and industrial activities such as leaking

underground storage tanks. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that could occur. It does not mean that the contamination has occurred or will occur. ECCV can use this information to evaluate our current water treatment capabilities and prepare for future contamination threats. This can help ECCV ensure quality water is delivered to your home. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

Testing for Your Safety

ECCV routinely monitors for contaminants in its drinking water supply, according to Federal and State laws. The table below shows all of the applicable drinking water contaminants detected from January 1 to December 31, 2018, unless otherwise noted. Constituents not detected are not listed. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.



ECCV – Water Quality Table

La información que sigue es importante acerca de la calidad de su agua. Si no la pueda leer, le sugerimos que alguien se la traduzca.

Microbiological	Violation	Highest % of Positive Samples		MCL			MCLG	Typical Source
Coliform, Total	No	0% January 2018		Less than 5% positive each month			0	Human and animal fecal waste
Organics and Inorganics	Violation	Collection Year	Average	Range	MCL	MCLG	CCR Unit	Typical Source
Arsenic	No	2018	1	br-1	10	0	ppb	Erosion of natural deposits; Runoff from orchards; runoff from glass and electronics production wastes
Barium	No	2018	0.080	0.02-0.156	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	No	2018	0	br - 2	100	100	ppb	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride	No	2018	1.01	0.50-1.20	4.0	4.0	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (As N)	No	2018	0.30	br - 1.80	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radionuclides	Violation	Collection Year	Average	Range	MCL	MCLG	CCR Unit	Typical Source
Gross Alpha	No	2014	3.2	3.2 - 3.2	15	0	pCi/L	Erosion of natural deposits
Uranium	No	2014	2.2	2.2 - 2.2	30	0	ppb	
Disinfection By-Products	Violation	Collection Year	Highest Annual Average	Range of All Samples	MCL		CCR Unit	Typical source
Total Haloacetic Acids (HAA5)	No	2018	18.9	br - 18.9	60		ppb	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	No	2018	61	br - 61	80		ppb	
Lead and Copper	Exceedance	Collection Period	90th Percentile	Number of Sites Exceeding Action Level	Action Level		CCR Unit	Typical Source
Lead	No	Jan-Jun '18	1	0	15		ppb	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	No	Jan-Jun '18	0.07	0	1.3		ppm	
Lead	No	Jul-Sep '18	1	0	15		ppb	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	No	Jul-Sep '18	0.12	0	1.3		ppm	
Secondary Contaminants / Other Monitoring	Collection Year		Average	Range	Secondary MCL		CCR Unit	Typical Source
Nickel	2018		0	br-0.2	n/a		ppb	Erosion of natural deposits.
Sodium	2018		46.4	34.1-61.1	n/a		ppm	

See page 5 for definitions of the terms and abbreviations used in this table.

Sustainability Partners – Combined Water Quality Table

Microbiological	Violation	Highest % of Positive Samples		MCL	MCLG	Typical Source		
Organics and Inorganics	Violation	Collection Year	Average	Range	No more than 5% positive each month	Typical Source		
Coliform, Total	No		0.8% in August 2018			Naturally present in the environment.		
Antimony	No	2018	0	br-0.09	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	
Arsenic	No	2018	1.1	1.1-1.1	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics; solder	
Barium	No	2018	33.9	16-43	2	2	Erosion of natural deposits; water treatment chemicals.	
Cadmium	No	2018	0.01	br-0.01	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	
Chromium	No	2018	0.20	br-1.6	100	100	Discharge from steel and pulp mills; erosion of natural deposits	
Fluoride	No	2018	0.60	br-0.97	4.0 ¹	4.0	Erosion of natural deposits; Water additive which promotes strong teeth	
Mercury	No	2018	0.00	br-0.07	2	2.0	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	
Nitrate (As N)	No	2018	0.00	br-0.96	10	10	Erosion of natural deposits	
Selenium	No	2018	0.20	br-3.4	50	50		
Turbidity ²	No	2018	Highest turbidity level: 0.19		TT<0.3NTU			
			"% of Samples <0.3; 100%"		TT<0.30 NTU in 95% of samples/month			
Total Organic Carbon	No	2018	1.74	1.26-2.38	ratio <1		Naturally present in the environment	
Radionuclides	Violation	Collection Year	Average	Range	MCL	MCLG	CCR Unit	
Gross Alpha	No	2017	0.42	br-0.9	15	0.0	0.0	pcI/L
Radium	No	2017	2.42	1.5-4	5	0.0	0.0	pcI/L
Uranium	No	2018	0.3	br-1	30	0	0	ppb
Disinfection By-Products	Violation	Collection Year	Highest Annual Average	Range of All Samples	MCL	MCLG	CCR Unit	
Chlorite	No	2018	0.49	0.24-0.645	1	0.8	0.8	ppm
Total Haloacetic Acids (HAA5)	No	2018	14.5	5.33-22.6	60	n/a	n/a	ppb
Total Trihalomethanes (TTHM)	No	2018	23.9	10.8-31.2	80	n/a	n/a	ppb
Lead and Copper	Exceedance	Collection Period	90th Percentile	Number of Sites Exceeding Action Level	Action Level	CCR Unit		
Copper ³	No	Jan-June '18	0.27	0 of 559	1.3		ppm	
Lead	No	Jan-June '18	11	19 of 559	15		ppb	
Copper	No	July-Dec '18	0.21	0 of 602	1.3		ppm	
Lead	No	July-Dec '18	11	35 of 602	15		ppb	
Secondary Contaminants / Other Monitoring	Collection Year	Average	Range	Secondary MCL	CCR Unit	Typical Source		
Alkalinity	2018	90	46-162	n/a	ppm	Water Quality Parameter		
Aluminum	2018	30.0	11-84	50-200	ppb	Erosion of natural deposits; water treatment chemicals		
Calcium	2018	41.0	30-65	n/a	ppm	Erosion of natural deposits		
Chloride	2018	45.0	17-98	250	ppm	Erosion of natural deposits		
Conductivity	2018	478.0	288-778	n/a	mmhos/cm	Water Quality Parameter		
Copper	2018	0.4	br-2.5	1	ppm	Erosion of natural deposits		
Hardness	2018	132.0	98-204	n/a	ppm	Erosion of natural deposits		
Sodium	2018	43.0	21-83	10000	ppm	Erosion of natural deposits		
Sulfate	2018	71.0	43-94	250	ppm	Erosion of natural deposits		

See page 5 for definitions of the terms and abbreviations used in this table.

Violations, Significant Deficiencies, and Formal Enforcement Actions

ECCV is required to report any violations, significant deficiencies, and formal enforcement actions involving its water system. The District did not receive any deficiencies or formal enforcement actions in 2018, however, a monitoring violation was noted. Information regarding the violation is described in the table below.

Violations					
Name	Category	Time Period	Health Effects	Compliance Value	TT Level or MCL
TOTAL COLIFORM	FAILURE TO MONITOR AND/OR REPORT - NON-HEALTH-BASED	01/01/2019-01/31/2019	N/A	N/A	N/A
<p>Additional Violation Information:</p> <p>*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.*</p> <p><i>Explanation of the violation(s), the steps taken to resolve them, and the anticipated resolved date:</i></p> <p>During January of 2019, ECCV was required to collect 60 total coliform samples. There were 59 samples collected during January. Although one sample was missed, the water quality met all drinking water standards.</p>					

Terms and Definitions:

br means below the reportable level for an analysis; the reportable level is the lowest reliable level that can be measured.

Trigger levels are limits that when reached warrant further investigation and/or action as per a specific regulation.

MRDLG is the Maximum Residual Disinfectant Level Goal

Contaminant: A potentially harmful physical, biological, chemical substance

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to MCLG's as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): the level of a contaminant in drinking waer below which there is

no known or expected risk to health. MCLG's allow for a margin of safety.

Secondary Maximum Contaminant Levels (SMCL) are non-enforceable recommended limits for substances that affect taste, odor, color or other aesthetic qualities of drinking water, rather than posing a health risk.

Parts per billion (ppb): Equivalent to micrograms per liter. One ppb is comparable to one drop of water in 55,000 gallons.

Parts per million (ppm): Equivalent to milligrams per liter. One ppm is comparable to one drop of water in 55 gallons.

pCi/L is picoCuries per Liter is a radiological unit measuring radioactivity per unit volume

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 or other requirements which a water system must follow

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 Residual Disinfectant Level Goal (MRDLG): the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

¹The Floride SMCL of 2 mg/L triggers notifying the Public of the exceedance. Other SMCL's are non-enforceable.

²Turbidity has no known health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth.

³The last compliance sampling for lead and copper was in the Fall of 2016, the next one will be in the Spring of 2018. The results in the table are from the Spring and Fall of 2016.