

2017 Water Quality Report

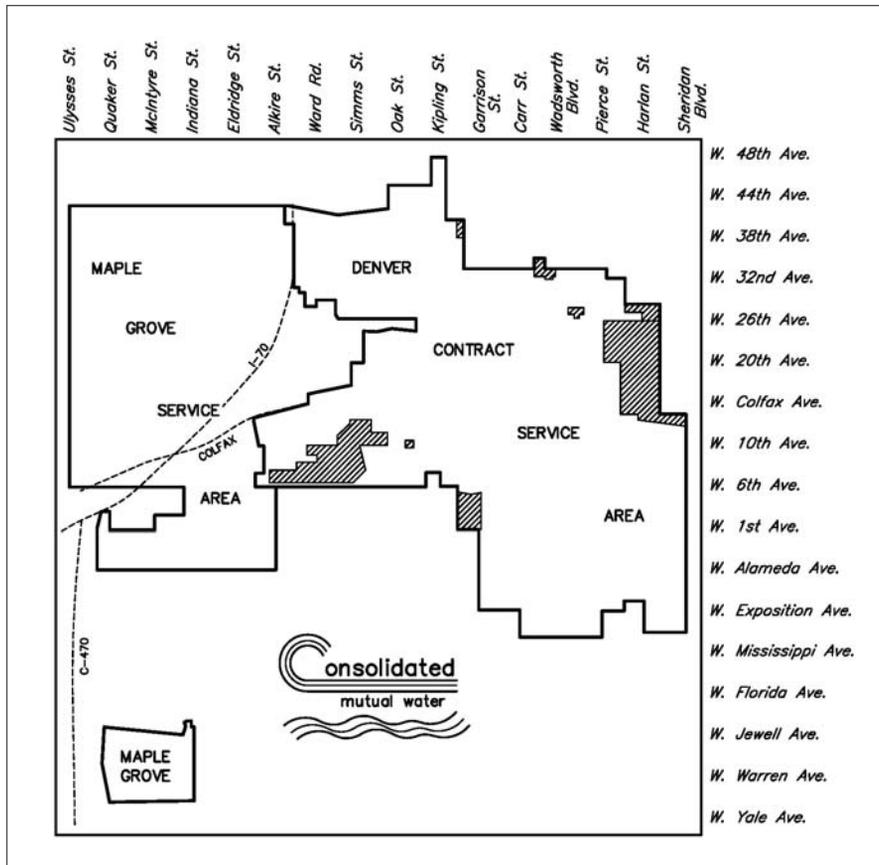
The Consolidated Mutual Water Company (Company) is pleased to present its 2017 Annual Water Quality Report in accordance with the United States Environmental Protection Agency (USEPA) National Primary Drinking Water Regulations, which requires all drinking water suppliers to provide their customers with an annual statement describing the water supply and the quality of its water. The Company's service area is provided water from two independent and separate water treatment systems. The largest section is the Denver Contract area, which is supplied from the Denver Water treatment facilities. The second area is supplied from the Company owned and operated Maple Grove Water Treatment Plant. Both systems provide high quality drinking water in accordance with **The Safe Drinking Water Act**. All treatment plants are operated with certified Class "A" operators as required by EPA regulations.

A summary of water quality for each system is provided along with details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. Certified laboratories in accordance with current regulations completed all reportable water analysis.

Protection of the Water Supply

The Company is aware of potential security risks at U.S. water utilities and the possibility of future threats. The Company has completed and submitted a Federal vulnerability assessment, increased security at all Company facilities and enhanced its sampling schedules. The Company's highest priority is to maintain the quality of water supply for our customers. 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 130020, CONSOLIDATED MUTUAL MAPLE GROVE, or by contacting JIM BOHKS at 303-274-7435. 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 page 15 of this report.



Maple Grove Service Area

Source water: Maple Grove Water Treatment Plant receives water from two surface water sources. About 90% of the water is diverted from Clear Creek and the remainder comes from Lena Gulch. Both collection systems are generally very healthy due to the absence of industrial activity in the watershed area. Some naturally-occurring metals and radioactive materials are dissolved in the water; however, as of this date, we have experienced no violations of regulations from any of these contaminants.

Treatment technology: Maple Grove Water Treatment Plant is a full treatment facility with coagulation, flocculation, membrane filtration and disinfection. In addition, iron, manganese and organic material are reduced. Lower iron and manganese levels reduce staining of fixtures and lower organic material levels reduce the formation of Total Trihalomethanes (TTHMs) during disinfection. The Treatment Plant features current state-of-the-art monitoring and operating equipment and all operators are certified by the State of Colorado.

REGULATED IN THE TREATMENT PLANT EFFLUENT								
CONTAMINANTS	MCL (1)	MCLG (2)	UNIT (3)	RANGE OF DETECTION (4)	MAPLE GROVE AVERAGE	VIOLATION	SAMPLING DATE	SOURCES OF CONTAMINATION
Barium	2	2	ppm	0.03 to 0.03	0.033	No	Dec. 2017	Erosion of natural deposits, drilling wastes and metal refineries
Fluoride	4	4	ppm	0.41 to 0.41	0.41	No	Dec. 2017	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	10	10	ppm	0.09 to 0.09	0.09	No	Dec. 2017	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	N/A	N/A	ppm	31 to 31	31.0	No	Dec. 2017	Naturally present in the environment
Chlorine Dioxide	800	800	ppb	0 to 190	19.5	No	Daily	Water additive used to control microbes
Chloramine as Total Chlorine	4 (5)	N/A	ppm	1.76 to 2.87	2.3	No	6 Daily	Water additive used to control microbes
Turbidity	TT (6)	N/A	NTU	0.08 (7)	100% (8)	No	6 Daily	Soil runoff
REGULATED IN THE DISTRIBUTION SYSTEM								
Total Trihalomethanes (TTHM)	80	N/A	ppb	11.4 to 27.2	18.91	No	2017	Byproduct of drinking water disinfection
Halo Acetic Acids (HAA5)	60	N/A	ppb	0 to 8.32	5.37	No	Quarterly	Byproduct of drinking water disinfection
Chlorite	1	0.8	ppm	0.3 to 0.57	0.49	No	Daily	Byproduct of drinking water disinfection
Chloramine	4 (5)	N/A	ppm	(9)	100%	No	Dec. 2017	Water additive used to control microbes
REGULATED AT CUSTOMERS TAP								
Copper	1.3 (10)	1.3	ppm	0.32 (11)	0 out of 30 (12)	No	Aug. 2017	Corrosion of household plumbing systems; erosion of natural deposits
Lead	15 (10)	0	ppb	4.50 (11)	2 out of 30 (12)	No	Aug. 2017	
RAW SOURCE WATER	POSITIVES		SAMPLE SIZE					
E. Coli	8		15		During 2017 the Company sampled its raw source waters 15 times as part of the LT2 Surface Water Treatment Rule			

Notes:

- (1) Maximum Contaminant Level (MCL) - 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.
- (2) 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.
- (3) Units of Measurement = pCi/L - Picocuries per liter is a measure of radioactivity in water. ppm = one part per million. ppb = one part per billion.
- (4) Range of Detection = br - below reporting level and nd - no detection.
- (5) Maximum Residual Disinfectant Level (MRDL).
- (6) Treatment Technique (TT) is a required process intended to reduce the level of a contaminant in drinking water.
- (7) Highest turbidity level was August 2017.
- (8) Monthly % of samples less than 0.1 Nephelometric Turbidity Unit (NTU).
- (9) Lowest period percentage of samples meeting TT Requirement: 100%.
- (10) MCL / Action level (AL) at 90th percentile.
- (11) 90th percentile.
- (12) Number of samples exceeding AL.

Denver Service Area

Source water: Denver Water treatment plants receive surface waters from a watershed that covers over 3,100 square miles on both sides of the Continental Divide. Water is transported from the Colorado, Fraser and South Platte Rivers through the Denver Water collection system. Treatment technology: Denver has three treatment plants: Foothills, Marston and Moffat. They are all full treatment plants and are maintained, evaluated and upgraded to stay abreast of advancements in technology, health science and governmental regulations. For additional information on this report contact Denver Water at (303) 628-5973.

REGULATED IN THE TREATMENT PLANT EFFLUENT

CONTAMINANTS	MCL (1)	MCLG (2)	UNIT (3)	RANGE OF DETECTION (4)	DENVER AVERAGE	VIOLATION	SAMPLING FREQUENCY	SOURCES OF CONTAMINATION
Antimony	6	6	ppb	0 to .28	0	No	Monthly	Discharge of petroleum refineries, fire retardants, ceramics, and electronics solder
Arsenic	10	0	ppb	0 to 1.2	0	No	Monthly	Erosion of natural deposits, runoff from orchards, glass and electronics production wastes
Barium	2	2	ppm	.02 to .04	0.03	No	Monthly	Discharge from drilling wastes and metal refineries; erosion of natural deposits
Beryllium	4	4	ppb	0 to 0.06	0	No	Monthly	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	5	5	ppb	0 to 0.06	0	No	Monthly	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	100	100	ppb	0 to 1.4	1	No	Monthly	Discharge from steel and pulp mills, erosion of natural deposits
Copper	1.0 (6)	1.3	ppm	0 to .02	0.001	No	Monthly	Erosion of natural deposits
Fluoride	4	4	ppm	0.13 to 0.99	0.7	No	Monthly	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury	2	2	ppb	0	0	No	Monthly	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate as N	10	10	ppm	0.02 to 0.18	0.08	No	Monthly	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50	50	ppb	0 to 7	0	No	Monthly	Discharge of petroleum and metal refineries, erosion of natural deposits, and discharge from mines.
Thallium	2	2	ppb	0 to 0.06	0	No	Monthly	Leaching from ore-processing sites; discharge from electronic, glass, and drug factories
Combined Radium	5	0	pCi/L	0	0	No	Annually	Erosion of natural deposits
Combined Uranium	30	0	ppb	0 to 1.2	0.4	No	Monthly	Erosion of natural deposits; mine drainage
Gross Beta Particle Activity	50	0	pCi/L(5)	0 to 3	1.5	No	Annually	Decay of natural and man-made deposits
2,4-D	70	70	ppb	0 to 0.1	0	No	Annually	Runoff from herbicide used on row crops
Sodium (6)	N/A	N/A	ppm	7 to 24	17	N/A	Monthly	Naturally present in the environment
Turbidity	TT (7)	N/A	NTU	0.153 (8)	100% (9)	No	Daily	Soil runoff
Total Organic Carbon	1 (10)	N/A	Ratio	(10)	1.06 (11)	No	Weekly	Naturally present in the environment
Chlorine/Chloramine	4(12)	N/A	ppm	(13)	(13)	No	Daily	Water additive used to control microbes

REGULATED IN THE DISTRIBUTION SYSTEM

Total Trihalomethanes TTHM	80	N/A	ppb	14 to 33.1	27	No	Monthly	By-product of drinking water disinfection
Halo Acetic Acids (HAA5)	60	N/A	ppb	5.9 to 21	17	No	Monthly	By-product of drinking water disinfection
Chloramine	4 (12)	N/A	ppm	1 (14)	99.75% (15)	No	Daily	Water additive used to control microbes
Total Coliform	(16)	0	(16)	(17)	(17)	No	Daily	Naturally present in the environment

REGULATED AT THE CUSTOMER'S TAP

LEAD AND COPPER SAMPLED AT THE CUSTOMER'S TAP	90TH PERCENTILE	90TH PERCENTILE AL	UNIT	TIME PERIOD	SAMPLE SITES ABOVE AL	90TH PERCENTILE AL EXCEEDANCE	SAMPLE SIZE	SOURCES OF CONTAMINATION
Copper	0.26	1.3	ppm	1/11 to 6/30	0	No	317	Corrosion of household plumbing; erosion of natural deposits
Copper	0.26	1.3	ppm	7/1 to 12/29	0	No	476	
Lead	10.3	15	ppb	1/11 to 6/30	15	No	317	
Lead	10	15	ppb	7/1 to 12/29	21	No	476	
RAW SOURCE WATER	POSITIVES	SAMPLE SIZE						
E. Coli	3	11	During 2017 Denver Water sampled their raw source waters 11 times as part of the LT2 Surface Water Treatment Rule					

Notes:

- Maximum Contaminant Level (MCL) - 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.
- 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.
- Units of Measurement = pCi/L - Picouries per liter is a measure of radioactivity in water. ppm = one part per million. ppb = one part per billion.
- Range of Detection = br - below reporting level and nd - no detection.
- The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L EPA considers 50 pCi/L to be the level of concern for Gross Beta Particle Activity.
- Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.
- Treatment Technique (TT) is a required process intended to reduce the level of a contaminant in drinking water.
- Highest turbidity level was August 2017.
- Lowest monthly percentage of samples meeting TT requirement for their technology.
- Denver Water uses enhanced treatment to remove the required amount of natural organic mater and/or demonstrates compliance with alternative criteria.
- TT Minimum Ratio.
- If minimum ratio not met and no violation identified then the system achieved compliance using alternative criteria.
- Maximum Residual Disinfectant Level (MRDL).
- No more than 4 hours with a sample below 0.2 ppm.
- Lowest monthly percentage of samples meeting TT requirements was 99.5% in July 2017. Six out of 4,931 samples had non-detectable residuals in 2017.
- Present or absent. No more than 5% positive per month.
- Highest monthly percentage was .24% in July 2017. Number of positive samples was one out of 4,836 samples (.02%).

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. 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 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.

Lead in Drinking 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. The Company 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 it tested. 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>.

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 attend the Annual Stockholder Meeting on May 10, 2018, 6:30 p.m. at 12700 W. 27th Ave. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Español

El presente informe contiene información muy importante relacionada con el agua potable. Si quiere esta información en español, llame al 303-628-5986.