2018 Annual Drinking Water Quality Report

(for calendar year 2017)

5150 Snead Dr., Fort Collins, CO 80525 - www.FCLWD.com - Phone: (970) 226-3104

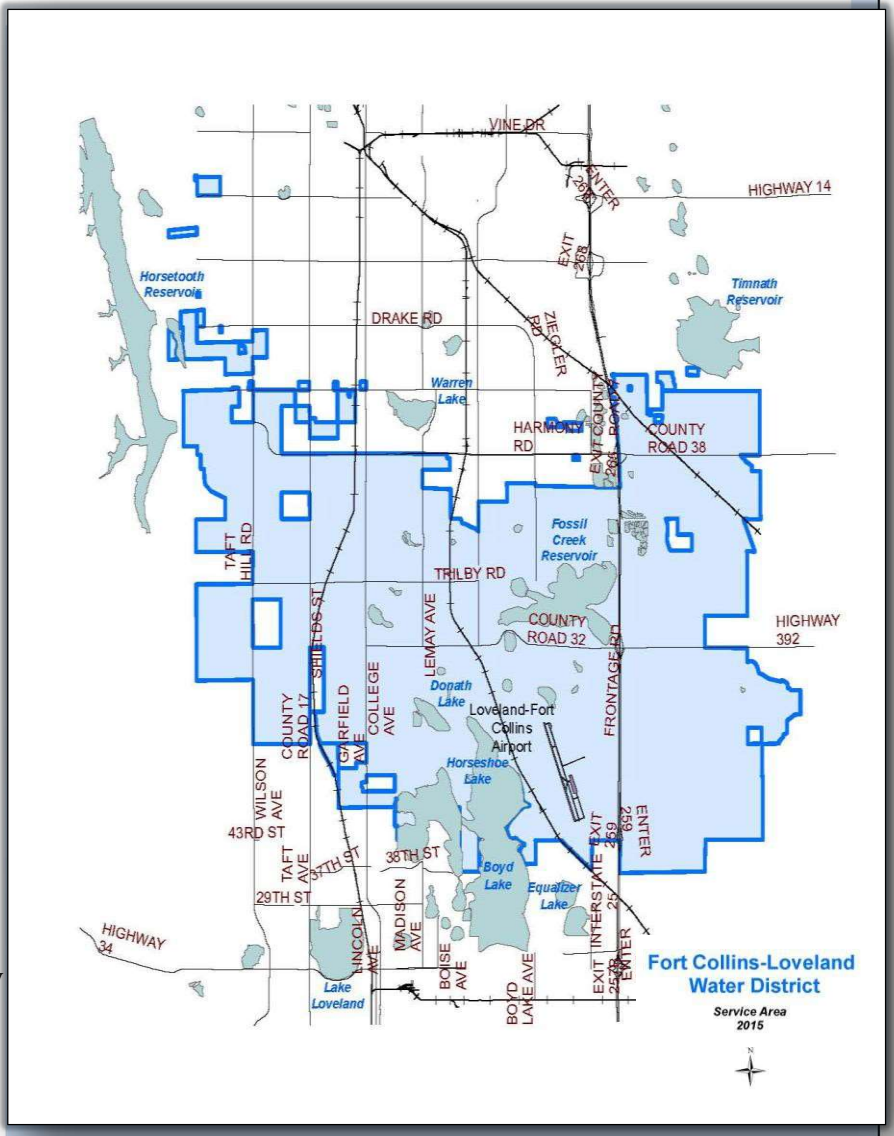
Dear Customers of the Fort Collins– Loveland Water District,

We're pleased to send you the District's water quality report for 2017. In this report, we share with you information about your drinking water quality and interesting facts about the District. Our constant goal is to provide you with a safe and dependable supply of drinking water.

The District continues to grow at a moderate rate and sales of new taps reached 432 in 2017. We do not anticipate any water restrictions in the coming year.

We continue to look forward to serving you and invite you to attend the monthly meetings of your Board of Directors. The meetings are held at the District office at 5150 Snead Drive on the third Tuesday of every month starting at 7:00PM.

As a reminder, our office hours are Monday-Friday, 8:00 to 4:30 with after hours on call. You can also contact us at 970-226-3104. If you have any questions regarding this report, please call the District Manager at 970-226- 3104 extension 101.



YOUR DRINKING WATER MEETS ALL STATE AND FEDERAL STANDARDS

The Fort Collins–Loveland Water District (FCLWD) is committed to providing our customers with a safe and dependable supply of drinking water. Throughout 2017, we met all state and federal health standards.

WHERE DOES YOUR WATER COME FROM?

The water delivered to you by the FCLWD comes from the Tri-District treatment plant and the City of Fort Collins, which pull from the Poudre River and Horsetooth Reservoir. The Tri-Districts plant was part of an integrated water system consisting of the Fort Collins-Loveland Water District, the East Larimer County Water District and the North Weld County Water District. In 2017 the integrated agreement was dissolved and the Tri-Districts. became known as The Soldier Canyon Water Treatment Authority, but it is still owned and operated by the three water districts mentioned above. The FCLWD also purchases water from The City of Loveland during summer demand and sells water to the Town of Windsor, The City of Loveland and the Little Thompson Water District.

TREATMENT PROCESS

The water treatment process at Soldier Canyon Filter Plant is defined as "conventional" treatment. This means throughout the treatment process, certified operators and laboratory staff conduct numerous tests on your drinking water to ensure that it consistently meets or surpasses all state and federal water quality standards.

Treatment employs the following processes:

Coagulation: The addition of chemicals such as aluminum sulfate and polymers to cause tiny particles in the water to agglomerate or clump together.

Flocculation: The slow mixing of the coagulated water with large rotating paddles to create a large heavy particle called floc.

Sedimentation: A solid-liquid separation process that promotes the gravity settling of solid particles to the bottom of the basin where the solids are removed hydraulically. The settling is aided by plate settlers or tube settlers, which improve the efficiency of the solid-liquid separation process.

Filtration: The passage of water through a porous medium for the removal of suspended solids.

Disinfection: Chlorine is added to finished water. One of multiple barriers to assure the production of microbiologically-safe drinking water

SOURCE WATER ASSESSMENT REPORT

The Colorado Department of Public Health and Environment (CDPHE) has provided us with a Source Water Assessment Report for our water supply. You may obtain a copy of the report by visiting www.colorao.gov/cdphe/ccr. The Report is located under Guidance "Source Water Assessment Reports". Search the table using 135718 Soldier Canyon Filter Plant, or by contacting Chris Harris at 970-482-3143. 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 insure 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 are listed below. Potential sources of contamination in our source water area may come from: Hazardous waste generators, chemical inventory/storage sites, toxic release inventory sites, permitted wastewater discharge sites,above ground, underground and leaking storage tank sites, solid waste sites, existing/abandoned mine sites, other facilities, commercial/industrial and transportation, low intensity residentialurban recreational grasses,row crops, fallow, pasture/hay, deciduous forest, evergreen forest, mixed forest, septic system oil/gas wells, road miles.

Detected Contaminants

The Fort Collins-Loveland Water District and the Soldier Canyon Filter Plant 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, 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 last 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.

Definitions of Terms Used In Report

Fort Collins - Loveland Water District - FCLWD ID#CO0135292
City of Fort Collins - FC ID# CO0135291 **Tri Districts/Soldier Canyon Filter Plant/TD, SCFP** - ID#CO0135718

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

Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water. MCL's 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.

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 unexpected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control micro-bialcontaminants.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Parts per billion (ppb) or Micrograms per liter (µg/l): One part per billion corresponds to one minute in 2,000 years or one penny in $10,000,000.

Parts per million (ppm) or Milligrams per liter (mg/l): One part per million corresponds to one minute in two years or one penny in $10,000.

PicoCuries per Liter (pCi/l): A measure of radioactivity in water.

Treatment Technique (TT): A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Average of Individual Samples: The typical value.

Range: The lowest value to the highest value.

Gross Alpha, Including RA, Excluding RN & U: This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.

Violation: A failure to meet a Colorado Primary Drinking Water Regulation.

Formal Enforcement Action: An escalated action taken by the State (due to the number and/or severity of violations) to bring a non-compliant water system back into compliance by a certain time, with an enforceable consequence if the schedule is not met.

Health-Based: A violation of either a MCL or TT.

Non-Health-Based: A violation that is not a MCL or TT.

Variance and Exemptions (V/E): Department permission not to meet a MCL or treatment technique under certain conditions.

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).

Sample Size (n): Number or count of values (i.e. number of water samples collected).

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 occasio

General Information

"Esta informacion es importane, si no la pueden leer, necesitan que alguien se la pueda traducir"

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 that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wild life.
- 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 of farming
- Pesticides and herbicides that 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 by products of industrial processes and petroleum production, and also may come from gas stations, urban stormwater 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 that limit 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."

"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. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, per sons who have undergone organ transplants, people with HIVAIDS or other immune system disorders, some elderly, and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. 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 or by visiting http://water.epa.gov/drink/contaminants.

Lead and Copper Sampled in the Distribution System									
Contaminant Name		*Monitoring Period*	*90th Percentile*	*Number of Samples*	*Unit of Measure*	*Action Level*	*Sample Sites Above Action Level*	*90th Percentile Action Level Exceedance*	*Typical Sources*
COPPER	FCLWD	6/4/2017-6/20/2017	0.24	30	ppm	1.3	0	No	Corrosion of household plumbing systems Erosion of natural deposits
LEAD	FCLWD	6/4/2017-6/20/2017	3	30	ppb	15	0	No	

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/MRDL Violation*	*MRDL*
Chlorine	FCLWD	December, 2017	Lowest Period Percentage samples meeting TT Requirement: 100%	0	40	No	4.0 ppm

Disinfection Byproducts (TTHMs, HAA5, and Chlorite) Sampled in the Distribution System										
Contaminant Name		*Year*	*Average of Individual Samples*	*Range of Individual Samples (Lowest - Highest)*	*Number of Samples*	*Unit of Measure*	*MCL*	*MCLG*	*MCL Violation*	*Typical Sources*
CHLORITE	FCLWD	2017	0.41	0.13-0.52	12	ppb	1	0.8	No	By-Product of drinking water disinfection
Total, HALOACETIC ACIDS (HAA5)	FCLWD	2017	27.49	19.9-34.1	16	ppb	60	N/A	No	
TTHM	FCLWD	2017	30.42	16-0.52	16	ppb	80	N/A	No	

LEAD AND 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 at 1-800-426-4791 or visit http://www.epa.gov/safewater/lead

Radionuclides Sampled at the Entry Point to the Distribution System										
Contaminant Name		***Year***	***Average of Individual Samples***	***Range of Individual Samples*** *(Lowest - Highest)*	***Number of Samples***	***Unit of Measure***	***MCL***	***MCLG***	***MCL Violation***	***Typical Sources***
COMBINED RADIUM	*TD*	2011	0.76	0.76 - 0.76	1	pCi/L	5	0	No	Erosion of natural deposits.
	FC	2011	0.2	0.2 - 0.2	1	pCi/L	5	0	No	
COMBINED URANIUM	*TD*	2011	0.01	0.01 - 0.01	1	ppb	30	0	No	
GROSS ALPHA	*TD*	2011	1.7	1.7 - 1.7	1	pCi/L	15	0	No	
	FC	2011	0.5	0.5 - 0.5	1	pCi/L	15	0	No	
GROSS BETA PARTICLE ACTIVITY*	*TD*	2011	2.1	2.1 - 2.1	1	pCi/L*	50	0	No	Decay of natural and man-made deposits
*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.										

Turbidity Sampled at the Entry Point to the Distribution System						
Contaminant Name		***Sample Date***	***Level Found***	***TT Requirement***	***TT Violation***	***Typical Sources***
TURBIDITY	*SCFP*	Nov 12-2017	Highest single measurement: 0.042 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff
		Month: All 2017	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.3 NTU	No	
	FC	Dec.2017	Highest single measurement: 2.5 NTU	Maximum 1 NTU for any single measurement	Yes	
		Feb.2017	Lowest monthly percentage of samples meeting TT requirement for our technology: 99%	In any month, at least 95% of samples must be less than 0.3 NTU	No	

Inorganic Contaminants Sampled at the Entry Point to the Distribution System										
Contaminant Name		***Year***	***Average***	***Range Low-High***	***Number of Samples***	***Unit of Measure***	***MCL***	***MCLG***	***MCL Violation***	***Typical Sources***
Barium	SCFP	2017	0.017	0.017 to 0.017	1	ppm	2	2	No	Discharge or drilling waste; Discharge from metal refineries; Erosion of natural deposits.
	FC	2017	0.02	0.02 to 0.02	1	ppm	2	2	No	
Fluoride	SCFP	2017	0.74	0.74 to 0.74	1	ppm	4	4	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
	FC	2017	0.65	0.65 to 0.65	1	ppm	4	4	No	
Nitrate	SCFP	2017	<0.010	<0.010	1	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewer; Erosion of natural deposits.

Disinfectants Sampled at the Entry Point to the Distribution System							
Contaminant Name		***Year***	***Number of Samples Above or Below Level***	***Sample Size***	***TT/MRDLE Requirement***	***TT/MRDL Violation***	***Typical Sources***
Chlorine	*SCFP*	2017	0	2190	TT= No more than 4 hours with a sample Below 0.2 ppm	No	Water additives to control microbes
	FC	2017	0	2190		No	
Chlorine Dioxide	*SCFP*	2017	0	365	MRDL= 800 ppb	No	Water additives to control microbes
	FC	2017	0	365	MRDL= 800 ppb	No	

Total Organic Carbon (Disinfection By-Products Precursor) Percentage Removal Ratio of Raw & Finished Water									
Contaminant Name		***Year***	***Average of Individual Ratio Samples***	***Range of Individual Ratio Samples*** *(Lowest - Highest)*	***Number of Ratio Samples***	***Unit of Measure***	***TT Minimum Ratio***	***TT Violation***	***Typical Sources***
Total ORGANIC	*SCFP*	2017	1.23	0.98 -1.43	12	Ratio	1	No	Naturally present in the environment
	FC	2017	1.31	0.82 -1.57	12	Ratio	1	No	

Under the 1996 amendments to the Federal Safe Drinking Water Act, the U.S. Environmental Protection Agency is required once every five years to issue a new list of up to 30 unregulated contaminants for which public water systems must monitor. The intent of this rule is to provide baseline occurrence data that the EPA can combine with toxicological research to make decisions about potential future drinking water regulations.

The Fort Collins Loveland Water District is required to sample at the entry point into our distribution system and at the maximum residence time in our distribution system for a total of 21 unregulated contaminants. Of the 21 unregulated contaminates sampled for, there were only four (4) that were detected. The City of Fort Collins also tested for unregulated contaminants and the six (6) detected are listed below with those of the FCLWD.

Unregulated Contaminants Sampled at the Entry Point to the Distribution System

Contaminant Name		*Year*	*Range of Results*	*Number of Samples*	*Unit of Measure*	*Violation*	*Typical Sources*
CHLORATE	*TD*	2013	AVG: 48 Range: 33 - 61	4	ppb	No	By-Product of drinking water disinfection
	FC	2013-14	< 20 - 41		ug/L	No	
STRONTIUM	*TD*	2013	AVG: 45 Range: 44 - 46	4	ppb	No	Naturally occurring element
	FC	2013-14	40 - 53		ug/L	No	
VANADIUM	*TD*	2013	AVG: 0.1 Range: 0.0 - 0.2	4	ppb	No	
	FC	2013-14	200 - 300		ng/L	No	
HEXAVALENT CHROMIUM	*TD*	2013	AVG: 0.08 Range: 0.00 - 0.14	4	ppb	No	
	FC	2013-14	170 - 350	-	ng/L	No	
CHROMIUM	*FC*	2013	200 - 300	-	ng/L	No	
CHLORODIFLUORO-METHANE	*FC*	2013-14	< 80 - 460	-	ng/L	No	Propellants and refrigerants

Secondary Contaminants**

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.

Contaminant Name		*Year*	*Average*	*Range of Results*	*Sample Size*	*Unit of Measure*	
Sodium	SCFP	2017	8.6	8.6 – 8.6	1	ppm	

Synthetic Organic Contaminants Sampled at the Entry Point									
Contaminant Name	**Year**	**Average**	**Range Low-High**	**Total Samples Tested**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Dalapon	2017	0.9	0 to 1.9	4	ppb	200	200	No	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) phthalate	2017	0.24	0 to 0.96	4	ppb	6	0	No	Discharge from rubber and chemical factories
Lindane	2017	8.5	0 to 34	4	ppt	200	200	No	Runoff/leaching from insecticide used on cattle, lumber, gardens

Cryptosporidium & Raw Source Water E. Coli				
Contaminant Name		**Year**	**Number of Positives**	**Sample Size**
E.Coli	*SCFP*	2017	9	12
	FC	2017	2	6

Disinfection Byproducts Sampled at the Entry Point									
Name	**Year**	**Average**	**Range Low-High**	**Total Samples Tested**	**Unit of Measure**	**MCL**	**MCLG**	**Highest Compliance Value**	**Typical Sources**
Chlorite	2017	0.50	0.28 to 0.79	365	ppm	1.0	0.8	N/A	Byproduct of drinking water disinfection

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

The Fort Collins Loveland Water District received a Tier 3 monitoring violation during its Sanitary Survey in April of 2017. The District had not received approval or submitted plans for the Timnath Tank construction as required by the Colorado Department of Health and Environment Regulation 11. The Fort Collins Loveland Water District responded immediately to the violation and on June 30th of 2017 received approval for the design of the Timnath Tank Facility that meets or exceeds the required State of Colorado design criteria. The violation had no effect on the quality of water delivered to our customers and no future action was needed. The Fort Collins Loveland Water District has implemented a process during engineering review that will comply with the Regulation 11 requirements in the future. We have also included procedures for storage tank rehabilitation in the operations division for future improvements to our facilities. Any questions or concerns can be addressed to Jay East, Operations Superintendent at 970-226-3104 or e-mail Jay@fclwd.com.