City of Fort Collins Utilities

2018 WATER QUALITY REPORT

CONTINUING OUR COMMITMENT

Fort Collins Utilities remains committed to delivering high-quality drinking water and meeting the challenges of source water protection, water conservation and community education.

Learn where your drinking water comes from and how it compares to federal standards.

Cache la Poudre River below Poudre Falls in early summer

Para más información de este informe de su cualidad de agua potable en español, llame Fort Collins Utiliites a 970-212-2900, V/TDD: 711 o mande preguntas en español a ***utilities@fcgov.com***.

Auxiliary aids and services are available for persons with disabilities. V/TDD 711. Esta información puede ser traducida, sin costo para usted.

05/2019 19-21144

2018 WATER QUALITY REPORT

PROTECTING AND TREATING SOURCE WATER

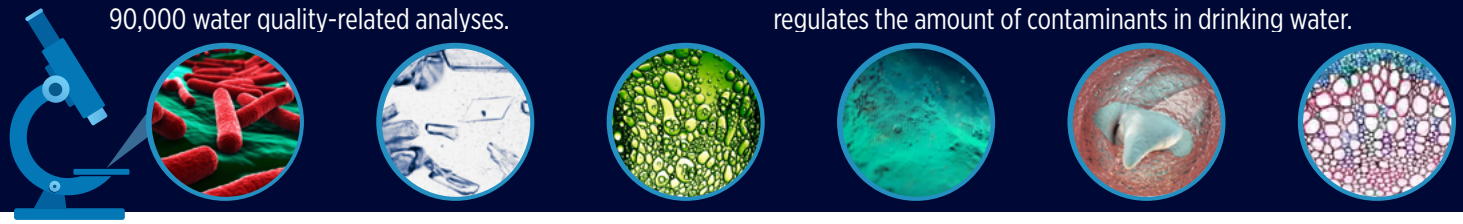
Utilities collaborates with local drinking water providers and other water stakeholders to monitor water quality trends in the Poudre River, Big Thompson River and Horsetooth Reservoir.

- Monitoring includes 25+ different chemicals, physical and microbiological contaminants at 35 locations throughout our source watersheds.

TEST RESULTS

Utilities Water Treatment Facility collected and received approximately 5,000 samples and performed more than 90,000 water quality-related analyses.

To ensure tap water is safe to drink, the Colorado Department of Public Health and Environment (CDPHE) regulates the amount of contaminants in drinking water.

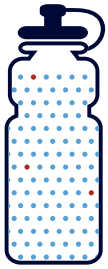


MICROBIAL CONTAMINANTS | INORGANIC CONTAMINANTS | ORGANIC CHEMICAL CONTAMINANTS | RADIOACTIVE CONTAMINANTS | CRYPTOSPORIDIUM AND GIARDIA | CHLORINE

LEAD IN DRINKING WATER

Since 1984, eight years before EPA began regulating lead in drinking water, Utilities has used best management practices to provide conditions that keep lead levels low in our finished drinking water.

Utilities also monitors lead levels in the drinking water of a representative number of homes. These tests have shown the level of lead in our drinking water to be substantially below EPA's action level.



FLUORIDATION

Utilities adds fluoride to the water, resulting in levels that range from 0.60 to 0.75 milligrams of fluoride per liter of treated water based on recommendations from CDPHE. Naturally occurring fluoride levels are 0.15 milligrams per liter.

COMMUNITY PARTICIPATION

Community members are welcome to attend Utilities' Water Board meetings, a citizen committee that advises City Council on matters of policy and budget.

City of Fort Collins Utilities

FOR MORE INFORMATION

970-212-2900
utilities@fcgov.com

04/2019 19-2061

CDPHE – Colorado Department of Public Health and Environment | EPA – Environmental Protection Agency | Auxiliary aids and services are available for persons with disabilities. V/TDD 711. Esta información puede ser traducida, sin costo para usted.

PROTECTING AND TREATING OUR SOURCE WATER

Our drinking water supply comes from two sources: the upper Cache la Poudre River (Poudre River) and Horsetooth Reservoir.

Poudre River water originates as rain and snow in the mountains on the eastern slope of the Continental Divide, northwest of Fort Collins. Horsetooth water is delivered from the Colorado River Basin on the western slope via the Colorado-Big Thompson Water Project.

Source Water Quality Monitoring

Utilities' Watershed Program collaborates with local drinking water providers and stakeholders to monitor water quality trends in the Poudre River, Big Thompson River and Horsetooth Reservoir.

Monitoring includes 25+ different chemical, physical and microbiological contaminants at 35 locations throughout our source watersheds. As in previous years, 2018 water quality data indicated that our source watersheds continue to provide high-quality water.

Source Water Protection Plan

The City of Fort Collins' *Source Water Protection Plan (SWPP)* was completed in 2016. The SWPP summarizes potential major sources of pollution to the Poudre River and Horsetooth Reservoir and identifies key protection or mitigation strategies. The highest priority threats were identified as past and future wildfires and historic mining.

Since 2013, Utilities has worked with the Coalition for the Poudre River Watershed (CPRW) and other stakeholders to improve the health and resiliency of the Poudre River.

In 2016, CPRW completed the Poudre River Watershed Resiliency Plan that is used by Utilities to prioritize wildfire restoration and mitigation projects in the watershed. Utilities continues to allocate funding for collaborative wildfire restoration and mitigation projects to protect its source watersheds.

Restoration efforts have largely focused on projects within the 2012 High Park Fire burn scar to control

Prescribed fire has been successfully used by Fort Collins Utilities and our partners to mitigate the risk of severe wildfires in our source watersheds.

post-fire soil erosion. Heavy debris flowing from an unnamed tributary into the Munroe Tunnel Inlet following the High Park Fire completely clogged the tunnel. The water supply was interrupted, and infrastructure was damaged. The area was identified as a high priority for restoration following the fire due to its instability and risk for additional erosion. In 2012, CPRW began a multi-year project with Fort Collins Utilities and other partners to stabilize the area. The project is slated for completion in spring of 2019.

Several forest thinning projects have been successfully completed outside of the burn area to reduce fuels loads and mitigate the future risk of large, high-severity wildfires that could impact our source water quality.

The 2017 Elkhorn Creek Forest Health Initiative is a great example of a collaborative project that reduced fuels in a priority area of the Poudre River. The project was completed using funding, labor and equipment from more than a dozen partners, including Fort Collins Utilities. Wildfire risk was significantly reduced with treatments that included:

- hand thinning
- piling and burning
- mechanical treatment
- prescribed fire

The successes of this project provided an implementation template that will be used at a larger scale throughout 2019.

An abandoned mine inventory and assessment (SWPP, Appendix H) was completed in September 2016 to determine whether heavy metals from these sites are a risk to our source water in the Poudre River. The study concluded that there is no known mine drainage to the Poudre River or its tributaries, which was consistent with metals data from routine Poudre River monitoring from 2008-2016. Fort Collins' water supplies are currently considered at low risk of contamination from historical mining activities.

Learn more about our Watershed Program and source water monitoring efforts, including seasonal updates, annual and five-year reports at ***fcgov.com/source-water-monitoring***.

WATER QUALITY TEST RESULTS

Our Water Treatment Facility produces nearly all the water it distributes. However, customers may occasionally receive a blend of water treated by Utilities and the Soldier Canyon Filter Plant (SCFP). Both treatment facilities use Horsetooth Reservoir and the Cache la Poudre River as sources of water. The SCFP is owned by Soldier Canyon Water Treatment Authority. To determine your water provider, view an *interactive map* of water districts in Fort Collins and surrounding areas.

The monitoring results shown here are representative of water treated by Utilities and the SCFP. All data are from monitoring completed during 2018.

Definitions

AL: Action level — concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow

CDPHE: Colorado Department of Public Health and Environment

EPA: United States Environmental Protection Agency

ISO: International Organization for Standardization

MCL: Maximum contaminant level — highest level of a contaminant allowed in drinking water; MCLs are set as close to MCLGs as feasible, using the best available treatment technology

MCLG: Maximum contaminant level goal — 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

N/A: Not applicable

NTU: Nephelometric turbidity unit — measure of particles in the water or clarity

ppb: Parts of contaminant per billion parts of water, µg/L

ppm: Parts of contaminant per million parts of water, mg/L

SCFP: Soldier Canyon Filter Plant

TOC: Total organic carbon

Watershed: Land area that collects, stores and drains water into a shared network of streams, rivers, lakes and reservoirs

Raw and Finished Water Samples

Parameter	Average	Range	Number of Samples	Unit of Measure	Minimum Ratio	Meet Standard?	Typical Sources
Total Organic Carbon Ratio, Utilities	1.35	1.19 to 1.58	12	Ratio	1.00	Yes	Naturally present in the environment
Total Organic Carbon Ratio, SCFP	1.24	0.98 to 1.43	12	Ratio	1.00	Yes	

Combined Filter Effluent Samples (from within the Treatment Plant)

Parameter	Month	Result	Standard	Meet Standard?	Typical Sources
Turbidity, Utilities	March	Highest single measurement: 0.16 NTU	Maximum is 1 NTU for any single measurement	Yes	Soil Runoff
Turbidity, SCFP	October	Highest single measurement: 0.075 NTU		Yes	
Turbidity, Utilities	All months	During all 12 months of 2018, 100% of samples were less than 0.3 NTU.	In any month, at least 95% of samples must be less than 0.3 NTU	Yes	
Turbidity, SCFP	All months	During all 12 months of 2018, 100% of samples were less than 0.3 NTU.		Yes	

Turbidity is a measure of the clarity of the water and is a good indicator of the effectiveness of the filtration system.

Sampled at the Entry Point to the Distribution System

Parameter	Number of Samples Not Meeting the Standard	Number of Samples	Standard	Meet Standard?	Typical Sources
Chlorine Residual	0	2190	No more than 4 hours with a sample below 0.2 mg/L	Yes	Water additive used to control microbes
Chlorine Dioxide, Utilities	0	365	800 ppb	Yes	
Chlorine Dioxide, SCFP	0	365		Yes	

Parameter	Result	Number of Samples	Unit of Measure	MCL	MCLG	Meet Standard?	Typical Sources
Barium, Utilities	0.01	1	ppm	2	2	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Barium, SCFP	0.018	1	ppm			Yes	
Fluoride, Utilities	0.67	1	ppm	4	4	Yes	Erosion of natural deposits; water additive which promotes strong teeth
Fluoride, SCFP	0.64	1	ppm			Yes	
Nitrate, Utilities	0.06	1	ppm	10	10	Yes	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits

Sampled in the Distribution System

Parameter	Month	Standard	Lowest monthly percentage	Number of Samples Below 0.2 ppm	Number of Samples	Meet Standard?	Typical Sources
Chlorine Residual	All months of 2018	At least 95% of samples per month must have a chlorine residual of at least 0.2 ppm	100% of all monthly samples had a chlorine residual of at least 0.2 ppm	0	Monthly sample size ranged from 103-130	Yes	Water additive used to control microbes

Parameter	Month	Standard	Meet Standard?	Typical Sources
Chlorine Residual	All months of 2018	All samples must be less than or equal to 4.0 ppm	Yes	Water additive used to control microbes

Parameter	Monitoring Period	Number of Samples	90th Percentile AL	Unit of Measure	Number of Sample Sites Above AL	90th Percentile	Meet Standard?	Typical Sources
Copper	7/17/2018 to 9/15/2018	52	1.3	ppm	0	0.12	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Lead		52	15	ppb	1	5	Yes	

Parameter	Average	Range	Number of Samples	Unit of Measure	MCL	MCLG	Highest Compliance Value	Meet Standard?	Typical Sources
Total Haloacetic Acids	21.23	11 to 43	32	ppb	60	N/A	25.10	Yes	Byproduct of drinking water disinfection
Total Trihalomethanes	24.97	12.5 to 41.7	32	ppb	80	N/A	30.50	Yes	
Chlorite	0.28	0.22 to 0.33	12	ppb	1.0	0.8	0.33	Yes	

TREATING SOURCE WATER

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 indicate that the water poses a health risk.

As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals and humans. To ensure tap water is safe to drink, the CDPHE regulates the amount of certain contaminants in water from public water systems.

Source water may contain:

MICROBIAL CONTAMINANTS

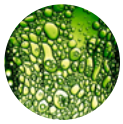
Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

INORGANIC CONTAMINANTS

Inorganic contaminants, such as salts and metals, which may be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

PESTICIDES AND HERBICIDES

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

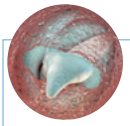


ORGANIC CHEMICAL CONTAMINANTS

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production. These contaminants also may come from gas stations, urban stormwater runoff and septic systems.

RADIOACTIVE CONTAMINANTS

Radioactive contaminants, which may be naturally occurring or the result of oil and gas production and mining activities.

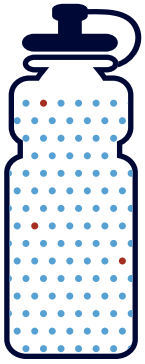


CRYPTOSPORIDIUM AND GIARDIA

Cryptosporidium and *Giardia* come from animal and human waste in the watershed and are common in untreated surface water. When ingested, the organisms may cause fever, nausea and diarrhea. They are removed by a well-maintained water treatment process.

In 2018, Fort Collins Utilities tested the untreated source water for the organisms. *Giardia* was found in the Poudre River samples. Neither organism was found in the Horsetooth Reservoir samples.

For more information about contaminants and potential health risks, call the Safe Drinking Water Hotline at 800-426-4791 or visit *epa.gov/safewater*.



FLUORIDATION

As directed by City Council and our customers, Utilities adds fluoride to the water, resulting in levels that range from 0.60 to 0.75 milligrams of fluoride per liter of treated water.

If you or members of your household are sensitive to fluoride or fluoridation-related substances or if you provide our water to an infant younger than six months of age, please consult your physician or another health expert regarding precautions you may want to consider.

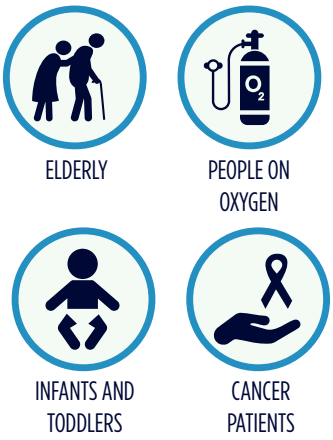
Visit *fcgov.com/fluoride* for more information.

VULNERABLE POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than the general population.

Particularly at risk are immunocompromised persons, such as those undergoing chemotherapy; those who have received organ transplants; people with HIV/AIDS or other immune-system disorders; and some elderly and infants. These people should seek advice about drinking water from their healthcare providers.

Guidelines to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available the EPA/Center for Disease Control. Call the Safe Drinking Water Hotline at 800-426-4791 or visit *epa.gov/safewater*.



MONITORING FOR LEAD

In 1984, eight years before the EPA began regulating lead in drinking water, Fort Collins Utilities implemented a Corrosion Control Program to prevent the leaching of lead and copper from water pipes into our finished drinking water. Before leaving the Water Treatment Facility, calcium and carbon dioxide are added to balance the mineral content and reduce the corrosiveness of the treated drinking water.

As a check to make sure our corrosion control approach is effective, Utilities also monitors lead levels in the drinking water of 50 homes annually. These tests have shown the level of lead to be substantially below EPA's action level.

The source of lead in drinking water is primarily from material and components associated with home plumbing. Lead service lines (the pipes that run from Utilities' main lines in the street to homes and businesses) have been prohibited by Fort Collins' building codes since before the 1950s, and lead-tin solder was banned in 1986. Additionally, Utilities does not have any lead in its water main lines. These safeguards help limit the potential for lead contamination of drinking water.

While Utilities is responsible for providing high-quality drinking water, we have limited control regarding the material that is used for home plumbing. If you are concerned, you can minimize the potential for lead exposure by flushing your water tap for 30 seconds to 2 minutes before drinking or cooking, if the water has been sitting in your service lines for several hours. If you have concerns about your water quality, contact the Water Quality Lab at 970-221-6863.

If present, elevated levels of lead can cause serious health problems, particularly for pregnant women and young children. For more information, testing methods and steps to minimize exposure, call the Safe Drinking Water Hotline at 800-426-4791 or visit *epa.gov/safewater/lead*.

COMMUNITY PARTICIPATION

Community members are welcome to attend Fort Collins Utilities' Water Board meetings, a citizen committee that advises City Council on matters of policy and budget. Please see the schedule and location at *fcgov.com/cityclerk/water*.

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CONTACT

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