

# NORTH WELD COUNTY WATER DISTRICT 2018 Drinking Water Quality Report For Calendar Year 2017

**Public Water System ID:** CO0162553

**Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.**

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact ERIC RECKENTINE at 970-356-3020 with any questions about the Drinking Water Consumer Confidence Rule (CCR) or for public participation opportunities that may affect the water quality.

## **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. Immunocompromised 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). 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

## **Source Water Assessment and Protection (SWAP)**

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 <https://www.colorado.gov/cdphe/ccr>. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 135718, SOLDIER CANYON FP, or by contacting ERIC RECKENTINE at 970-356-3020. 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 the next page.

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 to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

## Our Water Sources

<u>Source</u>	<u>Source Type</u>	<u>Water Type</u>	<u>Potential Source(s) of Contamination</u>
PURCHASED FROM FORT COLLINS CO0135291	CC (CONSECUTIVE CONNECTION)	SW (SURFACE WATER)	Our source water comes from Horsetooth Reservoir and the Poudre River. 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, aboveground, underground and leaking storage tank sites, solid waste sites, existing/abandoned mine sites, other facilities, commercial/industrial & transportation, low intensity residential, urban recreational grasses, row crops, fallow, pasture/hay, deciduous forest, evergreen forest, mixed forest, septic systems, oil/gas wells, road miles.
PURCHASED FROM GREELEY CO0162321	CC	SW	
PURCHASED FROM SOLDIER CANYON FILTER PLANT (SCFP) CO0135718 SW	CC	SW	

### Terms and Abbreviations

- **Maximum Contaminant Level (MCL)** – The highest level of a contaminant allowed in drinking water.
- **Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.
- **Health-Based** – A violation of either a MCL or TT.
- **Non-Health-Based** – A violation that is not a MCL or TT.
- **Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **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 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 Goal (MRDLG)** – The level of a 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.
- **Violation (No Abbreviation)** – Failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** – Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.
- **Variance and Exemptions (V/E)** – Department permission not to meet a MCL or treatment technique under certain conditions.
- **Gross Alpha (No Abbreviation)** – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
- **Picocuries per liter (pCi/L)** – Measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **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 90<sup>th</sup> Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).
- **Average (x-bar)** – Typical value.
- **Range (R)** – Lowest value to the highest value.
- **Sample Size (n)** – Number or count of values (i.e. number of water samples collected).
- **Parts per million = Milligrams per liter (ppm = mg/L)** – One part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Parts per billion = Micrograms per liter (ppb = ug/L)** – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **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 occasions.

### Detected Contaminants

NORTH WELD COUNTY WATER DISTRICT routinely monitors 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 next 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.

Microorganism Contaminants Sampled in the Distribution System							
Contaminant Name	Time Period	Results	Sample Size	MCL	MCLG	MCL Violation	Typical Sources
Coliform (TCR)	January-December	0 Positive Samples	120	No more than 1 positive sample per period (if sample size is less than 40)	0	No	Naturally present in the environment

Disinfection Byproducts Sampled in the Distribution System									
Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2017	29.13	22.6 to 35.5	16	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2017	35.19	21.5 to 52.8	16	ppb	80	N/A	No	Byproduct of drinking water disinfection

Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio of Raw and Finished Water								
Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	TT Minimum Ratio	TT Violation	Typical Sources
Total Organic Carbon Ratio SCFP	2017	1.23	0.98 to 1.43	12	Ratio	1.00	No	Naturally present in the environment
FORT COLLINS	2017	1.31	0.82 to 1.57	12	Ratio	1.00	No	
GREELEY	2017	1.26	1.05 to 1.54	19	Ratio	1.00	No	

\*If minimum ratio not met and no violation identified then the system achieved compliance using alternative criteria.

Summary of Turbidity Sampled at the Entry Point to the Distribution System					
Contaminant Name	Sample Date	Level Found	TT Requirement	TT Violation	Typical Sources
Turbidity SCFP	Date/Month: Nov 12 2017	Highest single measurement: 0.042 NTU	Maximum 1.0 NTU for any single measurement	No	Soil Runoff
FORT COLLINS	Date/Month: December	Highest single measurement: 2.5 NTU		Yes	
GREELEY	Date/Month: April	Highest single measurement: 0.31 NTU		No	
Turbidity SCFP	Month: All 12 months	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	Soil Runoff
FORT COLLINS	Month: All 12 months			No	
GREELEY	Month: December			No	

Inorganic Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Barium SCFP	2017	0.017	0.017 to 0.017	1	ppm	2.0	2.0	No	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
FORT COLLINS	2017	0.02		1	ppm	2.0	2.0	No	
GREELEY	2017	0.04	0.02 to 0.06	2	ppm	2.0	2.0	No	
Fluoride SCFP	2017	0.74	0.74 to 0.74	1	ppm	4.0	4.0	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer
FORT COLLINS	2017	0.65		1	ppm	4.0	4.0	No	
GREELEY	2017	0.56	0.48 to 0.65	2	ppm	4.0	4.0	No	
Nitrate SCFP	2017	<0.010	<0.010	1	ppm	10.0	10.0	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium GREELEY	2017	0.80	0 to 1.60	2	ppb	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium SCFP	2017	8.6	8.6 to 8.6	1	ppm	N/A			
FORT COLLINS	NA	NA	NA	NA	NA				
GREELEY	2017	19.85	8.6 to 31.1	2	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

Disinfectants Sampled in the Distribution System						
<b>TT Requirement:</b> At least 95% of samples per period (month or quarter) must be at least 0.2 ppm <b>OR</b> If sample size is less than 40 no more than 1 sample is below 0.2 ppm <b>Typical Sources:</b> Water additive used to control microbes						
Contaminant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2017	Lowest period percentage of samples meeting TT requirement: 100%	0	120	No	4.0 ppm

Disinfectants Sampled at the Entry Point to the Distribution System						
Contaminant Name	Year	Number of Samples Above or Below Level	Sample Size	TT/MRDL 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 Additive to control microbes
FORT COLLINS	2017	0	2190	TT = No more than 4 hours with a sample below 0.2 ppm	No	
Chlorine/Chloramine GREELEY	2017	0	3267	TT = No more than 4 hours with a sample below 0.20 ppm	No	Water Additive to control microbes
Chlorine Dioxide SCFP	2017	0	365	MRDL = 800 ppb	No	Water Additive to control microbes
GREELEY	2017	0	365	MRDL = 800 ppb	No	
FORT COLLINS	2017	0	365	MRDL = 800 ppb	No	

Disinfection Byproducts Sampled at the Entry Point										
Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	Highest Compliance Value	MCL Violation	Typical Sources
Chlorite SCFP	2017	0.5	0.28 to 0.79	365	ppm	1.0	0.8	N/A	No	Byproduct of drinking water disinfection

Disinfection Byproducts Sampled in the Distribution System										
Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	Highest Compliance Value	MCL Violation	Typical Sources
Chlorite	2017	0.21	0 to 0.45	12	ppm	1.0	0.8	N/A	No	Byproduct of drinking water disinfection

Lead and Copper Sampled in the Distribution System								
Contaminant Name	Time Period	90 <sup>th</sup> Percentile	Sample Size	Unit of Measure	90 <sup>th</sup> Percentile AL	Sample Sites Above AL	90 <sup>th</sup> Percentile AL Exceedance	Typical Sources
Copper	07/09/2017 to 07/20/2017	0.27	30	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	07/09/2017 to 07/20/2017	3.9	30	ppb	15.0	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unregulated Contaminant Monitoring Rule 3 (UCMR3)						
<p>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.</p> <p>North Weld County 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 contaminants sampled for, there were only four (4) that were detected.</p>						
Contaminant Name	Year	Range of Results	Average	Unit of Measure	Violation?	Typical Sources
Chlorate	2013	36 to 71	54	ppb	No	Byproduct of drinking water disinfection
Strontium	2013	43 to 45	44	ppb	No	Naturally occurring element
Vanadium	2013	0 to 0.2	0.1	ppb	No	Naturally occurring element
Hexavalent Chromium	2013	0.04 to 0.09	0.06	ppb	No	Naturally occurring metal

**Cryptosporidium and E. Coli at the Combined Raw Water Source**

<b>Contaminant Name</b>	<b>Year</b>	<b>Number of Positive</b>	<b>Sample Size</b>
E. Coli SCFP	2017	9	12
E. Coli GREELEY	2017	5	5



**Violations, Significant Deficiencies, and Formal Enforcement Actions**

CITY OF FORT COLLINS:

On December 14, 2017, the filter process effluent turbidity value exceeded the standard of 1.0 turbidity units for 18 minutes, and the value was not reported to CDPHE within 24 hours. There were no adverse health effects that resulted from this event. In response, the lime feed was reduced and the turbidity dropped below 1.0 turbidity unit.