

# NORTH CARTER LAKE WD 2022 Drinking Water Quality Report

## For Calendar Year 2021 *Public Water System ID:* CO0135553

**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 GARY ALLEN at 970-776-8218 with any questions or for public participation opportunities that may affect 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 may have 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](http://www.colorado.gov/cdphe/ccr). The report is located under "Guidance: Source Water Assessment Reports". Search the table using 135553, NORTH CARTER LAKE WD, or by contacting GARY ALLEN at 970-776-8218. 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** – Your water is treated at the Carter Lake Filter Plant CO0135476 and purchased from Little Thompson Water District CO0135477—Surface Water Consecutive Connection.

**Potential Source(s) of Contamination** – There is no SWAP report, please contact us regarding potential sources of contamination

### Sources (Water Type - Source Type)

DRY CREEK RESERVOIR (Surface Water-Reservoir)  
CARTER LAKE (Surface Water-Intake)

### Potential Source(s) of Contamination

EPA Hazardous Waste Generators, EPA Chemical Inventory/Storage Sites, EPA 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, Small Grains, Pasture / Hay, Deciduous Forest, Evergreen Forest, Mixed Forest, Septic Systems, Oil / Gas Wells, Road Miles

## 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.
- **Below Detectable Limits (BDL)**

## Detected Contaminants

NORTH CARTER LAKE WD 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, 2021, 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.

### **Regulated Compounds Detected in the North Carter Lake Water District Distribution System**

#### **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 -- Chlorine

**The North Carter Lake Water District samples 1 sites per month and met the TT Requirement 100% of the time for year 2021.**

Lead and Copper	Collection Date	90 <sup>TH</sup> Percentile	Unit	AL	Action Level Exceedance	Typical Source
LEAD	June 2021	1	ppb	15	No	Corrosion of household plumbing systems; Erosion of natural deposits.
COPPER	June 2021	0.14	ppm	1.3	No	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD	November 2021	1	ppb	15	No	Corrosion of household plumbing systems; Erosion of natural deposits.
COPPER	November 2021	0.22	ppm	1.3	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By-Products	Date	Average	Sample Size	Unit	MCL	MCLG	Violation	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2021	36.4	1	ppb	60	N/A	No	Byproduct of drinking water disinfection
TOTAL TRIHALOMETHANES (TTHM)	2021	29.1	1	ppb	80	N/A	No	Byproduct of drinking water chlorination

**Compounds Regulated in the Little Thompson District Distribution System**

Compound	MCL	MCLG	Unit	Level Detected	Sample Date	Violation	Likely Source of Compound
Total Coliform Bacteria	2021	1 Positive	Sample Size 303		Monthly	No	Naturally present in the environment
Copper 1 <sup>st</sup> half 2021	AL = 1.3	0	ppm	0.24 90 <sup>th</sup> percentile	Jan-June 2021	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper 2 <sup>nd</sup> half 2021	AL = 1.3	0	ppm	0.20 90 <sup>th</sup> percentile	July-Dec 2021	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead 1 <sup>st</sup> half 2021	AL = 15	0	ppb	1.8 90 <sup>th</sup> percentile	Jan-Jun 2021	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead 2 <sup>nd</sup> half 2021	AL = 15	0	ppb	2.3 90 <sup>th</sup> percentile	Jul-Dec 2021	No	Corrosion of household plumbing systems; Erosion of natural deposits

Compounds	Level Detected	Sample Size	Unit	MCL	MCLG	Violation	Typical Source
HAA5*	34.09	16	ppb	60	N/A	No	Byproduct of drinking water disinfection
	22.7-46.7						
TTHM*	34.62	16	ppb	80	N/A	No	Byproduct of drinking water disinfection
	19.7-44.2						

**Compounds Regulated at the Carter Lake Treatment Plant**

Compound	MCL	MCLG	Unit	Level Detected	Sample Date	Violation	Likely Source of Compound
Barium	2	2	ppm	0.01	2021	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.59	2021	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Chlorite	1	.8	ppb	0.32	2021	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Turbidity	TT ≤ 1	NA	NTU	0.25	2021	No	Soil runoff
	TT ≤ 0.5	NA	NTU	100% <0.1	Continuous	No	

**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 Low – High	Sample Size	Unit of Measure	Secondary Standard
Sodium	2021	7.57	7.57 to 7.57	1	ppm	N/A

**Radionuclides Sampled at the Carter Lake Treatment Plant**

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Gross Alpha	2021	1.8	1.8 to 1.8	1	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2021	1.1	1.1 to 1.1	1	pCi/L	5	0	No	Erosion of natural deposits

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

**Health-Based Violations**

**Maximum contaminant level (MCL) violations:** Test results for this contaminant show that the level was too high for the time period shown. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We are evaluating, or we already completed an evaluation, to find the best way to reduce or remove the contaminant. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

**Treatment technique (TT) violations:** We failed to complete an action that could affect water quality. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We were required to meet a minimum operation/treatment standard, we were required to make upgrades to our system, or we were required to evaluate our system for potential sanitary defects, and we failed to do so in the time period shown below. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

Name	Description	Time Period	Health Effects	Compliance Value	TT Level or MCL
Storage Tank Rule	Failure to Inspect Storage Tank(s) and/or Failure to Correct Storage Tank Defects - F334	08/19/2021 - 08/25/2021	May pose a risk to public health.	N/A	N/A

**Additional Violation Information**

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.

**Summary of the event:** A routine drinking water inspection was conducted on July 29, 2021, by the Department of Public Health and Environment's Water Quality Control Division. (department) The inspector identified violations described below that may pose a risk to public health. Although this situation is not an emergency, as our customers you have a right to know what happened, what you should do, and what we are doing to correct this situation. **What happened? What is being done?** At the time of the sanitary survey, the department inspector found that North Carter Lake Water District (District) had a storage tank inspection plan but had failed to identify and address all sanitary defects at the main storage tank. The department inspector observed a sanitary defect with screening on air vents of one of the tanks that could possibly allow contaminants or disease-causing organisms to enter the drinking water, which can cause diarrhea, nausea, cramps, and associated headaches. Failure to operate and maintain finished water storage tanks so that they are free of sanitary defects is evidence that District failed to implement the written plan for finished water storage tank inspections, which is a violation of Regulation 11, Section 11.28 (4) (c) (iv). The District operator noticed this error as well and took the necessary step to correct the deficiency the following morning. This violation required a public notice, and that notice was delivered to the District customers on 9.4.21. The department inspector has deemed this matter resolved and no additional follow-up is required. **What does this mean? What should I do?** There is nothing you need to do at this time. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. This problem was resolved on July 30, 2021. For further information, please contact Gary Allen at gary.nclwd@gmail.com or 970-776-8218, or PO Box 135 Berthoud, CO 80513.

**Non-Health-Based Violations**

These violations do not usually mean that there was a problem with the water quality. If there had been, we would have notified you immediately. We missed collecting a sample (water quality is unknown), we reported the sample result after the due date, or we did not complete a report/notice by the required date.

Name	Description	Time Period
Revised Total Coliform Rule (RTCR)	Failure to Have Adequate Coliform Bacteria Samples Sites – R518	08/19/2021 - 10/20/2021

Per the direction of the Department Inspector the District Operator uploaded the required sampling sites on August 22<sup>nd</sup>. The department inspector has deemed this matter resolved and no additional follow-up is required. What does this mean? What should I do? There is nothing you need to do at this time.

Name	Description	Time Period
Cross Connection Rule	Failure to Meet Cross Connection Control and/or Backflow Prevention Requirements - M613	08/19/2021 - 08/27/2021

At the time of the sanitary survey, the District was utilizing their own form to summarize the system's annual backflow reports summarizing the systems backflow status for the previous three years. The Inspector noted that the District had the individual records, but its form did not meet all the requirements designated by the Department. The operator submitted the appropriate Department template, and the department inspector has deemed this matter resolved and no additional follow-up is required. What does this mean? What should I do? There is nothing you need to do at this time.

**There are no additional required health effects notices. This report reflects no violations or formal enforcement actions.**