# CITY OF GREELEY
# 2024 Drinking Water Quality Report
## Covering Data For Calendar Year 2023





## 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 epa.gov/ground-water-and-drinking-water.

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.

## Director's Message

At Greeley Water Utilities, the reliable delivery of safe, high-quality water is our highest priority. The city's water operations team takes great pride in its daily work. We ensure our water sources are well-managed, treated to the highest standard, and delivered safely to each customer's tap. Several water quality parameters are measured continuously at our treatment facilities and locations throughout the system to ensure quality. In addition, water samples are collected regularly throughout the water distribution system and then analyzed at state-certified laboratories.

This water quality report is for water samples taken in 2023. The data provides detailed information on the quality of treated water for Greeley residents, businesses, and industries.

The Greeley water system is among the most resilient systems in the West. The system's diverse water supply comes from four river basins (Big Thompson, Cache la Poudre, Upper Colorado, and Laramie Rivers) and feeds into the city's two water treatment plants.

City staff work diligently to ensure that water treatment, transmission, and delivery infrastructure are well-maintained and professionally operated to advance high-quality water for generations. Long-range water supplies and infrastructure planning guide Greeley's activities to best manage water quality and quantity.

Despite significant wildfires burning in our watersheds in 2013 and 2020, the city's water system and treatment facilities remain resilient, maintaining a consistently high standard of service. The city has invested in a team that is identifying and replacing existing water service lines that contain lead, ensuring the protection of our water quality for all.

Certified water professionals and treatment teams utilize the best available technologies and proven treatment techniques to protect our award-winning, high-quality drinking water despite watershed disruptions. We believe you'll find the information in this water quality report helpful and informative.

Sean P. Chambers
Director of Greeley Water & Sewer Utilities

This report provides our customers with information on the city's municipal water quality based on the prior year's certified laboratory test results.

If you have questions about this report or the water quality data, please call us at 970-350-9836. Also, more information is available at greeleygov.com/water.

Public Water System ID: CO0162321

Esta es información importante. Para español visite GreeleyGov.com/water-quality

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 Michaela Jackson at 970-350-9836 or WaterQuality@greeleygov.com with any questions or for public participation opportunities that may affect water quality. **Please see the water quality data from our wholesale system(s) (either attached or included in this report) for additional information about your drinking water.**

# 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 90th 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.

## Lead in Drinking Water

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. We are responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact MICHAELA JACKSON at 970-350-9836. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

# What other projects are we working on?


**Lead Protection:** In early 2023, Greeley Water kicked off the Lead Protection Program to identify and replace all service lines that may contain lead at no direct cost to property owners. By 2026, the program aims to identify the material of all service lines in Greeley and replace any that contain lead. In 2024, the program received approval for a $21 million state revolving fund loan. The approval includes $10 million in loan forgiveness, eliminating the need for a 1.1% water rate increase to fund the program. Greeley residents who live in homes built before 1960 should expect to receive notices regarding service line inspections. For more information on the Lead Protection Program, please visit greeleygov.com/LeadProtection.

**Post-Fire River Restoration:** Three years after the Cameron Peak Fire, post-fire effects in the Poudre River and Big Thompson River watersheds continue to affect Greeley's water quality. Aerial mulching completed on over 9,000 acres was an essential early mitigation effort. However, high-intensity rainstorms in severely burned areas continue to cause water quality issues. In 2023, Greeley and its partners changed fire mitigation tactics. Instead of mulch and structure protection, efforts focused on point mitigation in small mountain streams. Two recent projects restored the function of the river system by adding porous wood structures, called logjams, to streams and floodplains to slow down and spread out the water flow. These structures aim to capture soil and sediment in the stream and nearby overbank areas. This strategy limits the amount of fine sediment transported downstream to Greeley's water intake, thereby improving the water quality that comes into Greeley's drinking water treatment plants.

**Regional Collaborative Source Water Protection Plan:** The City of Greeley is partnering with watershed partners in the Cache La Poudre River to develop a regional collaborative Source Water Protection Plan. The partnership will identify activities or projects needed to mitigate threats to source water quality and improve the resiliency of the water supply. Grant funding from multiple state agencies, alongside equal contributions by each watershed partner, helps fund this effort and ensures the final product is a comprehensive action plan for source water protection for years to come.

**WaterSmart:** Have you signed up for WaterSmart yet? This online customer portal allows you to track water use, reduce wasteful habits, and potentially prevent property damage from water leaks. WaterSmart is **free** to all Greeley water customers and allows you to:

- See your water use in real-time
- Set alerts to show when you have a leak
- Get tips for conserving water

All you need to register is your Greeley water account number and zip code.
Register at greeleygov.com/WaterSmart.

## 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 wqcdcompliance.com/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using our system name or ID, or by contacting Michaela Jackson at 970-350-9836. 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

| Sources (Water Type - Source Type) | Potential Source(s) of Contamination |
|---|---|
| • PURCHASED FROM CO0135290 (Surface Water-Consecutive Connection)<br>• PURCHASED FROM CO0135291 (Surface Water-Consecutive Connection)<br>• BIG THOMPSON GLIC PUMPSTATION (Surface Water-Intake)<br>• PURCHASED EAST LARIMER CNTYCO0135233 (Surface Water-Consecutive Connection)<br>• PURCHASED CITY OF LOVELAND CO0135485 (Surface Water-Consecutive Connection)<br>• PURCHASED FROM NORTH WELD CO0162553 (Surface Water-Consecutive Connection)<br>• HORSETOOTH RESERVOIR (Surface Water-Intake)<br>• BOYD LAKE (Surface Water-Intake)<br>• CACHE LA POUDRE RIVER (Surface Water-Intake)<br>• LAKE LOVELAND (Surface Water-Intake) | 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, Concentrated Animal Feeding Operations, Other Facilities, Commercial/Industrial/Transportation, High Intensity Residential, Low Intensity Residential, Urban Recreational Grasses, Quarries / Strip Mines / Gravel Pits, Row Crops, Fallow, Small Grains, Pasture / Hay, Deciduous Forest, Evergreen Forest, Mixed Forest, Septic Systems, Oil / Gas Wells, Road Miles |

## Detecting Contaminants

Greeley 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, 2023 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.

## Disinfectants Sampled in the Distribution System

| Disinfectant Name | Time Period | Results | Number of Samples Below Level | Sample Size | TT Violation | MRDL |
|---|---|---|---|---|---|---|
| Chlorine | December, 2023 | Lowest period percentage of samples meeting TT requirement: 100% | 0 | 121 | No | 4.0 ppm |

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

## Lead and Copper Sampled in the Distribution System

| Contaminant Name | Time Period | 90th Percentile | Sample Size | Unit of Measure | 90th Percentile AL | Sample Sites Above AL | 90th Percentile AL Exceedance | Typical Sources |
|---|---|---|---|---|---|---|---|---|
| Lead | 04/19/2023 to 06/05/2023 | 6.9 | 101 | ppb | 15 | 5 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead | 10/11/2023 to 11/16/2023 | 4.2 | 101 | ppb | 15 | 3 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

## 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) | 2023 | 25.35 | 16.6 to 36.6 | 32 | ppb | 60 | N/A | No | Byproduct of drinking water disinfection |
| Total Trihalomethanes (TTHM) | 2023 | 48.35 | 24.9 to 76.6 | 32 | ppb | 80 | N/A | No | Byproduct of drinking water disinfection |
| Chlorite | 2023 | 0.29 | 0.21 to 0.42 | 12 | ppb | 1.0 | .8 | 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 | 2023 | 1.18 | 0.99 to 1.47 | 18 | Ratio | 1.00 | No | Naturally present in the environment |

*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 | Date/Month: Oct | Highest single measurement: 0.54 NTU | Maximum 1 NTU for any single measurement | No | Soil Runoff |
| Turbidity | Month: Oct | 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 | Soil Runoff |

## 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 | 2023 | 0.05 | 0.02 to 0.07 | 2 | ppm | 2 | 2 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride | 2023 | 0.06 | 0 to 0.12 | 2 | ppm | 4 | 4 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate | 2023 | 0.12 | 0.02 to 0.21 | 2 | ppm | 10 | 10 | No | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Selenium | 2023 | 0.9 | 0 to 1.8 | 2 | ppb | 50 | 50 | No | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |

## Volatile Organic 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 |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 2023 | 0.24 | 0 to 0.48 | 2 | ppb | 5 | 0 | No | Discharge from factories; leaching from gas storage tanks and landfills |

## Secondary Contaminants**

| Contaminant Name | Year | Average | Range: Low – High | Sample Size | Unit of Measure | Secondary Standard |
|---|---|---|---|---|---|---|
| Sodium | 2023 | 28.05 | 7.3 to 48.8 | 2 | ppm | N/A |

**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.

## Unregulated Contaminants***

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Unregulated Contaminant Monitoring Rule (UCMR). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (epa.gov/dwucmr/national-contaminant-occurrence-database-ncod) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR sampling and the corresponding analytical results are provided below.

| Contaminant Name | Year | Average | Range: Low – High | Sample Size | Unit of Measure |
|---|---|---|---|---|---|
| Lithium | 2023 | 10.22 | 0 to 25.7 | 6 | ppb |
| Perfluorinated and Polyfluorinated Alkyl Substances | 2023 | Not Detected | Not Detected | 6 | ppb |

***More information about the contaminants that were included in UCMR monitoring can be found at: drinktap.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR. Learn more about the EPA UCMR at: epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule or contact the Safe Drinking Water Hotline at (800) 426-4791 or epa.gov/ground-water-and-drinking-water.

## 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.

### 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 |
|---|---|---|
| CHLORITE | FAILURE TO MONITOR AND/OR REPORT | 06/01/2023 - 06/30/2023 |

**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.**

Describe the steps taken to resolve the violation(s), and the anticipated resolution date:

Our water system received notice from the state of a drinking water requirement violation on August 14, 2023. 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.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. In July of 2023, the water system failed to report chlorite samples to the state for the month of June in a timely manner. Upon receiving the notice of the reporting violation, sample results were submitted to the state on August 14, 2023. The sample results showed that we are still meeting drinking water standards. The situation has been resolved and there is nothing you need to do at this time.