MCDONALD FARMS ENTERPRISES INC 2022 Drinking Water Quality Report
Covering Data For Calendar Year 2021

Public Water System ID: CO0207500

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 SCOTT D MCDONALD at 303-772-7938 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.**

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.

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 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 wqcdcompliance.com/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 207500, MCDONALD FARMS ENTERPRISES INC, or by contacting SCOTT D MCDONALD at 303-772-7938. 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 WATER FROM CO0162122 CWWD (Surface Water-Non-Piped, Purchased) PURCHASED WATER FROM LEFT HAND WD 107471 (Surface Water-Non-Piped, Purchased) PURCHASED FROM DENVER CO0116001 (Surface Water-Non-Piped, Purchased) PURCHASED FROM CASTLE ROCK CO0118010 (Surface Water-Non-Piped, Purchased)	There is no SWAP report, please contact SCOTT D MCDONALD at 303-772-7938 with questions regarding potential sources of contamination.

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.

Detected Contaminants

MCDONALD FARMS ENTERPRISES INC 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.

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 Violation	MRDL
Chloramine	November, 2021	Lowest period percentage of samples meeting TT requirement: 100%	0	8	No	4.0 ppm

Violations, Significant Deficiencies, and Formal Enforcement Actions

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
TOTAL COLIFORM	FAILURE TO MONITOR AND/OR REPORT	11/01/2021 - 11/30/2021
TOTAL COLIFORM	FAILURE TO MONITOR AND/OR REPORT	12/01/2021 - 12/31/2021
CHLORINE/CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	12/01/2021 - 12/31/2021
CHLORINE/CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	11/01/2021 - 11/30/2021
CHLORINE/CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	07/01/2021 - 07/31/2021
CHLORINE/CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	06/01/2021 - 06/30/2021
CHLORINE/CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	05/01/2021 - 05/31/2021

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
CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	10/01/2021 - 12/31/2021
CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	07/01/2021 - 09/30/2021
CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	04/01/2021 - 06/30/2021
M621- Management	Water Hauler Not Operating in Accordance with plan	12/29/2021-Open
R540- Monitoring, Recordkeeping and Data Verification	Design Approval: Supplier had not received plans and specifications approval by the department prior to construction of renovations to the water system, including the addition of new sourced, modification of treatment or addition of storage tanks	12/29/2021-04/29/2022
R520- Monitoring, Recordkeeping and Data Verification	Record Keeping: Supplier did not maintain records according to the minimum requirements specified in Regulation 11	12/29/2021-Open
TOTAL COLIFORM	FAILURE TO MONITOR AND/OR REPORT	01/01/2022 - 01/31/2022
CHLORINE/CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	01/01/2022 - 01/31/2022

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.

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

TOTAL COLIFORM: Samples collected for Total Coliform compliance monitoring incorrectly identified the sample point ID on the chain of custodies. This violation was resolved during the February, 2022 sampling period.

CHLORINE/CHLORAMINE: Total Coliform sampling was being conducted from the water source at the McDonald Farms Enterprises Inc. facility at 7440 E I-25 Frontage Rd, where the disinfectant in use is chlorine. The monitoring schedule called for Total Chlorine testing which is not applicable for chlorine disinfection. The monitoring schedule has been updated and McDonald Farms sample reporting is now in compliance.

M621-MANAGEMENT: The supplier has developed tank tracking documents that identifies when a water tank has been unused for longer than seven days and documents tank disinfection in that circumstance.

The supplier has added the source in use and whether the residual testing method was total or free chlorine to the delivery tickets.

The operational plan was amended to reflect procedures for when a low chlorine measurement is collected.

The supplier has developed tank tracking documents which identifies and provides a record of periodic tank inspections. Documentation

Non-Health-Based Violations

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Name	Description	Time Period

is also provided for periodic and comprehensive tank inspections on the tank inspection forms.

All M621-Management violations are anticipated to be resolved by August 31, 2022.

R540-Monitoring, Recordkeeping and Data Verification: Professional Engineers have submitted design approval documents to CDPHE for Water Hauler Tank 3015 on April 15, 2022.

R520- Monitoring, Recordkeeping and Data Verification: Certification document received from kosher tank cleanings document tank ID, process used, temperature and hold times.

The supplier has modified the bulk water and tank delivery ticket to identify the backflow prevention type used for each delivery.

The bulk water and delivery tickets document the date, time and location of each water loading station used. The tank tracking document has been amended to properly identify the water loading station and the PWSID for that station at the bottom of the document.

The tank tracking document identifies only the water hauler tanks and not the truck used to move the tanks.

Maintenance and replacements will be documented on the tank tracking document as well as on the tanker inventory and history log in the operational plan.

The total coliform record for Water Hauler Tank 361 were mislabeled as Water Hauler Tank 761.

All R520- Monitoring, Recordkeeping and Data Verification violations are anticipated to be resolved by August 31, 2022.

Significant Deficiencies

A situation, practice, or condition that may potentially result in drinking water quality that poses an unacceptable risk to public health and welfare and/or may potentially introduce contamination into the drinking water.

Date Identified	Deficiency Description	Deficiency Explanation and Steps Taken or Will Take to Correct	Estimated Completion Date
12/29/2021	F333 - NON-ANSI/NSF MATERIALS OR AWWA STANDARDS; Interior surface coatings and materials in contact with drinking water must be American National Standard Institute (ANSI)/National Sanitation Foundation (NSF) Standard 61 certified.;	All hoses identified to be non-ANSI/NSF Standard 61 or food grade hoses have been removed from service and are being replaced with ANSI/NSF Standard 61 or food grade hoses.	8/31/2022
12/29/2021	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.;	Pipe sections have been disinfected on water hauler tank 311 by spraying with a 295 mg/L chlorine solution, and caps installed on all pipes. The operating plan has been amended, under section 6, to instruct drivers to cap pipes when not being used to fill the tank. Checking that pipes are capped is also included on the	8/31/2022

Significant Deficiencies A situation, practice, or condition that may potentially result in drinking water quality that poses an unacceptable risk to public health and welfare and/or may potentially introduce contamination into the drinking water.			
Date Identified	**Deficiency Description**	**Deficiency Explanation and Steps Taken or Will Take to Correct**	**Estimated Completion Date**
		Bulk Water & Tank Delivery Tickets as part of the daily inspections.	
12/29/2021	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.;	Pipe sections have been disinfected on water hauler tank 320 by spraying with a 295 mg/L chlorine solution, and caps installed on all pipes. The operating plan has been amended, under section 6, to instruct drivers to cap pipes when not being used to fill the tank. Checking that pipes are capped is also included on the Bulk Water & Tank Delivery Tickets as part of the daily inspections.	8/31/2022
12/29/2021	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.;	Pipe sections have been disinfected on water hauler tank 322A by spraying with a 295 mg/L chlorine solution, and caps installed on all pipes. The operating plan has been amended, under section 6, to instruct drivers to cap pipes when not being used to fill the tank. Checking that pipes are capped is also included on the Bulk Water & Tank Delivery Tickets as part of the daily inspections.	8/31/2022
12/29/2021	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.;	Pipe sections have been disinfected on water hauler tank 361 by spraying with a 295 mg/L chlorine solution, and caps installed on all pipes. The operating plan has been amended, under section 6, to instruct drivers to cap pipes when not being used to fill the tank. Checking that pipes are capped is also included on the Bulk Water & Tank Delivery Tickets as part of the daily inspections.	8/31/2022
12/29/2021	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.;	Pipe sections have been disinfected on water hauler tank 7232 by spraying with a 295 mg/L chlorine solution, and caps installed on all pipes. The operating plan has been amended, under section 6, to instruct drivers to cap pipes when not	8/31/2022

Significant Deficiencies A situation, practice, or condition that may potentially result in drinking water quality that poses an unacceptable risk to public health and welfare and/or may potentially introduce contamination into the drinking water.			
Date Identified	**Deficiency Description**	**Deficiency Explanation and Steps Taken or Will Take to Correct**	**Estimated Completion Date**
		being used to fill the tank. Checking that pipes are capped is also included on the Bulk Water & Tank Delivery Tickets as part of the daily inspections.	
12/29/2021	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.;	Pipe sections have been disinfected on water hauler tank 7233 by spraying with a 295 mg/L chlorine solution, and caps installed on all pipes. The operating plan has been amended, under section 6, to instruct drivers to cap pipes when not being used to fill the tank. Checking that pipes are capped is also included on the Bulk Water & Tank Delivery Tickets as part of the daily inspections.	8/31/2022
12/29/2021	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.;	Water Hauler Tank 361 was being used as a non-potable water source for the construction site at the time of the inspection. The operating plan has been amended to trigger a tank and equipment disinfection, under section 5, when a water hauler tank and hoses have been used for non-potable water hauling prior to hauling potable water to ensure proper disinfection and cleaning of the tank and hoses. The operating plan has also been amended, under section 7, to reflect that all tank access hatches will be sealed with a tamper seal when the tank is stored offsite and will be the responsibility of the user to inspect the tamper seal while the tank is stored offsite, as reflected in the disclaimer on the bulk water and tank delivery tickets.	8/31/2022

CENTRAL WELD CNTY WD 2022 Drinking Water Quality Report
Covering Data For Calendar Year 2021

Public Water System ID: CO0162122

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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 STAN LINKER at 970-352-1284 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.**

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.

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 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 wqcdcompliance.com/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 162122, CENTRAL WELD CNTY WD, or by contacting STAN LINKER at 970-352-1284. 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.

Water Sources

Central Weld County WD Sources (Water Type - Source Type)	Potential Source(s) of Contamination
PUR CARTER LAKE 135476 SW (Surface Water-Consecutive Connection) MASTER METER CONNECTION 402 (Surface Water-Consecutive Connection) BERTHOUD MASTER METER CONNECTION (Surface Water-Consecutive Connection) LEFT HAND MASTER METER COUNTY RD 12 (Surface Water-Consecutive Connection) LEFT HAND MASTER METER COUNTY RD 6 (Surface Water-Consecutive Connection) MASTER METER CONNECTION 401 (Surface Water-Consecutive Connection)	There is no SWAP report, please contact STAN LINKER at 970-352-1284 with questions regarding potential sources of contamination.
Carter Lake Water Sources (Water Type – Source Type)	**Potential Source(s) of Contamination**
PURCHASED WATER From CARTER LAKE CO0135476 (Surface Water-Intake) Carter Lake (Surface Water-Intake) Dry Creek Reservoir (Surface Water-Reservoir)	EPA Hazardous Waste Generators, Sites: EPA Chemical Inventory/Storage, EPA Toxic Release Inventory, Permitted Wastewater Discharge, Aboveground, Underground & Leaking Storage Tank, Solid Waste, Existing/Abandoned Mine. Other Facilities: Commercial/Industrial/Transportation, Low Intensity Residential, Urban Rec 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.	**Picocuries per liter (pCi/L)** − Measure of the radioactivity in water.
Average (x-bar) − Typical value.	**Range (R)** – Lowest value to the highest value.
Not Applicable (N/A) – Does not apply or not available.	**Variance and Exemptions (V/E)** − Department permission not to meet a MCL or treatment technique under certain conditions.
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.
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 expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control 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.	**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.
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.
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.	**Sample Size (n)** − Number or count of values (i.e. number of water samples collected).
Violation (No Abbreviation) − Failure to meet a Colorado Primary Drinking Water Regulation.	**Gross Alpha (No Abbreviation)** − Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
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).	

Detected Contaminants

CENTRAL WELD CNTY 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. The Average Total Hardness = 29.70 mg/L (Less than 60 mg/L is considered soft)

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 by Central Weld County WD 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 Violation	MRDL
Chlorine	December, 2021	Lowest period percentage of samples meeting TT requirement: 100%	0	9	No	0.77 ppm

Disinfection Byproducts Sampled by Central Weld County WD 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)	2021	43.46	32.7 to 57.2	8	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2021	46.4	32 to 83.6	8	ppb	80	N/A	No	Byproduct of drinking water disinfection

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	1/1/2021 to 6/30/2021	1.8	60	ppb	15	0	NO	Corrosion of household plumbing systems; erosion of natural deposits
LEAD	7/1/2021 to 12/31/2021	2.3	60	ppb	15	2	NO	
COPPER	1/1/2021 to 6/30/2021	0.24	60	ppm	1.3	0	NO	Corrosion of household plumbing systems; erosion of natural deposits
COPPER	7/1/2021 to 12/31/2021	0.20	60	ppm	1.3	0	NO	

Unregulated Contaminants***(sampled by Central Weld County WD)
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. Two contaminants were detected during our UCMR sampling in 2019.
***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.

Detected Contaminants at Carter Lake Filter Plant:

The Carter Lake Filter Plant routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables 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 re-ported 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.

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	2021	0.01	0.01 to 0.01	1	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	2021	0.59	0.56 to 0.63	4	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Summary of Turbidity Sampled at the Treatment Plants

Contaminant Name	Sample Date	Level Detected	TT Requirement	TT Violation	Typical Sources
Turbidity	July 2021	Highest single measurement 0.25 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff
Turbidity	December 2021	Lowest monthly percentage of sample meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.1 NTU	No	Soil Runoff

Radionuclides Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average	Range Low-High	Sample Size	Unit of Measure	MCL	MCGL	MCL Violation	Typical Sources
Gross Alpha	2019	1.8	1.8 to 1.8	1	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2019	1.1	1.1 to 1.1	1	pCi/L	5	0	No	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
Chlorite	2021	0.33	0.28 to 0.4	12	ppb	1.0	.8	No	Byproduct of drinking water disinfection

Secondary Contaminants** Sampled by Carter Lake Filter Plant

**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

VOC's and SOC's (sampled by Carter Lake Filter Plant)

The 21 Volatile Organic Compounds (VOC's) tested for in 2021 were all below detection limits.

The 32 Synthetic Organic Compounds (SOC's) tested for in 2021 were all below detection limits.

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	04/28/2021 - 04/28/2021	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.

VIOLATION CORRECTION: The storage tank hatch seals were replaced on April 9, 2021 and pictures were submitted to CDPHE on April 12, 2021. Public Notice of the violation was mailed to the District's customers in July 2021 and posted on the District's website. CDPHE deemed the violation resolved.

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
PUBLIC NOTICE	FAILURE TO NOTIFY THE PUBLIC/CONSUMERS	05/29/2021 - 07/19/2021
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION CONTROL AND/OR BACKFLOW PREVENTION REQUIREMENTS - M610	04/28/2021 - 06/15/2021

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.

VIOLATION CORRECTION: The Public Notice was mailed to customers in July 2021 and posted on the District's website. CDPHE deemed the violation resolved. The Backflow Prevention Policy wording was corrected to meet the cross connection control requirements and approved by Board action and posted on the District's website to meet the Backflow Prevention Requirements.

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 the Left Hand Water District at 303-530-4200 with any questions about the Drinking Water Consumer Confidence Rule (CCR) or for public participation opportunities that may affect the 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.**

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.

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 & 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 http://wqcdcompliance.com/ccr. The report is located under "Source Water Assessment Reports", and then "Assessment Report by County". Select BOULDER County and find 107471; LEFT HAND WD or by contacting the Left Hand Water District at 303-530-4200. 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 below and 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 Consumer Confidence 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.

Potential Source(s) of Contamination

EPA Hazardous Waste Generators, Aboveground, Underground and Leaking Storage Tank 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, Road Miles

Left Hand's Water Sources

Source	Source Type	Water Type
Lefthand Creek	Intake	Surface
Purchased from Central Weld County	Consecutive Connection	Surface
Purchased water from City of Boulder	Consecutive Connection	Surface
Colorado Big Thompson Carter Lake	Intake	Surface
Purchase From City of Longmont	Intake	Surface
Williamson Ditch	Intake	Surface

Left Hand 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, 2021 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.

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

Contaminant Name	Time Period	Results	No. of Samples Below Level	Sample Size	TT Violation	MRDL
CHLORINE	Dec 2021	Lowest period percentage of samples meeting TT requirement: 100%	0	20	No	4.0 ppm

Lead and Copper Sampled in the Distribution System

Contaminant Name	Monitoring Period	90th Percentile	No. of Samples	Unit of Measure	Action Level	Sample Sites Above Action Level	AL or TT Violation	Typical Source
COPPER	07/15/2021 - 08/19/21	0.11	30	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD	07/15/2021 - 08/19/2021	2	30	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts Sampled in the Distribution System

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (lowest to highest)	No. of Samples	Unit of Measure	MCL	MLCG	MCL Violation	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2021	23.8	13.3- 35.3	16	ppb	60	N/A	No	Byproduct of drinking water disinfection
TOTAL TRIHALO-METHANES (TTHM)	2021	39.4	16.8- 59.1	16	ppb	80	N/A	No	Byproduct of drinking water disinfection

Total Organic Carbon Ratio (Disinfection Byproducts Precursor) Removal Ratio of Raw and Finished Water

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (lowest to highest)	No. of Samples	Unit of Measure	TT Minimum Ratio	TT Violation	Typical Source
TOTAL ORGANIC CARBON RATIO*	2021	1.14	.99- 1.51	12	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 Source
TURBIDITY	Month: October	Highest single Measurement: .24 NTU	Maximum 1 NTU for any single measurement	No	Soil runoff
TURBIDITY	Month: December	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.1 NTU	No	Soil runoff

Inorganic Contaminants Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (lowest to highest)	No. of Samples	Unit of Measure	MCL	MCLG	MCL Violation	Typical Source
BARIUM	2021	0.04	0.01 - 0.06	2	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	2021	0.57	.53 to .62	2	ppm	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
CHROMIUM	2021	1.5	0 to 2	2	ppb	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Radionuclides Sampled at the Entry Point									
Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (lowest to highest)	No. of Samples	Unit of Measure	MCL	MLCG	MCL Violation	Typical Source
Gross Alpha	2020	.25	0-.5	2	pCi/L	15	0	No	Erosion of Natural Deposits
Combined Radium	2020	1.24	.37 to 2.1	2	pCi/L		5	No	Erosion of Natural Deposits

Secondary Contaminants **						
Contaminant Name	Year	Average	Range Low - High	Sample Size	Unit of Measurement	Secondary Standard
SODIUM	2021	11.9	8.5 to 15.3	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.

Violations, Significant Deficiencies & 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.

n/a

Non-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.

n/a

Certain customers of the Left Hand Water District may receive a portion of their water from Central Weld County Water District's (CWCWD) treatment facilities. For this reason we are providing a copy of CWCWD's 2021 Consumer Confidence Report. The area of the Left Hand Water District that may receive a portion of their water through this inter connecton is generally described as being north of WCR 18, bounded by WCR 7 on the west and I 25 on the east. If you have any questions related to this interconnection, please contact the Left Hand Water District at 303-530-4200.

Terms & 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.

Colorado Public Water System | Identification (PWSID)#: CO-0-107471
Esta es informacion importante. Si no la pueden leer, necesitan que alguien se la traduzca.

Left Hand Water District
Mailing Address ~ P.O. Box 210 ~ Niwot, CO 80544-0210
Office Address ~ 6800 Nimbus Road ~ Longmont, CO 80503
Phone 303-530-4200 ~ Fax 303-530-5252
M – F, 8:30 a.m. – 4:30 p.m. ~ www.lefthandwater.org

2022

Water Quality Report

INFORME DE CALIDAD DE AGUA

DENVER WATER

Photo credit: iStock.

Photo credit: Denver Water.

WHAT IS THIS REPORT?

The Environmental Protection Agency requires public water suppliers that serve the same people year-round (community water systems) to provide consumer confidence reports to their customers. These reports are also known as annual water quality reports. This report summarizes information regarding water sources used, any detected contaminants, compliance and educational information.

Where does your water come from?

Denver's drinking water comes from rivers, lakes, streams, reservoirs and springs fed by high-quality mountain snow runoff. Denver Water's supply is 100% surface water that originates in sources throughout 3,100 square miles of watersheds on both sides of the Continental Divide.

Mountain water sources

Denver Water's water sources are the South Platte River and its tributaries, the streams that feed Dillon Reservoir and the creeks and canals above the Fraser River. Denver Water stores its water in five mountain reservoirs: Antero, Eleven Mile Canyon, Cheesman, Dillon and Gross. From these reservoirs, the water is then sent to the metro area through a complex system of streams, canals and pipes to be treated.

After treatment, drinking water is fed by both gravity and pumps to a system of underground, clean-water reservoirs before continuing to your home or business. More than 4,000 miles of pipe carry water to Denver Water customers.

Source water assessment

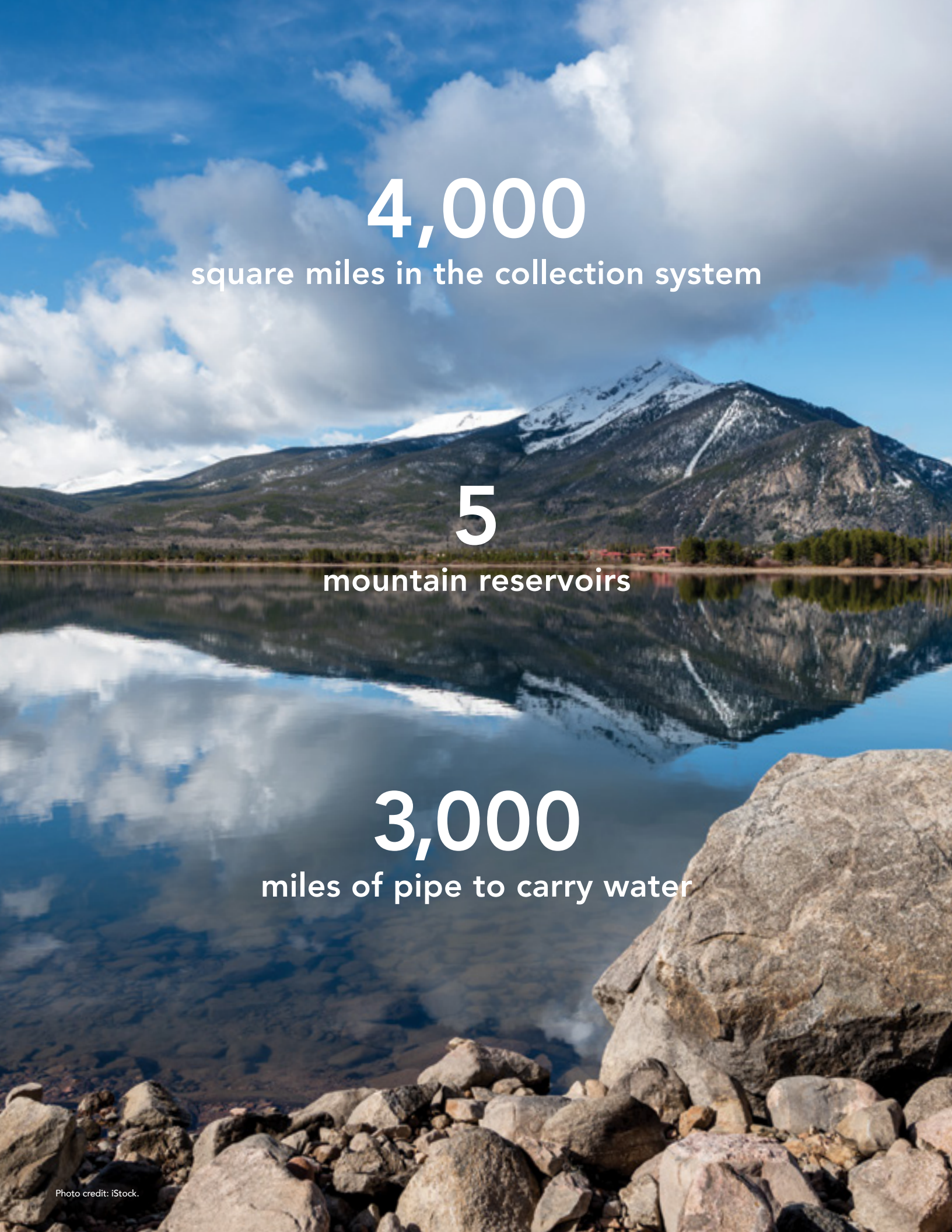
The Colorado Department of Public Health and Environment has completed a source water assessment of the potential for contaminants reaching any of Denver Water's three terminal reservoirs at Strontia Springs, Marston and Ralston, the last stop for the water before it is treated. The potential sources of contamination that may exist are: EPA areas of concern; permitted wastewater discharge sites; above ground, underground and leaking storage tank sites; solid waste sites; existing or abandoned mine sites; other facilities; commercial, industrial and transportation activities; residential, urban recreational grasses; quarries, strip mines and gravel pits; agriculture; forests; septic systems; oil and gas wells and roads.

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 the future contamination threats. This can help us ensure that high-quality drinking water is delivered to your homes.

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 116001, Denver Water Board, or call Denver Water Customer Care at **303-893-2444**.

Información importante acerca de la calidad del agua

Para recibir la versión en español del Informe de Calidad de Agua de 2022 de Denver Water, llame a Servicio al cliente al **303-893-2444** o visite **denverwater.org/2022CalidadDeAgua.**


4,000
square miles in the collection system
5
mountain reservoirs
3,000
miles of pipe to carry water
Photo credit: iStock.

DENVER WATER'S SYSTEM

Devoted to water quality

Devoted to water quality, Denver Water proudly serves high-quality water to 1.5 million people in the city of Denver and many surrounding suburbs. Since 1918, we have expertly planned, developed and operated a complex system that provides clean, safe, great-tasting water. Denver Water is a public agency funded by water rates, new tap fees and the sale of hydropower, not taxes. We are Colorado's oldest and largest water utility — Denver Water has a total water service area of approximately 300 square miles.

Denver Water serves 25% of the state's population with less than 2% of all the water used in the state. The natural environment is our lifeline, and we help protect it by promoting wise water use. We take our water quality very seriously. Last year we collected more than 55,000 samples and conducted more than 200,000 tests to ensure our water is as clean and safe as possible. Denver Water is required by state and federal law to monitor for — and provide this report on — regulated contaminants in drinking water.

Denver Water also goes above and beyond these requirements to monitor for additional compounds in drinking water. This information is available on our website at **denverwater.org/TreatedWater.**

Reservoir	Capacity (acre-feet)	Percent of Total Capacity
Dillon	257,304	36.7
Eleven Mile Canyon	97,779	14.0
Williams Fork	96,822	13.8
Cheesman	79,064	11.3
Gross	41,811	6.0
Chatfield (Denver's portion)	28,709	4.1
Wolford Mountain (Denver's portion)	25,610	3.7
Antero	20,122	2.9
Marston	19,108	2.7
Ralston	10,776	1.5
Strontia Springs	7,864	1.1
Meadow Creek	5,370	0.8
South Complex	3,561	0.5
North Complex (current gravity storage)	3,495	0.5
Long Lakes	1,787	0.3
Platte Canyon	910	0.1
Soda Lakes (Denver Water's portion)	615	0.1
Total	**700,707**	**100**

SOURCES OF DRINKING WATER

Photo credit: iStock.

Sources of drinking 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. It can also pick up substances resulting from human activity and the presence of animals. Contaminants may include the following:

Microbial contaminants

Viruses, bacteria and other microbes 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides

Chemical substances resulting from a variety of sources, such as agricultural and urban stormwater runoff, and residential uses.

Organic chemical contaminants

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

Radioactive contaminants

Substances that can be naturally occurring or be the result of oil and gas production and mining activities.

Photo credit: Denver Water.

WATER AT A GLANCE

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. In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment's regulations set limits on the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration sets limits for contaminants in bottled water to provide the same protection for public health.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 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 people, such as people with cancer undergoing chemotherapy, people 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. Those at risk should seek advice about drinking water from their health care providers. Guidelines from the EPA and the Centers for Disease Control and Prevention on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline, 800-426-4791.

Lead in drinking water

Denver Water is committed to delivering safe water to our customers. The water we provide to homes and businesses is lead-free, but lead can get into the water as it moves through customer-owned water service lines and household plumbing that contain lead.

Service lines bring water into a home or building from Denver Water's main delivery pipe in the street. In Denver Water's experience, homes built prior to 1951 are more likely to have lead service lines. Homes built before 1987 may have lead solder connecting copper pipes in their plumbing. Faucets and fixtures made before 2014 do not meet today's "lead-free" requirements.

Lead exposure can cause serious health problems, especially for pregnant women and young children.

To address this issue, Denver Water has launched the Lead Reduction Program, which was approved in December 2019 by the Environmental Protection Agency and Colorado Department of Public Health and Environment.

The Lead Reduction Program has five main components:

- Increasing the pH level to reduce the risk of lead from getting into drinking water from lead service lines or household plumbing.
- Developing and maintaining a publicly accessible inventory of all customer-owned lead service lines in Denver Water's service area. This interactive map is available at **denverwater.org/Lead**.
- Replacing all lead service lines in our service area with copper lines at no direct charge to the customer. Beginning in 2020, it will take 15 years to replace all the lead service lines in our service area and work will continue through 2035.
- Providing a free water pitcher and filters that are certified to remove lead to all customers suspected of having a lead service line until their line is replaced, and for six months after.
- Ongoing communication, outreach and education.

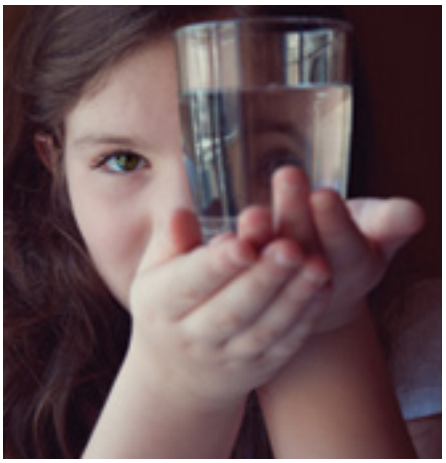
HOW THE PROGRAM CAME TO BE

Since 1992, as part of the EPA's Lead and Copper Rule, Denver Water has monitored water quality in homes that have service lines or plumbing that contain lead.

Only once, in 2012, did test results from those homes indicate additional action was needed to protect public health, and Denver Water remains in compliance today. However, Denver Water is still required to implement the best method to reduce the risk of lead in tap water in homes with lead-containing plumbing or service lines.

Denver Water studied multiple treatment options from 2012 to 2017. Based on the results, the CDPHE in March 2018 required Denver Water to begin adding orthophosphate to the water it delivers in March 2020.

Although orthophosphate is effective at reducing lead levels, adding



phosphorous, a nutrient, into the wastewater and our streams and watersheds can, under the right conditions, set off a chain of problematic events, such as accelerating the growth of algae. With a desire to protect public health and regional water supplies, Denver Water conducted more research and participated in a comprehensive stakeholder process that resulted in Denver Water requesting a variance from the EPA that met the Lead and Copper Rule's requirement that the proposed Lead Reduction Program Plan is "at least" as efficient at reducing lead levels as orthophosphate treatment.

That plan became the Lead Reduction Program, which is now underway. Learn more about this effort and the program at **denverwater.org/Lead**.

If you are concerned about lead, you can request to have your water tested. Denver Water customers can request a free lead test kit at **denverwater.org/Leadtest.**

Information on lead in drinking water, testing and steps to minimize exposure is available from the Safe Drinking Water Hotline at **1-800-426-4791**, at **epa.gov/safewater/lead** and at **denverwater.org/Lead.**

HOW TO MINIMIZE YOUR EXPOSURE TO LEAD

If you have a water service line or interior plumbing that contains lead, you can take the following actions to reduce your household's risk of exposure.

Flush

If water has not been used in the property for a few hours, such as first thing in the morning or when coming home from work, run cold water from the kitchen or any bathroom faucet for five minutes. You can also run the dishwasher, take a shower or do a load of laundry to help flush water in your home's internal plumbing before drinking, cooking or preparing infant formula.

Replace old fixtures

Replace faucets and indoor plumbing with "lead-free" components. Faucets and fixtures installed prior to 2014 do not meet today's requirements for "lead-free" fixtures.

Clean aerators

A faucet aerator is a small screen added to the end of a faucet to mix air with water to reduce the flow of water coming from the faucet. Remove and clean the aerators on your faucets, as they may have trapped particles from your old lead service line.

Maintain filters

Follow the manufacturer's maintenance schedule for the filtration system you have, including water pitchers, faucet-mounted filters, under-sink filter or refrigerator filters. The results of your water quality test may help to determine if you still wish to continue using a filter. Boiling the water does not remove lead.

You can find instructional videos on flushing and filter use at **denverwater.org/Lead**.

IS THERE A PRESENCE OF CRYPTOSPORIDIUM AND GIARDIA?

Denver Water has tested for cryptosporidium (crypto) and giardia in both raw and treated water since the 1980s. Since that time, Denver Water has never detected a viable indication of either in the drinking water.

Crypto and giardia are microscopic organisms that, when ingested, can cause diarrhea, cramps, fever and other gastro-intestinal symptoms. Crypto and giardia are usually spread through means other than drinking water.

While most people readily recover from the symptoms, crypto and giardia can cause more serious illness in people with compromised immune systems. The organisms are in many of Colorado's rivers and streams and are a result of animal wastes in the watershed. At the treatment plants, Denver Water removes crypto and giardia through effective filtration, and giardia is also killed by disinfection.

THE TREATMENT PROCESS

1 COAGULATION/ FLOCCULATION

Raw water is drawn into mixing basins at our treatment plants where we add alum and polymer. This process causes small particles to stick to one another, forming larger particles.

2 SEDIMENTATION

Over time, the now larger particles become heavy enough to settle to the bottom of a basin from which sediment is removed.

3 FILTRATION

The water is then filtered through layers of fine, granulated materials — either sand, or sand and coal, depending on the treatment plant. As smaller, suspended particles are removed, turbidity diminishes and clear water emerges.

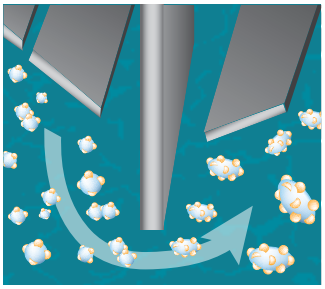
4 DISINFECTION

As protection against any bacteria, viruses and other microbes that might remain, disinfectant is added before the water flows into underground reservoirs throughout the distribution system and into your home or business. Denver Water carefully monitors the amount of disinfectant added to maintain quality of the water at the farthest reaches of the system. Fluoride occurs naturally in our water but is also added to treated water, when needed, to achieve public health levels.

5 CORROSION CONTROL

pH is maintained by adding alkaline substances to reduce corrosion in the distribution system and the plumbing in your home or business.

1



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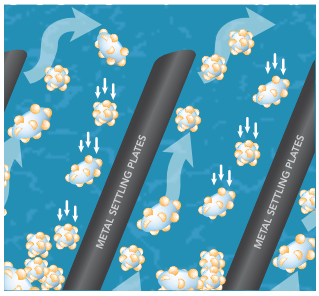

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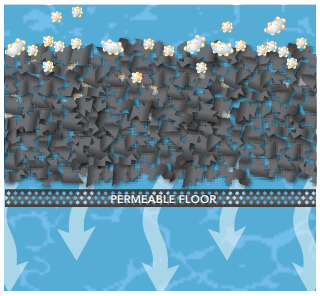

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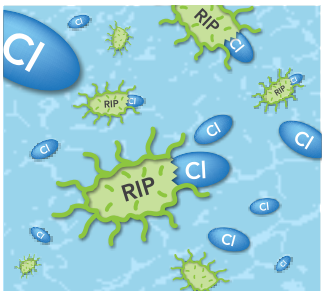

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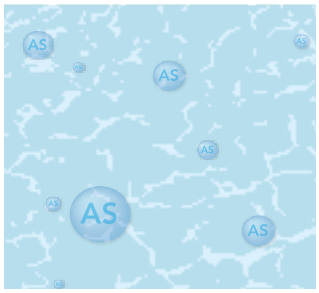

REGULATED WATER CONTAMINANTS: WHAT IS IN THE WATER?

Data collected throughout 2021

Denver Water routinely monitors for contaminants in drinking water according to federal and state laws. The following tables show all detections found in the period of Jan. 1 through Dec. 31, 2021 unless otherwise noted. The state of Colorado requires Denver Water 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.

Inorganic Contaminants Sampled at the Entry Point to the Distribution System									
Chemical Parameters	**Year**	**Sampling Frequency**	**Average**	**Range**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Antimony	2021	Monthly	BRL	BRL	ppb	6	6	No	Discharge from petroleum refineries, fire retardants, ceramics, electronics, solder.
Arsenic	2021	Monthly	BRL	BRL	ppb	10	0	No	Erosion of natural deposits; runoff from orchards, runoff from glass, electronics, solder.
Barium	2021	Monthly	34.0	18.0-42.9	ppb	2,000	2,000	No	Erosion of natural deposits; discharge of drilling wastes.
Beryllium	2021	Monthly	BRL	BRL	ppb	4	4	No	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace and defense industries.
Cadmium	2021	Monthly	BRL	BRL	ppb	5	5	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste, batteries and paints.
Chromium	2021	Monthly	0.03	BRL-1	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits.
Mercury	2021	Monthly	BRL	BRL	ppb	2	2	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands.
Selenium	2021	Monthly	BRL	BRL	ppb	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium	2021	Monthly	BRL	BRL	ppb	2	0.5	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands.
Uranium	2021	Monthly	BRL	BRL	ppb	30	0	No	Erosion of natural deposits; mine drainage.
Fluoride	2021	Monthly	600	410-840	ppb	4,000 (2,000 is SMCL)	4,000	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate as N	2021	Monthly	70	BRL-200	ppb	10,000	10,000	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite as N	2021	Monthly	BRL	BRL	ppb	1,000	1,000	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nickel	2021	Monthly	0.38	BRL-2.2	ppb	N/A	N/A	No	Discharge from industrial uses such as transportation, chemical industry, electrical equipment and construction.
2,4-D	2021	Annually (Foothills WTP)	BRL	BRL	ppb	70	70	No	Runoff from herbicide used on row crops.

Secondary Contaminants Sampled at the Entry Point to the Distribution System*									
Chemical Parameters	**Year**	**Sampling Frequency**	**Average**	**Range**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Sodium	2021	Monthly	20,100	9,100-28,800	ppb	N/A	N/A	No	Naturally occurring.

*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.

Summary of Turbidity Sampled at the Entry Point to the Distribution System							
Chemical Parameters	**Year**	**Sampling Frequency**	**Level Found**	**Unit of Measure**	**Treatment Technique Requirement**	**Treatment Technique Violation**	**Typical Sources**
Turbidity	2021	Daily	Highest single measurement: 0.2009 NTU (June, Marston Treatment Plant)	NTU	Maximum 1 NTU for any one single measurement.	No	Soil runoff
Turbidity	2021	Daily	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	NTU	In any month, at least 95% of samples must be less than 0.3 NTU.	No	Soil runoff

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio of Raw and Finished Water*					
Chemical Parameters	**Year**	**Frequency**	**Treatment Technique Requirement**	**Treatment Technique Violation**	**Typical Sources**
Total organic carbon ratio	2021	Twice per month	**Denver Water uses enhanced treatment to remove the required amount of natural organic material and/or demonstrates compliance with alternative criteria.	No	Natural organic matter present in the environment.

**Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts including trihalomethanes (TTHMs) and haloacetic acids (HAA5s). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects and may lead to an increased risk of getting cancer.

Disinfection Byproducts Sampled in the Distribution System									
Chemical Parameters	**Year**	**Sampling Frequency**	**Average**	**Range**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Combined Radium (Ra-226 and Ra-228)	2021	6-9 years	0.92	BRL-2.1	pCi/L	5	0	No	Erosion of natural deposits, Mine drainage, Industrial or manufacturing discharges
Gross Alpha (excluding Uranium)	2021	6-9 years	0.77	0.5-1.0	pCi/L	15	0	No	Erosion of natural deposits, Mine drainage, Industrial or manufacturing discharges

Disinfection Byproducts Sampled in the Distribution System									
Name	**Year**	**Sampling Frequency**	**Highest Locational RAA**	**Range**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Total Trihalomethanes (TTHM)	2021	Quarterly	28.9	26.6-35.7	ppb	80	N/A	No	Byproduct of drinking water disinfection.
Haloacetic Acids (HAA5s)	2021	Quarterly	16.2	13.2-20.4	ppb	60	N/A	No	Byproduct of drinking water disinfection.

Microbial Contaminants Regulated in the Distribution System									
Name	**Year**	**Sampling Frequency**	**MCL**	**MCLG**	**Unit of Measure**	**Highest Monthly Percentage**	**Number of Positives**	**MCL Violation**	**Typical Sources**
Total coliform (T. coli)	2021	Daily	No more than 5% positive per month	0	Present/ Absent	0.26% (present T. coli), June 2021	2 out of 4,734 total samples (0.04%); 0 *E. coli* positive samples	No	Naturally present in the environment.

Disinfectants Sampled in the Distribution System*							
Name	**Year**	**Results**	**Number of Samples Below Level**	**Frequency**	**Treatment Technique Violation**	**MRDL**	**Typical Sources**
Disinfectant as Total Cl2	2021	Lowest period percentage of samples above 0.2 ppm: 100%	0	Daily	No	4.0 ppm	Drinking water disinfectant used to control microbial growth.

*Treatment technique requirement: at least 95% of samples per period (month or quarter) must be at least 0.2 ppm.

Lead and Copper Sampled in the Distribution System								
Contaminant Name	**Period**	**90th Percentile**	**Sample Size**	**Unit of Measure**	**90th Percentile Action Level**	**Sample Sites Above Action Limit**	**90th Percentile AL Exceedance**	**Typical Sources**
Copper	1-6/2021	50	470	ppb	1,300	0	No	Corrosion of household plumbing; erosion of natural deposits.
Lead	1-6/2021	4.1	470	ppb	15	4	No	Corrosion of household plumbing; erosion of natural deposits.
Copper	7-12/2021	62	498	ppb	1,300	0	No	Corrosion of household plumbing; erosion of natural deposits.
Lead	7-12/2021	4.5	513	ppb	15	7	No	Corrosion of household plumbing; erosion of natural deposits.

REGULATED WATER CONTAMINANTS: WHAT IS IN THE WATER?

TERMS, ABBREVIATIONS AND SYMBOLS

Some of the terms, abbreviations and symbols contained in this report are unique to the water industry and might not be familiar to all customers. Terms used in the table are explained below.

action level
Concentration of a contaminant that if exceeded triggers treatment or other requirements that a water system must follow.

average
Typical value.

below reporting level (BRL)
Below the reportable level for an analysis or below the lowest reliable level that can be measured.

compliance value
Single or calculated value used to determine if a regulatory contaminant level is met. Examples of calculated values include average, 90th percentile, running annual average and location running annual average.

contaminant
Potentially harmful physical, biological, chemical or radiological substance.

formal enforcement action
Escalated action taken by the state to bring a noncompliant water system back into compliance.

health-based
Violation of either a maximum contaminant level or treatment technique.

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.

locational running annual average (LRAA)
The average of sample results for samples collected at a particular monitoring location during the most recent four calendar quarters.

maximum contaminant level (MCL)
Highest level of a contaminant allowed in drinking water. MCLs are set as close to the maximum contaminant level goal as feasible using the best available treatment technology

maximum contaminant level goal (MCLG)
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 disinfection level (MRDL)
Highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of disinfectant is necessary for control of microbial contaminants.

maximum residual disinfection 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.

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.

non-health-based
A violation that is not a MCL or TT.

parts per billion (ppb)
Equivalent to micrograms per liter. One drop in one billion drops of water.

parts per million (ppm)
Equivalent to milligrams per liter. One drop in one million drops of water.

picocuries per liter
Measure of radio activity in water.

range (R)
Lowest value to the highest value.

running annual average (RAA)
Average of the monitoring period for a year.

secondary maximum contaminant level (SMCL)
Nonenforceable, recommended limits for substances that affect the taste, odor, color or other aesthetic qualities of drinking water rather than pose a health risk.

treatment technique
Required process intended to reduce the level of a contaminant in drinking water.

turbidity
Measure of suspended material in water. In the water field, a turbidity measurement, expressed in nephelometric turbidity units (NTU), is used to indicate clarity of water.

variance and exemptions
Department permission not to meet maximum contaminant level or treatment technique under certain conditions.

violation
Failure to meet a Colorado Primary Drinking Water Regulation.

DENVER WATER

1600 W. 12th Ave., Denver, CO 80204-3412
303-893-2444

For more information on water quality, including opportunities for public participation, visit **denverwater.org.**

@DenverWater @Denver_Water
DenverWater YourDenverWater TAP denverwatertap.org

Denver Water's Public Water System Identification: CO0116001

2021 Water Quality Report

CASTLE ROCK water

Securing our future *drop by drop*

Copies of this report can be found at CRgov.com/**waterquality**

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

Town of Castle Rock
Public Water System ID: C00118010

The purpose of this report

Castle Rock Water's goal is to provide our customers with a safe and reliable supply of drinking water. The Water Quality Report or "Consumer Confidence Reports" are produced annually to describe the overall quality of water from its raw collection and storage to the treated purity at your tap. This report is required by the Environmental Protection Agency to summarize information regarding the water sources used, any detected contaminants, compliance and educational information.

Please contact Castle Rock Water at 720-733-6000 or email waterquality@CRgov.com with any questions about the quality or treatment of our water.

General Information About Drinking Water

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 at 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.

Our Water Sources and Water Treatment Plants

In 2020, approximately 65 percent of the Town's water was pumped from the Town's 57 deep groundwater wells. Castle Rock overlies the Denver Basin, a geologic formation with four principal aquifers into which our deep wells are drilled: the Dawson, Denver, Arapahoe, and the deepest of the four, the Laramie-Fox Hills. The remaining 35 percent came from renewable water resources which included 13 shallow alluvial wells and a surface water diversion along East Plum Creek and imported WISE water. See table for Castle Rock's sources.

Castle Rock utilizes five treatment plants to purify and distribute potable water. Having five facilities provides redundancy to ensure reliable service during the winter with low demand, several plants may not be in use.

SOURCE		WATER TYPE	WATER PLANT
Well CR20 Mikelson A1	Well	GW	FWTP
Well CR21 Mikelson Den1	Well	GW	FWTP
Well 22 Mikelson DA1	Well	GW	FWTP
Well 31R	Well	GW	FWTP
Well 33R Enderud	Well	GW	FWTP
Well 39 Weaver 1	Well	GW	FWTP
Well 41 Weaver 1	Well	GW	FWTP
Well 43 Weaver A2	Well	GW	FWTP
Well 44 Weaver LDA2	Well	GW	FWTP
Well 45 Weaver D2	Well	GW	FWTP
Well CR-226	Well	GW	FWTP
Well CR-227	Well	GW	FWTP
Well CR27R	Well	GW	MWTP
Well 28R Meadows A-2R	Well	GW	MWTP
Well CR47 Meadows D1	Well	GW	MWTP
Well 49 Meadows A8	Well	GW	MWTP
Well 50R	Well	GW	MWTP
Well CR51A Meadows D-7A	Well	GW	MWTP
Well CR67 Meadows A7 Arapahoe	Well	GW	MWTP
Well 82 A4	Well	GW	MWTP
Well CR83	Well	GW	MWTP
Well CR84 Meadows A7 Denver	Well	GW	MWTP
Well CR86	Well	GW	MWTP
Well 148 Den4	Well	GW	MWTP
Well 149 Meadows D3	Well	GW	MWTP
Well 150 Meadows D2	Well	GW	MWTP
Well CR152 Meadows A7 Dawson	Well	GW	MWTP
Well 168 LDA4	Well	GW	MWTP

SOURCE		WATER TYPE	WATER PLANT
Well 170 Meadows DA6	Well	GW	MWTP
Well 174 Meadows D6	Well	GW	MWTP
Well 219 A13	Well	GW	MWTP
Well CR220	Well	GW	MWTP
Well CR221	Well	GW	MWTP
Well CR222	Well	GW	MWTP
Well CR223	Well	GW	MWTP
Well CR224	Well	GW	MWTP
Well CR225	Well	GW	MWTP
Well CR14R PC Miller East	Well	GW	PSMWTP
Well 15R	Well	GW	PSMWTP
Well 16R	Well	GW	PSMWTP
Well AL-1	Well	GW UDI Surface	PCWPF
Well AL-2	Well	GW UDI Surface	PCWPF
Well AL-8	Well	GW UDI Surface	PCWPF
Well AL-9	Well	GW UDI Surface	PCWPF
Well AL-16	Well	GW UDI Surface	PCWPF
Well AL-18	Well	GW UDI Surface	PCWPF
Well AL-20	Well	GW UDI Surface	PCWPF
Well 11R	Well	GW UDI Surface	PCWPF
Well 12R	Well	GWUDI Surface	PCWPF
Well 13R	Well	GW UDI Surface	PCWPF
Well 78 PC Alluvium	Well	GW UDI Surface	PCWPF
Well 79 PC Alluvium	Well	GW UDI Surface	PCWPF
Well 80 PC Alluvium	Well	GW UDI Surface	PCWPF
Well CR204	Well	GW	PCWPF
Well CR228	Well	GW	PCWPF
Well CR229	Well	GW	PCWPF

Our Water Sources and Water Treatment Plants continued

SOURCE		WATER TYPE	WATER PLANT
Well CR230	Well	GW	PCWPF
Plum Creek Diversion No. 1	Intake	Surface	PCWPF
Well 72R Castle Oaks 6 Denver	Well	GW	RWRWTF
Well 73R Castle Oaks 6 Arapahoe	Well	GW	RWRWTF
Well CR101	Well	GW	RWRWTF
Well CR105	Well	GW	RWRWTF
Well CR110	Well	GW	RWRWTF
Well CR111	Well	GW	RWRWTF
Well CR117	Well	GW	RWRWTF
Well CR118	Well	GW	RWRWTF
Well CR123	Well	GW	RWRWTF
Well CR124	Well	GW	RWRWTF
Well CR217	Well	GW	RWRWTF
Well CR218	Well	GW	RWRWTF
WISE Purchase from Parker WSD	CC	Surface	RWRWTF
Purchase Castle Pines Metro CO0118005	CC	GW	DIST
Purchased The Pinery WSD CO0118025	CC	GW	DIST

GW — Groundwater
GW UDI — Groundwater under direct influence of surface water
CC — Consecutive Connection
DIST — Distribution System

Water sources and types of water are important to help Castle Rock Water determine the appropriate level of treatment and design the correct type of treatment plant.

Plants treating surface water using flocculation, coagulation, sedimentation, greensand filtration, membrane filtration and disinfection

- Plum Creek Water Purification Facility (PCWPF)

Plants treating groundwater using greensand filtration, or anthracite and silica sand filtration, and disinfection

- Founders Water Treatment Plant (FWTP)
- Meadows Water Treatment Plant (MWTP)
- P.S. Miller Water Treatment Plant (PSMWTP)
- Ray Waterman Regional Water Treatment Facility (RWRWTF)

Possible sources of contamination

Aboveground, Underground and Leaking Storage Tank Sites, Commercial/Industrial/Transportation, High Intensity Residential, Low Intensity Residential, Urban Recreational Grasses, Small Grains, Pasture / Hay, Deciduous Forest, Evergreen Forest, Septic Systems, Road Miles.

Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment (CDPHE) has provided Castle Rock Water with a Source Water Assessment Report for the Town's water supply. Through this Assessment Report, the total susceptibility of the Town's water sources to potential contamination from both discrete and dispersed contaminant sources was determined.

The Source Water Assessment provides a screening-level evaluation of potential contamination that could occur. It does not mean that the contamination has or will occur. Castle Rock Water can use this information to evaluate the need to improve current water treatment capabilities and prepare for future contamination threats. This can help ensure that quality finished water is delivered to every home. In addition, the source water assessment results provided a starting point for developing a source water protection plan.

In March 2018, Castle Rock Town Council approved a Source Water Protection Plan to help mitigate risks associated with these potential contaminants. The plan is designed to create awareness of the community's drinking water sources and the potential risks to surface water and/or groundwater quality within the watershed; encourage education and voluntary solutions to alleviate pollution risks; promote management practices to protect and enhance the drinking water supply; and provide for a comprehensive action plan in case of an emergency that threatens or disrupts the community water supply. To view the plan, visit CRgov.com/waterplans. Potential sources of contamination in our source water area are listed on pages 30-33 in that plan.

For general information or to obtain a copy of the Source Water Assessment, visit https://www.colorado.gov/cdphe/ccr. The report is located under "Guidance - Source Water Assessment Reports." Search the table using 118010 - Castle Rock, Town Of. Copies of the report are also available by contacting Castle Rock Water at 720-733-6000.

Please contact Castle Rock Water to learn more about what you can do to help protect drinking water sources, to ask any questions about this Drinking Water Consumer Confidence Report, to learn more about the water 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.

Recognized for Excellence

Commitment Award—2020
Awarded by the Colorado Department of Public Health and Environment. It is given to a single drinking water system that has shown an impressive commitment to the culture of protecting public health. Castle Rock Water is the first recipient of this award.

CDPHE CO COLORADO Department of Public Health & Environment
PURSUING EXCELLENCE
Gold Level: 2016, 2017, 2018, 2019

Environmental Leadership Program - Gold 2019
Awarded by the Colorado Department of Public Health and Environment to companies voluntarily going beyond compliance with state and federal regulations, increasing sustainability and commitment to continual environmental improvement. Our sustainability efforts and Environmental Policy identify our focus toward environmental stewardship and sustainability.

COLORADO Environmental Leader Gold

Devoted to Water Quality

Water quality is the core of our service. Last year, we collected more than 2,500 samples and conducted tests daily, monthly, quarterly and annually within our treatment plants, at points throughout the distribution systems and at service locations. These tests are not only for compliance for local, state and federal regulations, but show our commitment to ensuring our systems, processes and upgrades continue to provide water to our community that is as clean and safe as possible. Castle Rock Water takes pride in being presented with awards such as the Pursuing Excellence and Commitment Award awarded by the Colorado Department of Public Health & Environment, our regulatory agency, for going above and beyond compliance measures. Our service is for our community and we welcome questions from our customers about the Drinking Water Confidence Rule or for public participation opportunities affecting water quality.

Detected Contaminants

Castle Rock Water routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show all detections found in the period of January 1 to December 31, 2020 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

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 Violation	MRDL
Chloramine	December, 2020	Lowest period percentage of samples meeting TT requirement: 100%	0	90	No	4.0 ppm

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)	2020	1.57	0 to 8.5	32	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2020	4.04	1.1 to 10	32	ppb	80	N/A	No	Byproduct of drinking water disinfection

*MCL = Maximum Contaminant Level

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	Month: Apr	Highest single measurement: 0.097 NTU	Maximum 0.5 NTU for any single measurement	No	Soil Runoff
Turbidity	Month: Dec	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.1 NTU	No	Soil Runoff

Radionuclides 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
Gross Alpha	2020	3.3	0 to 7.1	11	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2020	3.46	1.7 to 5.5*	11	pCi/L	5	0	No	Erosion of natural deposits
Combined Uranium	2020	0.18	0 to 1.3	11	ppb	30	0	No	Erosion of natural deposits
Gross Beta Particle Activity	2020	4.2	3.8 to 4.5	2	pCi/L**	50	0	No	Decay of natural and man-made deposits

*The Locational Running Annual Average did not exceed the MCL.
**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.

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
Arsenic	2020	0.18	0 to 1	11	ppb	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2020	0.14	0.09 to 0.19	11	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2020	1.45	0 to 3	11	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2020	0.8	0.72 to 0.98	11	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2020	0.06	0 to 0.2	11	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	2020	0.55	0 to 3	11	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
Trichloroethylene	2020	0.09	0 to 1	11	ppb	5	0	No	Discharge from metal degreasing sites and

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 Meas-ure	Secondary Standard
Alkalinity ($CaCO_3$)	2020	101.50	89 – 116	82	ppm	N/A
Calcium	2017	50.5	50-51	2	N/A	N/A
Chloride	2020	56	15 - 206	14	ppm	250
Conductivity	2020	358	230 – 698	14	uS/cm	N/A
Hardness ($CaCO_3$)	2020	134	68 - 346	14	ppm	N/A
pH	2020	7.91	7.36 – 8.50	85	SU	6.5 – 8.5
Sodium	2020	23.31	11.1 to 49.3	11	ppm	N/A
Sulfate	2020	22	13 - 41	14	ppm	250
Total Dissolved Solids (TDS)	2020	239	150-478	14	ppm	500
Total Iron	2020	0.007	0 – 0.04	14	ppm	0.3
Total Manganese	2020	0.013	0.002 - 0.028	14	ppm	0.05

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
Copper	05/11/2020 to 06/19/2020	0.22	60	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	05/11/2020 to 11/19/2020	4	60	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	07/09/2020 to 11/19/2020	0.2	60	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	07/09/2020 to 06/19/2020	2	60	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Lead Testing in Castle Rock

Castle Rock Water is required by State and Federal regulations to conduct periodic lead and copper testing. Samples are collected from indoor taps in designated single family homes built between 1982 - 1987. These homes have been identified because they were built during the timeframe when lead-based solder was more widely used. Lead can enter the water through contact with plumbing pipes and fixtures containing lead within the home. It does this by leaching lead and copper from your private plumbing through the corrosion of pipes, solder, faucets and fittings. As part of our treatment process, Castle Rock Water treats the water to minimize, reduce, and eliminate, to the extent possible the potential for this corrosion to occur.

If you have any concerns, or would like your home to be considered for lead testing, contact our Water Quality staff at 720-733-6000 or visit CRgov.com/waterquality. This test is performed at no cost to the homeowner.

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 epa.gov/safewater/lead

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
Bromide	2020	146.67	110 – 190	3	ppb
Manganese	2020	1.47	0 – 6.80	7	ppb
Total Organic Carbon (TOC)	2020	2133.33	1600 – 2700	3	ppb
Haloacetic Acid (HAA5)	2020	1.81	0.55 – 3.20	16	ppb
Haloacetic Acid with Bromochloroacetic Acid (HAA6Br)	2020	2.02	0.31 – 5.8	16	ppb
Haloacetic Acid (HAA9)	2020	3.07	0.87 – 7.20	16	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

No Violations, Significant Deficiencies, or Formal Enforcement Actions in 2020

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 and tested).

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 a 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 a water system on multiple occasions.

Common Questions About Water

Is my water safe to drink?
Yes. Our water meets or surpasses all the regulatory standards set by the Colorado Department of Public Health and Environment and the U.S. Environment Protection Agency. We are required to conduct frequent and routine water quality testing to ensure your water stays safe.

Why is my water discolored?
If you see black or brown water coming from your hot water tap, the culprit may be your water heater. Most manufacturers suggest flushing your water heater at least once a year. This discoloration is due to sediment settling at the bottom of the tank which over time will build up. The sediment includes naturally occurring minerals in the water, such as manganese (a black color) and iron (a brown color).

White or cloudy water may be due to air in the pipes that is released as oxygen bubbles when water leaves the tap. It is not a health risk. Other causes of this type of discoloration may be due to the time of the year – during colder months water in outdoor pipes is colder and holds more oxygen than household pipes. When the cold water enters your home or building and begins to warm, the oxygen bubbles escape which can cause the water to look milky. Another cause may be maintenance or construction on the distribution system lines. This may allow air to enter the water pipes and cause the water to have a cloudy appearance.

Brown or yellow water from the first draw, may be the internal plumbing of your home or building. This may be the issue if you only see the discoloration for the first minute or two after your tap is turned on. If you see this discoloration constantly, it may be due to sediments in the water mains. Sediment can get stirred up if there is flushing or maintenance in the area and may cause a brown or yellow color. One way to figure out whether the discoloration is due to your indoor plumbing or from the water mains is to consult with your neighbors and see if they are having similar issues with their water quality.

Please contact us at 720-733-6000 or waterquality@CRgov.com with any questions about discoloration of water.

Is the water in Castle Rock hard?
Castle Rock has moderately hard water. Hardness is caused by naturally occurring calcium and magnesium ions in the water. White spots on glassware or other fixtures are caused by the calcium. This is not harmful. In fact, calcium and magnesium are found in many food products. For more information about hardness, visit CRgov.com/waterquality.

Why does my water taste/smell funny?
Your water may taste funny to you if you recently moved from an area containing very few naturally occurring minerals, or if you are accustomed to a certain type of source water. We sometimes gets reports from customers that their water smells like rotten eggs or sewage/septic. Often, these smells are caused by gases that are formed in the household drains and may not be directly related to your water supply. Bacteria that live on hair, food, soap and other organic matter can form gases and can produce unpleasant odors. Another cause of these odors may be your water heater. If your water heater has been turned off and not in use for a while, it can produce a septic or sulfuric smell.

Is there fluoride in my water?
Yes, there is naturally occurring fluoride in Castle Rock's water. Fluoride comes from the erosion of natural deposits. The fluoride level in Castle Rock has an average of 0.8 ppm with the Maximum Contaminant Level set at 4 ppm. Castle Rock does not add fluoride to the water supply.

Is there lead in my drinking water? If so, what is the Town of Castle Rock doing about it?
There is no lead in Castle Rock Water's drinking water. Lead enters the water through contact with plumbing pipes and fixtures within the home. It does this as a result of "leaching" caused by the corrosion of pipes, solder, fixtures and faucets (brass) and fittings. We are required to conduct periodic lead and copper testing to see if there is proper treatment that prevents the corrosion of the piping materials in homes. Since testing began in 1992, Castle Rock Water has only found one case in which private plumbing corroded to the point the fixture needed to be replaced.

If you would like to have your home tested for lead, please contact us at waterquality@CRgov.com or 720-733-6000.

Where can I get my water tested?
Castle Rock Water can run certain simple tests in the field or our lab, specifically relating to odor, taste and plumbing questions related to water quality. For more extensive testing, please contact CDPHE at https://cdphe.colorado.gov/laboratory-services/water-testing