CASTLE PINES NORTH

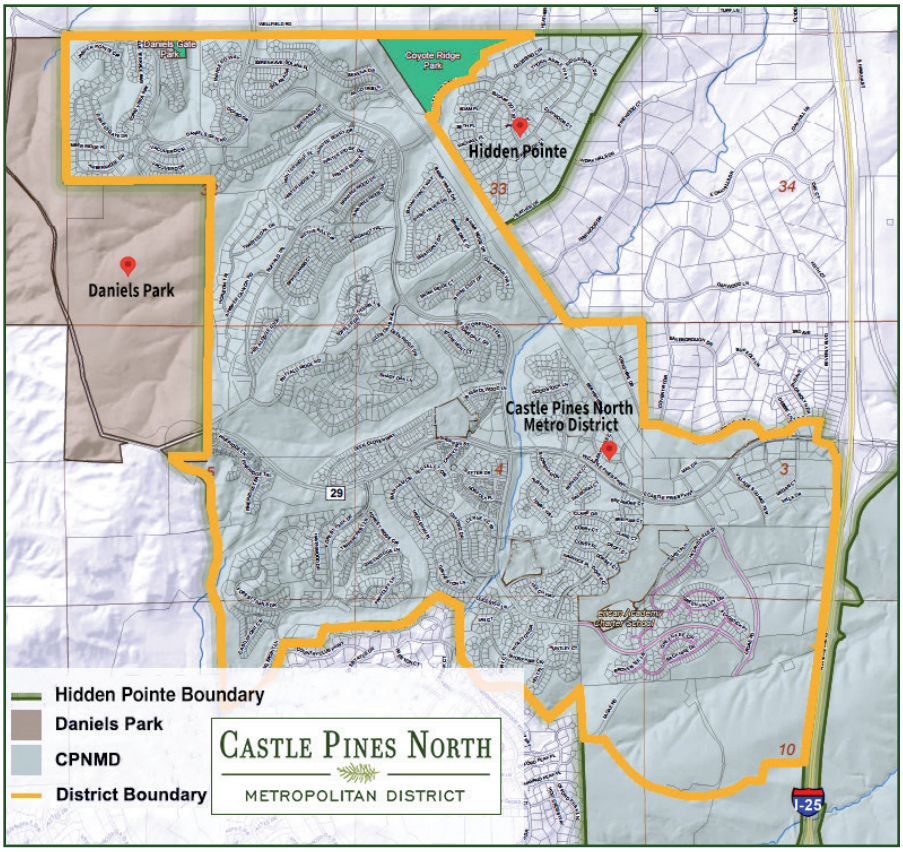
METROPOLITAN DISTRICT

2023 Water Quality Report

Mission Statement

To provide high-quality, clean, safe, reliable, on-demand drinking water, and wastewater, services to our community at the lowest possible cost.

Established in 1984, the Castle Pines North Metropolitan District (CPNMD) is a Title 32 Special District. We serve residents of the City of Castle Pines, west of I-25, in Douglas County, Colorado. We provide water & wastewater services to approximately 12,000 residents, as well as a number commercial customers, via roughly 3,900 service connections. Our customers include those that live within our boundaries, as well as residents of Hidden Pointe. We also provide service to Daniels Park, ensuring that the buffalo herd and caretakers have sufficient, safe water. This is done through an agreement with the City and County of Denver.



We provide high-quality water to our residents through two sources:

May-September: We utilize our wells drawing from the Arapahoe, Denver, and Lower Dawson Aquifer. This water is treated at our own water treatment facility. Over the past year and a half, our plant has undergone significant upgrades, with further capital improvements planned through spring of 2024.

October-April: We take full advantage of our renewable water resources. This is accomplished through an agreement with Centennial Water and Sanitation District. CWSD treats our stored renewable water in Chatfield Reservoir. We then use our Interconnect Pump Station to deliver their high-quality drinking water directly to our residents. Because of this, we include Centennial Water and Sanitation District's Consumer Confidence Report in addition to our own.

Our wastewater is treated by the Plum Creek Water Reclamation Authority (PCWRA), located north of Castle Rock, discharging into Plum Creek. This facility primarily serves CPNMD, the Town of Castle Rock and Castle Pines Metropolitan District (The Village at Castle Pines). Treated wastewater return flows are captured, and utilized as the primary source of irrigation water for The Ridge Golf Course.

This annual report is produced each spring. The document is a requirement of the Environmental Protection Agency to provide water quality data to our customers.

For more detailed information, including the status of any listed violations. Type in the web address below, or simply scan the QR code.

www.cpnmd.org/water-quality

2023 Drinking Water Quality Report

Covering Data For Calendar Year 2022

Public Water System ID: CO0118006

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 NATHAN J TRAVIS at 303-688-8550 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

Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact District Manager, Nathan Travis, at 303-688-8550. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available 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 our system name or ID, or by contacting NATHAN J TRAVIS at 303-688-8550. 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)

A7 WELL (Groundwater-Well)
DE7 WELL (Groundwater-Well)
A6 WELL (Groundwater-Well)
DE6 WELL (Groundwater-Well)
A5 WELL (Groundwater-Well)
PURCHASED WATER FROM CO0118015 (Surface Water-Consecutive Connection)
A1 WELL (Groundwater-Well)
A2 WELL (Groundwater-Well)
A3 WELL (Groundwater-Well)
A4 WELL (Groundwater-Well)
LDA1 WELL (Groundwater-Well)

Potential Source(s) of Contamination

Aboveground, Underground and Leaking Storage Tank Sites, Other Facilities, Low Intensity Residential, Urban Recreational Grasses, Fallow, Evergreen Forest, Septic Systems, Road Miles

Terms and Abbreviations

- **Maximum Contaminant Level (MCL)** – The highest level of a contaminant allowed in drinking water.
- **Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.
- **Health-Based** – A violation of either a MCL or TT.
- **Non-Health-Based** – A violation that is not a MCL or TT.
- **Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **Maximum Residual Disinfectant Level (MRDL)** – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Maximum Contaminant Level Goal (MCLG)** – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Residual Disinfectant Level Goal (MRDLG)** – The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Violation (No Abbreviation)** – Failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** – Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.
- **Variance and Exemptions (V/E)** – Department permission not to meet a MCL or treatment technique under certain conditions.
- **Gross Alpha (No Abbreviation)** – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
- **Picocuries per liter (pCi/L)** – Measure of the radioactivity in water
- **Nephelometric Turbidity Unit (NTU)** – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **Compliance Value (No Abbreviation)** – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 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

CASTLE PINES NORTH MD 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, 2022 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, 2022	Lowest period percentage of samples meeting TT requirement: 100%	0	13	No	4.0 ppm

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	09/30/2021 to 09/30/2021	0.39	20	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	09/30/2021 to 09/30/2021	1	20	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Lead and Copper Sampled in the Distribution System

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Combined Radium	2022	4.7	4.3 to 5.1	2	pCi/L	5	0	No	Erosion of natural deposits

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	0.1	0.1 to 0.1	1	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2021	2	2 to 2	1	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2020	0.73	0.73 to 0.73	1	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Secondary Contaminants**

**Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	Secondary Standard
Sodium	2021	18.2	18.2 to 18.2	1	ppm	N/A

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 - F326	4/29/2022 - 6/7/2022	May pose a risk to public health.	N/A	N/A
STORAGE TANK RULE	FAILURE TO INSPECT STORAGE TANK(S) AND/OR FAILURE TO CORRECT STORAGE TANK DEFECTS - F318	04/29/2022 - 06/07/2022	May pose a risk to public health.	N/A	N/A
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION CONTROL AND/ OR BACKFLOW PREVENTION REQUIREMENTS - M614	12/16/2021 - 01/12/2022	We have an inadequate backflow prevention and cross-connection control program. Uncontrolled cross connections can lead to inadvertent contamination of the drinking water. This is due to one or more of the following: We have permitted an uncontrolled cross connection, AND/OR we have installed or permitted an uncontrolled cross connection, AND/OR we failed to comply with the requirements for surveying our system for cross connections, AND/OR we failed to complete the testing requirements for backflow prevention devices or methods, AND/OR we failed to notify the State Health Dept of a backflow contamination event.	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.

FAILURE TO INSPECT STORAGE TANK(S) AND/OR FAILURE TO CORRECT STORAGE TANK DEFECTS - F326
– This violation was caused by inappropriately plumbed floor drains that protruded into a tank at our interconnect pump station. These drains were installed per the original approved design. Repairs were not immediately made when CPNMD was informed of the deficiency, however the pump station had not been in use since October of 2022, and did not present an immanent risk of contamination. The piping has been removed, and we are now compliant.

FAILURE TO INSPECT STORAGE TANK(S) AND/OR FAILURE TO CORRECT STORAGE TANK DEFECTS - F318
– This violation was the result of frequent turnover and staffing shortages. The storage tank inspection program was not successfully completed, and was not defined effectively. With our operations team now well in place, Tank inspections are now completed on a regular, scheduled basis, meeting all requirements.

FAILURE TO MEET CROSS CONNECTION CONTROL AND/OR BACKFLOW PREVENTION REQUIREMENTS - M614
– This violation was caused by CPNMD not having the necessary access to a small number of backflow devices in the district. Additionally, CPNMD was inadvertently improperly reporting and recording data for the program. CPNMD discovered the program deficiency internally and self-reported the violations to the State. In 2021 CPNMD expanded the program. Since that time, we have utilized a contractor to survey, inspect, test, repair, and in some cases, install new backflow devices at the required locations.

The violation issued by the state in December of 2021, was for calendar years 2020 and prior. However, because the needed documentation was received by the State in January of 2022, we are required to list it on the 2022 CCR.

Non-Health-Based Violations

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

Name	Description	Time Period
REVISED TOTAL COLIFORM RULE (RTCR)	FAILURE TO HAVE ADEQUATE COLIFORM BACTERIA SAMPLE SITES - R518	04/29/2022 - Open
PUBLIC NOTICE	FAILURE TO NOTIFY THE PUBLIC/ CONSUMERS	08/30/2022 - 10/10/2022
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION CONTROL AND/OR BACKFLOW PREVENTION REQUIREMENTS - M612	12/16/2021 - 01/12/2022
CHLORINE	FAILURE TO MONITOR AND/OR REPORT - R536	04/29/2022 - 06/07/2022
CHLORAMINE	FAILURE TO MONITOR AND/OR REPORT	03/01/2022 - 03/31/2022

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.

FAILURE TO HAVE ADEQUATE COLIFORM BACTERIA SAMPLE SITES – This violation was due to one of the identified sample sites not meeting the requirements of a routine coliform sampling site. Not only has a new sample site been identified, but an entirely new sampling site plan has been created to more accurately represent the system as a whole. 20 new designated sample taps will be installed throughout our water system and will be ready for use by the end of 2023.

FAILURE TO NOTIFY THE PUBLIC/CONSUMERS – This violation was due to the district issuing a public notice for the "F326" and "F318" violations listed above outside of the time frame allotted by CDPHE. The notice was sent out 10/7/22, eleven days after the CDPHE requirement.

FAILURE TO MEET CROSS CONNECTION CONTROL AND/ OR BACKFLOW PREVENTION REQUIREMENTS - M612 This violation was caused by CPNMD not having the necessary access to a small number of backflow devices in the district. Additionally, CPNMD was inadvertently improperly reporting and recording data for the program. CPNMD discovered the program deficiency internally and self-reported the violations to the State. In 2021 CPNMD expanded the program. Since that time, we have utilized a contractor to survey, inspect, test, repair, and in some cases, install new backflow devices at the required locations.

The violation issued by the state in December of 2021, was for calendar years 2020 and prior. However, because the needed documentation was received by the State in January of 2022, we are required to list it on the 2022 CCR.

FAILURE TO MONITOR AND/OR REPORT - R536 – This violation was due to a clerical error made when submitting bacteriological samples for testing. A decimal point was entered in the incorrect place, showing a lower disinfectant residual than allowed by CDPHE. The issue was corrected and the violation was retracted.

FAILURE TO MONITOR AND/OR REPORT - This violation was due to a clerical error made when submitting bacteriological samples for testing. A decimal point was entered in the incorrect place, showing a lower disinfectant residual than allowed by CDPHE. The issue was corrected and the violation was retracted.

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
3/30/2022	F310 - STORAGE CONDITION; The condition of the storage structure may allow potential sources of contamination to enter the tank.	This violation was caused by inappropriately plumbed floor drains that protruded into a tank at our interconnect pump station. These drains were installed per the original approved design. Repairs were not immediately made when CPNMD was informed of the deficiency, however the pump station had not been in use since October of 2022, and did not present an immanent risk of contamination. The piping has been removed, and we are now compliant.	COMPLETE