

WATER DEMAND TOTAL **510.8** MG

**27,433** CUSTOMER ACCOUNTS

**34.1%** RENEWABLE WATER SUPPLIES

**1.5** WATER SUPPLY INDEX

SYSTEM INTEGRITY **8** leaks



# CASTLE ROCK WATER

## JULY 2024 MONTHLY REPORT



**1,504** UTILITY LOCATES

CUSTOMERS WITH ONLINE ACCOUNT **60.2%**

WATER QUALITY SAMPLING **0** issues

**4.06** mi LINES CLEANED  
LINES INSPECTED **11.72**mi

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# WHAT WE ARE UP TO

## Partnership for Safe Water

Taking optimization and improved water quality to the next level

Plum Creek Water Purification Facility is already one of the most advanced water treatment plants in the nation and now staff is going one step further in increasing optimization of the plant's performance. Castle Rock Water has just begun the application for the Partnership for Safe Water through American Water Works Association. This program is a voluntary effort with six drinking water organizations and more than 250 water treatment utilities and 150 distribution systems. It aims to increase the public health protection by implementing prevention programs where legislation or regulations do not exist.

Being part of this partnership demonstrates the commitment to water quality and public health that Castle Rock Water provides to its customers. Successful completion of the project, a four-phase process, will take several years. In the meantime, one of the primary benefits of the program, is that the PCWPF team meets monthly with other Front Range water providers in the partnership to discuss new technologies, issues that arise, and methods to fix and prevent those issues.

Phase I has been completed with an application for a water system that provides filtered surface water and has met all applicable regulatory requirements during the six months prior to application. Phase II has begun and involves the baseline data collection of twelve months of performance data for water turbidity and residuals. Phase III is a comprehensive self-assessment for the treatment plant system performance and operations. The Partnership provides support tools, including a self-assessment guide, report template, and materials checklist to help gauge efficiency measures. The Phase III report is reviewed by a team of utility peers and optimization experts.



*Kristen Burakou, Water Operator I*

Castle Rock Water hopes to earn the Directors Award at this stage. Phase IV is not required but provides recognition for treatment plants that have achieved the highest possible levels of performance. There are 2 levels of Phase IV performance recognition: the President's Award and the Excellence in Water Treatment. The President's Award represents meeting specific, numeric water quality standards, while Excellence Awards are for systems that demonstrate full optimization and meet all water quality and operational requirements.

Participation in the partnership will prepare Castle Rock Water for more stringent regulatory requirements, while providing a higher level of operation through performance optimization.

Being part of this partnership, puts Castle Rock Water in collaboration with American Water Works Association (AWWA), Association of Metropolitan Water Agencies (AMWA), Association of State Drinking Water Administrators (ASDWA), National Association of Water Companies (NAWS), U.S. Environmental Protection Agency (USEPA) and Water Research Foundation (WRF) and supports us in being a national leader in the water industry.

# STAFF RECOGNITION

## Certifications



Alex Daws  
Distribution 1 Operator

Casey Stevenson  
Mike Murphree  
Jake Austin  
Rob Daniels

After receiving a call from a concerned citizen about the Mitchell Gulch Pond, the staff went out to the pond and cleaned up some lumber and other debris/trash that was unsightly and could potentially cause issues. The willingness to jump in and fix a potential issue is greatly appreciated.

Lori Bentley

Lori is doing a fantastic job of carrying the GIS Department at Castle Rock Water while we continue to search to fill other positions. I am sure she is buried in work requests but she dependably assists me by collecting GPS data on new infrastructure for the CRR1/CRR2 Reservoir Project and marking proposed infrastructure locations for the Plum Creek to Rueter-Hess Reservoir Pipeline Project. She reviews project construction plans to gather information and keeps ahead of construction in collecting data for new Castle Rock Water infrastructure. Thanks Lori!



Mitch Horner  
Distribution 2 Operator



## WELCOME

Adriana Alfaro  
Water Resources Program Analyst



## WATER STAR AWARD

**Scott Tait**, Project Manager-CIP, received the Water Star Award from Thomas Hecker because of how Scott demonstrates multiple Town values and supports Castle Rock Water's mission. Scott is always friendly and outgoing, is an active listener and problem-solver, and is a great team leader. He consistently goes out of his way to look for solutions to any issue brought to his attention. He even took time out of his day to provide exceptional customer service to our residents and presented project updates at a Woodlands HOA meeting.

# WATER RESOURCES

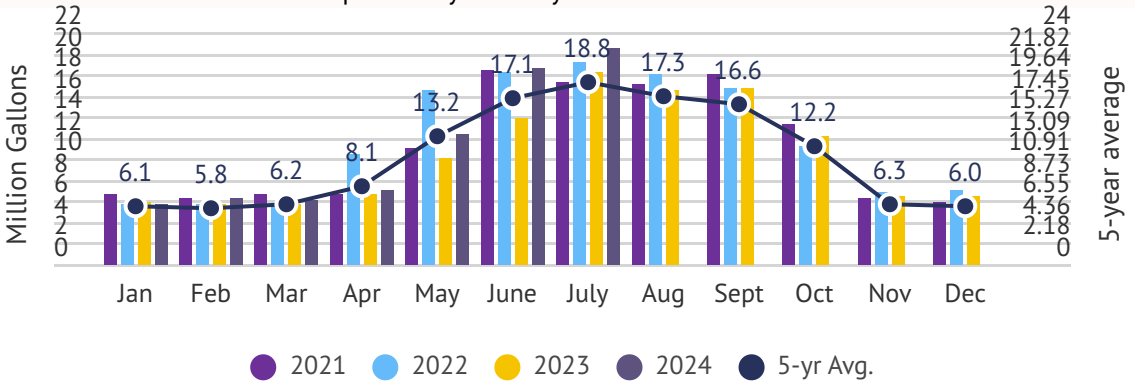
## DAILY DEMAND

- 20.4 million gallons/day (MGD)
- 5-year average: 18.4 MGD
- 11% higher than the 5-year average

Maximum demands inform us of the size of the infrastructure necessary to provide water service over short periods of time and help us to plan future water resources needs.

## MONTHLY DEMAND TOTAL

- The water demand total for July was 510.8 million gallons (MG) [1,567.6 acre-feet (AF)]
- 8% higher than the June 2024 total of 471.3 MG
- 15.1% increase from the previous year's July 2023 demand of 443.7 MG



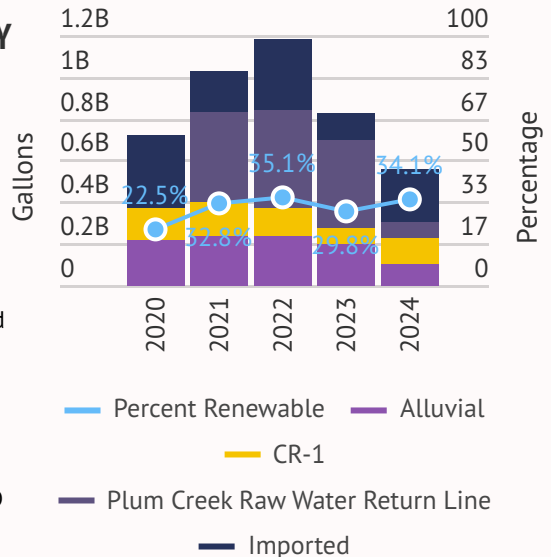
34.1%  
YTD

## RENEWABLE WATER SUPPLY

Renewable supplies are those water sources that are replenished by precipitation.

In total, renewable supplies accounted for 35.1% of the total water supply for the month (145.5 MG of 414 MG) and 34.1% of the annual water supply (1,627 MG of 4,994 MG)

- The CR-1 diversion produced an average of 1.08 MGD
- The PC diversion produced an average of 2.50 MGD
- The 14 alluvial wells produced an average of 0.33 MGD
- The renewable water production average was 4.69 MGD



# WATER RESOURCES

## STORAGE

- Chatfield Reservoir: 1,828 AF
- Rueter-Hess Reservoir: about 140 AF
- Castle Rock Reservoir No. 1 (CRR1): 132.22 AF

## REUSABLE SUPPLIES

81.4%  
July 2024

Reusable supplies are waters that are either from the non-tributary Denver Basin (deep wells) or imported supplies (such as WISE) that can be used over and over, to extinction.

## EAST PLUM CREEK FLOWS

The hydrograph indicates the estimated flow in East Plum Creek basin. (This text will indicate the peak and low points as the data is only an image.)

- Flows ranged from 4.93 to 114 cubic feet per second (cfs)
- The monthly average streamflow was 11.24 cfs.
- The 24-year mean is 9.3 cfs

## East Plum CR Abv Haskins Gulch NR Castle Rock, CO - 06708800

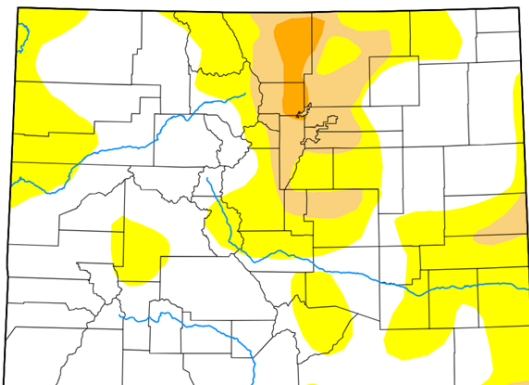
July 1, 2024 - July 31, 2024

Discharge, cubic feet per second



## DROUGHT According to the most recent U.S. Drought Monitor maintained by the United States Department of Agriculture (USDA), Douglas County is experiencing abnormally dry conditions.

This map of Colorado shows Abnormally Dry to Moderate Drought for the top center of the state with Abnormally Dry for the northwest and southeast areas of the state as August 1, 2024.



Map released: Thurs. August 1, 2024

Data valid: July 30, 2024 at 8 a.m. EDT

### Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

### Authors

United States and Puerto Rico Author(s):

[Lindsay Johnson](#), National Drought Mitigation Center

Pacific Islands and Virgin Islands Author(s):

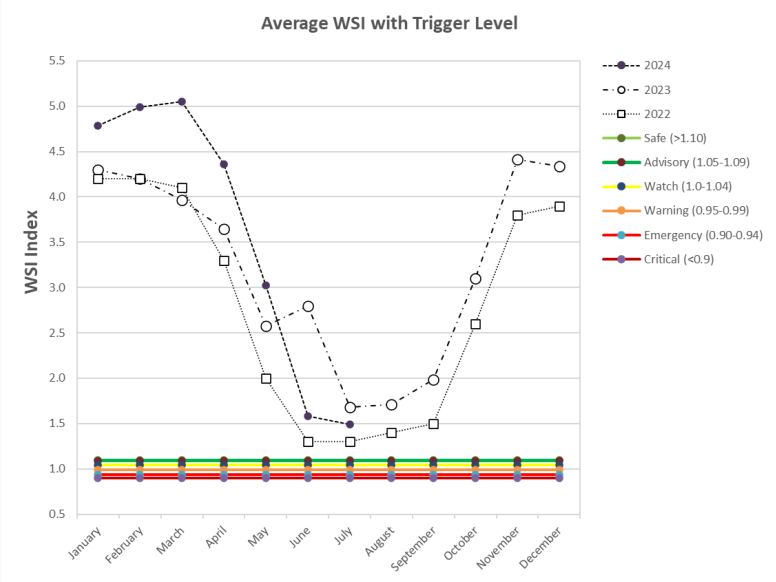
[Brad Rippey](#), U.S. Department of Agriculture

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# WATER SUPPLY INDEX

WATER SUPPLY INDEX  
**1.5**  
July average



This graph shows historical WSI data for 2022 and 2023 along with a peak WSI of 5 in March 2024 and July's WSI of 1.5.

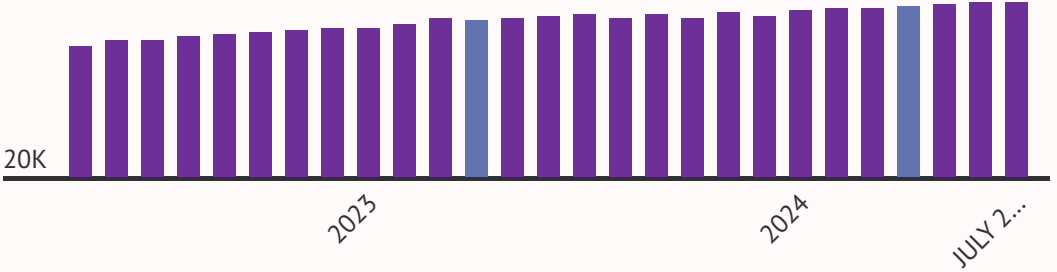
The Town of Castle Rock's Drought Management Plan uses a Water Supply Index (WSI) for the Town that accounts for local conditions relative to the Town's capability to address our water resources and daily water demands. Anything below 1.1 will trigger a drought stage relative to its severity.

# BUSINESS SOLUTIONS

## NUMBER OF CUSTOMER ACCOUNTS

27,433

30K



### CUSTOMER SERVICE

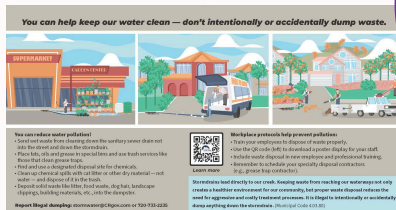
JULY	2022	2023	2024
Phone calls	1974	2188	1323
Walk-ins	171	83	83
Transfer of service	464	263	300
Email inquiries	339	102	775

### CUSTOMER OUTREACH

Facebook	6 posts	32.8 k reach	199 engagement	10 shares
Instagram	1 posts	3.4 k reach	126 engagement	1 comment
LinkedIn	2 posts	1.2k impressions	26 reactions	
Email	11,575 reach	53% open rate		
HOA email	101 open	53% open rate		

TOPICS  
Smart Irrigation Month  
Cycle & Soak  
Drought Management

Postcards were sent to Town businesses regarding water pollution awareness.



# METER SERVICES

27,241

Meters read

Meters are read the first two days of every month. The number of meters read continues to increase month over month.

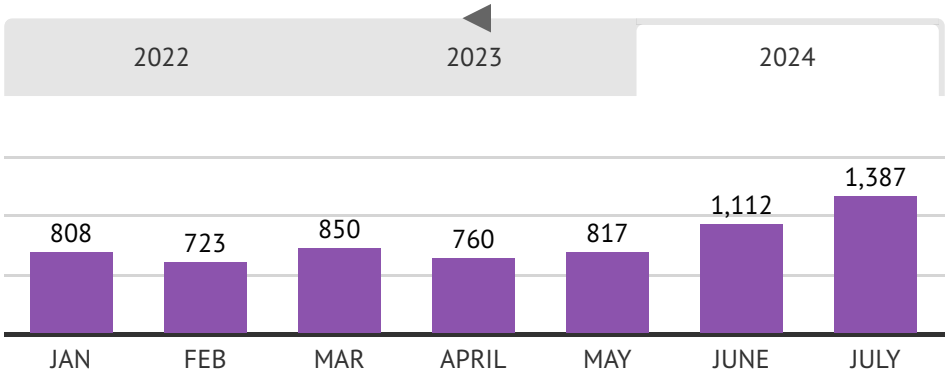
Skipped reads

0.46%

The AWWA standard is 2%, so we still continue to stay well below the industry average.

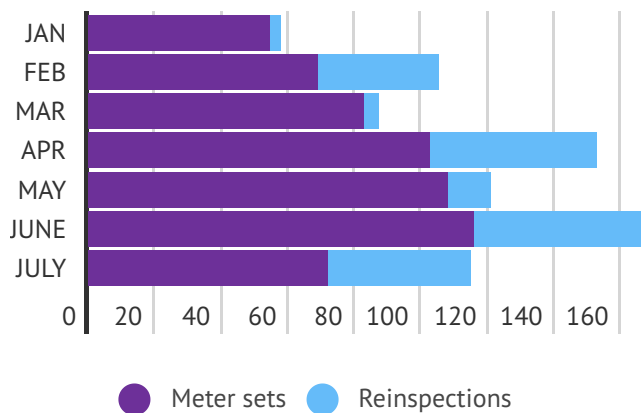
Measuring skipped reads is a strong indication of the level of preventative maintenance being done by our team. A skipped read is indicative of a problem with the metering infrastructure. Fewer skipped reads means more properly working meters, which is good for all our customers.

## ALL SERVICE WORK ORDERS



## METER SET INSPECTIONS

Meter set inspections are required on all new meters installed. This ensures that the meters are installed per specifications and according to Town code. At the time of the inspection, the curb stop is tested for operability and the MXU is installed which provides reading capability for our drive by technology. Re-inspections are needed to ensure installation meets code when original inspections are failed.





# OPERATIONS



## OUTAGES

GOAL: <5 % of our customers will experience water outage for one or more events totaling more than 30 hours per year.



## PRESSURE

GOAL: 1% of our customers will experience less than 43 pounds per square inch (psi) of pressure at the meter during normal operations.

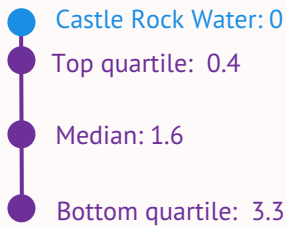


## OVERFLOWS

GOAL: Prevent 100% of sewer system overflows with line inspections and cleaning.

### SANITARY SEWER OVERFLOWS

AWWA Index: SSO rate/100 mi

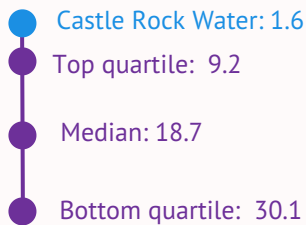


## LINE BREAKS

GOAL: Remain in the top quartile for AWWA benchmarking for leaks and breaks through regular maintenance and rehabilitation.

### WATER SYSTEM INTEGRITY

AWWA Index: Leaks and breaks/100 mi



# OPS in the field



There was a failed wet tap for a fire hydrant on a 16” main in Crystal Valley. Staff removed the failed tapping saddle and installed a leak repair coupling to stop the leak. They have scheduled the large repair to be completed by one of our on-call contractors to get the fire hydrant back in service.



There was a main break in The Meadows on an 8” ductile iron pipe, due to a one-and-a-half-inch corrosion hole. Our on-call contractor conducted the repair which affected 13 residents, with low pressure overnight, for approximately 1.5 hours.

There was a service line leak in Castle Oaks, on the Town’s side, nine residents had reduced to no pressure for one hour during the repair.

There was a main break on an 8” ductile iron pipe in the industrial district off Wolfensberger Rd. Four businesses had lower-than-normal pressure for 12 hours during the repair, which was completed by the on-call contractor.

There was a service line leak in the Redhawk area, four homes experienced little to no pressure during the 30-minute repair.



The Stormwater Maintenance team cleaned out a clogged underdrain on Skyward Way. A five-gallon bucket of roots was removed to restore flow to the drain.