

WATER DEMAND TOTAL **471.3** mg

**27,342** CUSTOMER ACCOUNTS

**23.6%** RENEWABLE WATER SUPPLIES

**1.6** WATER SUPPLY INDEX

SYSTEM INTEGRITY **3** leaks



# CASTLE ROCK WATER

## JUNE 2024 MONTHLY REPORT



**1,504** UTILITY LOCATES

CUSTOMERS WITH ONLINE ACCOUNT **60.5%**

WATER QUALITY SAMPLING **0** issues

**8.81** mi LINES CLEANED  
LINES INSPECTED **4.06** mi

[View report online](#)

Made with

infogram

# WHAT WE ARE UP TO

## New Sewer Line CCTV

Upgraded inspection equipment increases operational efficiencies and decreases maintenance costs

With more than 1.7 million feet of sewer lines, how does Castle Rock keep sewer line backups at bay? With the help of a robot, of course. Castle Rock Water just upgraded to a new remote CCTV inspection camera. The goal was to inspect 1/5 of the system each year but the previous equipment was failing, preventing the department from reaching its goal. Castle Rock Water hired an outside company to inspect the sewer lines via acoustic technology. While this was a great first step in identifying problem areas there are a slew of issues that were not found. Sewer lines should have a certain slope and flow. Old and new construction, settling soil and invading vegetation can affect this. Defects in the pipes or not being sealed properly wear over time. And of course, there is debris intentionally and unintentionally dumped into the sewer.

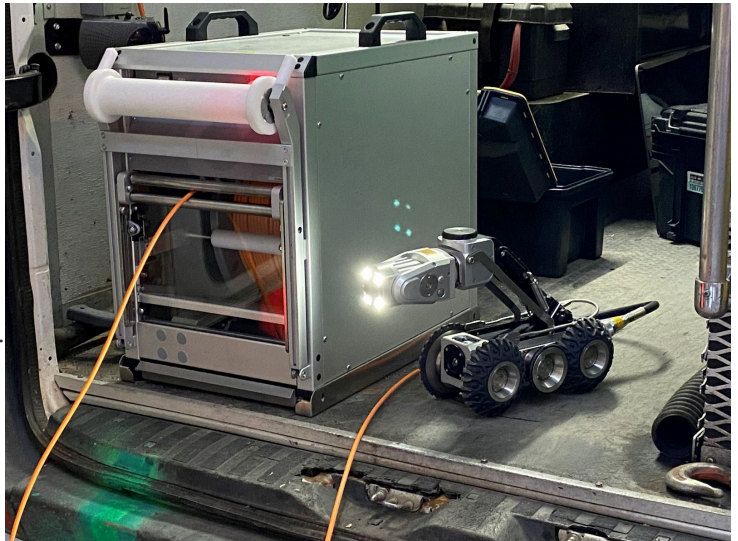
In addition to continuing the exceptional service for an efficiently running sewer system, sewer system overflows are a nasty business that affects the health and well-being of residents, nearby wildlife and creek water quality. Proper inspections, maintenance and rehabilitation of the sewer lines is a cost savings that spreads across departments.



*Phil Jolly manning the CCTV*

The new CCTV is easier to use in terms of camera maneuverability, data technology and portability. It is usually housed in a van, but can be easily transported if necessary. It has added dexterity and is small enough to peak around any corner. If residents see a white van, clearly marked with Castle Rock Water, with a little wheeled robot dropping down into the sewer manholes, it is the Collections Team ensuring your pipes are clear!

*The camera is ready for action!*



## SCADA Upgrade at Founders Water Treatment Plant

The Founders Water Treatment Plant Programmable Logic Controller (PLC) and plant upgrade is complete! With this project, the Castle Rock Water team had the opportunity to upgrade the older Bristol PLC that has been running the plant for the past couple of decades. It was replaced with a new Allen-Bradley PLC. Along with that, the project was able to relocate the control room out of the electrical room and staff created a dedicated control room near the pipe room. This plant is now outfitted with new flow meters, chemical analyzers, transmitters and valve actuators. It has been a journey getting to this point, but it is great to say that the Founders plant is setup to run well for the next couple of decades.



*New Motor Control Center and Programmable Logic Controller*



*New Control Room*



*New PLC cabinets with PanelView screens*

*New actuators and transmitters*



# STAFF RECOGNITION



Jon Lutterman  
Certified Well Meter Tester



Zuzanna Howard  
Certified Well Meter Tester



Kyle Buntin  
Water Operator Distribution 4  
PROMOTED to  
Distribution Supervisor



Courtney Convy  
Certified Landscape Auditor



Tim Dagg  
Certified Landscape Auditor

Way to go!

## Safety Standdown June 12, 2024



# STAFF RECOGNITION



## WELCOME

### New Hires



Mark Morgan  
Water Plant Operator I



Alex Miller  
Sr. SCADA Controls Technician



Nichol Bussey  
Mark Billman  
Jon Lutterman  
Chad Francis  
Josh Hansen  
Andy Dieter  
Susan Salvatori

Recognition of the Safety committee for all of their hard work on the Safety Stand down. The group did an amazing job. Each activity was interactive and interesting, the staff members were engaging and kept staff involved with the activities, and it was obvious that a lot of thought went into the planning of the stand down.

Thank you for caring about the safety of the CRW staff.

Maryjo Woodrick

Maryjo took the time out of her busy schedule to assist me in creating a survey through SurveyMonkey for the EAT Team for an upcoming event we are having, as I don't have access. I truly appreciate her time and effort.

Maryjo Woodrick

When a Town vehicle is used on a toll road the billing and payment process can be very complicated. To solve this problem Maryjo has been working to order transponders for the CRW vehicles that have been used on the toll way the past six months. In addition, she said she would order additional transponders in the future as needed. She set the billing up on her P-card. I'm sure this process has taken her a lot of time and I really appreciate her efforts, which will improve our efficiency in paying toll charges in the future.

Paul Rementer

Paul is our go-to guy at Castle Rock Water regarding all things budget! He is always willing to help and jumps right into any issue we may have and does it with a smile! Recently, Paul helped the Operations Team with the budget forecasting process. He showed us the filters that he built in, to help us identify line items that needed attention. He then proceeded to walk through each division's budget, teaching us how this was done, entering the budget amounts. The values that he represents are encouraging creativity and innovation as well as providing excellent internal customer service. Thank you, Paul!

## WATER STAR AWARD

**Thomas Hecker**, Field Services Superintendent, was awarded the Water Star Award from Josh Hansen for being so positive, helpful and exemplifying the Town values.

# WATER RESOURCES

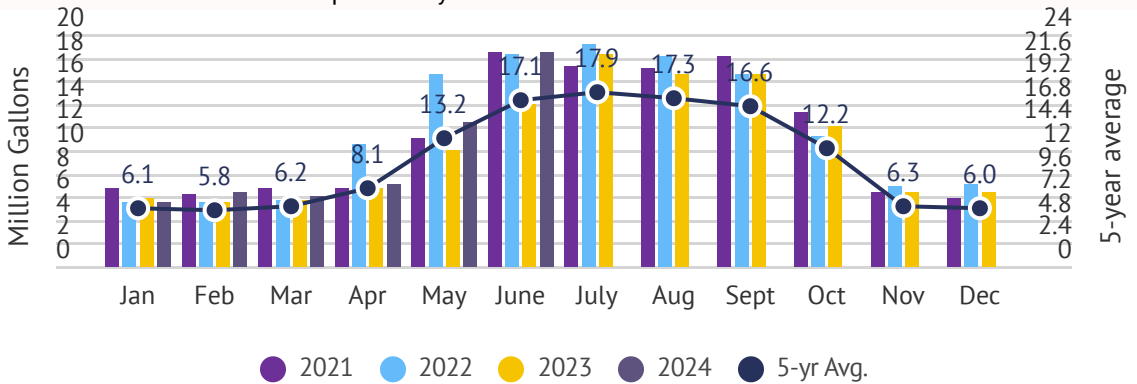
## DAILY DEMAND

- 18.5 million gallons/day (MGD)
- 5-year average: 17.1 MGD
- 8% higher than the 5-year average

According to the National Weather Service, June 2024 was the second warmest June on record for Colorado.

## MONTHLY DEMAND TOTAL

- The water demand total for June was 471.3 million gallons (MG) [1,446.4 acre-feet (AF)]
- 81% higher than the May 2024 total of 260.9 MG
- 73.3% increase from the previous year's June 2023 demand of 271.9 MG



38.2%  
YTD

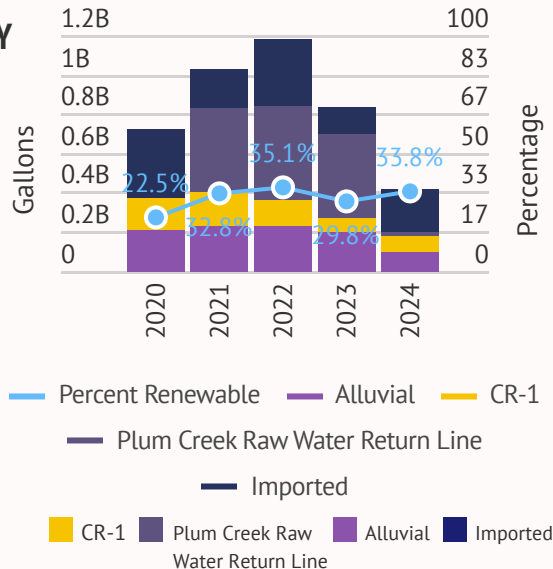
## RENEWABLE WATER SUPPLY

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

In total, renewable supplies accounted for 23.6% of the total water supply for the month (93.5 MG of 396 MG) and 33.8% of the annual water supply (410 MG of 1,213 MG)

- The CR-1 diversion produced an average of 1.05 MGD
- The PC diversion produced an average of 1.00 MGD
- The 14 alluvial wells produced an average of 0.65 MGD
- The renewable water production average was 3.12 MGD

\*Due to construction operations at the Castle Rock Reservoirs, we were not able to divert and store water in CRR1 during the month of May.



# WATER RESOURCES

## REUSABLE SUPPLIES

### STORAGE

- Chatfield Reservoir: 1,965 AF
- Rueter-Hess Reservoir: 140 AF
- Castle Rock Reservoir No. 1: 156.30 AF

25.4%  
June 2024

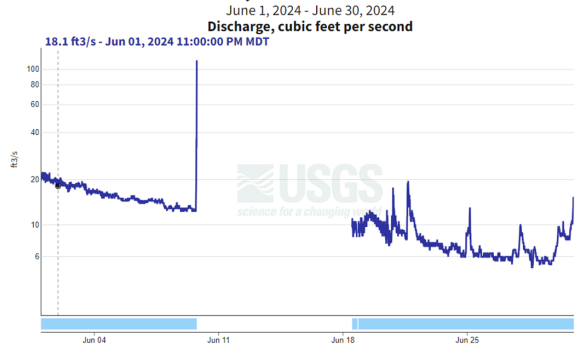
Reusable supplies are waters that are either from the non-tributary Denver Basin (deep wells) or imported supplies (such as WISE) that can be used over and over, to extinction.

### 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.)

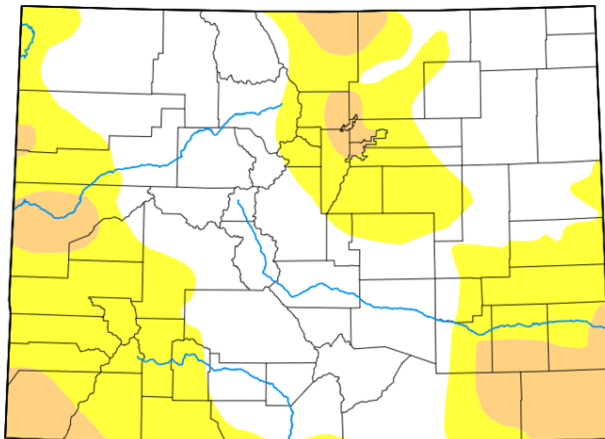
- Flows ranged from 4.93 to 114 cubic feet per second (cfs)
- The monthly average streamflow was 11.24 cfs.
- The 24-year mean is 9.3 cfs

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



**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 southeast and southwest corners of the state and top center for June 25, 2024.



Map released: Thurs. June 27, 2024

Data valid: June 25, 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):  
[Adam Hartman](#), NOAA/NWS/NCEP/CPC

Pacific Islands and Virgin Islands Author(s):  
[Rocky Bilotta](#), NOAA/NCEI

# WATER SUPPLY INDEX

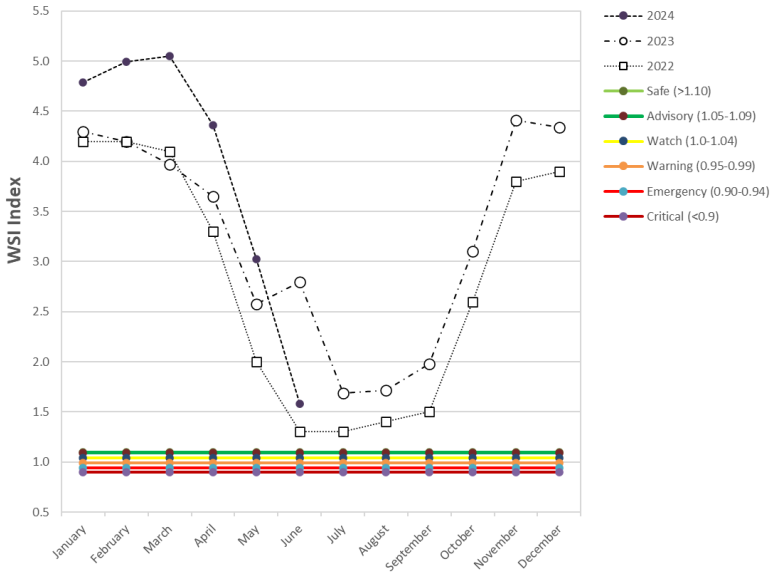
WATER SUPPLY INDEX

**1.6**

June average

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.

Average WSI with Trigger Level



This graph shows historical WSI data for 2022 and 2023 along with a peak WSI of 5 in March 2024 and May's WSI of 3.0.

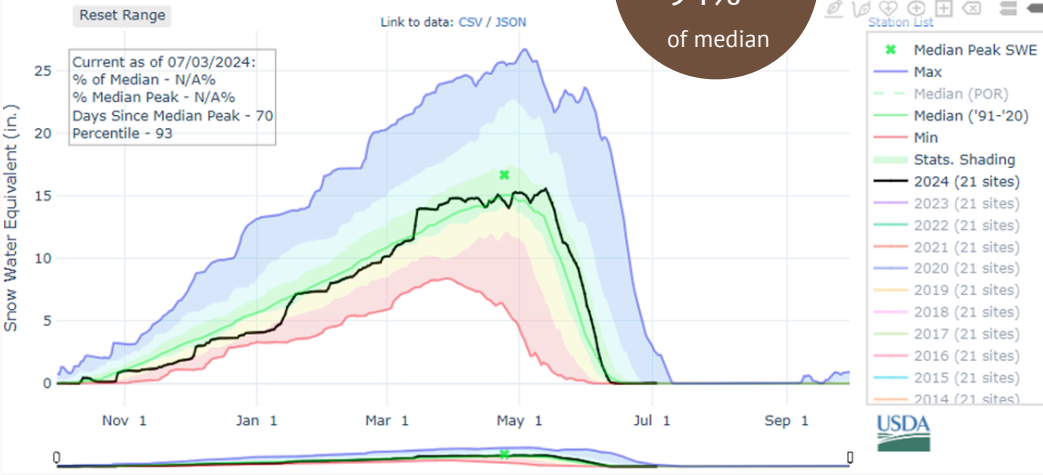
# SOUTH PLATTE RIVER BASIN SNOW PACK

This complex graph shows historical precipitation 2014 to 2024.

YEAR TO DATE PRECIPITATION

**94%**

of median



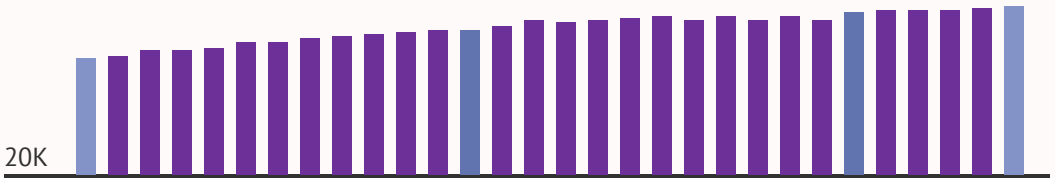


# BUSINESS SOLUTIONS

## NUMBER OF CUSTOMER ACCOUNTS

30K

27,342



JUNE 2...

### CUSTOMER SERVICE

MAY	2022	2023	2024
Phone calls	1941	2176	1273
Walk-ins	184	99	75
Transfer of service	622	338	246
Email inquiries	450	183	461

### CUSTOMER OUTREACH

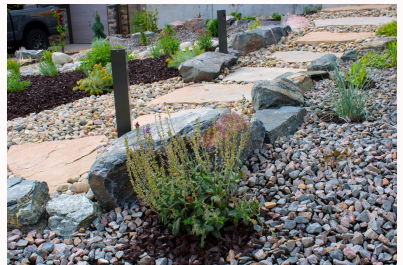
Facebook	3 posts	9.1 k reach	64 engagement	4 shares
Instagram	2 posts	1.5 k reach	56 engagement	0 shares
LinkedIn	1 posts	358 impressions	16 reactions	
Email	12,527 reach	60% open rate		
HOA email	119 open	64% open rate		

TOPICS

- ColoradoScape contest
- Water waste / violations
- Workshops

# OUTREACH

## COLORADOSCAPE CONTEST



To further educate our residents about the beauty and benefits of the a ColoradoScape, Castle Rock Water hosted its 6th annual ColoradoScape makeover contest to give away a free \$9,000 front yard landscape. This social media contest was held in April to coincide with Water Conservation Month. To enter, residents (or in this case, the children of the homeowner), submitted a 30 to 60 second video on social media with fun tips about the benefits of ColoradoScape. This home, located in Cobblestone, has more than 80 plants including a Snow Globe crabapple, Vanderwolf pine and native dwarf rabbitbrush.

REACH  
>100,000  
impressions  
(a 20% increase  
from 2024)

The social media campaign included past winners touting the benefits, along with images of the color and beauty of a low-water landscape. Posts were across all Town of Castle Rock social media platforms including Facebook, Instagram, LinkedIn and NextDoor.

# METER SERVICES

27,057

Meters read

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

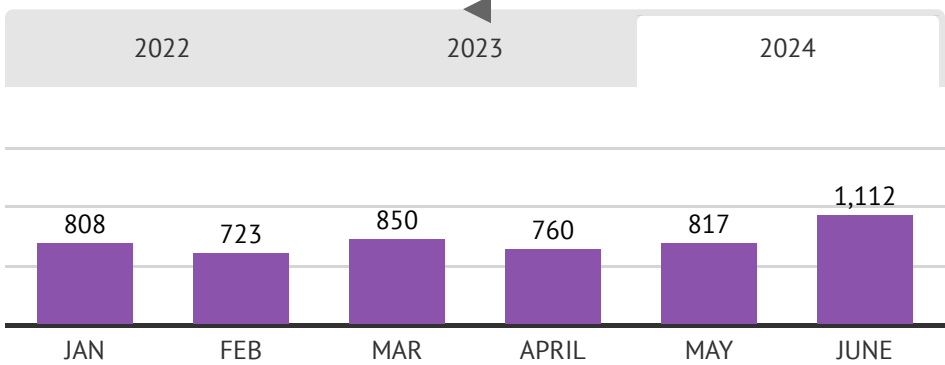
Skipped reads

0.45%

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

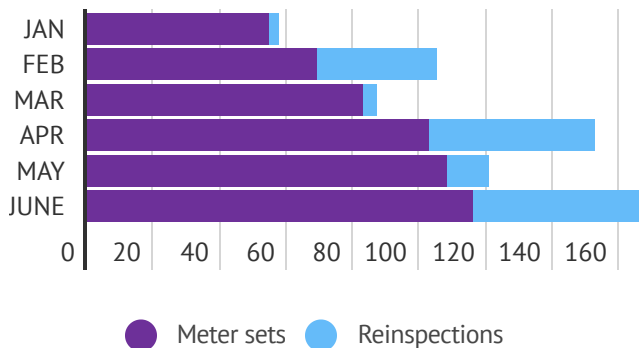
*Measuring skipped reads is a strong indication of the level of preventative maintenance being done by our team. A skipped read is indicative of a problem with the metering infrastructure. Fewer skipped reads means more properly working meters, which is good for all our customers.*

## ALL SERVICE WORK ORDERS



Meter set inspections 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.

## METER SET INSPECTIONS



# OPERATIONS



## OUTAGES

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



## PRESSURE

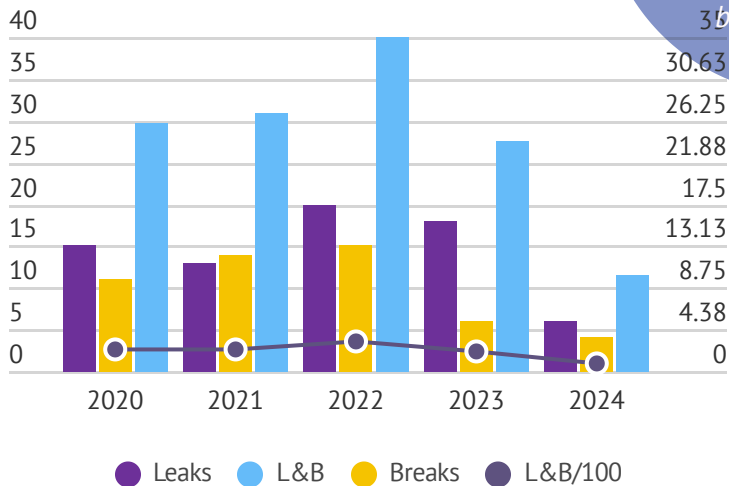
GOAL: 1% of our customers will experience less than 43 pounds per square inch (psi) of pressure at the meter during normal operations.



## OVERFLOWS

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

### WATER SYSTEM INTEGRITY



*Castle Rock Water remains in the Top Quartile for water system integrity based on the American Water Works Association benchmarking.*

# OPS in the field

*There were two main breaks on 6" ductile iron pipe in the Canyon Dr. area. During each repair 15 homeowners were without water or had reduced pressure.*



*An asphalt contractor working in a manhole knocked off the air relief valve, with spectacular results. The waterline was shut down quickly to isolate the unit during the repair.*



*Mike Wilder created a ColoradoScape area at the entrance to the Meadows Water Treatment Plant. This area had been just dirt for a number of years, since the sidewalks were replaced. Great improvement!*



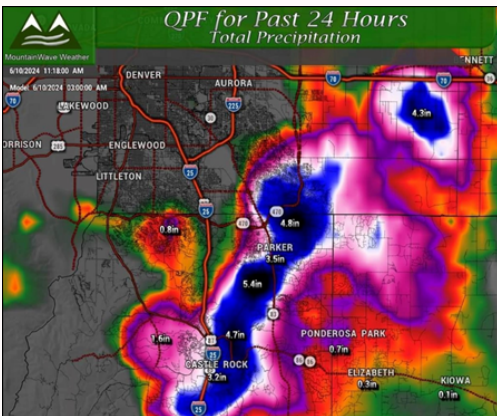
# STORMWATER COMPLIANCE Q2 2024

As an integral part of the Town's vision of providing residents the highest quality services at the best value, the Stormwater Division manages stormwater runoff to minimize flooding hazards and to protect water quality in our watersheds.

Services the Stormwater Division provides include:

- Construction site inspections
- Spill reporting, enforcement and response
- Public education and outreach
- Pond maintenance oversight
- Floodplain management
- Design and construction of SW CIP projects

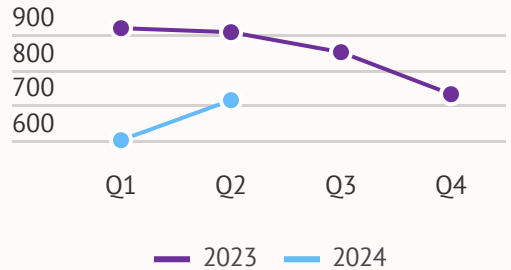
## INTENSE STORM EVENT



The evening of June 9 brought a slow-moving intense storm to Castle Rock bringing 3-5 inches of rain and hail, flooding areas of Crystal Valley Ranch and Lanterns/Montaine. The Town received over 40 calls and emails, including photos and video, reporting numerous issues due to the runoff. CRW is still investigating the size of the storm and impact, but it is believed that the storm was greater than a 100-year storm, possibly much greater.

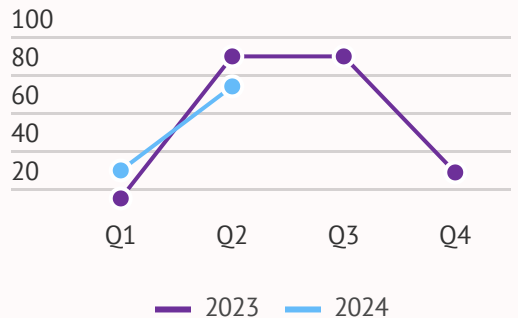
## INSPECTIONS

The inspection team regulates permitted residential and commercial properties. Total inspections tracked 21% lower than in Q2 of 2023 but 19% higher than Q1 of 2024.



## CUSTOMER SERVICE

The Stormwater Division receives various customer concerns, from nuisance groundwater and illicit discharges, to dust, and infrastructure maintenance. Complaints often rise and fall with weather patterns.

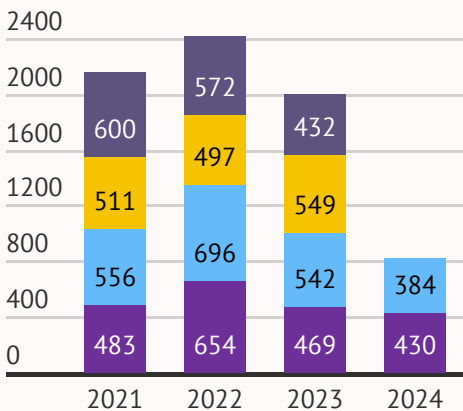


# PLAN REVIEW Q2 2024

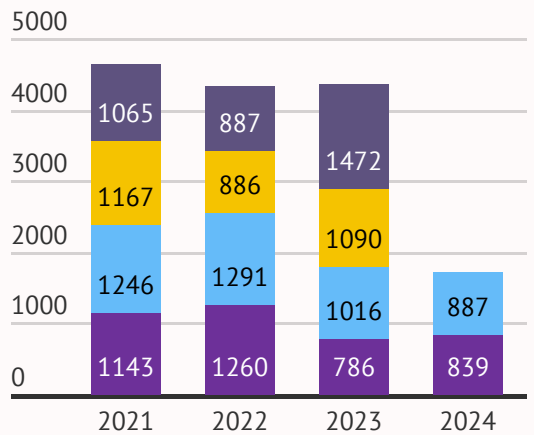
Castle Rock Water Plan Review team reviews planned development plans, site plans, construction drawings, water efficiency plans and technical reports for each project to ensure the public infrastructure built by the developer is following the criteria set by the Town, with respect to:

- Water
- Sanitary sewer
- Stormwater
- Drainage
- Flood Control
- Landscape and Irrigation
- Temporary Erosion and Sedimentary Control

## PROJECT REVIEWS



## PLAN REVIEWS



● 1st Q ● 2nd Q ● 3rd Q ● 4th Q

● Q1 ● Q2 ● Q3 ● Q4

*Each project may have several plans related to it.*

## PERMITS

The plan review team reviews building permits to verify proposed water demand to size meters and assess system development fees.

PERMITS	Single Family	Commerical	Misc	Multifamily	TOTAL
Q1	333	50	15	11	409
Q2	443	39	17	0	499