

Our Vision: We will be a national leader among water utilities, focused on customer satisfaction and delivering outstanding quality and value.

Tank 3 Drain Line Project

Water Tank 3 is located on the butte south of 5th Street, just east of downtown Castle Rock. The tank was constructed in 1969 and the overflow discharge line was constructed to discharge to grade on the southwest side of the tank. When the tank overflows, the



discharge will flow down the slope towards Tacker Court. In the last few years, several new residential homes have been built on the east side of Tacker Court. Overflow discharge flows will now flow into the back yard of these residential homes.

The project constructed a new gravity storm sewer to direct the tank overflow discharge to the northeast of the tank. The discharge will be directed to an existing drainage that will not impact local properties. A new drain valve was also installed on the transmission main that will connect to the new drain line. Previously, operations had to allow the system's demand to draw down the tank then manually pump the remaining water out to allow for routine maintenance. The project also included a new by-pass main around the tank. This will allow operations to maintain the distribution looping between Tacker Court and Reservoir Road when the tank is down for maintenance. This new by-pass main will also include a pressure relief valve to protect the distribution system from overpressure events during tank maintenance.

The project was awarded to 53 Corporation. The total project cost was \$387,455 and was completed within the approved budget. The completion of the project was delayed due to the wet spring weather. The delayed completion did not have any impact on the continued use of Tank 3.



Good Job!

NEW CERTIFICATIONS

The water, wastewater and stormwater utility business is highly technical and regulated. As such, Castle Rock Water has to maintain an extensive staff of professionally licensed individuals. Most of these licenses require specialized education and the passing of state testing, as well as proof of continuing education.





Lanre Ajayi Distribution 4 Operator Certification

Liz Knox Water Treatment B Operator Certification



Jane Chrestensen Sr. Billing Specialist

CONGRATULATIONS ON YOUR PROMOTION!

* *



The Water Star Award recognizes a coworker within Castle Rock Water for doing an excellent job in fulfilling the Department's Vision and Mission.

Safety Demonstrated outstanding safety conscious behavior in performing a job or task.

Exceptional Service Provided exceptional service to either an internal or an external customer Quality

Delivered excellent quality service or product Value

Provided remarkable value for our customers Environmental:

Demonstrated extraordinary environmental responsibility

Fiscal Demonstrated superb fiscal responsibility



Harvey Bessonett,

SCADA Supervisor, received the Water Star Award from Matt Hayes for his consistent and thorough assistance. Harvey took on the supervisor position several years ago and his attention to the system and processes has been noticed and appreciated. Matt respects Harvey's feedback on projects as well as his assistance whenever called upon.

Good Job!

Welcome to the team



Michelle Strang Distribution Operator 1



David Madsen Water Utility Operator Apprentice





Nathan Hanick Utility Locator



Zach Montgomery Distribution Seasonal



Nolan Ferguson Water Operations Seasonal



Ethan Coyhis Water Operations Seasonal

WATER QUALITY REPORT

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

Castle Rock Water collects water samples throughout the entire distribution system and conducts thousands of tests to ensure clean and safe water for the Town. The 2020 Water Quality Report shows that your drinking water is safe, in compliance and surpasses requirements set by the EPA and Colorado Department of Public Health and Enivornment.

Find the report at CRgov.com/ WaterQualityReport.

Conservation

Education is key

The Conservation Division introduced a new way of reaching out to customers with a free, online webinar in which customers can ask specific landscape questions that are lingering on their minds. The monthly webinar started in June and is currently hosted by Rick Schultz, Water Efficiency Supervisor.

The next Ask the Expert webinar is scheduled for Tuesday, July 13, 6-7 p.m. and with July being Smart Irrigation Month, Rick is focusing on how to program those pesky irrigation controllers.

Registration can be found on CRconserve.com.



Water Demand



Max daily water demand

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.

June 2021

18.4 million gallons/day

June 5 yr. avg.

16.4 million gallons/day

12% higher than average

Max daily water demand in 2020 17.3 MGD in August (record breaking)

Renewable water supply

- The CR-1 diversion produced an average of 1.38 MGD for the month of June.
- The Town's thirteen alluvial wells, CR-1, • and the Plum Creek Raw Water Return Line (PCRWRL) produced a total of 106.00 MG of renewable water (and an average of 2.06 MGD).
- In total, renewable supplies accounted for 32.6% of the total water supply for the month and 32.7% of the annual water supply (1,239 MG or 3,804 AF) to date.

Water demand total

Water demand total is how much water was used over the entire month. Population and weather changes can significantly affect usage.

June	2021	4
June	2020	4

412.7 million gallons

441.5 million gallons

6.5% decrease from last year

Water demand total for 2020 3.251.7 MG



Our goal is to reach 75% renewable water by 2050.

Note: In 2020, renewable water production was down due to the construction of Advanced Treatment processes to the Plum Creek Water Purification Facility.

Water Demand

Renewable supplies are those water sources that are replenished by precipitation (think of our alluvial wells, CR-1, PCRWRL, and WISE), whereas reusable supplies are those waters that are either from the Denver Basin (deep wells) or imported supplies (such as WISE, RHR, PCRWRL) that can be used over and over, to extinction. The average reusable supplies used by Castle Rock for 2021 through June is 40.6%.

Alluvial supply

June 2021 production: 20.3 MG

- The graph shows the monthly production of the Town's alluvial well system, which helps to supply PCWPF. The production from the alluvial wells in June was 20.3 MG
- We had three alluvial well rehabilitations completed this year.



East Plum Creek Flows Average May streamflow: 11.8 cfs

The flow hydrograph represents stream flows in East Plum Creek (EPC) taken from the stream gauge located above Haskins Gulch. The hydrograph shows that estimated flows in the East Plum Creek basin ranged between 2.34 and 191 cubic feet per second (cfs) during the month of June, with



an average streamflow of 11.8 cfs. This month's average streamflow of 11.8 cfs is above the 20-year median of 5.5 cfs.

There were active calls on the South Platte River in June. Some of the active calls have had a more senior water right than some of the Town's water rights. This means that those diversions are out-of-priority, so the stream depletions will be replenished by nontributary return flows. This also means that the Town will have slightly less reusable water going down Plum Creek during an active call. The priority date on a river call may change each day depending on the stream flow available and the seniority of the diversions that need water on that day. As a participant in the Chatfield Storage Reallocation Project, the Town is able to store up to 2,000 AF of water in Chatfield Reservoir. This means that our reusable water that flows down Plum Creek and past CRR1 can be captured and stored at Chatfield for later use. First storage started on May 15, 2020 and to date we have 1,657 AF of water stored in Chatfield.

Water Demand

Drought Monitor

The average WSI for June was 1.6, well above the 1.1 trigger level, which is considered "good."

According to the U.S. Drought Monitor maintained by the United States Department of Agriculture (USDA), approximately 41.62% of Colorado is experiencing Moderate Drought (D1) to Exceptional Drought (D4) conditions, with no drought conditions in Douglas County or eastern Colorado. The Town of Castle Rock Drought Management Plan uses a Water Supply Index (WSI) for the Town that is similar to the U.S. Drought Monitor in that it provides us an indicator to drought level; however, the WSI accounts for local conditions relative to the Town's capability to address our water resources and daily water demands. The WSI is calculated by taking the sum of our supply (deep groundwater, alluvial wells, surface water, and WISE) and dividing that by our maximum daily demand. We generally want to see a WSI above 1.1, which means that we have enough resources to meet our demands. Anything below a 1.1 will trigger a drought stage relative to its severity.

The NRCS Colorado Precipitation Report June 30, 2021

South Platte River Basin:

- YTD precipitation is at 97% of average
- YTD snowpack is completed melted for the season

U.S. Drought Monitor Colorado June 29, 2021 (Released Thursday, Jul. 1, 2021) Valid 8 a.m. EDT





The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

Deborah Bathke National Drought Mitigation Center



droughtmonitor.unl.edu

Stormwater Compliance

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
- Public education and outreach
- Pond maintenance oversight
- Floodplain management

Inspections

The inspection team regulates permitted residential and commercial properties.

The second quarter of 2021 was a rainy one. Higher-than-normal rainfall in May resulted in a backlog of final inspections in June. Contractors were not able to drive equipment on finished single-family home lots due to muddy conditions.



Two stop work orders were issued in May due to breaches in perimeter controls from heavy rain and hail.



Customer Service

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

A rainy May and drier June resulted in complaints trending with the weather. We received many calls in May from residents concerned with sump pumps running more often than normal and algae on the sidewalks.



A private contractor mixed concrete on the street in front of an inlet. This violation resulted in the Town contacting the CO Environmental Task Force for assistance.

Constant water causing algae on sidewalks.



Plan Review

For each commercial and residential project submitted for development review, Castle Rock Water provides plan review, as appropriate, for:

- Water
- Sanitary sewer
- Stormwater
- Landscape/irrigation
- Temporary erosion and sedimentary control

Castle Rock Water reviews site plans, construction drawings and technical reports for each project to ensure the public infrastructure built by the developer is following the criteria set by the Town.

Reviews

225 Development Services PROJECT plan reviews 147 Building PERMIT reviews for 80 separate projects

Total Distinct	2020:	2021:	Decreased
Projects	86	80	7%
Total Dev Review	2020:	2021:	Increased
project reviews	208	225	8%
Total Bldg permit reviews	2020:	2021:	Decreased
	164	147	10%

Building permits are reviewed to calculate the system development fees for each lot, as determined by the number of fixtures, irrigated area, meter size, etc. This is necessary for proper billing.



CRWater Plan Review DS projects reviews + BLDG permit reviews





June 2021 total reviews: 372

Service levels

The average number of days assigned to review: 14.0 days The average days to complete assigned reviews: 12.9 days

Plan Review: 94% of the reviews were completed on-time

Review time for each plan is 1 to 5 weeks, a permit is 3-5 days.



Business Solutions

Customer Service & Billing





Customers benefit from having an online H20access account with 24/7 access to statement information, 12 months of statement history, helpful email account reminders and safe and secure online payment options.

2021/Q2 statistics

- 16,323 or 66% of our total customers have enrolled in an online account
- 10,350or 63% of the customers with an online account have chosen to go to paperless billing



Mywaterbill Email Inquiries



Customer Outreach

Water Outreach Social Media Stats	REACH
Oil spots in the garage—6/2	2,219 people
Don't know mulch—6/9	4,116 people
What's a perennial—6/16	2,346 people
Water Reuse Video #1 Re-release—6/23	4,806 people 3,212 views
Smart Irrigation Month—6/30	1,777 people
Duck Derby & Stormwater—6/4	3,063 people







Keeping customers informed about the value of water.

Ask the Expert—6/8	4,935 people
Household cleanup roundup SHARE—6/8	1,877 people
Poop Fairy (Belle) spotting-6/21	4,578 people
No Poop Fairy video—6/29	2,835 people 1,455 views
EMAIL: What the mega drought means to Castle Rock.	9,032 opened (44% open rate)
EMAIL: Got landscape questions? Ask the Expert	6,418 opened (32% open rate)

Meters

Meters Read

Meters are read the first three days of every month. The number of meters read continues to increase month to month and is a significant increase over last year.

Skipped Reads

June 2021: 0.29%

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 (i.e. battery, wiring, etc.). Fewer skipped reads means more properly working meters, which is good for all our customers.

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

Meter Set Inspections

Re-inspections: 49%

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.

Work Orders

June 2021: 1,106

Meter services performs a variety of service work orders every month beyond meter reading. These include curb stop maintenance, meter replacement and repair, final reads for transfers of service,

disconnection and reconnections, meter set inspections, etc.



Meters Read





Operations & Maintenance

LEVELS OF SERVICE

June 2021

Drinking Water Compliance	Castle Rock Water will deliver water that meets or surpasses the requirements of both Primary Drinking Water Regulations and Secondary Maximum Contaminant Levels 100% of the time.	<i>Ninety routine samples were completed.</i> All samples were within the parameters set forth by the Safe Drinking Water Act and Colorado Drinking Water Standards.
Pressure Adequacy	< 1% of our customers will experience less than 43 pounds per square inch (psi) of pressure at the meter during normal operations.	There were no water pressure issues this month.
Sewer System Effectiveness	<1% of our customers will experience a sewer backup caused by the utility's sewer system per year. Castle Rock Water remains in the Top Quartile for least number of sewer backups based on the American Water Works Association benchmarking.	There were no sewer system issues this month.
Drinking Water Supply Outages	<5% of our customers will experience water outages for one or more events totaling more than 30 hours/year. Castle Rock Water remains in the Top Quartile for water system integrity based on the American Water Works Association benchmarking.	 There were six water system integrity issues in June. Contractors damaged a service line and a main in Glovers and the South Street area. The Distribution team assisted the contractors as they made the appropriate repairs. Contractors working on the Tank 3 project, installing a main in East Town, found a leaking fitting, resulting in nearby residents having little to no pressure during their repair. Contractors also had a delay installing a water main, including a break to the existing main and phone lines to a commercial area on south Wilcox. Nearby businesses had limited to no water service for over 20 hours and the Distribution team assisted them in order to complete the project properly. There was a water main leak on 4" cast iron pipe (CIP) pipe in the South St. area. Horizontal hairline fractures caused the leak and staff had to install a 4"x15" repair clamp to complete the repair. Seven homes had little to no pressure for 15 minutes during the repair. There was a main break on 8" ductile iron pipe (DIP) in the Meadows, which occurred near a previous repair. Due to an inaccessible valve, 20 residents rather than 9 were out of water for less than four hours, during the repair, which was completed using a 24" clamp. A valve used to isolate the break above was called in the next day as it had developed a leak. The leaking valve as well as the inaccessible valve were repaired. No customers were affected during these repairs.
Water Quality Complaints	Castle Rock Water remains in the Top Quartile for water quality complaints based on the American Water Works Association benchmarking.	There were no water quality issues in June.

Operations & Maintenance

Locate Report



Before you start a project, call 811. Whether you are planning to do it yourself, or hiring a professional, we will help you do it safely. The local 811 Call Center will contact Castle Rock Water and will schedule a time for us to come out to locate public water, wastewater and stormwater lines in the road and in your project area.

ANNUAL LITHITY LOCATES

Castle Rock Water's locate requests from 811 have continued to rise, year over year.

-	<u>2010</u>	2011	<u>2012</u>	2013	2014	2015	2016	<u>2017</u>	<u>2018</u>	<u>2019</u>	2020	<u>2021</u>
January	577	475	617	1,190	1,289	1,162	1,199	1,334	1,442	1,472	1,612	1,803
February	521	485	538	1,094	1,093	1,383	1,334	1,378	1,293	1,404	1,443	1,958
March	660	552	818	1,437	1,349	1,906	1,625	1,851	1,514	1,560	1,626	2,253
April	838	681	1,025	1,482	1,552	1,784	1,631	1,760	1,856	1,984	2,600	2,524
May	853	863	985	1,541	1,531	1,609	1,809	2,002	1,801	2,122	2,288	2,524
June	969	844	982	1,314	1,399	1,654	2,075	1,872	1,854	1,716	1,931	2,278
July	680	582	859	1,350	1,392	1,477	1,675	1,582	1,556	1,937	1,894	
August	901	723	1,123	1,476	1,468	1,494	1,651	2,001	1,986	1,603	2,096	
September	880	723	1,029	1,240	1,373	1,343	1,701	2,102	1,747	1,979	2,026	
October	715	688	1,155	1,501	1,376	1,314	1,579	1,792	2,064	1,839	1,913	
November	536	518	1,041	1,072	866	1,134	1,131	1,460	1,469	1,649	1,734	
December	415	405	925	1,005	1,043	1,063	1,059	1,277	1,293	1,175	1,859	
Totals	8,545	7,539	11,097	15,702	15,731	17,323	18,469	20,411	19,875	20,440	23,022	13,340

Collections

Castle Rock Water tracks within the top quartile in the Sanitary Sewer Overflow rate, according to the American Water Works Association. Our team runs a camera through the sewer mains to look for problems. When problems are identified, they are cleared with a high pressure water jet. The goal is to clean and inspect one-fifth of the collection system or 55 miles each year.

YTD

Lines Cleaned Lines Inspected SSO Rate 38.81 miles 17.73 miles 0.0 SSO/100 mi

June: No sanitary sewer issues.

Operations

Monty Anderson and the plant mechanics designed and built a portable VFD trailer to assist in emergencies with well pumping operations when well VFDs fail





Unimaginative and highly un-skilled artists have been tagging our stormwater structures. Our stormwater team has repaired the damage. Do you recognize this handwriting?

Operations & Maintenance

Water main line breaks don't happen often, but when they do, our team is all in!





A sink hole, possibly caused by an earlier line break on Lewis St., was repaired by the stormwater team.





The distribution team found a leak in the South St. area. Several hairline fractures, two inches long had occurred horizontally, on the 4" cast iron water main, causing the leak. The ends of the fracture were cut to prevent spreading and a 4"x 15" repair clamp was installed and the line covered in poly wrap for the repair. Seven homes had reduced pressure for about 15 minutes but were never completely out of water.

Jonny and Alex assisting a customer during a contractor's emergency waterline shutdown

