

MONTHLY REPORT

APRIL 2022

CASTLE ROCK
water
Securing our future drop by drop

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

Plum Creek Diversion Low-Duty Pump

The Plum Creek Diversion Pump Station was placed into service in September of 2020. This station pumps our renewable supplies including reuse water from Plum Creek back to Plum Creek Water Purification Facility. During the first winter of operation, staff identified the need for a low-duty raw water pump. The original design of the pump station was sized to pump 2 mgd to 6 mgd. During the winter operations, the total dissolved solids in the creek can be too high at times due to de-icing operations. The new low-duty raw water pump will allow operations to reduce the flow from the Plum Creek Division down to 1 mgd. The reduced flow will allow operations to blend the creek water with other sources to lower the total dissolved solids in the Plum Creek Water Purification Facility's source water.



A change order with RN Civil Constriction was approved in April of 2021 for the installation of the low-duty pump. The cost for the purchase and installation of the pump was \$353,922. The installation was completed within budget, but the installation schedule was delayed due to material delays.



Ray Waterman Green Zone Pump Upgrades

In 2020, plant maintenance staff began refurbishing the Ray Waterman High Service Pump Station Green Zone pumps, which were originally installed in 2005. The three FloWay vertically staged turbine pumps were showing their age and had considerable leakage at the joints of the columns. These pumps supply water to Tanks 3, 6A and 6C and are critical to distributing water to the Founders area throughout the year.

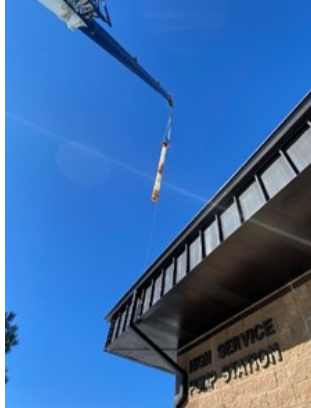
To keep up with growth, the plant maintenance staff worked with the engineering team to increase the pump sizes and capacity, to better meet current and future demands. Refurbishing of the FlowWay pumps was staged over the course of three years,

in order to limit distribution pumping capacity disruptions.

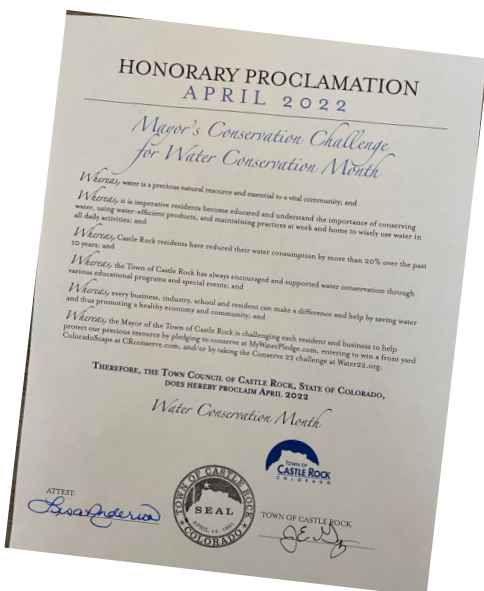
Canfield Drilling removed each pump and conducted the refurbishment at their Fort Morgan facility. This work included disassembly and replacement of multi-staged bowl assemblies, column, column bearings, line shaft couplings and mechanical seals. The 350 HP motor for Pump P508 had its bearings replaced and the winding reinsulated, and the discharge heads were rebuilt and reassembled. Each refurbished pump was then reinstalled and the next pump taken in for service. The project was completed in April 2022 and the total cost for this work was just over \$123,300.



Removal of a Ray Waterman Green Zone Pump



Ray Waterman Green Zone Pump Motor and motor removal



Mayor Proclaims April as Water Conservation Month

In conjunction with Earth Month, April is national Water Conservation Month. Mayor Jason Gray made the official proclamation to bring awareness to and celebrate our efforts for conservation.

The proclamation challenged residents and businesses to help protect our precious resource by pledging to conserve at MyWaterPledge.com, entering to win a front yard ColoradoScape and/or by taking the Conserve 22 challenge at Water22.org.

Good job!

Welcome NEW HIRES



Wuillian Pineda
Water Plant
Operator I

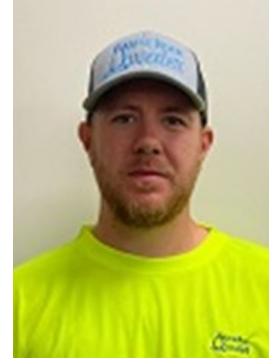


Zuzana Howard
Water Plant
Operator I

NEW CERTIFICATIONS



Lanre Ajayi
Collections 2 Operator
Certification



Kyle Buntin
Distribution II Colorado
Certified Water Professional
Certification

Dan Nickerson, Senior SCADA Analyst, was awarded the Water Star from Scott Berndt because he provides so much more than exceptional service. Dan has helped tremendously, especially with last-minute, right-now, emergency stuff. It is unique to have someone who drops everything and eagerly help his fellow co-worker. Dan is a true and appreciated team player!



Water Star Award

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

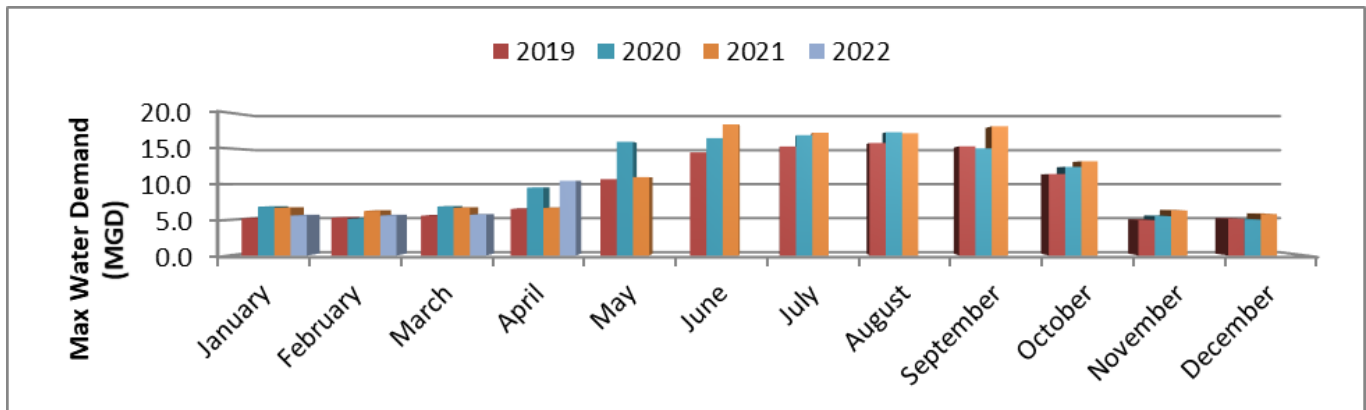
Fiscal

Demonstrated superb fiscal responsibility

Water Resources

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.



April Max Daily Demand:

- 10.5 million gallons/day
- 5-year average, 7.8 million gallons/day
- 35% higher than the 5-year average

Water Demand Total:

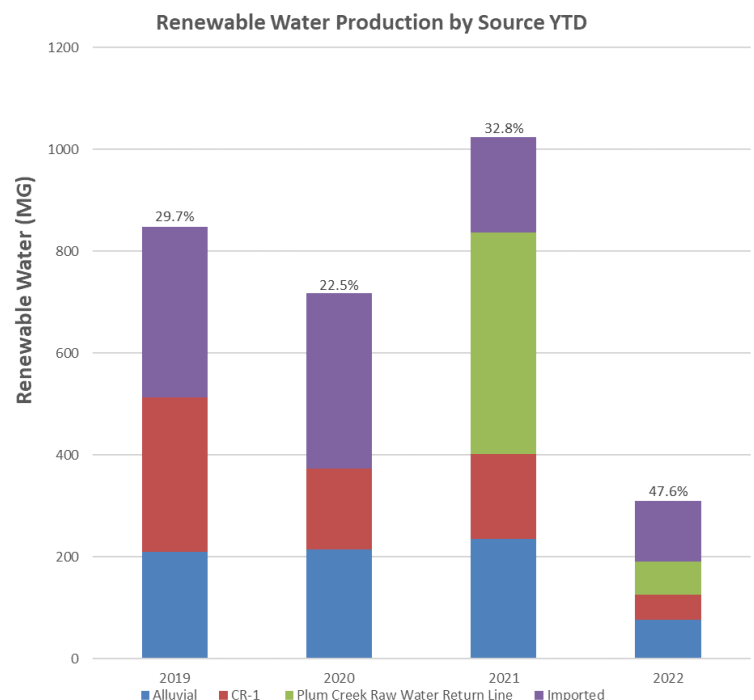
- The water demand total for April was 200.5 million gallons (MG) [615.3 acre-feet (AF)]
- 29% higher from the March 2022 total of 157.1 MG
- 27.2% increase from the previous year's April 2021 demand of 157.7 MG.

Renewable supplies

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

In total, renewable supplies accounted for 48.4% of the total water supply for the month and 47.6% of the annual water supply (650.6 MG or 1996.6 AF) to date.

- The CR-1 diversion produced an average of 0.84 MGD
- The 14 alluvial wells produced an average of 0.71 MGD
- The renewable water production average was 3.24 MGD
- The renewable water total production was 97.3 MG (298.6 AF)



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

Water Demand

Reusable supplies

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.

- The average reusable supplies used by Castle Rock for 2022 through April is 33.3%.

Storage

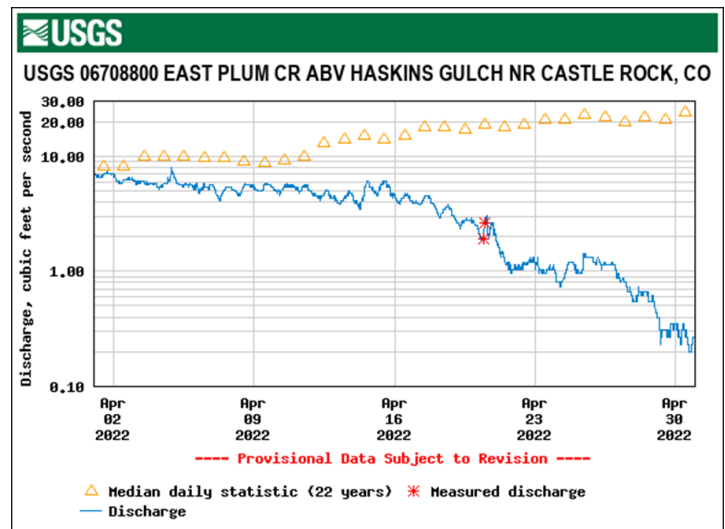
Current reservoir storage

- Chatfield: 1,552.1 AF
- Rueter-Hess: 113.46 AF
- CRR1: 173.6 AF

Drought

According to the U.S. Drought Monitor maintained by the United States Department of Agriculture (USDA), **Castle Rock is experiencing Abnormally Dry (D0) to Moderate Drought (D1) conditions.**

Local Plum Creek supplies

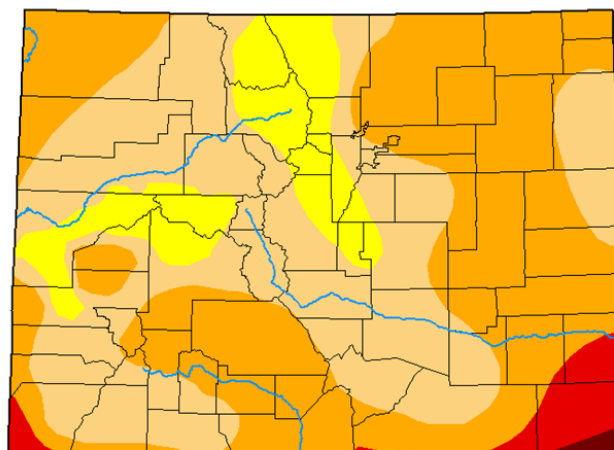


The hydrograph shows the estimated flows in the East Plum Creek basin.

- Flows ranged from 0.2 – 7.87 cubic feet per second (cfs).
- The monthly average streamflow was 3.6 cfs.
- The 22-year median is 25 cfs.

U.S. Drought Monitor Colorado

April 26, 2022
(Released Thursday, Apr. 28, 2022)
Valid 8 a.m. EDT



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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:

Brad Rippey
U.S. Department of Agriculture



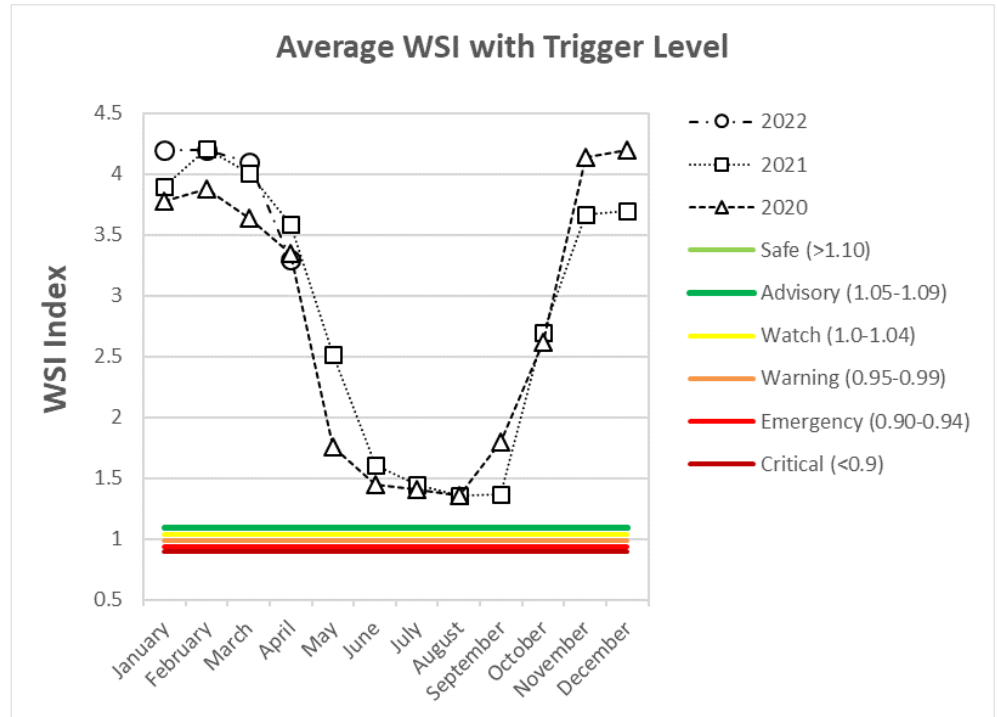
droughtmonitor.unl.edu

Water Demand

Water supply index

The Town of Castle Rock 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 a 1.1 will trigger a drought stage relative to its severity.

- The average WSI for April was 3.3

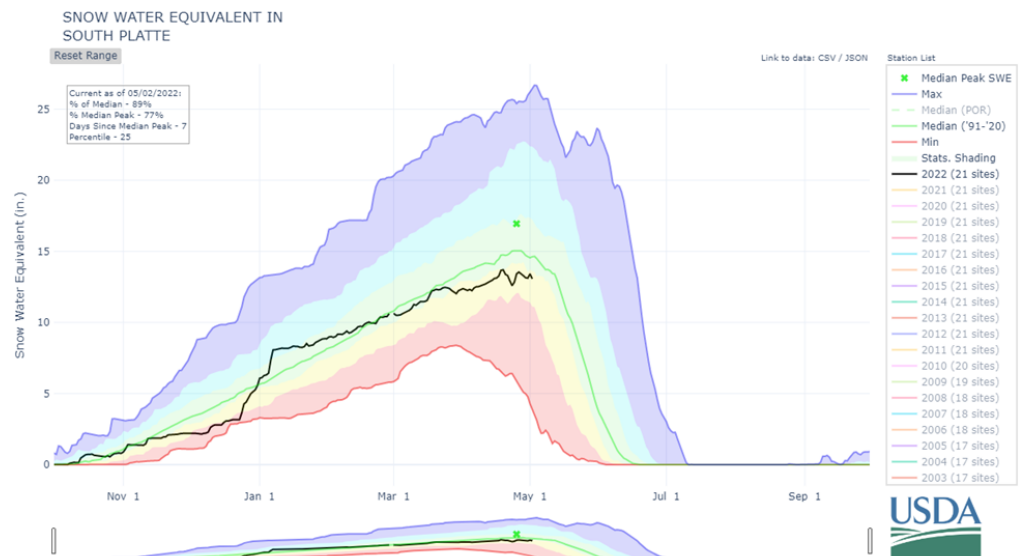


South Platte River Basin

South Platte River Basin

Snow Pack

- Year-to-date precipitation at 93% of average
- Snow Water Equivalent (SWE) at 88% of average

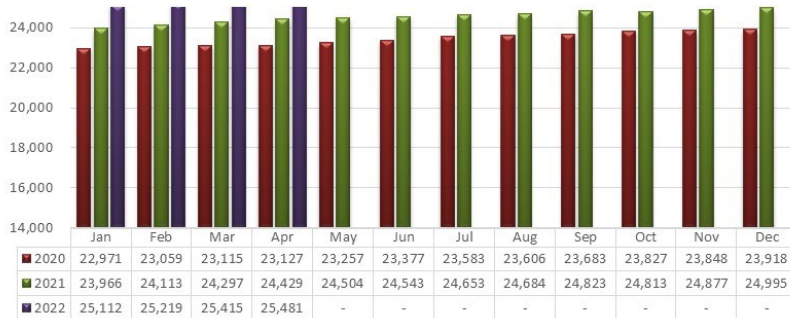


Business Solutions

Customer Service & Billing



of Accounts Billed



2022/Q1 statistics

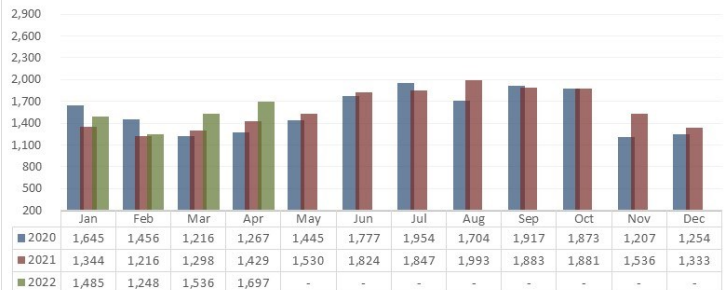
- 17,991 (71%) have an online account
- 11,575 (64%) are paperless

Customers benefit from having an online H2Oaccess account with 24/7 access to statement information, 12 months of statement history, helpful email account reminders and safe and secure online payment options. Customers are encouraged to use paperless billing to reduce clutter, be environmentally friendly and save mailing costs.

Walk-In Customers



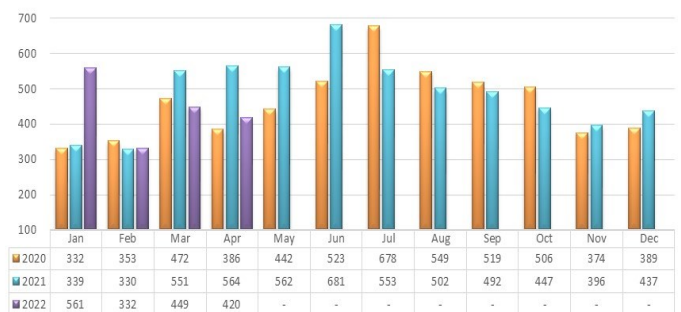
Customer Phone Calls



Mywaterbill Email Inquiries



Transfers of Water Service



Customer Outreach

Keeping customers informed about the value of water.

Water Outreach Social Media Stats	REACH
CRW long-term water plans — April 6	4,267 people
ColoradoScape Contest reminder — April 8	2,768 people
Contest reminders/Instagram	2,741 reach
Poop Fairy: Taylor — April 11	7,478 people
PCWPF Tours — April 13	876 people
ColoradoScape Contest — April 14	3,834 people

Instagram Reel for Contest — April 14	10,627 reach
ColoradoScape Contest — April 20	975 people
Twitter ColoradoScape video — April 20	386 reach
Spring Up the Creek — April 27	2,288 people
Water Schedules press release — April 29	4,235 people
Conservation, growth and water budgets	14,761 opened (52% open rate)
ColoradoScape Contest starts April 1	15,017 opened (53% open rate)
Spring clean those stormwater structures too	109 opened (50% open rate)

Meters



Meters Read

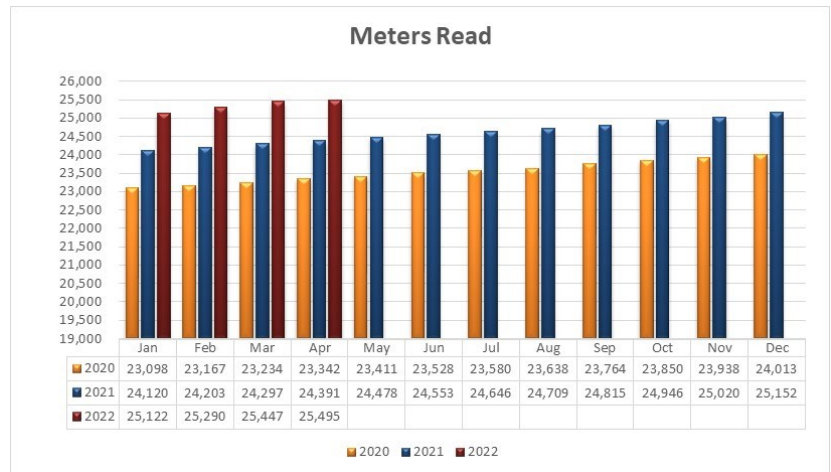
Meters are read the first two days of every month. The number of meters read continues to increase month to month and is a significant increase over last year.

Skipped Reads

Apr. 2022: 0.39%

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.

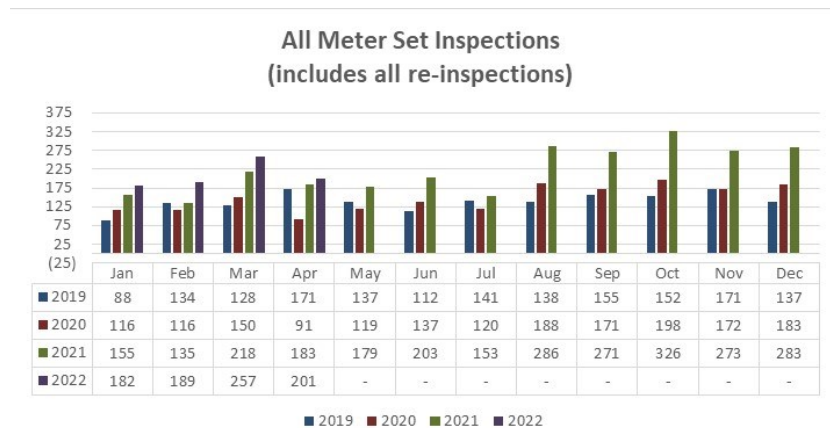
The AWWA standard is 2%, so we still continue to stay well below the industry average.



Meter Set Inspections

Re-inspections: 38%

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

Apr. 2022: 745

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, and more.



Operations & Maintenance

LEVELS OF SERVICE

Apr. 2022

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.

Ninety routine samples were completed. All samples were within the parameters set forth by the Safe Drinking Water Act and Colorado Drinking Water Standards

Pressure Adequacy

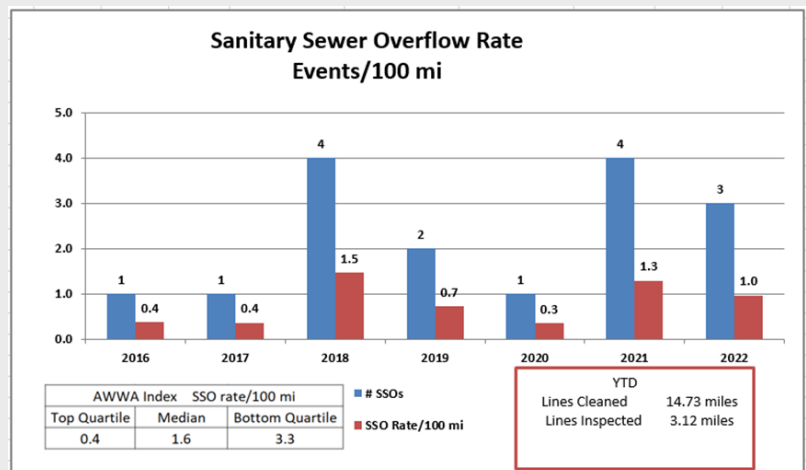
< 1% of our customers will experience less than 43 pounds per square inch (psi) of pressure at the meter during normal operations.

There were no water pressure issues in April.

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 AWWA benchmarking.

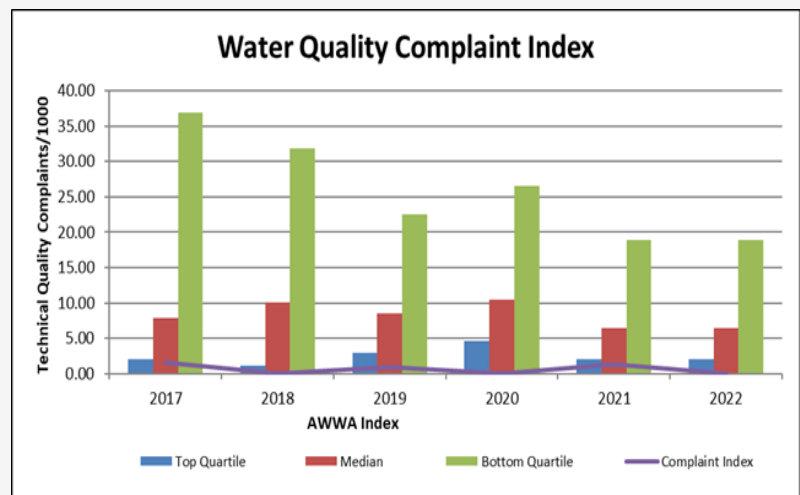
There was one sanitary sewer issue in April.



Water Quality Complaints

Castle Rock Water remains in the Top Quartile for water quality complaints based on the AWWA benchmarking.

There were no water quality complaints or issues in April.



Operations & Maintenance

LEVELS OF SERVICE

Drinking Water Supply Outages

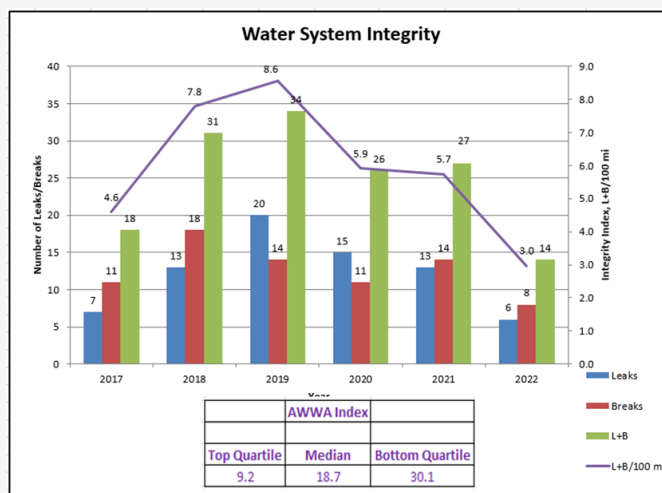
<5% of our customers will experience water outages for one or more events totaling more than 30 hours/year.

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

Apr. 2022

There was one water system integrity issue in April:

- There was a service line leak in the Meadows. A curb stop was replaced and 12 homeowners were out of water for less than 20 minutes during the repair.



Utility locates

Water locates conducted

- April — 2,431 tickets



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.

Operations & Maintenance



A large piece of asphalt lodged near a manhole in the middle of Founders Parkway near Allen St. and caused a sewer overflow, affecting the parking lots of commercial businesses nearby.



A previous line break repair at the Mt. Zion church caused parking lot compaction. The stormwater team peeled the existing millings from the subgrade, mixed it up and regraded the lot.



To conduct maintenance on the Tank 14 access road and in preparation for the SCADA Antenna project, the stormwater team scarified, processed and replaced the road base material. This returned the dirt road to good condition, removing the erosion damage and ruts.

