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

# Castle Rock Water issues $30 million bond

**By Greg Kropkowski**

Utility companies will, from time to time, issue revenue bonds to fund capital projects in areas considered essential to provide public services, including water and wastewater infrastructure. The services they provide and resulting revenue, generate funds through customer rates and fees which provide cash flows that can service the debt.

Debt issuances make sense for large (read relatively expensive) capital intensive projects that will provide system benefits for customers for many years into the future. So getting money through a bond issuance now to get the projects going and gaining time (perhaps a couple of decades or so) to pay back investors, just makes a great deal of sense. Given the fact that water utilities generally will only have user fees (money from rate payers) to finance operations, debt financing through bonds is sometimes a vital source of funds. It is true that most water utilities levy system development fees (SDFs) on new connections and those funds represent a source of revenue for a utility, but SDF funds are generally earmarked for use in other areas of a utility's operations.

***A bond helps offset customer rates while providing immediate funds for capital improvement projects.***

The Town of Castle Rock and Castle Rock Water began looking into the possibility of issuing a bond in the late fall of last year, based upon projections financial models presented to the Enterprise Fund analyst. When weighed against money projected to be needed for certain capital projects over the next few years and the sources of revenue expected to come in through the level of rate increases that would be needed, CR Water leadership determined that those projected rate increases would not be in the best interest of our rate payers.

The infusion of funds through a bond issuance, on the other hand, would give CR Water the dollars needed to proceed on vital capital projects while allowing rates to remain stable and relatively low at a level customers have come to expect.

CR Water determined that a $30M bond issuance would help take upward pressure off of rates so in the final two months of 2021 we worked with our partners in the municipal debt arena and the Town's Finance team to put together an offering to present to Council for approval. Once approval was obtained, the Enterprise Fund team worked with Finance to present the Town's financial strength to bond underwriters to make a sale to investors in February 2022. The goal was to fully sell the $30M issuance and to sell it where the Town would be responsible for debt service at the lowest possible interest rate.

There are many factors that play into how well a bond issuance will sell to the investment public, but the chief factor is generally the safety investors feel in knowing that they will be repaid on their investment. Given the financial strength of the Town (Standard and Poor's rates the Town at AA+ - which signals that Castle Rock manages its financial affairs in an exemplary manner!) when the issuance was offered for sale on February 1, it was quickly fully subscribed (sold) and in fact, it was oversubscribed. This has the effect of driving down the rate the Town will have to pay in servicing this debt over the years.

The end result – CR Water got the $30M we needed to move on with our financial plans for future investments in infrastructure while keeping user rates low and we got it at a very manageable yield (rate) for the Town.

Here are some other quick facts:

- This is the first issuance in 2022 where Stifel (an investment banking company that assists in bond underwriting) was able to lower the rates across all issuance dates due to the high demand
- The issuance was over-subscribed by 5.6x. This is the strongest performance of any recent debt issuance by the Town.
- Stifel received orders from 33 different institutional investors across the country, which speaks volumes. According to Stifel, the institutional investors have been very picky about what they buy.
- Strong management of the water enterprise and financial status of the town, coupled with a rating of AA+ was very attractive to the market.
- For comparison sake, the State of Massachusetts issued general obligation (GO) debt at about the same time and landed at 2.14 interest rate for a 2042 maturity. The towns water bonds for the same maturity landed at 2.18 interest rate. It's pretty remarkable for a Town issuance to be that close to a state deal.
- The all-in interest rate is 2.39%, down 4 basis points from the 2.43% that was predicted as the sale date

## Terrain Control Valve Project

The Town's water distribution system is divided into pressure zones and managing the volume and pressure of water to customers requires some fine-tuned calculations. The red pressure zone on the east side of Town is supplied with water from the Ray Waterman Regional Water Treatment Facility (RWRWTF). The red pressure zone has two tanks associated with it, Tank 16 and Tank 14. Tank 16 is located near the King Soopers along Ridge Road and Tank 14 is located at the north end of the Diamond Ridge subdivision. When the high service pumps at RWRWTF pump into the red zone, water more easily flows into Tank 16 due to its proximity to RWRWTF. Eventually, Tank 16 would overflow before Tank 14 was filled. To alleviate this issue, the Castle Oaks Control Valve was installed to restrict the flow of water into Tank 16. Unfortunately, this also restricted the flow of water out of Tank 16 and into the distribution system. The restricted flow in and out of Tank 16 could result in water quality issues in the tank.

The Terrain Control Valve is located along Founders Parkway, just north of Crimson Sky Drive. It is designed to work with the existing Castle Oaks Control Valve to direct the water produced at RWRWTF between the two tanks and balance the system demand on both tanks. The Terrain Flow Control Vault project is located along Founders Parkway, north of Crimson Sky Drive. The two valves will divide the existing red zone into two zones, with a storage tank in each zone. Water from RWRWTF will be supplied to Tank 14 as needed based on operating levels.


The project was awarded to Elite Surface Infrastructure. The total project cost was $242,742 and was completed within the approved budget. Completion of the project is almost final with some expected electrical work from CORE still pending.

# 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.*

**Alex Tarnawski**
Colorado Water Professional
Wastewater Operator 4
Certification

**Courtney Stoddard**
Colorado Water Professional
Treatment C Operator
Certification

## Look who got Promoted

**Aaron Dugan**
Operator 2 / Collections

## 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.*

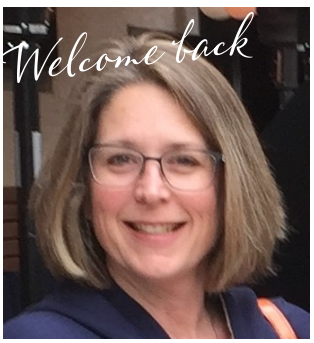
**Mark Billman,** EHS Supervisor was acknowledged by Nichol for his thoroughness and calmness during emergency situations.

Mark is one of the unsung heroes of Castle Rock Water. He quietly works behind the scenes to keep every day safe for all employees and customers of Castle Rock Water. He is the coordinator behind all of the quarterly safety inspections, emergency drills and annual safety training and he's always looking for ways to improve our training, identify problems before they cause an accident and make Castle Rock Water a safe place to be at all times.

A recent example of Mark stepping up to help out was a few weeks ago when we received a reverse-911 emergency call notifying us of two fugitives in the area. Mark quickly jumped into action, contacting IT to make sure our campus was locked down and further coordinated with me to make sure we could still safely respond to any walk-in customers. Through this incident, Mark also quickly identified some improvements that can be made to make future incidents like this easier to manage and he immediately reached out to IT to enlist their help.

## Welcome NEW HIRES

**Justin Wiser**
Meter Services Technician

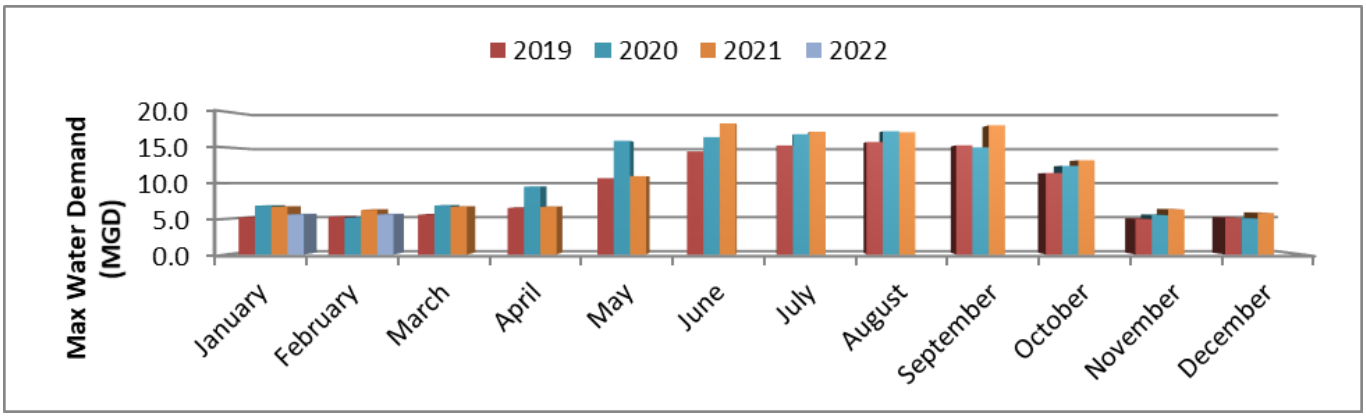



**Susan Salvatori**
Conservation Office Asst.

# 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.




**February Max Daily Demand:**

- 5.6 million gallons/day
- 5-year average, 5.4 million gallons/day
- 3% higher than the 5-year average

**Water Demand Total:**

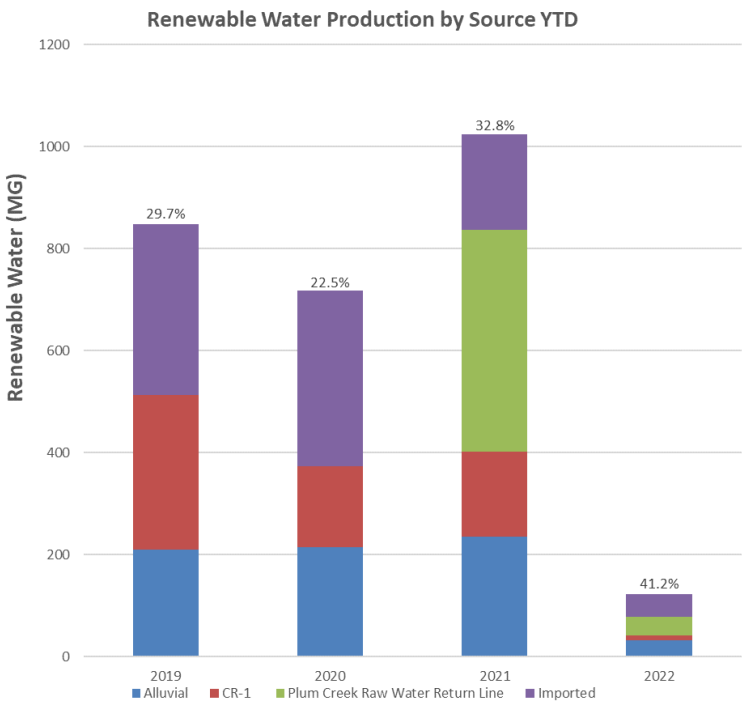
- The water demand total for February was 140.7 million gallons [431.8 acre-feet (AF)]
- 11% lower from the January 2022 total of 158.3 MG
- 4.7% increase from the previous year's February 2021 demand of 134.4 MG

## Renewable supplies

Renewable supplies are those water sources that are replenished by precipitation. (NOTE: PCWPF was down for 14 days during the month of February. Due the high salinity (primarily attributed to road salt run-off) in the surface water, the water quality was impaired which reduced the ability to effectively treat the surface water. Both factors reduced the renewable production rates.)

In total, renewable supplies accounted for 29.2% of the total water supply for the month and 41.2% of the annual water supply (139.1 MG or 426.9 AF) to date.

- The CR-1 diversion produced an average of 0.06 MGD
- The 14 alluvial wells produced an average of 0.33 MGD
- The renewable water total production was 40.7 MG (124.9 AF)
- The renewable water production average was 1.45 MGD




**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

## 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.

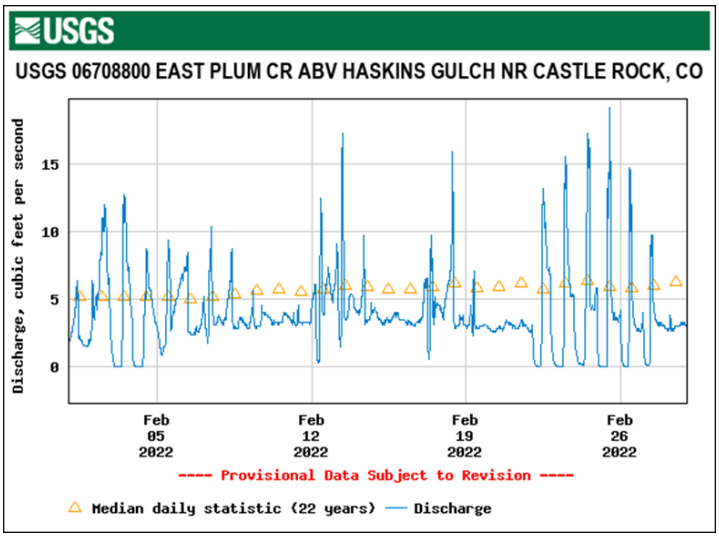
- The average reusable supplies used by Castle Rock for 2022 through February is 26.5%.

## Storage

**Current reservoir storage**

- Chatfield: 1,375 AF
- Rueter-Hess: 118 AF
- CRR1: 70 AF

## Local Plum Creek supplies

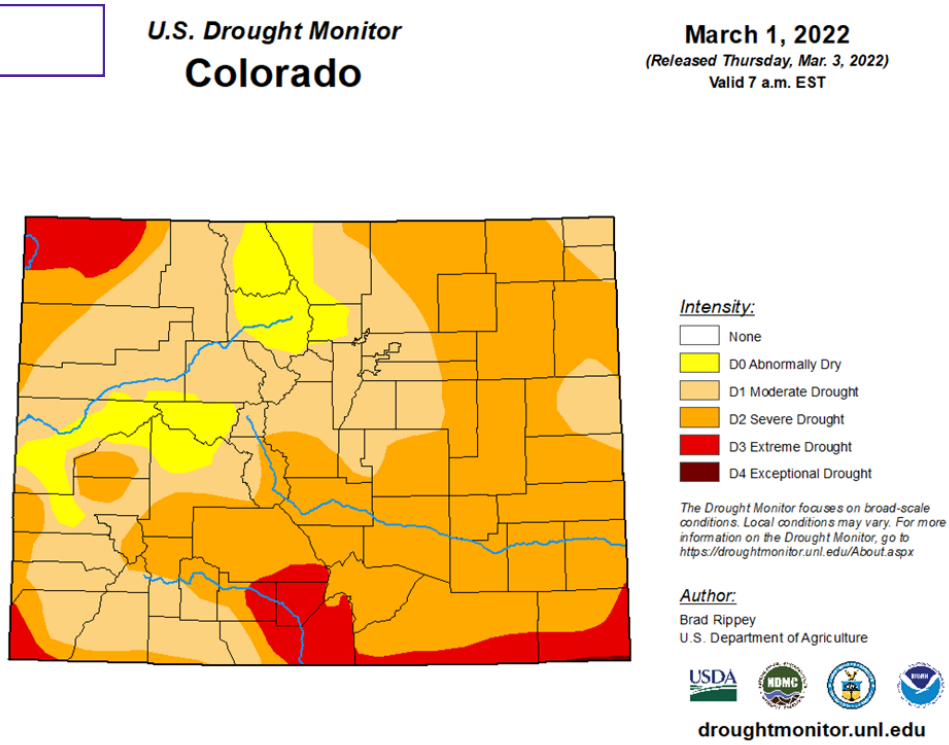



**East Plum Creek basin flows**

- Flows ranged from 0 – 19.1 cubic feet per second (cfs).
- The monthly average streamflow was 3.84 cfs.
- The 22-year median is 5.0 cfs.

## Drought

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

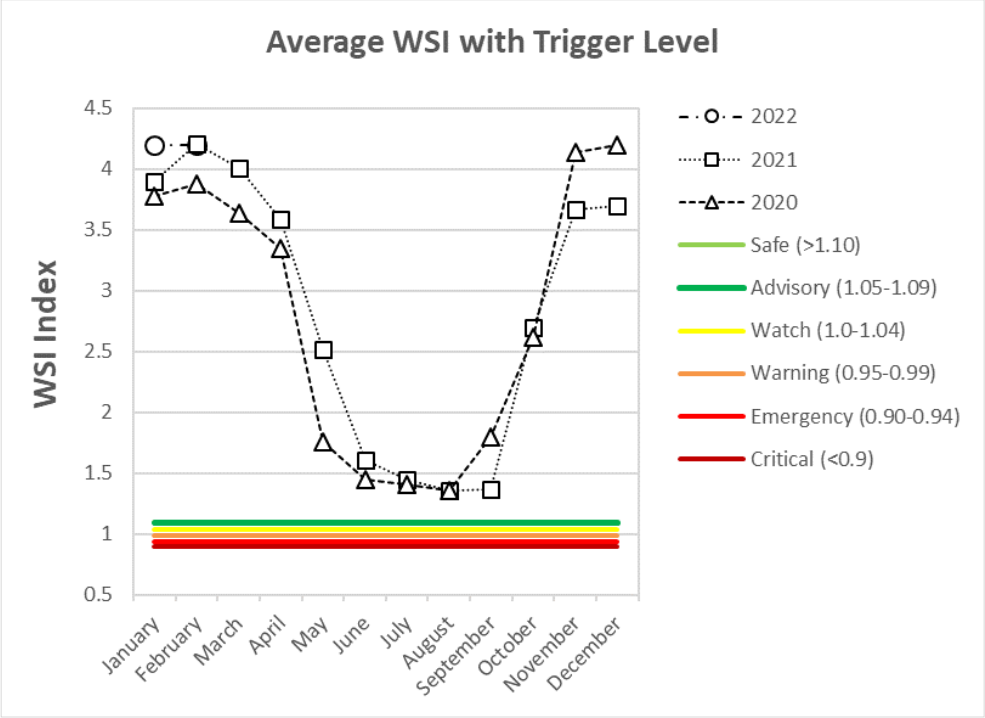


# Water Demand

## 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.

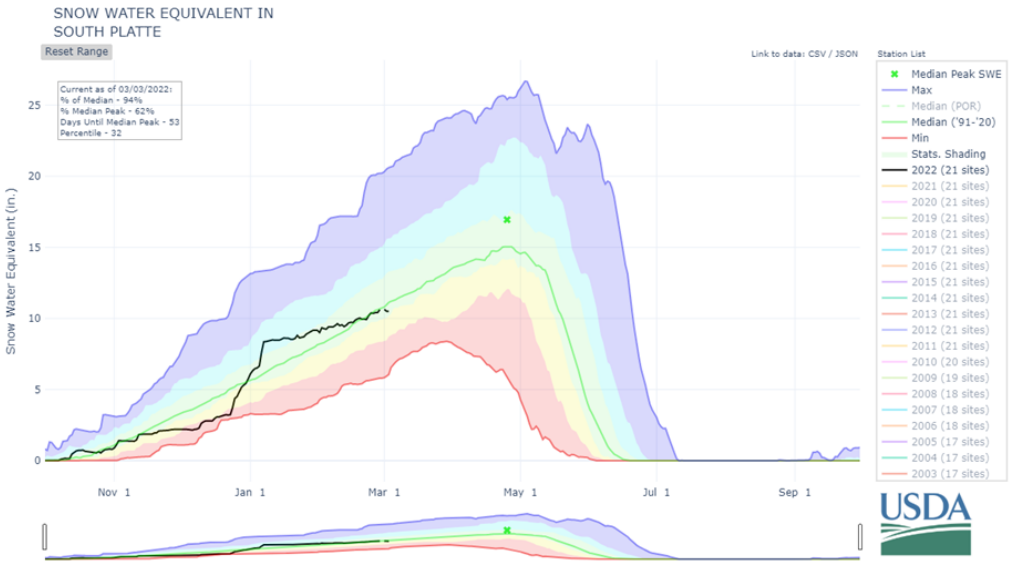
- The average WSI for February was 4.2




## South Platte River Basin

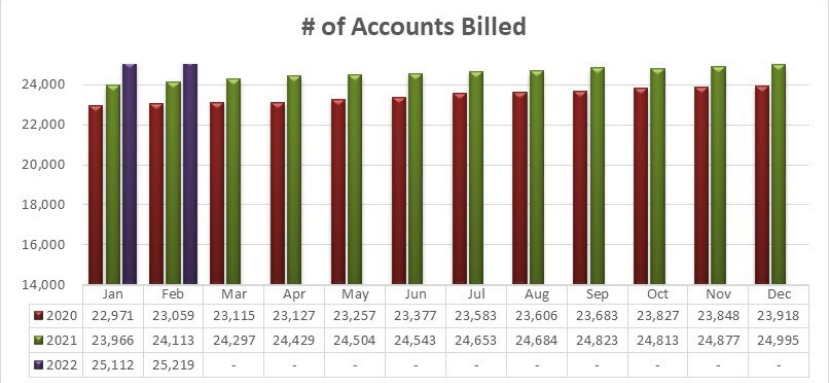
**South Platte River Basin Snow Pack**

- Year-to-date precipitation at 99% of average.
- Snow Water Equivalent (SWE) at 96% of average.



# Business Solutions

## Customer Service & Billing




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 22,971 | 23,059 | 23,115 | 23,127 | 23,257 | 23,377 | 23,583 | 23,606 | 23,683 | 23,827 | 23,848 | 23,918 |
| 2021 | 23,966 | 24,113 | 24,297 | 24,429 | 24,504 | 24,543 | 24,653 | 24,684 | 24,823 | 24,813 | 24,877 | 24,995 |
| 2022 | 25,112 | 25,219 | - | - | - | - | - | - | - | - | - | - |

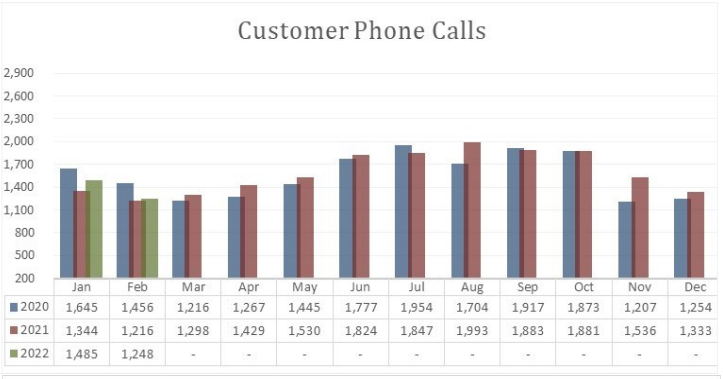
H2Oaccess

**2021/Q4 statistics**

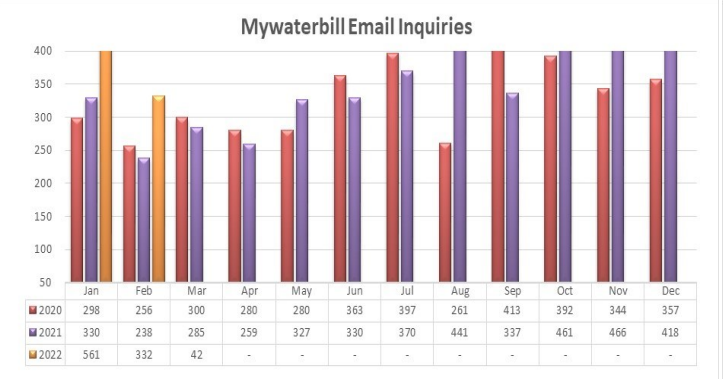
- 17,413 (70%) have an online account
- 11,188 (64%) are paperless

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. Customers are encouraged to use paperless billing to reduce clutter, be environmentally friendly and save mailing costs.

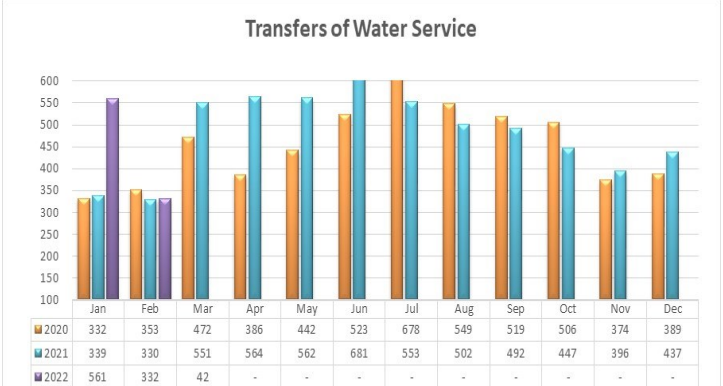

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 396 | 314 | 218 | 18 | 13 | 160 | 180 | 87 | 194 | 217 | 146 | 149 |
| 2021 | 175 | 167 | 205 | 190 | 203 | 225 | 214 | 123 | 58 | 154 | 147 | 98 |
| 2022 | 91 | 116 | - | - | - | - | - | - | - | - | - | - |




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 1,645 | 1,456 | 1,216 | 1,267 | 1,445 | 1,777 | 1,954 | 1,704 | 1,917 | 1,873 | 1,207 | 1,254 |
| 2021 | 1,344 | 1,216 | 1,298 | 1,429 | 1,530 | 1,824 | 1,847 | 1,993 | 1,883 | 1,881 | 1,536 | 1,333 |
| 2022 | 1,485 | 1,248 | - | - | - | - | - | - | - | - | - | - |




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 298 | 256 | 300 | 280 | 280 | 363 | 397 | 261 | 413 | 392 | 344 | 357 |
| 2021 | 330 | 238 | 285 | 259 | 327 | 330 | 370 | 441 | 337 | 461 | 466 | 418 |
| 2022 | 561 | 332 | 42 | - | - | - | - | - | - | - | - | - |




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 332 | 353 | 472 | 386 | 442 | 523 | 678 | 549 | 519 | 506 | 374 | 389 |
| 2021 | 339 | 330 | 551 | 564 | 562 | 681 | 553 | 502 | 492 | 447 | 396 | 437 |
| 2022 | 561 | 332 | 42 | - | - | - | - | - | - | - | - | - |

## Customer Outreach

***Keeping customers informed about the value of water.***

Repeat messages, like Pressure and Freezing Pipes, continue to be high impact topics and the repetitive and consistent message builds strong industry knowledge.

| Water Outreach Social Media Stats | REACH |
|---|---|
| Watersheds — Feb. 4 | 2,104 people |
| Poop Fairy: Harper — Feb. 7 | 5,147 people |
| Poop Fairy: Harper — Feb. 7 (Instagram) | 2,310 people |
| WW workshops — Feb. 9 | 2,896 people |
| HJ Women in Science — Feb. 11 | 2,400 people |
| HJ Women in Science — Feb.11 (LinkedIn) | 424 people |
| Too much pressure — Feb. 16 | 8,967 people |
| Craig & Gould Project update- — Feb. 17 | 2,068 people |
| Freezing pipes — Feb. 23 | 3,982 people |
| Water rebate program — Feb. 25 (release) | 1,684 people |
| EMAIL: Intl Day of Women in Science | 13,999 opened (48% open rate) |
| HOA Email: Reduce your water usage by 29% | 101 opened (46% 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

**Feb. 2022: 0.48%**

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.

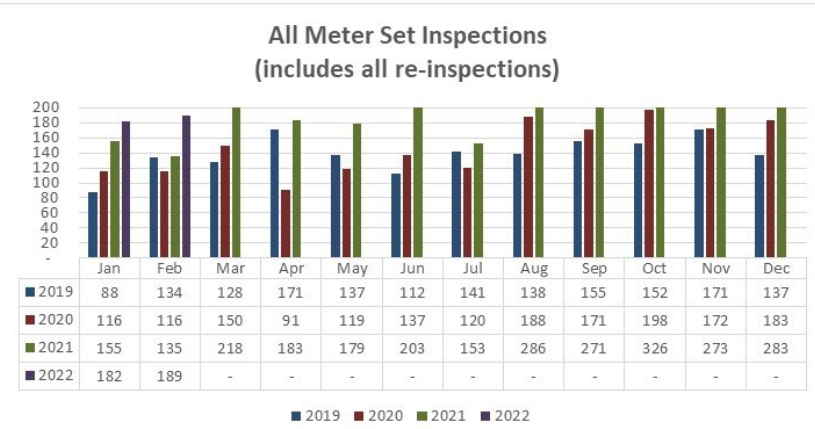
*The AWWA standard is 2%, so we still continue to stay well below the industry average.*


| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 23,098 | 23,167 | 23,234 | 23,342 | 23,411 | 23,528 | 23,580 | 23,638 | 23,764 | 23,850 | 23,938 | 24,013 |
| 2021 | 24,120 | 24,203 | 24,297 | 24,391 | 24,478 | 24,553 | 24,646 | 24,709 | 24,815 | 24,946 | 25,020 | 25,152 |
| 2022 | 25,122 | 25,290 | | | | | | | | | | |

## 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.



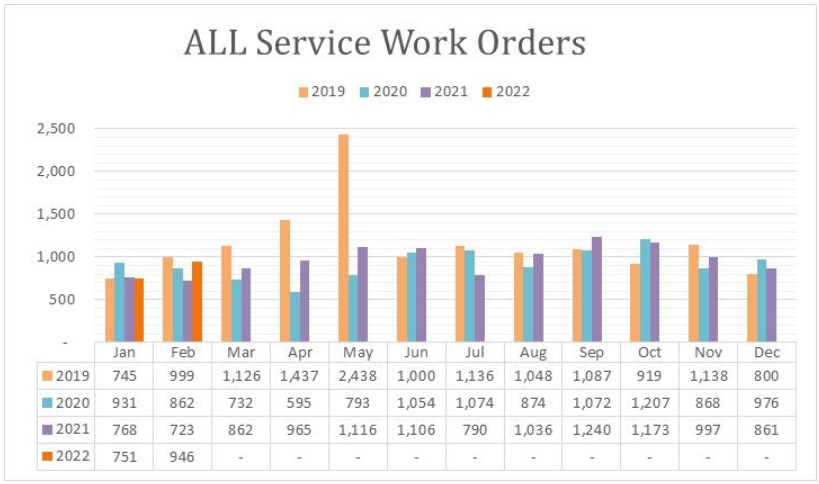

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019 | 88 | 134 | 128 | 171 | 137 | 112 | 141 | 138 | 155 | 152 | 171 | 137 |
| 2020 | 116 | 116 | 150 | 91 | 119 | 137 | 120 | 188 | 171 | 198 | 172 | 183 |
| 2021 | 155 | 135 | 218 | 183 | 179 | 203 | 153 | 286 | 271 | 326 | 273 | 283 |
| 2022 | 182 | 189 | - | - | - | - | - | - | - | - | - | - |

## Work Orders

**Feb. 2022: 946**

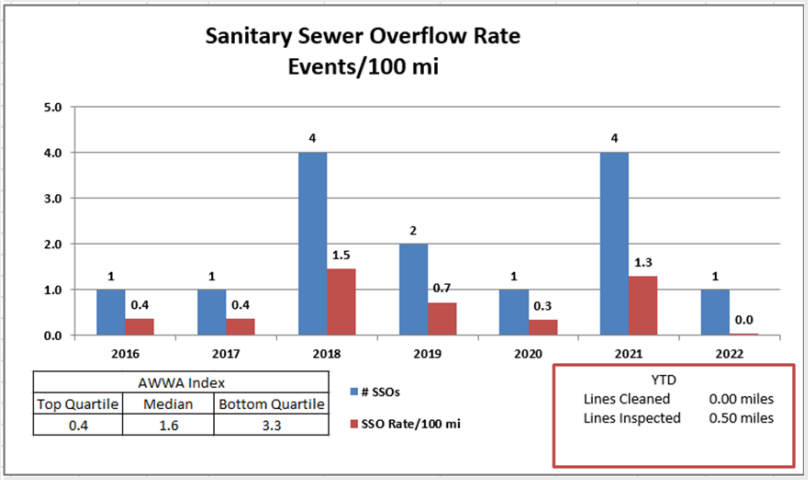
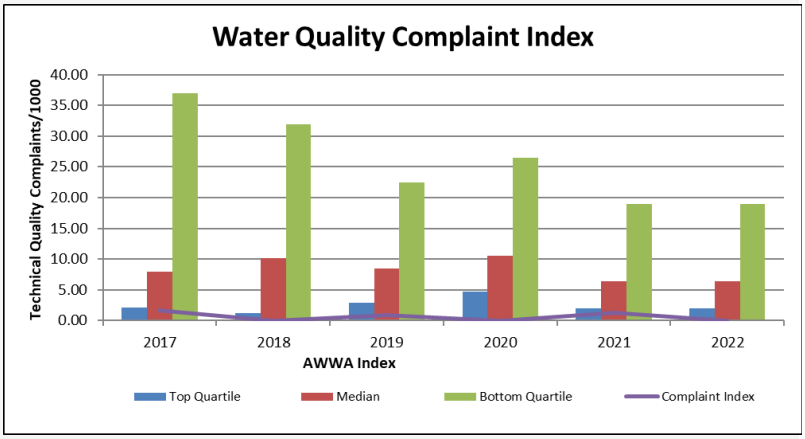
Meter services performs a variety of service work orders every month beyond meter reading. These include curb stop maintenance, meter replacement and repair, final reads for transfers of service, disconnection and reconnections, meter set inspections, and more.

*Note: Correction to January numbers*

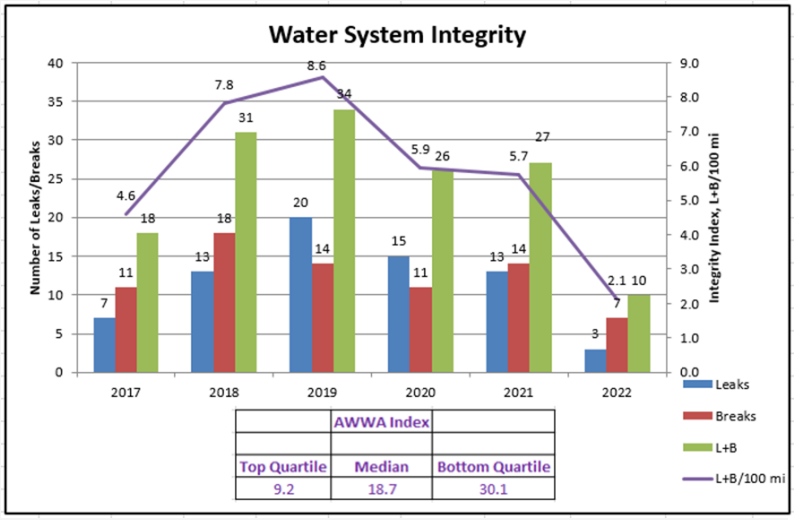



| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019 | 745 | 999 | 1,126 | 1,437 | 2,438 | 1,000 | 1,136 | 1,048 | 1,087 | 919 | 1,138 | 800 |
| 2020 | 931 | 862 | 732 | 595 | 793 | 1,054 | 1,074 | 874 | 1,072 | 1,207 | 868 | 976 |
| 2021 | 768 | 723 | 862 | 965 | 1,116 | 1,106 | 790 | 1,036 | 1,240 | 1,173 | 997 | 861 |
| 2022 | 751 | 946 | - | - | - | - | - | - | - | - | - | - |

# Operations & Maintenance

| LEVELS OF SERVICE | | Feb. 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 February.*** |
| **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 February.**   |
| **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 issues in February.*** *There were two customer education visits related to hardness.*   |

# Operations & Maintenance

| LEVELS OF SERVICE | | Feb. 2022 |
|---|---|---|
| **Drinking Water Supply Outages** | <5% of our customers will experience water outages for one or more events totaling more than 30 hours/year.<br><br>Castle Rock Water remains in the Top Quartile for water system integrity based on the American Water Works Association benchmarking. | ***There were four water system integrity issues and one planned main shutdown in February:***<br>• *There was one planned shut down and one service line leak on the Craig & Gould North capital improvement project.*<br>• *There was a main break at the Oaks Townhomes, due to a corrosion hole in the 8" ductile iron pipe (DIP), 48 townhomes were out of water for eight hours overnight during the repair.*<br>• *There was a main break in Glovers on 6" cast iron pipe (CIP), affecting eight homes, for less than two hours, with reduced pressure during the repair.*<br>• *There was a main break in the Meadows, due to a corrosion hole on 8" DIP, service was throttled down for five hours and one home was out of water for an hour during the repair.* |
| | |  |

## Utility locates

**Water locates conducted**

- Feb. 2022: 2,300

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

*In the Glovers neighborhood there was a top side beam break on the 6" cast iron pipe. The team installed a clamp on the break and water was restored to all affected homes within two hours.*

*A main break occurred in the Meadows. A 24" clamp was used to repair the 8" ductile iron pipe main. Pressure to 30 homes was reduced for five hours, and off for less than one hour during the repair.*

*The On Call team responded to a sewer service overflow occurring on Jerry St. They used the vac truck to eliminate the overflow and then jetted the sewer main to restore normal flow. It appears as if it was caused by a fats, oil & grease (FOG) buildup near from a local restaurant.*

*The Castle Rock Water On Call Team assisted a local restaurant with another grease trap and sewer overflow issue— and also helped with the site cleanup.*