

MONTHLY REPORT

MARCH 2020



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

DEALING WITH COVID-19

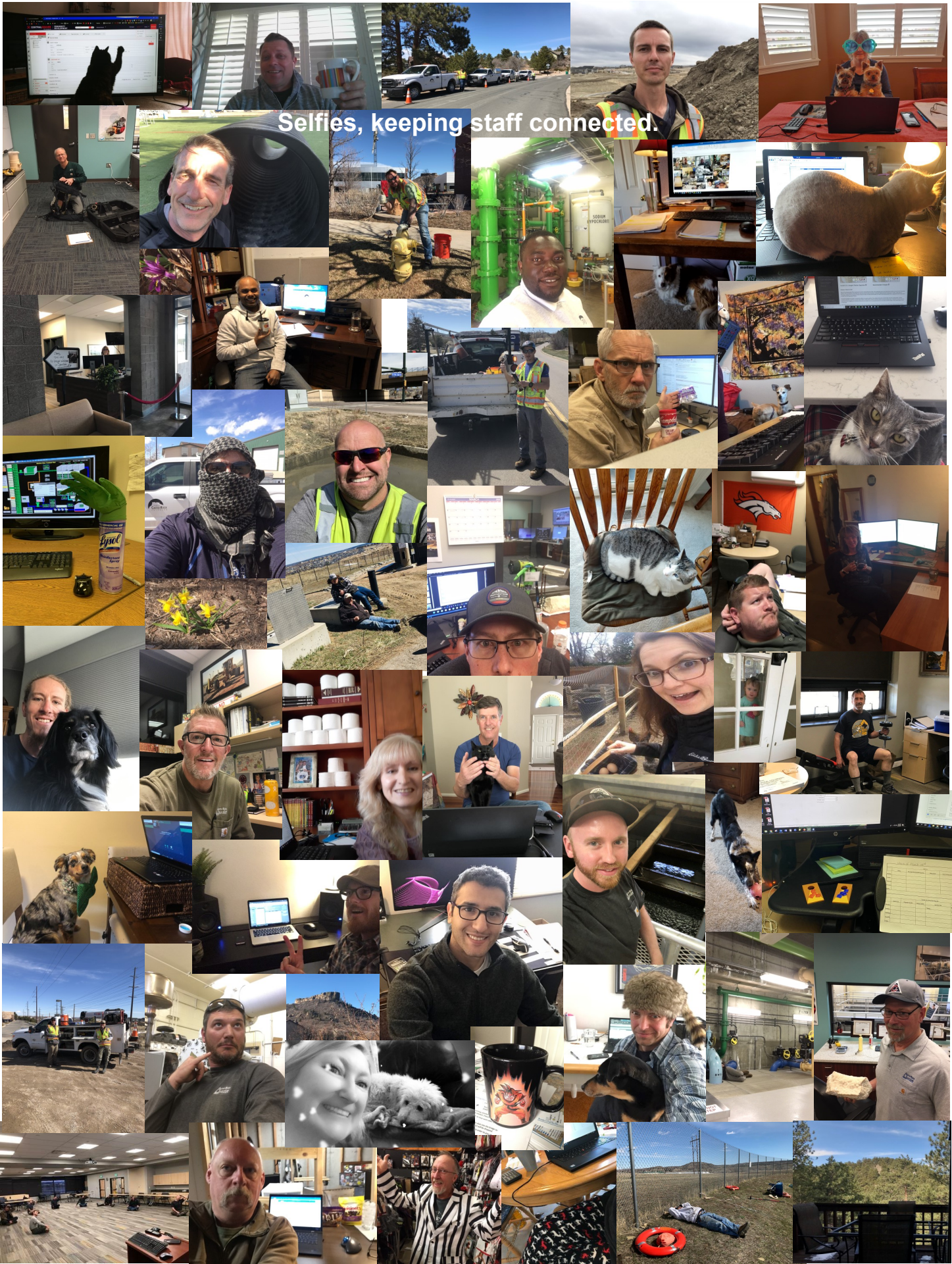
By Tim Friday

The world has found itself in an unprecedented pandemic situation which has turned our respective worlds upside down. With stay at home orders for many states and cities across the nation, this means that most families are spending 24/7 together under the same roof, businesses are suffering due to mandatory closures and, consequently, many people are unemployed or living with a reduced income. The Town of Castle Rock recognizes that this has created hardships for many people. With this in mind, Castle Rock Water Director, Mark Marlowe, presented Customer Assistance Programs for Town utility customers to Town Council, which subsequently was approved. Hopefully, this provides some peace of mind for those who are experiencing financial strain during these times. Additionally, starting on March 13, 2020, Castle Rock Water suspended disconnections of water service until at least June 30, 2020, due to non-payment. Castle Rock Water is also not charging late fees, disconnection fees, and fees for non-payment. We already had options for customers to establish payment plans, but the additional economic assistance should provide more relief.



Functioning critical infrastructure is imperative during the response to the COVID-19 pandemic for both public health and safety as well as community well-being. Certain critical infrastructure industries have a special responsibility in these times to continue operations. Providing safe, reliable drinking water 24/7 is as important as ever and Castle Rock Water is working hard to ensure uninterrupted service and to continue to protect public health. We have made accommodations for our crews to be in the field and still practice social distancing to the maximum extent possible to ensure no disruptions in water service. Our Plant Operations team is prepared to work in a quarantine situation if it becomes necessary, where plant operators would remain at the water treatment plants until the pandemic abates and work alternating 12-hour shifts. In the meantime, essential staff reporting to duty are checking their health prior to arriving at the water treatment sites and anyone showing any symptoms is required to stay home until healthy. Other support and engineering staff are working remotely. Castle Rock Water's front office is closed to public entry, but we are open for business. Our customer service staff are still answering phones at the main office and assisting customers with any needs. If you need help with anything water, please call.





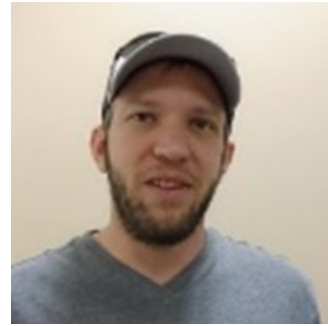
Employee Recognition

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 which requires specialized education, state testing, and continuing education.



Alex Tarnawski
*Distribution Operator 3
Certification*



Phillip Jolly
*Collections Operator 2
Certification*



Jeff Lehman
*Water Treatment Operator C
Certification*

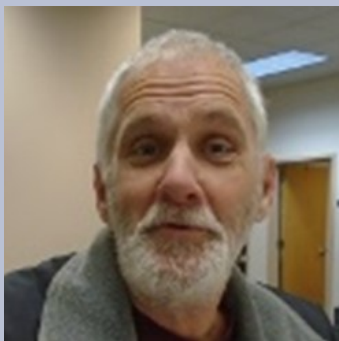


Rick Schultz
*Sustainable Landscape
Management Certification*



Linda Gould
*Sustainable Landscape
Management Certification*

New hires and new jobs!



Harvey Bessonett
promoted to SCADA Supervisor



Shantanu Tiwari
*Project Manager –
Engineering Division*



Doron Levary
*Plan Review Engineer—
Engineering Division*



William Brown
Utility Locator – GIS Division

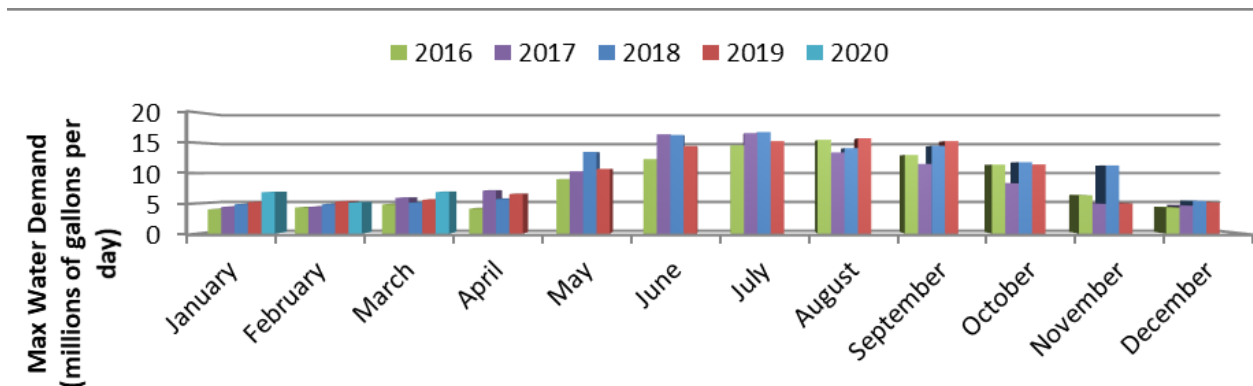


Wayne Hagin
*Landscape/Irrigation Inspector
(seasonal)*



Theo Luera
GIS Intern – GIS Division

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.

Mar. 2020	6.9 million gallons/day
Mar. 5 yr. avg	5.6 million gallons/day
Difference	22% higher

Max daily water demand in 2019
15.8 MGD in August

Water demand total

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

Mar. 2020	150.0 million gallons
Mar. 2019	136.5 million gallons
Difference	9.93% increase

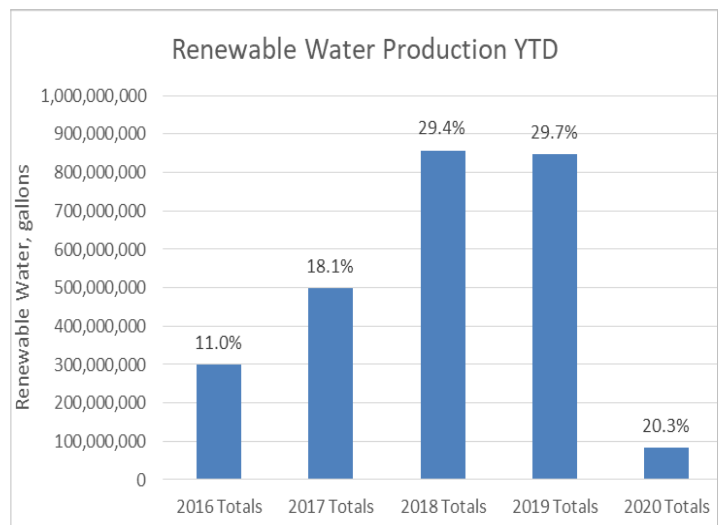
Water demand total for 2019
2,838.5 MG

Renewable water supply

PCWPF was down for emergency maintenance during the month of March, so unfortunately, CR-1 and the alluvial wells did not provide any renewable water.

We were, however, able to utilize our other renewable source, WISE water. WISE water supplied 21.4 MG of renewable water.

In total, renewable supplies accounted for 15.2% of the total water supply for the month and 20.3% of the annual water supply (412 MG or 1,265 acre-feet) to date.



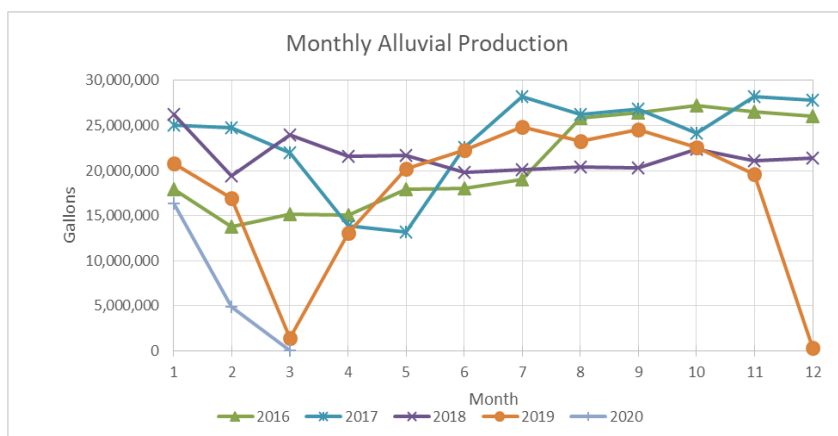
Our goal is to reach 75% renewable water by 2050.

Water Demand

Renewable supplies are those water sources that are replenished by precipitation (think of our alluvial wells, CR-1, and WISE), whereas reusable supplies are those waters that are either from the Denver Basin (deep wells) or imported supplies (such as WISE and RHR) that can be used over and over, to extinction. The average reusable supplies used by Castle Rock for 2020 through March is 4.4% with 1.5% of available reusable supplies used in the month of March.

Alluvial supply

Mar. 2020 production: 0 MG

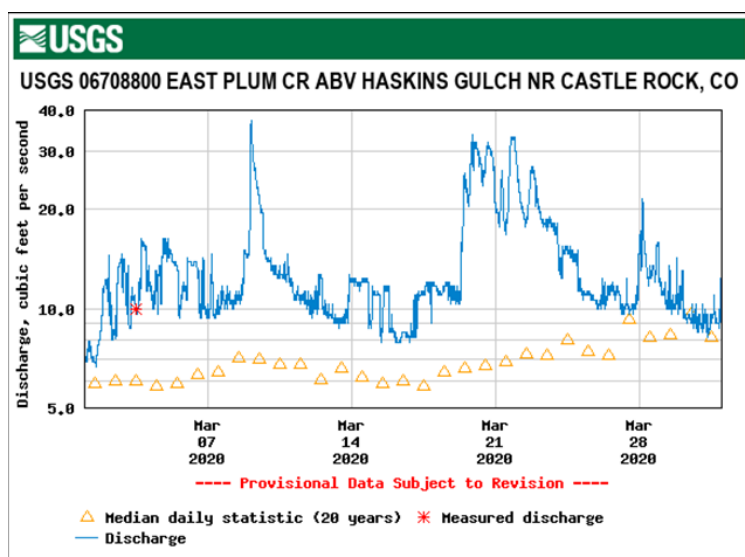


This graph shows the monthly production of the Town's alluvial well system, which helps to supply PCWPF. There was no production from the alluvial wells in March.

We completed seven well rehabilitation projects this past fall/winter and one more is scheduled for this spring.

East Plum Creek Flows

Mar. 2020 avg flow: 13.3 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 6.7 and 37.3 cubic feet per second (cfs) during the month of March, with an average streamflow of 13.3 cfs. This month's average streamflow of 13.3 cfs is above the 20-year median of 7.0 cfs.

There were active calls on the South Platte River in March. 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 covered by non-tributary 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.

Water Demand

Drought Monitor

The average WSI for March was 3.6, 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 68% of Colorado is experiencing Abnormally Dry (D0) to Severe Drought (D2) conditions. 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.

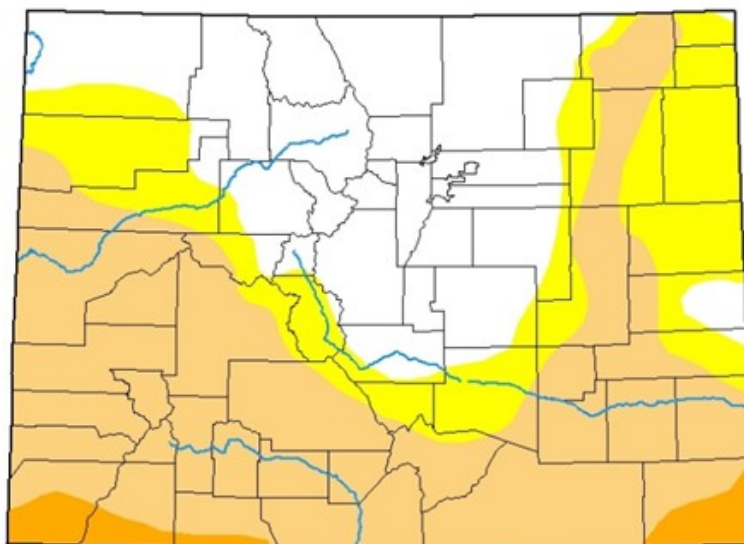
The NRCS Colorado SNOTEL Report

April 1, 2020

- YTD precipitation for the South Platte River Basin is at 107% of average
- The snow water equivalent is at 117% of median

U.S. Drought Monitor Colorado

March 31, 2020
(Released Thursday, Apr. 2, 2020)
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:

David Simeral
Western Regional Climate Center



droughtmonitor.unl.edu

Plan Review

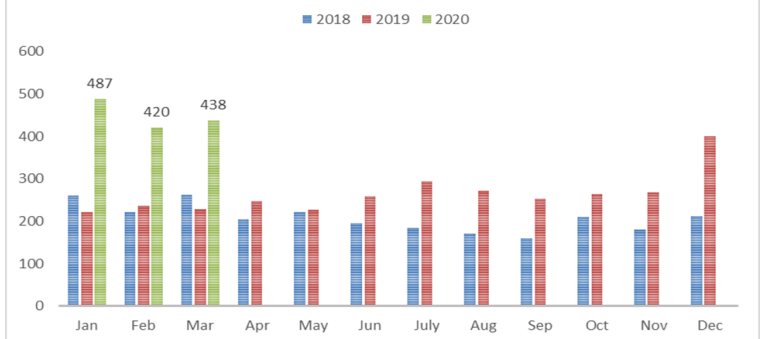
For each commercial and residential project submitted for development review, Castle Rock Water provides plan review, as appropriate, for:

- 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.



TOTAL # OF CASTLE ROCK WATER PLAN REVIEWS FOR DEVELOPMENT SERVICES AND BUILDING



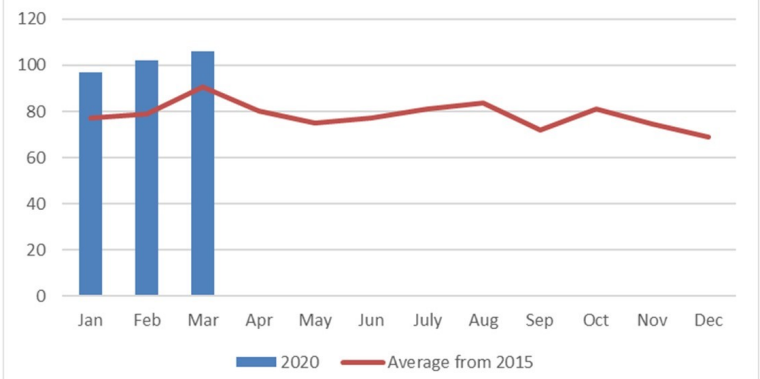
Reviews

256 development services PROJECT plan reviews
182 building PERMIT reviews
For 106 separate projects

- Number of distinct projects increased 39% from March 2019
- Total of 106 distinct projects permits were reviewed
- Number of project reviews increased 56% from March 2019
- Permit reviews increased 184% from March 2019

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.

Monthly Projects Reviewed 2020 Average monthly reviews since 2015



Service levels

The average number of days assigned to review: 11.9 days
The average days to complete assigned reviews: 11.0 days

Plan Review: 86% of the reviews were completed on-time

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

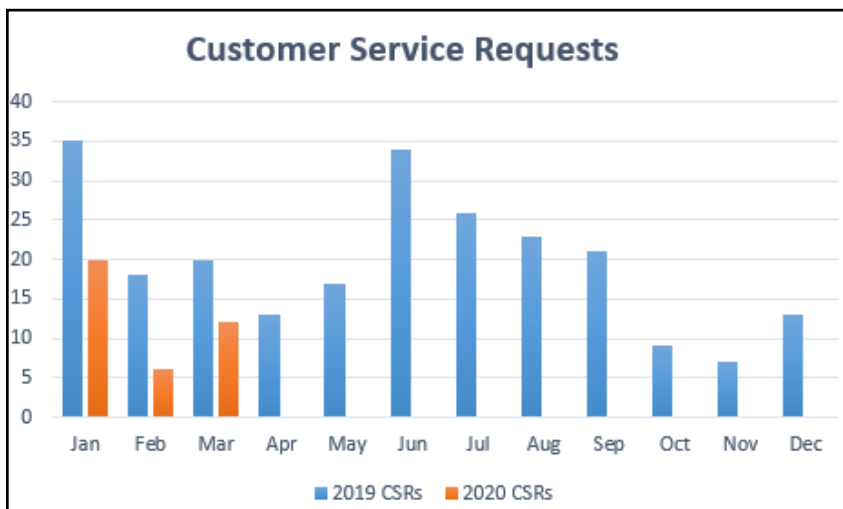
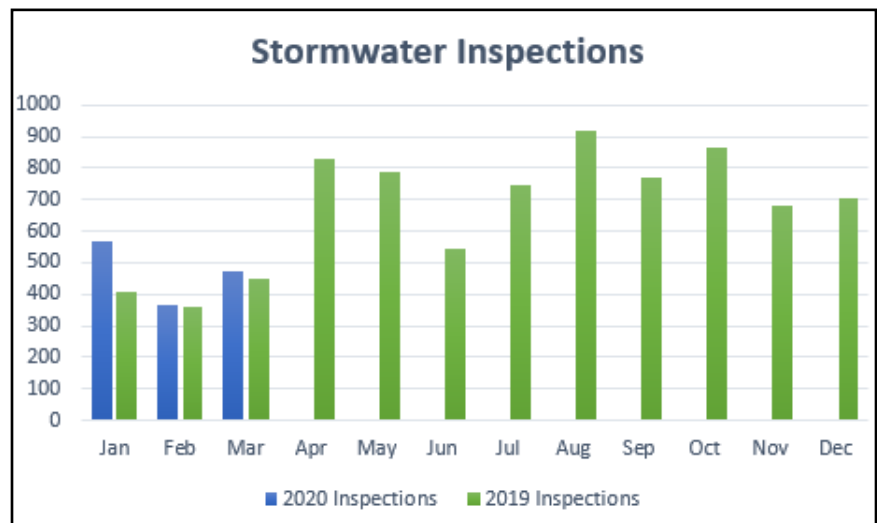
Stormwater

Updated quarterly
Quarterly Report: 2020 Q1

Inspections

The inspection team regulates permitted residential and commercial properties.

As anticipated, inspections are coming back down to about where they were in early 2019. Many of the builders have moved from DESC to Vertical TESC, decreasing the number of permits from equal to the number of active houses under construction, to just one for an entire builders' site.



Customer Service Requests

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

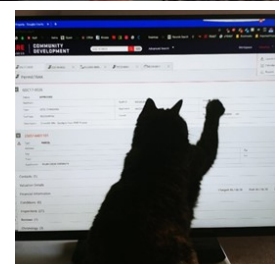
The first quarter of 2020 is trending much lower than last year.

Acclimating to the "New Normal"

The Water Quality Control Division of the State has not made any concessions with respect to our State permit requirements due to the coronavirus so the Stormwater Division continues to conduct inspections and meet other permit requirements on the same schedule as before.

The inspectors are working from home and Town vehicles while maintaining social distancing when inspecting sites and responding to customer concerns.

The Team has maintained contact with each other through texting, Jabber and FaceTime, where we have all gotten to see each others families, pets and home "offices".



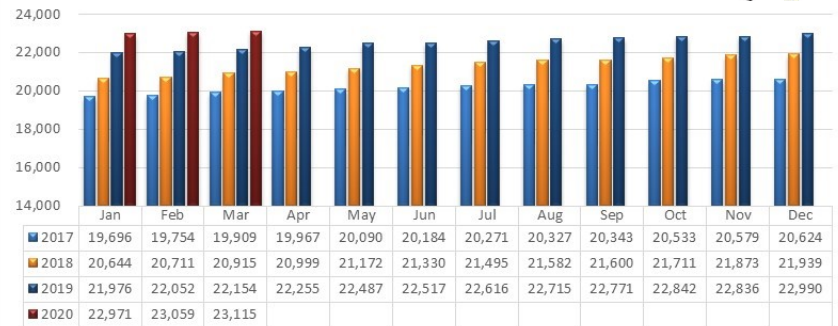
Business Solutions



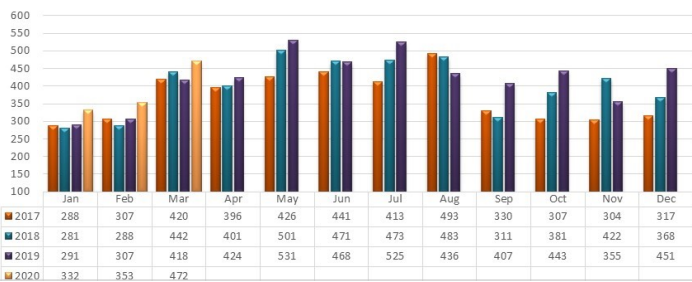
Customer Service

With the COVID-19 Pandemic, the customer service lobby was closed to walk-in customers, reducing customer contact. Disconnection notices were not mailed in March as well as no service disconnections were conducted, which reduced customer call volume significantly.

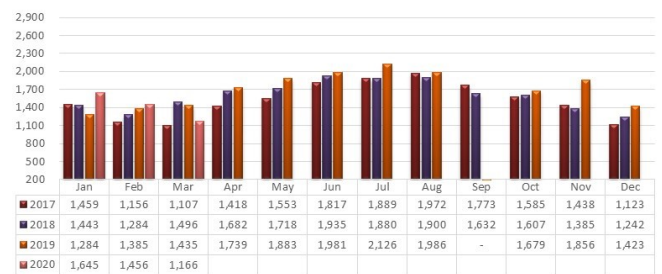
of Accounts Billed



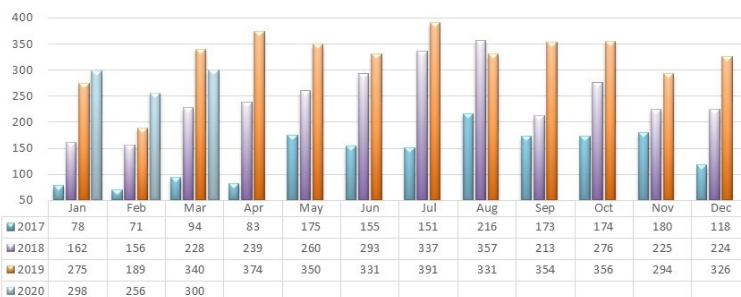
Transfers of Water Service



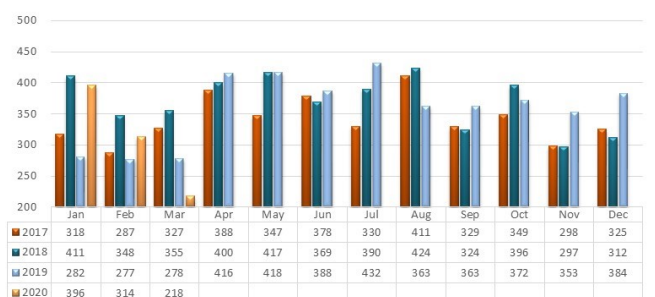
Customer Phone Calls



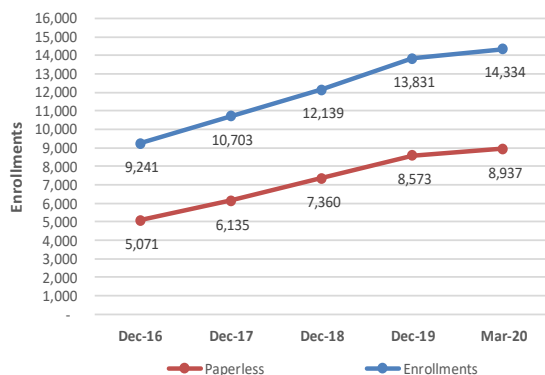
Mywaterbill Email Inquiries



Walk-In Customers



H₂O Access Customer Enrollments



- Walk-in customers were significantly down due to limited customer interaction from COVID-19 social distancing.
- With business continuing, despite closing the lobby doors, transfers of service, email inquiries and new accounts continue to steadily increase.
- Customers creating online accounts through H2Oaccess, the online payment portal, remains steady and paperless customers increased to 62% this quarter.

Meters



Meters Read

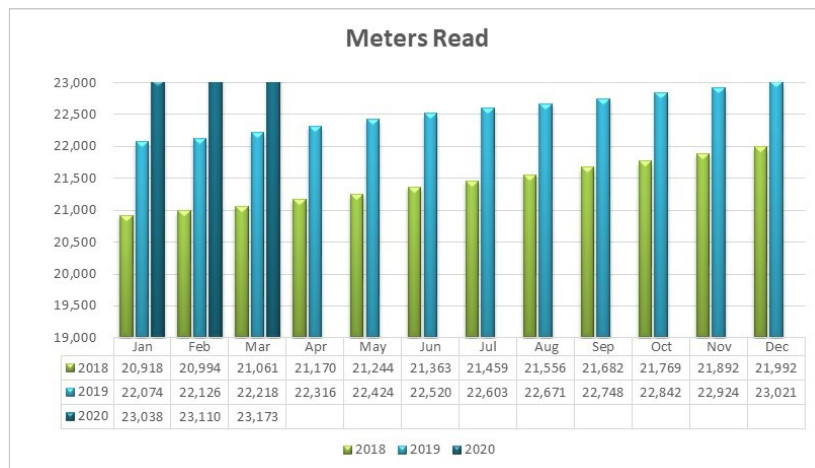
Meters are read the first three days of every month. The number of meters read continues to increase month to month and is a significant increase over last year.

Skipped Reads

Mar. 2020: 0.26%

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.

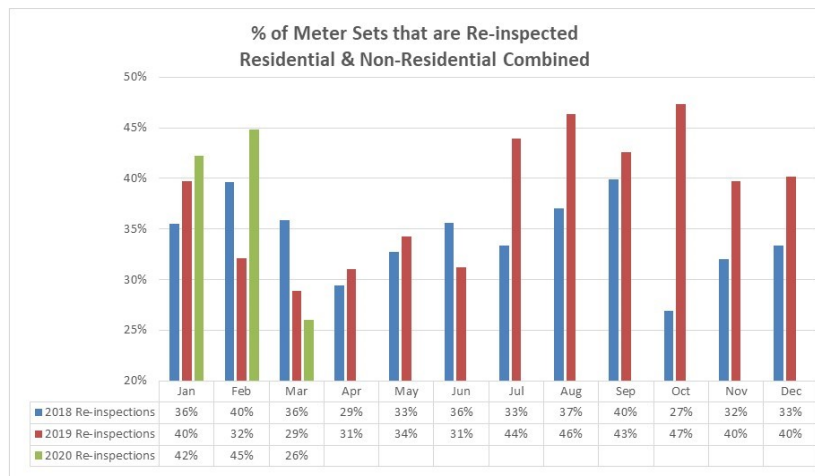
The AWWA standard is 2%, so we still continue to stay well below the industry average.



Meter Set Inspections

Mar. 2020 150 *Re-inspections were*
YTD 382 *significantly down*
Re-inspections 26% *in March—a good*
trend to see!

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.

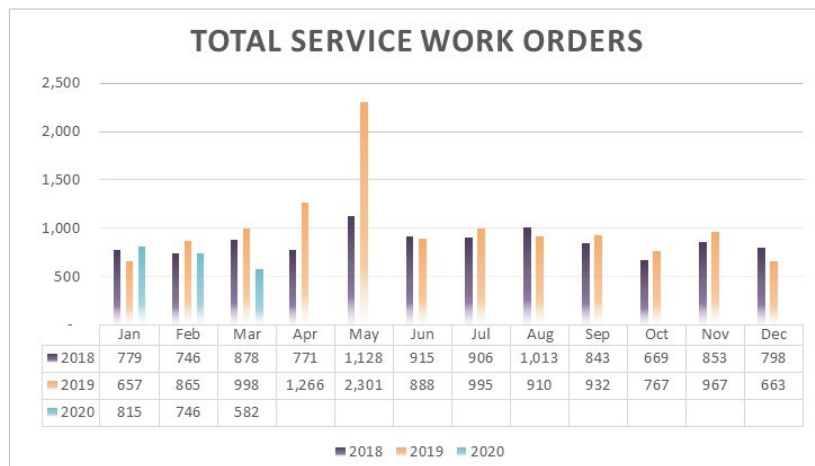


Work Orders

Mar. 2020 582

Work orders were down in March due to no disconnection service orders conducted in response to COVID-19. Service for customers was conducted only for exterior building access or emergency situations, beginning 3/16/20.

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



Operations & Maintenance

LEVELS OF SERVICE		MAR. 2020
Drinking Water Compliance	Castle Rock Water will deliver water that meets or exceeds the requirements of both Primary Drinking Water Regulations and Secondary Maximum Contaminant Levels 100% of the time.	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.</i>
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. <i>Castle Rock Water remains in the Top Quartile for least number of sewer backups based on the American Water Works Association benchmarking.</i>	There was 1 sewer system issue this month. <i>There was one sewer system issue in March. Construction material left in a manhole caused a sewer main blockage, comprised of flushable wipes. This sewer line issue created a backup into two homes in The Meadows.</i>
Drinking Water Supply Outages	<5% of our customers will experience water outages for one or more events totaling more than 30 hours/year. <i>Castle Rock Water remains in the Top Quartile for water system integrity based on the American Water Works Association benchmarking.</i>	There were 3 water system integrity issues in March. <i>There was a leak in a meter pit on Canyon Dr. The team replaced a gasket and some bolts to stop the leak on the 2" meter. Eight residents of the townhome complex there were out of water for less than two hours during the repair.</i> <i>There was a service line leak in the Meadows, on Coach House Loop, eighteen homes experienced reduced pressure for several minutes while the service line was repaired.</i> <i>There was a line break in the Glovers neighborhood, 31 homes experienced reduced pressure for several hours, during the repair of the 6" cast iron pipe with a large corrosion hole on the bottom of the pipe.</i>
Water Quality Complaints	<i>Castle Rock Water remains in the Top Quartile for water quality complaints based on the American Water Works Association benchmarking.</i>	There were no water quality issues this month. <i>There was one water quality customer education visit.</i>

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 to come out to locate public water, wastewater and stormwater lines in the road and in your project area.

Castle Rock Water's locate requests from 811 have continued to rise, year over year. This year to date, there have been no incidence of damage to lines, as a result of incorrect locate marks.

ANNUAL UTILITY LOCATES

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
January	577	475	617	1,190	1,289	1,162	1,199	1,334	1,442	1,472	1,612	
February	521	485	538	1,094	1,093	1,383	1,334	1,378	1,293	1,404	1,443	
March	660	552	818	1,437	1,349	1,906	1,625	1,851	1,514	1,560	1,626	
April	838	681	1,025	1,482	1,552	1,784	1,631	1,760	1,856	1,984		
May	853	863	985	1,541	1,531	1,609	1,809	2,002	1,801	2,122		
June	969	844	982	1,314	1,399	1,654	2,075	1,872	1,854	1,716		
July	680	582	859	1,350	1,392	1,477	1,675	1,582	1,556	1,937		
August	901	723	1,123	1,476	1,468	1,494	1,651	2,001	1,986	1,603		
September	880	723	1,029	1,240	1,373	1,343	1,701	2,102	1,747	1,979		
October	715	688	1,155	1,501	1,376	1,314	1,579	1,792	2,064	1,839		
November	536	518	1,041	1,072	866	1,134	1,131	1,460	1,463	1,643		
December	415	405	925	1,005	1,043	1,063	1,059	1,277	1,293	1,175		
Totals	8,545	7,539	11,097	15,702	15,731	17,323	18,469	20,411	19,875	20,440	4,681	

Collections

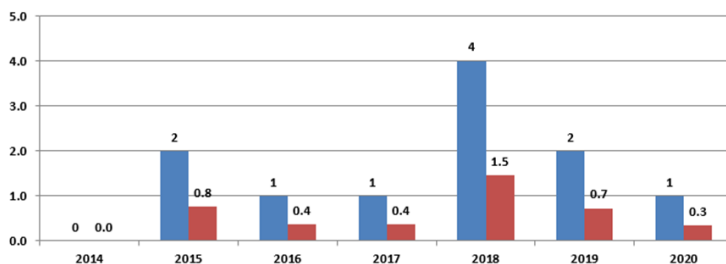
Castle Rock Water tracks within the top quartile in the Sanitary Sewer Overflow rate, according to the American Water Works Association. Our team runs a camera through the sewer mains to look for problems. When problems are identified, they are cleared with a high pressure water jet. The goal is to clean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

YTD:

Lines cleaned: 2.35 miles

Lines inspected: 9.45 miles

Sanitary Sewer Overflow Rate
Events/100 mi



AWWA Index		
Top Quartile	Median	Bottom Quartile
0.4	1.6	3.3

SSOs
SSO Rate/100 mi

YTD
Lines Cleaned 2.35 miles
Lines Inspected 9.45 miles
SSO Rate 0. SSO/100 mi

Field Services

Getting ready for the day.
The morning stretch—at a safe social distancing.

