



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

## Chatfield Storage Reallocation Project

By Matt Benak

More than 25 years of effort by various regional water entities, water professionals, environmental consultants and government officials has culminated in the ability to store water in Chatfield Reservoir for municipal, agricultural and environmental purposes. The US Army Corps of Engineers (USACE) built Chatfield Reservoir in 1975 for the purpose of flood control, recreation, fish and wildlife habitat, and water supply near the confluence of the South Platte River and Plum Creek. Population growth in the Denver metropolitan area and crop production in northeast Colorado has led to a higher demand for water storage. In response, on May 29, 2014, the USACE signed a Record of Decision for the CSRP Feasibility Report/ Environmental Impact Statement (FR/EIS), approving an additional 20,600 acre-feet (AF) of water storage. At full storage pool, the reservoir level will increase by up to approximately 12 feet from the historic operational high level.

The Town of Castle Rock currently owns 590 AF of storage space in the project having recently closed on an additional 129 AF of storage space with the Colorado Water Conservation Board (CWCB). Additionally, the CWCB indicated that they will allow Castle Rock to store water in the storage space that it has under option, beyond the 590 AF currently owned, up to 2,000 AF. The CWCB is not requiring any payment for the storage of water in this optioned space.

Castle Rock began storing some of its fully reusable effluent and native rights on East and West Plum Creek on May 15, 2020 and has approximately 160 AF of water in storage through the third week of June.

*The North Boat Ramp area at Chatfield Reservoir*



## Chatfield continued

Construction activities for the Reallocation Project were substantially completed in December 2019. The final Project construction costs were approximately \$167,000,000, which is \$4 million less than the last official Project estimate, or around 2.3% under budget. The Chatfield Reservoir Management Company (CRMC) has been directed to utilize the remaining funds to pay for the first five years of post-construction Project obligations, such as vegetation and habitat monitoring, erosion monitoring, weed management and new vegetation irrigation.

There are multiple benefits to water storage in Chatfield for Castle Rock. Some of these benefits include:

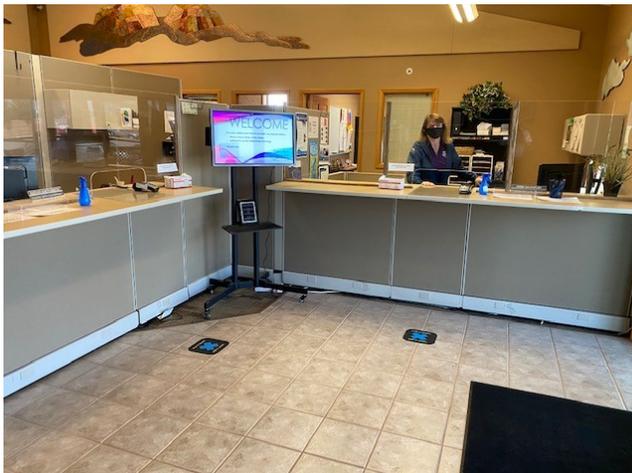
- Reasonably priced storage capacity at the confluence of Plum Creek and the South Platte River. A location that gives us the ability to store reusable return flows as well as junior surface water rights on the South Platte when they are in priority.
- The Town has a 2,000 acre-foot conditional junior water storage right in Chatfield (Water Court Case No. 89CW169) with an appropriation date of November 6, 1989 that has a value of millions of dollars' worth of renewable water supply.
- A regional project that has had statewide and Federal support and will increase cooperation amongst water providers in our area.

- The potential for Castle Rock to lease excess water or lease storage space at attractive rates, benefiting our rate payers.
- Options to collaborate with other regional entities on treatment and transmission infrastructure.
- More future flexibility with WISE water (potential deal with Denver Water, Parker and East Cherry Creek Valley to move water to Rueter-Hess Reservoir without pumping – this is known as a paper trade).
- Allows us to purchase spot water from other entities.



*The new bridge and bank modifications over the South Platte River in Chatfield State Park.*

## Updated pandemic measures



*The front lobby opened June 1 with social distancing measures in place.*



*Masks are required if working within 6 feet of staff.*

# Employee Recognition

## 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



**Walt Schwarz,**  
Project Manager,  
received the  
Water Star award  
from  
Dawn Tiffany.

"There are so many people at Castle Rock Water that work hard, offer great customer service and help to me every day. This makes the job of

passing on the award incredibly difficult. The person I have chosen, is not someone I work with every day. But I think he exemplifies the best that Castle Rock Water has to offer. This person is very busy handling multiple projects. But, he is always in a good mood and accepts every challenge with a smile and a great attitude. He offers excellent internal and I'm sure external customer service. He is always available for a quick phone call or to tackle a larger project. When this person answers a question, he doesn't just give the answer, he also offers an education on the subject you've asked him about, which I love.

Walt, I would like to pass the Water Star award on to you, with my sincere thanks and gratitude!"

## CONGRATULATIONS ON YOUR PROMOTION!



**Casey Devol**  
Plant Mechanic II

## 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. Below is a list of those passing various certifications this month:



**Lauren Moore**  
Well Meter Testing  
Certification



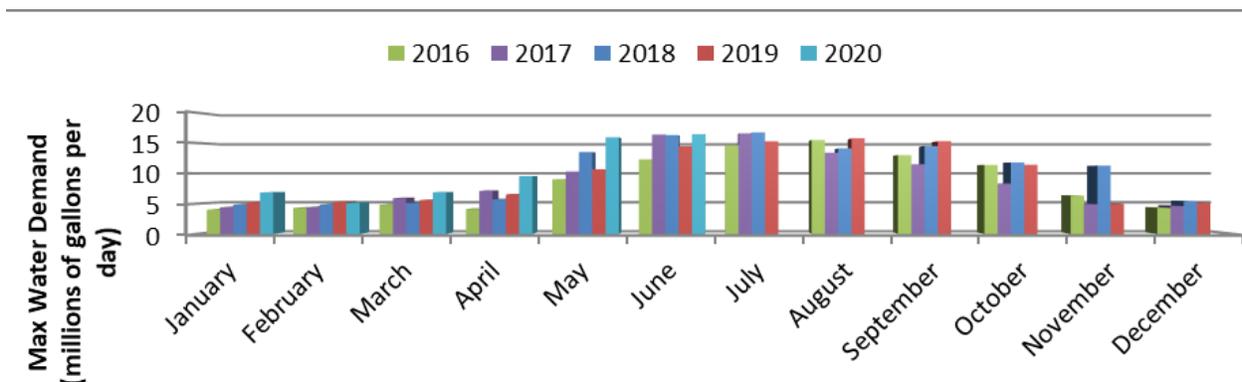
**Brent Pickrell**  
Well Meter Testing  
Certification



**Chad Sonka**  
Backflow Certification



# 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.

<b>June 2020</b>	<b>16.5 million gallons/day</b>
June 5 yr. avg	15.2 million gallons/day
Difference	8% higher

## Water demand total

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

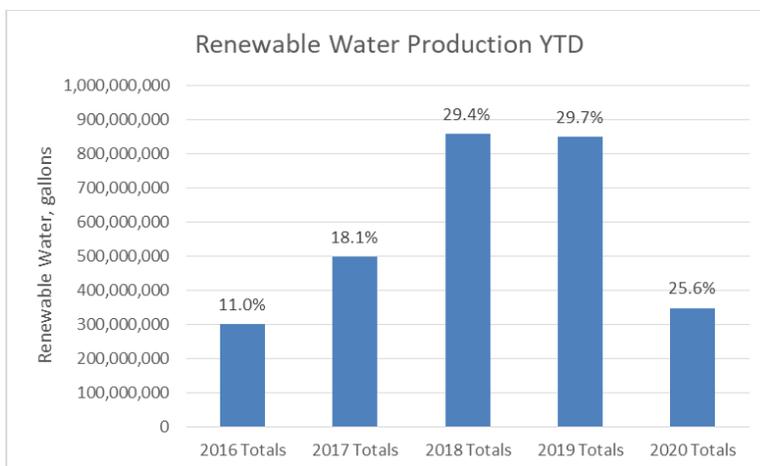
<b>June 2020</b>	<b>441.5 million gallons</b>
June 2019	344.6 million gallons
Difference	28% increase

**Max daily water demand in 2019**  
15.8 MGD in August

**Water demand total for 2019**  
2,838.5 MG

## Renewable water supply

- The CR-1 diversion produced an average of 0.69 MGD for the month of June (not including captured Well 7C and the Bell Mountain Wells' flows). The Town's thirteen alluvial wells and CR-1 produced a total of 45.57 MG of renewable water (and an average of 1.52 MGD).
- WISE water supplied an additional 48.4 MG of renewable water.
- In total, renewable supplies accounted for 22.7% of the total water supply for the month and 25.6% of the annual water supply (1,355 MG or 4,158 AF) to date.



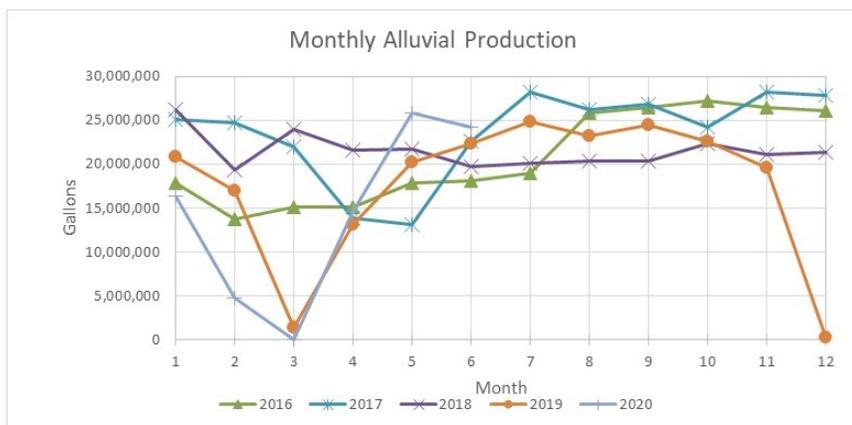
*Our goal is to reach 75% renewable water by 2050.*

# 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 June is 29.5% with 66.9% of available reusable supplies used in the month of June.

## Alluvial supply

**June 2020 production: 25.8 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 24.2 MG.

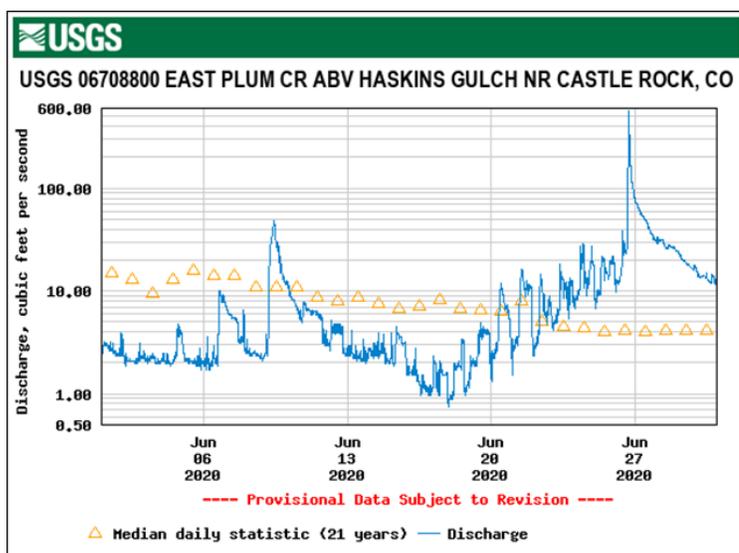
We completed eight well rehabilitation projects this past fall/winter.

## East Plum Creek Flows

**June 2020 avg flow: 11.0 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 0.74 and 576 cubic feet per second (cfs) during the month of June, with an average streamflow of 11 cfs. This month’s average streamflow of 11 cfs is above the 20-year median of 7 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 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. 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 15th and to date we have 170.9 AF of water stored in Chatfield.



# Water Demand

## Drought Monitor

The average WSI for June was 1.4, above the 1.1 trigger level, which is considered “good.”

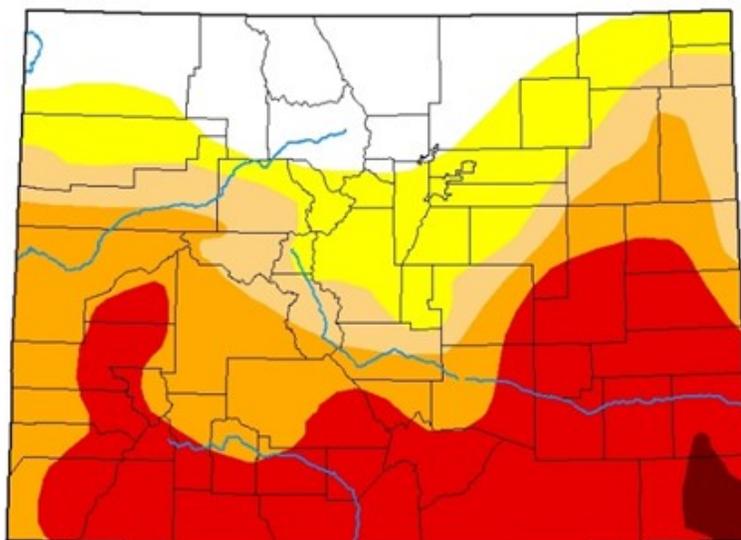
According to the U.S. Drought Monitor maintained by the United States Department of Agriculture (USDA), approximately 84% of Colorado is experiencing Abnormally Dry (D0) to Exceptional Drought (D4) conditions. The Town of Castle Rock Drought Management Plan uses a Water Supply Index (WSI) for the Town 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**  
June 30, 2020

YTD precipitation for the  
South Platte River Basin is at  
97% of average.

### U.S. Drought Monitor Colorado

**June 30, 2020**  
(Released Thursday, Jul. 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:**

Adam Hartman  
NOAA/NWS/NCEP/CPC



[droughtmonitor.unl.edu](https://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.

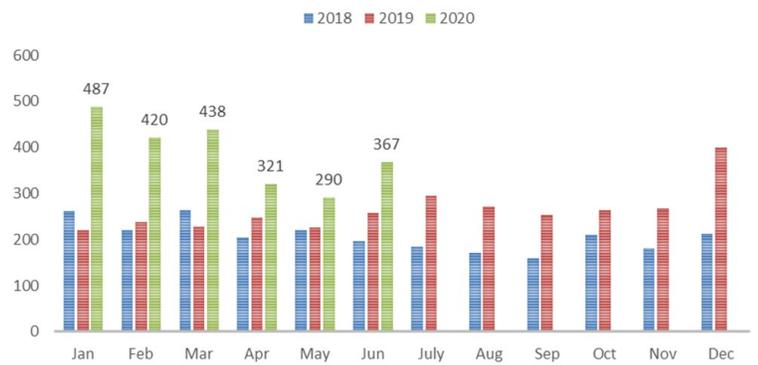
## Reviews

208 development services PROJECT plan reviews  
159 building PERMIT reviews  
For 86 separate projects

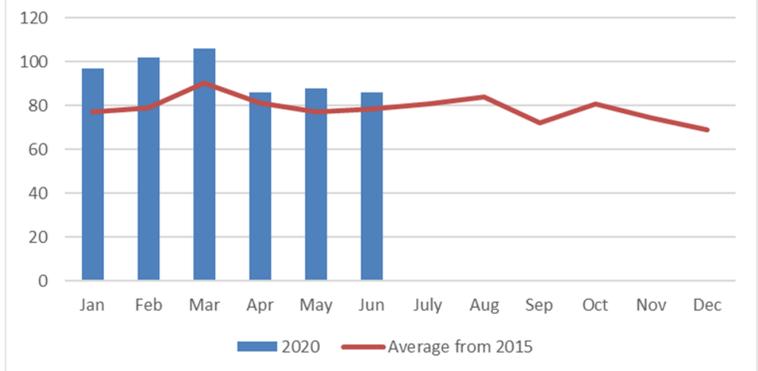
- *Number of distinct projects increased by 18% from June 2019*
- *The total number of development project reviews increased by 25% from June 2019.*
- The TOTAL number of permit reviews increased by 73% from June 2019.
- The team maintained 97% of the building permit reviews completed on time

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.

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



## Monthly Projects Reviewed 2020 Average monthly reviews since 2015



## Service levels

The average number of days assigned to review: 12.6 days  
The average days to complete assigned reviews: 11.9 days

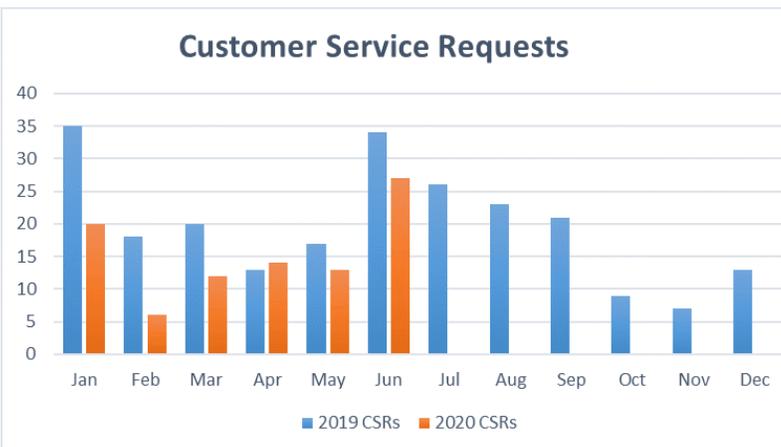
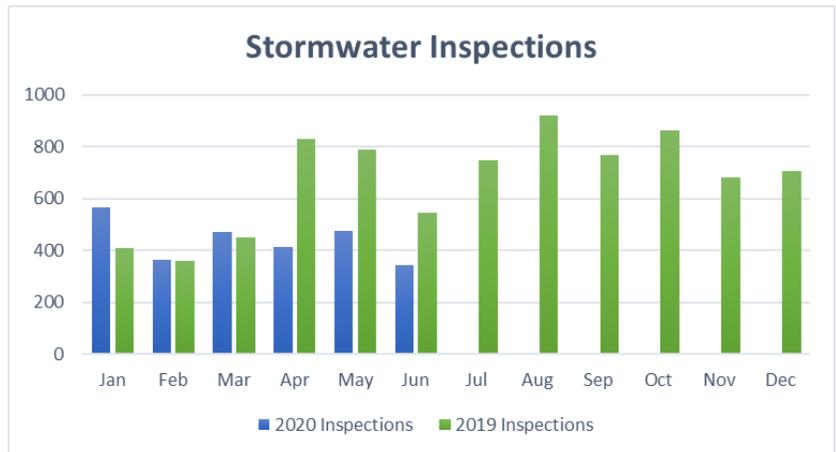
Plan Review: 92% of the reviews were completed on-time

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

## Stormwater Inspections

The inspection team regulates permitted residential and commercial properties.

Inspection numbers are continuing to decrease due to nearly 100% of the builders now under vertical TESC permits therefore decreasing the number of permits from equal to the number of active houses under construction to just one for an entire builders' site. As for workload, each vertical TESC inspection is more involved and takes longer to complete.



## Customer Service Requests

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

There was a major increase in CSRs in June similar to last year. This is generally attributed to the start of the rainy season and also irrigation where more nuisance water over the sidewalk is reported.

## Flood Season

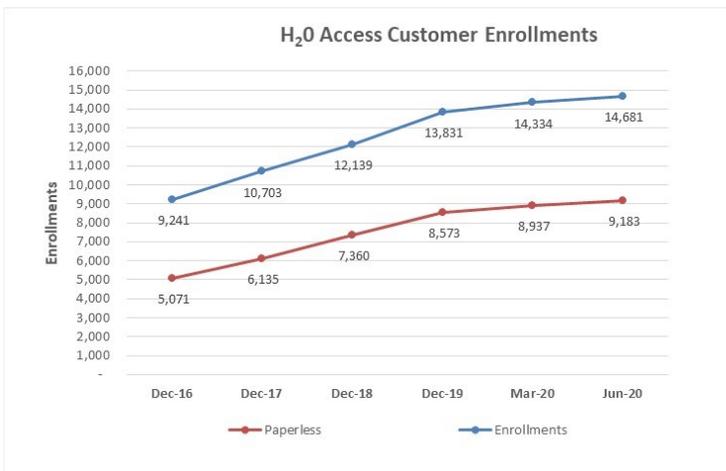
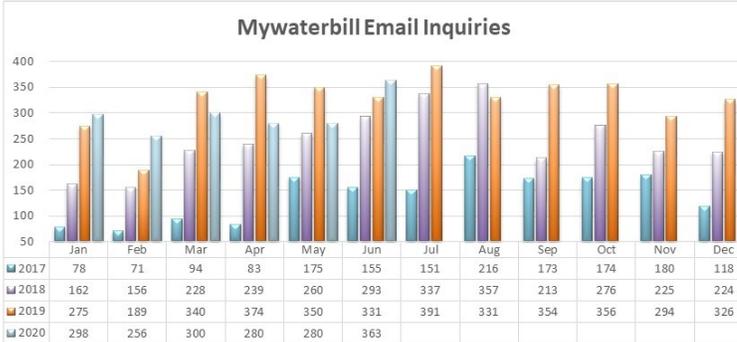
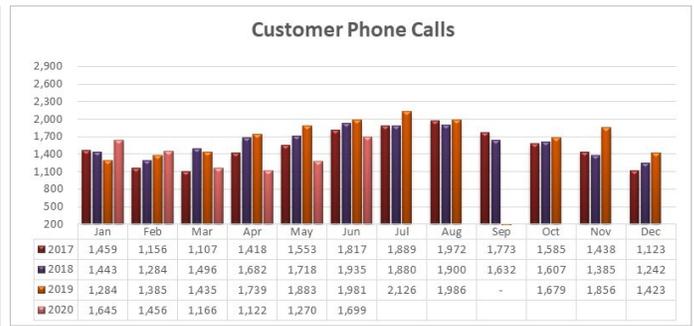
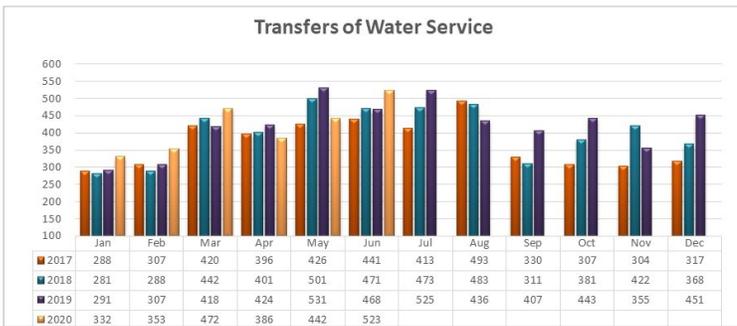
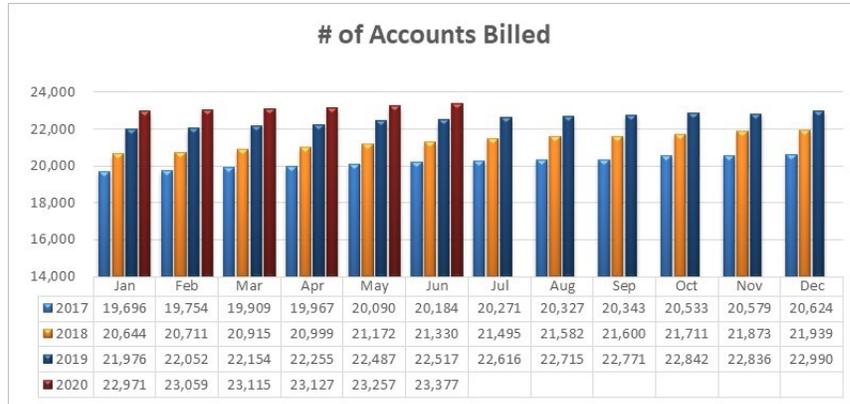
Flood season “officially” began in Castle Rock on Friday, June 26, 2020 when a strong storm dumped ~1.25” of rain on the Meadows in about 45 minutes. The storm caused damage in several locations. Drainageways were transporting tons of runoff downstream and filling stormwater ponds.

The top photo shows the drainageway behind the Grange which is functioning as intended. The lower photo shows the aftermath of an intersection that flooded impacting apartment units nearby.



# Business Solutions

## Customer Service & Billing



- The front lobby opened back up to customers on June 1, however walk in customers are still significantly lower compared to the last few years in June.
- Customer calls increased in June due to courtesy calls to customers with past due balances.
- Email inquiries increased due to increase in transfers of service.
- Customers creating online accounts through H2Oaccess, the online payment portal, remains steady and paperless customers increased to 63% in 2020/Q2.

# Meters



## Meters Read

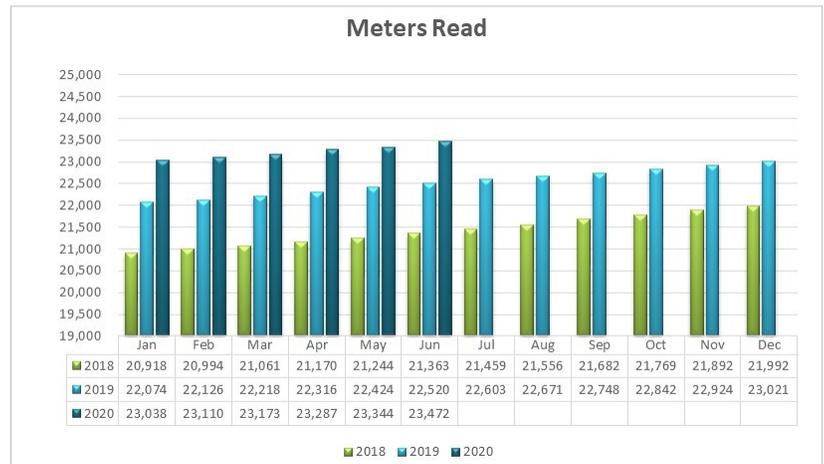
Meters are read the first three days of every month. The number of meters read continues to increase month to month and is a significant increase over last year.

## Skipped Reads

**June 2020: 0.24%**

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.

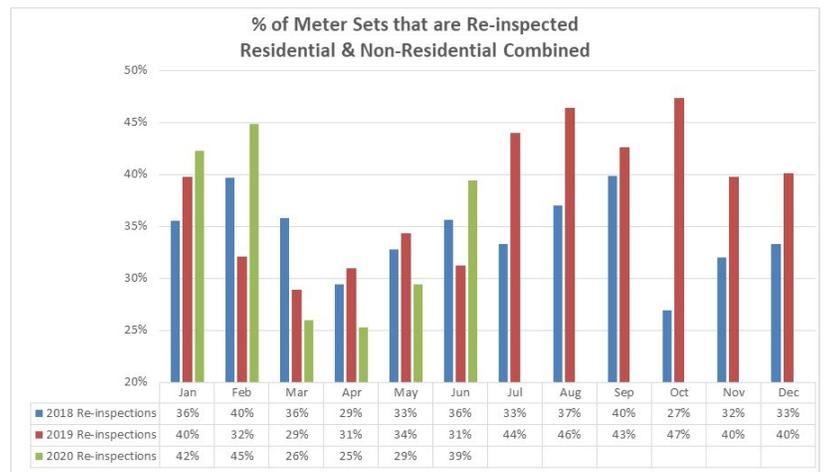
*The AWWA standard is 2%, so we still continue to stay well below the industry average.*



## Meter Set Inspections

**Re-inspections 39%**

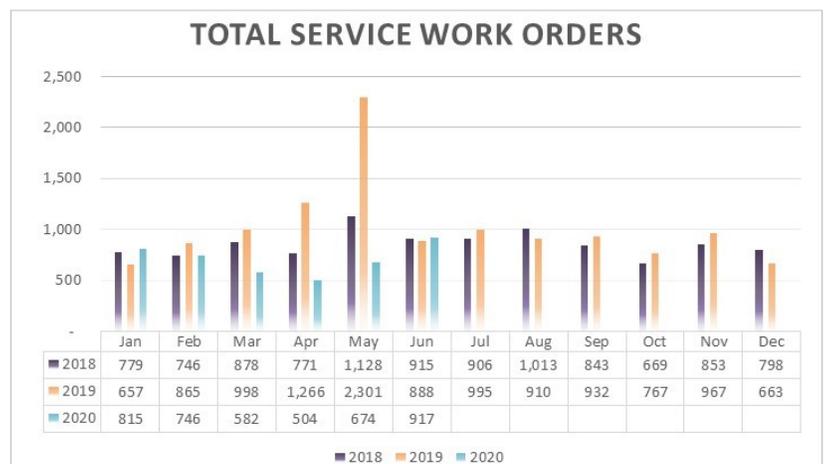
Meter set inspections are required on all new meters installed. This ensures that the meters are installed per specifications and according to Town code. At the time of the inspection, the curb stop is tested for operability and the MXU is installed which provides reading capability for our drive by technology. Re-inspections are needed to ensure installation meets code when original inspections are failed.



## Work Orders

**June 2020 917**

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 transfer of service, disconnection and reconnections, meter set inspections, etc.



# Operations & Maintenance

LEVELS OF SERVICE		JUNE 2020
<b>Drinking Water Compliance</b>	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.	<b><i>Ninety routine samples were completed.</i></b> <i>All samples were within the parameters set forth by the Safe Drinking Water Act and Colorado Drinking Water Standards.</i>
<b>Pressure Adequacy</b>	< 1% of our customers will experience less than 43 pounds per square inch (psi) of pressure at the meter during normal operations.	<b><i>There were no water pressure issues this month.</i></b>
<b>Sewer System Effectiveness</b>	<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>	<b><i>There were no sewer system issue this month.</i></b>
<b>Drinking Water Supply Outages</b>	<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>	<b><i>There were two water system integrity issues in June.</i></b> <ul style="list-style-type: none"> <li><i>There was a leak at an apartment building in Plum Creek. A 10" valve with a bonnet seal leak caused twelve units to have lower than normal pressure during the repair.</i></li> <li><i>There was also a leak at the Oakcrest Apartments. A corrosion hole on 8" DIP caused 21 apartment homes to be out of water for five hours during the repair.</i></li> </ul>
<b>Water Quality Complaints</b>	<i>Castle Rock Water remains in the Top Quartile for water quality complaints based on the American Water Works Association benchmarking.</i>	<b><i>There were no water quality issues this month.</i></b> <i>There was one water quality customer education visit. Upon investigation it was determined that the business had an inoperable water softener, which had forced media debris into the building's water lines.</i>

# Operations & Maintenance

## Locate Report



Know what's below.  
Call before you dig.

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.

Castle Rock Water's locate requests from 811 have continued to rise, year over year. This year to date, there have been no incidences 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	2,600	
May	853	863	985	1,541	1,531	1,609	1,809	2,002	1,801	2,122	2,288	
June	969	844	982	1,314	1,399	1,654	2,075	1,872	1,854	1,716	1,931	
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	1,469	1,649		
December	415	405	925	1,005	1,043	1,063	1,059	1,277	1,293	1,175		
<b>Totals</b>	<b>8,545</b>	<b>7,539</b>	<b>11,097</b>	<b>15,702</b>	<b>15,731</b>	<b>17,323</b>	<b>18,469</b>	<b>20,411</b>	<b>19,875</b>	<b>20,440</b>	<b>11,500</b>	

## Field Services



A truck hit a hydrant off Founders Parkway and the hydrant lost! On-Call staff member Chad Sonka was assisted by Field Services and Public Works in the cleanup.

## Stormwater Field Services



Cherokee Ponds Standpipe Gravel Renewal conducted by the Stormwater team.



## Collections

YTD	
Lines Cleaned	17.59 miles
Lines Inspected	16.03 miles
SSO Rate	0.35 SSO/100 mi

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.