

MONTHLY REPORT

NOVEMBER 2019



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

Engaging our customers

Soliciting input and providing details to residents regarding water project makes for a smoother and more comprehensive project management process and is standard outreach for most projects. The Craig & Gould North infrastructure improvement project has held two open houses to hear about residents' concerns. Issues that have arisen primarily deal with the traffic and pedestrian use from the public accessing the Rock. Based on this input, the Town is developing alternatives to address these considerations. Subsequent resident meetings are scheduled.

The project, a joint effort between Castle Rock Water and Castle Rock Public Works, will address stormwater flows, upgrade street pavement, and replace aging water and sanitary sewer mains, as appropriate. The project will reduce flooding hazards, unnecessary utility disruptions and improve traffic and pedestrian use of the right-of-way. This infrastructure will be upgraded to meet current design criteria standards and will be similar to improvements completed in the Craig and Gould South neighborhood. Construction is scheduled for 2020.



Environmental Impact

By Mark Billman

An Environmental Management System (EMS) is a set of management processes and procedures that allows an organization to analyze, control and reduce the environmental impact of its activities, products and services, and operate with greater efficiency and control. Implementing an EMS does not necessarily involve a drastic change from the way Castle Rock Water (CRW) conducts its business. The EMS builds on what our organization has been doing well, and provides a structured approach to improve what we want to do better. *Castle Rock Water has earned the Gold Level of the Environmental Leadership Program from CDPHE for these efforts.*

EMS Objectives		
Renewable Water	To reduce the Town's dependence on non-renewable sources (deep groundwater wells), we've set a target of 75% of our total water supply to be from surface water by the year 2050.	YTD: 30%
SSOs	To reduce the number of Sanitary Sewer Overflows (SSOs) per year, with a target of zero SSOs, and to clean and inspect one third of the collections system annually.	On target
Conservation	To reduce the overall water demand, with a target of 100 gallons per capita per day by the year 2050.	5-yr avg: 114.9 gpcd 2019 est: 111.0 gpcd
Recycling	To optimize our existing recycling program, with a target of increasing awareness and ease of recycling among CR Water staff.	Recycling programs in place Indoor clean-up day held 9/23/19
Energy	To reduce overall energy consumption, with a target of a recognized downward trend in the amount of energy used per million gallons of water produced.	2019: 22,114 kBTU/MG 2018: 24,713 kBTU/MG (August 2019 stats)

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. Certifications earned this month:



Michelle Strang
Backflow Certification



Clayton Baker
Backflow Tester Certification



John Whitesel
Water Treatment B
Certification



Jared Poyner



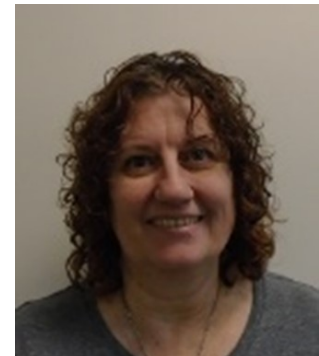
Lanre Ajayi
Distribution 3 Operator
Certification



Henry Mahafeey
CDOT/CDL License and
Collections 1 Operator
Certification

Elizabeth Knox
Distribution 1 Operator
Certification

GOOD JOB!



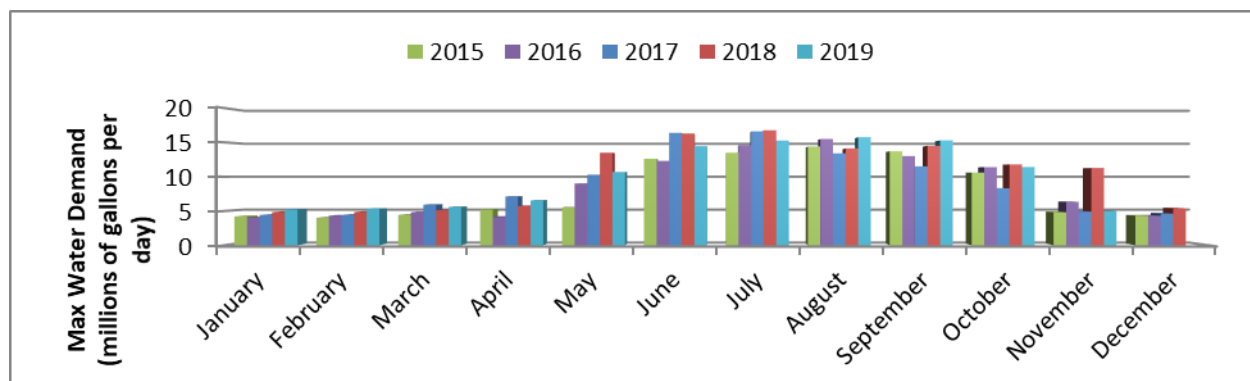
Water Star Award

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

Kris Julseth, Meter Services Support Specialist, received the Water Star from Tina Close, for her 'excellence in action' and always being extremely helpful and honest. Tina appreciates Kris' forthright nature—and humor!



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.

Nov. 2019	5.0 million gallons
Nov. average	6.4 million gallons
Difference	23% lower

Water demand total

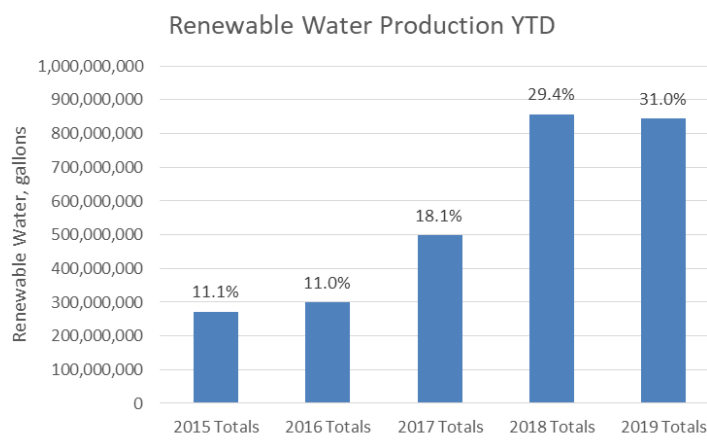
Water demand total is how much water was used over the entire month. Population and weather changes can significantly affect usage.

Nov. 2019	135.9 million gallons
Nov. 2018	146.2 million gallons
Difference	7.1 % decrease

Renewable water supply

- The CR-1 diversion produced an average of 0.24 MGD for the month of November.
- The Town's thirteen alluvial wells and CR-1 produced a total of 26.95 MG of renewable water (and an average of 0.9 MGD).
- In total, renewable supplies accounted for 18.8% of the total water supply for the month and 31.0% of the annual water supply (2,722 MG or 8,355 acre-feet) to date.

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

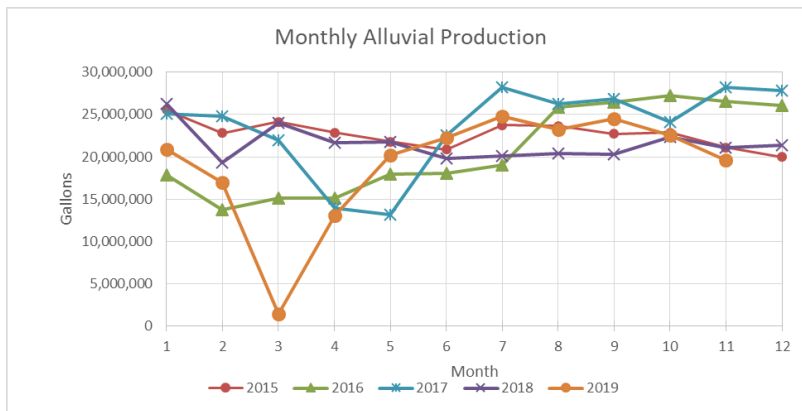


Renewable supplies are those water sources that are replenished by precipitation (think of our alluvial wells, CR-1, and WISE), whereas reusable supplies are those waters that are either from the Denver Basin (deep wells) or imported supplies (such as WISE and RHR) that can be used over and over, to extinction.

Water Demand

Alluvial supply

Nov. 2019 production: 22.6 MG

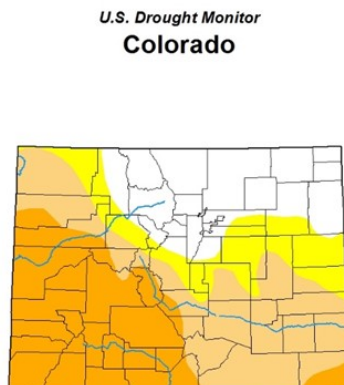


Drought Monitor

The average WSI for November was 3.8, 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 75% of Colorado is experiencing Abnormally Dry (D0) to Severe Drought (D2) conditions.

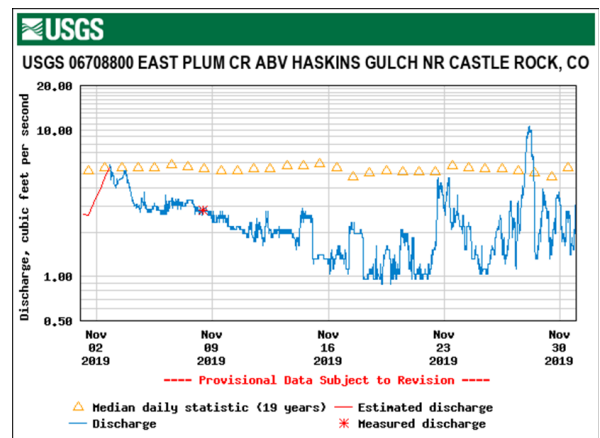
The Town of Castle Rock Drought Management Plan uses a Water Supply Index (WSI) for the Town that is similar to the U.S. Drought Monitor in that it provides us an indicator to drought level; however, the WSI accounts for local conditions relative to the Town’s capability to address our water resources 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.



East Plum Creek Flows

Nov. 2019 avg flow: 2.4 cfs

The flow hydrograph (above) 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 0.88 and 10.6 cubic feet per second (cfs) during the month of November, with an average streamflow of 2.4 cfs. This month’s average streamflow of 2.4 cfs is below the 19 year median of 5.5 cfs.



There were active calls on the South Platte River during November. 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.

November 26, 2019
(Released Wednesday, Nov. 27, 2019)
Valid 7 a.m. EST

Drought Conditions (Percent Area)						
	None	D0	D1	D2	D3	D4
Current	24.00	75.92	61.85	32.29	0.00	0.00
Last Week (11/19/2019)	25.19	74.81	59.95	32.23	0.00	0.00
3 Months Ago (09/27/2019)	40.47	59.53	1.98	0.00	0.00	0.00
Start of Calendar Year (1/1/2019)	17.84	82.06	66.26	54.91	27.11	11.22
Start of Water Year (10/1/2018)	30.14	69.86	27.53	0.00	0.00	0.00
One Year Ago (11/27/2018)	17.10	82.90	66.26	54.82	33.46	13.35

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

USDA
droughtmonitor.unl.edu

Precipitation report

105% above average

The NRCS Colorado SNOTEL report for Dec. 2, 2019

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

Projects submitted

Nov. 2019	71
Nov. 2018	75

Plans reviewed

Nov. 2019	170
Nov. 2018	139

Permits reviewed

Nov. 2019	98
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Permits are system development fees assessed for each individual unit after the project is completed including the number of fixtures, irrigated area, meter size, etc. This is necessary for proper billing.

Service levels

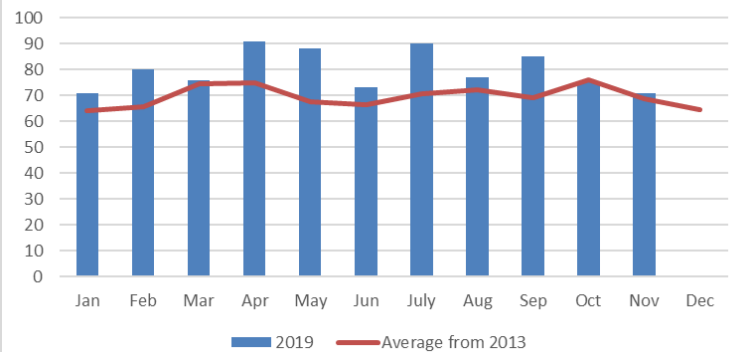
The average number of days assigned to review: 12.8 days
The average days to complete assigned reviews: 12.0 days

Plan Review: 80% of the reviews were completed on-time

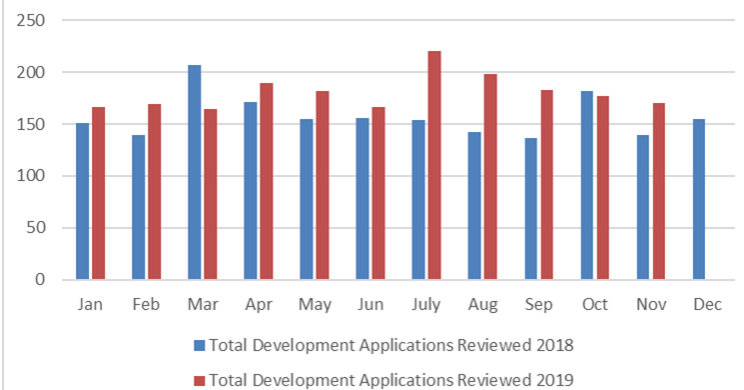
Permit Review: 100% completed on-time

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

Monthly Projects Reviewed 2019
Average monthly reviews since 2013



Total Plan Application Reviews



The Town reviews the plans for each project to ensure the public infrastructure built by the developer is following the criteria set by the Town.

Business Solutions

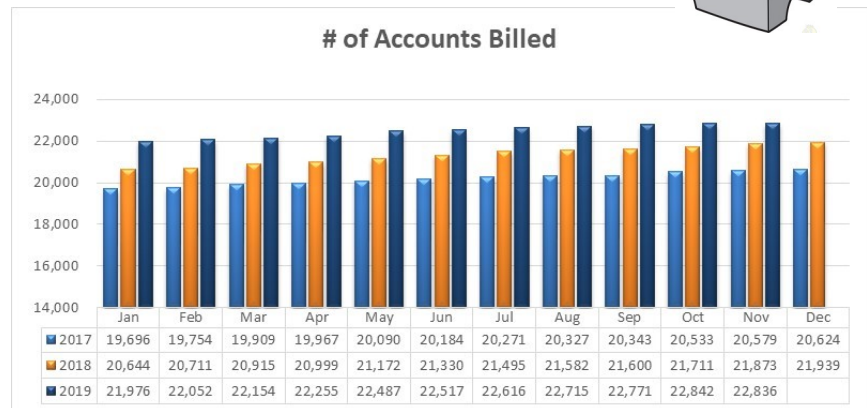
Customer Service

By: Anne Glassman, Business Solutions Manager

Incoming customer phone calls is a primary responsibility for our Customer Service Representatives and they field, on average 1,600 phone calls every month. Calls include billing questions, how projects in my neighborhood will impact water service, how to check for leaks, and pressure issues, among 1,596 other topics!



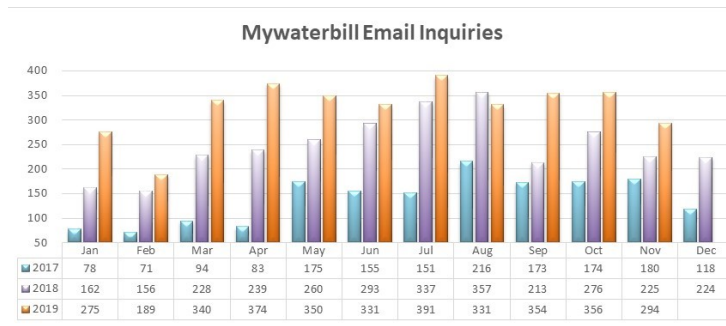
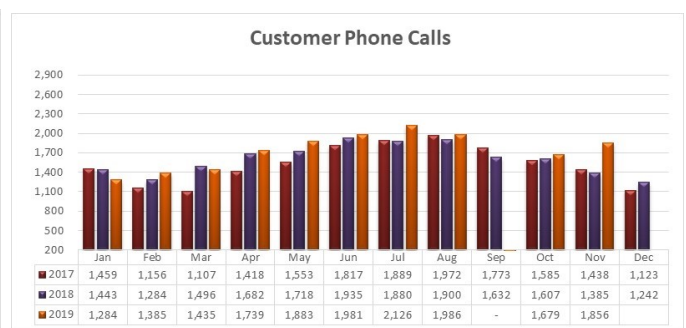
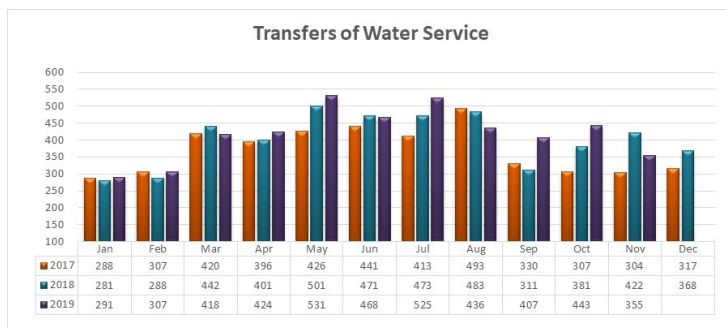
Accounts billed
Nov. 2019 22,836



**Paperless customers increased
from 61% to 62%**

In October and November, customers were encouraged to sign up for paperless billing with the incentive of being one of the ten paperless customers randomly chosen to receive \$50 credit on their December bill. All paperless customers were eligible.

*The Business Solutions Team tracks a host of statistics and data as we evaluate our levels of service and look for efficient ways to improve on these levels. **Levels are consistently rising due to the growing number of accounts.***



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.

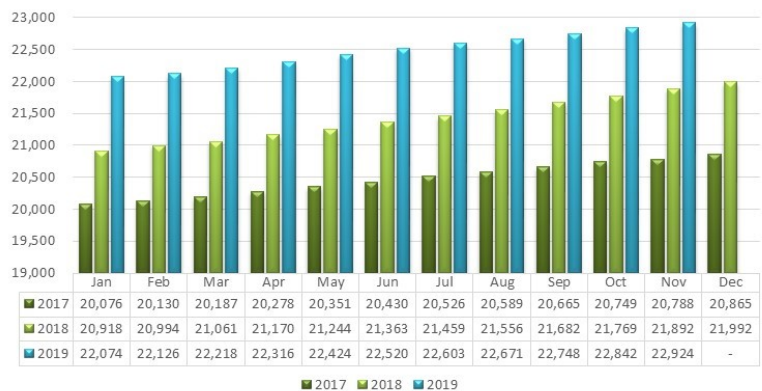
Skipped Reads

Nov. 2019: 0.38%

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.

Meters Read

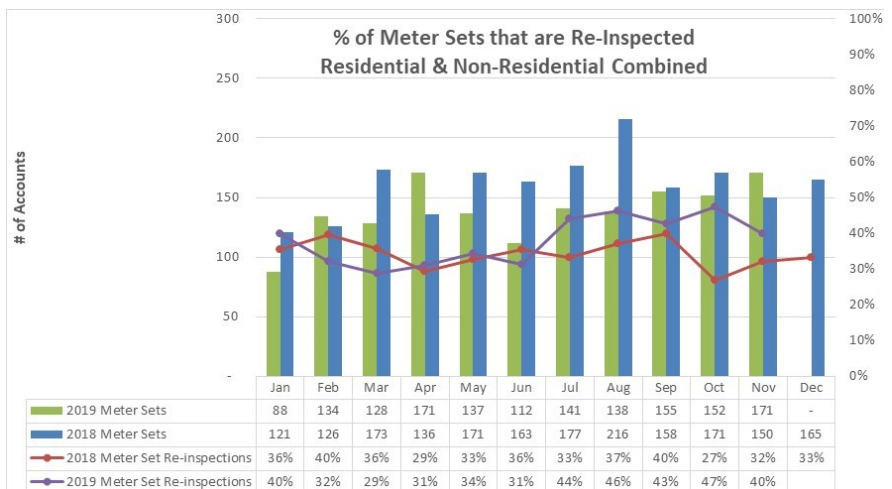


Meter Set Inspections

Nov. 2019 171
YTD 1,527
Re-inspections 40%

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.

% of Meter Sets that are Re-Inspected
Residential & Non-Residential Combined



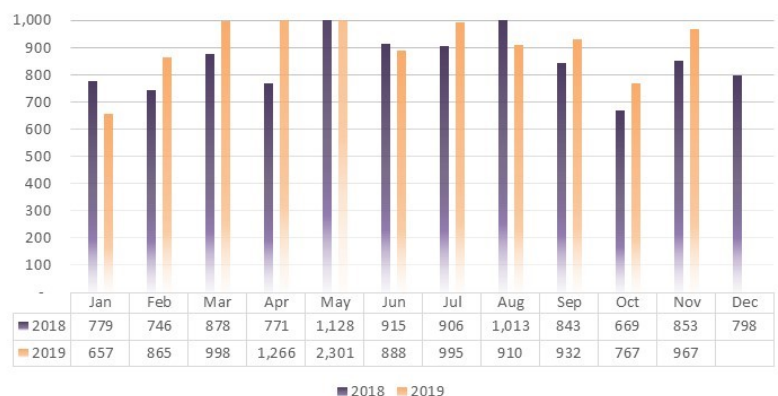
Work Orders

Nov. 2019 967

November 2019 service orders are up due to the high number of disconnects/reconnects since October 2019 none were performed.

Meter services performs a variety of service 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, just to name a few.

TOTAL SERVICE WORK ORDERS



Operations & Maintenance

LEVELS OF SERVICE		NOV. 2019
Drinking Water Compliance	Castle Rock Water will deliver water that meets or exceeds both Primary Drinking Water Regulations and Secondary Maximum Contaminant Levels 100% of the time.	<i>Ninety routine samples were completed.</i> <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.	<i>There were no water pressure issues this month.</i>
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 based on the American Water Works Association benchmarking.</i>	<i>There was one sewer system issue this month, on Thanksgiving Day. As a direct result of construction and development in the immediate area, an inflatable mechanical test plug was mistakenly left in a sewer main in the Meadows. These plugs are used to pressure check the sewer main for integrity. This seal caused an overflow of sewage which ran down the street into the first storm drain inlet. The cleanup took approximately five hours.</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>	<i>There were two water system integrity issues in November.</i> <i>1. There was a main break in Plum Creek consisting of two corrosion caused holes in the 8" ductile iron pipe (DIP). This condominium service connection issue caused seven homes to be out of water for four to eight hours during the repair.</i> <i>2. There was also a service line leak in the Meadows, caused by corrosion on 3/4" copper pipe. This leak put one home out of water for less than eight hours, while a new service line was installed, by pulling a new length of copper from the main to the curb stop.</i>
Water Quality Complaints	<i>Castle Rock Water remains in the Top Quartile for based on the American Water Works Association benchmarking.</i>	<i>There were no water quality issues this month.</i> <i>There was one water quality customer education visit.</i>

Operations & Maintenance



Locate Report

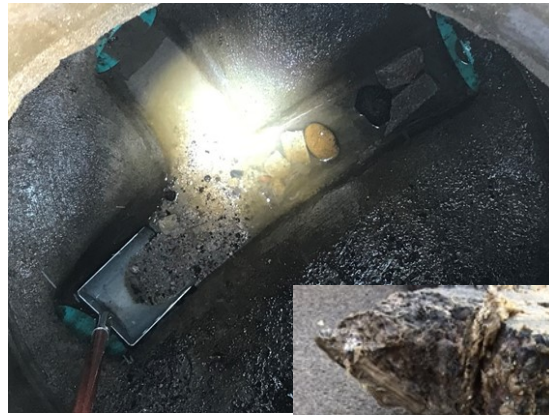
Before you start a project, call 811. Whether you are planning to do it yourself, or hiring a professional, we will help you do it safely. The local 811 Call Center will contact Castle Rock Water. We will schedule a time to come out to locate public water and wastewater lines in the road and in your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

YTD:	19,265
Nov. 2019:	1,643

*Castle Rock Water's locate requests from 811 have continued to rise, year over year. To date, there has been **one** incidence of damage to lines, as a result of incorrect locate marks.*

Fats, Oils and Grease

Sewer mains maintenance is a primary responsibility for Castle Rock Water which involves monitoring and cleaning more than 275 miles of sewer mains. A chunk of fats, oils and grease (FOG) was removed during routine cleaning of the sewer main in The Woodlands. This is why it is essential to dispose of FOGs in the trash instead of down the drain!



FOGs clogs!