

FEBRUARY 2018



Castle Rock Water Honored in Pursuing Excellence

By: Sandi Aguilar, Customer Services Program Manager

Our commitment to providing high quality water to our customers, sharing best practices and advancing water technology across the state of Colorado was recognized by the Colorado Department of Public Health and Environment. In February, Castle Rock Water was awarded the Gold Tier in the Pursuing Excellence Program for the third year in a row. In addition to identifying our thorough standard operational procedures for source water protection measures, treatment goals and distribution components, four action plans were completed in 2017. These included:

- Redesigned CRconserve.com conservation website with interactive tools to further our goal of reducing 18 percent in gallons per capita per day (gpcd)
- Update of the Emergency Action Plan to a site-specific, hands-on, “rip and run” procedural format
- Bringing the financial and forecasting models in-house, saving money and better identifying correlations
- Formalizing the internship program to bring more awareness to the water industry career options



2018 Water Demands

By: Sheri Scott Water Resources Program Analyst

The maximum daily water demands are plotted by month from 2015 to the current month. As observed by the data, the maximum demand for the month of February was 4.8 million gallons per day (MGD) which was 12 percent greater than the 5-year average maximum daily demand for the month. Summer time 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. The water demand total for February was 125.6 million gallons (MG), which was about a 1% decrease from the January 2018 total of 127 MG, and a 1.5 percent increase from the February 2017 demand of 123.7 MG.

The CR-1 diversion produced an average of 1.2 MGD for the month of February. The Town's thirteen alluvial wells and CR-1 produced a total of 53.9 MG of renewable water during February, which represents 47.3 percent of the total water supply for the month and 48.9 percent (118 MG or 361 acre-feet) of

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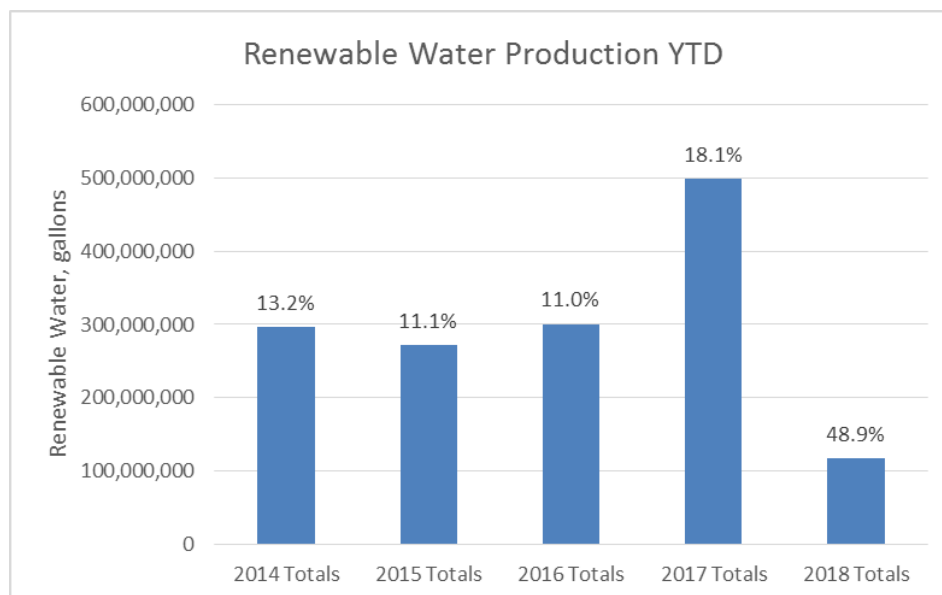
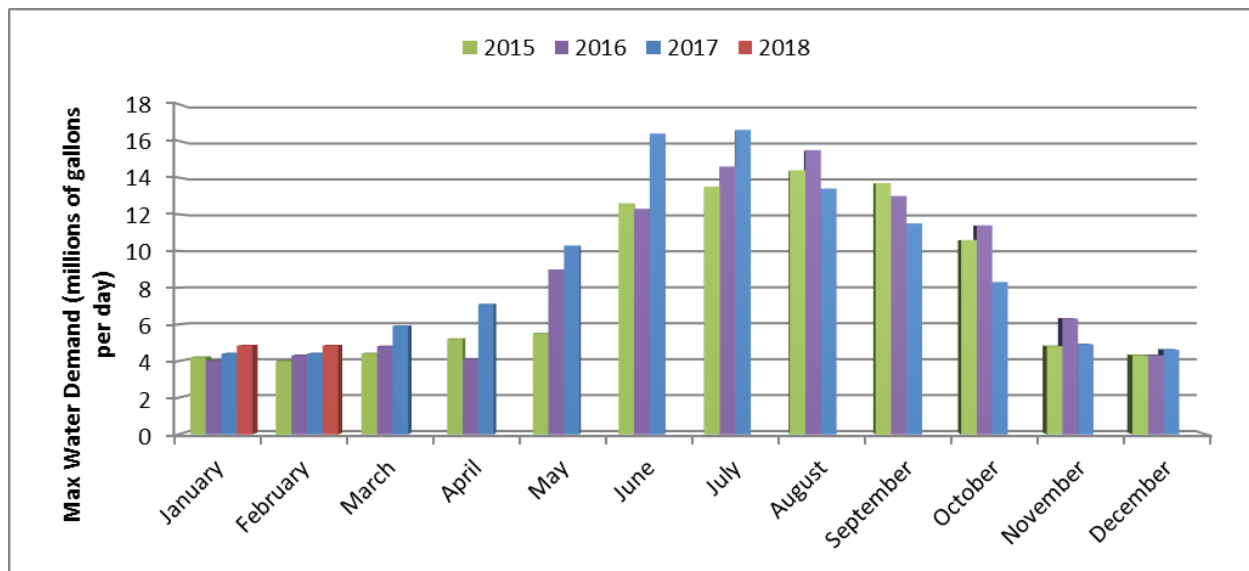
OUR VISION

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

Water Demands, continued

the annual water supply (241 MG or 738 acre-feet). The total renewable water produced since the opening of the PCWPF has surpassed 1,661 MG, which represents 13.5 percent of the Town's total water supply since the alluvial wells began pumping in May 2013.

Renewable supplies are those water sources that are replenished by precipitation (think of our alluvial wells or CR-1) whereas reusable supplies are those waters that are either from the Denver Basin (deep wells) or imported supplies (like we will be getting with WISE) that can be used over and over, to extinction. The average reusable supplies used by Castle Rock for 2018 through February is 56.5 percent with 54.4 percent of available reusable supplies being used in the month of February.



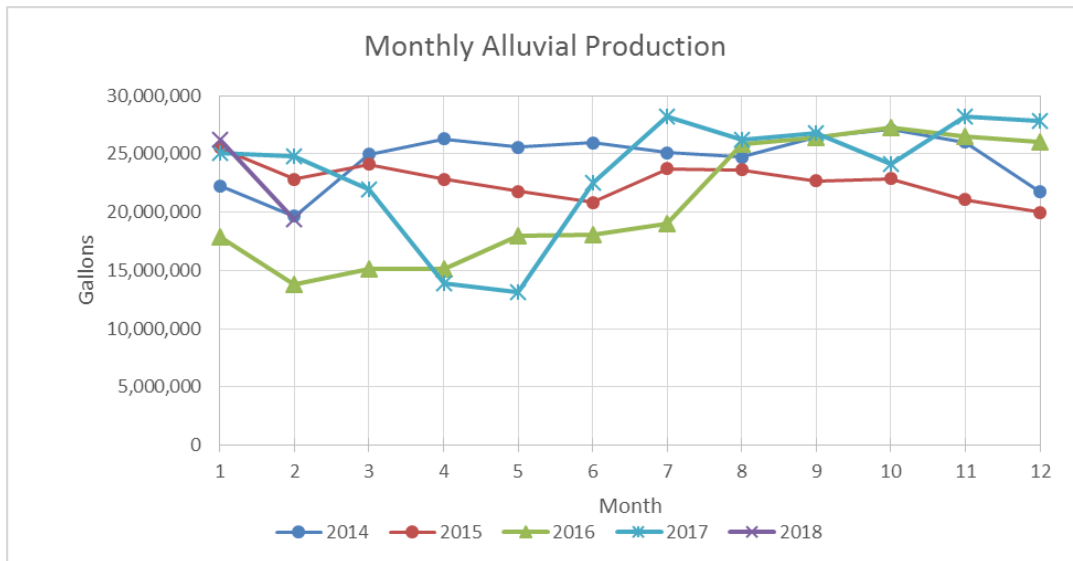
**2018 renewable production will vary as demand increases and additional sources are brought online.*

The percentage shown on top of the bars is the amount of renewable water relative to total water production.

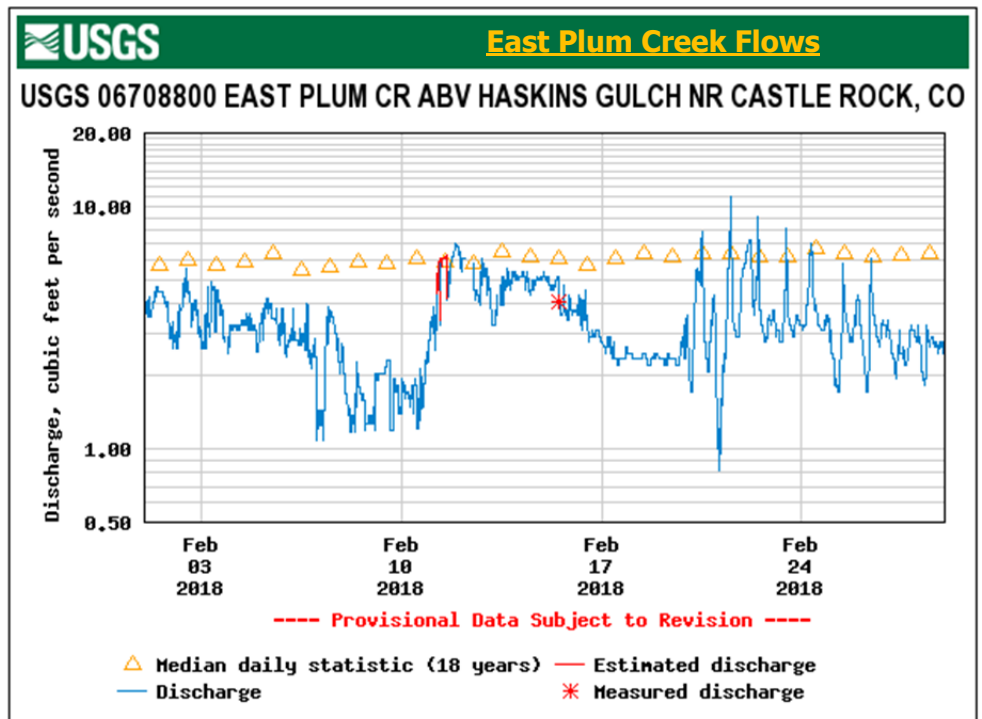
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Water Demands, continued

The following graph shows the monthly production of the Town's alluvial well system. The production from the alluvial wells in February 2018 was 19.4 MG, which is less than other February's because PCWPF was down for maintenance for five days.



The flow hydrograph represents stream flows in East Plum Creek taken from the stream gauge located above Haskins Gulch. The hydrograph shows that flows in the East Plum Creek basin ranged between 1 and 11 cubic feet per second (cfs) during the month of February, with flows averaging around 3 cfs for the majority of the month. During February there were active calls on the South Platte River. 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. According to the U.S. Drought Monitor from USDA, Douglas County is considered to be in a moderate drought. The NRCS Colorado SNOTEL report for March 6, 2018 shows the snow water equivalent (SWE) for the South Platte River Basin is at 85 percent of median.



Castle Rock Water reviewed 89 applications (see below) this month which compares to 55 during the same time period in 2017. The average assigned due date by Development Services was six days, and Castle Rock Water completed the reviews in an average of six days.

- 3 Agreements
- 3 Planned Development Plans
- 10 Field Change Orders
- 15 Grading, Erosion, and Sediment Control (GESC) Plans
- 2 Miscellaneous
- 1 County Referral
- 3 Plats
- 4 Preliminary Project Applications
- 19 Construction Drawings
- 14 Site Development Plans
- 10 Technical Criteria Variances

The applications reviewed consisted of:

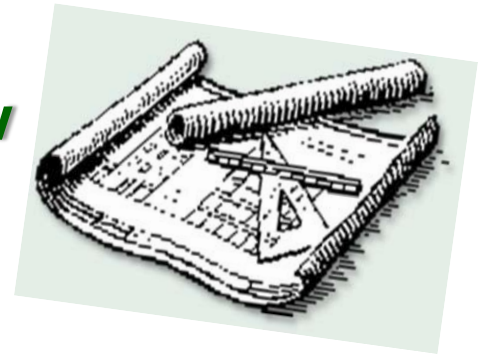
- 40 1st submittals
- 15 2nd submittals
- 13 3rd submittals
- 17 Special reviews
- 41 Completed late*
- 59 Completed on-time as scheduled*

* Total late/on-time applications are greater than the total number of projects, due to some projects being reviewed by multiple reviewers, so it was both late and on-time, depending on reviewers work load.

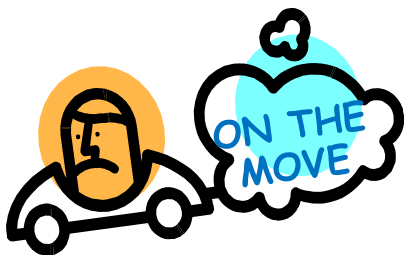
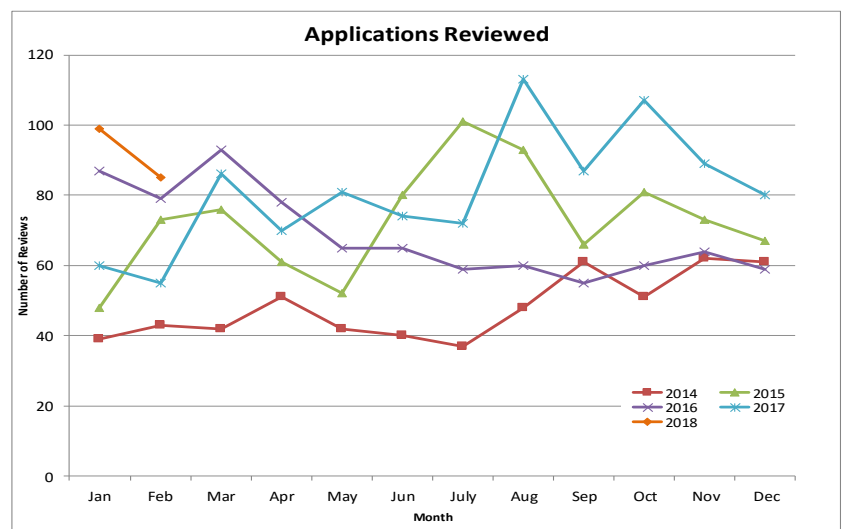
In addition, Castle Rock Water completed 89 building permit reviews and associated system development fees.

Plan Review Update

*By Tina Close
Plan Review Engineer*



Castle Rock Water provides plan review for all water, wastewater and stormwater projects submitted through the development review process. The line graph (below) shows development activity data (by month and year) since 2014.



Congratulations on your recent promotion!



Alex Tarnawski
Distribution Operator II

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**Welcome to our
Team!**

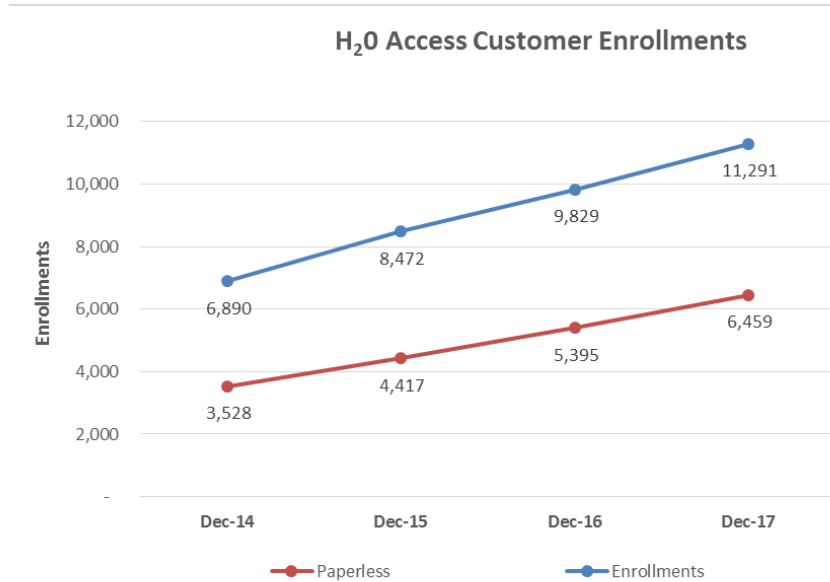


Colton Maloney
Distribution Operator II

Customer Statistics

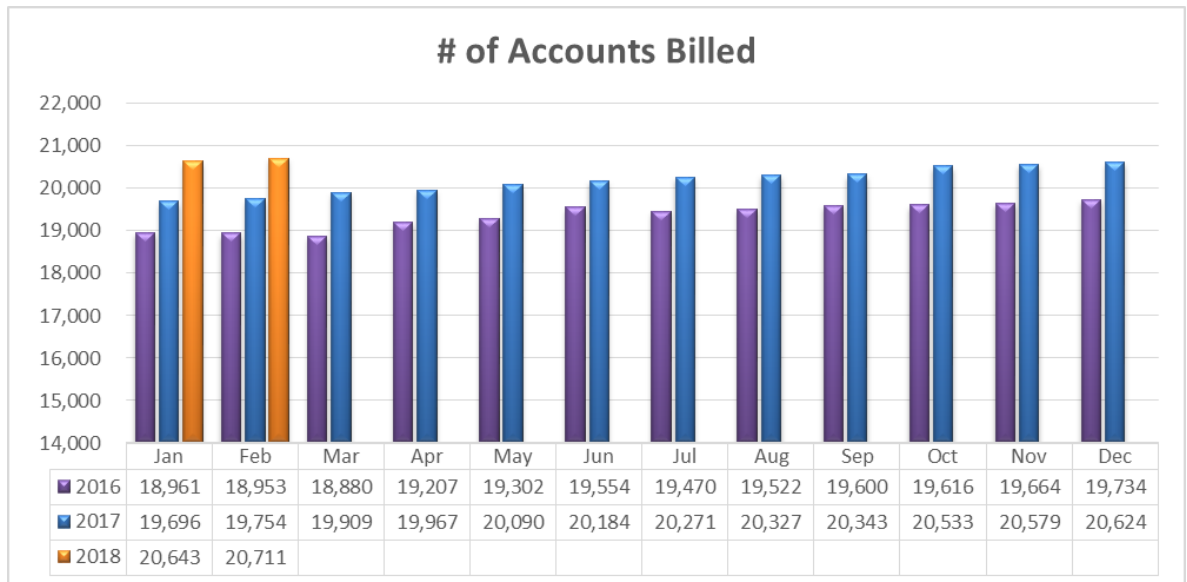
By: Anne Glassman, Business Solutions Manager

Our Business Solutions Team continues to track a host of statistics and data as we continue to evaluate our levels of service and look for efficient ways to improve on these levels.



Updated quarterly - Data reported quarter ending 12/2017

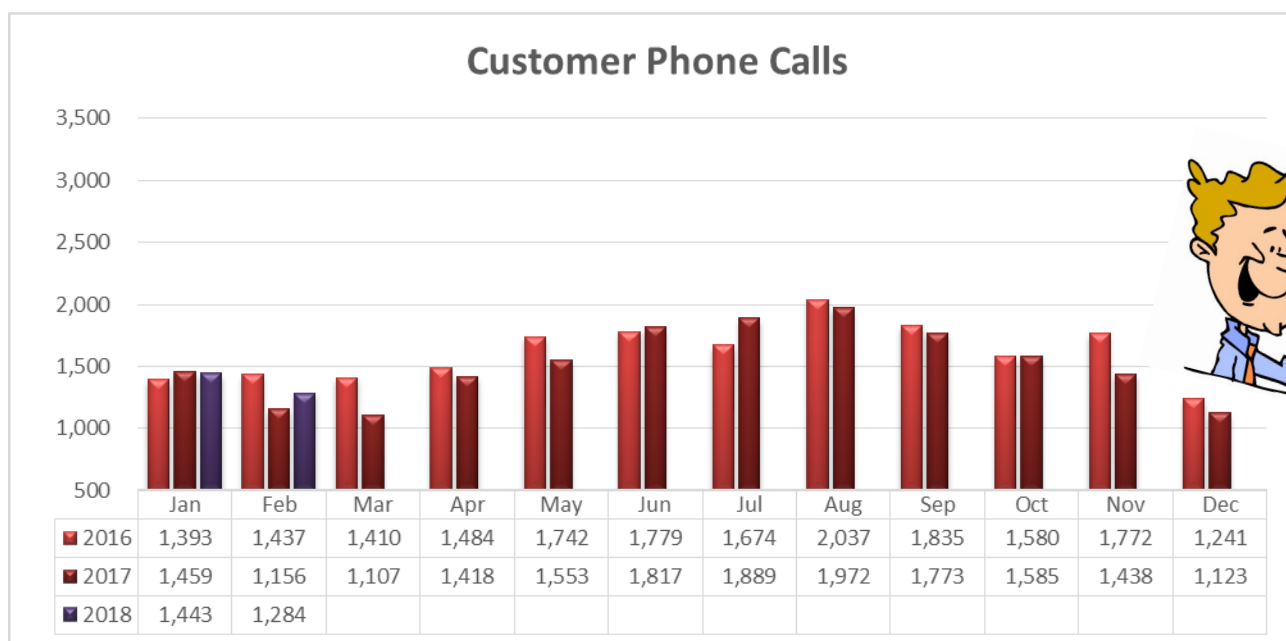
Customer enrollments have increased by 64 percent since December 2014. Customers choosing to go paperless have increased by 83 percent since December 2014. The customer online portal has been available to customers since January 2014 when it was first launched.



The number of accounts billed continues to increase year over year due to new residential and commercial growth.



Walk-in customers are fairly consistent with this same time in the previous years.



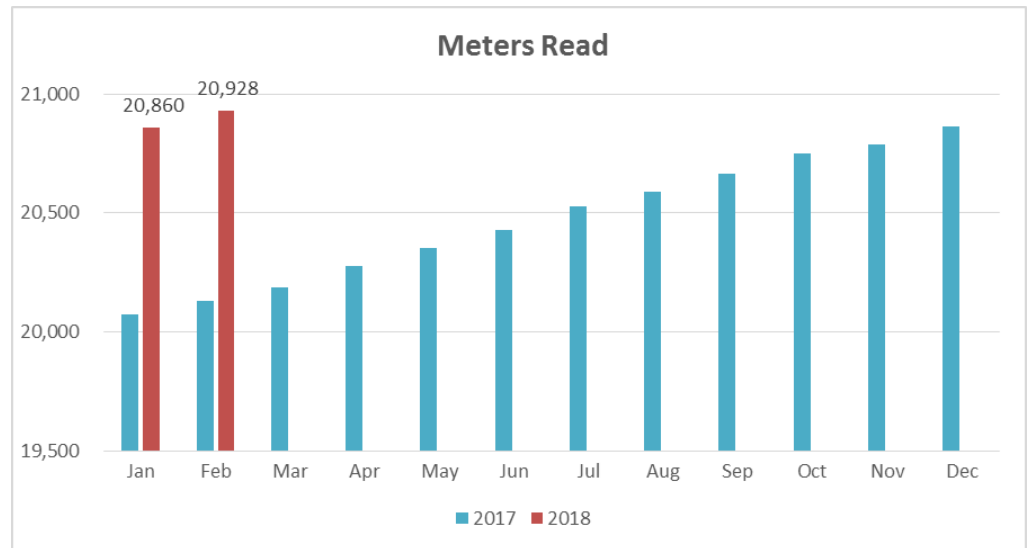
Customer phone calls are fairly consistent with this same time in the previous years.

METERS



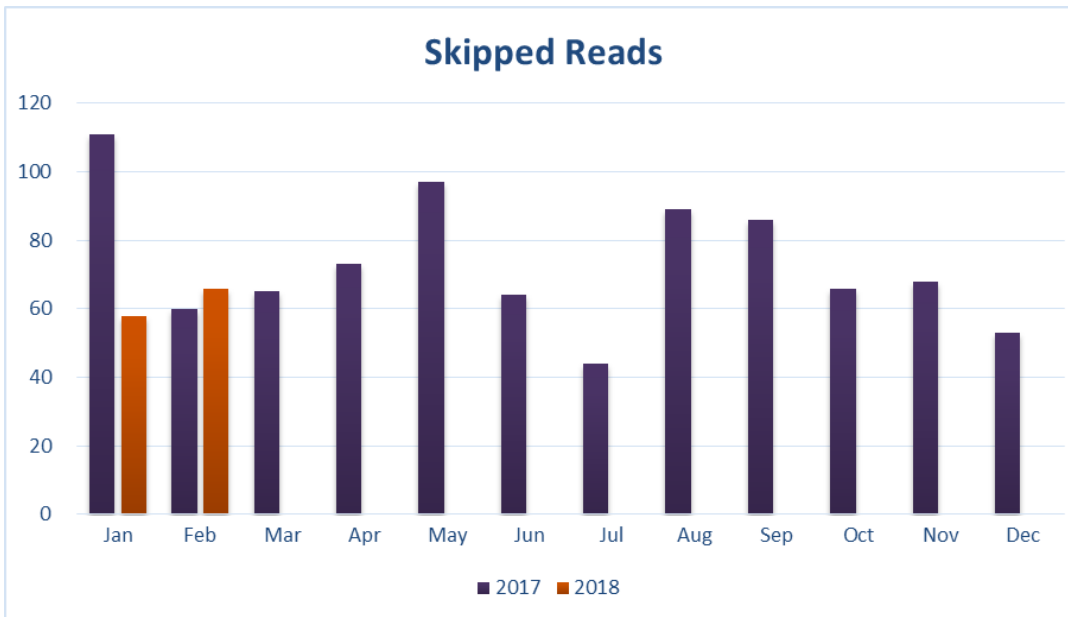
Meter Sets

Month-to-Date 69
Year-to-date 140



The meters read continues to increase month-to-month due to new residential and commercial accounts, with a significant increase year-over-year.

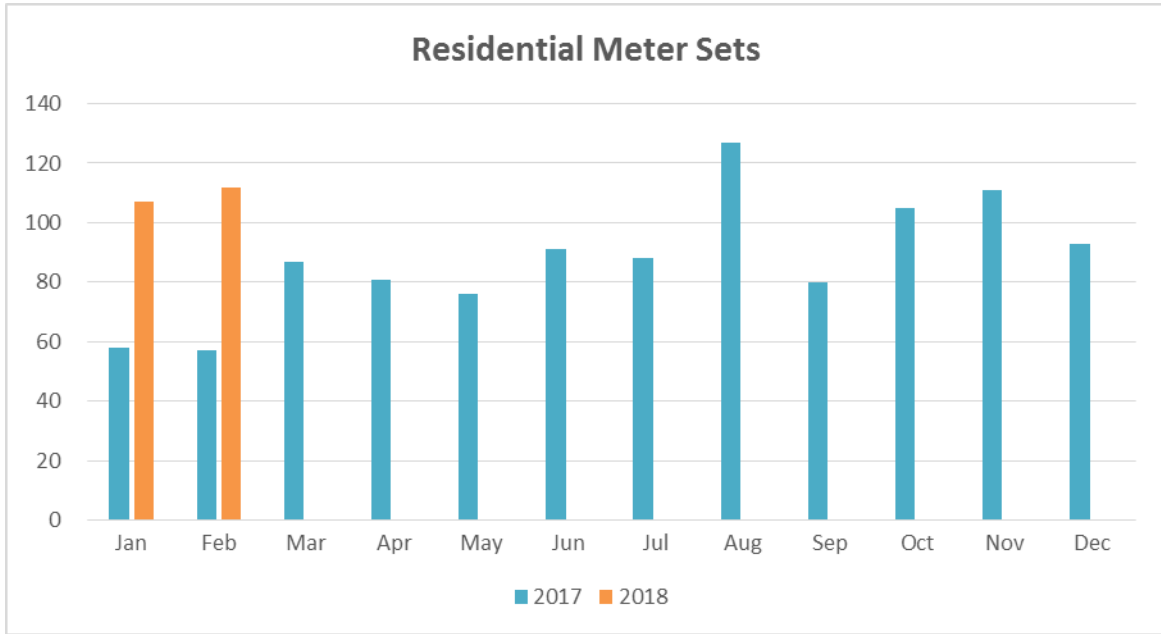
Skipped Reads



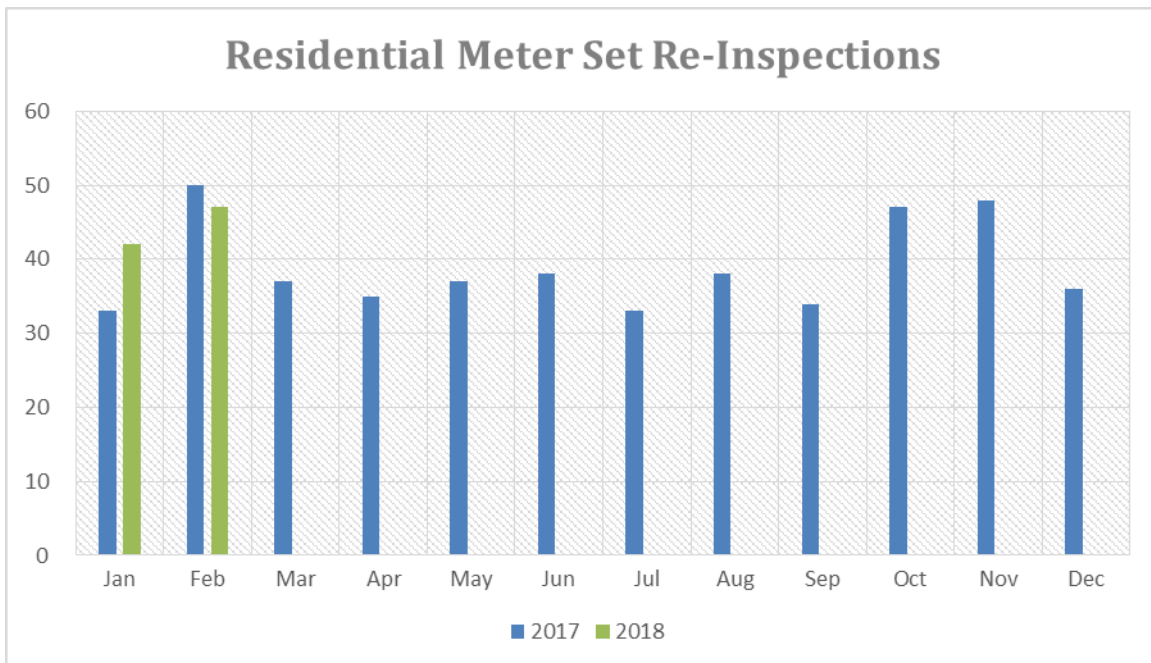
The American Water Works Association (AWWA) standard for skipped reads is 2 percent, so at 0.31 percent in February, we still continue to stay below the industry average. This is a result of continued maintenance and repair efforts on meter infrastructure.

WHY IS THIS IMPORTANT?

It 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.



Residential meter sets are significantly higher than last year at this time due to the increased number of meters that have been released for new residential development.



Residential meter set re-inspections are consistent with this same time last year.



STORMWATER UPDATE

Our team of four “storm troopers” maintains over 138 miles of pipe and drainageways, 110 detention ponds and 4,439 inlets as well as completes special projects designed to improve water quality.



The Stormwater Team participated in prepping a pipe which was then relined by Colorado Pipeline Rehab. This coating extends the life of the pipe, preventing its replacement and saving money for the Town.

FEBRUARY LEVELS OF SERVICE

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.

Seventy routine samples were completed. All samples were within the parameters set forth by the Federal 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 issues in February

Sewer System Effectiveness

<1% of our customers will experience a sewer backup caused by the utility's sewer system per year.

There were no issues in February

Drinking Water Supply Outages

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

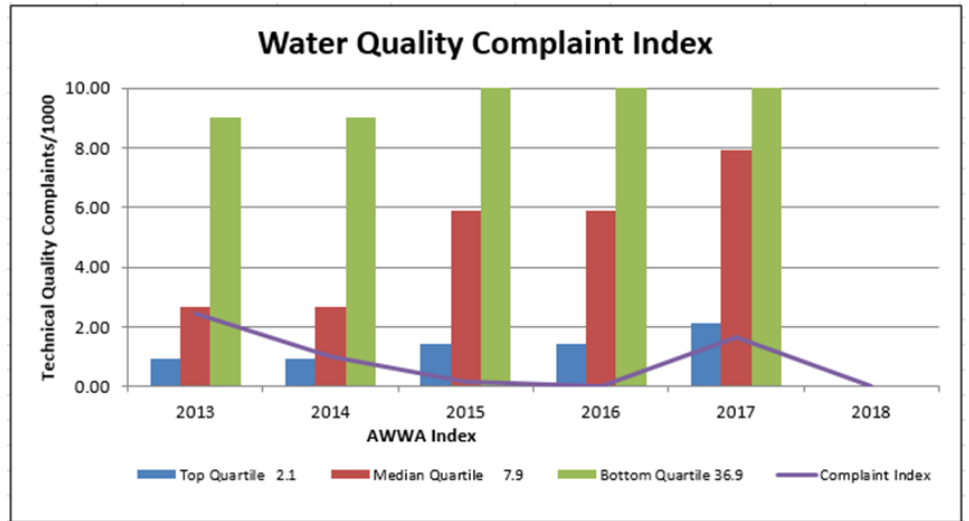
There was a water main break in the Hillside area of Town. Twelve homes experienced lower than normal pressure while the repair was made.

Work on a water main project in The Meadows resulted in approximately 60 residents being without water for less than two hours while the issue was being investigated.



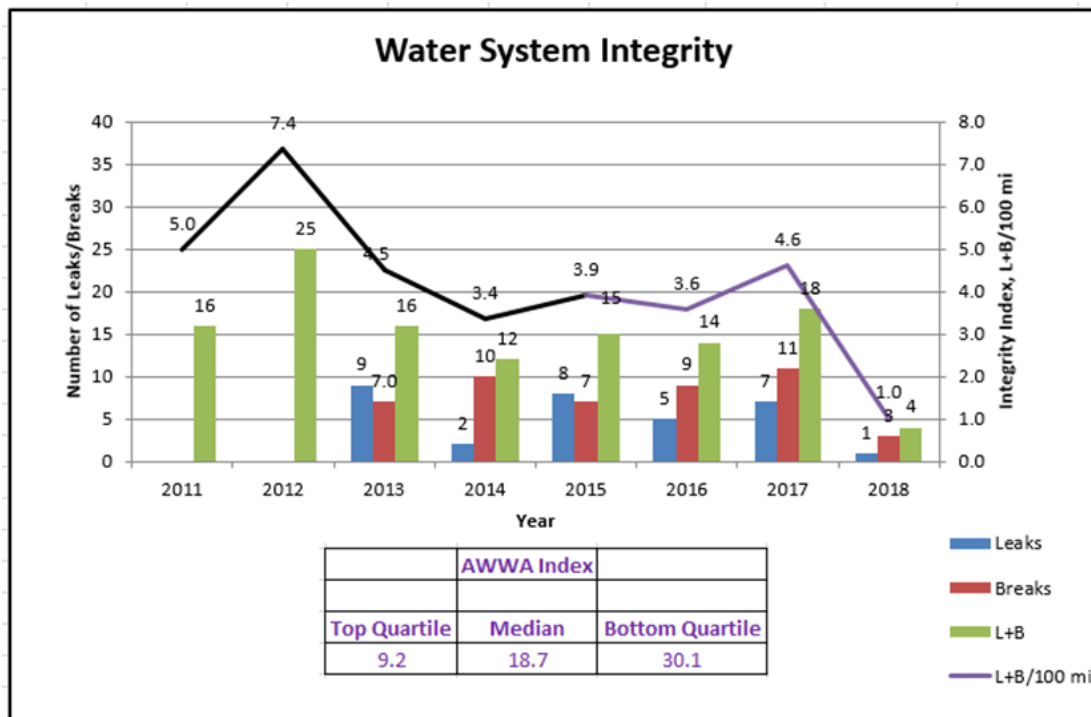
Water Quality Complaints

The Water Quality Complaint index shows that we are doing very well in this category; rating in the Top Quartile since at least 2015 according to the American Water Works Association. There were no water quality complaints in February 2018.



For more information, view the current water quality report at CRgov.com/waterqualityreport.

Water System Integrity



As the Water System Integrity chart indicates we have been in the top quartile, the top 25%, for water system integrity based on American Water Works Association benchmarking since 2011. There was one water system integrity issue in February.



Before you start a project, call 811. Whether you are planning to do it yourself, or hiring a professional, we'll 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.

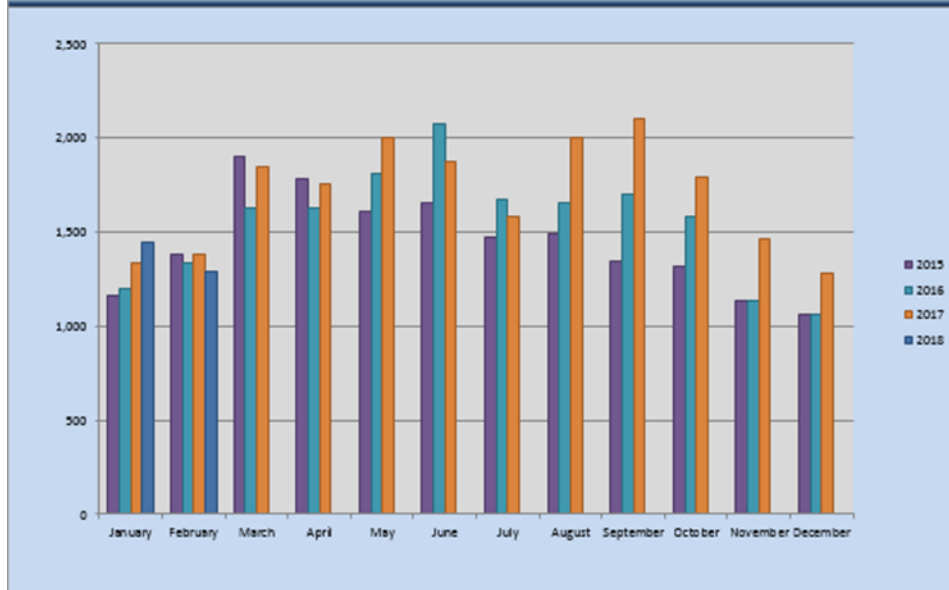
The graphs below show our monthly utility locates and a chart showing the year-to-year comparison

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			
February	521	485	538	1,094	1,093	1,383	1,334	1,378	1,293			
March	660	552	818	1,437	1,349	1,906	1,625	1,851				
April	838	681	1,025	1,482	1,552	1,784	1,631	1,760				
May	853	863	985	1,541	1,531	1,609	1,809	2,002				
June	969	844	982	1,314	1,399	1,654	2,075	1,872				
July	680	582	859	1,350	1,392	1,477	1,675	1,582				
August	901	723	1,123	1,476	1,468	1,494	1,651	2,001				
September	880	723	1,029	1,240	1,373	1,343	1,701	2,102				
October	715	688	1,155	1,501	1,376	1,314	1,579	1,792				
November	536	518	1,041	1,072	866	1,134	1,131	1,460				
December	415	405	925	1,005	1,043	1,063	1,059	1,277				
Totals	8,545	7,539	11,097	15,702	15,731	17,323	18,469	20,411	2,735			

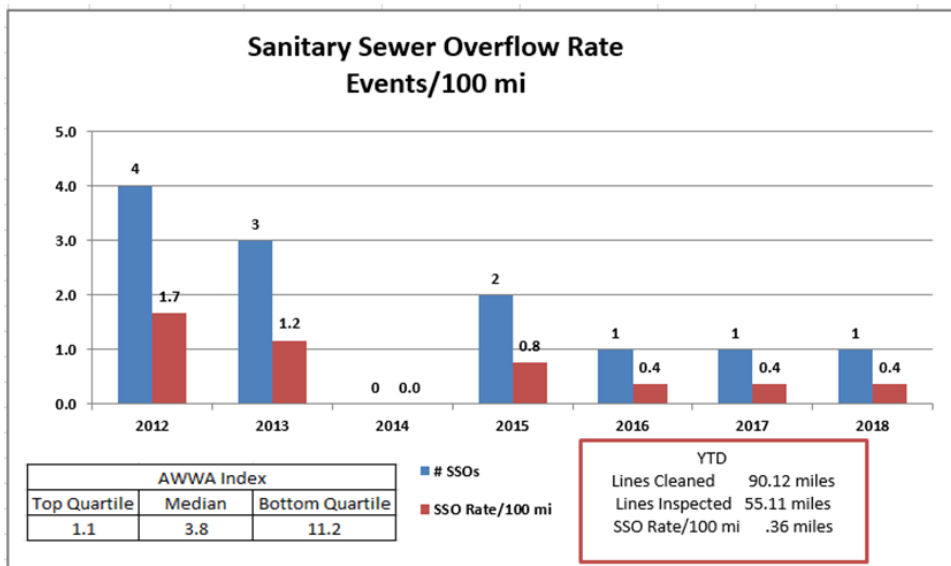


3 Year Locate Trend



Sanitary Sewer Overflows

We are also tracking in the Top Quartile in the Sanitary Sewer Overflow Rate since 2014, according to the American Water Works Association, showing one incident in 2017. There was one sanitary sewer issue in February.



How do we avoid overflows?

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 this year is to clean and video approximately 33 percent of the collection system or about 90 miles.