

JULY 2017

Safety Stand Down

By: Mark Billman, Environment, Health and Safety (EHS) Program Analyst

To be effective, any safety and health program needs the meaningful participation of all employees. Workers often know the most about the potential hazards that are associated with their jobs.

This year's Safety Stand-Down focused on reporting unsafe behaviors, conditions, and near-miss incidents. The Castle Rock Water staff divided into small groups and time was devoted to discussions about reporting. A series of questions were posed to each of the groups, and feedback was solicited and then taken back to the Safety Committee for evaluation.

The results of the evaluation showed that there was agreement among staff members that accidents are preventable, and that all employees are responsible for safety. Additionally, there was agreement that reporting near-misses, and unsafe conditions/behaviors is important for preventing future accidents. Staff members also voiced a number of existing safety issues, along with several suggestions on how to report these and future issues.

As a result, corrective measures to address existing issues are underway, and an on-line Safety Reporting Form was created on The Depot. With continued encouragement, employee participation in the Castle Rock Water safety program can thrive, and accidents will continue to be prevented.

Year-to-date, Castle Rock Water has had no reportable incidents, keeping our OSHA key performance indicator at zero (lower is better) which is outstanding.

2017 Water Demands

By: Kurtis Cotten, Water Resources Program Analyst

The maximum daily water demands are plotted by month from 2014 to the current month. As observed by the data, the maximum demand for the month of July was 16.6 million gallons per day (MGD) which was about 14% more 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 July was 389.4 million gallons (MG), which was about a 7% decrease from the June 2017 total of 420.7 MG, and a 0.5% increase from the July 2016 demand of 387.5 MG.

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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.



Sprucing Up the Place

Castle Rock Water team donned the proper safety gear and “spruced up the site” by laying mulch in the garden beds, trimming trees, and placing rock in the various beds adjacent to the entrances.

Afterwards, everyone was treated to a BBQ by the Employee Appreciation Team.



Castle Rock Water Receives Award from NOAA

Castle Rock Water has important information for the National Oceanic and Atmospheric Association (NOAA) and NOAA has been listening for the past 25 years. The Town of Castle Rock has housed a NOAA weather station for more than two decades, providing critical weather data for the National Weather Service. Earlier this summer, the National Weather Service awarded Castle Rock Water the Honored Institution Award in recognition of 25 years of weather observation.

Weather data, primarily temperature and precipitation, is collected every 15 minutes at the local weather station. This data is used for verification and analysis for unique weather conditions. For instance, data from Castle Rock, along with 99 other stations across the Front Range was used to investigate the flooding in 2013. This data is also utilized by Federal Emergency Management Agency (FEMA) in supporting flood and drought emergency reparation.

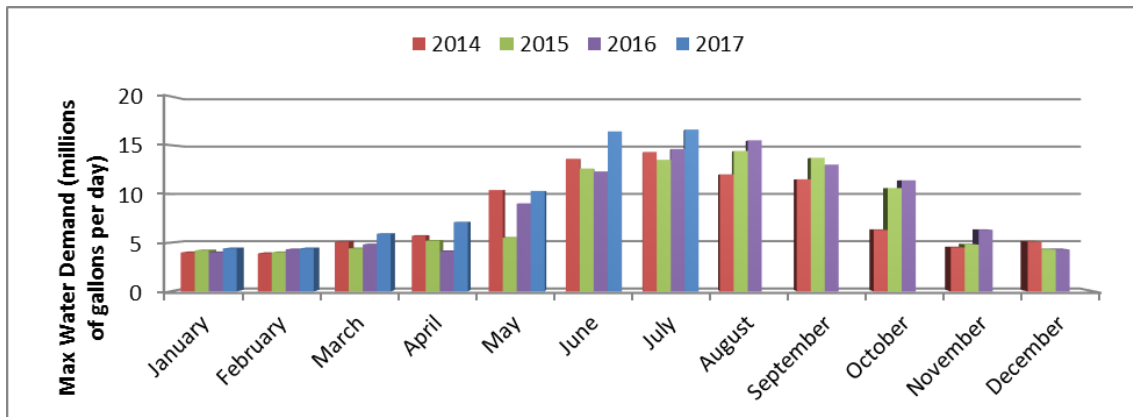


Andy Dieter and Tim Lambert accepted the award from Jim Kalina of the National Weather Service.

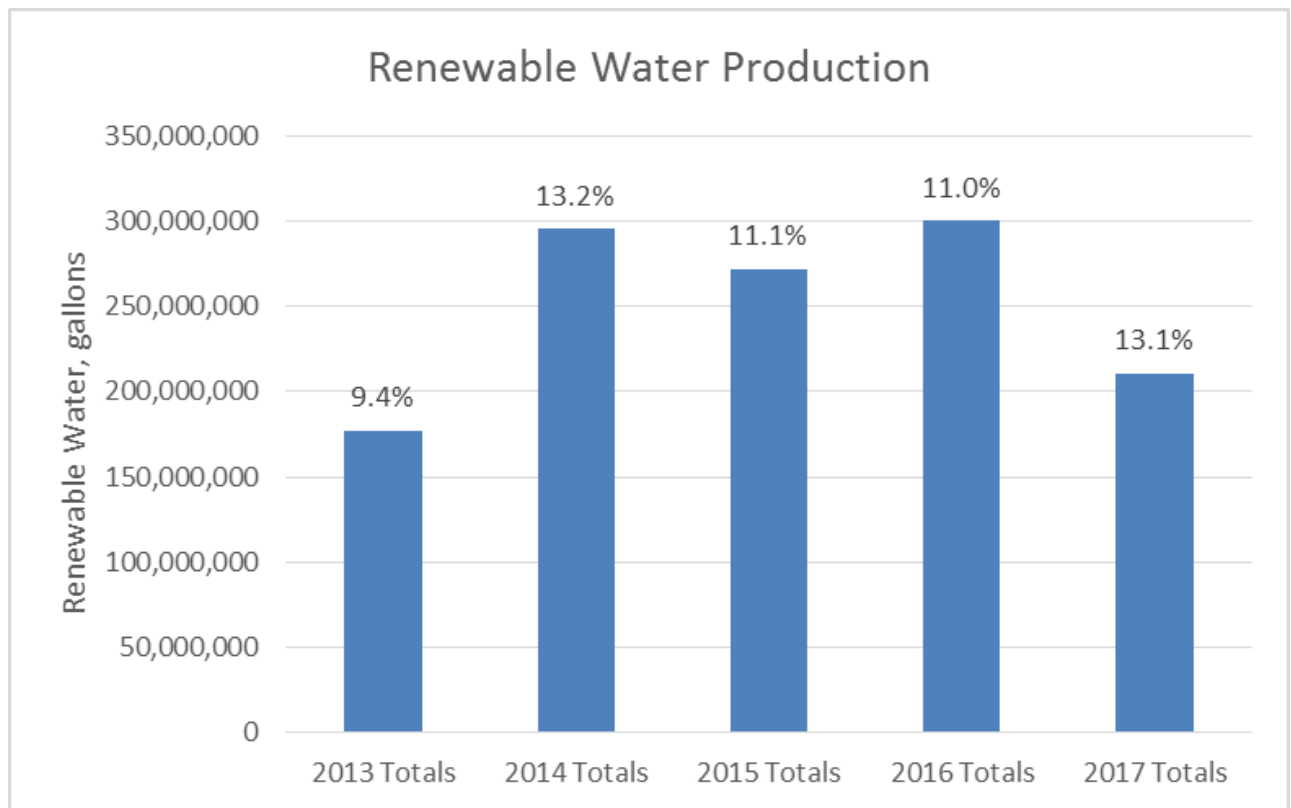
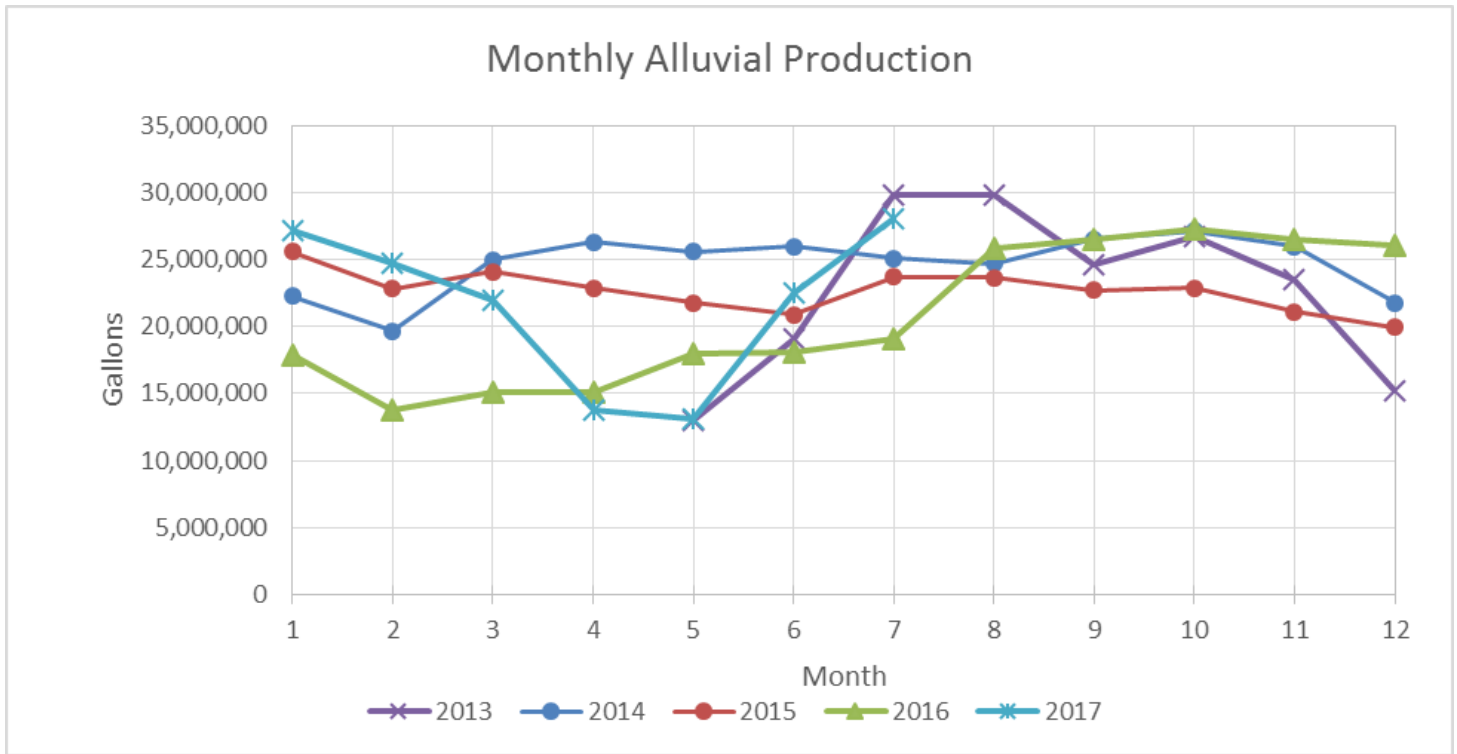


Water Demands, continued from page 1

The permanent pumps for CR-1 were brought online in June 2017 and the diversion produced an average of 0.66 MGD for the month of July. Recent rains have undermined the diversion and work is being done to bring the diversion back online. The Town’s twelve alluvial wells and CR-1 produced a total of 48.5 MG of renewable water during July, which represents 12.3% of the total water supply for the month and 13.1% (210.7 MG or 647 acre-feet) of the water supply year to date. The total renewable water produced since the opening of the PCWPF has surpassed 1,256 MG, which represents 11.5% of the Town’s total water supply since the alluvial wells began pumping in May 2013. Currently, the Town’s renewable water rights surpass the capacity of the alluvial wells. The renewable water projects the Town is currently working on will help close this gap. Another alluvial well will be brought on-line in August.



Water Demands, continued

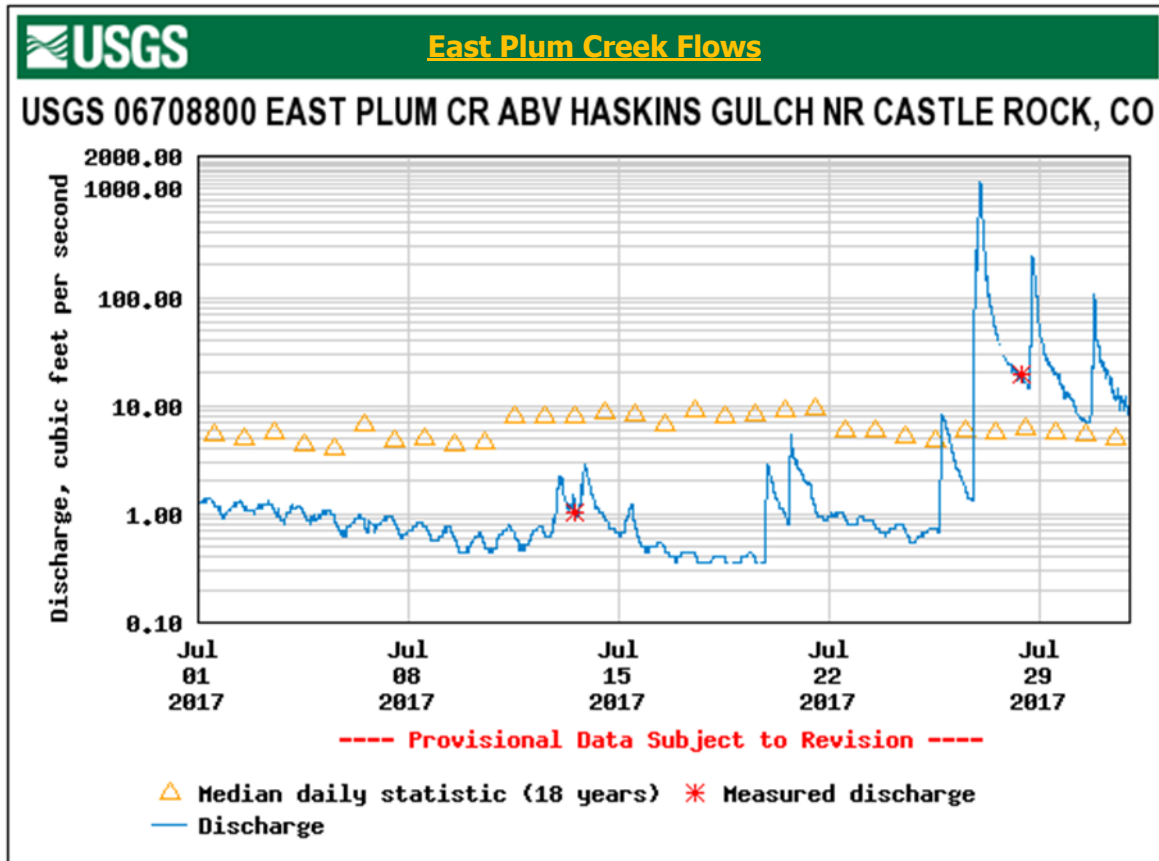


The percentage shown on top of the bars is the amount of renewable water relative to total water production.

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Water Demands, continued

The 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 0.3 and 1,200 cubic feet per second (cfs) during the month of July, with flows averaging around 10 cfs at the end of the month. During July, 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.



Strategies and Key 2017-2018 Tactics



Strategy 1 Ensure long-term water

Goal 1 Secure adequate supplies at a cost and in a manner that spreads the costs evenly through 2050.

- 1-1-1 Have infrastructure in place by 2017 to import 1,000 acre-feet of WISE water to Town customers.
- 1-1-3 Negotiate agreements with Parker Water & Sanitation District for the use of existing infrastructure and new infrastructure to reduce the cost of WISE
- 1-1-13 Evaluate additional raw water supply options for Rueter-Hess Reservoir.
- 1-1-14 Maximize and track the use of reuse water.

Goal 3 Increase conservation and reduce seasonal peak demands in the community

- 1-3-5 Audit and assist in optimizing Town Irrigation systems.

Goal 4 Develop plans and preparations for dealing with future droughts.

- 1-4-1 Development of Drought Mitigation Plan.

Goal 5 Protect the watershed and shallow alluvial aquifers from whence our supply comes.

- 1-5-1 Develop the Town's current source water protection plan/code, and adjust as necessary

Strategy 3 Enhance customer satisfaction

Goal 2 In collaboration with our customers, seek and apply innovative approaches to provide exceptional customer service.

- 3-2-5 Interactive Voice Response (IVR) system
- 3-2-8 Pilot test customer driven advanced metering infrastructure solution.

Strategy 4 Maintain financial sustainability

Goal 1 Maintain sustainable rates and fees.

- 4-1-12 Review Certificates of Participation for new management strategy and implement changes as appropriate.

Goal 2 Demonstrate fiscal accountability and transparency.

- 4-2-5 Risk assessment to adequately plan for replacement and rehabilitation of infrastructure
- 4-2-13 Evaluate interfund loans to minimize rates and fees impacts.
- 4-2-14 Create agreement commitments monitoring program.

Strategy 5 Optimize infrastructure performance

Goal 1 Examine and implement cost-effective and sustainable performance improvements.

- 5-1-9 Move planning/design forward for next Plum Creek Water Reclamation Authority Wastewater Treatment Plant Expansion.

Goal 2 Maintain and enhance infrastructure stability to optimize life-cycle costs.

- 5-2-3 Asset identification and overall condition ratings.
- 5-2-6 Evaluate and update procedures for identifying capital rehabilitation and replacements.

Strategy 6 Demonstrate industry leadership

Goal 2 Deliver a high-quality product and service to our community.

- 6-2-2 Top level performance on 2017 Sanitary survey.

Goal 3 Be a forward-thinking organization and a recognized leader among our water utility peers.

- 6-3-8 Update Master Plans for water, wastewater, stormwater and water resources.
- 6-3-11 Pursue Gold status in Colorado State Environmental Leadership Program.

Castle Rock Water updated the strategies and key 2017-2018 tactics. Poster boards listing these guiding tactics are posted throughout the site in staff work areas, break rooms, and conference rooms. This year is the end of the 5-year, and Castle Rock Water will begin a complete update in 2018.

Castle Rock Water reviewed 72 applications (see below) this month which compares to 59 during the same time period in 2016. The average assigned due date by Development Services was six days, and we completed the reviews in an average of six days.

- 8 Agreements
- 1 County Referral
- 16 Field Change Orders
- 7 Grading, Erosion, and Sediment Control (GESC) Plans
- 7 Plats
- 1 Preliminary Project Application
- 16 Construction Drawings
- 12 Site Development Plans
- 4 Technical Criteria Variances

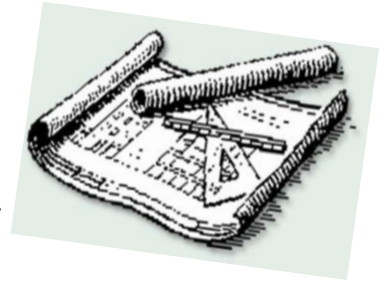
The applications reviewed consisted of:

- 38 1st Submittals
- 20 2nd Submittals
- 14 Special reviews
- 14 Completed late
- 58 Completed on-time as scheduled

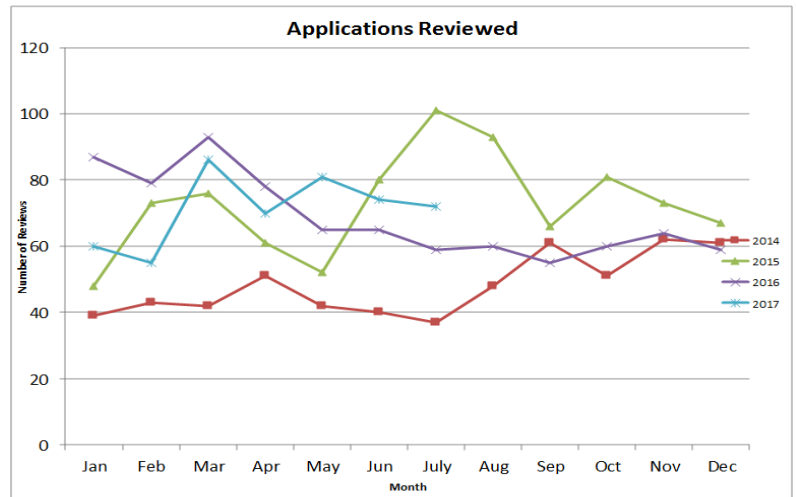
In addition, Castle Rock Water completed 85 building permit reviews and associated system development fees.

Plan Review Update

By Mark Mantua, 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.

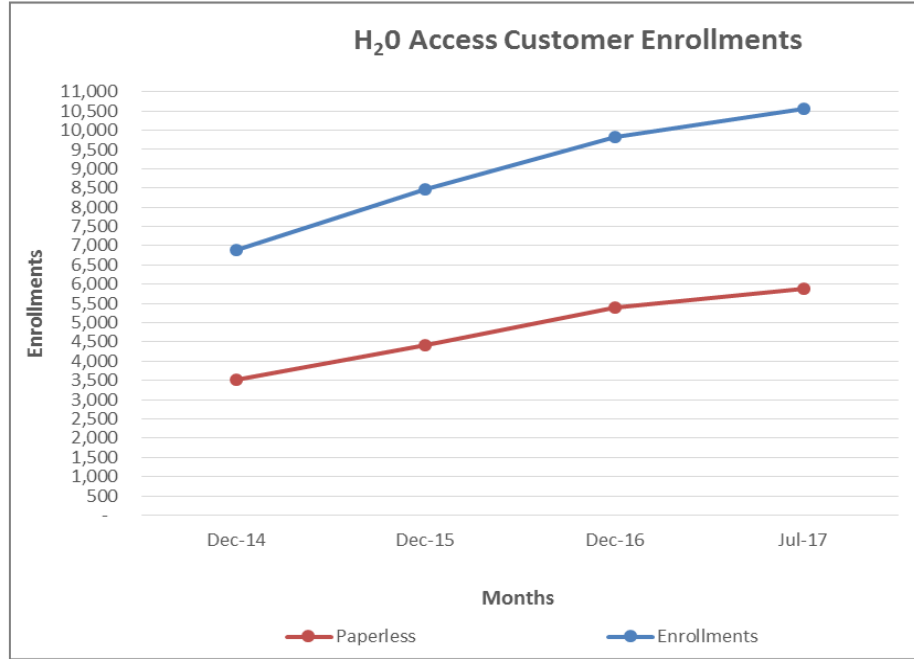


Customer Statistics

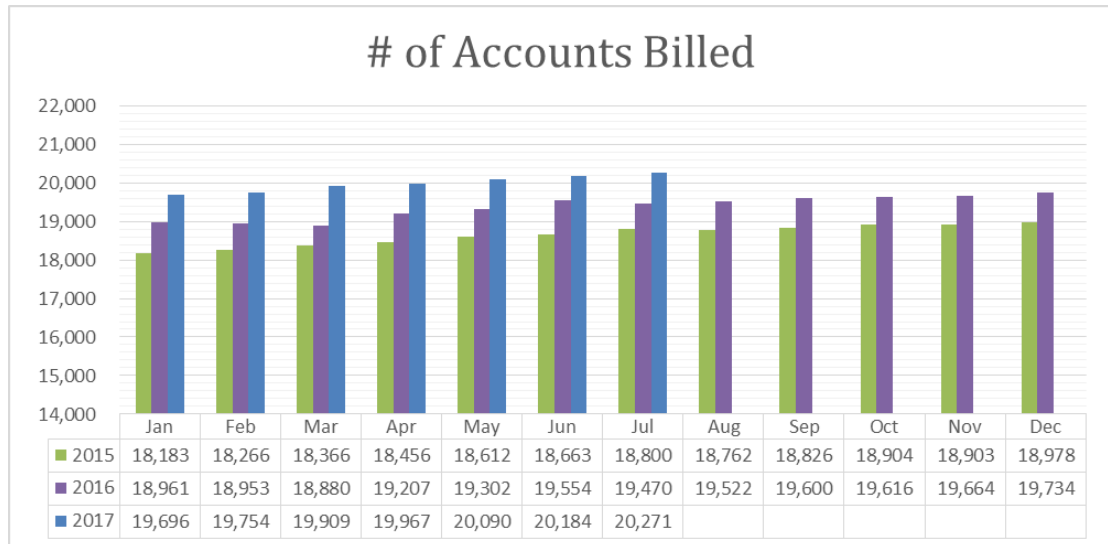
By: Anne Glassman, Business Solutions Manager



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.



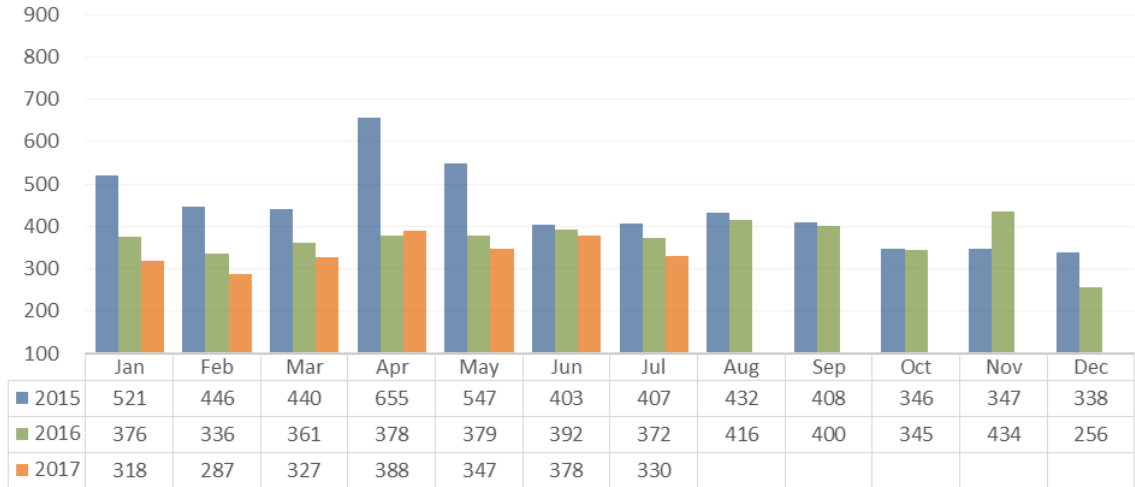
Fifty-six percent of the customers enrolled in H₂OAccess have also chosen to “Go Paperless.”



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



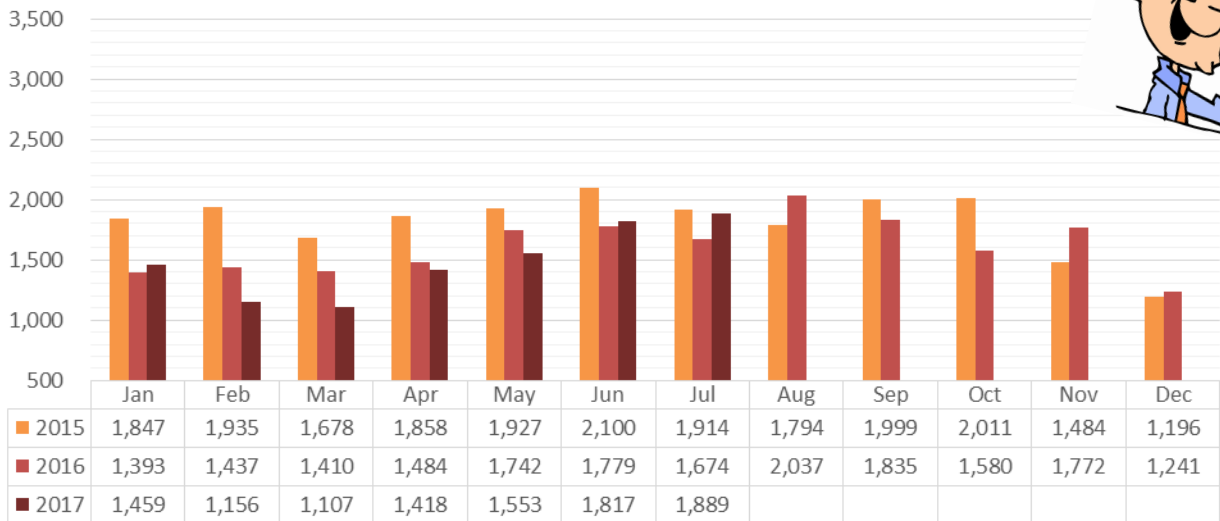
Walk-In Customers



Walk-in customers are consistent with this same period last year.



Customer Phone Calls



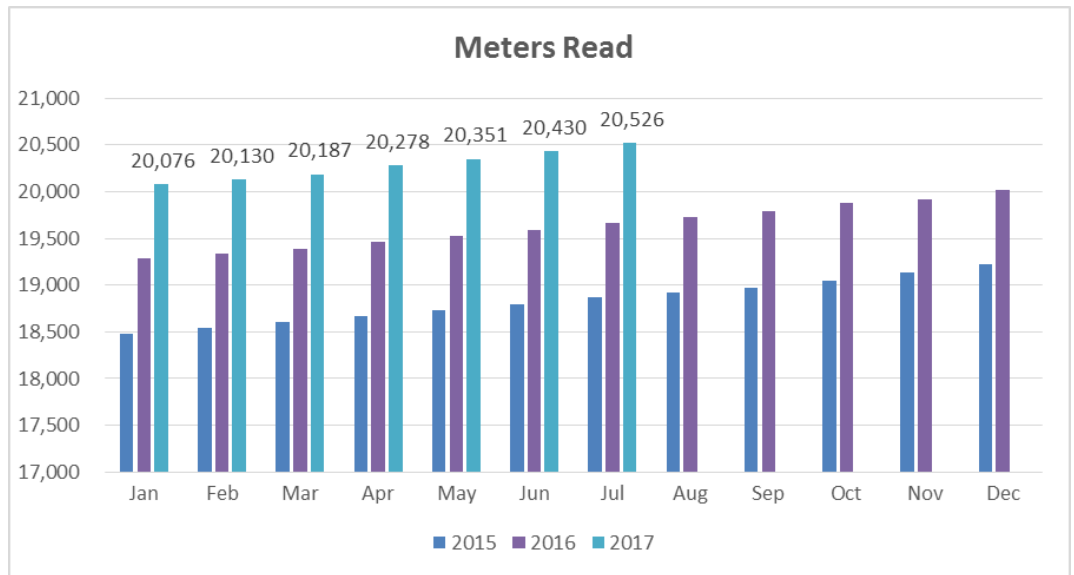
Customer phone calls are up in July 2017 over last year at the same time due to watering schedule outreach.

METERS



Meter Sets

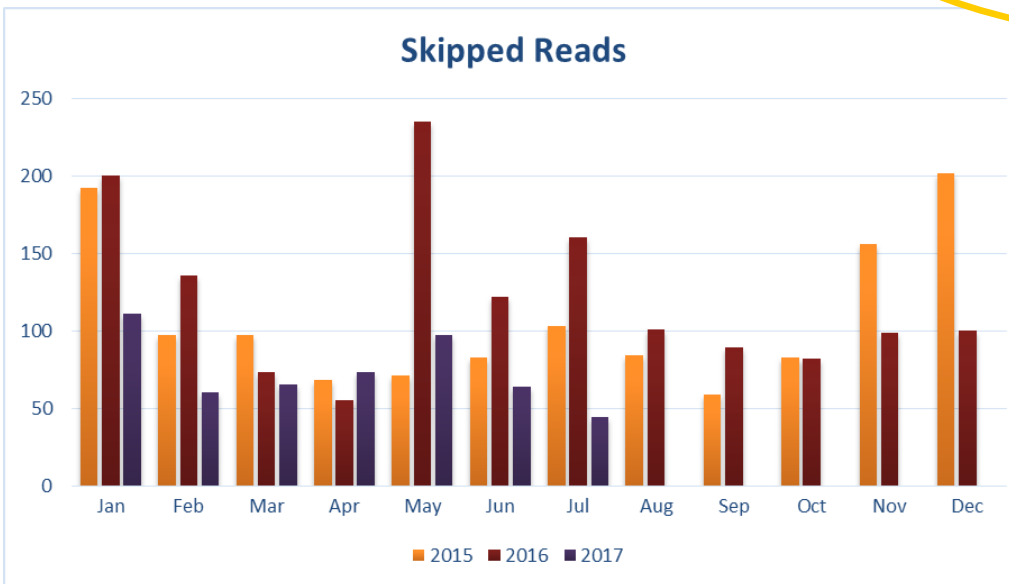
Month-to-Date 91
Year-to-date 450



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

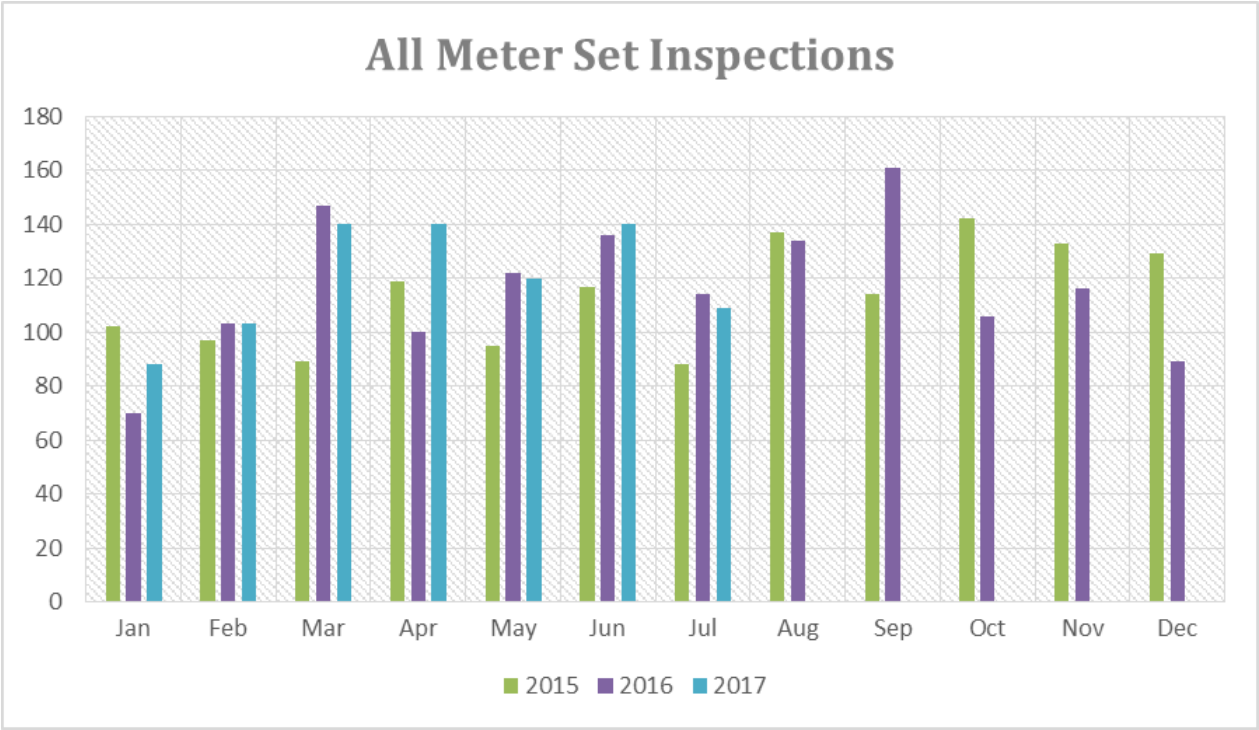
July 2017 sets a new all time low record number of skipped reads at 44!



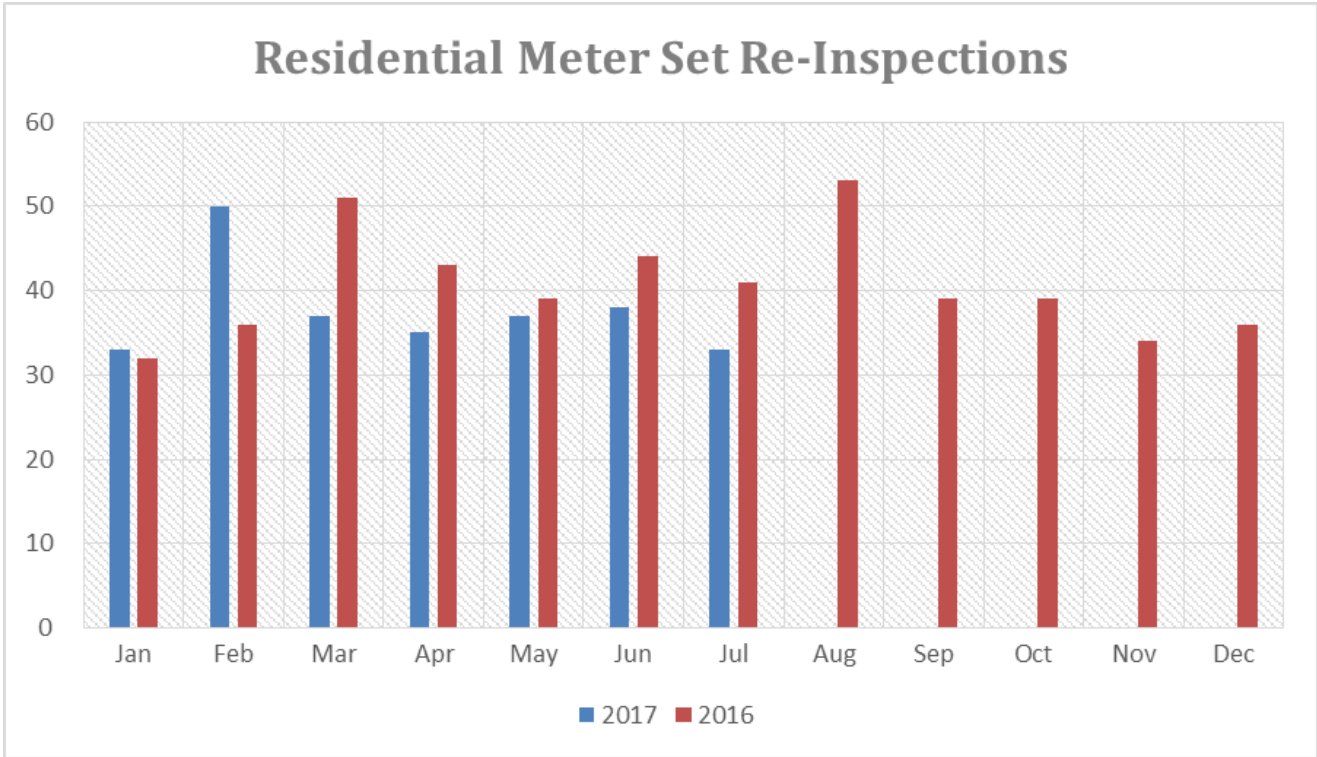
The American Water Works Association (AWWA) standard for skipped reads is 2 percent, so at 0.21 percent in July, we still continue to stay below the industry average. This is a result of continued maintenance and repair efforts on meter infrastructure. The higher number of skipped reads in May 2016 were due to equipment failure.

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.



Meter set inspections are fairly consistent with prior years at this time.



Residential meter set re-inspections through July 2017 are very similar to those seen last year through July 2016.



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 graded, added rip rap and created a retaining wall to prevent erosion at the Hangman’s Gulch overpass.



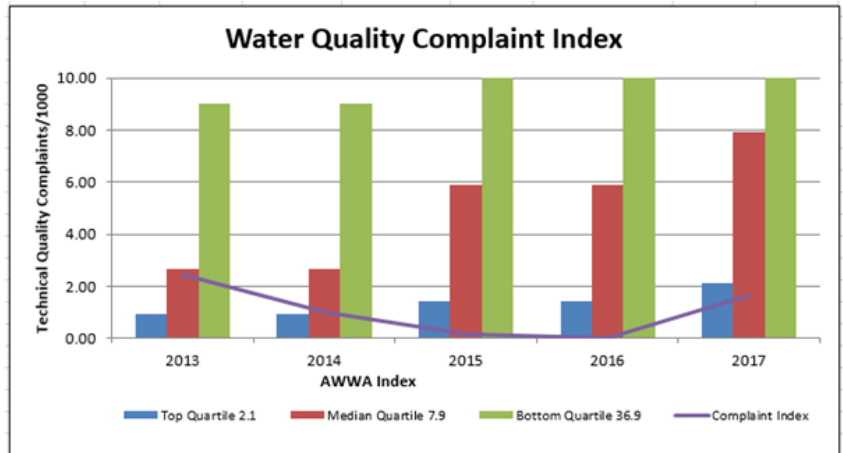
The stormwater team cleaned up flood damage on the road at the Ray Waterman Water Treatment Plant. They installed straw waddle best management practices (BMPs) next to the road to prevent future erosion. A gate was also added to prevent the illegal dumping that was occurring at this site.



Our team maintains about 810 miles of water, wastewater and stormwater pipeline, enough to run from Castle Rock to Las Vegas, Nevada.

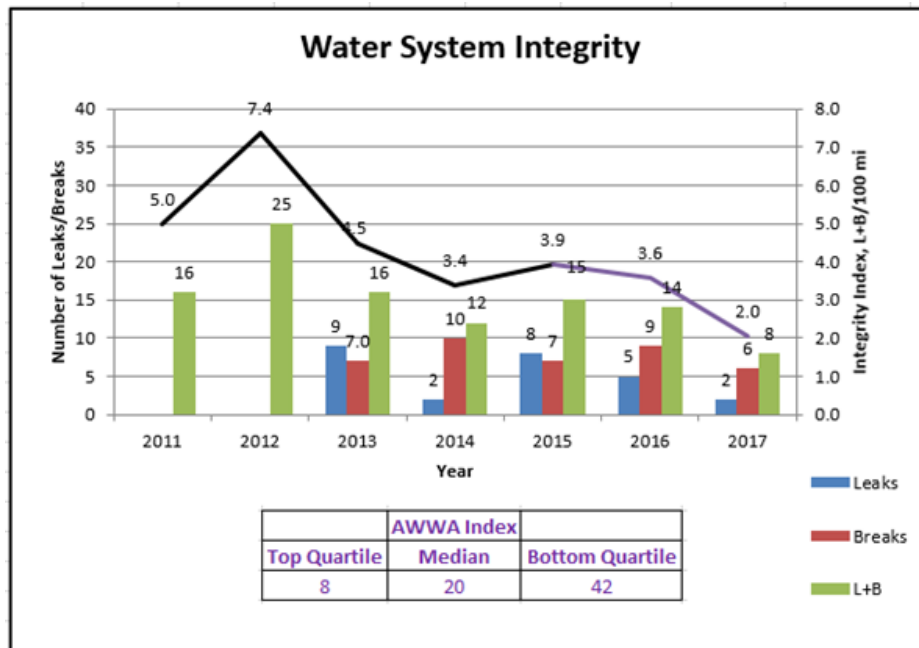
Water Quality Complaints

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. Our score was even better in 2016! There were no water quality complaints in July of 2017.



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

Water System Integrity



As the Water System Integrity chart indicates, our occurrence rate has generally decreased over the last four years. 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 July.

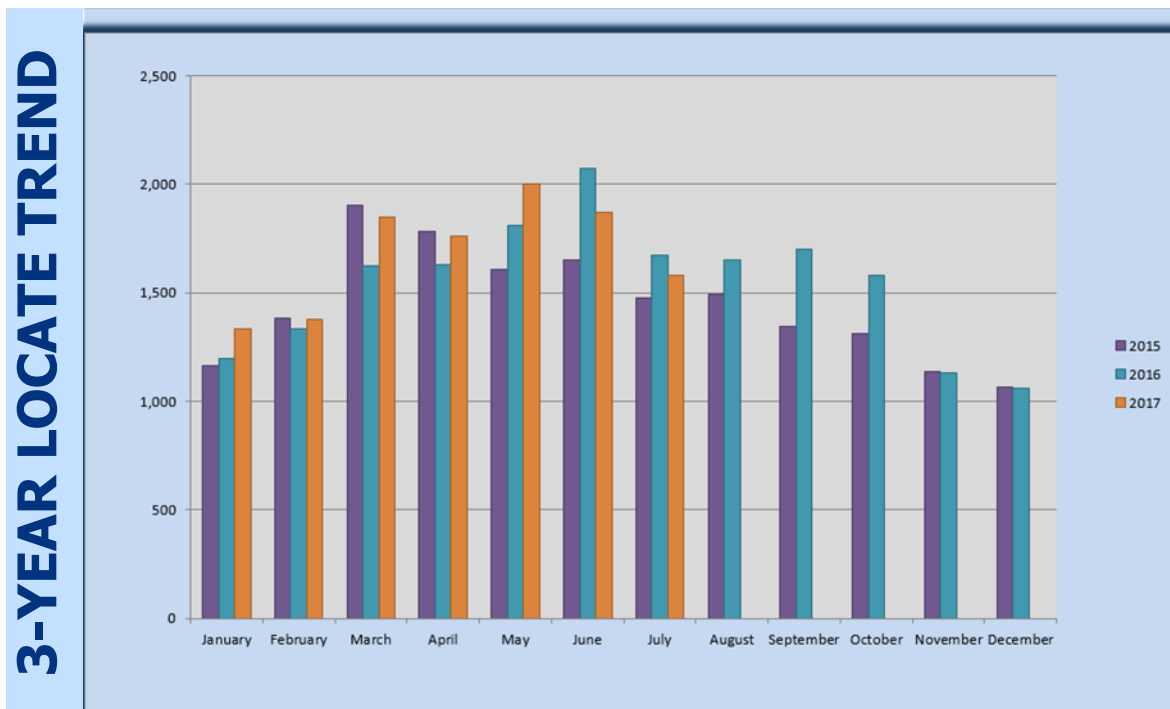


Before you start a project, call 811. Whether you are planning to do it yourself, or hiring a professional, we'll help you do it safely. The local 811 Call Center will contact Castle Rock Water. We will schedule a time to come out to locate public water and wastewater lines in the road and in your project 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				
February	521	485	538	1,094	1,093	1,383	1,334	1,378				
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					
September	880	723	1,029	1,240	1,373	1,343	1,701					
October	715	688	1,155	1,501	1,376	1,314	1,579					
November	536	518	1,041	1,072	866	1,134	1,131					
December	415	405	925	1,005	1,043	1,063	1,059					
Total	8,545	7,539	11,097	15,702	15,731	17,323	18,469	11,779	0	0	0	0
Difference from previous year's total	N/A	-1,006	3,558	4,605	29	1,592	1,146	-6,690	-11,779	0	0	0



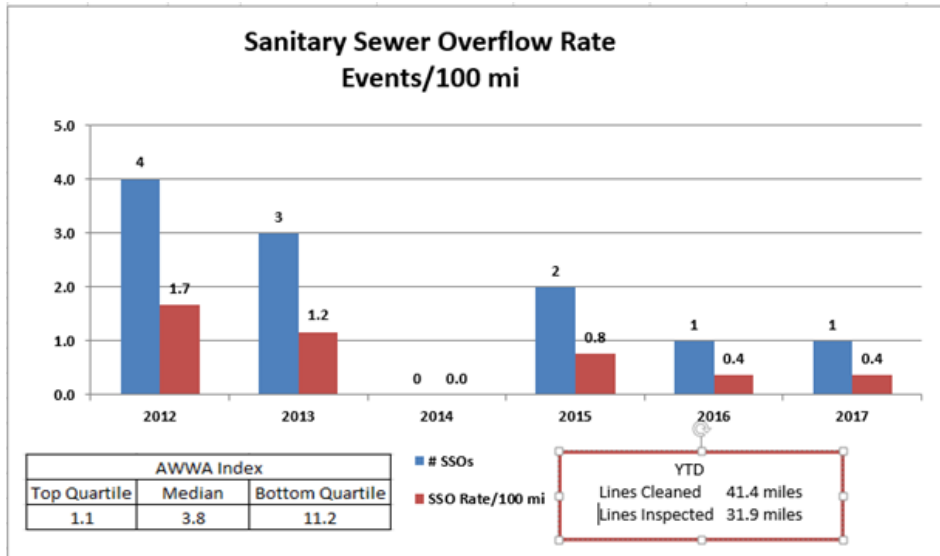
Sanitary Sewer Overflows

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 were no sanitary sewer issues in July.

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. In 2015 and 2016, we inspected and cleaned 42.44 and 45.65 miles, respectively.

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



JULY 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 July.

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 July.

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 on Johnson Dr. Due to the planned capital project shut down, no additional homes were affected while the repair was made.