

SEPTEMBER 2017



## Congratulations to Our Recent Graduates



Castle Rock Water is honored to recognize **Heather Justus** as a recent graduate of the Colorado Foundation for Education Water Leaders

program. The goal of this program is to positively impact the Colorado water profession by developing a pipeline of water leaders across diverse fields with the knowledge and skills to navigate the complex world of Colorado water. Participants receive extensive training in skills related to navigating conflict and diversity, leading self and others, effective management and problem-solving tactics. Graduates walk away with a better understanding of their strengths, how to address challenges, skills to enhance staff and/or team and a network of peers to further their career growth.



**Evan Bahn** and **Thomas Hecker** are recent recipients of the American Water Works Association Rocky Mountain Section Supervisory Leadership Certificate Program. This program provides the leadership skills needed for success in today's rapidly-changing workplace. Participants learn how to make the transition from employee to supervisor, delegate, motivate others and boost morale, address performance issues and resolve conflict, evaluate and reward performance, train, coach and mentor, and build overall aptitude as a leader.



**Thomas Hecker**  
Water Distribution  
Systems Supervisor



**Evan Bahn**  
Regulatory & Water Quality  
Compliance Analyst

### OUR VISION

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

## Rick Schultz Receives Conservation Award

Castle Rock Water is pleased to announce that Rick Schultz, Water Conservation Specialist received the Alice Darilek Water Conservation Award on Sept. 11, 2017 at the regional conference in Loveland, CO. This award recognizes outstanding contributions to the water conservation field within the Rocky Mountain Section of the American Water Works Association Rocky Mountain Section (RMSAWWA) which includes water providers in Colorado, Wyoming and New Mexico.

The award is named in honor of Alice Darilek whose dedicated work in New Mexico helped water conservation efforts throughout the region, and has been awarded annually to a single water conservation professional since 2006 for exceptional performance and commitment to water conservation in the region.

Rick lives and breathes water conservation, and spends much of his time working one-on-one with customers via telephone, and through face-to-face visits to help our customers reduce water consumption and minimize water waste. He has been Castle Rock Water's Water Conservation Specialist since 2007. Some of his accomplishments include:

- Leads Castle Rock's conservation program which is State recognized and held up as an example in the State Water Plan
- Helped reduce water consumption by 15 percent since 2007
- Instrumental in establishing a conservation website, CRconserve.com
- Instructs about 500+ members of the community annually at the Water Wiser Workshops
- Helped develop and handles the Smartscape Renovation program
- Keeps landscapers up-to-date on annual updates to the Landscape and Irrigation Regulations
- Oversees our water monitors to ensure customers follow the correct schedule
- Conducts annual training and registration of landscape professionals
- Provides hands-on demonstrations and instructions to 3<sup>rd</sup> and 5<sup>th</sup> grade classrooms around Castle Rock on the importance of water conservation
- Member of the South Metro Water Supply Authority - Water Conservation Subcommittee
- Actively participates in the AWWA-RMS Conservation Subcommittee
- Volunteers as a field testing judge for the Landscape Industry Certificated Technician through the Associated Landscape Contractors of Colorado

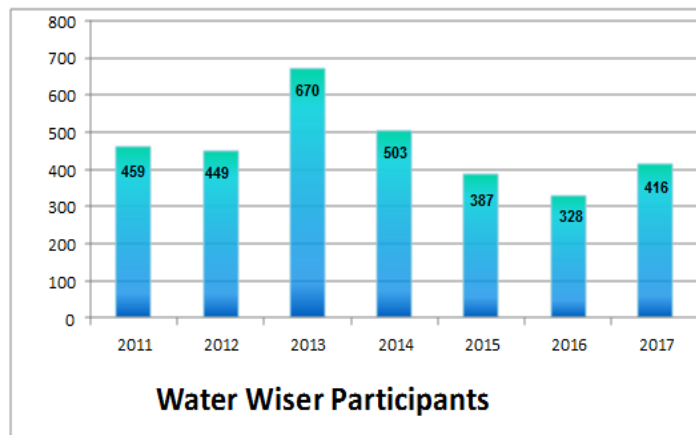


Smartscape solutions for your lawn and home.

# ALL ABOUT CONSERVATION

## SMARTSCAPES SOLUTIONS FOR YOUR LAWN AND HOME

There were nine Water Wiser Workshops held in 2017. Attend one of these workshops and you'll see how easy it is to increase your water efficiency by learning how to detect leaks, identify water waste, and manage your irrigation system to achieve maximum effectiveness. These workshops continue to be very popular with our customers. Since 2011, over 3,200 customers have received this comprehensive education on water efficiency.



## UPDATE ON REBATES

Smartscapes Renovations continue to be popular with 30 applications being submitted. An evaluation of past customers taking part in these programs indicate a water savings of about 28 percent.

Program Category	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual
SmartScape Renovation	\$51,142	\$50,392	\$54,152	\$23,400	\$21,407	\$14,649	\$24,192	\$28,271*
Rotary Nozzle Retrofit	\$3,699	\$2,309	\$794	\$1,200	\$2,461	\$1,538	\$1,669	\$720
Rain Sensor	\$112	\$131	\$34	\$150	\$183	\$115	\$93	\$159
Smart Irrigation Controller	\$2,876	\$1,262	\$584	\$750	\$2,995	\$4,261	\$6,270	\$6,327
Slow the Flow Irrigation Audits	\$17,502	\$9,372	\$4,318	\$4,500	\$3,500	\$2,980	\$3,088	\$3,915
<b>Total, All Programs</b>	<b>\$75,331</b>	<b>\$63,466</b>	<b>\$59,882</b>	<b>\$30,000</b>	<b>\$30,546</b>	<b>\$23,543</b>	<b>\$35,312</b>	<b>\$39,392</b>

\*Represents Smartscapes through 9/30/17; does not include those awaiting final inspection

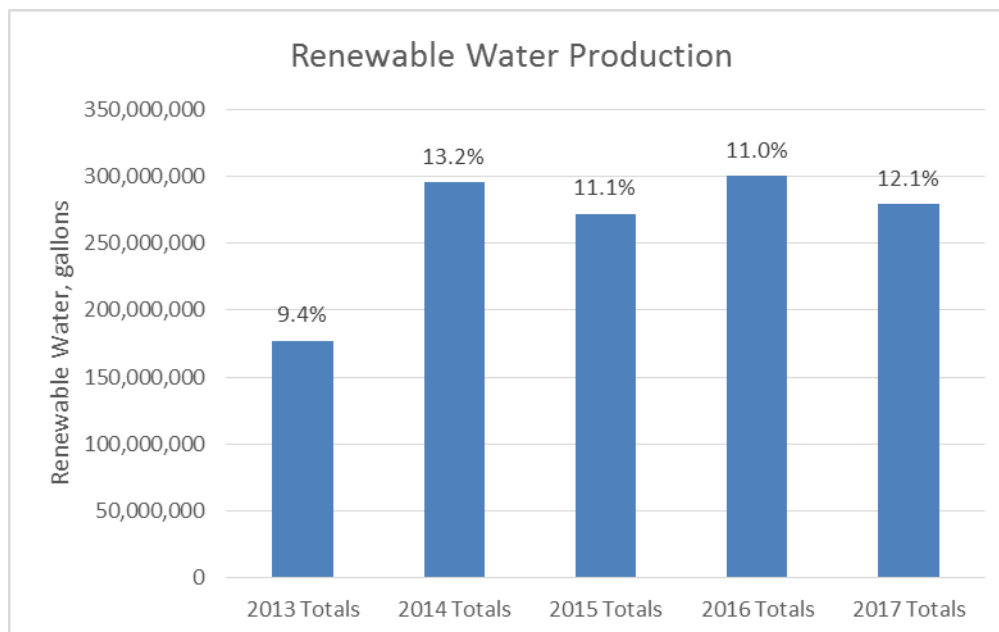
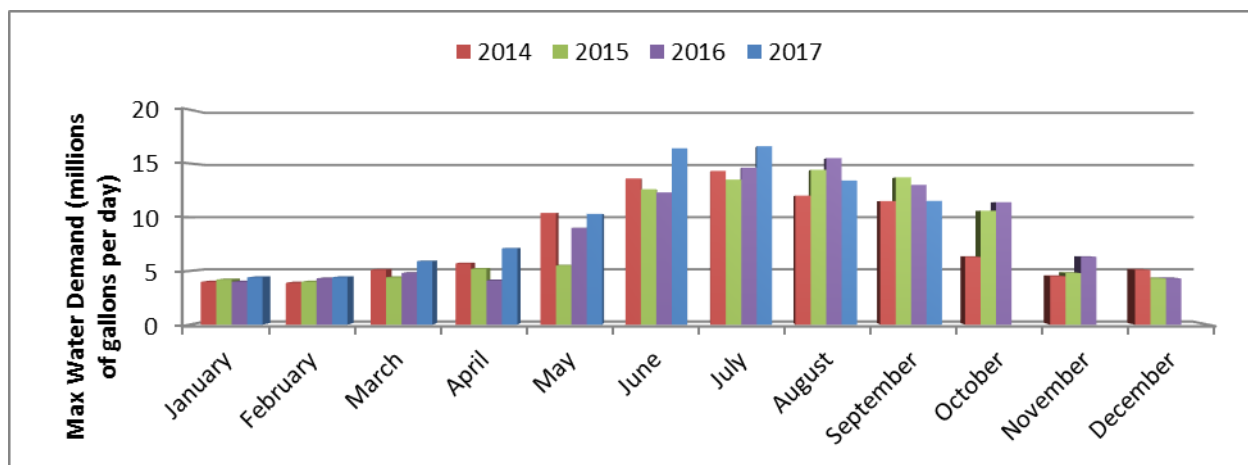
Additional funds were made available this year, so there is still time to replace an ET controller, rotary nozzle or install a rain sensor. For more information, visit [CRconserve.com/rebates](http://CRconserve.com/rebates).

## 2017 Water Demands

By: Kurtis Cotten, Water Resources Program Analyst

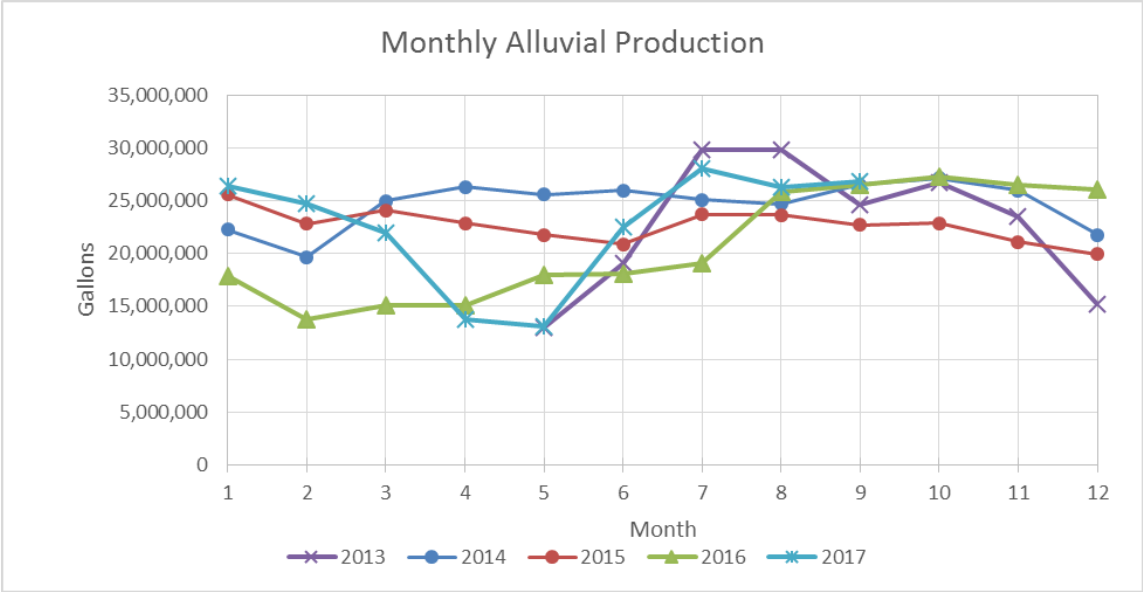
The maximum daily water demands are plotted by month from 2014 to the current month. As observed by the data, the maximum demand for the month of September was 11.5 million gallons per day (MGD) which was about 7% less than the 5-year average maximum daily demand for the month. Summer time maximum demands 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 September was 356.8 million gallons (MG), which was about an 8% increase from the August 2017 total of 329.1 MG, and a 0.8% decrease from the September 2016 demand of 359.6 MG.

The CR-1 diversion produced an average of 0.44 MGD for the month of September. The Town's thirteen alluvial wells and CR-1 produced a total of 40 MG of renewable water during September, which represents 11.4% of the total water supply for the month and 12.1% (279 MG or 856 acre-feet) of the water supply year to date. The total renewable water produced since the opening of the PCWPF has surpassed 1,325 MG, which represents 11.4% of the Town's total water supply since the alluvial wells began pumping in May 2013.

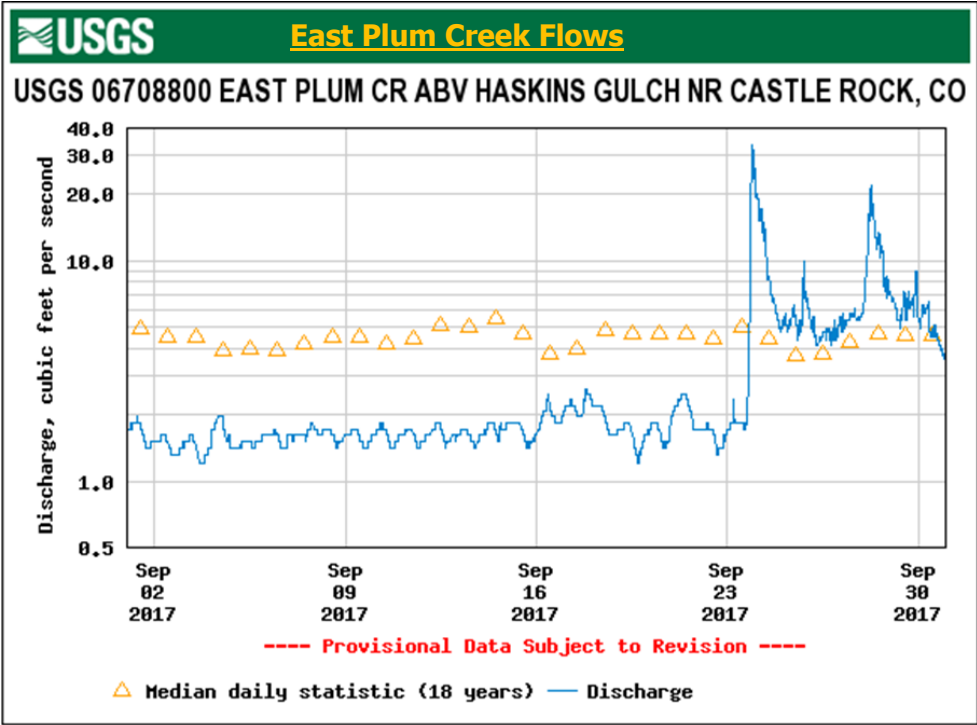


*The percentage shown on top of the bars is the amount of renewable water relative to total water production.*

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 1 and 35 cubic feet per second (cfs) during the month of September, with flows averaging around 2 cfs. During September, 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.





Castle Rock Water reviewed 87 applications (see below) this month which compares to 55 during the same time period in 2016. The average assigned due date by Development Services was seven days, and we completed the reviews in an average of five days.

- 8 Agreements
- 1 Planned Development Plan
- 10 Field Change Orders
- 17 Grading, Erosion, and Sediment Control (GESCC) Plans
- 1 Miscellaneous Applications
- 9 Plats
- 6 Preliminary Project Application
- 20 Construction Drawings
- 12 Site Development Plans
- 2 Technical Criteria Variances
- 1 County Referral

The applications reviewed consisted of:

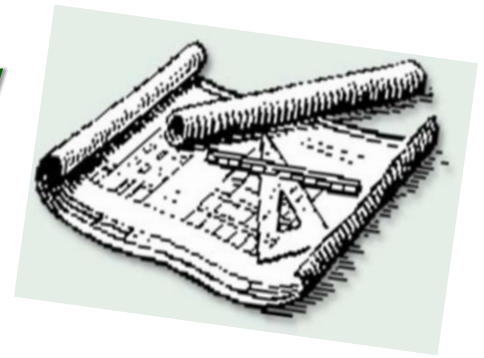
- 27 1<sup>st</sup> Submittals
- 31 2<sup>nd</sup> Submittals
- 22 Special reviews
- 44 Completed late\*
- 54 Completed on-time as scheduled\*

\* 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.

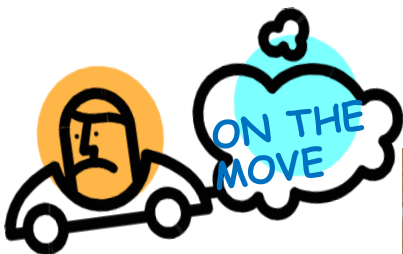
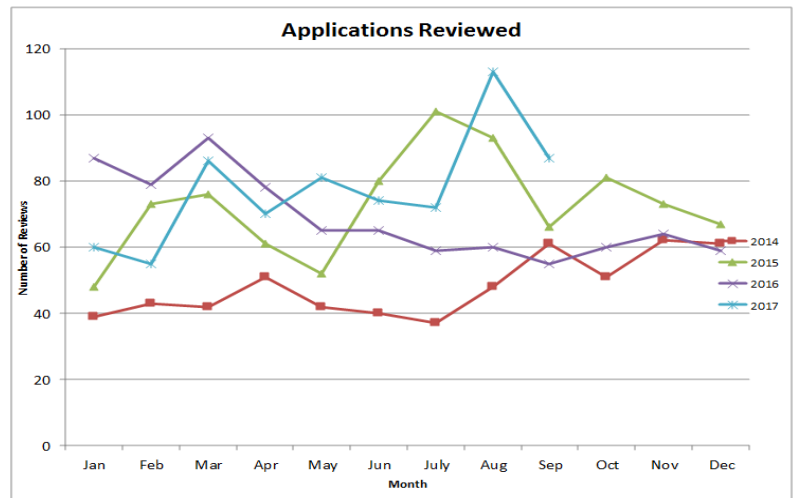
In addition, Castle Rock Water completed 81 building permit reviews and associated system development fees.

## 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!!***



**John Whitesel**  
Water Operator I



**Dwight Keller**  
Maintenance Technician I

**Welcome to our  
Team!**



**Lanre Olanrewaju Ajayo**  
Water Operator II



**Kaitlyn Scott**  
GIS Intern

## **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.*



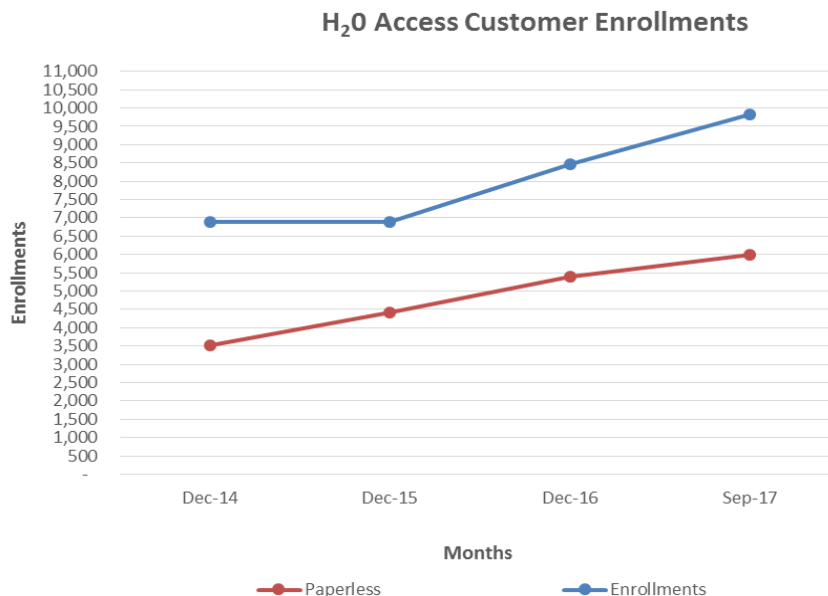
**Dwight Keller**  
Collections II Operator

## Customer Statistics

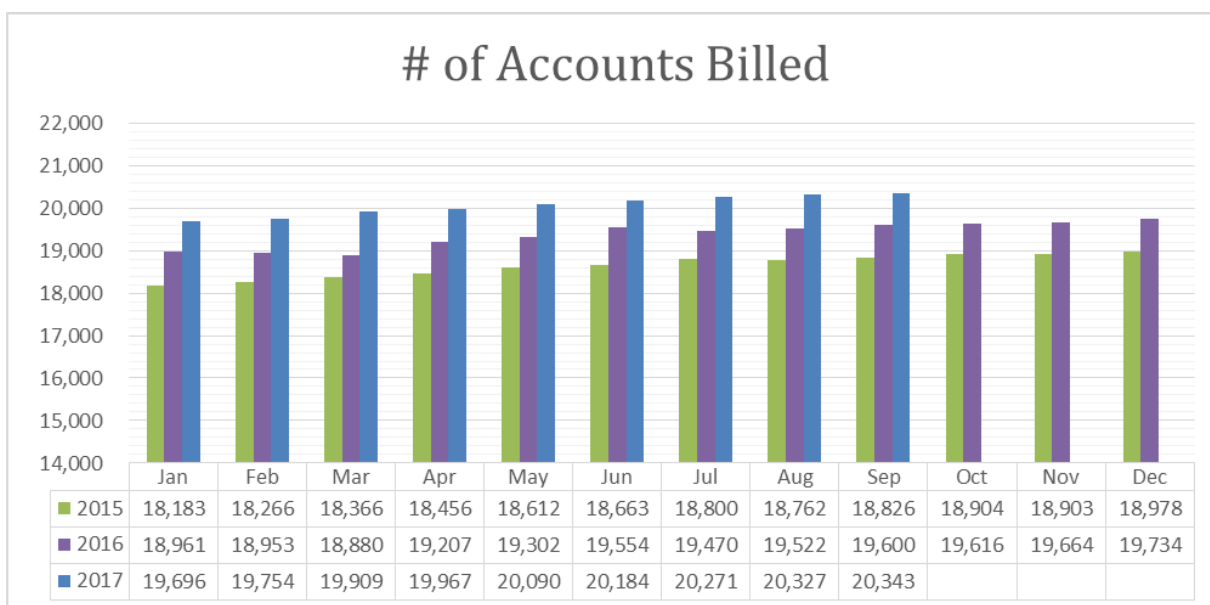
By: Anne Glassman, Business Solutions Manager



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.

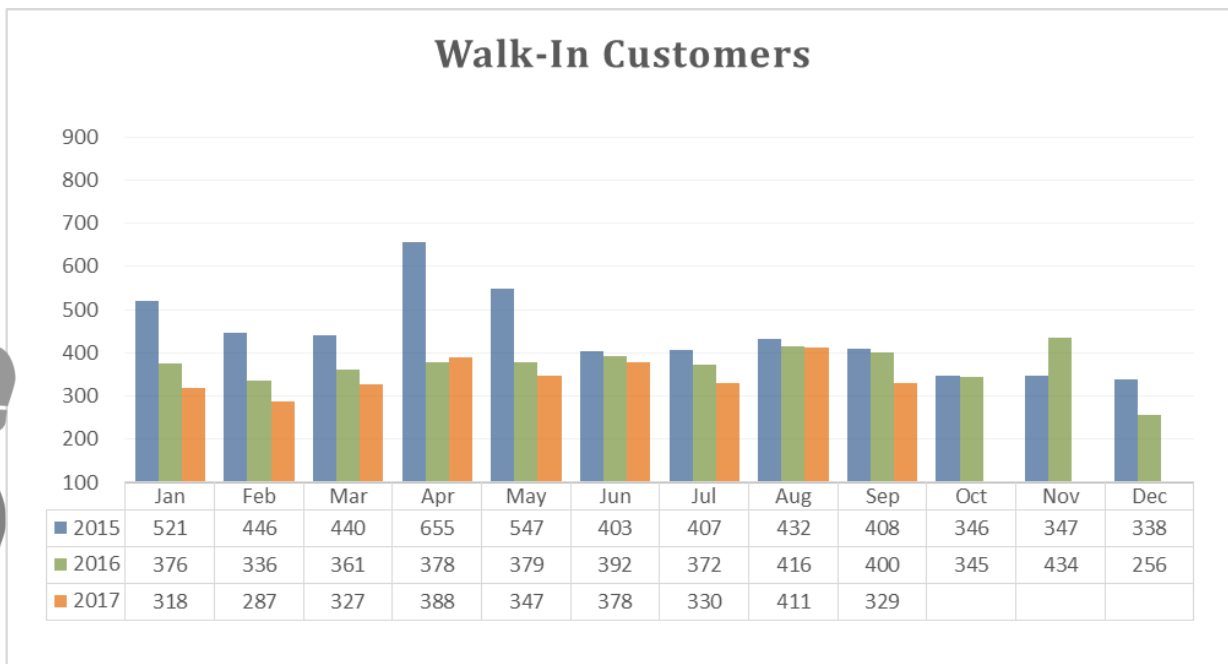


Fifty-five percent of the customers enrolled in H<sub>2</sub>OAccess have also chosen to “Go Paperless.”

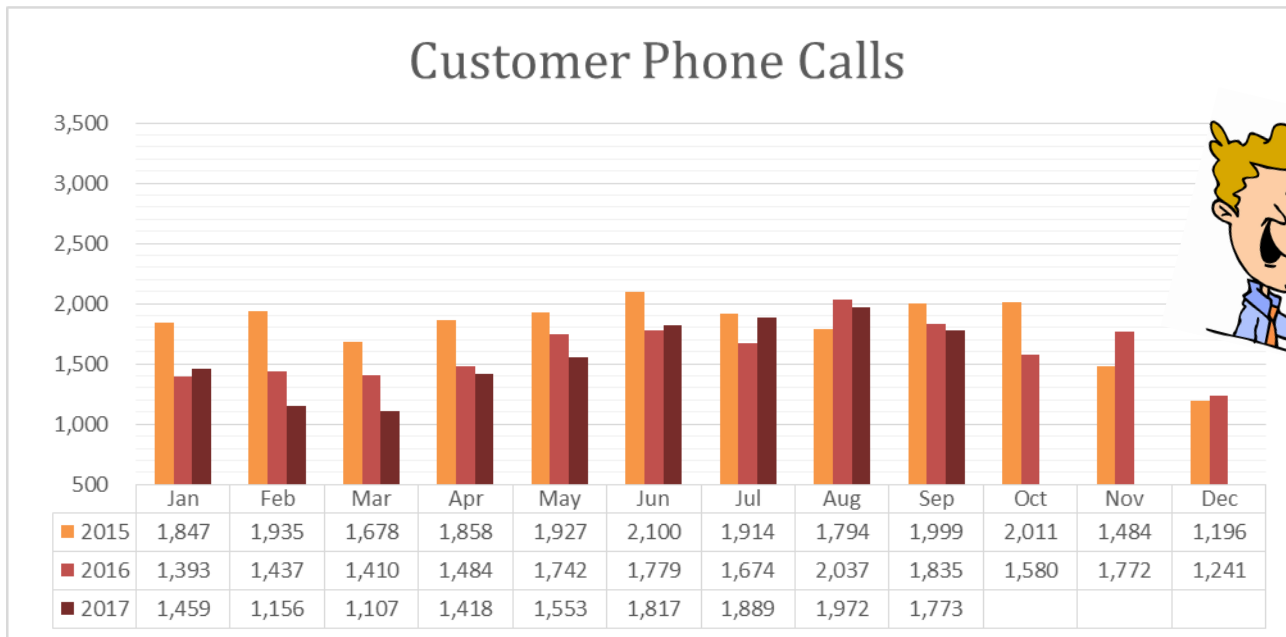


The number of accounts billed continues to increase year over year due to new residential and commercial growth.





Walk-in customers are down in September due to the end of irrigation and watering restrictions season.



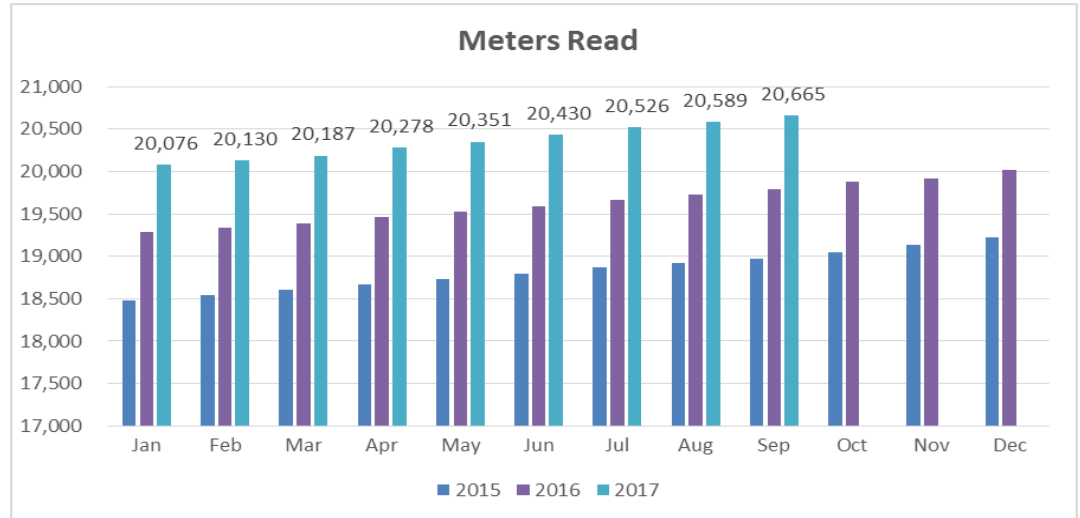
Customer phone calls are down in September due to the end of irrigation and watering restrictions season.

# METERS



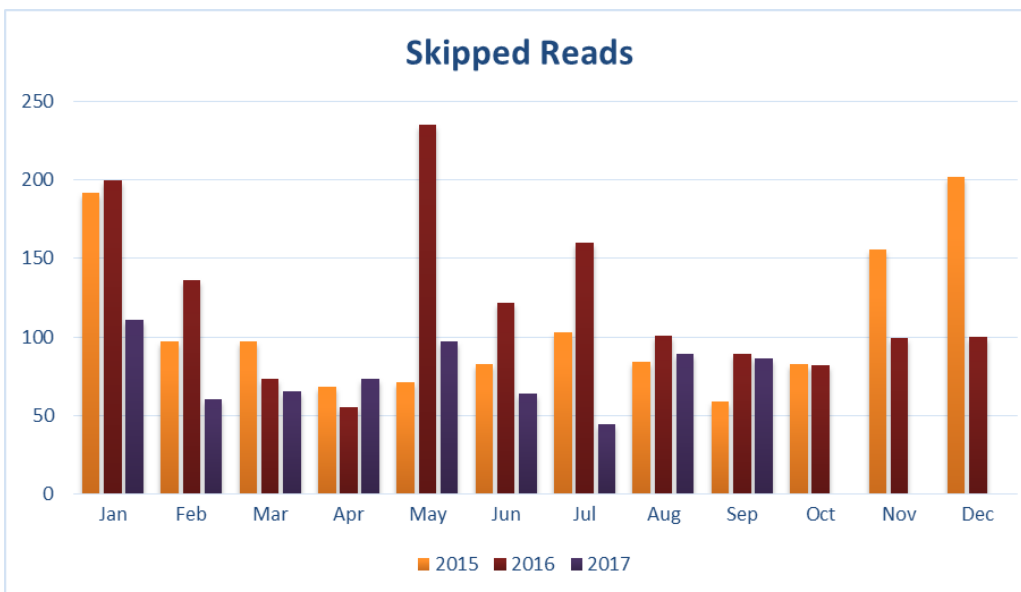
## Meter Sets

Month-to-Date 56  
Year-to-date 685



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

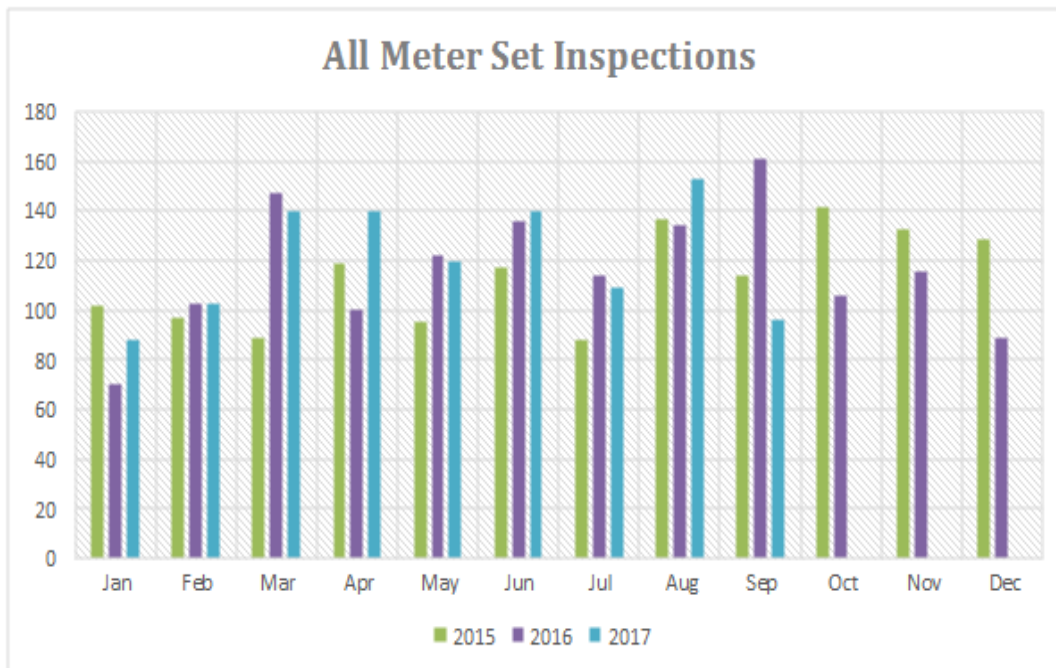
## Skipped Reads



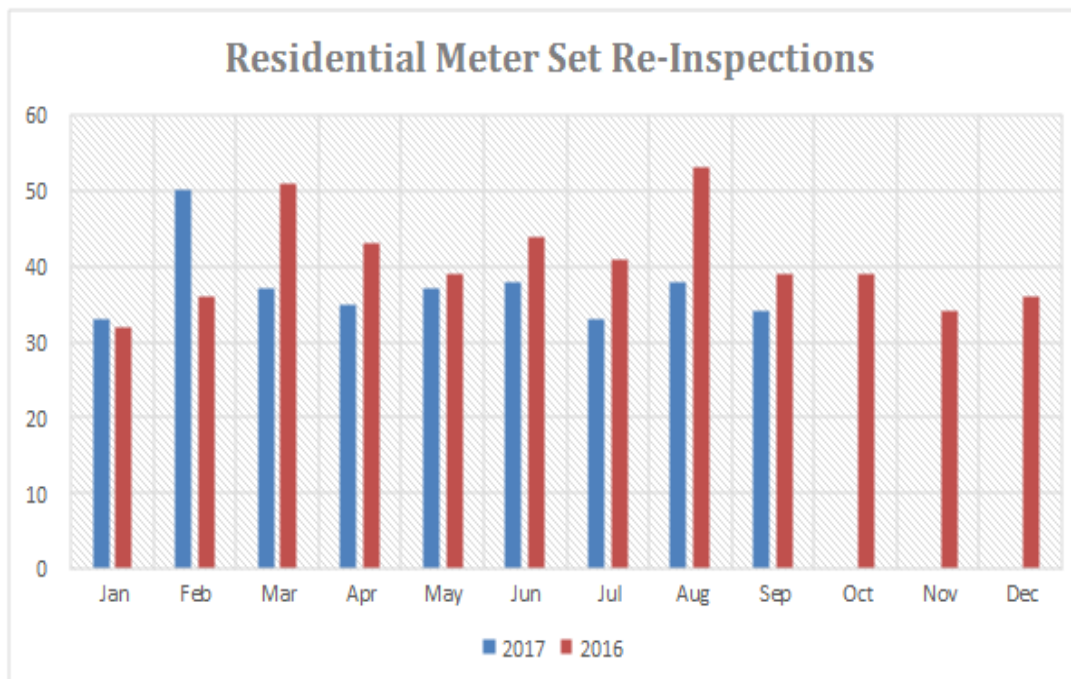
The American Water Works Association (AWWA) standard for skipped reads is 2 percent, so at 0.42 percent in September, we still continue to stay below the industry average. This is a result of continued maintenance and repair efforts on meter infrastructure.

## 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.



Meter set inspections are down in September; however, based on the number of meters released in September we expect the meter set inspections in October to be higher.



Residential meter set re-inspections through September 2017 are very similar to those seen last year at this same time. Although for most of the year re-inspections are down. This means that home builders are improving in their work which also means our team has more time for other priorities.



## 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.*



**BEFORE**

Meadows 20 Regional Pond - The “stormtroopers” removed the solids (mud and cattails) that were blocking the drainage gate as shown in the BEFORE photo. By doing this, the standing water drains quicker from the pond.



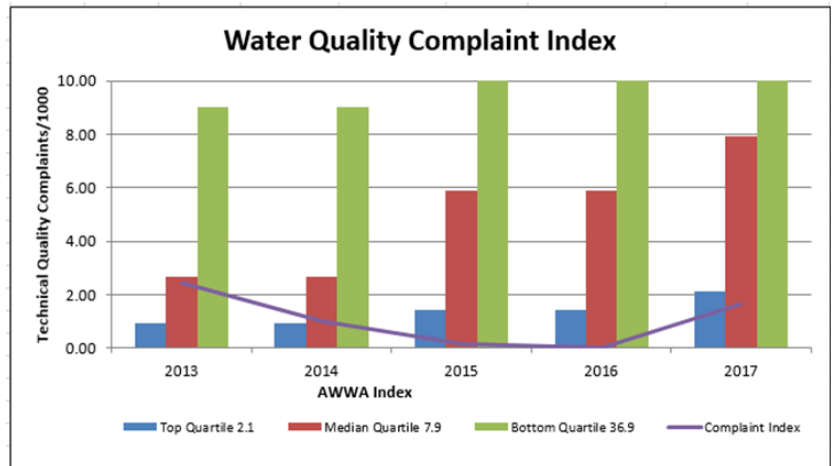
**AFTER**



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

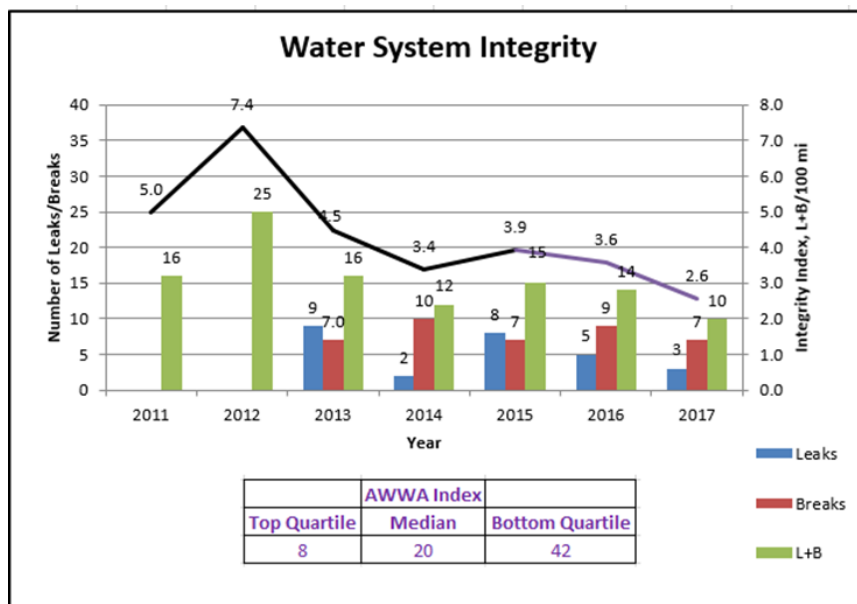
## Water Quality Complaints

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 September, 2017



For more information, view the current water quality report at [CRgov.com/waterqualityreport](http://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 September.





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

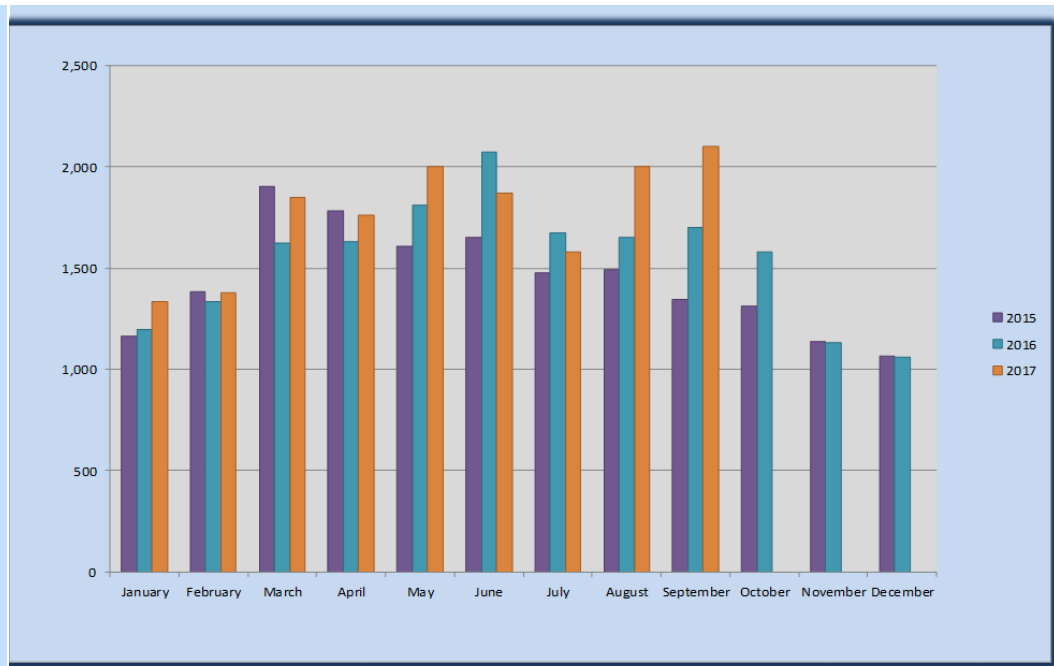
### ANNUAL UTILITY LOCATES

	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	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					
November	536	518	1,041	1,072	866	1,134	1,131					
December	415	405	925	1,005	1,043	1,063	1,059					
<b>Total</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>15,882</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Difference from previous year's total	N/A	-1,006	3,558	4,605	29	1,592	1,146	-2,587	-15,882	0	0	0



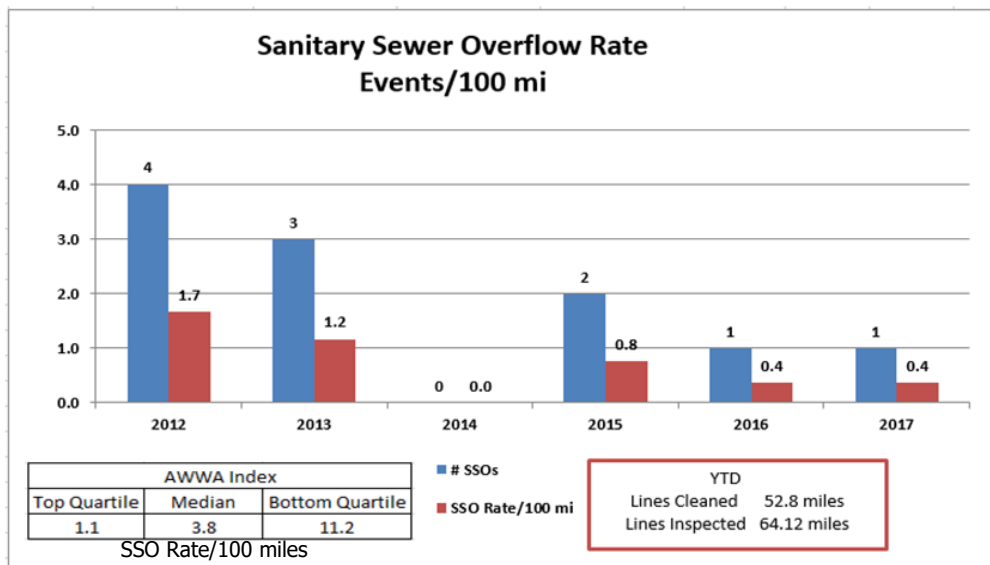
Know what's below.  
Call before you dig.

### 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 were no sanitary sewer issues in September.



### ***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.

## SEPTEMBER 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 September.*

### **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 September.*

### **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 one service line break in The Meadows. The repairs took four hours, and only one customer was without water.*