CASTLE ROCK water

Securing our future drop by drop

January 2016

Waterman Regional Water Treatment Center Gets New Clearwell Access Hatch

By: Walt Schwarz, Project Manager

The clearwell was built in 2005 along with the Ray Waterman Regional Water Treatment Center (RWRWTC) and has a capacity of approximately 546,000 gallons. Filtered water from RWRWTC flows into the clearwell and is then pumped out to the Town's potable water distribution system. A single three-foot square access hatch into the clearwell roof has proven inadequate for maintenance and operation activities. A new five-foot wide by nine-foot long access hatch on the existing clearwell was designed and bid for construction in 2015.

Canterbury Construction was the low bidder and was awarded the construction contract in the amount of $98,967. In addition to the new hatch, the project includes replacing a leaking metal weir box with 42-inch diameter ductile iron piping. The top of the new piping arrangement is approximately 15 feet above the clearwell floor. The elevation is important and is set to work hydraulically with the gravity flow filters.

Canterbury has installed a steel reinforced concrete beam that was needed to add support to the clearwell roof after removing the concrete section. The project is proceeding within budget and weather dependent. Canterbury plans to complete the hatch installation and other pieces of the project by end of February.

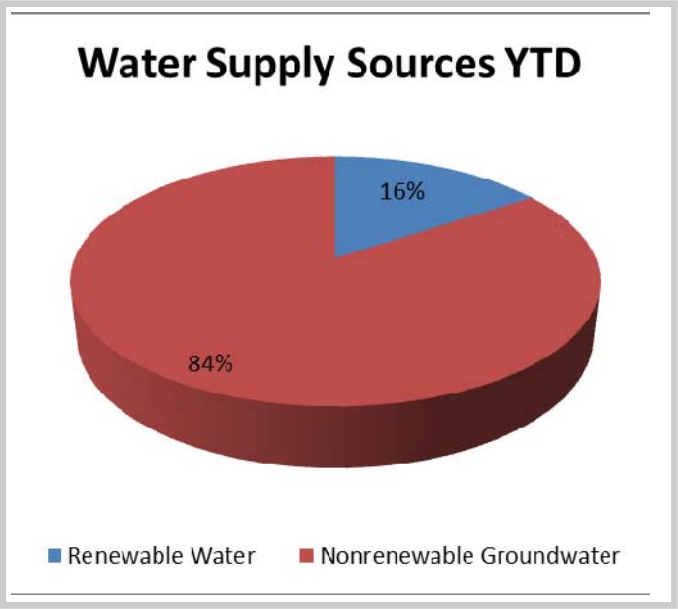
Left to right: Cutting and removing the 20,000 plus pounds of concrete, reinforcing and formwork for new concrete beam and hatch curb walls, and the new 42" diameter ductile iron pipe system.

OUR VISION

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

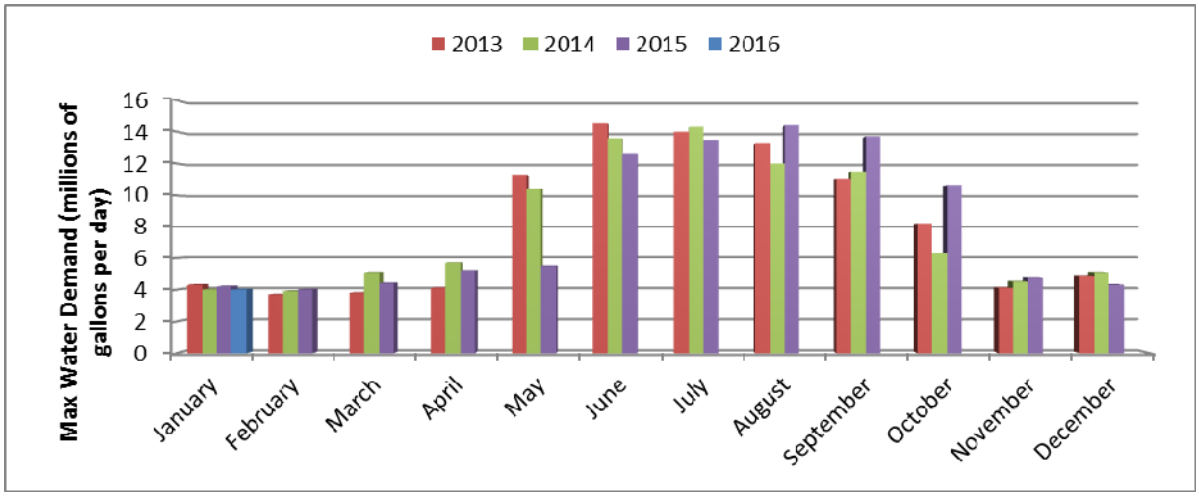
2016 Water Demands

By: Sheri Scott, Water Resources Program Analyst



The maximum daily water demands are plotted by month from 2012 to the current month. As observed by the data, the maximum demand for the month of January was 4.0 million gallons per day (MGD) which was about 3% less than the 5-year average maximum daily demand. 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. An average of the winter month (November, December, January, and February) usages, reflect indoor or base demand. The water demand total for January was 115.5 million gallons (MG), which was about a 1% increase from the December 2015 total of 114.7 MG, and a 3% increase from the January 2015 demand of 111.6 MG.

The Town's nine alluvial wells produced a total of 18 MG of renewable water during January, which represents 16% of the total water supply for the month and 16% (18 MG or 55 acre-feet) of the water supply year to date. The total renewable water produced since the opening of the PCWPF has surpassed 763 MG, which represents 11% of the Town's total water supply since the alluvial wells began pumping in May of 2013. Currently, the Town's renewable water rights surpass the capacity of the alluvial wells. The alluvial well project the Town is currently constructing will help close this gap.



The flow hydrograph (see next page) represents stream flows in East Plum Creek taken from the stream gauge located at Haskins Gulch. The hydrograph shows that the East Plum Creek basin experienced stream flows between 7 to 14 cubic feet per second (cfs) with flows remaining around 7 to 8 cfs towards the end of the month. During the month there were no calls on the main stem of the South Platte, therefore a Free River condition and no out-of-priority depletions needed to be made up. The river call may change at any time as a result of downstream water diversion calls. We are currently about halfway through the snow accumulation season in the West. The NRCS Colorado SNOTEL report for February 1, 2016 shows the snow/precipitation for the South Platte River Basin is at 109% of average.

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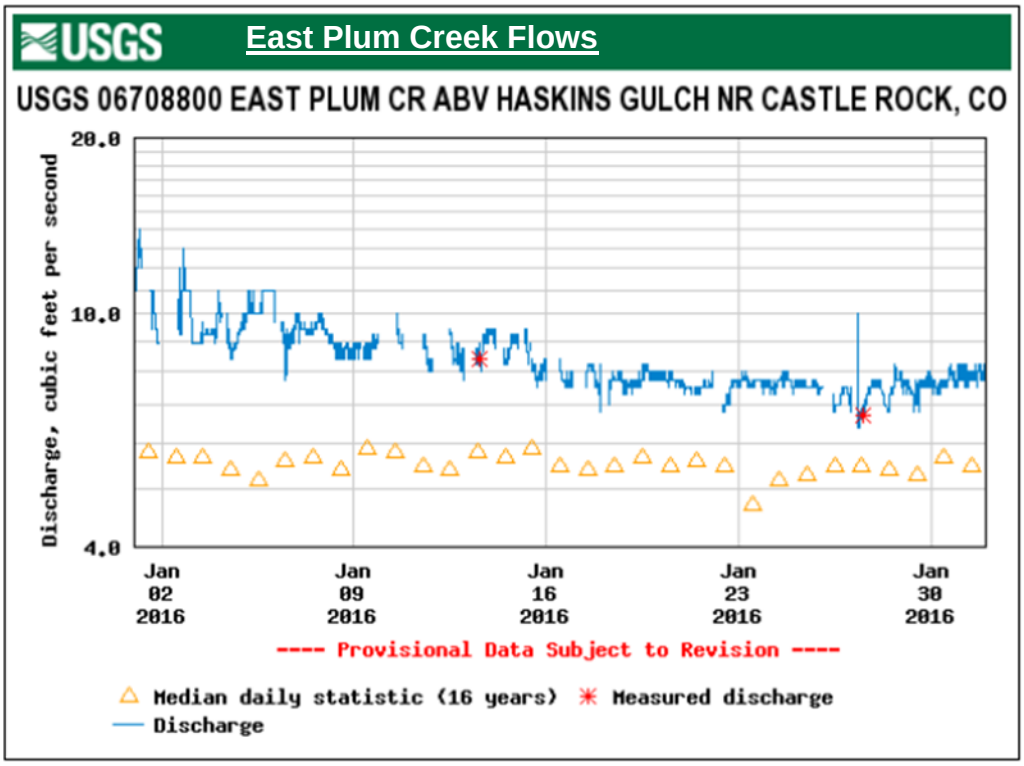
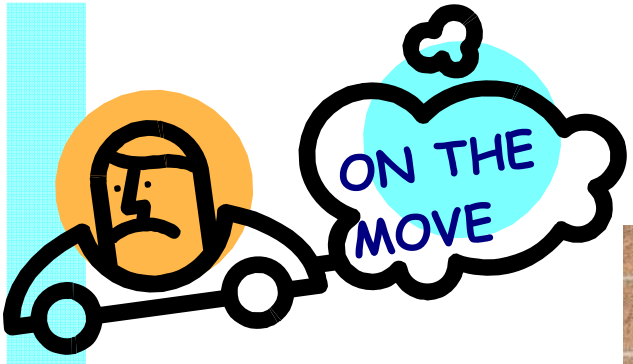
2016 Water Demands, continued





Congratulations on your recent promotion!

Colton Maloney
Maintenance Technician I

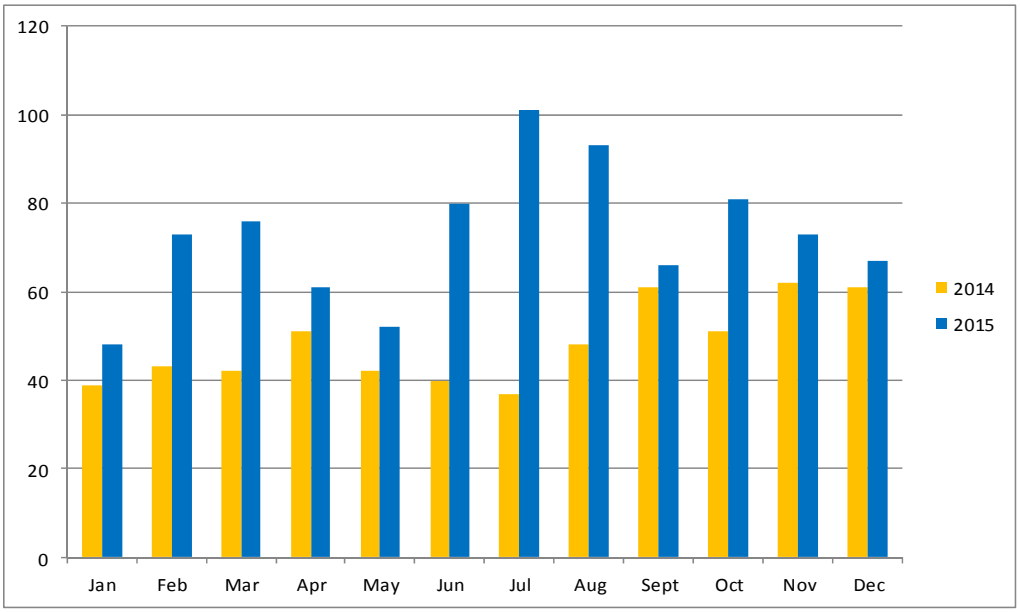
Thomas Hecker
Maintenance Technician II

Calvin Cooke
Maintenance Technician I

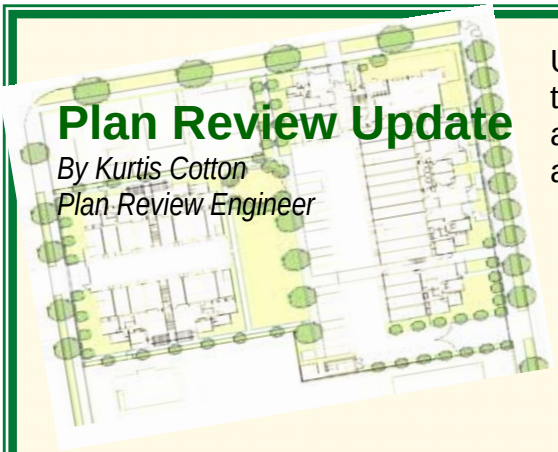
Plan Review Ends Year Strong

The pace of growth in Castle Rock is still very strong, as demonstrated by the level of plan review performed by Utilities staff in 2015.

Staff completed over 870 reviews in 2015 (an average of almost 73 per month) compared to 576 reviews (average of 48 per month) in 2014.



The 51% increase in plan review submittals was still completed almost 100% on time, with no increase in staff. Plan review in 2016 is expected to be very heavy still, as strong growth continues in residential and commercial development. Submittals in January 2016 were 80% higher than in 2015, and over 125% higher when compared to 2014.



Plan Review Update

By Kurtis Cotton
Plan Review Engineer

Utilities reviewed 87 applications this month which compares to 48 during the same time period in 2014. The average assigned due date by Development Services was 1.7 weeks, and Utilities completed the reviews in 1.4 weeks, which included:

- 2 Agreements
- 1 Annexation
- 1 Final Plat
- 1 Lot Line Vacation
- 7 Plats
- 3 Preliminary Project Applications
- 23 Construction Drawings
- 15 Site Development Plans
- 4 Technical Criteria Variances
- 10 Field Change Orders
- 14 Grading, Erosion and Sediment Control (GESC) Plans
- 2 Grading, Erosion and Sediment Control (GESC) Permits

The applications reviewed consisted of:

- 30 1st Submittals
- 25 2nd Submittals
- 32 Special reviews

In addition to completing the above listed applications as scheduled, Utilities completed 77 single family utility reviews and associated system development fees.

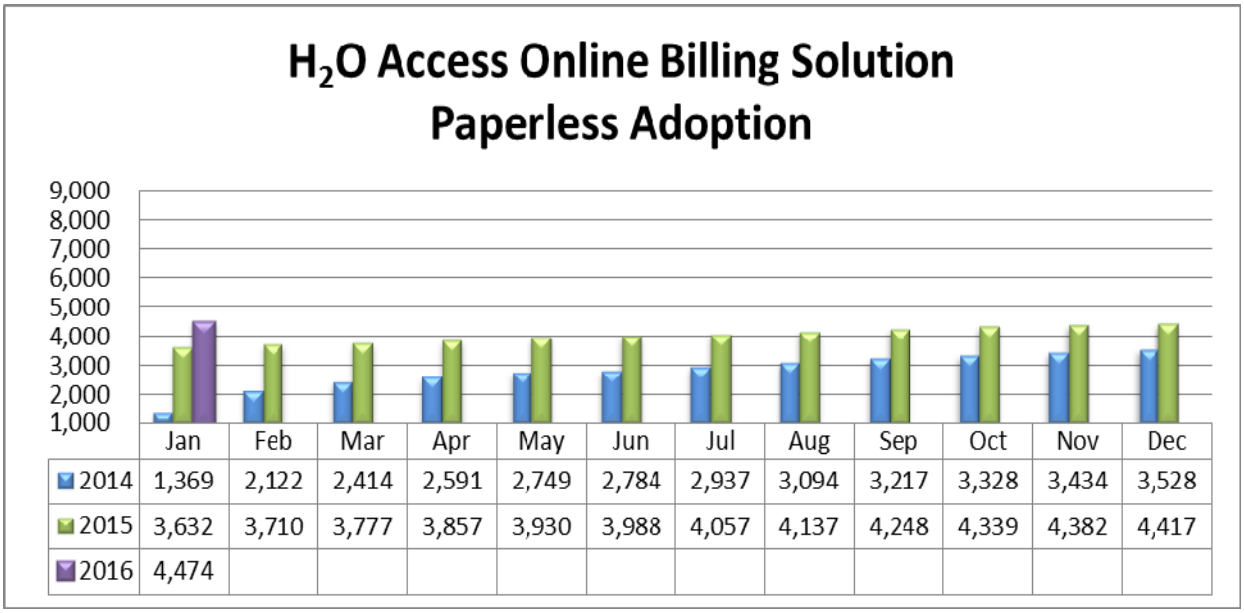
Business Solutions

Customer Statistics

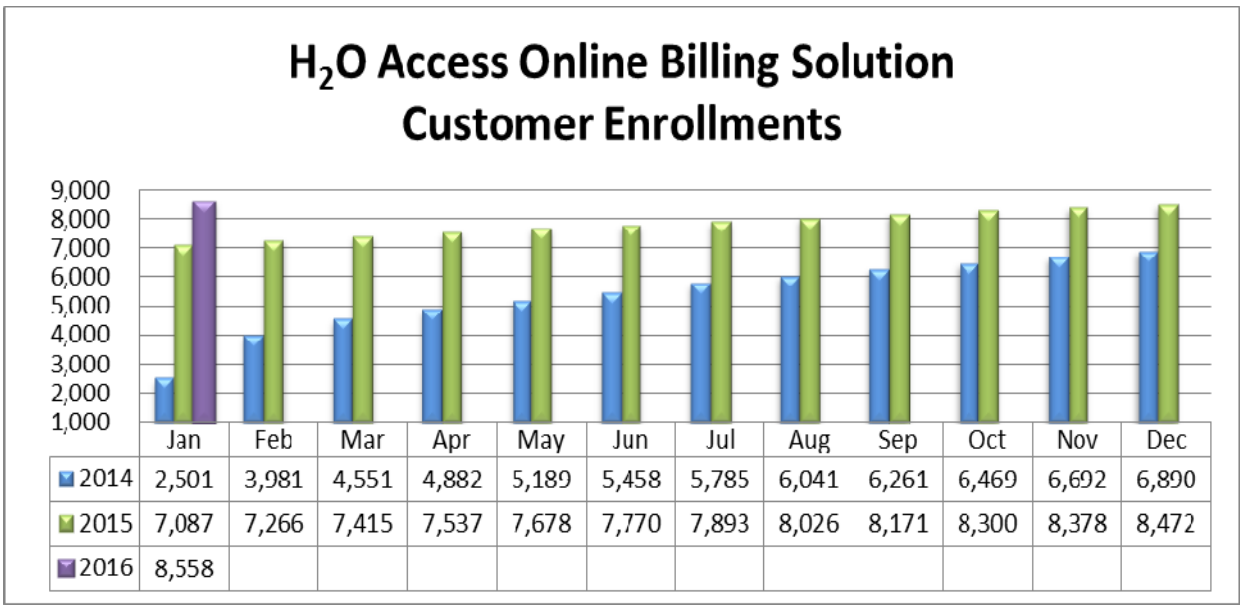
By: Anne Glassman, Business Solutions Manager

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.

Customer enrollments have continued to increase from launching the H_2O Access Online Billing Solution in January 2014. However, the increase in enrollments has slowed down over the last year so we plan to launch a campaign in 2016 to increase enrollments and paperless adoption. Paperless adoption remains steady at 52% of customers enrolling with an online account. This saves the Town approximately $50,000 per year in printing and postage costs.

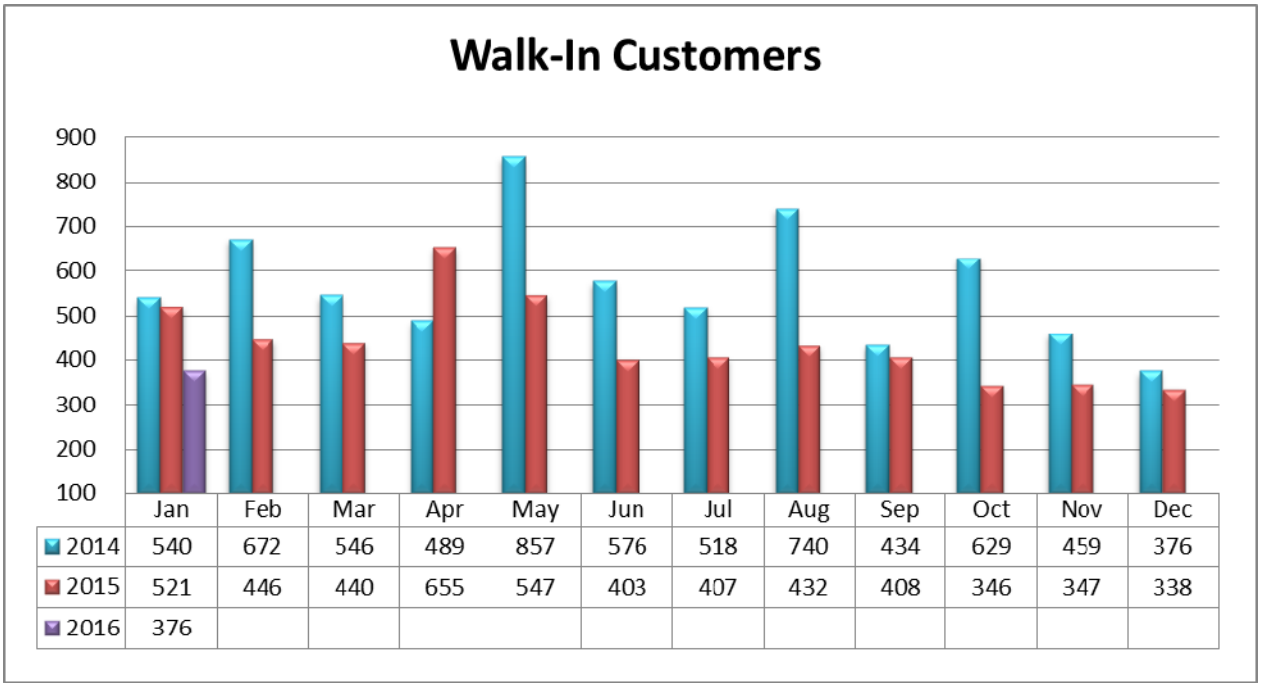


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2014	1,369	2,122	2,414	2,591	2,749	2,784	2,937	3,094	3,217	3,328	3,434	3,528
2015	3,632	3,710	3,777	3,857	3,930	3,988	4,057	4,137	4,248	4,339	4,382	4,417
2016	4,474											



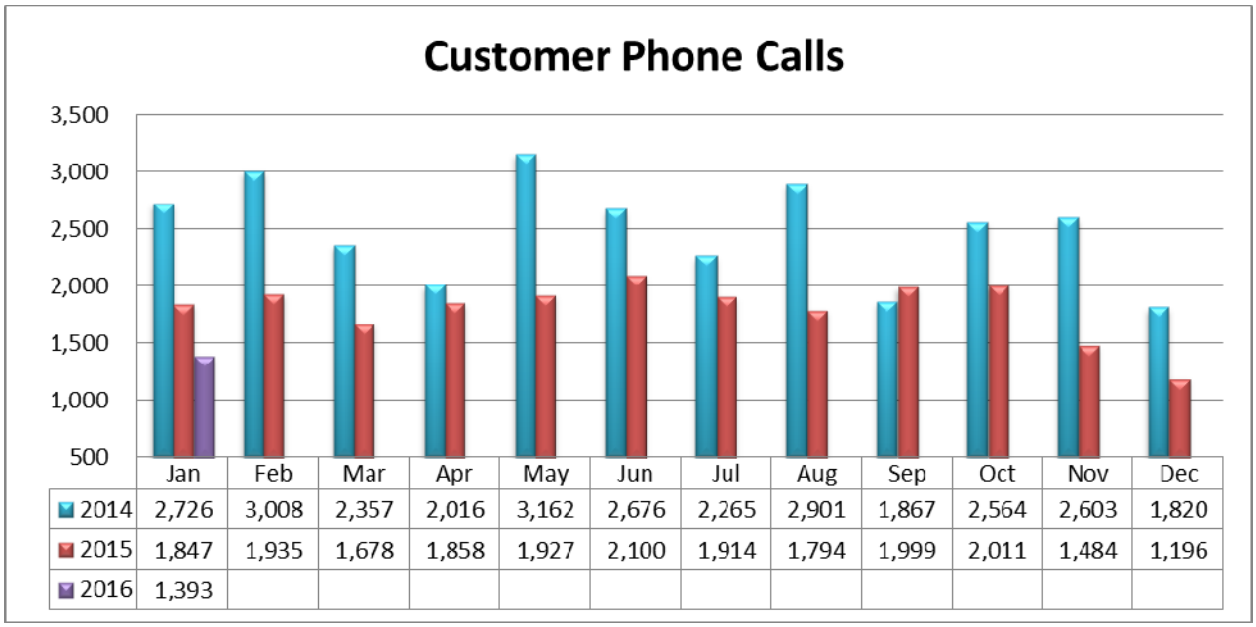
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2014	2,501	3,981	4,551	4,882	5,189	5,458	5,785	6,041	6,261	6,469	6,692	6,890
2015	7,087	7,266	7,415	7,537	7,678	7,770	7,893	8,026	8,171	8,300	8,378	8,472
2016	8,558											

Business Solutions



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2014	540	672	546	489	857	576	518	740	434	629	459	376
2015	521	446	440	655	547	403	407	432	408	346	347	338
2016	376											

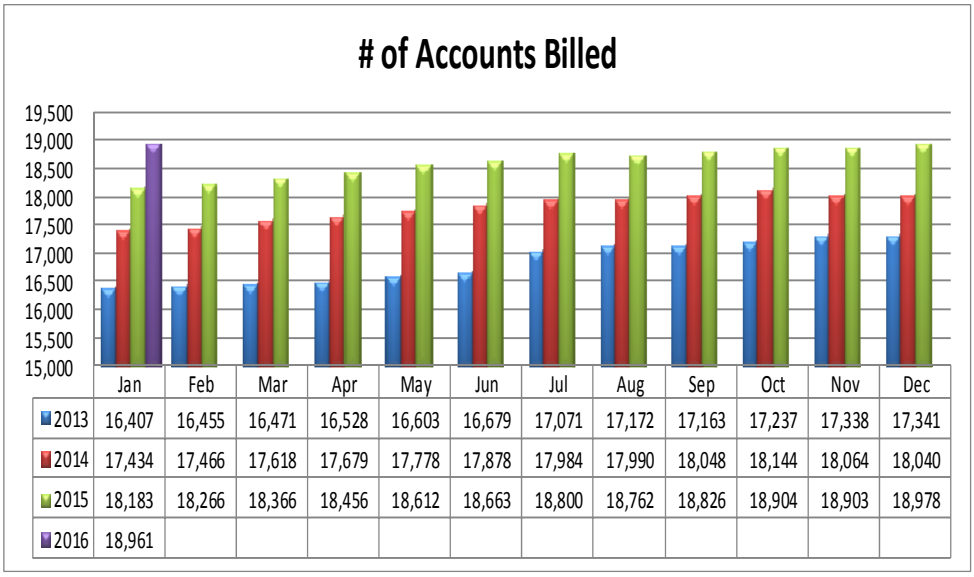
Customer walk-ins have been trending down over the last several months due to more customers taking advantage of our online services and website information.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2014	2,726	3,008	2,357	2,016	3,162	2,676	2,265	2,901	1,867	2,564	2,603	1,820
2015	1,847	1,935	1,678	1,858	1,927	2,100	1,914	1,794	1,999	2,011	1,484	1,196
2016	1,393											

Customer phone calls have been trending down over the last several months due to more customers taking advantage of our online services and website information.

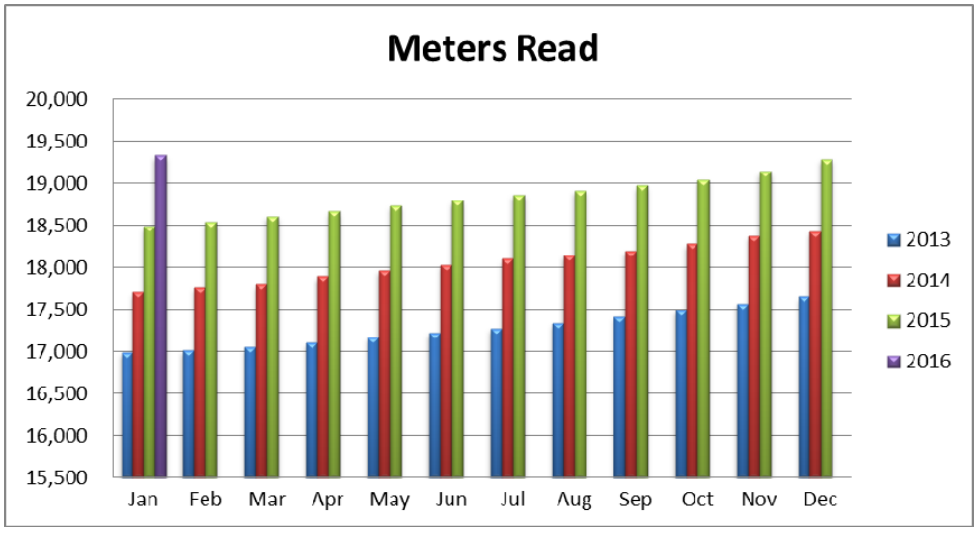
Business Solutions



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	16,407	16,455	16,471	16,528	16,603	16,679	17,071	17,172	17,163	17,237	17,338	17,341
2014	17,434	17,466	17,618	17,679	17,778	17,878	17,984	17,990	18,048	18,144	18,064	18,040
2015	18,183	18,266	18,366	18,456	18,612	18,663	18,800	18,762	18,826	18,904	18,903	18,978
2016	18,961											

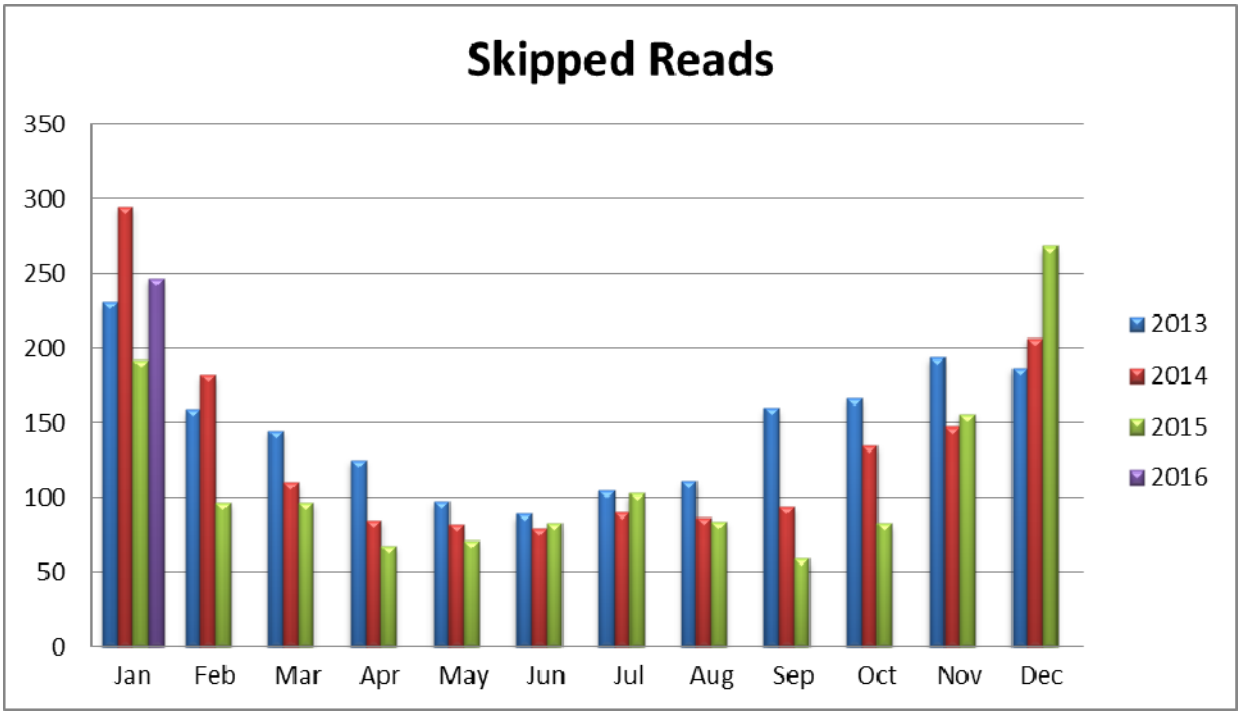
The number of accounts billed compared to January last year is up due to new residential and commercial growth.

METERS



The meters read continues to increase month-to-month due to new residential and commercial accounts, with a significant increase over January 2015.

Business Solutions



The American Water Works Association (AWWA) standard is 2 percent, so at 1.28 percent, we still continue to stay below the industry average. This is a result of continued maintenance and repair efforts on meter infrastructure. January skipped reads are typically higher than other months due to the colder temperatures which can cause batteries that are weak to stop working. We had unusually cold temperatures this January.

Why is this important?

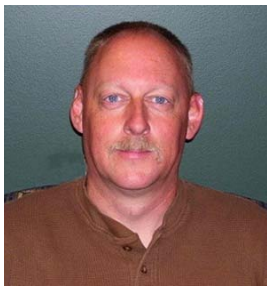
It is a strong indication of the level of preventative maintenance being done by our team. A skipped read is indicative of a problem with the meter. Less skipped reads means more properly working meters, which is good for all our customers.

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:

Shawn Griffith
Backflow Prevention
Assembly Tester

Charles Roubidoux
Backflow Prevention
Assembly Tester



Rick Schultz
Backflow Prevention
Assembly Tester

David Montgomery
Backflow Prevention
Assembly Tester

Denise Lannan
Backflow Prevention
Assembly Tester

Tim Lambert
Backflow Prevention
Assembly Tester

John Chrestensen
Backflow Prevention
Assembly Tester

Rob Chrestensen
Backflow Prevention
Assembly Tester

Nikki Hoyt
Backflow Prevention
Assembly Tester

Isaiah Rose
Collections II and Backflow
Prevention Assembly Tester

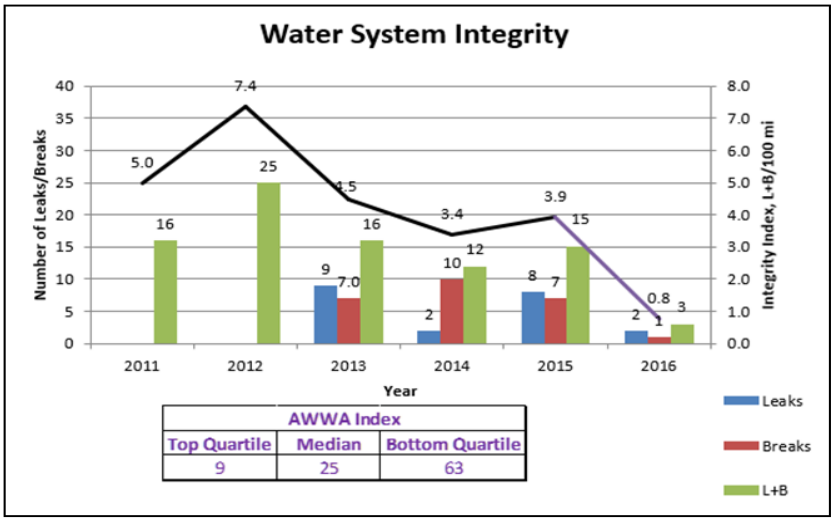
Eric Layton
Collections I

Ryan Cline
Collections II

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 for best water system integrity based on the American Water Works Association (AWWA) benchmarking since 2011.

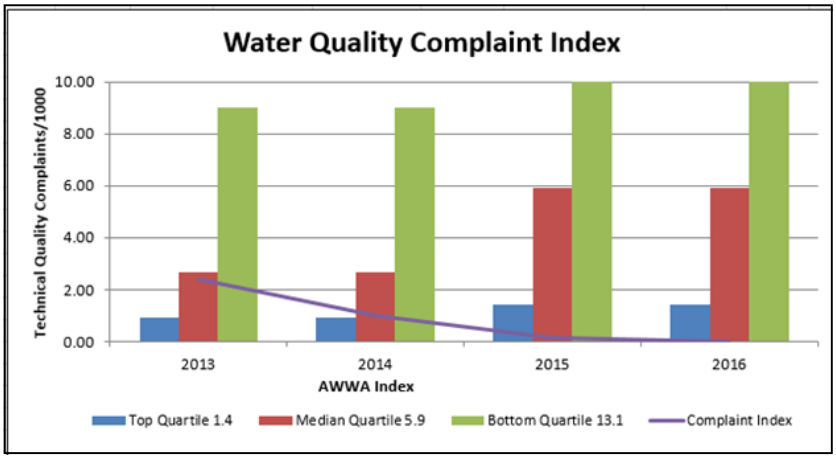
There were three incidents in January which was a busy month. The colder weather may have contributed.



Water Quality Complaints

The Water Quality Index shows that we are doing very well in this category, rating in the Top Quartile in 2015 according to the AWWA. There were no water quality complaints in January.

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

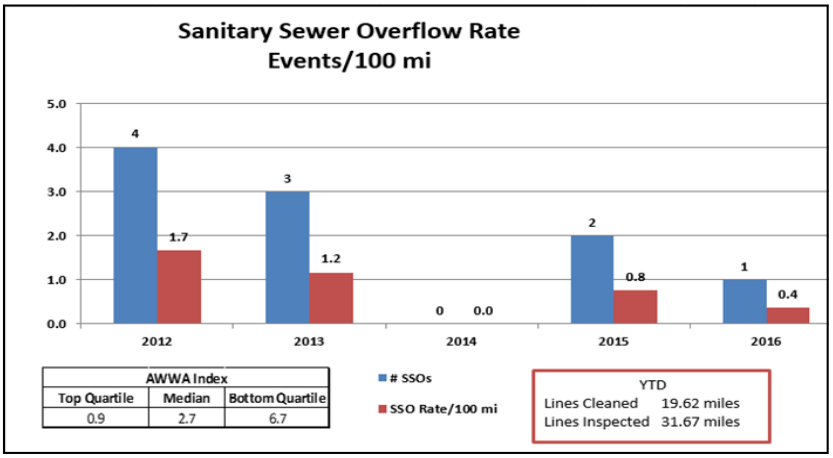


Sanitary Sewer Overflows

We are also tracking in the Top Quartile in the Sanitary Sewer Overflow Rate since 2014 according to the AWWA, showing one incident in January.

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.



January 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.
Sixty routine samples were completed. All samples were within the parameters set forth by the 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.
Pressure has been maintained at or above 43 psi throughout the distribution system in January.

Drinking Water Supply Outages

<5% of our customers will experience water outages for one or more event totaling more than 30 hours/year.
There were two service line breaks and one water main break in January. The service line breaks resulted in service interruptions to 15 residential customers, and the water main break affected 6 customer's pressure, but was repaired without any service interruption. Details of these incidences are provided below:

- *A private fire line suppression line break occurred on January 5 in The Woodlands. The leak was between the saddle and the curb stop. Six homes were without water for less than four hours.*
- *On January 6, a service line leak occurred in Red Hawk. The leak was located near the curb stop valve. The water was off to 9 customers for about 30 minutes.*
- *On January 15, a main line break occurred on Moore St. The break was on a 6-inch piece of cast iron line. Six customers saw a reduction in pressure but were never out of water, and repairs were completed in less than five hours.*

Sewer System Effectiveness

<1% of our customers will experience a sewer backup caused by the utility's sewer system per year.
There was one sanitary sewer overflow on January 17 at 10:45 a.m., where untreated wastewater was seeping out of the manhole cover on Darren St. The blockage was cleared through initial jetting, removing a root ball, and the overflow was halted by 1:45 p.m. No customers were impacted by this blockage. The area was cleaned and sanitized, and the event was reported to the State.

Stormwater Improvements

The eroded slope on Park Street was backfilled and repaired in partnership with the property owner.

Before

After

Field Services Activities

	January
Distribution	
Leaks Repaired	3
Hydrants Repaired	3
Valves Inspected	272
Hydrants Inspected	113
Tanks Inspected	4
Collections	
Sanitary Sewer Overflows	1
Sanitary Sewer Stoppages	1
Miles of Line Cleaned	0.51
Miles of Line Inspected (CCTV)	0.83
Stormwater	
Infrastructure Inspections	14
Cubic Yards of Material Removed	245
Cubic Yards of Material Placed	185
Locating	
Utility Locating Requests	1151
Backflow	
Hydrant Meter Permits Open	25
Backflow Prevention Test Letters Sent	55