



THE Pipeline

YOUR CURRENT WATER INFO SOURCE

FALL 2018 Newsletter

In this edition...

- **Improved Water Quality at the JWPP**
- **Managing our Water Supply**
- **Sewer Maintenance Program**



13031 E Caley Avenue
Centennial, CO 80111
Phone: 303-790-4830
Website: acwwa.com

IMPROVED WATER QUALITY at ACWWA's



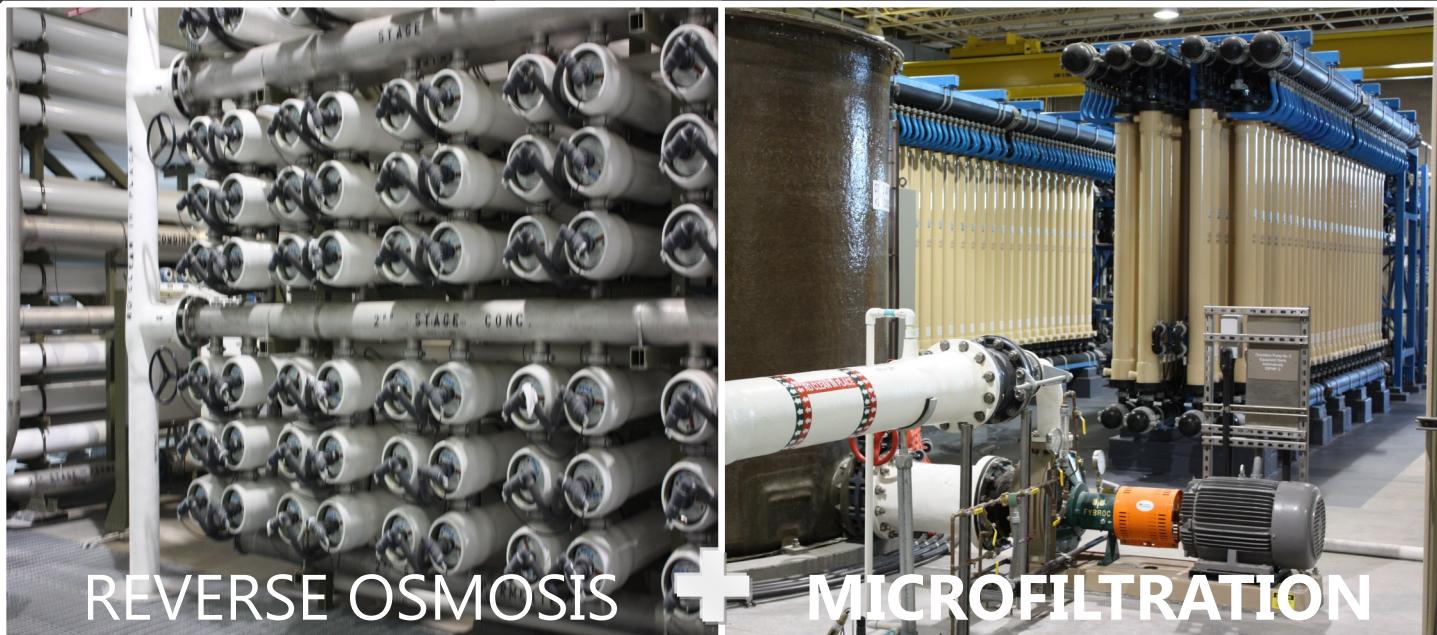
JWPP



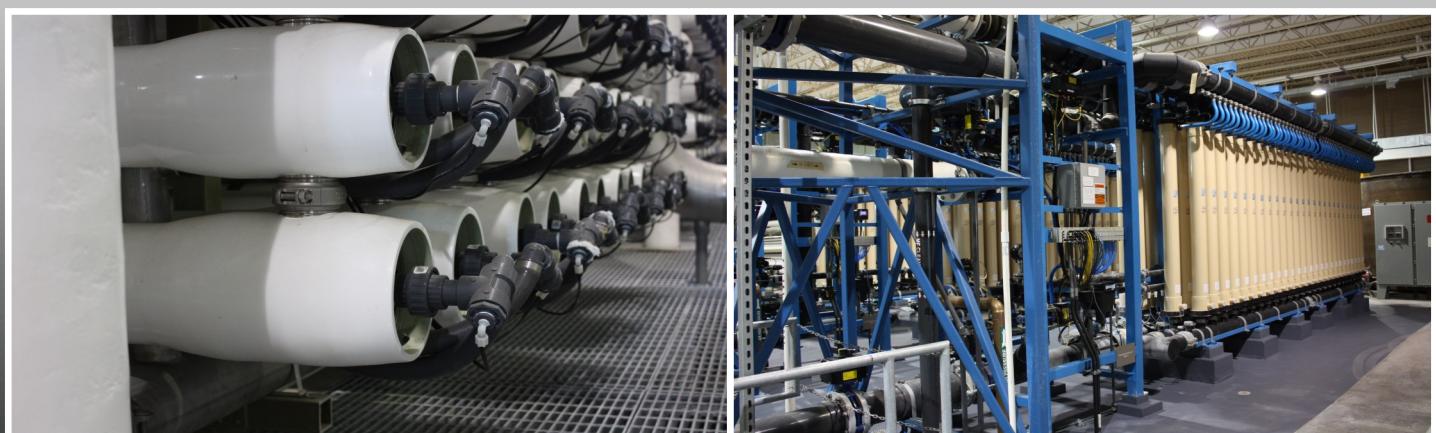
In 2006, construction began on the Joint Water Purification Plant (JWPP) located at 8051 S. Jordan Rd. The JWPP is a cooperative facility owned by ACWWA and Cottonwood Water and Sanitation District (CWSD). The plant was originally designed and built with an advanced technology filtration process called Reverse Osmosis or RO. The RO process provides a high-quality drinking water by filtering virtually everything in the original water source. Rejected water is then discharged back to a stream. In order to protect the environment, the Colorado Department of Public Health and Environment (CDPHE) requires a discharge permit to monitor and limit constituents in the reject water. Unfortunately, when this plant was brought online, the discharged concentrate from the JWPP exceeded the allowable level for selenium. Selenium is limited to protect fish and other aquatic invertebrates in the stream.

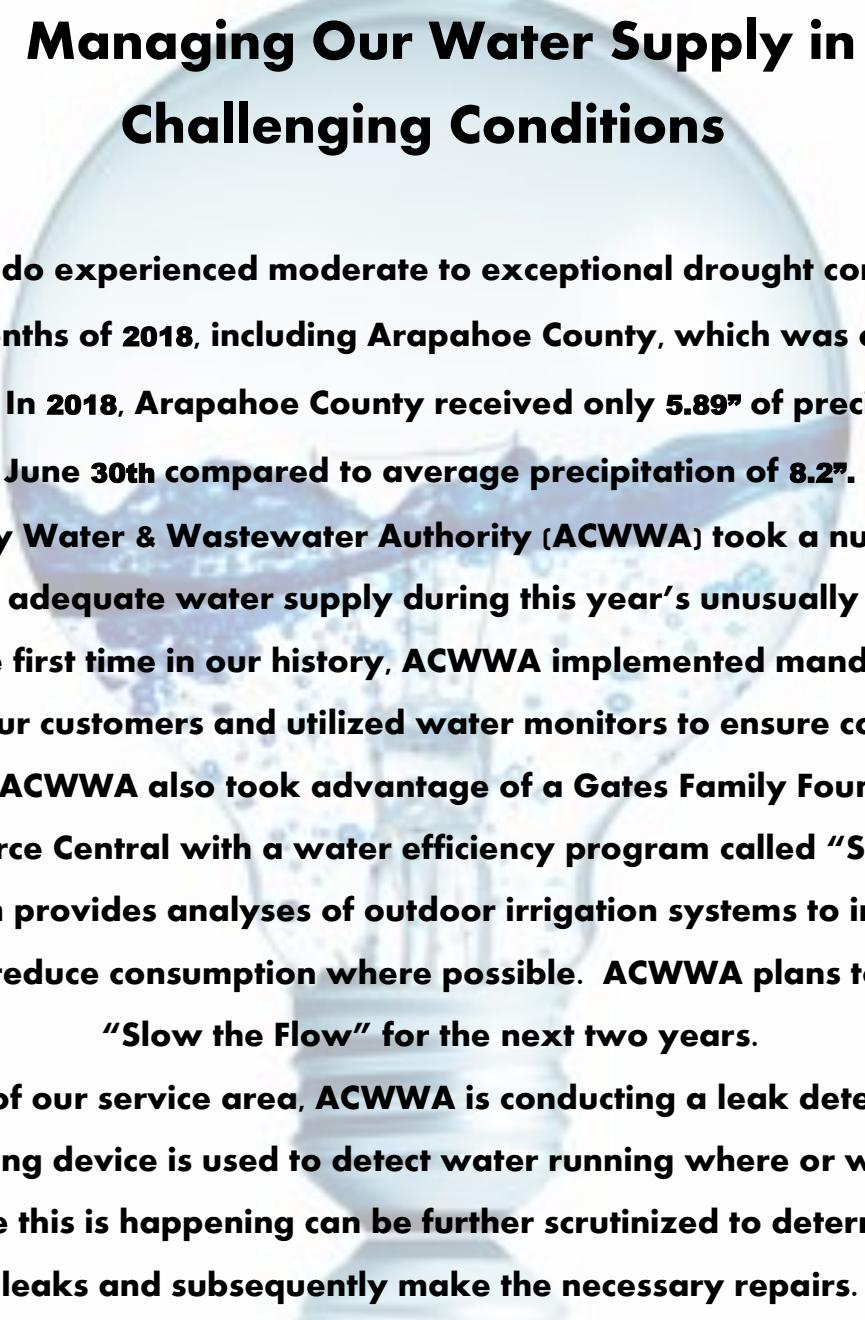
Because ACWWA and CWSD could not operate the RO filtration system without exceeding the limit for selenium, the water treatment process at the JWPP was changed to bypass the RO units and only utilize microfiltration instead in 2012. This change required only minor modifications to the plant as the microfiltration units were already a part of the original treatment process. Microfiltration is an approved CDPHE process that treats water to meet all drinking water standards. While microfiltration meets all standards, ACWWA desires to continue to improve the water quality coming from the JWPP and to reduce the hardness levels in the water that can

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be noticeable to our customers. For the last several years, ACWWA and CWS have been evaluating new technologies to address the discharge from the RO plant with the intent to return the plant to RO and improve water quality. Two years ago in this newsletter we updated you on initial findings regarding a biological treatment system (BTS) to treat the discharge in a manner to meet the discharge permit requirements. This system was pilot tested under varying conditions, and the results were promising. ACWWA also conducted an alternatives analysis to determine if there were any other technologies that would provide better benefit for the cost and none were found. In August 2018 after extensive analysis, the ACWWA Board authorized the construction of the necessary improvements to the JWPP as well as the construction of the BTS. This was not an easy decision for the Board. As with any new technology and project, there are risks, which include the potential of changing regulations by state/federal agencies or changing source water quality from Cherry Creek. Both can impact the operations of the plant and the BTS system. ACWWA is monitoring these and working with CDPHE to mitigate these risks. After considering the risks involved with all alternatives, including the BTS, this project was chosen as it was the best option to meet our desire to improve water quality for our customers. Improvements to this plant will begin this fall with the intent to be operational fall 2019. The plant will run as a blended plant, in general 50% RO water and 50% microfiltration water. Currently the JWPP is operating with 100% microfiltration which produces a water quality that meets all primary drinking standards but has a higher level of hardness than is desired. The new process will drop hardness levels by 50%. As this project is relatively complex, there will be continued work on the final design and construction. We will provide updates regarding the project on our website and future newsletters.





Managing Our Water Supply in Challenging Conditions

Much of Colorado experienced moderate to exceptional drought conditions for the first half months of 2018, including Arapahoe County, which was classified as abnormally dry. In 2018, Arapahoe County received only 5.89" of precipitation through June 30th compared to average precipitation of 8.2".

Arapahoe County Water & Wastewater Authority (ACWWA) took a number of steps to help ensure an adequate water supply during this year's unusually warm and dry months. For the first time in our history, ACWWA implemented mandatory watering days for our customers and utilized water monitors to ensure compliance.

This summer, ACWWA also took advantage of a Gates Family Foundation grant through Resource Central with a water efficiency program called "Slow the Flow."

This program provides analyses of outdoor irrigation systems to improve their efficiency and reduce consumption where possible. ACWWA plans to participate in "Slow the Flow" for the next two years.

In some parts of our service area, ACWWA is conducting a leak detection program wherein a listening device is used to detect water running where or when it shouldn't be. Areas where this is happening can be further scrutinized to determine if there are leaks and subsequently make the necessary repairs.

ACWWA is committed to optimizing our water supply and to helping our customers understand and improve their efficiency. We currently offer customer rebates for rain sensors and high-efficiency clothes washers, and are considering avenues to expand the rebate program in 2019. We will continue to look for new ways to enhance our water conservation efforts. Please visit the water efficiency section of our website to learn how you can help to conserve water on your property:

<https://www.acwwa.com/2162/Conservation-Tips>

Sewer Maintenance Program

ACWWA's service area has approximately 73 miles of sanitary sewer lines, 3,073 manholes and three lift stations within its sanitary sewer system. While sanitary sewer system problems are not common, ACWWA is initiating a Sanitary Sewer Maintenance Program, which is intended to avoid or minimize problems to the maximum extent possible. The first phase of cleaning will begin in mid-September 2018 and will run through the end of the year.

The sanitary sewer lines are cleaned using high performance sewer cleaning equipment. High velocity water is sprayed against the internal pipe walls of the sanitary sewer, systematically removing accumulated grease, debris and sediment. This process is repeated on every sewer line cleaned. A camera is then launched into the line where video is taken to inspect the integrity of the piping. Routine maintenance is also done on the lift stations to help prevent future blockages and back-ups, and to keep our main sewer lines flowing consistently.



What to Expect if You Live in the Cleaning Area

Sanitary sewer cleaning operations will be performed by DES Pipeline Maintenance. You can expect to see their trucks out on the roads in mid-September, Monday – Friday between the hours of 8:30 a.m. – 5:00 p.m. ACWWA will post signs at the entrances to neighborhoods approximately one week prior to conducting sanitary sewer cleaning operations in your area.

A sanitary sewer jet-cleaning machine uses high-pressure water to clean the sanitary sewer. This high water pressure may affect your home or office's sanitary sewer plumbing. You may experience gurgling or bubbling water in the toilet bowl or, in rare cases, splash out of the bowl. **So, to minimize water splashing out of your toilet bowl, make it a habit to keep the lid down.** You may smell sewer gas from your basement floor drains. If this does occur, flush your toilet and pour water into your floor drains. Sanitary sewer cleaning does not damage your sewer system. The water that comes out is the water that is normally in the home's system (drain traps), not the water from the sanitary sewer in the street.

If you encounter any problems or have any questions, please contact ACWWA at 303-790-4830.