

Rental Eliminates Plant Maintenance Disruption

Arizona WTP uses RapiSand™, ChemCenter, and Pressure Filter

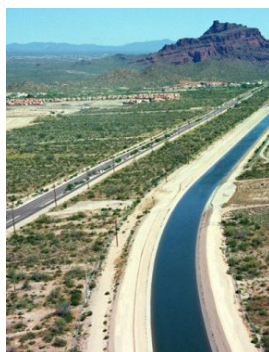


CASE STUDY

Location: Cave Creek, Arizona
Owner: Town of Cave Creek
Agent: Goble Sampson

Problem

Cave Creek is a resort town near Phoenix that draws visitors to its classic western culture and landscape. Tourism spikes increase the demand on the water supply



when the population swells above the 5,000 permanent residents. Also, the Cave Creek Water Treatment Plant accesses CAP (Central Arizona Project)

water from the Colorado River, which is delivered from Lake Havasu in an open canal 180 miles long.

With these conditions in mind, the plant determined that the three WestTech Trident® HS package plants installed at the site decades ago needed media replenishment. The oldest plant's media was being replaced after a lengthy 28 years of operation. The plant also had a more recently installed Trident HS.

Cave Creek contacted WestTech, and the new parts and media were ordered for the upgrade. The plan was to take one Trident offline at a time, leaving two still operating. The package plants were reducing the influent water turbidity to a level of less than 0.3 NTU and it was expected to improve the filter performance. However, the contractor who was installing the new media needed one to two months to replace the media in the three units and place them back in service. The plant needed a temporary treatment system to assure production capacity while each Trident package system was taken off line. This plan was deemed to be the best for continued plant production during the planned filter project.

The Trident HS package plants have been an effective treatment choice for Cave Creek. Combined, the four Trident HS package plants have a design flow of 5 MGD (3500 gpm).

Analysis of Alternatives

To fill in the treatment gap, the plant considered renting units that would provide ultrafiltration treatment. However, the plant eventually chose a more economical, simpler solution: a RapiSand™ ballasted flocculation train. The plant also realized that the addition of a pressure filter would allow for solids reduction.



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Recommended Solution

The equipment train included a pressure filter, RapiSand, and ChemCenter and has the capacity to treat 500 gpm of influent while still keeping the water tank consistently full. This water level was maintained even though the rental system was turned off at night.



Because it was a temporary installation with remote access, the operator could view the mobile unit's operational data from offsite, an additional plus. The customized system also included virtual online tech support from WesTech.

"The solution we chose was perfect for our needs. WesTech provided rental equipment quickly and on-time, with plenty of support to make sure we were comfortable running it," said Jim Kaylor, from the Town of Cave Creek. "Our customers received uninterrupted service, while maintaining all water quality and treatment goals during the filter maintenance project."

Implementation

It took just two weeks from the time that the Town of Cave Creek first made the call until the rental solution was delivered to the site. The equipment was brand new and ideal for a drinking water plant.

The site was very small, so the equipment was particularly challenging to install. Some creative maneuvering was needed to get the equipment placed in the correct order at the site. In

addition, the equipment was installed in July, when 114-degree days were common. This meant that additional installation time was needed to accommodate more frequent breaks.

Within two to three days of installation, the site's mobile application was producing clean water. The operators were successful in implementing a systematic change of approach to run this equipment.

Results

The installation needed to provide safe drinking water, be running in a short time period, and allow the town to complete the filter rehab project on schedule. These important goals were accomplished with the WesTech mobile units.

In addition, the plant was able to continue to produce low turbidity water that met all State and Federal requirements while operating the WesTech mobile unit.

In the end, the upgrade of the original Trident equipment went seamlessly, and there was no disruption to the water supply during the entire process for the visitors and residents of Cave Creek.

"I am proud that our team was able to get this project up and running for the customer under tight constraints," said Steve Goldsmith, WesTech Rental Systems Group Leader. "From the short lead time to the delicate dance required to move the equipment onto the site to the quick equipment start up, everyone made the extra effort to make this successful."

