WATER RESOURCES

The project includes a raw water intake on the Central Arizona Project (CAP) Canal, and a 14-mile 48" raw water pipeline. sized to handle the ultimate 48 mgd plant capacity.

The CAP canal delivers Colorado River Water from the New Waddell Dam across the state to supply Arizona communities with a renewable resource for drinking water. The New Wadell Dam allows CAP to deliver up to 1.8 million acre-feet of Colorado River water per year into central and southern Arizona when the water is available. The canal is owned and operated by the CAWCD.The Town of Gilbert and the City of Chandler manage multiple water resources including surface water from the CAP system, the SRP system and groundwater supplies from wells to provide economical drinking water to their customers. The CAP surface water supply is integral to their water resources portfolio and the new Santan Vista WTP is designed to treat this CAP water supply to meet current and future potable water regulations.

Central Arizona Project (CAP) System

www.cap-az.com

SANTAN VISTA WTP BY THE NUMBERS

24 million Gallons of water the plant can treat per day - expandable to 48 million gallons

10 Finished water pumps delivering water to Gilbert and Chandler customers

100,000+ Number of people the plant serves in both communities

5 million Gallons of water the reservoir can hold

10% Amount of space needed compared to conventional treatment, the compact footprint of the ballasted flocculation process takes up a fraction of the area

GILBERT
ARIZONA
www.ci.gilbert.az.us

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www.chandleraz.gov

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SANTAN VISTA

Water Treatment Plant

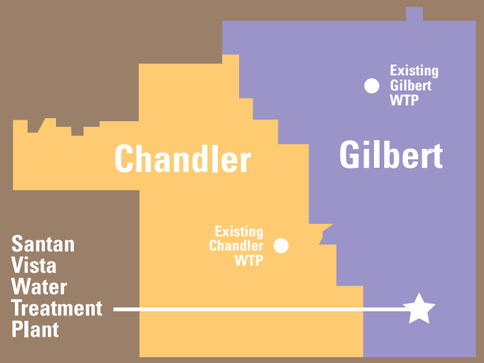
A PARTNERSHIP OF TWO CITIES

Arizona's vast landscape draws thousands of new residents every year, and proper planning for this growth is essential for life in the desert.

As evidenced by the delivery of the new Santan Vista Water Treatment Plant, which features an array of advanced technologies, the Town of Gilbert and City of Chandler are positioned to take on future opportunities. This jointly owned WTP will deliver the highest quality, state-of-the-art drinking water to over 100,000 people everyday in both communities.

The two cities are among the fastest growing in the U.S. and their combined population has expanded to about 500,000 residents today.

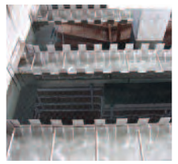
The two municipalities worked together for over a decade to plan the joint facility. Process technologies and delivery methods were evaluated for the new water treatment plant that would serve the area and meet the standards of prevailing and future anticipated drinking water regulations. The end result is the Santan Vista WTP, with an initial treatment capacity of 24 million gallons per day (mgd), expandable to 48 mgd. The plant is located in the Town of Gilbert and operated by Gilbert water treatment plant professionals.



THE SANTAN VISTA WATER TREATMENT PROCESS

1 Raw Water Intake, Metering and Control

From the CAP canal, the water travels 14 miles and falls 200 feet in elevation.



2 Ballasted Flocculation

Rapidly removes particles by weighing them down with silica sand.

3 Ozone with Contact Basin

Improves filterability and removes taste and odor.

4 Deep-Bed Monomedia Filtration

Removes viruses, bacteria, and particulates as small as one micron

5 Reservoir and Finished Water Pumping Station

Delivers fresh potable drinking water to the customers of both Gilbert and Chandler

6 Recovered Water

Water used to clean particles from the filters is separated and recycled

PUBLIC HEALTH PROTECTION

The Center for Disease Control and Prevention and the National Academy of Engineers named water treatment as one of the most significant public health advances of the 20th century. Advanced processes, such as Ballasted Flocculation and Ozone enhance public health by improving the barriers to pathogens while decreasing the level of suspected carcinogens in the water.

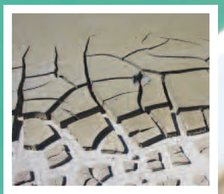
As such, the Santan Vista WTP has a robust process design that employs multiple barriers for maximum operational flexibility and treatment of varying raw water qualities. The plant incorporates the latest in modern water treatment technology and automation. The plant is designed with quality systems and redundancy to protect the public health. The design team and operating staff collaborated with the Maricopa County Environmental Services Department to ensure the treatment process meets regulatory requirements. Water quality tests are run daily to ensure healthy, aesthetically pleasing (taste, odor, color) water is produced.

ENVIRONMENTAL STEWARDSHIP

The Santan Vista WTP was designed and constructed in a manner that was consistent with the Town of Gilbert's and City of Chandler's focus on environmental management.

State-of-the-art technology is used to generate a "bleach" solution on site for chlorination to reduce hazardous chemicals stored at the plant. Water is recovered from the residuals captured in the process and recycled into drinking water to conserve our precious resource in the desert. In addition, CAP water comes from a sustainable source of supply: surface water and snow melt into the Colorado River.

By bringing this additional renewable water supply into the desert, the Town of Gilbert and City of Chandler have helped to reduce groundwater dependence in the area and improve livability for residents of both communities.



Only 1% of the water is wasted to evaporation during the treatment and washwater process. Over 99% of the raw water is recovered by the treatment process.

Ten tons of sand are contained within the treatment process. Silica microsand has a diameter of about 85 microns.

23,074 cubic yards of concrete and 265 tons of structural steel were used in construction of the plant, as well as 195 miles of electrical wire.

Construction led to a surprising discovery when workers found an upper-foreleg bone of a large prehistoric camel known as a camelops. The fossil was turned over to the Arizona Museum of Natural History, in Mesa, Arizona.

Designer	Black & Veatch
Construction Manager	Carollo Engineers
Program Manager	Arcadis
Contractor	Sundt