

## **San Antonio Path to Water Resiliency**

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What has always made San Antonio special is the abundance of water from the Edward's Aquifer. It has made robust life possible in a semi-arid region. It has also made San Antonio water concentric and because of this has made the San Antonio's path to water resiliency ever changing. The Native American population recognized the abundance of water in modern day San Antonio and because of the precious water supply in the area consider the Blue Hole/San Antonio River headwaters a sacred place.

When Spain settled San Antonio in 1718 the first thing they did was build canals (acequias) to divert water from the San Antonio River headwaters to a series of Missions to supply water for consumption and irrigation. The acequias were used for both water supply and waste management during the 1800's until the citizens of San Antonio recognized the importance of clean water after a number of citizens became ill and died as result of the water in the acequias becoming contaminated.

In the early 1870's San Antonio recognized a need for a greater volume of water and water less susceptible to contamination. Water was lifted from the headwaters of the San Antonio River to the high point north of the city, the present-day Botanical Gardens, for distribution by gravity.

George Brackenridge hypothesized because of the abundant springs that there might be water beneath the ground surface and in 1891 drilled the first artesian well in San Antonio. This was the beginning of the modern-day network of Edwards Water supply wells across San Antonio.

Because of the continued growth of the city, largely due to the abundant supply of water, San Antonio recognized the need for an organized sewage collection system. In 1894, construction of the first organized sewage collection system began. Initially the sewage was discharged directly to Mitchell Lake without treatment. The untreated sewage was used for irrigation of over 5,000 acres of farmland adjacent to the Lake.

In 1930, the city built the 3<sup>rd</sup> and by far the largest activated sludge plant in the United States. The effluent continued to be discharged to Mitchell Lake for irrigation.

In the early 1960's the city provided wastewater effluent/recycle water to two electrical power plant cooling lakes. The first time recycle water had been used for this purpose in the US. Things continued status quo with only the addition of two new

wastewater treatment facilities to serve the west and east sides of San Antonio until the 1990's and then a lawsuit regarding endangered species in the Edwards put San Antonio on a new trajectory. With the pumpage from the Edwards Aquifer being regulated San Antonio was forced to find new water supplies.

Since San Antonio has a long history with recycle water the first project was recycle water system encircling San Antonio. This system provides water for industrial purposes and irrigation. In fact, it provides water to the world-famous Riverwalk.

Over the next 20 years the City (SAWS) developed 8 additional water supply projects which includes aquifer storage and recovery, brackish desalination, and the Vista Ridge project. After Winter Storm Uri, SAWS has taken one more large step toward resiliency and in partnership with CPS Energy is providing backup power generation at critical water pump stations to ensure that service is still provided in case of a loss of power. All of this is being done to fulfill the requirements of Senate Bill 3.