

Amid drought, is S.A. truly water-secure?

SAWS says city is better equipped to avoid a crisis than ever

By **Elena Bruess**
STAFF WRITER

Earlier this year, the San Antonio Water System installed a new billboard off U.S. 281 heading into the downtown area. High above speeding traffic, the blue-and-white message is clear for residents and visitors alike — “Water: Secure for the future.”

For decades, San Antonio’s water utility has searched for ways to protect the city from the effects of major drought now and into the future. As the city’s population grows explosively and new development expands in every direction, SAWS must meet a new water demand, one with no end in sight.

Now, as one of the hottest and driest summers in San Antonio history presses on, questions over water security, drought, climate change and the future of South Central Texas are front and center, putting the city’s water utility right in the middle of it.

While many are reassured by SAWS’ actions in addressing water, others are not so sure. Development already strains the water supply in the Hill Country, experts say, and for some, the drought this year feels different,

longer and more intense than before. Fears of endless parched lands have come up again and again, and just this past week, the Edwards Aquifer Authority declared Stage 4 drought restrictions, prompting many regional water permit holders to adjust their aquifer water usage. The declaration changed again, to Stage 3 on Friday, but is teetering

Water continues on A9
between the two.

San Antonio, meanwhile, insists it is prepared for new development and interested businesses. Since the inclusion of the controversial Vista Ridge Pipeline, SAWS pulls from nine water sources. In a statement this past week, SAWS CEO Robert Puentes said the community is better equipped to handle widespread drought and avoid a water crisis than ever before.

“We’ve created a culture of water stewardship and conservation that is making the community water-secure, while demonstrating what could be a model for other cities,” Puentes said.

For now, the system is staying with Stage 2 watering restrictions. The drought, however, continues.

Home of the water

Historically, San Antonio always has depended on the Edwards Aquifer for its water supply. Far below the city, the aquifer is a twisting limestone labyrinth of underground rivers. It

spans 3,600 square miles right in the heart of South Central Texas, providing for 2 million people.

For decades, 100 percent of San Antonio’s water came from the aquifer. In 1993, however, withdrawals from the Edwards became limited by the Endangered Species Act, which maintained the spring flow at Comal and San Marcos springs to protect animals dependent on the aquifer, such as the Texas blind salamander and the Comal Springs riffle beetle.

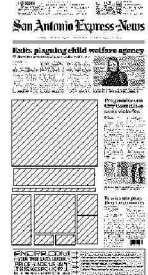
Subsequently, San Antonio began to work to decrease its dependence on the Edwards Aquifer system. Today, there are 15 supply projects originating from nine sources.

Will Stage 2 be surpassed?

San Antonio has never had to declare Stage 3 watering restrictions. In the past, when the city experienced extreme drought, SAWS remained in Stage 2. During the last extreme drought in San Antonio, in 2011, SAWS went into Stage 2 for months, pulling out of it only briefly before heading right back into it.

Karen Guz, director of water conservation at SAWS, said Stage 2 is enough for right now. The variety of water supplies that the system uses and current drought management methods can keep residents from going into further restrictions.

“What I like to say is, ‘First things first,’” Guz said. “And what I mean by that is we really need to right now get full compliance with Stage 2, get those savings firmed up and make sure



that we're getting results from that. Then we'll see what's happening with the drought and circumstances before we can say Stage 3."

Historically, customer compliance has improved over time, Guz said, eventually resulting in the water savings that SAWS is looking for. During the drought from 2011 to 2015, the utility saw a 50 million-gallon-a-day reduction on weekends, when residents were not allowed to water their lawns. So far, this year has not reached those savings yet, but Guz is optimistic SAWS will see the same, if not similar, results.

"We have to find a mix between rules that the community is actually willing to take on, lawn and plants that are drought-resilient and population growth," she said. "I want people to know this is conservation, not deprivation. If you all follow these reasonable rules, your bill is going to be much lower and your landscapes may not look the best, but they will be OK."

SAWS is functioning under the 2017 water management plan, which includes per capita goals on water usage and conservation. The plan is meant to maintain a sustainable water supply through 2070. It's updated every five years, and a new plan will come this year. This update will look at questions pertaining to the 1950s drought of record — which is considered the worst-case scenario — and climate change.

The utility will be forecasting population growth, how much water each person will use, water patterns and what the next worst-case drought scenario could be.

For some, however, more action on the drought needs to happen now.

Amy Hardberger, who sits on the SAWS board of trustees, said San Antonio is experiencing extreme conditions right now. It's

not just the future, and the city needs to recognize that.

"Just because we have the water doesn't mean we should use it," Hardberger said. "It's a precious resource. If you got a Christmas bonus in December, but you knew that there were a bunch of people who are going to get fired in January, should you spend your Christmas bonus now?"

Moving to Stage 3 is complex, though, especially in the need for residential compliance. Hardberger largely agrees with SAWS staff that layering rules on rules might not achieve mass adoption. The drought regulations and rules that were crafted, however, were from a different time, when the population in San Antonio was lower and extreme temperatures were not as prevalent.

"Times are changing and have changed," Hardberger said. "This drought could go on for three or four years, and if that happens, Stage 3 will be child's play for this region."

Still, San Antonio is considered one of the most capable municipalities in Texas when it comes to water, said Todd Votteler, the president of Collaborative Water Resolution and a fellow of the Meadows Center for Water and the Environment at Texas State University.

Just this spring, the Environmental Protection Agency's Office of Water toured SAWS' H2Oaks Center, where one control room manages three water sources: a desalination plant, the Carrizo Aquifer and the Aquifer Storage and Recovery site. The EPA found the entire operation inspiring.

Votteler — who worked for the federal judge who presided over the Edwards Aquifer endangered species litigation and later worked at the Guadalupe-Blanco River Authority — sees water management now as an ever-evolving landscape. Major drought is hard to predict, and

long-lasting drought is infrequent, but experts have found that drought could get worse with time, even worse than the 1950s drought of record.

"San Antonio has made major changes with water over the past three decades," he said. "Right now, this city and El Paso are leaders in water management and providing excellent examples to other Texas cities. In general, people are much more into conserving water than ever before, and we can only hope that continues."

The economics of drought

When the Vista Ridge Pipeline was first in the works, the San Antonio Chamber of Commerce and other development advocates were enthused about the proposal. The new water source would add to San Antonio's growth and reassure new businesses that the city was prepared for future development and expansion.

"There is a perception out there that San Antonio is water-poor," said Richard Perez, the chamber's president and CEO. "That's not true anymore, and it hasn't been true for several years now. We have the Vista Ridge Project and the Aquifer Storage and Recovery; we have more diversity than ever before."

Water stability in San Antonio has been an issue for businesses in the past, such as ex-Mayor Bill Thornton's visit to Japan when Sony executives questioned their company's microchip plant water use on the Northwest Side. It was a question brought up again and again, until Vista Ridge. Now, Perez said, businesses can sit more comfortably for the future.

Vista Ridge was contentious, however, among environmentalists, SAWS and some who had an adverse reaction to spending \$220,000 a day on the water from nearly 150 miles away in Burtson County. Opponents questioned new rate structures,

growth projections and the state of the Carrizo-Wilcox Aquifer, into which the new pipeline is plugged with 18 groundwater wells.

Nevertheless, the pipeline officially began pumping water in 2020, adding another source to SAWS' ever-growing diversification.

"Moving to Stage 4 watering restrictions would be a black eye for San Antonio," said Joe Krier, who represented District 9 as a City Council member from 2013 to 2017. He was a major advocate for Vista Ridge when it was first under discussion.

"As the grass turns yellow and dries up, property values would go down, and with that, other repercussions," he said. "It would be disastrous both authentically and politically for the city. Diversification helped curb that. We've got this water locked in for the next 50 years."

Some, however, questioned whether the addition of Vista Ridge would promote development more than it would meet development where it is. Water in the Hill Country has a limited supply, and while the Edwards Aquifer is able to recharge quickly because of its limestone structure, other water sources are not so flexible.

"Whenever you take a limited water source, like a slowly recharging aquifer, and add an incredible rate of growth and demand, that causes problems when you're looking at the long-term future," said Katherine Romans, executive director of the environmental nonprofit Hill Country Alliance. "For long after the next rainfall comes, we'll be continuing to feel the impacts of this drought."

The Carrizo-Wilcox Aquifer, for example, has a sand system that slowly empties and slowly recharges. Vista Ridge pumping has depressurized the water in the aquifer, meaning landowners will have to lower their

pumps farther into the ground. Gary Westbrook of the Post Oak Savannah Water Conservation District said it has a deal with customers in Burleson and Milam Counties to lower their wells because of the Vista Ridge pumping.

This depressurization is to be expected, Westbrook said. The landowners sold their water rights to SAWS. But landowners in Lee County, which is next to Burleson, also have complained about depressurization. They, however, do not have a deal with Post Oak Savannah, nor did they sell their rights, and now they must spend thousands to lower their groundwater well pumps.

Vista Ridge isn't the only cause of depressurization, just the largest, Westbrook said. Every well pumping from this formation contributes to the problem.

"In Texas, when you're dealing with a shared resource like this, and everybody shares ownership of it," Westbrook said, "some people choose to allow their share to be produced for others, then it affects everybody."

'One Water'

Puente, the SAWS CEO, said San Antonio's recent diversification will keep the city water-secure for at least the next 50 years. Because of the Vista Ridge Pipeline, the desalination plant and the Aquifer Storage and Recovery site, the city will not need any additional water for a long time.

Vista Ridge, while expensive now, will remain steady, according to SAWS. The payments are fixed, so while water increases in price elsewhere, Vista Ridge will stay the same. Eventually, the utility will own the pipeline completely.

Puente doesn't suspect, however, that the pipeline is the cause for the decrease in Lee County groundwater wells. The pumps are too far away from Lee, he said. And SAWS con-

ducted hydrological studies to show what the effect would look like in the future. They determined that the aquifer could sustain itself.

Still, in May this year, at a meeting of the Texas Senate's Water, Agriculture and Rural Affairs Committee, four residents from Lee County discussed how much their groundwater had dropped since Vista Ridge started in 2020. One resident said his well has dropped 33 feet.

"This can be a risk of pulling water from neighboring communities," said Romans of the Hill Country Alliance. "It has to be a balancing act because water diversification can be a great thing, but it's a balance between landowners who want to sell their water and landowners who want to keep it."

In other ways, SAWS has been working with other water utilities on how to move toward resilient management strategies, such as storing water for future use and finding other sources rather than just the Edwards Aquifer.

Puente said he's been in contact with the city of New Braunfels on establishing its own center for aquifer storage and recovery. The city has started a recycling water system and has been slowly weaning off the Edwards. And SAWS' Guz has been in contact with water departments in other states to discuss water strategies.

"A lot of what Texas could be aiming for is something called 'One Water,'" Romans said. "It's how all our water sources are a part of one system and how we can maximize the benefits of water, for the environment to thrive, the economy to grow, to establish recreation and, of course, have drinking water."

Water in the Hill Country is a complicated system. It weaves through small towns and large cities, affected by days of rain or months of drought and governed

by bodies of water experts.

“There’s that old saying,” Romans said. “Every day of drought brings us one day closer to the next flood. We all know this region. Drought is a really good time to be talking about water conservation. The challenge is continuing that conversation and that momentum even after the drought.”

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CONSERVATION AT USAA

USAA is one of SAWS’ highest water users in San Antonio. The company employs 18,000 people in San Antonio, and 17,000 on its sprawling main campus.

Because of recent conservation and recycling efforts, USAA went from consuming 123 million gallons of Edwards Aquifer water in 2008 to 61 million in 2021.

While the company uses recycled water to irrigate the campus lawns, USAA still waters only once a week during Stage 2 restrictions. Otherwise, the company has continued to operate as usual.



William Luther/Staff photographer

Paddle boarders hit Canyon Lake off the closed Boat Ramp No. 5 last Wednesday, when the lake was about 88 percent full. San Antonio is experiencing one of its hottest and driest summers ever.



Josie Norris/Staff photographer

Tanks hold water from the Vista Ridge Pipeline as it is treated at the San Antonio Water System's Agua Vista station last week.



Photos by William Luther/Staff photographer

The Canyon Lake power station on the downstream side of the lake's dam is seen Wednesday, as the dam was releasing about 110 cubic feet of water per second, according to a gauge in Sattler, as reported by the Texas Water Development Board.



People walk atop the Canyon Lake dam. The lake has been releasing less than half its historical average for most of the summer, according to the Texas Water Development Board.