



EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - August 2020



When Drought Takes Center Stage

Critical Period Management Plan Helps Protect Edwards Aquifer

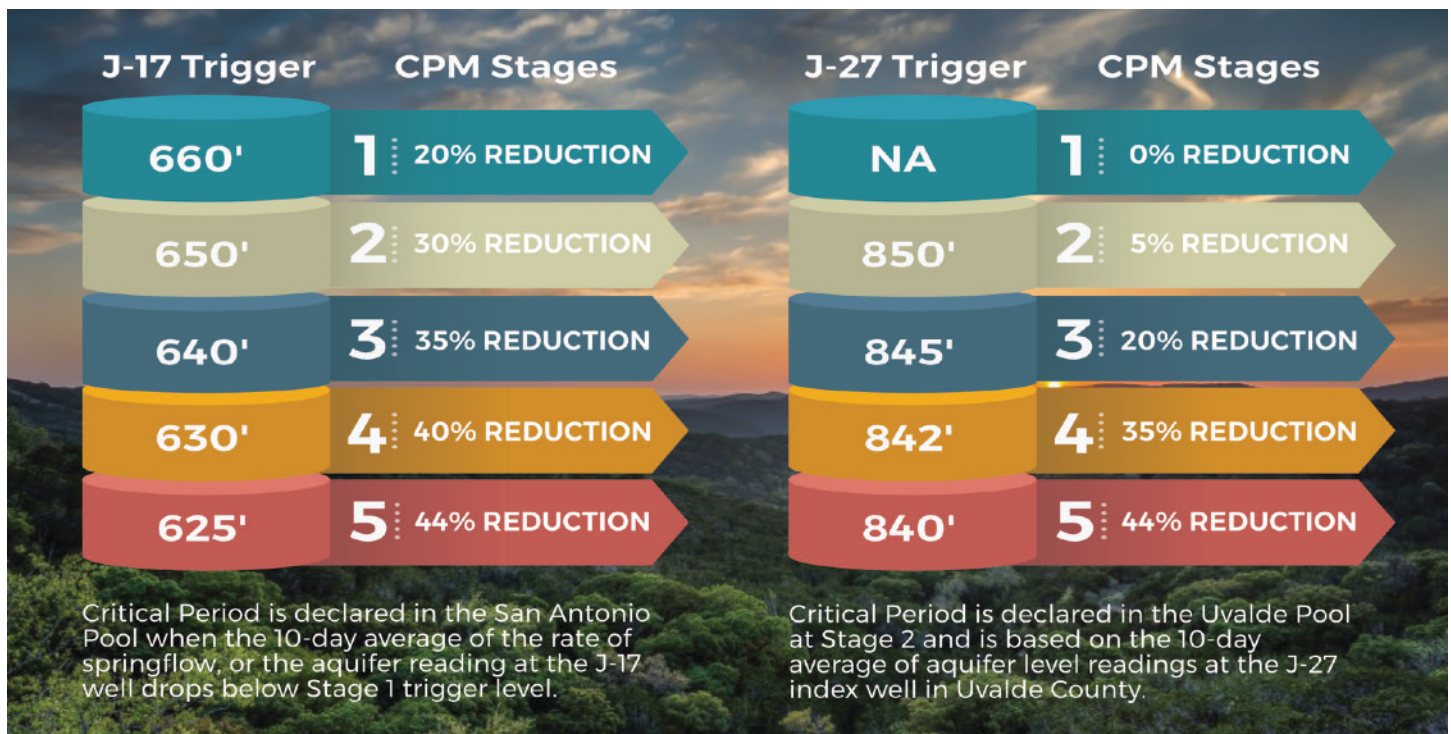
The Edwards Aquifer is one of the most prolific groundwater sources in the world. But, even this wonder of nature, which supports a robust agricultural industry, one of America's largest cities, a handful of endangered species and a thriving recreational industry, has its limits. Consequently, a diverse group of communities throughout the Edwards Aquifer Region ultimately agreed to a management system for the aquifer to limit water withdrawals in order to preserve the life-sustaining resource for future generations.

"The Edwards Aquifer Authority (EAA) was created by the State of Texas in 1993 to develop a regulatory system to protect the aquifer. While the primary focus in the EAA's first few years was developing a system of water rights permits, it also put in place a Critical Period Management Plan (CPM)," said Chuck Ahrens, EAA Water Resources Director. "The CPM called for percentage reductions in pumping as water levels in the Edwards Aquifer would decline due to drought conditions and overall water use. Texas experienced its worst drought in the 1950s and the Comal Springs, which are fed by the Edwards Aquifer, went dry for six months in 1956. The CPM was one tool designed to help prevent that from ever occurring again. And so far, things have worked out well."

Critical Period Management Plan - Continued

The primary benefit to the Edwards Aquifer is that the CPM helps slow the rate of decline in aquifer levels which in turn buoy springflows during dry periods, which are a common occurrence in South Texas. Although the Critical Period Management Plan has evolved a couple of time over the years, here is how works today.

The CPM is divided into five stages in which percentages of pumping restrictions become more restrictive as water levels in the Edwards Aquifer decline. The J-17 well in San Antonio and the J-27 well in Uvalde provide water level data which trigger the implementation of the CPM. There are two monitoring wells because scientists determined that there are two distinctive “pools” in the Edwards Aquifer. The Uvalde pool supports Uvalde County while the San Antonio pool supports Medina, Bexar, Comal and Hays and parts of Guadalupe, Atascosa and Caldwell Counties, even though there are no registered Edwards wells in Caldwell County. In Uvalde, Stage 1 of the CPM is triggered when that index well averages a reading of 850 feet at mean sea level (MSL) or less for 10 days. Stage 1 in the San Antonio pool is triggered when averages are 660 feet MSL or lower for 10 days. Getting out of the various stages also includes the consideration of a 10-day average.



While the trigger levels and required reductions to permitted volumes for each stage of the CPM are clearly spelled out, the implementation of those rules can be a little complicated.

“The Stage 1 percentage of reduction for groundwater rights holder in the San Antonio pool is 20 percent. However, that doesn’t mean that a water provider like the San Antonio Water System must immediately reduce its pumping by that amount,” said Javier Hernandez, Special Projects Liaison with the EAA. “The 20 percent is an annualized number. For example, if a permit holder has 100 acre-feet of water rights and we are in Stage 1 for 50 percent of the year, when you do the math, the permit holder would be required not to pump more than 90 acre-feet. Going over that 90 acre-feet would result in a fine. Additionally, and most importantly, the EAA does not mandate how the water rights holder achieves that reduction in water use. And that fact alone has produced some creative thinking by water rights holders around the region.”

Critical Period Management Plan - Continued



A key part of SAWS' conservation and drought program is offering free landscape irrigation inspections to reduce water use during the hottest and driest parts of the summer.

In the original 1993 EAA legislation, the Edwards Region was going to require an overall reduction in permitted withdrawals to 400,000 acre-feet in 2008. However, the Texas Legislature agreed to allow the overall permitted water to remain at 572,000 acre-feet, but the trigger levels

for the Critical Period Management Plan were increased to today's 660-foot J-17 and 850-foot J-27 levels meaning the drought plan would be triggered more often.

Because the average annual Edwards Aquifer levels are around the 660-foot mark during the summer months, one might think that the increased trigger levels would be a major issue for water providers. But, having more permitted water despite higher CPM trigger levels has worked out well for the water providers like the San Antonio Water System (SAWS).

"The cutbacks can have a significant impact on our permit, a Stage 1 reduction of 20% would cause an annual loss of over 54,000 acre-feet (17.6 billion gallons) of our permit," said Darren Thompson, water resources director for SAWS. "Those reductions only get worse during longer dry spells. But, having more permitted water when we are not in the CPM has given us the ability store that water in our Aquifer Storage and Recovery (ASR) facility, and that really helps us offset the CPM reductions. Outside of the summer months, San Antonio's water use declines and aquifer levels are typically higher which gives us a good amount of permitted water we can bank in ASR for use when we do get into drought conditions. And that is very stabilizing factor for our overall water resources plan."

The statement was validated in 2014 as the region peaked in the midst of a four-year drought. The EAA declared Stage 4 restrictions. The City of Uvalde spent most of the year in Stage V. But because SAWS had stored tens of thousands of acre-feet of Edwards Aquifer water in its ASR facility and could use that water to minimize drought impacts, the City of San Antonio never had to declare Stage 3.

The restriction on landscape watering is also a high-profile aspect that comes with the Critical Period Management Plan. Most water suppliers across the region go to once-a-week watering when Stage 1 is declared. Those reductions continue to escalate as the region progresses through the various drought plan stages.

Critical Period Management Plan - Continued

“For households that irrigate, landscape watering can account for up to 60% of their family usage in summer months. So, it makes sense to have rules that moderate lawn watering during a critical period,” said SAWS Water Conservation Director Karen Guz. “We go to requiring once-a-week watering in Stage 1 among other water-saving restrictions. In Stage 2, we continue with one day a week watering but restrict the amount of time you have to do that irrigation on your watering day. Stage 3, which kicks in at aquifer level 640 feet, allows watering on one day every other week. Stage 4 requires a special declaration by the San Antonio City Manager upon completion of a 30-day monitoring period following Stage 3 declaration. The once-a-week watering restrictions do help reduce overall water use in San Antonio, but they also reduce water bills while allowing enough water to retain landscape health.”

Guz also described the focused efforts by SAWS to reduce its per capita water use through water conservation and water recycling programs which began in the late 1990s. After an initial campaign to rid the city of high-water use toilets and shower heads, the water utility began a concerted public information campaign to change citizens’ water use habits, and that outreach continues today. Those programs have received national recognition for their effectiveness and have provided SAWS and the City of San Antonio another beneficial hedge against stringent water restrictions implemented during Critical Period Drought Stages.

“The Edwards Aquifer is an amazing natural resource,” Ahrens concluded. “And while it was a new concept to many, the Edwards Region came together to address its endangered species issues and effectively manage the Edwards so it would be a viable resource for future generations. That water management system, which includes a tough drought management plan, provided the incentive for water providers to diversify their water sources and the agricultural irrigators to really step up their game in using new water-saving technology on their farms. So overall, you’d have to say the CPM has had a positive effect on the Edwards Region.”

You can view the Critical Period Manage Plan details for the various cities in the Edwards Region by clicking on these links.

[Edwards Aquifer Authority](#)

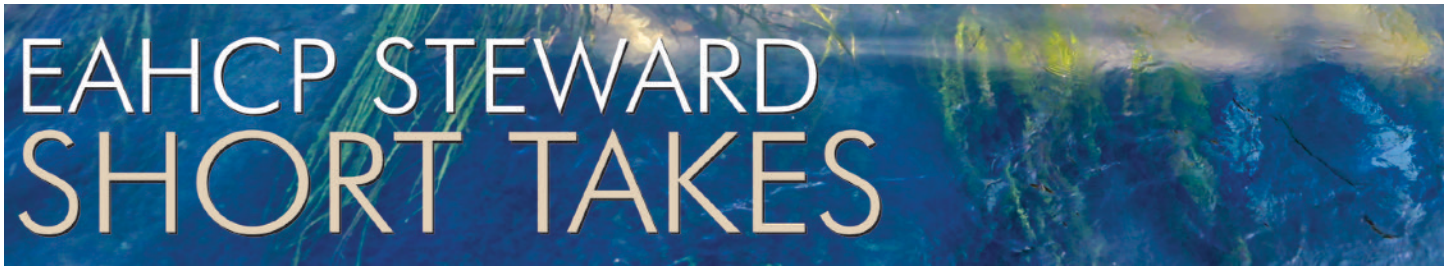
[San Antonio Water System](#)

[City of Uvalde](#)

[New Braunfels](#)

[City of San Marcos](#)





National Habitat Conservation Plan Coalition Moves Annual Meeting Online - November 17-18

Save the Date: November 17 – 18, 2020: The 2020 Annual Meeting of the National Habitat Conservation Plan Coalition will be held via web-conference. For the latest information, please visit: <https://www.nhcpcoalition.org/>.

EAHCP Meeting Reminders: Implementing Committee Meeting

The next EAHCP Implementing Committee meeting is coming up later in the month. And, in keeping with COVID-19 precautions, this meeting will be virtual. Here are the details. If you have any questions or would like to attend the virtual meeting, please email us at eahcp@edwardsaquifer.org.

EAHCP Implementing Committee Meeting

August 20, 2020 - Time: 10:00 AM

Location: Web - Conference via Microsoft Teams

New Braunfels and San Marcos Parks are Still Closed

While the summer heat is best beat in the cool waters of the Comal and San Marcos Rivers, this year the recreation season is being cut short due to abundant precautions about the spread of the COVID-19 coronavirus. To keep up with the information about those two parks, just click the links below.

[San Marcos River Park](#)

[City of New Braunfels Parks and Rivers](#)