



# EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - May 2022



Most people are familiar with the quote from Benjamin Franklin, “When the well runs dry, we know the worth of water.” And those with some understanding of the Edwards Aquifer Habitat Conservation Plan (EAHCP) know that the program is designed to make sure the well doesn’t run dry for the endangered species, even during a drought of record. So, when the Edwards Aquifer Authority began developing its Education Outreach Center (EOC) to inform people how the Edwards Aquifer is managed and protected, it made perfect sense to prominently feature the work of the EAHCP in the new EOC as well.

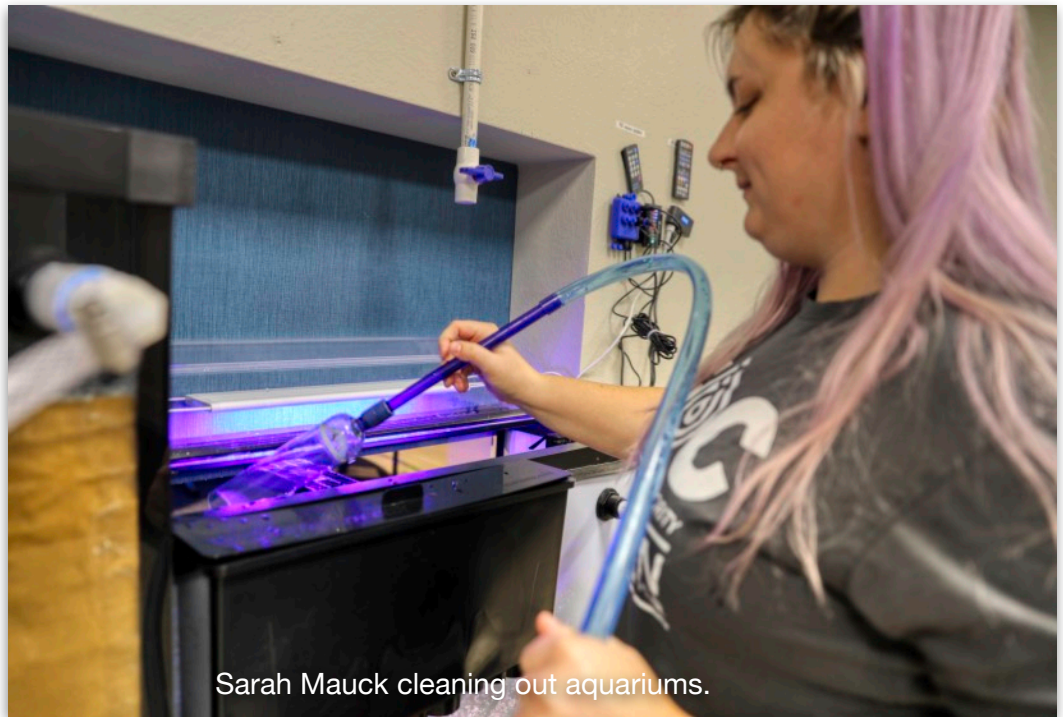


## There's Someplace Like Home - Continued

“Over the years, we’ve really had to rely on showing pictures of the endangered species in our school programs to help our audiences understand how they live and rely on the Edwards Aquifer. So, when we knew that the EOC was going to be a reality, we thought we should take the next step regarding endangered species education and bring live protected species to the facility so visitors could see them firsthand,”

Sarah Valdez, who manages the EOC,

explained. “And while it wasn’t an easy task to set up some aquariums and bring in some fountain darters and Texas blind salamanders, we feel this living display of the species will have a deeper impact on those who visit here. And with most of those visitors being children, we hope that their willingness to protect the Edwards Aquifers’ endangered species will last for their lifetimes and beyond.”



Sarah Mauck cleaning out aquariums.

The 2,400 square-foot Education Outreach Center was developed in partnership with Morgan’s Wonderland Camp, and is designed to be “ultra-accessible” for all children and adults with special needs regardless of physical or economic barriers, which is the first of its kind in the country. Valdez said that when planning first began, EAA staff met with teachers, parents and other stakeholders to determine the key stories the EOC should focus on conveying. From there, Valdez’ team produced an interpretive plan which an exhibit company then turned into the types of displays featured at the EOC.

In her description of developing the EAHCP display, Valdez noted that setting up this type of aquarium presentation was no simple task. In fact, establishing the EOC’s indoor system for the endangered species required a federal permit from the U.S. Fish and Wildlife Service, a specially designed water filtration system and a detailed plan for maintaining the species on display.

“In order to meet some of the guidelines in the permit, we’ve had to set up a fairly complicated means of supplying water to the aquariums housing the endangered species, we hired Dr. Lindsay Campbell, who previously managed the EAHCP Refugia in San Marcos, to help us get the system designed appropriately,” Kristy Kollaus Smith, EAHCP environmental scientist, stated. “The endangered species thrive at the Comal Springs and San Marcos Springs partly because the water quality is excellent and the water temperature is very stable. We actually use an Edwards Aquifer well at the EAHCP Refugia in San Marcos for the species there. But, here at the EOC, we’ve had to create that same type of water quality for the aquariums another way. Essentially, we are using the City of San Antonio’s water supply, but we’ve installed a reverse osmosis filtering system to take all dissolved solids out of the water to start with. Then we add back in minerals and other components the species need before chilling the water to match the 72 degree [Fahrenheit] water the Edwards Aquifer consistently provides. There are also UV sterilizers included in the water purifying installation in the aquariums to help remove harmful bacteria. It’s a bit of a longer climb to get where we need to be, but the fountain darters and salamanders will have the same ideal water quality conditions here as they do in the wild.”

## There's Someplace Like Home - Continued

In addition to designing this specialized water supply system, the team had to develop a detailed maintenance plan for the permit application. Kollaus Smith noted that they will be measuring levels of dissolved oxygen, total saturation of gasses, ammonia and total dissolved solids among other water quality parameters several times per week. A sophisticated filtering system is included in each tank to minimize the buildup of ammonia.

“The Texas blind salamanders people will see here were actually born at the EAHCP Refugia in San Marcos,” Kollaus Smith explained. “The fountain darters probably will come from both the Refugia and the wild. There should be 10-15 fountain darters and five or so salamanders for people to see. Our goal was to have enough here so visitors wouldn’t have to search for them in the tanks. Additionally, we’ve set up a quarantine type system in case any of the species become ill. The EOC staff have all been trained to inspect the species and the overall quality of this environment.

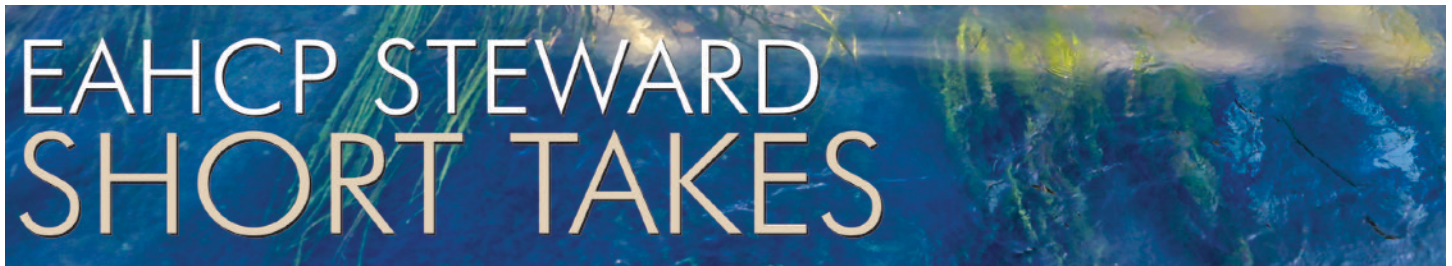


Kristy Kollaus Smith inspecting aquarium plumbing system.

While the spotlight will be on the endangered species, a third aquarium will be filled with other native species which include fish species endemic to the Edwards Aquifer region. The protections afforded to the EAHCP covered species also provide an umbrella of safeguards for other species as well. Then there is the story of the non-native species of plants and animals, which can negatively affect the endangered species, that needs to be told. Both Kollaus Smith and Valdez emphasized the importance of putting the non-natives in the spotlight because many non-native fish species typically come from home aquariums or bait buckets which are dumped in the Comal and San Marcos Rivers.

“I think people have good intentions when they take their aquarium fish to the rivers when they no longer want them, but non-native species can have a detrimental effect on endangered species in the Edwards Aquifer spring areas,” Kollaus Smith said. “The non-native [species] can do damage to native habitats, such as the suckermouth armored catfish which are known to burrow into the riverbank, causing erosion that can lead to increased turbidity of our normally crystal-clear spring systems. Consequently, the EAHCP has had to implement programs to remove those non-native [species] So, if we can show people those non-native fish here at the EOC along with telling the story of how they impair the native environment, we hope we can curtail the introduction of other non-natives over time.”

“This is truly a beautiful education center and Sarah and the EAA staff have really outdone themselves with the colorful displays, use of technology and interactive components kids will see here,” Kollaus Smith concluded. “In addition to the aquariums, the EAHCP display covers the entire back wall of the EOC, so they’ve allowed plenty of room to tell the story and add the essential component of seeing the live endangered species. The goal of the EAHCP is to protect the Edwards Aquifer’s endangered species for generations, and we believe this imaginative display will help accomplish that goal.”



## **Celebrating 10 Years of Habitat Conservation**

This year marks 10 years of Habitat Conservation with the EAHCP! Since implementation, there have been many successes. Today, the program continues to implement a complex environmental conservation program among a diverse group of stakeholders and dedicated volunteers. The EAHCP has become a benchmark for other habitat conservation plans around the country. Here's to 10 more years of EAHCP implementation! [Click here to view our new video.](#)

## **EAHCP Stakeholder and Implementing Committee Meeting - May 19**

**Date:** May 19, 2022

**Time:** 10:00 AM

**Location:** (in-person) City of New Braunfels – City Hall

## **Catch Scott Storment on the Next Recharge Zone Podcast**

Hosts Ann-Margaret and Brent sit down with Scott Storment, EAA Executive Director for Threatened and Endangered Species, as he discusses the Edwards Aquifer Habitat Conservation Plan from his perspective as the manager of the program. Tune in to learn about the programmatic aspects of the EAHCP, how it functions, and what's on the horizon for the future of the program. Click the link below to listen.

[www.edwardsaquifer.org/news-community/the-recharge-zone-podcast](http://www.edwardsaquifer.org/news-community/the-recharge-zone-podcast)

## **San Marcos Prospect Park Work Day Set for Saturday, May 21**

The next City of San Marcos volunteer workday will be at Prospect Park and is scheduled for Saturday May 21st from 8-10 a.m. Tasks will include removing invasive trees, building log terraces and litter removal. Tools will be provided, but bring a water bottle. Meet at 1410 Progress St. Parking will also be available on Columbia Ave. and Wall St. You can RSVP [here](#).