



# EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - February 2022



## A Decade of Delivering

*EAHCP celebrates 10 years of habitat conservation*

Over the past 10 years, the Edwards Aquifer Habitat Conservation Plan (EAHCP) got its official permit from the U.S. Fish and Wildlife Service, launched a complex environmental operation among a diverse group of stakeholders and then proceeded to build a program that not only has garnered state awards but become an interesting benchmark for other habitat conservation plans around the country to study. In recognition of those achievements, the EAHCP will be celebrating “10 Years of Habitat Conservation” throughout 2022 as we highlight both past accomplishments and present ideas for moving toward the program’s permit renewal in 2028.

## A Decade of Delivering - Continued

The EAHCP Steward staff thought it only fitting that we begin that celebration of the past 10 years with a Top 10 list of milestones that truly shaped the EAHCP that exists today. As always, it is necessary to provide a sound starting point and remind readers why the program exists in the first place, which is the protection and preservation of the Edwards Aquifer and the endangered species that rely on its fresh flowing water.

The Edwards Aquifer is one of the most prolific sources of fresh water found anywhere on the planet. It requires minimal treatment for use by communities, except for some small amounts of chlorine which ensure



Scenic view of the San Marcos River which is fed by the San Marcos Springs.

that it is still potable as it travels to homes and businesses through miles of underground water pipes. It is unusually sustainable in that its natural recharge system takes in billions of gallons of water when it rains over the aquifer's recharge zone. And, the water flowing from west to east through the system provides water for:

- irrigation of some of Texas' finest farmlands
- a superior drinking water supply for the 7th largest city in America and its neighboring and growing municipalities, and,
- the sustenance of two stunning environmental ecosystems and 11 endangered or threatened species living in and around the Comal Springs and San Marcos Springs.

Despite its capability of providing that robust and consistently reliable supply of water year after year, the Edwards Aquifer is fragile like all natural resources and subject to deterioration without proper preservation action. Protection of the Aquifer resource is where the EAHCP has excelled. In just the past decade alone there have been:

- numerous water conservation and springflow protection measures implemented
- 41 billion gallons of Edwards water stored underground for use during a repeat of the drought of record
- giant strides made in restoring the ecosystems of the Comal and San Marcos Rivers to native plant habitats, and,
- more scientific research started on the endangered species and associated habitats than ever before.

## A Decade of Delivering - Continued

It has been a decade of deliverance, so to speak. And here are nine of the Top 10 milestones the EAHCP Steward has selected that shaped the restoration of a remarkable work of nature.

**#1: 2013 USFWS Approves ITP** - The U.S. Fish and Wildlife Service (USFWS) issued a 15-year Incidental Take Permit which also officially created the startup of the Edwards Aquifer Habitat Conservation Plan. Additionally, the permittees entered into an agreement with the USFWS to ensure the implementation of the EAHCP. These two agreements essentially launched the EAHCP Phase I operations.

**#2: 2013 - 2016 Bank Stabilization:** The bank stabilization project at Dog Beach Park along the San Marcos River was completed 2014. This project created recreation access points to the river to prevent continued



NAS committee observes bank improvements at a stop on an EAHCP field trip.

erosion of the riparian zone along the highly-traversed area of the San Marcos River. In New Braunfels, about 1,000 feet of river bank between the Landa Park pool and the Landa Park Golf Course was completed in 2016 to reduce impact on endangered species and habitat in the Comal River due to riverbank erosion. These projects included the removal of non-native plants, major structural improvements to the rivers' banks and the replanting of the areas with native vegetation. Both of these projects will help minimize soil erosion that can harm the endangered species habitats.

**#3: 2014 EAHCP Steward** - The EAHCP kicked off its public communications work with the publishing of its first EAHCP Steward newsletter in January 2014. The newsletter started out as a bi-monthly publication that was published online to allow for photo slide shows to go along with the feature stories. In January, 2019, the publication moved to monthly distribution and added the Steward Podcast to enhance the written features and short stories in each issue. To date, there have been 77 Stewards written, a few thousand photos taken and 36 podcasts published over an eight-year period.

## A Decade of Delivering - Continued

**#4: 2016 Texas Environmental Excellence Award** - In 2016, the City of San Marcos and Texas State University received a Texas Commission on Environmental Quality Environmental Excellence Award for their civic and community engagement in their riparian restoration programs. River recreation and Texas State University are two hallmarks of the City of San Marcos, but recently, nationally-noted population growth has impacted the San Marcos River, and the EAHCP has developed solutions to mitigate bank erosion along the river by planting native riparian vegetation. Between 2013 and 2016, an extensive list of partners and volunteers restored 10,800 linear feet of riparian zone along the San Marcos River through 6,000 volunteer hours. The collaboration among local contractors and public, private, and volunteer groups has allowed for removal of 90 percent of invasive elephant ear plants with a 37 percent increase in native vegetation and a 50 percent reduction in eroding bank (as of 2016).

### **#5: 2013-2018 Submerged Aquatic Vegetation Study**

– When the five-year submerged aquatic vegetation mapping program started in the Comal River, the entire riverine area was covered with the non-native *Hygrophila* plants. It controlled the river from bank to bank. In San Marcos, there were huge areas of elephant ear plants and *Hygrophila* as well. So, after five years of mapping these areas and observing EAHCP

programs to reinstate native plants, the two river systems look very differently. One very important aspect of this five-year mapping program is that the data gathered was used to update the biological goal reporting to the U.S. Fish and Wildlife Service as part of the federal Incidental Take Permit, which is what governs the whole EAHCP program.



Eric Weeks, middle, and Melani Howard accept TCEQ environmental award.

**#6: 2018 National Academy of Sciences** - The National Academy of Sciences (NAS) published its third and final report in late 2018 documenting its thorough review of the EAHCP program. The central objective of the extensive evaluation was to help the EAHCP team ensure it was headed in the right direction with its scientific program elements. After nearly five years of work, the National Academy of Sciences (NAS) delivered its third and final report regarding its review of the EAHCP. Overall, the EAHCP received predominantly favorable comments in the 160-page final report and various suggestions on improving data collection, continuing existing pollution prevention measures and expanding species protection programs.

“This was certainly a unique process for an NAS review primarily because of the multi-year commitment,” said Danny Reible who chaired the committee of scientists. “Very rarely does a NAS committee have such extensive exposure to a project like we did with this one. We had a great team of experts for the EAHCP project and were fortunate to have most of them through the entire process. All of those factors contributed to a substantive report and one that I hope is extremely helpful to the EAHCP as it nears some decision points for the next phase of the program.”

## A Decade of Delivering - Continued

Overall, NAS rated the EAHCP highly on its work to protect the fountain darter and Texas wild-rice species. They thought the conservation measures to protect the San Marcos salamander would be effective but rated the EAHCP's biological objectives in the 'somewhat likely' to attain the biological goals primarily due to the fact there is less historical data on the San Marcos salamander than what the program has for the fountain darter and Texas wild-rice. The riffle beetle research was only a few years old at the time, so NAS could not determine how early efforts might protect the riffle beetle in the long run. However, they did provide several recommendations on how we could get there in the future.

### #7: 2019 Signing of EAHCP Phase 2 Resolution

- At the May 23, 2019 joint EAHCP Stakeholder and Implementing Committee meeting, Resolution and Order No. 05-19-001 was signed by all permittees effectively validating the transition to the second phase of the EAHCP program and confirming the Conservation Measures that would be implemented through 2028. The Springflow Habitat Protection Work Group was a product of this R&O.



Tour of the newly opened EAHCP refugia in San Marcos.

**#8: 2019 EAHCP Refugia Grand Opening** - As part of the EAHCP, a long-term refugia was required to be put in place. The purpose of the facility is to preserve endangered species in captivity for reintroduction into the wild in case some unusual disaster decimated the species living near the Comal and San Marcos Springs. The refugia is also the EAHCP's centerpiece for research as scientists study how they can grow the species populations in captivity. While the refugia worked started a few years earlier, the EAHCP built its own facility at the San Marcos Aquatic Research Center (SMARC) and held a grand opening in April, 2019. It is operated by the U.S. Fish and Wildlife Service, which also manages the SMARC facility.

**#9: 2020 ASR Water Storage Goal Attained** - The ASR and VISPO Springflow Protection Programs are key components in the EAHCP's ability to protect endangered species and habitats by curtailing pumping from the Edwards Aquifer during a repeat of the drought of record. The EAHCP requires that 126,000 acre-feet of water be stored in the San Antonio Water System's' Aquifer Storage and Recovery facility in South Bexar County, and the EAHCP reached that storage goal in 2020. The Edwards Aquifer Authority's computer models verified that the ASR and VISPO were the most effective programs in helping the Comal and San Marcos Springs continue to flow even under drought of record conditions.

**#10: #10: EAHCP program achieves a 129 percent increase in Texas wild-rice coverage in the San Marcos River** - At the start of the EAHCP, both the San Marcos River and Comal River were inundated with nonnative plants that were crowding out native plants, including the endangered Texas wild-rice. With an intensive program to root out the nonnatives and then plant more Texas wild-rice stands in the San Marcos River, the EAHCP team was able to achieve a 129 percent increase in Texas wild-rice coverage in the span of a few years.

# EAHCP STEWARD SHORT TAKES

## **A Decade of Delivering - Photo Slide Show - Top 10 Poll**

As you just read, the EAHCP is celebrating 10 Years of Habitat Conservation and we hope you enjoyed the article that takes a look back at some of the highlights during that time. The EAHCP Steward covered most of those stories and created a podcast as we interviewed people for the newsletter. If you click through to the website, we will see the links available to those featured newsletters in our archives.

Also, we've taken a ton of photos over the years and so the slide show that goes along with this newsletter is quite extensive. So, take a few minutes and click through that library of photos from around the region.

Lastly, you will notice that we only listed nine of the Top 10 highlights in the story. We are asking our readers to head to the website and vote for the milestone you think should round out our top 10 list.

Just go to: [www.EAHCPSteward.org](http://www.EAHCPSteward.org).

## **Upcoming EAHCP Meetings**

### **Joint Implementing and Stakeholder Committee Meeting**

Date: March 24, 2022  
Time: 10:00 AM  
Location: TBD

### **Science Committee Meeting**

Date: April 27, 2022  
Time: 10:00 AM  
Location: TBD