EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - April 2022

Give and Take

EAHCP annual report quantifies the number of endangered species "incidental takes"

Brad Littrell, with BIO-WEST, uses a dip net to check for Fountain darters.

It's been said that "respect" is a two-way street. If you want to receive respect, you must first give it away. That truism is also reflected in how humans interact with nature. And if you're looking for a shining example of how that actually works, look no further than the Edwards Aquifer Habitat Conservation Plan (EAHCP).

Adam Zerrenner, who is the field supervisor for the U.S. Fish and Wildlife Service's (USFWS) Austin Ecological Services Field Office, underscored that fact about the EAHCP. "I've been fortunate to work on the EAHCP since I arrived in Texas in 2007 just after the Edwards Aquifer Recovery Implementation Program (EARIP) began. This was a renewed, rigorous effort by Edwards Aquifer regional stakeholders


Adam Zerrenner, U.S. Fish and Wildlife Service

to develop a workable solution to protecting the endangered species in the Edwards Aquifer fed Comal Springs and San Marcos Springs while ensuring the continued use of water from the aquifer for municipal, agricultural and recreational needs. These stakeholders, who ultimately became partners in an Incidental Take Permit from our agency, agreed to give up unlimited pumping from the Edwards. They dedicated financial and staff resources to much needed research and riparian restoration programs, and they developed a series of other springflow protection measures. Today, these unique spring systems are in very good shape, the endangered species habitats are growing and the entire Edwards Region has certainty about its water supply from the aquifer."

Zerrenner noted that projections from the EARIP forecasts stated that without preservation efforts and continued growth in the region, that another drought of record could easily dry up the Comal Springs for three years and cause the San Marcos Springs to go dry for the first time in recorded history. That dire warning prompted the aggressive action plan that ultimately became the EAHCP. The region's agreement to the EAHCP measures convinced the USFWS to issue a 15-year Incidental Take Permit (ITP), which allows water withdrawals, recreation and other activities to continue because those voluntary protection programs ensure that the springs will continue to flow even during another drought of record.

While the USFWS considers its work with the EAHCP collaborative, the agency also know its role as a regulator is important to future success. Each year, the EAHCP is required to deliver an annual report to USFWS documenting ITP compliance and progress of the individual programs within the habitat conservation plan. This includes reporting on how many endangered species have been incidentally "taken" over the course of the year.

"The original compliance numbers in the Incidental Take Permit were developed by the U.S. Fish and Wildlife Service," said Ed Oborny, a company principal and fisheries section leader for EAHCP contractor BIO-WEST, Inc. "The Service conducted a biological assessment of the endangered species and habitat which led to the estimated populations of species in the spring systems and the amount of 'incidental take' allowed each year. Our job is to do the necessary field work and analysis to determine the level of incidental take on an annual basis. There is a very specific methodology for doing so, and we think it works quite well."

One complicating matter in the species monitoring process is the legal definition of "incidental take." The literal interpretation of the word "take" would lead one to think of the demise of an individual fish. The killing of an endangered species is still considered incidental take, however, the vast majority of the numbers reported in the incidental take category of EAHCP annual reports are estimates of how many individuals were disrupted by activity in and around their habitats.

Give and Take - Continued

“This type of calculation for terrestrial species, such as counting birds and nests, is a little easier than trying to measure harm to very small aquatic animals such as the fountain darter,” Oborny explained. “What we do for the fountain darters is track aquatic vegetation, their physical habitat, as a surrogate for the fish themselves. We map the aquatic vegetation in the spring systems each spring and fall and do an assessment of changes over that period. We also constantly monitor water temperatures since the darters need a nearly constant thermal regime to thrive. In the end, we’re measuring for net disturbance and any incidental take or harm caused by activity in the habitats. For example, if we are going to remove 10 meters of non-native vegetation, we know from our 20 years of data how many fountain darters would typically be found in that area. So, if there’s one fountain darter per square meter and we take out 10 meters of vegetation, we calculate the incidental take to be 10 fountain darters.”

Ed Oborny at BIO-WEST workstation.

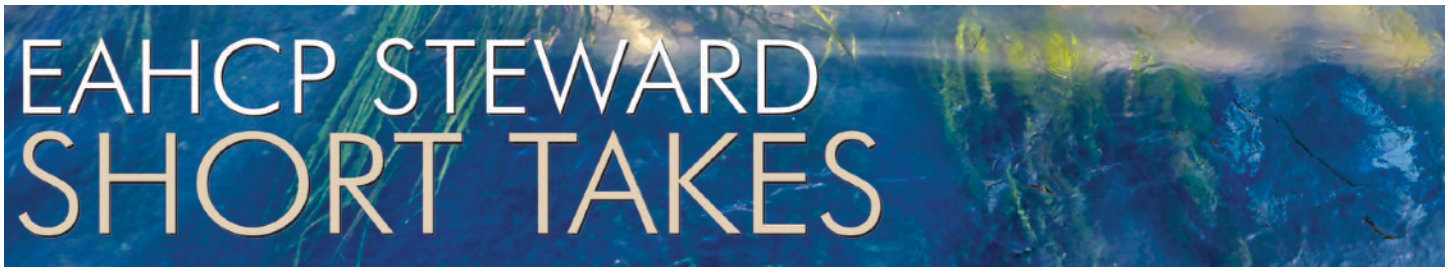
Oborny noted that these calculations are made even if there is restoration work going on, like the planting of native aquatic vegetation such as Texas wild-rice. The methodology is also accurate in picking up activities that are not controllable such as droughts, low springflows, recreation and even incidents such as a tree falling in the river.

“A perfect example of how the methodology picks up both seen and unseen events is what we experienced during the pandemic. The rivers were [fenced] off to [prohibit] recreation and the aquatic vegetation flourished. So, when the rivers were open again, there was more aquatic vegetation to be affected and that showed up in our mapping. Consequently, the incidental take numbers for that period were higher than average, just under 50,000 calculated incidental takes for the fountain darters. Typically, that number is in the 5,000 to 10,000 range. So, while the total incidental take for the year raised some eyebrows, it was perfectly explainable and well within the numbers the ITP allows. And with things getting back to normal, we would anticipate incidental take numbers to be back in the lower ranges next year.”

One common theme both Zerrenner and Oborny concluded with is that, overall, the spring systems and the endangered species living there are much better off than when the EAHCP took its first steps. They talked about the monumental efforts of the region coming together and investing vast resources to preserve the Edwards Aquifer ecosystem, and the resulting beauty of the natural surroundings hundreds of thousands of people enjoy each year.

“No doubt about it, this is a very special place in the world and we’re fortunate to have this prolific and unique resource, the Edwards Aquifer,” Zerrenner concluded. “At the same time, we can be proud of the work taking place to preserve this natural heritage so future generations will also be able to appreciate its gifts to people who live and visit here.”

Respect given, respect returned.



Information Links

Here are a few information links which provide even greater depth to this month's feature story on the how incidental take is calculated by the EAHCP. The first video link is to a presentation by Ed Oborny to the EAHCP Implementing Committee.

www.edwardsaquifer.granicus.com/MediaPlayer.php?view_id=2&clip_id=642

You can download the 2021 EAHCP Annual Report at: www.edwardsaquifer.org/wp-content/uploads/2022/03/2021-EAHCP-Annual-Report.pdf

Here is a link to the 2021 EAHCP Annual Report Highlights StoryMap: www.storymaps.arcgis.com/stories/07ed261ddff94b94a71900dc362bc22f

Upcoming EAHCP Meetings and Events

Science Committee Meeting
Date: April 27, 2022
Time: 10:00 AM
Location: Meadows Center for Water and the Environment

EAHCP Joint Committee Meeting
Date: May 19, 2022
Location: City of New Braunfels - City Hall
Time: 10:00 AM

San Marcos Prospect Park Work Day Set for Saturday, April 30

The next City of San Marcos volunteer workday will be at Prospect Park and is scheduled for Saturday April 30 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**.

EAHCP Staff Assist with Riparian Restoration at Landa Park

This month, the EAHCP staff participated in a tree and native vegetation planting event near the Landa Park golf course along the Comal River. This effort helped support the native riparian habitat restoration conservation measure implemented in New Braunfels. Click here to see the photos.