



March-April 2018

## Takin' it to the Streets

Campbell spreads word throughout Southwest U.S. on EAHCP uniqueness

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While many people in the Edwards Aquifer Region have an idea of what the Edwards Aquifer Habitat Conservation Plan is undertaking and accomplishing, word of this unique program is spreading to a wider audience as well. Dr. Lindsay Campbell, a U.S. Fish and Wildlife Service supervisory biologist and point person on the EAHCP refugia program, has spoken to other HCP program managers about the EAHCP in the last several months and has stirred thinking about improvements in overall habitat conservation plan methodologies.

"Last September, I spoke at the regional fisheries and aquatic conservation meeting, which U.S. Fish and Wildlife Service project leaders from Texas, Arizona, New Mexico and Oklahoma attended, and was able to spread the news about how we're conducting the EAHCP refugia program," Campbell commented. "That talk resulted in another invitation to speak at the American Fisheries Society meeting in Puerto Rico about a month ago. I received some great feedback on the EAHCP program and made some good contacts that could help us in the future. The best part of the experience was sparking some creative thinking among other scientists and having them tell me that our work methods inspired them to try something different with their own projects."

This is the first habitat conservation plan for groundwater in the U.S. and has required a new model for thinking about how these preservation

efforts can be accomplished. Researchers with the EAHCP are not only working on habitat conservation of the endangered species, which most HCPs focus on, but they are also developing a significant refugia program to be able to reintroduce the species back into the wild if something catastrophic happens to their habitats in the future.

"As resources for these types of efforts shrink across the U.S., it makes sense for us work with others managing HCPs to learn from each other and become more efficient and effective in our work," Campbell said. "Because the EAHCP is so different than other HCPs, we're really looking at being pioneers with our work. Most HCPs focus on terrestrial animals. But, the EAHCP takes into account aquatic organisms and the actual water flows which support the species. There are water rights to account for and various uses of the water in different areas in the Edwards Aquifer Region that come into play here. So this program reaches across many more levels than other HCPs and requires different approaches from our team."

In addition to the multilayered elements of managing the EAHCP refugia program, some of the species being studied are not well known to researchers. That fact in itself poses interesting challenges to the team.

"There are some species in the program we know a lot about, but there are those that we're just starting to gather information on," Campbell explained. "This presents interesting challenges in collecting the species from the wild and figuring out how to best maintain them in the lab."

Given that aspect of dealing with many unknowns, the original 10-year research plan was revamped to be a document that sets out research goals. It was difficult to outline what the team would be doing in year 10 of the plan without first understanding the basics of what the species need to survive and reproduce in the refugia. So, the team established strategic goals referred to as creating a "functional refugia" that addresses collection, maintaining, reproduction, reintroduction and a genetic management plan for the species they are studying.

"I'm a researcher at heart and always look forward to being in the field and doing the hands on work that is essential to overall understanding of these unique species," concluded Campbell. "Our team of young scientists are extremely engaged and enthusiastic. We learn things each day and then have to assemble those bits of information into sound science we can pass on to other researchers and the EAHCP team. That's truly exciting and a story well worth telling to others around the country."

## Give and Take

Incidental Take Permit gives EAHCP partners certainty in water planning

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The Edwards Aquifer Habitat Conservation Plan partners were granted an Incidental Take Permit (ITP) from the U.S. Fish and Wildlife Service in 2013. However, there was nothing incidental about the seven-year application development process. And today, maintaining compliance with the ITP is all business for the EAHCP team.

"The whole purpose of everything we do as part of the EAHCP program is to comply with our Incidental Take Permit which outlines what we must do to protect the endangered species during a drought of record," said Nathan Pence, EAHCP program manager.

"The permit actually helps drive many of the decisions we make. From our research, we are learning how much water from the springs the species need to live in worst case drought scenarios. So you don't spend extra dollars and resources going beyond those parameters."

The Endangered Species Act (ESA) prohibits the "take" of listed species through direct harm or habitat destruction. In the 1982 ESA amendments, Congress authorized the U.S. Fish and Wildlife Service to issue permits for the "incidental take" of endangered and threatened wildlife species. That means permit holders can proceed with an activity that is legal in all other respects, but that results in the "incidental" taking of a listed species.

"Our permit does specify a limit on the numbers of endangered species like the fountain darter or Texas blind salamander that we can 'take,'" Pence explained. "And to reiterate, taking means doing any kind of harm to the species, disturbing their habitat or anything of that nature. Taking doesn't just mean killing a darter or salamander. We know that public recreation, our field research and other types of activity near the spring

openings causes harm to the species, so we've developed many programs to mitigate that habitat disturbance in order to maintain our permit."

Pence noted that most people around the Edwards Aquifer Region are well aware of the various uses of the water from the aquifer. He also expressed that everyone knows during the 1950s drought of record, the Comal Springs went dry. While the Endangered Species Act didn't exist at that time, the species did. In the 1990s, various organizations brought a lawsuit against the federal government because nothing had been done to protect the Edwards Aquifer endangered species. It was that lawsuit and the desire to maintain regional control of the Edwards Aquifer water use that jump started the various aquifer protection plans in place today. In fact, the creation of the Edwards Aquifer Authority was created to manage pumping from the Edwards Aquifer as a means to help protect spring flows in New Braunfels and San Marcos.

"Despite the great work and progress of the EAA, there was still no guarantee that the springs would not go dry in another drought of record," Pence explained. "So in the 2006-2007 timeframe, stakeholders from around the Edwards Region came together to create a specific plan to keep the springs flowing during a drought of record. That plan was developed as a Habitat Conservation Plan and ultimately submitted in 2012 to Fish and Wildlife Service as part of the Incidental Take Permit application. It is important to understand that an ITP is a legally binding agreement between the U.S. Secretary of the Interior and the permit holders. In our case, that is the Edwards Aquifer Authority, City of New Braunfels, City of San Marcos, City of San Antonio through the San Antonio Water System and Texas State University."

The Edwards Aquifer ITP will run through 2028. The 15-year Edwards Aquifer permit period is a relatively short timeframe for a typical ITP. But, the original EAHCP planning team knew the region still had much to learn about the Comal and San Marcos Springs systems. So, the team decided to spend the better part of the first permit cycle to become more knowledgeable about this ecosystem and then prepare to apply for a 30-50 year permit in 2028.

"This ITP permit process is obviously a lengthy and detailed path," Pence concluded. "But, now that we have some very specific guidelines to follow, water providers and users in the Edwards Region have certainty in the amount of water they can count on from the Edwards. That goes a long way toward creating sound water management plans into the future. Our cities now have confidence that having a stable water supply is a positive element of their growing communities."

## The Future of the Farm

Yablonski is on EAHCP programs for business and regional reasons

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For the past 14 years, Adam Yablonski has been running the family farm just west of D'Hanis. With a degree in biology, he wasn't sure that he wanted to be in the agriculture business. But, with his grandfather's health failing, he took a second look at the opportunity. And his "give it a go" decision has turned out to be a great one.

His family purchased the 3,300 acres of mesquite brush in 1970 and slowly began transforming it into a working farm. The two Edwards Aquifer wells drilled on the property provided ample water to flood irrigate the fields back in the early days. Today, about 930 acres are tilled year-round and water conserving irrigation pivots

and drip systems are used to water the crops. Additionally, Yablonski uses soil moisture monitors to help him

schedule his irrigation and limit water waste. He says those water-saving measures are great for the farm and the Edwards Region.

"This year we're growing a mix of wheat, oats, corn, cotton, grain sorghum and sunflowers," Yablonski noted. "In the past we've produced wheat, green beans, other types of vegetables and sunflowers. With commodity prices varying over the past few years, we're relying on our mixture of crops to give ourselves the best opportunity to be successful. The rainfall over the past few years has been timely. We haven't had to do a lot of pre-watering the fields before planting and that really helps us in our annual water use."

As an agricultural irrigator, Yablonski knows the essence of farming success lies with the availability of water. But, he also understands the policy-making side of the water resource topic having served on the Edwards Aquifer Authority (EAA) Board of Directors for six years.

Yablonski said he had started attending regional water meetings to learn the new rules and regulations, and when his area's representative on the EAA board stepped down, he was asked to step up. And he did.

"I was involved in not only the EAA board work, but the whole Edwards Aquifer Habitat Conservation Plan (EAHCP) process as well. The approved EAHCP helped the Edwards Aquifer Authority acquire an incidental take permit from the federal government which protects the endangered species in the Edwards Aquifer. Obtaining that permit also gave the two million people who rely on the Edwards for their water some certainty in how much they can produce from the aquifer each year. The ASR Leasing and VISPO Programs and a few others which are part of the EAHCP efforts have helped farmers tremendously. I now have just under 1,500 acre-feet of water in ASR and VISPO, and that helps bring some dollars to our operation and gives us a means to manage our water like we do our crops. Overall, we know the Edwards is a shared resource, so conserving water here helps others in the region."

Yablonski sees a bright future to farming in this part of Texas. He pointed out some new, solar-powered well monitors that can report on water use in real time. Plus, the use of drip irrigation systems is now considered a best practice.

"I'd like to see this operation continue for generations," he said. "We've made a lot of progress in adapting new technology and that gives us an optimistic outlook for managing an operation like this for many years to come."

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