

NEWS DROP

M A G A Z I N E

A QUARTERLY PUBLICATION

SPRING 2022



Photo: The Karst Theater is ready for classroom presentations.



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2022

EAA BOARD OF DIRECTORS

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Roland Ruiz
EAA General Manager

In anticipation of the opening of the Education Outreach Center, I want to share with you a message that will greet all of our visitors. View it [here](#) - then make it a point to register for a visit to experience it in person.

We look forward to seeing you very soon!

Roland's welcome message can be found here:
<https://youtu.be/ryRTvSMBbm0>



MOMENTOUS ENDEAVOR

WITH THE GRAND REVEAL APPROACHING IN APRIL, THE EAA TEAM HAS BEEN WORKING TIRELESSLY TO ENSURE THAT THE EOC IS ON TRACK TO FULFILL ITS MISSION TO ENGAGE AND EDUCATE ALL WHO VENTURE INSIDE.



Photo: The Karst Theater is ready for classroom presentations.

As the Edwards Aquifer Authority continues its work on the Education Outreach Center within Morgan's Wonderland Camp, a momentous endeavor is being realized in real-time.

With the Grand Reveal approaching in April, the EAA team has been working tirelessly to ensure that the EOC is on track to fulfill its mission to engage and educate all who venture inside. From state-of-the-art technology to striking visuals, the Education Outreach Center and its many features will be one of the most memorable destinations within Morgan's Wonderland Camp.

One of the main attractions within the Education Outreach Center is the Karst Theatre, a realistic "cave" environment which serves as a space for engaged and imaginative learning. While seated on chairs resembling rocks and surrounded by multiple large screens, young campers will learn about the aquifer system through hands on-activities and demonstrations – all while being virtually transported underground!

In mid-January, EAA staff hit the road to join U.S. Fish & Wildlife and expand their knowledge about how care is provided for the threatened and endangered species of the Edwards Aquifer.

Outreach Educator Sarah Valdez and Outreach Contractor Sarah Mock spent time with Adam Daw- Refugia Lead at both the Uvalde National Fish Hatchery and the San Marcos Aquatic Resources Center, where refugia and reintroduction services are delivered to protect and monitor species covered under the Edwards Aquifer Habitat Conservation Plan (EAHCP).

The insight gained from the refugia will be advantageous in the installment and maintenance of a large aquarium that will house multiple endangered indicator species including the Fountain Darter, and the Texas Blind Salamander.

The EAA believes that the use of endangered species for this EOC exhibit will be a powerful tool in raising awareness, as presenting young people with living specimens will help instill the importance of protecting and conserving the aquifer and the ecosystem.



Photo: A young visitor explores the inside of a well casing.

This aquarium is an exciting addition to the many features offering camper engagement within the EOC.

The largest - and certainly the heaviest - piece of technology within the EOC will immediately capture visitors' attention as soon as they walk inside. Hanging from the ceiling and weighing over three hundred pounds, a five-foot tall, Global Perspectives Display projects compelling images and video from an ever-growing library. When assembled into a globe, the sphere appears as if it is rotating while demonstrating the worldwide impact of weather patterns on Texas and the Edwards Aquifer. When the EOC opens to the public, there is no doubt that this spectacular display will make a lasting impression on the minds of all who see it.

On the perimeter of the EOC building, there is a demonstration garden featuring over thirty species of native Texan plants. The garden is irrigated by the center's award-winning rain harvesting system and should bloom just in time for our Spring Grand Reveal! Interns are working on signage for the garden to provide visitors with

information, such as a legend for plant identification, and to promote volunteer opportunities. Speaking of interns, our student teammates have been rotating their time at the EOC and assisting with a variety of projects in preparation for opening day and beyond.

"Especially with the new Education Outreach Center projected to open in the next couple of months, the experience I have received has been extremely valuable", says Sandra Bustamante, who has been planning and creating social media content that will ensure the education provided at the EOC continues outside of its walls. We are very excited to announce that the new Education Outreach Center website, www.eaaeoc.org, has been launched! This page will help stir up anticipation for the EOC's Spring opening, which is crucial to reaching our goal of bringing in as many visitors as possible.

We've also introduced an EOC TikTok page, @eaaeoc, where interns "tok" about soil health in their fun demonstration videos that anyone can try at home. There is a brand-new Facebook page, too – search for "EAA Education Outreach Center" and give us a follow!



Photo: A young student learns about permeability.



Photo: A group gets a close-up look at preserved beetles under the microscope.

In addition to these social media platforms that will help extend our reach and broaden our audience, several new videos are in the works that will be displayed in exhibits to share facts about the EAA and aquifer science. We are filming at multiple sites, including locations of problematic vs. properly maintained water wells to demonstrate how each affects the aquifer.

**APRIL IS QUICKLY
APPROACHING, AND
WE CAN'T WAIT FOR
EVERYTHING THAT'S IN
STORE FOR THE FUTURE
OF OUR COMMUNITY.
THE EOC IS THE PLACE
TO BE! ■**



Robert Orben, a comedy writer famous for one-liners, once wrote, *“Time flies, but it’s up to you to be the navigator.”*

That gem would seem to fit in the “words of wisdom” category rather than a comedy routine. But, it aptly describes the actions now being taken by the leadership of the Edwards Aquifer Habitat Conservation Plan (EAHCP) regarding the renewal of its federal Incidental Take Permit (ITP), which doesn’t expire until 2028.

TIME FLIES

EAHCP begins work on Incidental Take Permit renewal due in 2028

“We know that starting a project six or so years in advance might seem to some like we’re way too early to begin working toward our ITP renewal. But once you lay out all of the major milestones we need to accomplish to get there, some might say we’re starting too late,” said EAHCP Executive Director, Scott Storment. “Time will pass quickly and we know we must conduct a comprehensive assessment of how our current program is fulfilling the current federal permit and then make some major decisions on the type of permit renewal we will submit to the U.S. Fish and Wildlife Service. So, while we won’t please everyone with this timeline we’ve laid out to get to our destination, we know the work that needs to be done and so we’re comfortable with starting that journey now.”

Most people know that the EAHCP program was put in place to protect the threatened and endangered species and the Edwards Aquifer. Many might not know that the issuance of a federal Incidental Take Permit in this case is driven by the National Environmental Policy Act (NEPA), which was signed into law on January 1, 1970. NEPA requires federal agencies to assess the environmental effects of various types of actions before allowing those actions to take place.

The mandate driving NEPA is that it “requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony.”

“The U.S. Fish and Wildlife Service (FWS) is responsible for implementing the Endangered Species Act. And since there are endangered species living in the Edwards Aquifer ecosystem and because there are multiple users of the Edwards Aquifer, the region needed to have an Incidental Take Permit (ITP) to continue drawing the large amounts of water from the aquifer over time,” said EAHCP Director of Habitat Conservation Administration, Jamie Childers. “NEPA requires federal agencies to balance human socio-economic needs with nature’s needs. They start by assessing existing conditions, then ask some basic questions such as, if we do nothing, what will happen? If we implement a permit to mitigate certain actions, what will happen? The Service then weighs those two options and decides which one is most beneficial to the environment and humans. In the case of the Edwards Aquifer Region, they chose to issue an Incidental Take Permit which gives the region the ability to continue pumping groundwater as long as there are programs in place to protect the endangered species.”

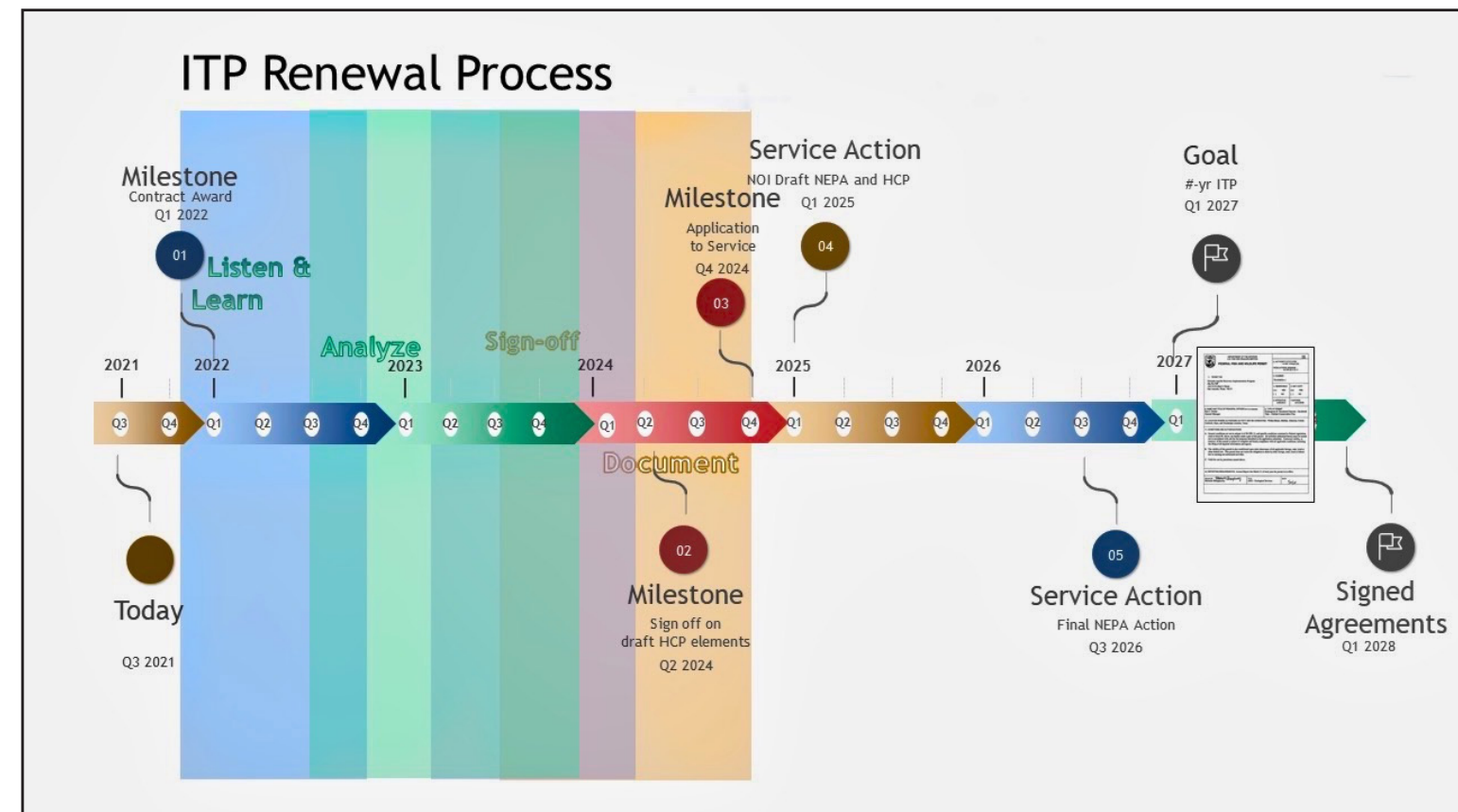
Storment explained that the first major step in beginning the permit renewal process will be the selection of a consultant. He noted that they are looking for a contractor that has

national experience with other HCPs and can help the team assemble the right types and amount of information that the FWS will be looking for. Storment said this will be one of the larger contracts the EAHCP and Edwards Aquifer Authority Board will commit to, so the contractor will need to have a wide range of expertise, professional relationships and flexibility in getting this multiyear project completed.

After getting a contractor on board, Storment said there will be four main phases in the renewal process and described them as:

- **Listen and Learn Phase** - a stakeholder involvement process that will run throughout 2022
- **Analyze Phase** - a means to identify need for more data gathering through studies which will start in 2023
- **Sign-Off Phase** - a period of time for EAHCP partners to review and ultimately approve the components of the comprehensive permit renewal document
- **Document Phase** - a comprehensive document will be written and submitted to the FWS. Following review of the document, the FWS will decide how to address the EAHCP permit renewal request.

Illustration: ITP Renewal Process.



THE GOAL IS TO HAVE A NEW EAHCP PERMIT IN PLACE BY MARCH OF 2028. ONE OF THE MOST SIGNIFICANT DIFFERENCES FROM THE CURRENT PERMIT, HOWEVER, WILL BE THE LENGTH OF THE PERMIT.

“The initial FWS permit was for 15 years,” Storment commented. “This time around, we are well-prepared to petition for a 30-year permit. The entire EAHCP process has matured. Our committees are aware of the studies completed and those which still need to occur. The staff is very qualified and competent in their roles. And most importantly, the permit partners have built a solid level of trust among the group and in how work is being conducted. Today, we are in a totally different place than when the first ITP was issued. So, realistically, a 30-year permit request seems very reasonable given our current program status.”

Childers pointed out that the Listen and Learn series will be designed to build upon the program’s current public involvement and cast an even wider net. In addition to the current Stakeholder Committee, they will be looking to invite other groups or individuals who might have some interest or could possibly be affected by the programs that will make up the second ITP. At the four Listen and Learn workshops, the current status of monitoring, research, and conservation measures will be presented and EAHCP staff will look to those interested stakeholders to identify any additional information that they think needs to be considered in developing the formal permit submittal.

“One of the Listen and Learn workshops will be on climate change,” Childers noted. “We’ve heard a lot about this topic at our recent Committee meetings, and with a 30-year permit request, we will want to provide as much science as possible to project how changing climate might impact proposed programs.”

Storment concluded, “There have always been different parties with different interests sharing this one water resource that is the Edwards Aquifer. And just as trust levels improved during the Edwards Aquifer Recovery Implementation Program public process which started us down this path, I think we all took a major step forward when we began to implement the habitat conservation plan. This is where we started spending citizens’ dollars, putting complex programs in place and working together each day to make sure we complied with the federal permit. So, I think we are in a good place now and ready to move forward toward renewing our federal permit.

ONE THING WE DO KNOW, TIME WILL FLY BY AND I THINK WE’LL LOOK BACK IN 2028 AND BE GLAD WE STARTED WHEN WE DID.” ■

An aerial photograph of a person in a red kayak paddling down a river. The river is surrounded by dense, lush green trees and vegetation. The water is clear, showing the riverbed and some aquatic plants. The kayaker is wearing a white shirt and a white cap. The overall scene is bright and vibrant, suggesting a sunny day.

A DECADE OF DELIVERING

EAHCP CELEBRATES 10 YEARS OF HABITAT CONSERVATION

Photo: Volunteers.



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.

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 that it is still potable as it travels to homes



Photo: Sessom Creek Riparian Restoration

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 contributing and recharge zones. 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

#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 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.

It has been a decade of deliverance, so to speak. And here are the Top 10 milestones that the EAHCP staff have selected, that have 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.



Photo: Refugia.

#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.

Photo: Environmental Excellence Award.



#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.



Photo: Bank Stabilization.

A DECADE
OF DELIVERING

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.

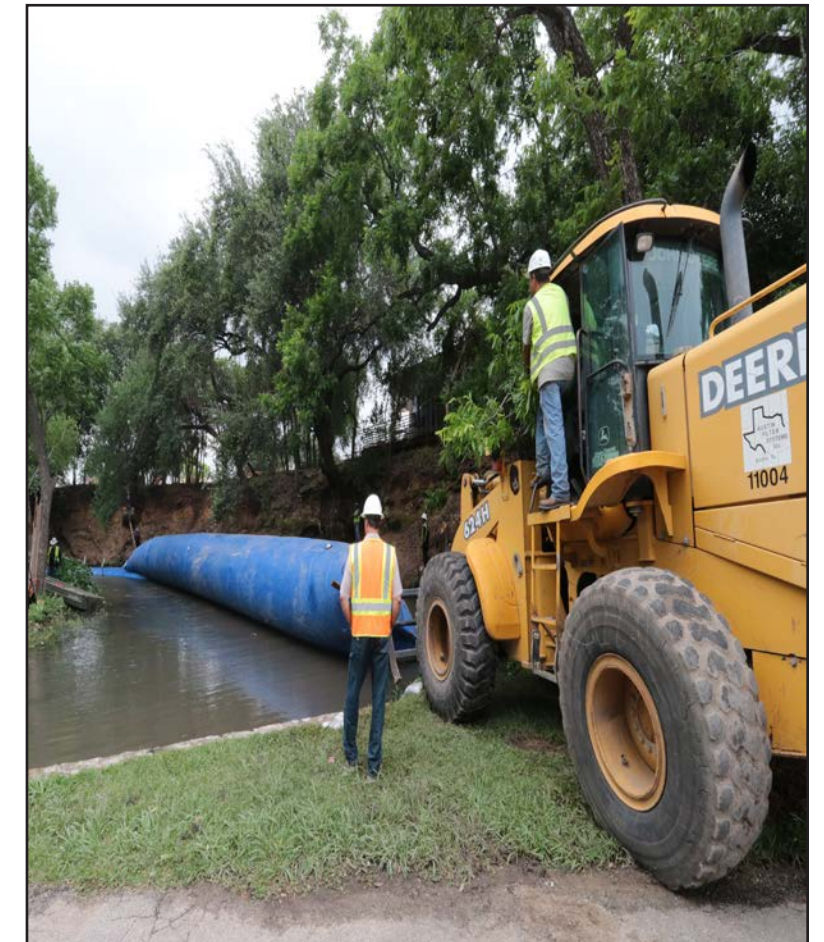


Photo: Bank Stabilization.

A DECADE
OF DELIVERING

Photo: Aquifer Storage and Recovery, (ASR).



Photo: Field research, Kristy Kollaus, EAA Environmental Scientist.

#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.”

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.

#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.



Photo: Volunteer.

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.

A DECADE OF DELIVERING

#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. ■



Photo: Research of San Marcos salamander to better understand reproduction in captivity.

Photo: EAA Geoscientist Taylor Bruecher, collects flow measurements at Helotes Creek.

HIGHLIGHTING

THE EAA'S WOMEN IN AQUIFER SCIENCE

ONGOING

Series

TAYLOR BRUECHER, GISP

Taylor Bruecher has been employed at the EAA for five years and currently works as a Geoscientist II. Her STEM career started after she received her bachelor's degree in Resource and Environmental Studies at Texas State University. While attending Sul Ross State University (SRSU), Alpine, Texas, for her master's degree, Taylor was employed by SRSU's cooperative "Adelante Tejas" project, a five-year partnership between SRSU and San Antonio College (SAC), promoting STEM enrollment and graduation rates at both institutions.

"While working with Adelante Tejas, I helped coordinate and participated in events to promote enrollment in STEM courses and interest in STEM career paths. I was also involved in coordinating field research trips in the Big Bend region, primarily on the Rio Grande, where we would assess fish populations, sample springs and surface water, and conduct flow measurements. These field trips gave undergraduates hands-on field experience and new perspectives as to what a career in STEM might look like."

Other responsibilities included being a teaching assistant for introductory and advanced geographic information systems (GIS), GIS laboratory technician, and mentoring undergraduates from both SAC and Sul Ross.

After the project ended, Taylor was looking to advance her STEM career. As someone who understands the importance of conservation and protections of water resources, she was looking for a company that shared her values. "The EAA has been actively dedicated to managing, enhancing, and protecting the Aquifer for decades, and is also dedicated to educating the public and stakeholders on the importance of groundwater and the direct actions they can take to support the EAA's goals." Taylor began her career at EAA as an environmental analyst, applying her skills in GIS for map production and data analysis, assisting in the conservation easement program, as well as contributing her time and skills in various agency projects. "One of the first major projects I was asked to take on was helping the Wells Team create a GIS model for the Abandoned Wells Program. The Wells Team compiled a set of criteria that I put into the model as a set of queries. Records of abandoned wells are then run through the model, returning a ranked list of wells, from most to least 'at risk.' The top five wells ranked as most vulnerable are then addressed with the funds allocated for this project." In October 2018, Taylor moved to her current position. "I was, and still am, so excited to be a



part of the Aquifer Science Team. I get to be involved in an array of interesting research projects, and am able to apply my knowledge and skill set to my current work. I am so grateful for the experiences I had working with my previous team. I feel like it gave me the opportunity to pursue my passions and advance my career." As a Geoscientist, Taylor is responsible for collecting and compiling hydrogeologic data, as well as creating maps and performing analyses using GIS. "Currently, I am working with staff to create a [Esri] StoryMap, which is a sort of interactive presentation, to inform and educate the public on the EAA's Field Research Park (FRP) and the ongoing and future research taking place." When not working on the FRP's StoryMap, Taylor is involved with various projects including producing maps for the annual water quality fact sheet, technical writing and data management for the Interformational Flow Study and providing GIS support to EAA staff.

One of Taylor's career highlights occurred before she was employed at the EAA. While at Sul Ross, Taylor worked on a project to determine estimated maximum discharge for Terlingua Creek at the HWY 170 bridge using Manning's Equation. Her project won her an award from the Texas Academy of Science. "It was my first research project in my first semester of graduate school. It was such an honor to be acknowledged, especially at the start of my graduate career." Another career highlight occurred in the Summer of 2021, when Taylor successfully passed the GISCI Geospatial Core Technical Knowledge Exam® and became a Certified GIS Professional (GISP®). "Studying to become a GISP® was so stressful and nerve-racking. I thought to myself 'I've been doing this for 10 years, I've got this!' But I so was wrong! GIS is so multifaceted, and I would consider myself a pro in maybe half of those facets. I studied for weeks but walked out of the four-hour test not feeling very confident. After four weeks of waiting for the results, I was so excited and relieved to receive a congratulatory letter saying I passed the exam - on my first try!"

Taylor's advice to future female STEM is something one of her mentors told her early on in her STEM education. "The best advice I ever received was 'make them play with you.' I was on a seven-day research trip on a very isolated stretch of the Rio Grande, and the only female.

I had been feeling overlooked and disregarded most of the trip, though I knew I had just as much to contribute as everyone else there. A mentor of mine was on the trip, too, and I think he could tell I was feeling frustrated and left out. He just looked at me and said, 'make them play with you.'

"IT WAS VALIDATING TO HAVE SOMEONE ACKNOWLEDGE WHAT I WAS EXPERIENCING. THERE WILL BE TIMES THROUGHOUT YOUR CAREER WHERE YOU WON'T FEEL HEARD OR ACCEPTED. MY ADVICE IS TO SPEAK UP AND ASSERT YOURSELF, ESPECIALLY WHEN YOU ARE FEELING EXCLUDED. YOU HAVE JUST AS MUCH TO OFFER, IF NOT MORE, AS ANYONE ELSE. THERE ARE SO MANY PEOPLE WHO WANT TO SEE WOMEN IN STEM SUCCEED. FIND THOSE PEOPLE!"



Photo: EAA Geoscientist, Taylor Bruecher, collects flow measurements at Helotes Creek.

Gizelle Luevano, Sr. Geoscientist, has been employed with the EAA for 21 years. Gizelle knew she wanted to join the EAA since she was a senior at McCollum High School. "I remember watching the news one day after school and there was a story on the Edwards Underground Water District (EAA's predecessor). I stopped doing my homework, looked at the TV and told myself that I was going to work there. Six months after graduating from St. Mary's University with a bachelor's degree in Geology, I was hired on as a part time records clerk at the EAA. At that time, all I wanted was to be an EAA employee because they researched the Edwards aquifer and I wanted to be a part of that."

After a short time at the EAA, Gizelle was able to secure a full-time job as an Environmental Science Technician. "When I received my promotion, I was thrilled. In my mind, I had succeeded. I was getting paid to do something that I truly enjoyed. I was always out in the field, collecting water quality data, assisting with hydrologic studies, or helping others when they needed help.

After earning her master's degree, Gizelle was promoted to hydrologic data coordinator in December 2012.

"Once I earned my master's degree, doors started to open. I was promoted and my responsibilities shifted from collecting water quality data to coordinating sampling events, writing technical reports, compiling data for the annual water quality fact sheet, and presenting technical briefings when needed. With these added responsibilities, I made sure to use my time management and organization skills to help me remain focused on my projects and not to miss deadlines. In January 2014, Gizelle decided to pursue her educational doctorate. "One of the reasons I went back to school was because a supervisor suggested that it was a needed step to move beyond the technician level and advance my career at the EAA. Earning my doctorate degree was a challenging and rewarding experience and did open even more doors for me. I was again promoted to my current role in 2014, where I now oversee our internship program as a social scientist working to mentor and grow the STEM workforce. Our interns help to build our legacy as an agency and working with them is both fun and rewarding."



and mentor the next STEM workforce. Working with the interns is both rewarding and fun for me. In my mind, our interns are our legacy because they will represent EAA when they enter the STEM workforce." Gizelle's advice to women interested in STEM is to follow your dreams and to not listen to those who say you cannot have a STEM career. "Follow your passion because that will give you longevity in your career and do not listen to those who discourage you from following your dreams. Before I graduated from McCollum High School, three people approached me and said that earning a bachelor's degree was out of my reach and that I should focus on a trade skill instead of a STEM career. If I had listened to them when I was 18 years old, I would not have a career that I love and I would have never been able to call myself Dr. Luevano."

"PEOPLE APPROACHED ME AND SAID THAT EARNING A BACHELOR'S DEGREE WAS OUT OF MY REACH AND THAT I SHOULD FOCUS ON A TRADE SKILL INSTEAD OF A STEM CAREER. IF I HAD LISTENED TO THEM WHEN I WAS 18 YEARS OLD, I WOULD NOT HAVE A CAREER THAT I LOVE AND I WOULD HAVE NEVER BEEN ABLE TO CALL MYSELF DR. LUEVANO." ■



This ongoing series has been featuring up-and-coming women scientists of the EAA and will present its fifth and final installment on our next edition.



Photo: Gizelle Luevano, EAA Sr. Geoscientist, and Faith Goddard, University of Texas-San Antonio STEM Graduate Student, collecting water quality samples from Comal Springs 7, New Braunfels, Texas.

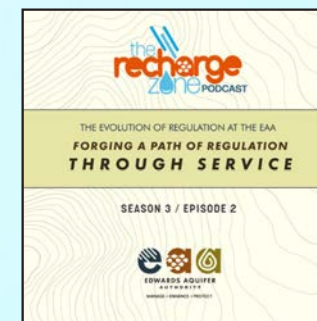


SEASON 3
the recharge
zone
PODCAST



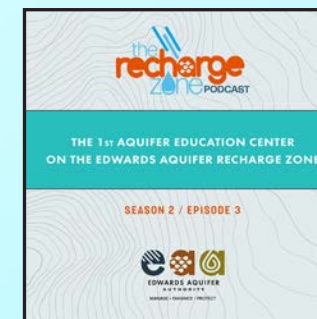
Episode 1 | Looking ahead in 2022 with General Manager Roland Ruiz

In this episode, hosts Ann-Margaret and Brent welcome back EAA GM Roland Ruiz to recap all the progress the agency made in 2021 and get his perspective on the Next Generation and Beyond strategic plan as he celebrates 10 years of being the General Manager for the EAA. From the highly anticipated grand opening of the EAA Education Outreach Center to all the research taking place at the EAA Field Research Park, and the next chapter for the EAHCP as it celebrates its 10th year ensuring a suitable habitat exists for the covered, threatened and endangered, species in both the San Marcos and Comal Springs.



Episode 2 | The Evolution of Regulation at the EAA - Forging a Path of Regulation Through Service

The EAA officially began as regulatory agency back in 1996, and the regulatory programs that relate to groundwater production and protection are crucial to the overall mission of the EAA. Tune in to this episode as hosts Brent and Ann-Margaret interview EAA Executive Director for External and Regulatory Affairs, Marc Friberg, about regulation through service, how the agency works with other entities and organizations, and carries out its mission to ensure the quality and quantity of water in the Edwards Aquifer for 2.5 million South Central Texans.




Episode 3 | The 1st Aquifer Education Center on The Edwards Aquifer Recharge Zone


On this episode, hosts Ann-Margaret and Brent discuss the highly anticipated EAA Education Outreach Center (EOC), which is the first aquifer education center situated on the Edwards Aquifer Recharge Zone. Mike De La Garza, EAA Executive Director for Communications and Development and Sarah Valdez, EAA Senior STEM Outreach Educator discuss the history behind this partnership with Morgan's Wonderland Camp, the immersive STEM educational offerings, and how you can schedule your visit to the center. This episode will go live on Wednesday, March 30th.


Recharge Zone Podcast:


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