

EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - March 2021



Passion Personified

Rachel Sanborn, center, leads the way in promoting a healthy San Marcos River

Enthusiasm was once described as “the electricity of life,” and Rachel Sanborn’s absolute love of the San Marcos River is unmistakably electric. After only a few minutes of discussion about the topic, you can actually feel yourself absorbing her passion for this unique South Texas natural resource, and then wanting to ask “how can I help?” Maybe that’s why she has been at the top of the leaderboard when it comes to training and involving citizen scientists in the San Marcos River Rangers’ weekly water quality testing program performed at about 30 locations along the river.

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River Rangers - Continued

“In 1997, I was looking for a way to volunteer in protecting the San Marcos River and this opportunity seemed fairly simple. So, I took the training to be a citizen scientist,” Sanborn described. “The task, which required going out once a month to do some water quality testing, really fit nicely into my work and family schedule. So, I jumped in. I didn’t have a background in the sciences but this group has always been about inviting everyone from the public into our work. And they have definitely shown up to help.”

The River Rangers volunteer group, the largest group of its kind in Texas, is run by the San Marcos River Foundation (SMRF). It is also a part of a statewide program called “Texas Stream Team.” The citizen volunteer groups began during the mid-1970s when the U.S. Environmental Protection Agency started creating a set of environmental regulations for the country. They knew they wouldn’t have enough scientists to conduct the level of testing required in the regulations, so they initiated citizen volunteer groups to assist



Winterle and SAWS’ Patrick Shriver celebrate agreement allowing EAHCP to utilize SAWS ASR facility to store water for future droughts.

with that. Sanborn noted that even today, while there are many agencies and contractors who do water quality sampling throughout the year, those organizations do not have the capacity to conduct sampling every week and are not able to physically observe the river on a regular basis. So, the River Rangers and other groups like them fill in the gaps.

“Currently, there are about 70 Rangers who go out at various times of the month to conduct the water quality sampling and at times just to observe any changes in the river,” Sanborn said. “South

Texas has an interesting climate in that we get floods, droughts and even the occasional snow storm as we experienced in late February. That type of weather can certainly change a stream over time. We want to be there to make note of those changes and make sure we get that information to the proper authorities.”

Over a year, the Rangers will take approximately 450 water quality samples. Sanborn says she understands that might be a bit excessive for such a comparatively short stretch of river. But, in the case of the San Marcos River and San Marcos Springs which are home to several endangered species, they have good cause for that level of participation from the community.

The large amount of data produced by the group is first reviewed by SMRF. After they analyze the information for trends and other types of potential environmental changes, they forward the reports to the Texas Stream Team (TST). TST input the data into an online viewer that is easily accessible to government officials, the public and interested stakeholders. Ultimately, the sampling statistics are collected by the Texas Commission on Environmental Quality (TCEQ). TCEQ then compiles water quality sampling results from around the state and publishes that information every five as part of the TCEQ Clean Rivers program.

River Rangers - Continued

“Most people who know a little about the San Marcos River might think that this level of sampling might be overkill. They see the consistent clarity of the water, the temperatures are always about the same and overall it just looks beautiful,” Sanborn stated. “But, there are many things that you can’t see. For example, the headwaters of the river is near a very active and developed part of the City of San Marcos. So, we can get



Winterle explaining benefits of major recharge spike.

various types of pollutants and sediment running off into the river. Not surprisingly, our sampling has reflected that slight decrease of water quality in that area. The finding was also confirmed by Texas Stream Team and TCEQ. Because of the potential for pollution there, the staff and member organizations of the Edwards Aquifer Habitation Conservation Plan (EAHCP) are focusing on that area and working to find solutions to prevent pollution from entering the river and causing harm to the endangered species habitat.”

While the River Rangers are producing large quantities of water quality samples and accompanying data, they do not need to work with a water quality testing lab. Their water quality testing kit used on site includes the capability to test for pH, dissolved oxygen and conductivity which measures how much sediment is in the sample. Additionally, they run E.coli tests primarily during the summer months when overflow crowds of tubers descend on the San Marcos River to enjoy a relaxing trip downstream. If SMRF ever comes across a serious issue found in any of the water quality samples, they can reach out to a licensed lab for further examination of the water.

Sanborn’s leadership in growing and sustaining the River Rangers over a couple of decades was recently recognized by Texas Stream Team with the Golden Secchi Award for her efforts. In October of 2018, Texas Stream Team celebrated training its 10,000th citizen scientist, and decided to commemorate that milestone by creating a yearly award to recognize one dedicated citizen scientist of the year. The award winner’s name is etched into the trophy which remains on display at Texas Stream Team Headquarters.

“That was definitely a very nice award to receive,” Sanborn acknowledged. “I’ve trained about 700 people over my years with the River Rangers and I think I’d like to get to 1,000 someday. People should know that Texas was an early adopter of the Texas Stream Team and there are groups all over that state who do this kind of work. The San Antonio River Authority has a new, very enthusiastic group now. Their volunteers even came to San Marcos during the months of the pandemic to get in some additional work. Overall, this has been a very rewarding life experience. I’ve met some truly wonderful people and ultimately we’ve been able to help the community increase its appreciation of the San Marcos River and its ecosystem.”y component and how much we estimate just percolates into the ground. While we say that the recharge calculation is a bit uncertain, especially during flood events, we know that when we sum up recharge estimates over the years and add actual pumping and springflow numbers, we are able to get a good picture of springflows and water levels as measured. So, while a certain month of recharge estimates might be off 10-30 percent, over a longer period, the data evens out.



EAHCP STEWARD SHORT TAKES

EAHCP Joint Stakeholder and Implementing Committees Meeting Slated for March 18

A joint meeting of the Edwards Aquifer Habitat Conservation Plan (EAHCP) Stakeholder and Implementing Committees will be held **Thursday, March 18, 2021 at 10:00 A.M. on Microsoft Teams**. The Implementing Committee will convene after the Stakeholder Committee.

Details on these agenda items are accessible on the EAA Granicus System. Public comments can be sent to dchilds@edwardsaquifer.org.

How to Become a Citizen Scientist - Join the Texas Stream Team

The Texas Stream Team, formerly known as Texas Watch, at The Meadows Center for Water and the Environment, is a statewide environmental education and volunteer-based water quality monitoring program. Through Texas Stream Team, citizen scientists are trained to collect and submit surface water quality data that can then be used to promote and protect the 191,000 miles of Texas waterways. Texas Stream Team brings together community members, students, educators, academic researchers, environmental professionals, and both public and private sector partners to conduct scientific research and promote environmental stewardship.



Want to learn more about becoming a citizen scientist in your area? You should take a few minutes to visit the Texas Stream Team website to read about the duties and training opportunities in your areas.

<https://www.meadowscenter.txstate.edu/Leadership/TexasStreamTeam.html>

Job Opportunity with the Edwards Aquifer Authority

The Edwards Aquifer Authority is looking for a creative manager to provide creative direction and design for the marketing and communication outreach of the EAA. You can learn more about the opportunity at:

<https://www.governmentjobs.com/careers/edwardsaquifer>.