



# EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - October 2020



## The Art of Balance

*Texas State Researchers Learning about the Impacts  
of Recreation on Texas wild-rice*

*Dr. Kimberly Meitzen*

Henri Matisse, a master of 20th century art, once said, “What I dream of is an art of balance.” That quote was never more applicable as when it is applied to evaluating and protecting the Texas wild-rice in the San Marcos River.

Over the summer, Texas State University Geography Department faculty and graduate students took advantage of the COVID-19-reduced recreation on the San Marcos River to take a close look at how Texas wild-rice fared with practically no human contact. Observations made during this study have introduced the groundwork for a future community discussion regarding the proper balance of recreation and the preservation of the ecological system.

“We took the opportunity of the COVID restrictions on recreation in the river to learn more about Texas wild-rice and how it recovers from people swimming through it, wading on it and floating over it,” said Dr. Kimberly Meitzen, an associate professor with Department of Geography at Texas State.

## Texas wild-rice Research - Continued



*Kevin Colgan demonstrates drone work.*

“Additionally, we worked with Dr. Jason Julian in our department and his team who are studying the social aspects of the river. We all know that the San Marcos River is one of the most popular places in this part of Texas for tubing and other recreation. But, there is no escaping the fact that the river is also part of an environmentally-sensitive ecosystem home to many endangered species, including Texas wild-rice. So, in the end, we hope our research helps create the dialogue between the

San Marcos community, Edwards Aquifer Habitat Conservation Plan team and other stakeholders on how visitors and the ecosystem viably coexist.”

Texas wild-rice (TWR) is a perennial aquatic grass. It is only found in the San Marcos River and was one of the first Texas plants listed (1978) on the U.S. Fish and Wildlife Service’s Endangered Species List. The full range for Texas wild-rice extends from the headwaters of the San Marcos Springs to the just upstream of the San Marcos River’s confluence with the Blanco River. However, it is most abundant in the first two miles of the upper San Marcos River.

The plant grows submerged underwater and becomes emergent when the leaves and flowering stalk grow above the water surface. The TWR leaves are referred to as “culms” and can grow 1-2 meters in length. TWR only flowers in its emergent state, with separate male and female flowers on the flowering stalk. Texas wild-rice reproduces sexually through seed production or through asexual propagation by TWR fragments breaking off and replanting downstream.

Texas wild-rice can grow in a range of flow depths from 0.5 - > 2 meters, and requires clear, cool, and good-quality flowing water to survive which the San Marcos Springs provide. TWR an important part of the river’s ecosystem as it enhances oxygen in the water and creates physical habitat for a diversity of aquatic organisms.

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## Texas wild-rice Research - Continued

“Although we were specifically looking at changes linked to varied recreation pressures on Texas wild-rice from different phases of the river parks opening and closing, we want to use the data we’ve gathered over that past few months as means to create a long-term research effort,” Meitzen noted. “We want to observe seasonal changes in the growth and reductions of TWR based on recreational concentrations. The drone data we are gathering with Dr. Jennifer Jensen in the Geography Department and her flight crew will also help us with defining areas in the river that may need more conservation attention. For example, we might



*Dr. Kimberly Meitzen and Dr. Jason Julian*

discover that our scientific areas which tubers must go around might need to be increased in number, enlarged or maybe moved up or down the river to better protect the [plant]. We’ll also be keeping track of how various flow levels play into the overall evaluation of how we best protect Texas wild-rice. But, one thing is for certain, we must work hand-in-hand with how the community views the river in order to hopefully find that proper balance for everyone.”

Dr. Julian explained that his team has been looking at the social demand aspects of the San Marcos River since 2015. Since then, they have conducted approximately 3,200 surveys with people visiting the river.

“We know that there has been a great deal of ecological research on the San Marcos Springs and the river. And we know that this is a hugely popular place to recreate. But, what we haven’t really dug into too deeply is what the people who come here want from the river,” Julian commented. “Our survey was 49 questions long and took 15-20 minutes to complete, so you can imagine the time our team has put into gathering this data. But, when you break it all down, visitors don’t want to see the river full of people and they love the clear, clean water in the river.”

Using drone images of the river, Julian’s team was able to calculate that the river has a recreational capacity of about 2,100 people at one time when you include the protected areas of the river where visitors are not allowed.

“There are some places like Jacob’s Well, Hamilton Pool and the Blue Hole which have limited visitor access to preserve those special natural resources,” Julian said. “Currently, there are no limits on visitors to the San Marcos River and we know that the population is only going to grow over time. Essentially, visitors and the Texas wild-rice want the same things...fewer people and consistently clear water. How we make them both happy over the long run will be a great discussion to have.”



# EAHCP STEWARD SHORT TAKES

## Make Plans to Attend the National Habitat Conservation Plan Coalition Annual Meeting - November 17-18

The 2020 National Habitat Conservation Plan Coalition Annual Meeting will be held November 17-18 via video conference. Topics include updates from the USFWS, tracking HCP successes and lessons learned from HCP planning. Additionally, Dr. Kimberley Meitzen will be providing a presentation on the impacts of recreation on Texas wild-rice and aquatic vegetation and Dr. Chad Furl will be presenting an overview of managing groundwater-dependent threatened and endangered species. This year's keynote speakers are Bruce Babbitt (former Secretary of the Interior and Governor of Arizona) and Dr. Mamie Parker (former Assistant Director of Fisheries and Habitat Conservation for the USFWS).

To register to this free event, please visit: <https://www.nhpccoalition.org/>



Join us!  
National Habitat Conservation Plan Coalition's  
**ANNUAL MEETING**  
virtual! free! 2020

National HCP Coalition  
**NOVEMBER 17 & 18**  
10 AM - 2 PM PST

**KEYNOTE SPEAKERS**  
Bruce Babbitt  
Dr. Mamie Parker

The annual meeting brings together HCP practitioners from across the country, including federal, state, and local agency staff, consultants, stakeholders, policy experts, and scientists.

**TOPICS INCLUDE**

- Updates from USFWS Headquarters
- Communicating and tracking HCP success
- Agriculture's role in conservation
- Monitoring species' response to management actions
- Impacts of COVID/pandemic policies on HCP implementation
- Management of groundwater-dependent ecosystems for species
- Permit integration (aligning ESA, 404, NEPA, MOAA for streamlined permitting processes)
- Lessons learned from HCP planning and implementation

Visit [www.nhpccoalition.org](http://www.nhpccoalition.org)  
Register by 11/6 at <http://tiny.cc/nhpcp>

QUESTIONS John Hopkins | (530) 756-6455 (Note: PST) | [john4eh@gmail.com](mailto:john4eh@gmail.com)

## 2020 Dos Rios Watershed Cleanup Happening Entire Month of October

For 2020, the Dos Rios Watershed Clean-up is going to be a little different than the clean-ups of previous years. The City of New Braunfels is hosting a month-long watershed clean-up challenge where participants can choose their own clean-up locations and attempt to collect as much trash as they can pick up in a month. This will be a great way to get out of the house, bond with family and friends and help keep New Braunfels' beautiful waterways clean and clear of trash. [Click this link to find out how to participate this year.](#)



## Sessom Creek Work Day Scheduled for October 26

The Sessom Creek cleanup day will be happening in San Marcos on Saturday, October 26. Participants will be removing invasive ligustrum, constructing contour terracing, dragging small brush to be chipped, pulling invasive seedlings, broadcasting native seeds and removing trashing. Please wear closed toed shoes. All tools needed for the work will be provided. [Click here to find out more about the event and to sign up.](#)