Spring Lake Dam - Continued


# Turning Back the Tide

*EAHCP's Riparian Restoration in New Braunfels, San Marcos Taking Hold*


Aaron Hoot with EBR

As you walk along the trails that lead to the Wetlands Boardwalk at Spring Lake in San Marcos, you'll run into a small, rickety-looking tin shed. As you enter, you're met with the printed words "Turning Back the Tide." At the very bottom of the colorful poster, you connect that title to information about an amazing ecosystem restoration project in progress. It's not only collaborative among various state and regional agencies, but heartfelt by local volunteers who understand that help is needed to give these unique natural areas a chance to be renewed after decades of non-native plant incursion.

Essentially, riparian restoration reestablishes native vegetation along the banks of a waterway to prevent stream bank erosion, provide a healthy vegetative buffer, and improve water quality. The riparian restoration process involves the removal of non-native vegetation, the subsequent planting of native vegetation in removal areas, and continued maintenance to prevent reestablishment of non-native vegetation. The EAHCP implements riparian restoration strategies in the San Marcos and Comal Rivers and along Landa Lake in a targeted effort to protect and enhance habitat for the endangered species like the fountain darter, Texas blind salamander and Texas wild-rice.

**Riparian Restoration - Continued**

“When you talk to people about riparian restoration in San Marcos and New Braunfels, it’s sometimes a little hard to get across the depth and importance of the work happening here,” said EBR Enterprises CEO Eric Ruckstuhl. “The San Marcos and Comal Springs are unique ecosystems. But, over the years, people changed the natural beauty of these areas into a predominantly non-native riparian system that was literally choking out the native plants and wildlife that inhabited the areas for thousands of years. Most of it was unintentional, however, all of it had a detrimental effect on the native environment.”

EBR Enterprises has been working with the City of San Marcos for five years and New Braunfels for about two years to achieve the EAHCP’s riparian restoration conservation measures. In that time, EBR has removed non-native vegetation from approximately five acres of riparian area along the Old Channel of the Comal River and Landa Lake in New Braunfels. And, it has completed an initial treatment of over 50 acres of invasive plants along the riparian edge of the San Marcos River. The non-native vegetation targeted by EBR primarily includes Ligustrum sp., Chinese Tallow, Chinaberry, Arundo Cane and Elephant Ear.

According to EBR’s non-native removal statistics, approximately 900 Ligustrum sp., 450 Chinese Tallow and 175 Chinaberry have been treated and removed in New Braunfels. Countless Elephant Ear, which once enveloped large portions of Landa Lake and the Old Channel of the Comal River as well as Spring Lake and banks of the San Marcos River down to Cape’s Road, have been removed. Arundo Cane, which is a bamboo-like plant that came from the Northeastern parts of the country, have also been treated and removed from large portions of both systems. Additionally, EBR’s riparian restoration work has included installation of erosion control berms and planting of native vegetation such as American Beauty Berry, Virginia Creeper and Elderberry.

“The Elephant Ear is probably the best example of how a non-native plant can overcome a significant part of a waterway and the native plants and animals there,” Ruckstuhl explained. “Growing in the water, their roots grow together to create an almost impenetrable mesh. Plus, they soak up huge amounts of water. So, the root networks stifle habitat for native fish and the plants use water that the now-endangered fish species thrive in. In Landa Lake, we removed one Elephant Ear root that was about three-and-a-half feet long and weighed 30 pounds. Just astounding. And very damaging.”

In addition to the riparian restoration work EBR is implementing, the EAHCP contracts with BIO-WEST, Inc. to improve riparian habitats for the benefit of the endangered Comal Springs riffle beetle. This riparian restoration is being done along the western shoreline of Landa Lake and the Spring Runs where many of the beetles can be found. Activities include the planting of native vegetation to increase bank stability, decrease erosion and sedimentation and increase the amount of usable habitat and food sources.

EAHCP also works with Cuda Conservation, LLC, the Conservation Crew and various volunteer organizations in San Marcos to remove non-natives and plant natives along the banks of the San Marcos River.

“Thanks to EAHCP contractors and dedicated volunteer efforts, riparian restoration along these spring systems has come a long way in reestablishing the native landscape. So, while the tide is turning, there is still a fairly steep hill to climb,” Ruckstuhl explained. “But, the good news is that we’re on the right road. And the EAHCP work in New Braunfels and San Marcos are perfect examples of how a native system can recover if you give it just a little bit of help, care, and vigilance.”

“Because there is a [U.S.] Fish and Wildlife Service incidental take permit associated with this area, we have been working hand in hand with the Fish and Wildlife biologists in San Marcos to ensure we are protecting the endangered species before any heavy machines or workers enter the areas around Spring Lake Dam,” Colucci explained. “In fact, this has been a great opportunity for Fish and Wildlife to collect some fountain darters and salamanders for the refugia located in San Marcos, which they are required to do each year as

**Riparian Restoration - Continued**

part of the Edwards Aquifer Habitat Conservation Plan. We have also been in regular contact with the Meadows Center [for Water and the Environment] at Texas State on protection of Texas wild-rice. Any time contractors are working in the water, we have a biologist there to inspect the area prior to work beginning. Everyone involved with the project understands our role and has been thoroughly supportive."

The biological team's responsibility is to ensure that the species are found and moved to other locations before work on the dam for the day is undertaken. They also monitor the turbidity and overall water quality in the river near the dam as construction has progressed to make sure the species aren't inadvertently harmed by excess dirt or other debris running off from the construction site.

"Overall, I think things have progressed nicely so far," Bynum concluded. "We still have a few months to go, but with everyone pulling together, communicating well and headed in the same direction, we're confident that we can solve our near-term issues with Spring Lake Dam and then be ready to look at that long-term fix."


## Dos Rios Watershed Clean-Up Set for Sept. 21

The City of New Braunfels, with the help of local partners and sponsors, is hosting the 3rd Annual Dos Rios Watershed Clean-Up onÂ Saturday, September 21st from 9 AM until noon. In case of inclement weather on September 21st, October 5th has been selected as a rain date for the event. This year the City of New Braunfels is partnering withÂ Headwaters at the Comal. The Headwaters at the Comal grounds will be our morning meeting location, a clean-up location, and where everyone will meet for lunch once the clean-up has wrapped up. You can read more about the event and sign up for activities at this link.

## San Marcos Dam Update

Last month, EAHCP Steward did a feature story on the construction work happening at the San Marcos Dam near the San Marcos Springs. The photo above shows that the work has been completed. Congrats to Texas State University for diligently pursuing shoring up of that historic structure in San Marcos.

**SPLASH Festival in San Marcos Starts Sept. 11**

The Mermaid Society of San Marcos serves as a catalyst for community engagement for the protection and preservation of the San Marcos River. Their goal is to help broaden awareness and to increase participation with various river protection efforts organized by city and community groups.

Since 2016, the Mermaid Society of San Marcos has staged the SPLASH Festival. It includes festivities, symposiums and events throughout two weeks in September. It culminates with the Mermaid Art Ball, the Downtown Mermaid Promenade - a parade through the city - and the Mermaid AquaFaire, a Riverside celebration for all.

You can read about all of the SPLASH Festival events here.

# Volunteer Opportunities

Here are some groups you might consider contacting to volunteer to help the EAHCP keep the Comal and San Marcos Springs and Rivers clean.

**New Braunfels**
Headwaters at the Comal Springs - www.headwatersatthecomal.com
Comal County Master Gardeners - www.txmg.org/comal
Comal County Master Naturalists - www.comal.agrilife.org/master-naturalists
Comal Trails Alliance - www.comaltrails.org
Native Plant Society of Texas-New Braunfels Chapter - www.npsot.org/wp/newbraunfels
Native Plant Society of Texas - Lindheimer Chapter - www.npsot.org/wp/lindheimer/
Comal County Conservation Association - www.comalconservation.org

**San Marcos**
San Marcos River Foundation - www.sanmarcosriver.org
San Marcos Greenbelt Alliance - www.smgreenbelt.org
Hays County Master Naturalists - www.haysmn.org
Hays County Master Gardeners - www.txmg.org/hays
Discovery Center - www.sanmarcostx.gov/873/Discovery-Center
Conservation Crew - Email Eric Weeks at EWeeks@sanmarcostx.gov