

# Ecological Restoration Brief

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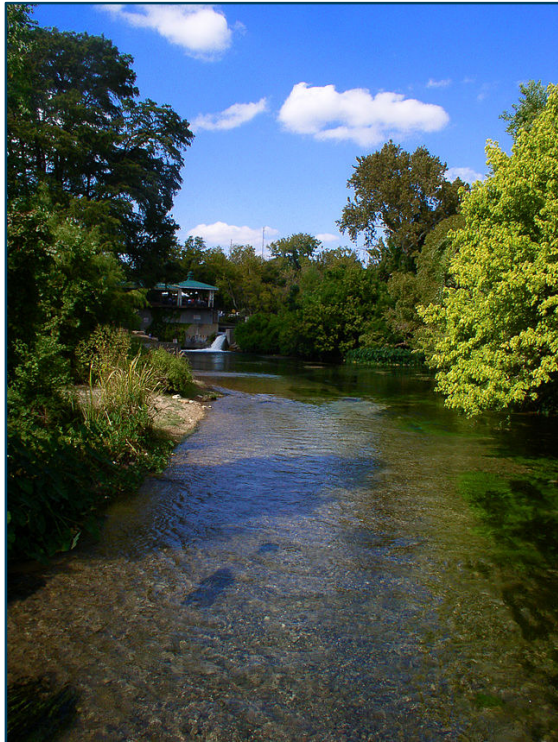
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## Spring Lake and the San Marcos River: Transformation to Restoration

Leslie Dietz

Masters Candidate, Department of Biology, Texas State University  
San Marcos, Texas

On any given day along the San Marcos River, people can be encountered—recreating, researching, relaxing and learning. Realized or not, these individuals are observing one of the most unique river systems in the state.



**San Marcos Springs**  
Photo credit: Wikipedia

The San Marcos River emerges from more than 200 springs located in Spring Lake. Located 30 feet below the water's surface, these springs exhibit a quiet beginning that flows into a glorious and dynamic river, emitting 130 million gallons of water per day. Spring Lake, known to many seasoned Texans as the former Aquarena Springs Amusement Center, is thought to be one of the longest continually inhabited sites in North America (Sansom 2013). An archaeological excavation produced artifacts dating to more than 12,000 years ago, providing hard evidence of human inhabitation and use of these springs.

Discovered in the modern era by Spanish explorers in 1691, Europeans settled the area until shortly after Texas won its independence, when the Republic of Texas established Post San Marcos in 1840. In 1845, General Edward Burleson purchased the site and four years later constructed Spring Lake dam, which raised the water level by 3.5 meters over the spring outflows (Kollaus 2015). The property was sold to A.B. Rogers for the purpose of creating a tourist destination in 1926 (Sansom 2013).

The continued anthropogenic influence on this water system has had cumulative and profound effects. Since the establishment of Post San Marcos in 1840, the city has

exponentially increased at a rate of 3% over 129 years and was listed as the fastest growing city in the United States in recent years (Kollaus 2015). With the increased human presence and varied use, modifications to the stream morphology have altered plant and animal communities.

The San Marcos River was dredged and dammed, with rock and gravel added to form Sewell Park in 1917. A golf course and hotel were added at the headwaters (Spring Lake) in 1928 and the quirky shows of Aquarena Springs began in 1950. From 1944-1970, aquatic vegetation was harvested (up to 700kg/day) and sold so that exotic aquatic vegetation could be cultivated for the same process (Kollaus 2015). Upon acquiring Spring Lake in 1994, Texas State University began to implement restoration techniques to improve habitat and educate the public.



**San Marcos River**  
Photo credit: [www.texaswildricefestival.org](http://www.texaswildricefestival.org)

A unique restoration opportunity exists when 170 years of urbanization with numerous artifacts is combined with biological records of 130 years of fish data and historical botanical data.

A lengthy stakeholder process resulted in the creation of the Edwards Aquifer Habitat Conservation Plan. This plan outlines a complex and lengthy restoration process for the aquatic system while allowing for low impact recreation: restoration and mitigation for the species of Spring Lake and scientific information and interactive displays to educate the public (EAA 2012).



**Texas Blind Salamander**  
Photo credit: **Greg Eckhardt**

The current use of Spring Lake is a fraction of what it once was due to the restricted use and access at the spring site, which is designated habitat for seven endangered species of animals and one plant species (Hardy 2014). With the removal of manmade structures, non-native vegetation, native plant propagation and plantings along with riparian reconstruction and restoration, Spring Lake is a worthwhile field trip for young and old to reconnect with a distinctive Texas river.

Today, the Meadows Center for Water and the Environment now inhabits the historic hotel site and engages more than 125,000

people each year to foster outdoor learning and stewardship of these treasured springs. While former attraction "Ralph the swimming pig" is no longer to be found at the springs, glass-bottom boats still operate and a wealth of information can be learned about this unique habitat and its ongoing journey.

Literature Cited:

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**The Society for Ecological Restoration, Texas Chapter promotes ecological restoration as a means of sustaining the diversity of life on Earth and re-establishing an ecologically healthy relationship between nature and culture.**

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