

# City of San Marcos & Texas State University

## 2016 TEEA Winner: Civic/Community



*Riparian work makes progress towards restoring a valuable ecosystem.*

Home to the university now called Texas State University for more than a century, in recent years San Marcos has seen tremendous growth and is regularly named the fastest-growing small city in the nation. Recreation on the beautiful San Marcos River has long been central to the lifestyle of residents and visitors alike. However, the recent population boom has left the city to address the challenges of compacted river banks, which, eroded and bare of native vegetation, allowed for the spread of invasive species. A rise in erosion from stormwater runoff has increased sediment deposition along various stretches of the river. The erosion has evoked concerns over water quality and degraded habitat for aquatic species unique to the region, including Texas wild rice and small invertebrates such as the fountain darter and the San Marcos and Texas blind salamanders. In response, the City of San Marcos and Texas State University outlined a plan to repair the damaged ecosystem in and along the increasingly urbanizing river.

The Riverine Enhancement for Endangered Species Protection Project is a collaboration between the city and university in alignment with the Edwards Aquifer Habitat Conservation Plan.

The project began with removal of invasive plants, particularly chinaberry and elephant ear. Beginning at the headwaters and working steadily south, the city invested in building out large, hard-surfaced river-access points to curb otherwise unrestricted foot traffic on rejuvenating banks. Temporary fencing and the innovative use of on-site resources (cut tree trunks and branches) have established an erosion-control buffer zone that allows native plants to mature. These plants then become important assets for enhancing water quality by filtering pollution from stormwater runoff and controlling erosion. Success can be seen in the recovery of endangered species such as Texas wild rice, which has seen significant increases in population due to the riverine enhancement.

Since the project began in 2013, an extensive list of partners and volunteers has restored 10,800 linear feet of riparian zone along the San Marcos River. With more than 6,000 logged volunteer hours, the community is heavily invested in the success of the work and protection of this iconic local natural resource. 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.

Years of hard work were put to the test in 2015 when record flooding hit throughout the county. In regions along the river where the Riverine Enhancement Project has been conducted, the banks held remarkably well. Through ongoing help from the community in and around San Marcos, the beauty and functionality of the San Marcos River will continue to be restored for Texans to enjoy today and for many years to come.