Riparian Restoration as part of a Habitat Conservation Plan

HABITAT CONSERVATION PLAN
EDWARDS AQUIFER

What is an HCP?

The HCP identifies conservation measures that protects endangered species

The EAHCP focuses on species in the Edwards Aquifer-fed Comal and San Marcos spring

The goal of the HCP is to protect those species from harm during the most severe drought to the extent required by state law (EAA Act) and federal law (ES Act)

WHY?

- Water needs within the region continue to impact the resource
- The region's stakeholders developed and adopted the HCP as a workable plan for long-term protection for the listed species while still meeting water demands
- Implementing measures to ensure minimum continuous springflows of the Comal and San Marcos Springs

Who are these Stakeholders?

City of San Marcos

Texas State University

City of New Braunfels

San Antonio Water Systems

Edwards Aquifer Authority

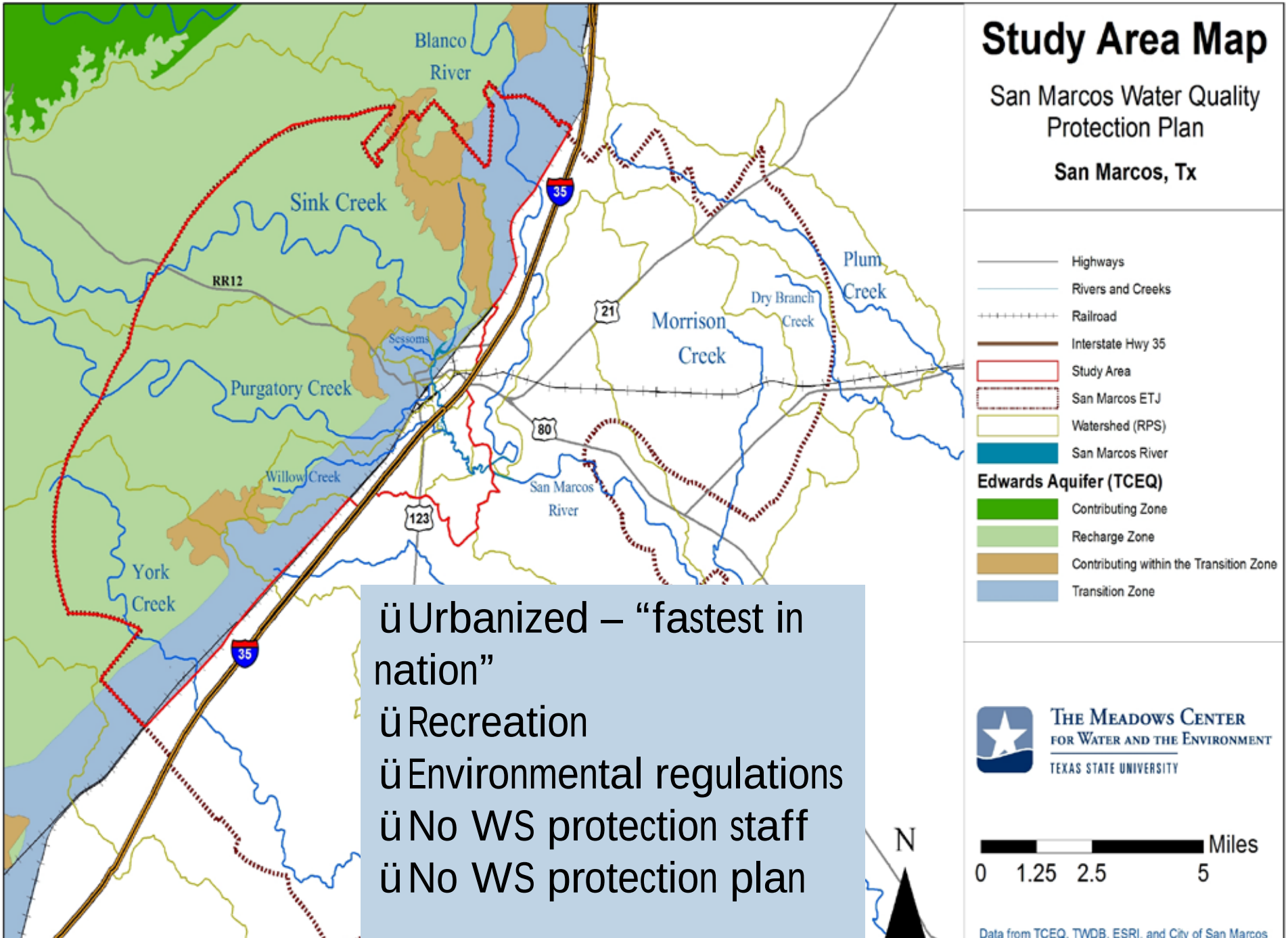
Covered Species

Fountain Darter

Riffle beetle

Texas wild-rice

San Marcos Salamander



- ü Urbanized – "fastest in nation"
- ü Recreation
- ü Environmental regulations
- ü No WS protection staff
- ü No WS protection plan

Sediment Removal - $500K

Sediment has accumulated at many locations due to the reduced scouring from installation of flood control dams, urbanization and natural processes.

- Altered the shape and natural dynamics of the San Marcos River
- Degraded listed species habitat
- Impacted survival and reproduction

Ground Penetrating Radar

State Scientific Areas (SSA)

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Texas Wild Rice Enhancement - $250K

- Texas wild-rice that have a high probability of success
- In Texas wild-rice and non-native vegetation stands, the non-natives will be removed and the original Texas wild-rice stand monitored for expansion.
- In optimal areas for Texas wild-rice that are unoccupied by Texas wild-rice, non-native vegetation will be removed and Texas wild-rice plants planted and monitored.

Invasive Species Removal - $35K

- Non-native, invasive species will be removed from Spring Lake and the San Marcos River.
- Species to be removed are:
  - Plecostomus (sucker mouth catfish)
  - Tilapia
  - Marisa cornuarietis (Ramshorn snail
  - Melanoides snails

Elephant Ear Removal

- Elephant Ears are an invasive species that dominates from headwaters to Blanco confluence

- HCP contractors are removing elephant ears from Spring Lake to I-35 through a drip and pulling process.

- Banks will be revegetated with native plants that will help minimize erosion and help to stabilize the river's banks.

- First step – willow wattling

Conservation Crew - $56K

- The Conservation Crew is a group of student workers for public education
- Crew works Thursday - Sunday during from May to September

Litter and Floating Mats - $50K

Household Hazardous Waste - $30K

Extend outreach and operational ability

to receive and process HHW

Water Quality Protection Plan - $300K

- The WQPP will address the needs of both the City and University for the following:
- Assessing existing watershed conditions
- Reviewing University and City technical documents that guide future development and construction, including:
  - Texas State University Construction Standards
  - City of San Marcos Land Development Code
  - City of San Marcos Stormwater Technical Manual
- Developing goals, priorities, and cost-effective solutions to water quality problems based on best available technology
- Reviewing proposed development projects on campus and in the city and providing recommendations for potential stormwater mitigation

Bank Stabilization - $967K

- Permanent access points will be combined with bank stabilization
- Bank is eroding due to clearing of riparian vegetation and intense recreational use.
- Natural rock will be used to create a stone terrace and the bank on either side will be densely planted

Bank Stabilization & Trail Improvements
San Marcos River · San Marcos, Texas

reation Engineering & Planning

Bicentennial Park

Riparian - $100K

Education & Public Outreach - $20K

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We want to get the word out!

And the word is –

Without these protected species,

we wouldn't have a river

For more information visit EAHCP.org