

The Upper San Marcos River Watershed Protection Plan

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Clean Rivers Program Steering Committee Meeting
August 20, 2020



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY



OUTLINE



Implementation Phase I



Implementation Phase I – SMGA & Mermaid Society



Implementation Phase II – Pending Award

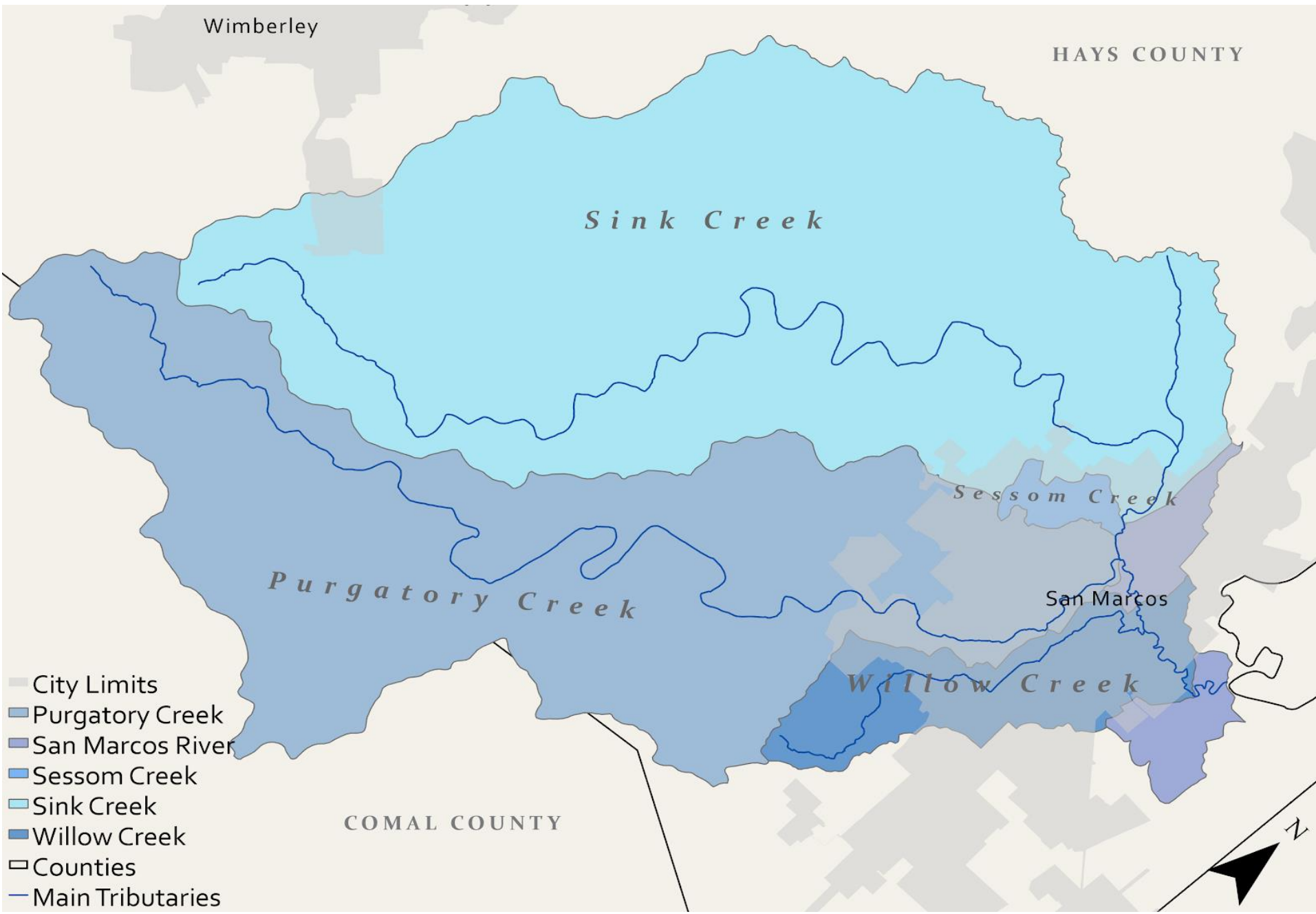


Texas Stream Team



Upcoming Meeting

THE UPPER SAN MARCOS RIVER WATERSHED



OUR VISION

A healthy watershed that supports a clean, clear, and flowing San Marcos River for the future as it was in the past.



An aerial photograph of a river winding through a lush, green forest. The water is a deep blue, and the surrounding trees are a vibrant green. The image has a blue overlay, giving it a serene and natural feel. The text "IMPLEMENTATION PHASE I" is centered in the middle of the image in a white, sans-serif font.

IMPLEMENTATION PHASE I

IMPLEMENTATION PHASE I OVERVIEW

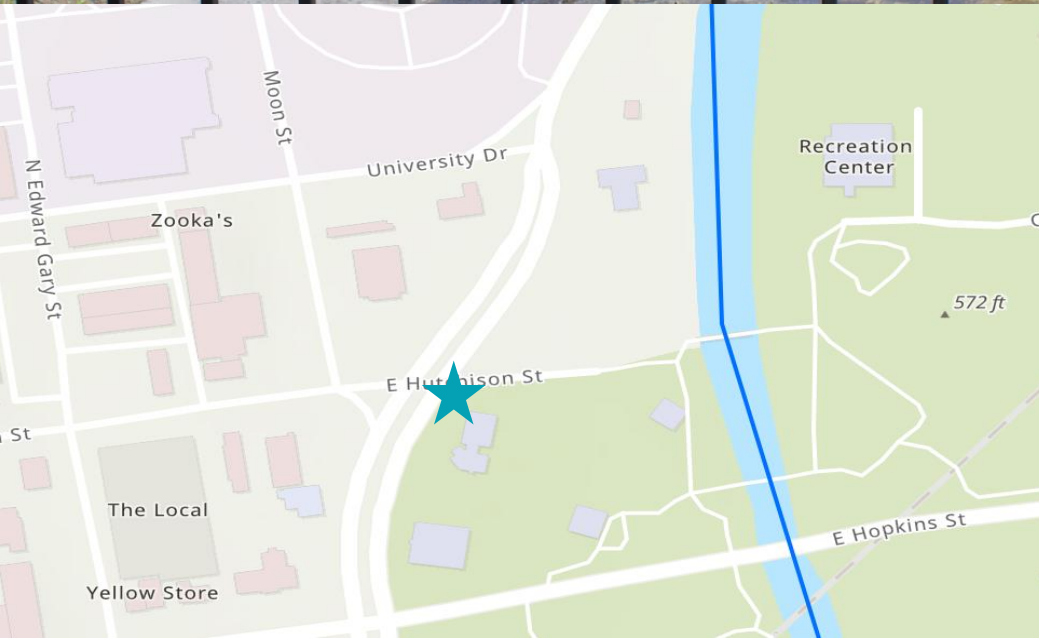
- Total Budget: \$299,522
 - Federal: \$179,713
 - Match: \$119,809
- Timeline: 8/22/2018 – 8/31/2020
- Main Tasks:
 - Task 3 - Best Management Practices (BMPs)
 - Task 4 - Education and Outreach
 - Task 5 - Ordinance Review
 - Task 6 - Monitoring Efforts



TASK 3 - HUTCHISON POND BMP

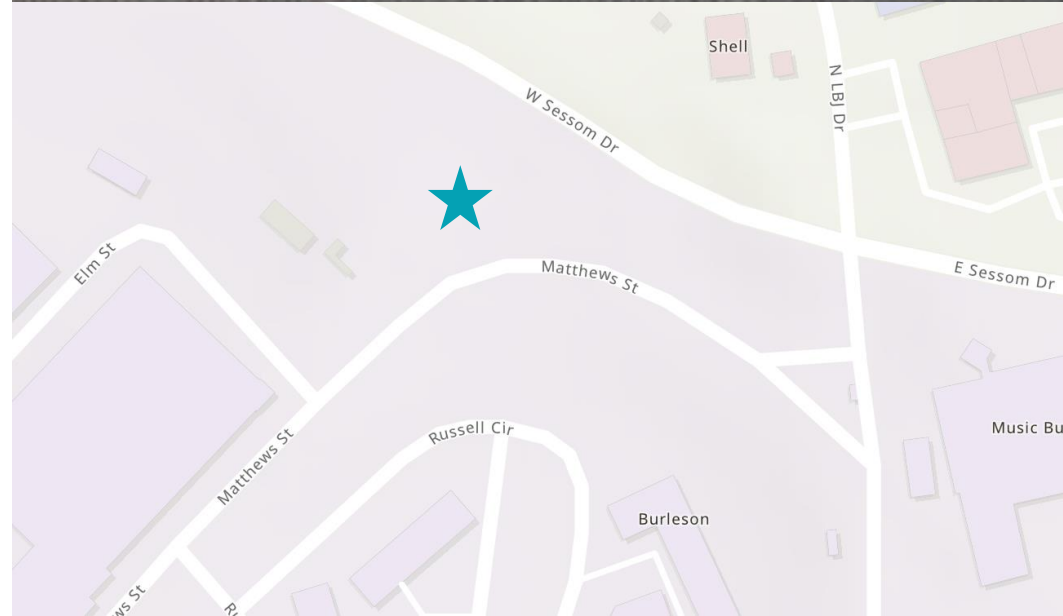


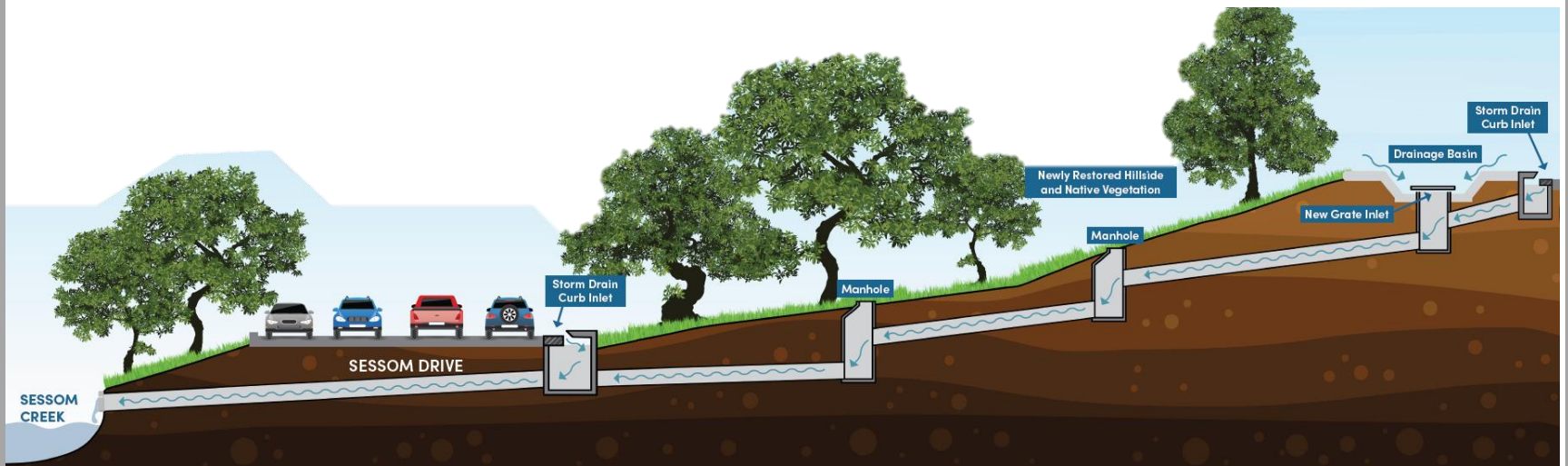
- **Partner:** City of San Marcos
- **BMP Type:** Biofiltration Pond
- **Date completed:** April 2020
- **Annual Pollutant Load Reductions:**
 - 2,000 lbs TSS
 - 5 lbs TP
 - $4.82e + 12$ MPNs, *E.coli*



TASK 3 – HOGTRAP BMP

- **Partner:** Texas State University
- **BMP Type:** Stormwater
- **Date completed:** April 2020
- **Annual Pollutant Load Reductions:**
 - 435.6 lbs TSS
 - 43.2 lbs TP
 - 26.3 lbs TN
 - $4.84e + 08$ MPNs, *E.coli*







TASK 4 - EDUCATION & OUTREACH

- 7 stakeholder meetings
- 2 public workshops
- Improved website with articles and events posted weekly
- Quarterly newsletters
- Watershed Story Map Tour

TASK 5 - WATERSHED ORDINANCE REVIEW

- Consider and evaluate:
 - Water quality regulation application and approaches
 - Regulatory criteria
 - Ordinances
 - Guidance's
- Report and workshop coming soon!

Sink Creek

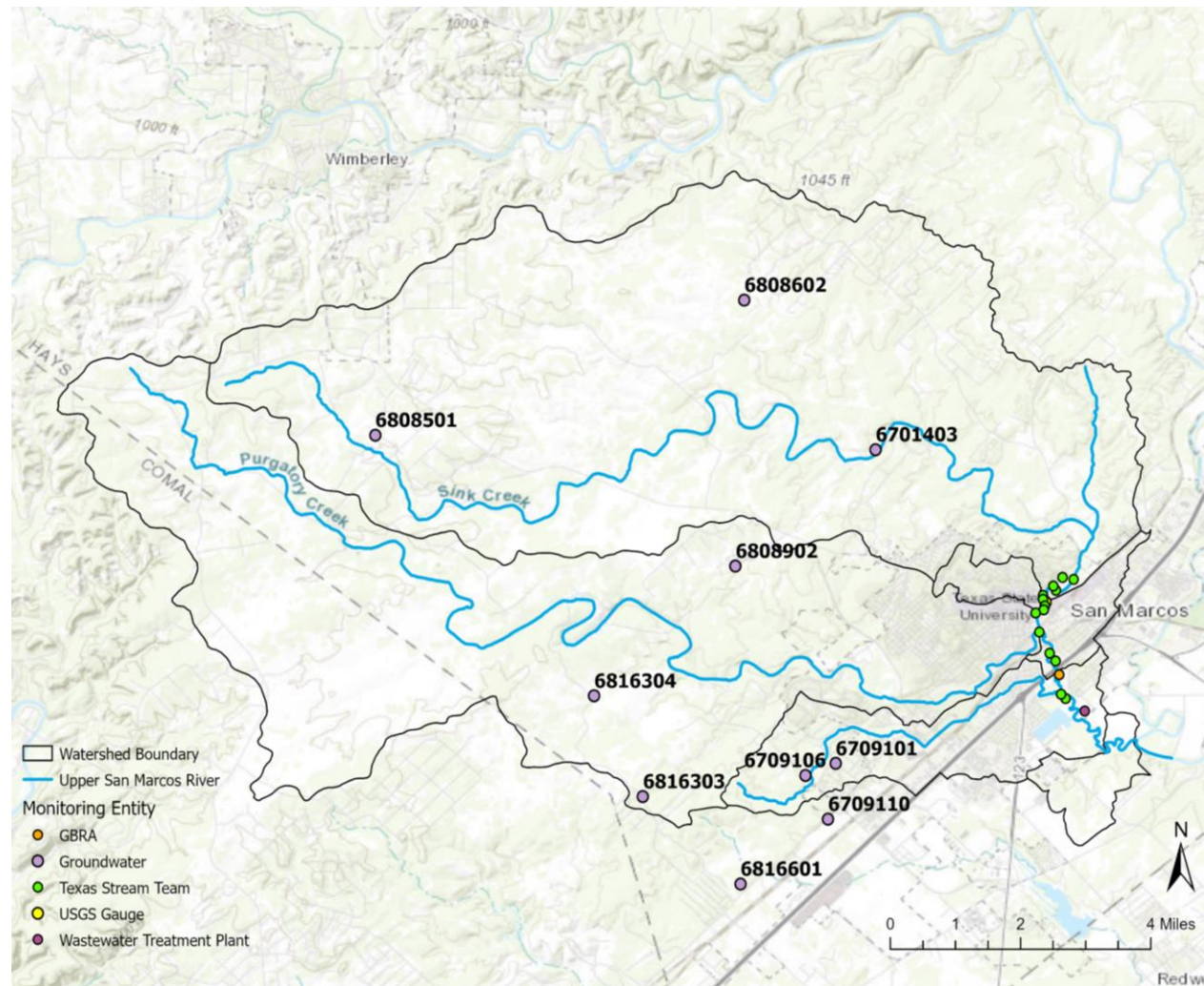
Purgatory Creek

Sess

Willow Cree

TASK 6 – MONITORING EFFORTS

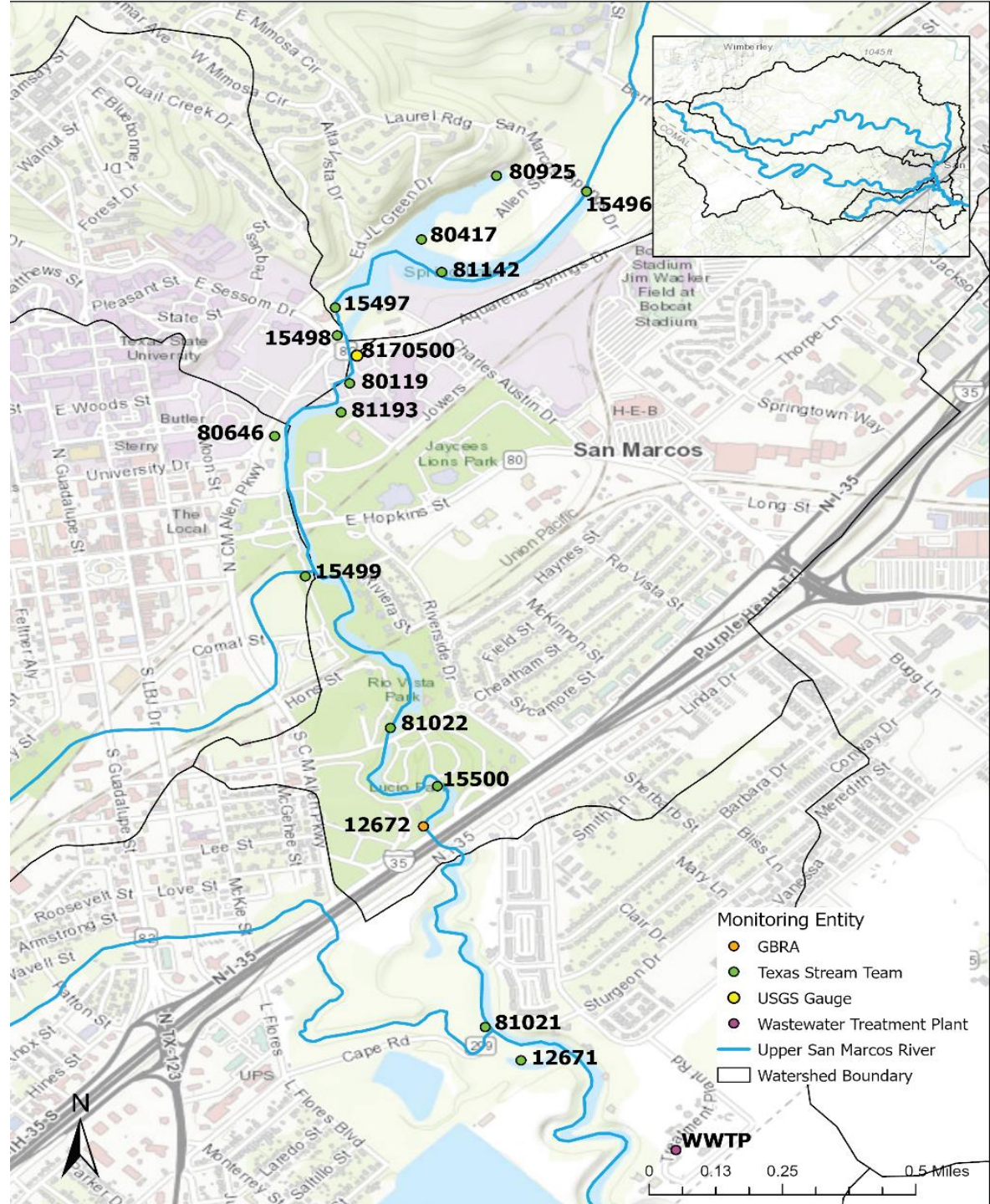
- **Purpose:** Conduct trend analysis of existing surface, storm, and ground water data
- **Management measures implemented:**
 - Ed. & Outreach
 - Constructed Two BMPs
- **Acquired data from:**
 - GBRA
 - Texas Stream Team
 - City of San Marcos
 - USGS
 - TWDB



Groundwater and Surface Water Monitoring Sites

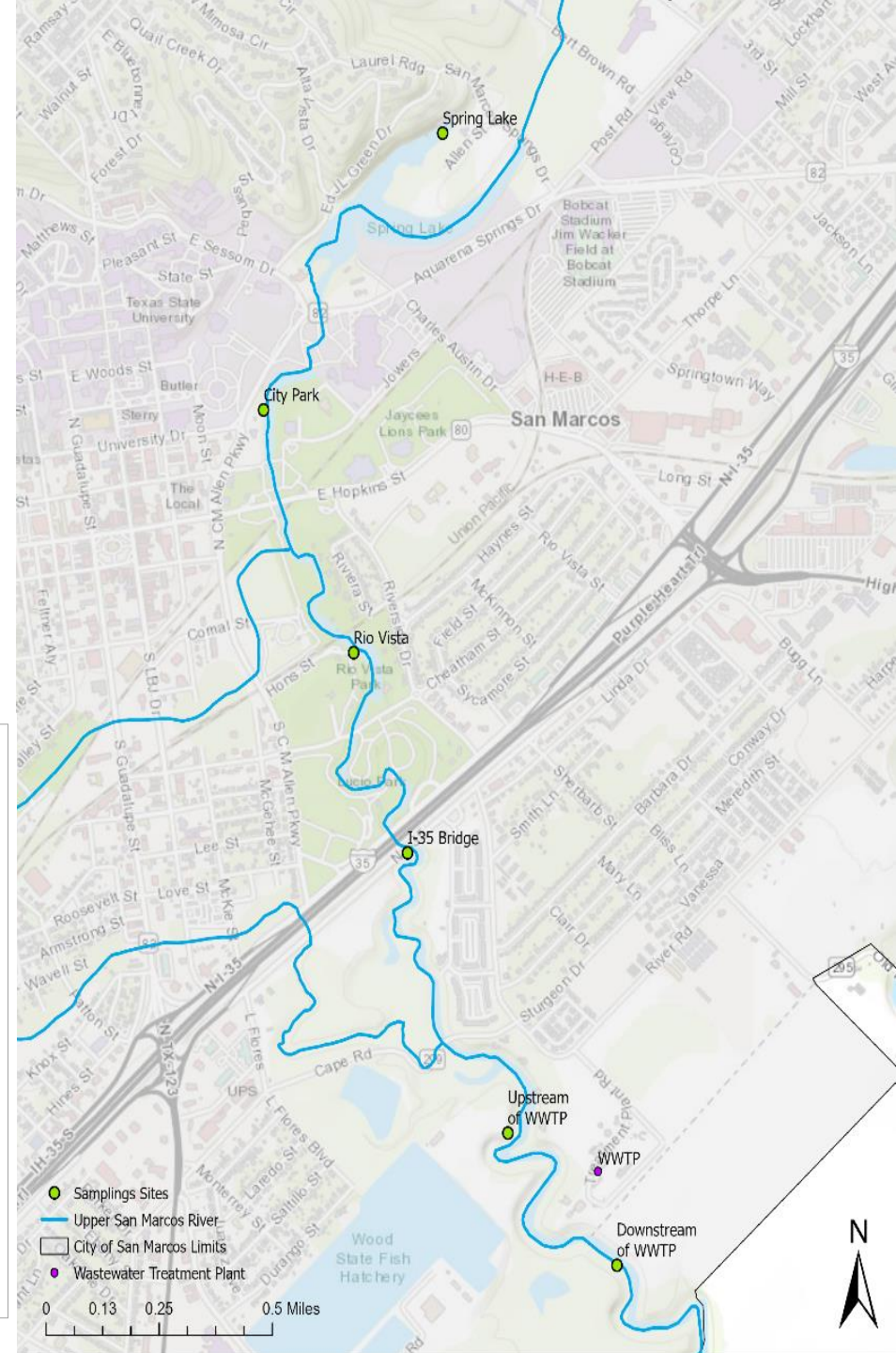
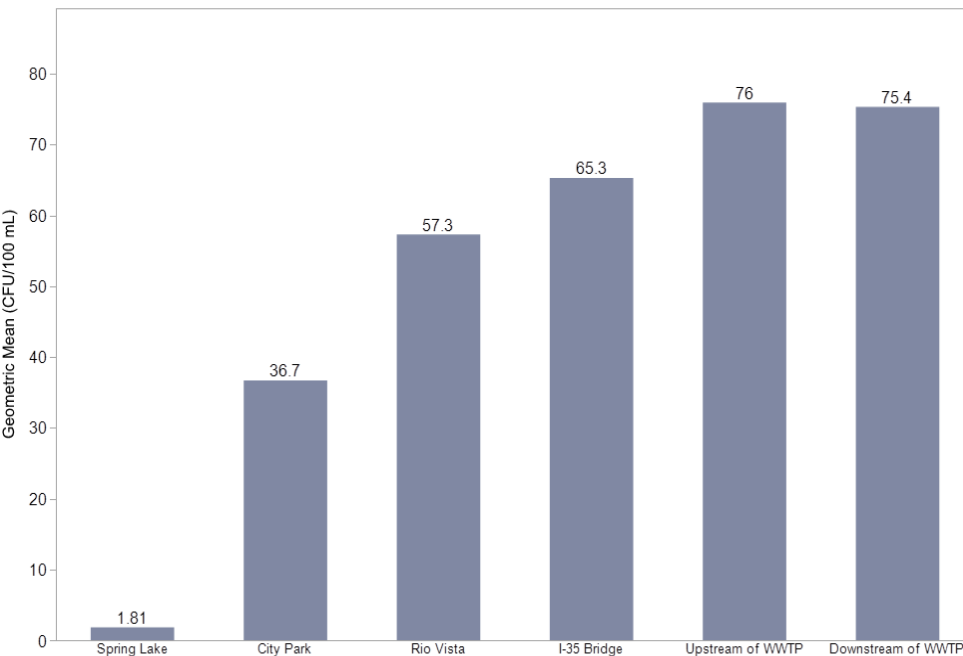
TASK 6 – MONITORING (Results)

- **TDS:** GBRA and Texas Stream Team means exceeded WQS and WPP targets
- **Chloride and Sulfate:** WQS met, but strong increasing seven-year trend ($r^2 > 0.45$)
- **WQS met for:**
 - Dissolved oxygen (mean = 9.9 mg/L)
 - Total NO₃-N (mean = 1.2 mg/L)
 - Total Phosphorus (mean = 0.05 mg/L)



TASK 6 – MONITORING (Results)

- **E. coli:**
 - WQS met (geometric mean = 65.5 MPN/100 mL)
 - COSM stormwater showed increasing geomeans with distance from Spring Lake





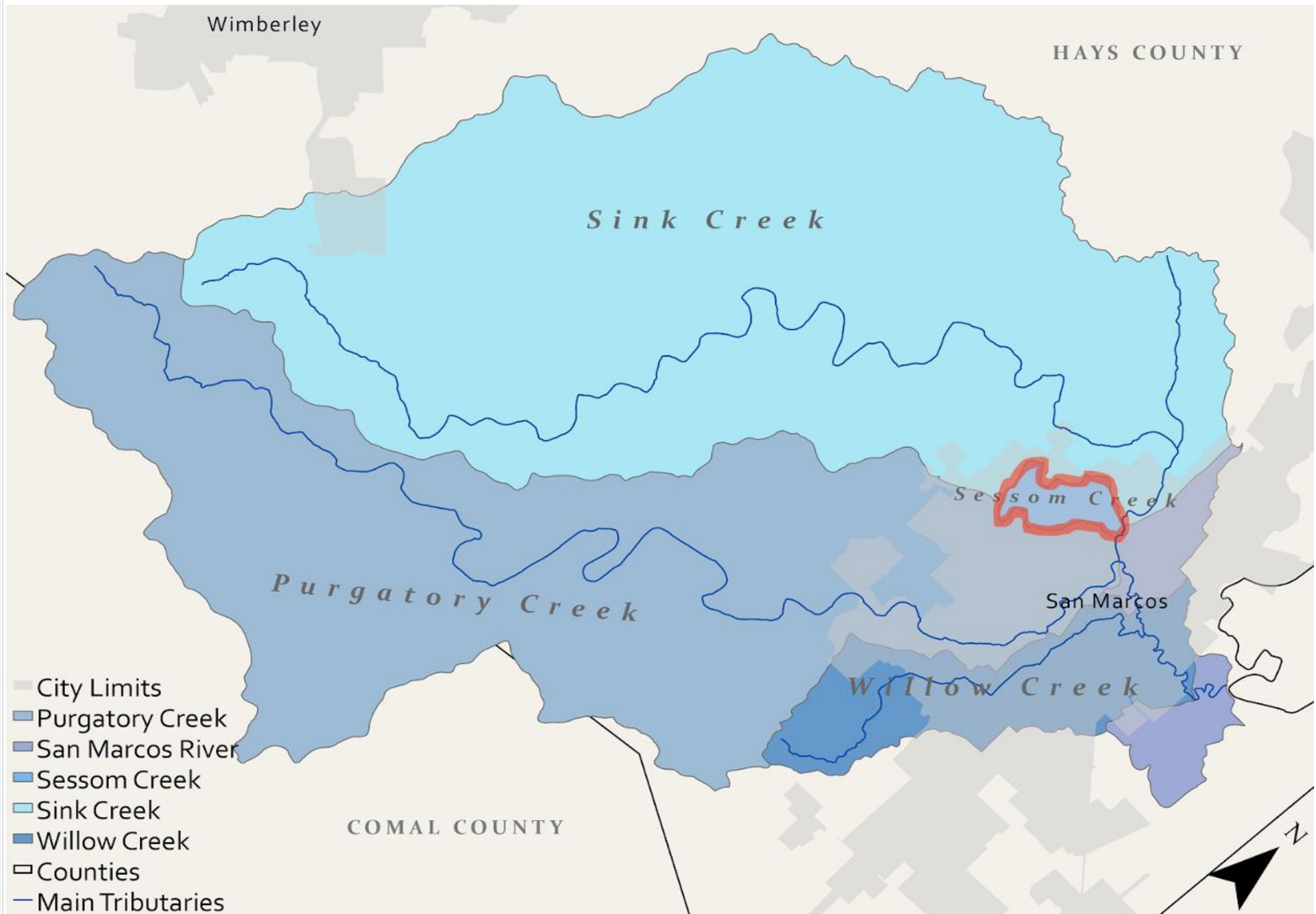
IMPLEMENTATION PHASE I – SAN
MARCOS GREENBELT ALLIANCE AND
MERMAID SOCIETY OF TEXAS

IMPLEMENTATION PHASE I OVERVIEW

- Total Budget: \$323,225
 - Federal: \$193,935
 - Match: \$129,290
- Timeline: 6/4/2020 – 2/28/2023
- Main Tasks:
 - Task 3 - Riparian and Upland Restoration
 - Task 4 - Stream Restoration
 - Task 5 - Vegetative Filter Strip
 - Task 6 - Community Trail Plan
 - Task 7 - Education and Outreach



SESSOM CREEK SUBWATERSHED



An aerial photograph of a river winding through a lush, green landscape. The river is dark and reflects the surrounding vegetation. The banks are covered in dense, vibrant green trees and shrubs. The overall scene is a natural, scenic view of a river in a forested area.

IMPLEMENTATION PHASE II – PENDING TCEQ GRANT AWARD

GRANT PROPOSAL OVERVIEW

- **Proposed Budget:** \$1,713,707
 - Federal: \$1,028,224
 - Match: \$685,483
- **Timeline:** 9/1/2021 – 8/31/2024
- **Main Proposed Tasks and Scope of Work:**
 - Coordination of Water Quality Monitoring and Analyses
 - Best Management Practices
 - Education and Outreach
 - Watershed Sustainability

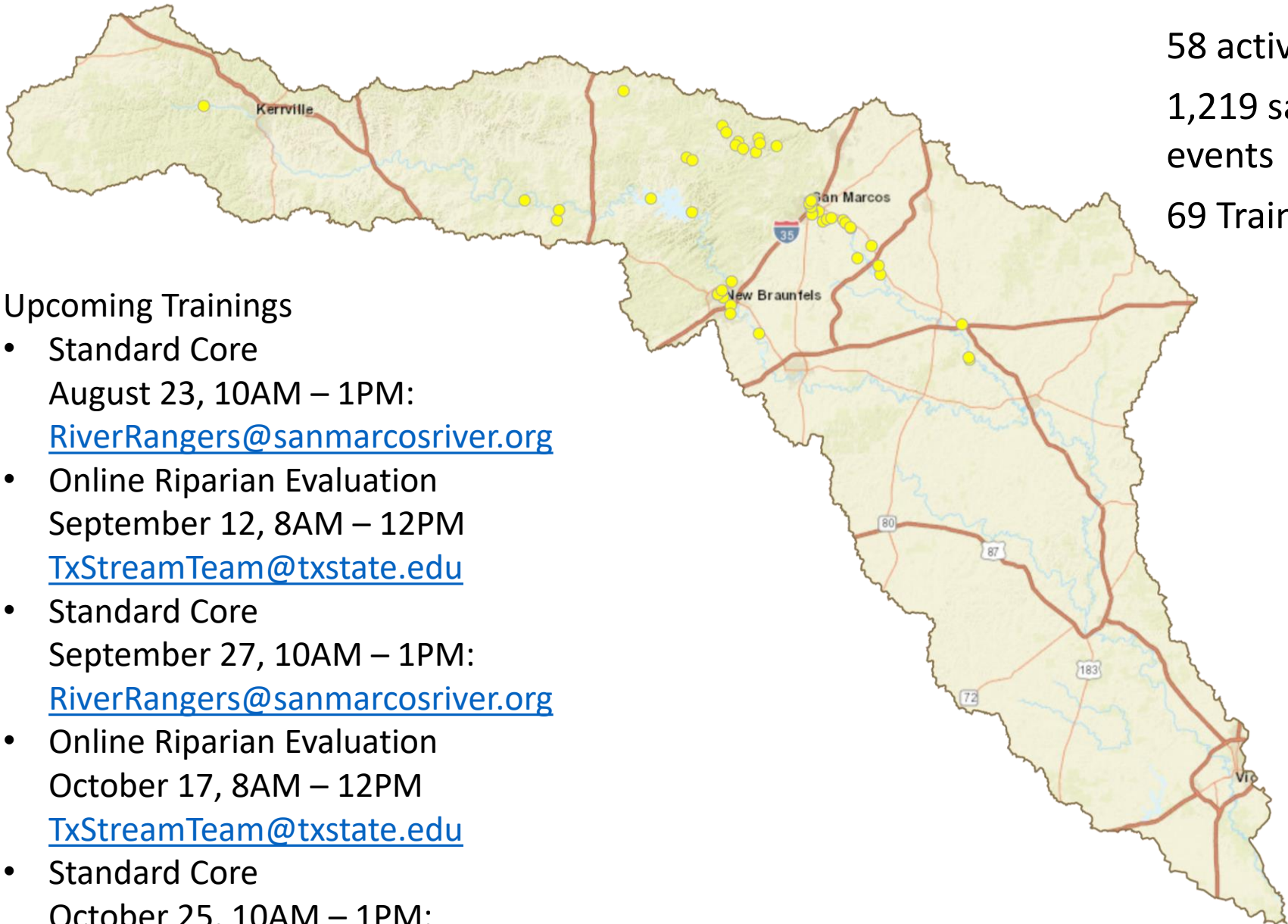




TEXAS STREAM TEAM

TEXAS STREAM TEAM

58 active sites
1,219 sampling
events
69 Trainings



Upcoming Trainings

- Standard Core
August 23, 10AM – 1PM:
RiverRangers@sanmarcosriver.org
- Online Riparian Evaluation
September 12, 8AM – 12PM
TxStreamTeam@txstate.edu
- Standard Core
September 27, 10AM – 1PM:
RiverRangers@sanmarcosriver.org
- Online Riparian Evaluation
October 17, 8AM – 12PM
TxStreamTeam@txstate.edu
- Standard Core
October 25, 10AM – 1PM:
RiverRangers@sanmarcosriver.org

Email TxStreamTeam@txstate.edu for match or reports!

UPCOMING PUBLIC ZOOM MEETING

August 25, 2020 | 5 – 6 PM

Register on **Eventbrite** by searching:

“Upper San Marcos River Watershed Protection Plan – Stakeholder Meeting”



Thank you!

201 San Marcos Springs
Drive, San Marcos, TX 78666
www.MeadowsWater.org

SMWatershed@txstate.edu
www.UpperSanMarcosRiver.org
(512) 245-7376

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updates!



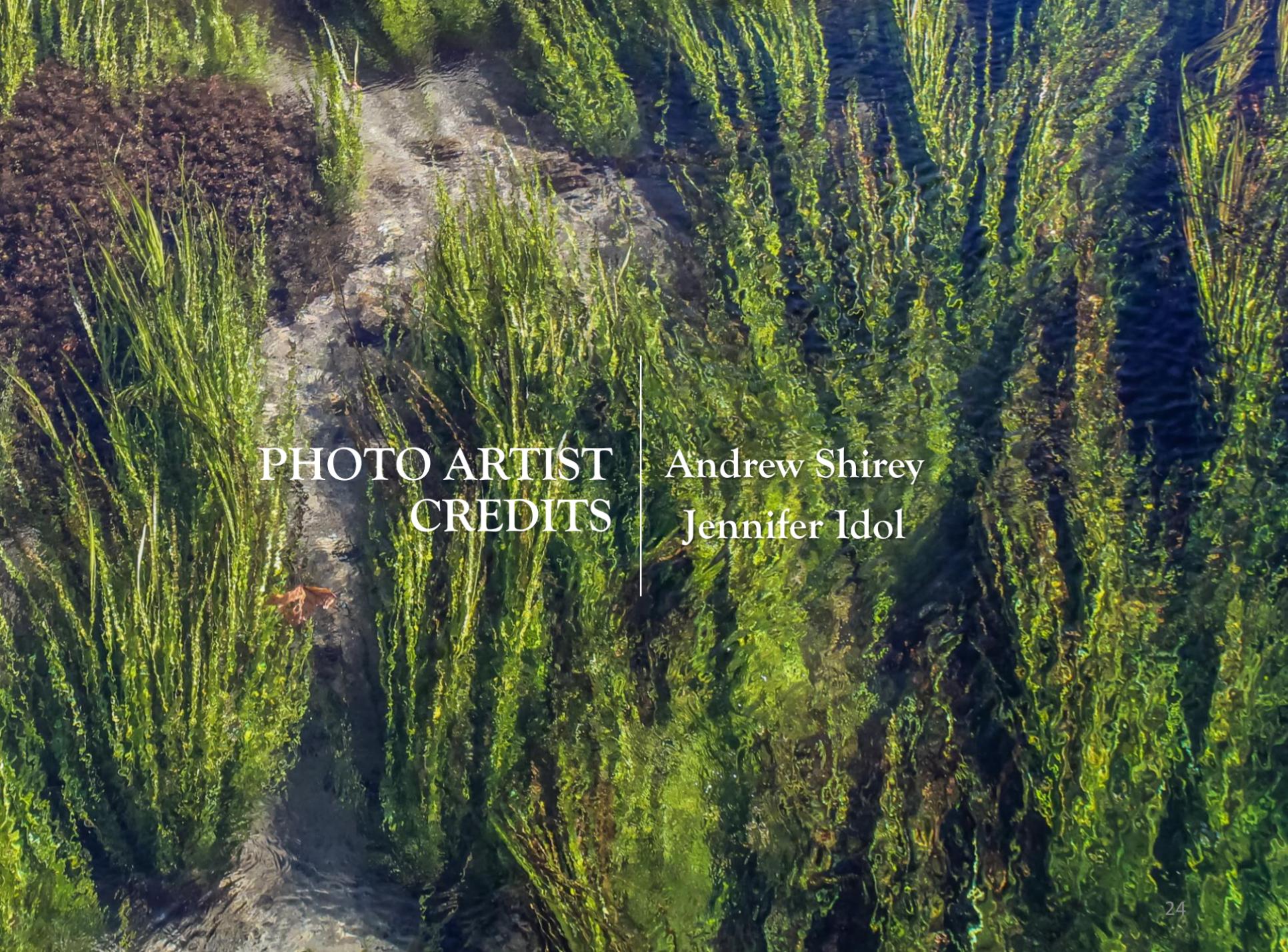
An aerial photograph of a river or stream. The water is a deep, dark blue-green color, reflecting the sky and the surrounding vegetation. The banks are covered in dense, vibrant green grass and reeds. A small, light-colored, rocky or sandy patch is visible in the upper left corner of the river. The overall scene is lush and natural.

PHOTO ARTIST
CREDITS

Andrew Shirey
Jennifer Idol