



# THE MEADOWS CENTER FOR WATER AND THE ENVIRONMENT

*No natural resource is more important to our future than Water. Water is what we do.*

RESEARCH | STEWARDSHIP | SERVICE | EDUCATION



THE MEADOWS CENTER  
FOR WATER AND THE ENVIRONMENT

TEXAS STATE UNIVERSITY



# TEXAS STREAM TEAM

...is a joint partnership with Texas Commission on Environmental Quality, U.S. EPA Region VI, Texas State University-San Marcos, and numerous partners.

We bring together community members, students, educators, academic researchers, environmental professionals, and both public and private sector partners to conduct scientific research and to promote environmental stewardship.



# TEXAS STREAM TEAM

***Mission*** - To facilitate environmental stewardship by empowering a statewide network of concerned volunteers, partners, and institutions in a collaborative effort to promote a healthy and safe environment through environmental education, data collection, and community action.



CELEBRATING  
**25**  
YEARS  
1991—2016

# OF CITIZEN SCIENCE AT TEXAS STREAM TEAM

Water Quality Monitoring — Education — Community Engagement

**8,607**

*citizen scientists  
trained  
since 1991*

**49,473**

*volunteer hours  
valued at over*

**\$1,000,000**

**280**

*sites actively  
monitored for  
water quality*

**20** *new citizen scientists  
trained each month*

**43,064**

*data-points have  
been validated by  
a QA officer*

**19,297** *miles of waterways  
actively monitored*

**125,000**

*Spring Lake visitors  
learn about water,  
nonpoint source  
pollution, and more  
each year*

**84**

*partner organizations  
use our data to manage  
water resources,  
inform policy,  
and more*

*for every  
dollar granted,*

**\$1.00 → \$1.72**

*we leverage  
an additional  
72 cents*

**JOINSTREAMTEAM.ORG**



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# TEXAS STREAM TEAM

Volunteers collect water quality data from established sites

- Standard training for temperature, pH, dissolved oxygen, conductivity, water clarity, field observations
- Advanced training for E. coli, nitrates, phosphates, turbidity



Prepared in cooperation with the Texas Commission on Environmental Quality and the United States Environmental Protection Agency.

**THE MEADOWS CENTER  
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Texas Stream Team

**ENVIRONMENTAL MONITORING FORM**  
PLEASE PRINT (Black Ink or #2 Pencil)

Send to:  
Texas Stream Team  
Texas State University  
Riverside Apts - Unit C4  
601 University Drive  
San Marcos, TX 78666-4616  
Toll Free: (877) 506-1401  
Email: [txstreamteam@txstate.edu](mailto:txstreamteam@txstate.edu)

Group ID #

Station ID #

Sample Date

Sample Time (military)

Sample Depth (meters)       (not total depth)

**Meter Calibration:** (Within 24 hours of sampling.) **Store and calibrate standard at room temperature.**

Calibration	Date	Time	Standard Value	Standard Temp (°C)	Initial Meter Reading	Meter Adjusted To	Pool Test
Conductivity							
pH (7.0)							

**Core Tests and Measurements:**

CONDUCTIVITY (µS/cm)  
 TDS Tester 3 (Low)  TDS Tester 4 (High)  Other

WATER TEMPERATURE (°C)

AIR TEMPERATURE (°C)

DISSOLVED OXYGEN (mg/L)  
Average \_\_\_\_\_ 1st titration \_\_\_\_\_ 2nd titration \_\_\_\_\_

pH (standard units)

SECCHI DISK TRANSPARENCY (meters)

TOTAL DEPTH (meters)

TRANSPARENCY TUBE (meters)

**Reagents/Media:** Are any reagents (or media) expired?  Yes  No  
List any expired:

**Bacteria Test:**

E. COLI (cfu/100 mL)  
Average \_\_\_\_\_ Sample 1 \_\_\_\_\_ Sample 2 \_\_\_\_\_

INCUBATION: Period (hrs) \_\_\_\_\_ (28-31 hrs) Temp (°C) \_\_\_\_\_ (35±3°C)

SAMPLE 1: Sample size \_\_\_\_\_ mL Dilution factor (100/sample size) \_\_\_\_\_  
Colonies counted \_\_\_\_\_ x dilution factor \_\_\_\_\_ = \_\_\_\_\_ cfu/100 mL

SAMPLE 2: Sample size \_\_\_\_\_ mL Dilution factor (100/sample size) \_\_\_\_\_  
Colonies counted \_\_\_\_\_ x dilution factor \_\_\_\_\_ = \_\_\_\_\_ cfu/100 mL

FIELD BLANK: Any colony growth (circle one) YES / NO

DATA QUALITY REVIEW: Checklist completed (circle one) YES / NO

# Data Uses

- Inform citizens, communities about local water quality
- Act as an early warning system for water quality issues
- Municipalities can incorporate into outreach messaging and monitoring efforts
- Supplemental data and education components applied towards WPP and TMDL activities
- Interpretive displays, education and outreach event
- Teachers and students use data for research projects
  
- *Presented on [Dataviewer](#)*
- *Compiled in Annual Data Summary Reports*
- *Submitted to EPA's water quality database*

# TEXAS STREAM TEAM

Participation in local planning, protection, restoration and educational events

- Watershed protection plans, TMDLs, water conservation initiatives
- University research, long term monitoring efforts
- Clean ups, restoration, habitat monitoring
- Community events, school programs, youth programs



# TST Partners, Network

- Provide kits, supplies, materials when budget allows
- Host trainings and educational events
- Create Monitoring Plans for citizen scientists
- Conduct quality assurance and submit data
- Incorporate TST data into projects, planning
- Use TST data to supplement professional water quality monitoring
- Act as watershed ambassadors, regional hubs
- Provide education and outreach, special projects, other support

## Current TST Partners Active in the UTRB

- Aquatic Alliance
  - Rich Grayson
    - <http://www.whiterocklake.org/index.php/programs/water-monitoring/texas-stream-team-and-aquatic-alliance>
- City of Dallas
  - Christopher Morris



## Specialized Data Collection Options

- Determine priority volunteer monitoring sites within your watershed
- Pick and choose parameters to test on a monthly or quarterly basis
- Schedule site specific grab samples to be brought to certified lab



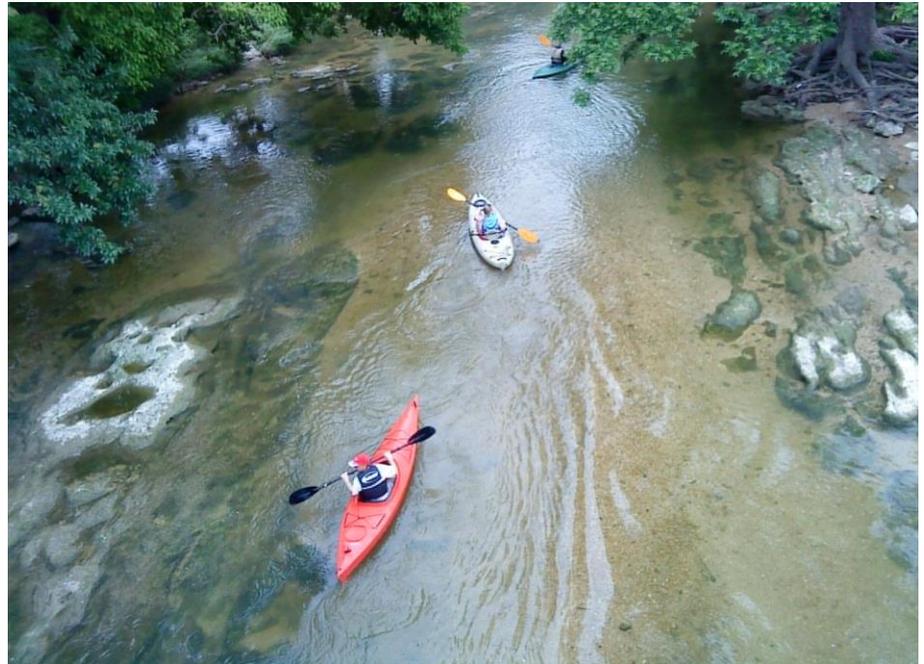
# Training and WQ Monitoring Kit

- Become trained as a Texas Stream Team instructor and recruit/train citizen scientists as needed
- Purchase kits to check out to volunteers directly
- Team up with existing Stream Team chapters in DFW area to share kits and training opportunities



# New TST Programs

- TST Paddlers
- TST Anglers
- TST Divers
- TST on Campus
- Monofilament Finders
- Biomonitoring
- Riparian Assessments
- [Video](#)



# THANK YOU

Visit [www.joinstreamteam.org](http://www.joinstreamteam.org) for more info.

**Jenna Walker, MA Geo**  
**Program Coordinator**  
**[jjwalker@txstate.edu](mailto:jjwalker@txstate.edu)**  
**512-245-9148**



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The Meadows Center for Water and the Environment  
201 San Marcos Springs Drive | San Marcos, TX. 78666  
Ph. 512.249.9200 | [meadowscenter@txstate.edu](mailto:meadowscenter@txstate.edu)  
EXPLORE SPRING LAKE.ORG