



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

A network of trained volunteers and partners working together to gather and disseminate information on the water resources of Texas.

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.*



*Citizen Scientists collect data from established sites

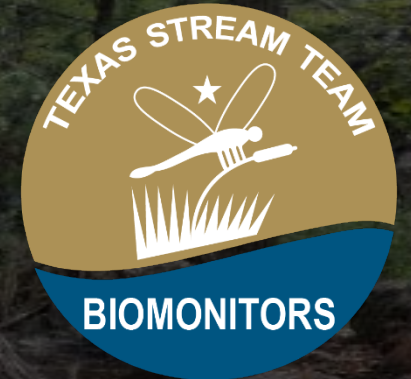
*Data helps support Watershed Protection Plan Development and Implementation for Nonpoint Source Water Pollution

Texas Stream Team Citizen Science Programs



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

- ✓ Standard Core Water Quality Monitoring
- ✓ Probe Core Water Quality Monitoring
- ✓ Advanced Water Quality Monitoring



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

- ✓ Riparian Bull's Eye Evaluation
- ✓ Macroinvertebrate Bioassessments



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

Texas Stream Team Quality Assurance Project Plan (QAPP)



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

TEXAS STREAM TEAM

Certificate of Achievement

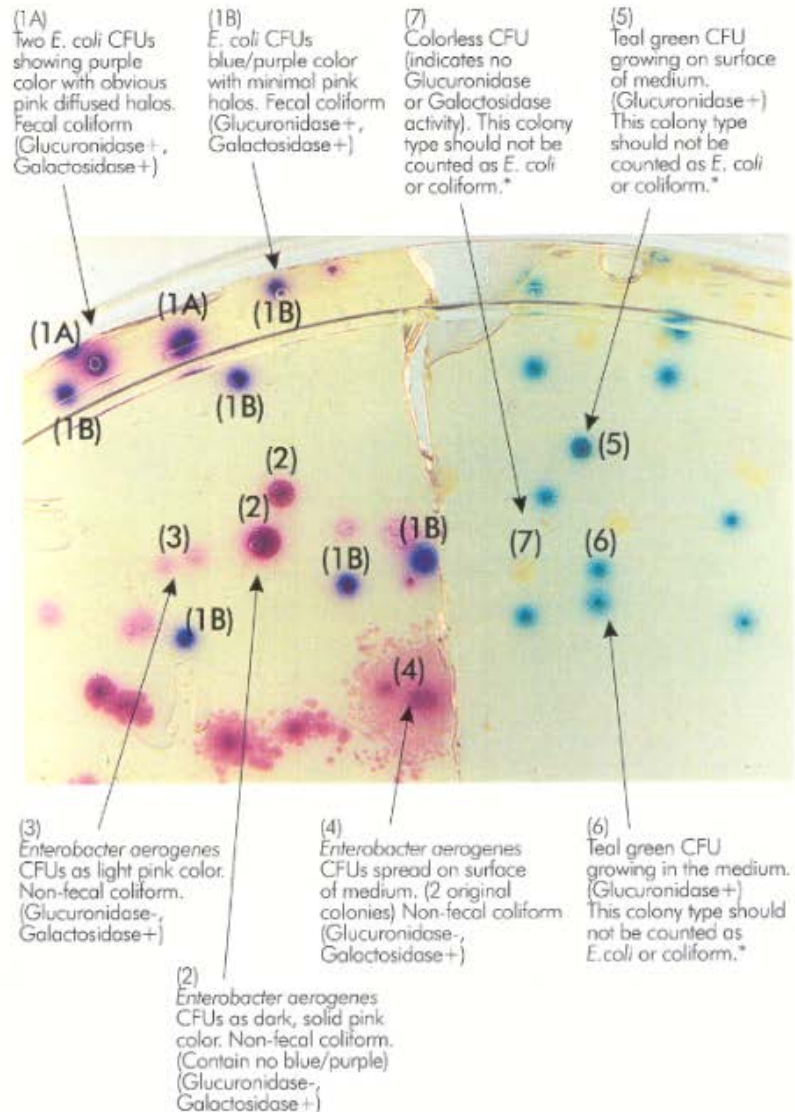
*For Participating and Completing the Texas Stream Team's
Water Quality Monitoring Training Courses*

ANDREW SANSOM
EXECUTIVE DIRECTOR
THE MEADOWS CENTER FOR WATER AND THE ENVIRONMENT

JENNA WALKER
PROGRAM COORDINATOR
TEXAS STREAM TEAM

ColiQuant EZ Colony Color Guide

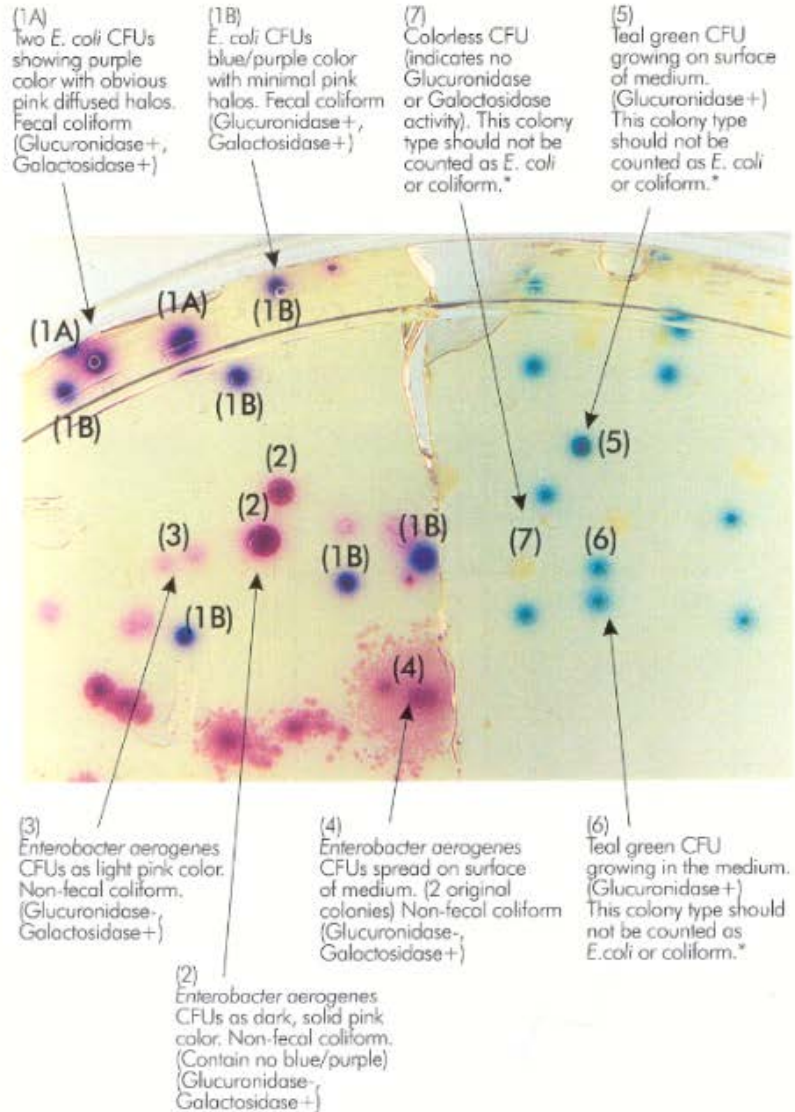
The left half of the photo (1-4) consists of colonies of *E. coli* (1A, 1B) and *Enterobacter aerogenes* (2, 3, 4) growing in/on Coliscan® Easygel® medium. The right half of the photo (5, 6, 7) represents the appearance of organisms other than *E. coli* or coliforms.



*These teal or colorless types of colonies may be significant other types of bacteria (such as *Salmonella* spp. or *Shigella* spp.) or even rarely found atypical *E. coli* or coliforms, but should never be counted as *E. coli* or coliform without further biochemical testing
Photo and information for Color Guide supplied by Micrology Laboratories, LLC.

ColiQuant EZ Colony Color Guide

The left half of the photo (1-4) consists of colonies of *E. coli* (1A, 1B) and *Enterobacter aerogenes* (2, 3, 4) growing in/on Coliscan® Easygel® medium. The right half of the photo (5, 6, 7) represents the appearance of organisms other than *E. coli* or coliforms.



*These teal or colorless types of colonies may be significant other types of bacteria (such as *Salmonella* spp. or *Shigella* spp.) or even rarely found atypical *E. coli* or coliforms, but should never be counted as *E. coli* or coliform without further biochemical testing
Photo and information for Color Guide supplied by Micrology Laboratories, LLC.

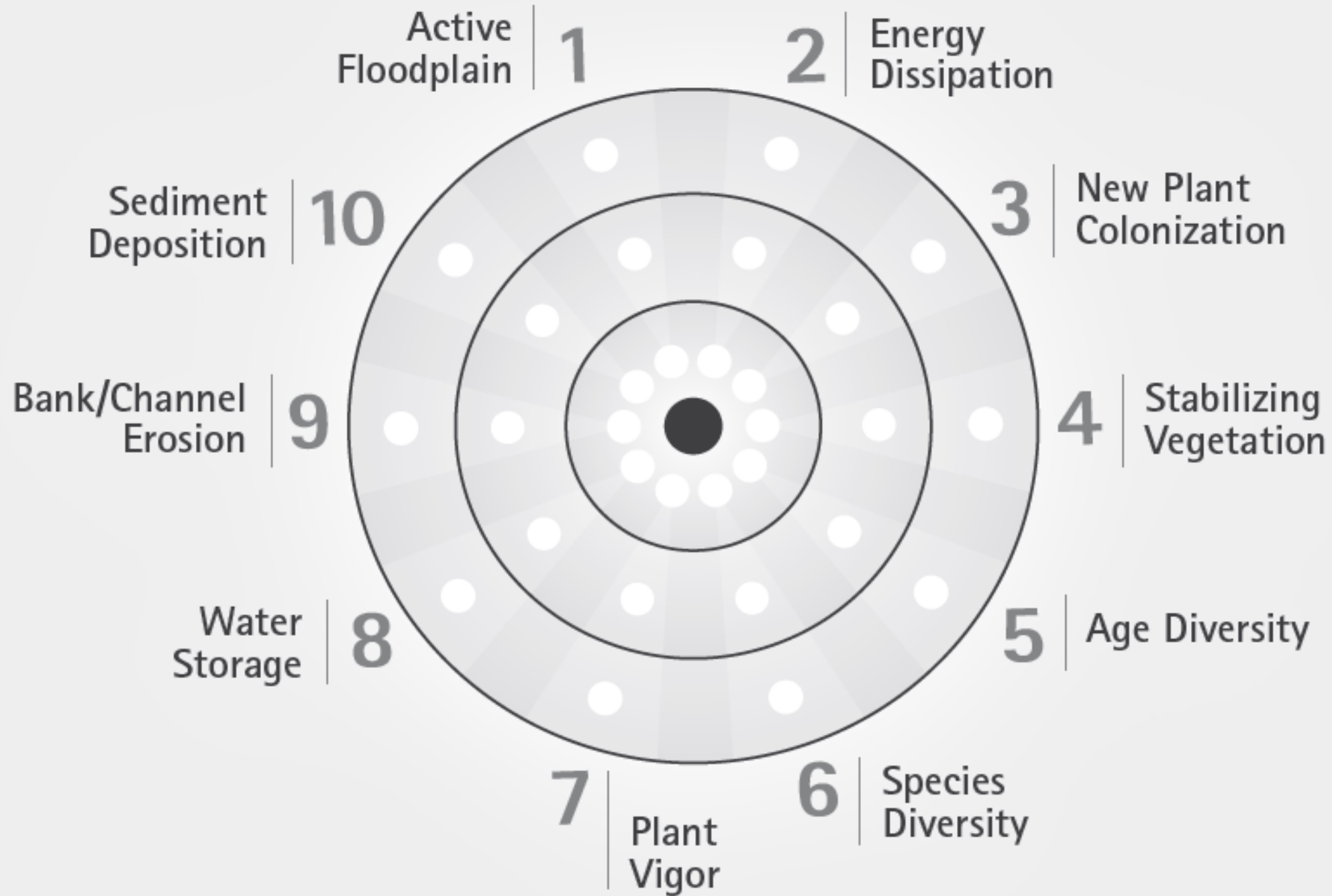
Riparian Function and Water Quality Connections



The quality of water in our rivers and streams can be influenced either positively by healthy riparian function or negatively by the presence of one or more hindrances.

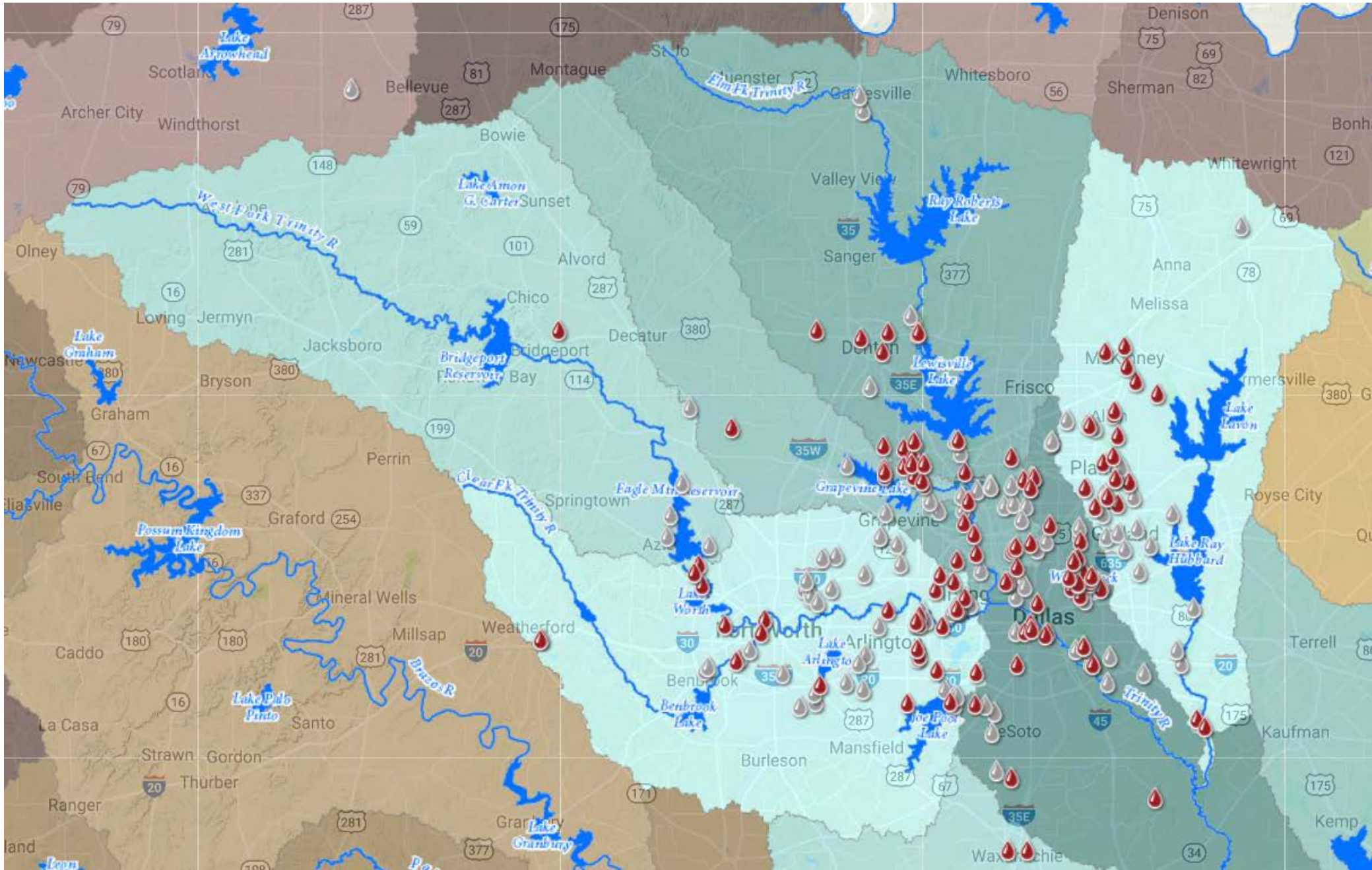


*A healthy, functional riparian system can positively affect both water quality and water quantity.



Texas Stream Team Macroinvertebrate Bioassessment Training





Maintaining healthy waterways at a community scale

Texas Stream Team Data Viewer

WATERWAYS™

CONSERVATION PROGRAMS, MODERNIZED



<http://www.aiqueous.com/waterways>



Texas Stream Team Community Forum
Caring for our waters

<http://tstcommunity.org/>

Fundraising Packet

- Telling Your Story
 - Personal asks
 - Sustainability
 - Success stories/impact stories
- Fundraising Packet
 - Template Letters
 - Individuals/families
 - Businesses/foundations
 - Sponsor Digital Banners
 - TST Quick Fact Sheet
 - Fundraising Jar Decal
- Documentation
 - Solicitation Form
 - Updated Partner Activity Report Form

EVERY DROP COUNTS. DONATE TODAY!



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

TEXAS STREAM TEAM



WATER QUALITY
MONITORING



EDUCATION



COMMUNITY
ENGAGEMENT

[FRIENDS.JOINSTREAMTEAM.ORG](https://friends.joinstreamteam.org)

TST Grant-writing Assistance

1. Offer matching/in-kind funds for grants and watershed protection plan activities
2. Serve on stakeholder committee
3. Grant review/feedback
4. Letter of support
5. Presentations

White Rock Creek Watershed Data Report

August 2017

White Rock Creek Watershed Trends over Time

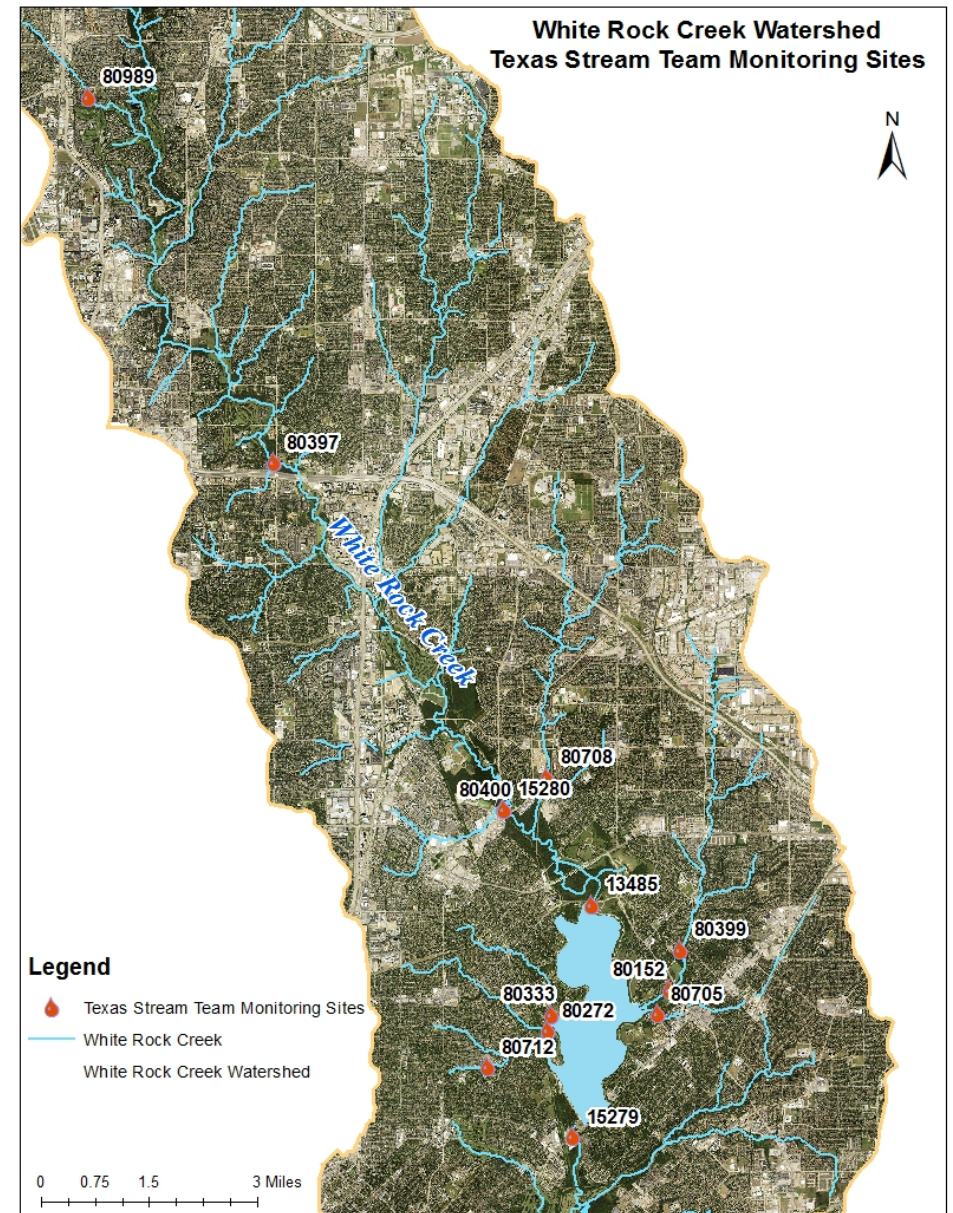
Sampling Trends over Time

Sampling in the White Rock Creek watershed began in December of 2004. A total of 927 monitoring events from 14 sites collected between December 2004 to July 2017 were analyzed.

Table 5: Descriptive parameters for all sites in the White Rock Creek Watershed

White Rock Creek Watershed December 2004 – July 2017				
Parameter	Number of Samples	Mean ± Standard Deviation	Min	Max
Total Dissolved Solids (mg/L)	880	374 ± 106	91	735
Water Temperature (°C)	897	18.9 ± 7.1	2.3	33
Dissolved Oxygen (mg/L)	883	6.5 ± 2.4	1.0	13.25
pH	886	7.3 ± 0.4	6.0	8.5
Turbidity (JTU)	41	4.41 ± 2.50	0.0	10.0
Orthophosphate (mg/L)	96	0.11 ± 0.33	0.02	3.0
Nitrate-Nitrogen (mg/L)	85	1.11 ± 0.34	1.0	3.0
E. coli (CFU/100 mL)	223	182 ± 3891	0	36667

There were a total of 927 sampling events between 12/11/2004 and 7/22/2017.



Rowlett Creek Watershed Data Report

November 2017

Rowlett Creek Watershed Trends over Time

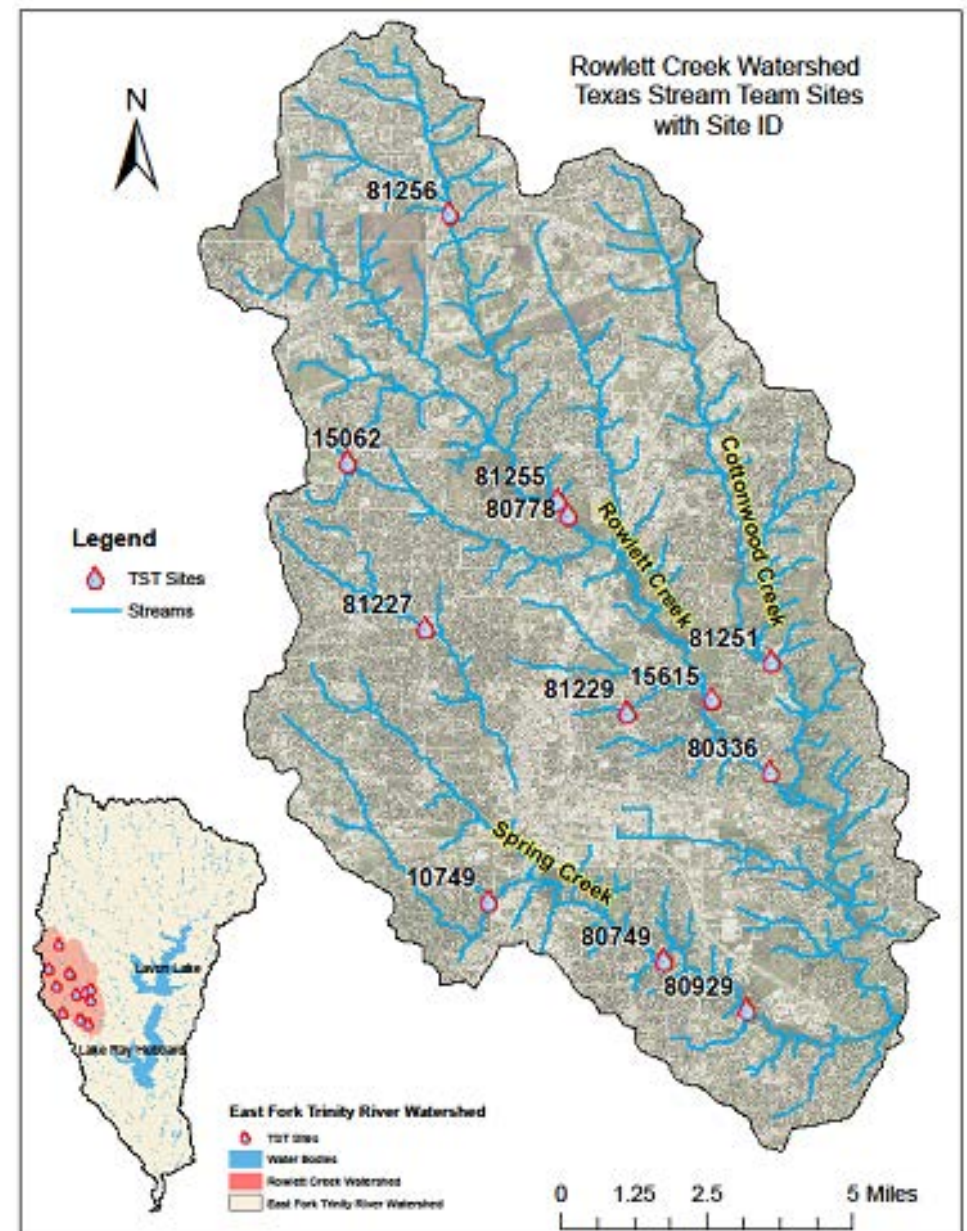
Sampling Trends over Time

Sampling in the Rowlett Creek Watershed began in August of 1995. A total of 549 monitoring events from 12 sites collected between August 1995 to November 2017 were analyzed.

Table 5: Descriptive parameters for all sites in the Rowlett Creek Watershed

Rowlett Creek Watershed August 1995 – November 2017				
Parameter	Number of Samples	Mean ± Standard Deviation	Min	Max
Total Dissolved Solids (mg/L)	529	416 ± 115	98	767
Water Temperature (°C)	549	19.0 ± 6.7	2.0	35
Dissolved Oxygen (mg/L)	481	7.1 ± 2.1	1.0	12.5
pH	542	7.6 ± 0.5	6.5	9.3
Orthophosphate (mg/L)	37	2.0 ± 2.0	< 0.02	5
Nitrate-Nitrogen (mg/L)	34	4.0 ± 2.0	< 0.2	10
E. coli (CFU/100 mL)	26	187 ± 335	27	1617

There were a total of 549 sampling events between 8/25/1995 and 11/2/2017.



Texas Stream Team Workshop

- March 6th, 2018
- Chance for non-participants to hear from successful TST Citizen Science programs
- Benefits communities
- Benefits volunteers
- Benefits Upper Trinity Watersheds

THANK YOU

Michael Jones
Water Resource Specialist
Watershed Services

txstreamteam@txstate.edu

512-245-1346

Explore Spring Lake | Join Us | Partner Up | Sponsor a Project | Put Us to Work

twitter  facebook YouTube  Instagram



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

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