

# 2022 ANNUAL TEXAS STREAM TEAM TRAINER MEETING

- Welcome! We are glad you can join us for today's event. We will be starting at 9:35 AM
- **Housekeeping:**
  - This meeting will be recorded
  - Please mute your microphones and turn off your videos
  - Questions/comments can be directed to the chat feature, or you may unmute your mic



THE MEADOWS CENTER  
FOR WATER AND THE ENVIRONMENT  
TEXAS STATE UNIVERSITY

TEXAS STREAM TEAM

# MEET OUR TEAM

Texas Stream Team - The Meadows Center for Water and the Environment



**Jenna Walker**  
Deputy Director



**Sandra Arismendez**  
Senior Watershed  
Scientist



**Laura Parchman**  
GIS & Data  
Management  
Associate



**Aspen Navarro**  
Program  
Coordinator



**Claudia Campos**  
Administrative  
Coordinator



**Bess Reisberg**  
Education Manager

# INTRODUCE YOURSELF!

1. Name
2. Texas Stream Team group
3. How long you have been with Texas Stream Team

# AGENDA

- 1 Texas Stream Team Book
- 2 2021 Goals Recap
- 3 Trainer Trainings
- 4 Pre-Training
- 5 Trainings
- 6 Post-Training
- 7 Monitoring
- 8 2022 Goals

A blue-tinted photograph of a stream flowing through a residential area. The stream is in the foreground, reflecting the sky and the surrounding environment. On the right bank, there are several houses with balconies and railings. The trees are dense and leafy. The overall scene is peaceful and scenic.

# TEXAS STREAM TEAM BOOK

# 2021 GOALS RECAP

- Updated Water Education Curriculum
- CPE Credit
- Outreach Materials and Resources
  - Program brochure
  - Core PowerPoint
  - Training flyers
- Core In Person Field Audit Session
- Training Manuals
  - Core
- Monitoring Protocol Videos
  - Advanced streamflow and turbidity
- Core Equipment Maintenance Documents
- Core Electronic Monitoring Forms



The background is a blue-tinted photograph of a river. On the left, there are dense trees. On the right, a multi-story building with balconies is visible. The water in the river is calm, reflecting the surrounding environment.

# TRAINER TRAININGS

# TRAINER ENROLLMENT FORM

[TRAINER ENROLLMENT FORM](#)

# QUESTION:

Are you for or against adding another phase to the Trainer Enrollment Process?

# UPCOMING TRAININGS

- 4/9/2022 Riparian Evaluation Training @ San Antonio
- 5/14/2022 *E. coli* Bacteria Training @ Waco
- 8/13/2022 Advanced Training @ Waco

TEXAS STREAM TEAM CALENDAR

A blue-tinted background image of a river. On the left, there are large, leafy trees. On the right, there is a multi-story building with balconies and railings. The water in the river is calm and reflects the surrounding environment. The overall scene is serene and quiet.

# PRE-TRAINING

# TRAINING ENROLLMENT FORM

TRAINING ENROLLMENT FORM

# TEXAS STREAM TEAM CALENDAR

- When submitting events, it is important to share the following:
  - Training details (type, time, location, trainers, any restrictions or capacity limits, RSVP instructions)
  - Is it a private or public event?
- Instruction Guide

[SUBMIT EVENTS](#)

# PROMOTIONAL MATERIALS

## Trainer Resources

- Training outreach materials and resources
  - **NEW** [Training Flyer Templates](#)
  - **NEW** [Texas Stream Team Brochure](#)
  - [Program Handout](#)
  - [Program Video](#)



TEXAS STREAM TEAM



THE MEADOWS CENTER  
FOR WATER AND THE ENVIRONMENT

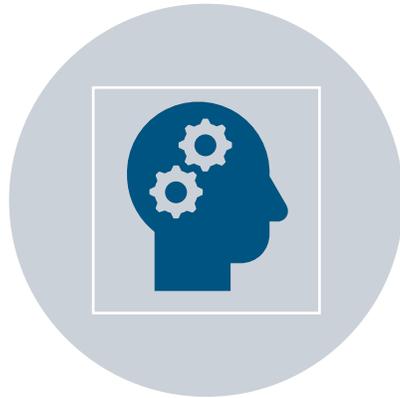
TEXAS STATE UNIVERSITY

TEXAS STREAM TEAM

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# TRAININGS

# TRAINING RESOURCES



MODULES



POWERPOINT SLIDES



TRAINING CHECKLIST

TRAINER FORM & RESOURCES PAGE  
(LEADING A TRAINING)

# DAY OF TRAINING MATERIALS



TRAINING SIGN-  
IN SHEET



TRAINING  
PARTICIPANT PACKET



POWERPOINT SLIDES



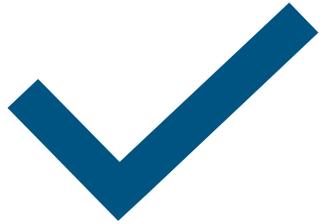
TRAINING  
PACKET

TRAINER FORM & RESOURCES PAGE  
(LEADING A TRAINING)



# POST-TRAINING

# TRAINING SIGN-IN SHEET



Taking attendance is required



Serves as supporting documentation  
and is necessary for verifying  
certifications



Submit to  
[TxStreamTeam@txstate.edu](mailto:TxStreamTeam@txstate.edu) after a  
training is held so staff can release  
certificates to participants on  
schedule

[SUBMIT EVENTS](#)

# IN-KIND MATCH

- Used as non-federal share of costs
- TCEQ grants require (40%) matching costs and is reported quarterly
- Allows Texas Stream Team to identify the value of volunteer time of our program!
- Sources include time spent (e.g., prep, monitoring, training, etc.) total distance traveled, staff time, and supplies (e.g., office supplies, kits, reagents, etc.)

2021 MATCH RATE

# REPORTING IN-KIND MATCH

- Blank PAR form is not required for **ZERO** activity/expenses
- Not required if partner/trainer plans to report Texas Stream Team match to other federally-assisted project/ program
- Supporting documents are required to be submitted with PAR forms (e.g., invoices, timesheets, mileage logs, etc.)

PARTNER ACTIVITY REPORT

A blue-tinted photograph of a river scene. On the right side, a multi-story house with a balcony is visible, partially obscured by trees. The river flows from the background towards the foreground, reflecting the sky and the surrounding environment. On the left side, there are large, leafy trees. The word "BREAK" is centered in the middle of the image in a white, serif font.

BREAK



# MONITORING

# QUALITY ASSURANCE AND QUALITY CONTROL

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- Quality Assurance
  - QAPP Revision due September 2022
  - Group Citizen Scientist Monitoring Plan
    - Annual trainer meeting will be used as reminder to update
    - Create a **new** one or **revise** existing one online

GROUP CITIZEN SCIENTIST MONITORING PLAN

# QUALITY ASSURANCE AND QUALITY CONTROL

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- Quality Control (QC)
  - Core In-person Field Audit Sessions
    - First one is conducted as part of training Phase III
    - Conducted every two years after initial training certification
    - Trainers/QAOs conduct Field Audits – consider hosting an annual/biannual event
      - Field audit checklist on monitoring form
      - Fill out form when a Field Audit Session is conducted
      - Trainer must discuss any observed deviations from the protocols with the citizen scientist and sign the form to verify the session took place
      - Enter in Waterways Dataviewer

# PROTOCOL UPDATES (CORE)

- Turbidity measurement – Secchi disc or turbidity tube
  - Turbidity tube (60 cm/120 cm) for use in shallow water
  - Secchi disc for use in deeper water
  - Report measurement in **meters not centimeters**
  - Only use the “>” qualifier for the tube measurement when you can see the bottom of a tube that is full of water (report either > 0.6 m or > 1.2 m)
  - Only use the “>” qualifier to report Secchi disc measurements when the disc is visible after it reaches the bottom of the water body (report > total depth of water body in meters)
  - **QC Check:**
    - Check your equipment yearly for rope distortions/stretching to ensure accurate measurements
- 2022 Goal
  - **Protocol Development**
    - Secchi Disc rope replacement
    - Replacements might include metered Dacron-type rope, chain, or wire



# PROTOCOL UPDATES (CORE)

- Salinity measurement in coastal, tidally-influenced saltwater
  - Refractometer measures salinity
  - **QC Check:**
    - Pre-/post-calibration error limit is  $\pm 1$  ppt
- Conductivity measurement in inland/freshwater streams, rivers, and lakes
  - Conductivity meter
  - Recently upgraded from to TRACER meter type
  - **QC Check:**
    - Pre-/post-calibration error limit is  $\pm 20\%$  of calibration standard solution



# PROTOCOL UPDATES (ADVANCED)

- Turbidity method
  - Old Turbidity Dropper Pipette method measured in Jackson Turbidity Units (JTU)
  - New Turbidity Tube method measured in centimeters then converted to Nephelometric Turbidity Units (NTU)
  - Units for new method (NTUs) align with current reporting units by other water quality monitoring entities
  - Replacement supplies not necessary for new method
  - One-time purchase of turbidity tube (approximately \$80-100)
  - **QC Check:**
    - Rinse bucket/tube 2X before use to prevent residual contamination from prior use

Distance from bottom of tube (m)	NTU	Distance from bottom of tube (m)	NTU
<0.0625	>240	>0.2875 to 0.3125	24
0.0625 to 0.07	240	>0.3125 to 0.3375	21
>0.07 to 0.08	185	>0.3375 to 0.3625	19
>0.08 to 0.095	150	>0.3625 to 0.3875	17
>0.095 to 0.105	120	>0.3875 to 0.4125	15
>0.105 to 0.12	100	>0.4125 to 0.4375	14
>0.12 to 0.1375	90	>0.4375 to 0.4625	13
>0.1375 to 0.1625	65	>0.4625 to 0.4875	12
>0.1625 to 0.1875	50	>0.4875 to 0.5125	11
>0.1875 to 0.2125	40	>0.5125 to 0.5375	10
>0.2125 to 0.2375	35	>0.5375 to 0.575	9
>0.2375 to 0.2625	30	>0.575 to 0.6	8
>0.2625 to 0.2875	27	> 0.6	<8

# PROTOCOL UPDATES (ADVANCED)

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- Streamflow – two methods
  1. Report streamflow from gage (i.e., USGS, IBWC, or local river authority)
  2. Report measured streamflow estimate
    - Instructional YouTube video for estimate
- 2022 Goal
  - New Orthophosphate method (LaMotte low-range test strips)
    - Field guide updates including QC check
    - Video with technique
    - Newsletter announcement prior to release
  - Complete revisions to Advanced Manual, Field Guide, and training materials

# PROTOCOL UPDATES (*E. COLI*)

- Sterile Diluent for Field Blank
  - Hach 100 mL Deionized Water (product #27242)
  - LaMotte stopped manufacturing 10 mL sterile diluent
  - Other sources of sterile diluent can include distilled water
  - Method didn't change, only source of field blank sample water
- 2022 Goal
  - Complete *E. coli* Bacteria Manual that is currently under development



# EQUIPMENT UPDATES

## Equipment Maintenance

- [NEW Maintenance guides available on website](#)
  - Standard Core
  - Probe Core

## Equipment Upgrades

- Conductivity meter
  - TRACER meters
- Advanced turbidity tube
  - 60 cm or 120 cm turbidity tube

# EQUIPMENT QUESTIONS:

See chat for link to survey

# VENDOR UPDATES AND SUPPLY ORDERS

## Vendor Discounts

- Mention Texas Stream Team when placing LaMotte orders and get a 10% discount
- 20% discounts apply if you order more than 10 of each item

## Back-order Delays (2 - 6 months)

- LaMotte – reagents, kits, etc.
- Micrology – Coliscan Easygel media and petri dishes

## Supply Requests

- Prefer you order directly from vendor
- If items are backordered or delayed, we might be able to assist with replacement supplies in the interim

# ELECTRONIC MONITORING FORM

- Designed for the Citizen Scientist
  - Available via mobile device or desktop
  - No account/login required to use
- Data Coordinators will still use the Waterways Dataviewer to QC group data



*Andrew Shing*

# ELECTRONIC MONITORING FORM DEMONSTRATION

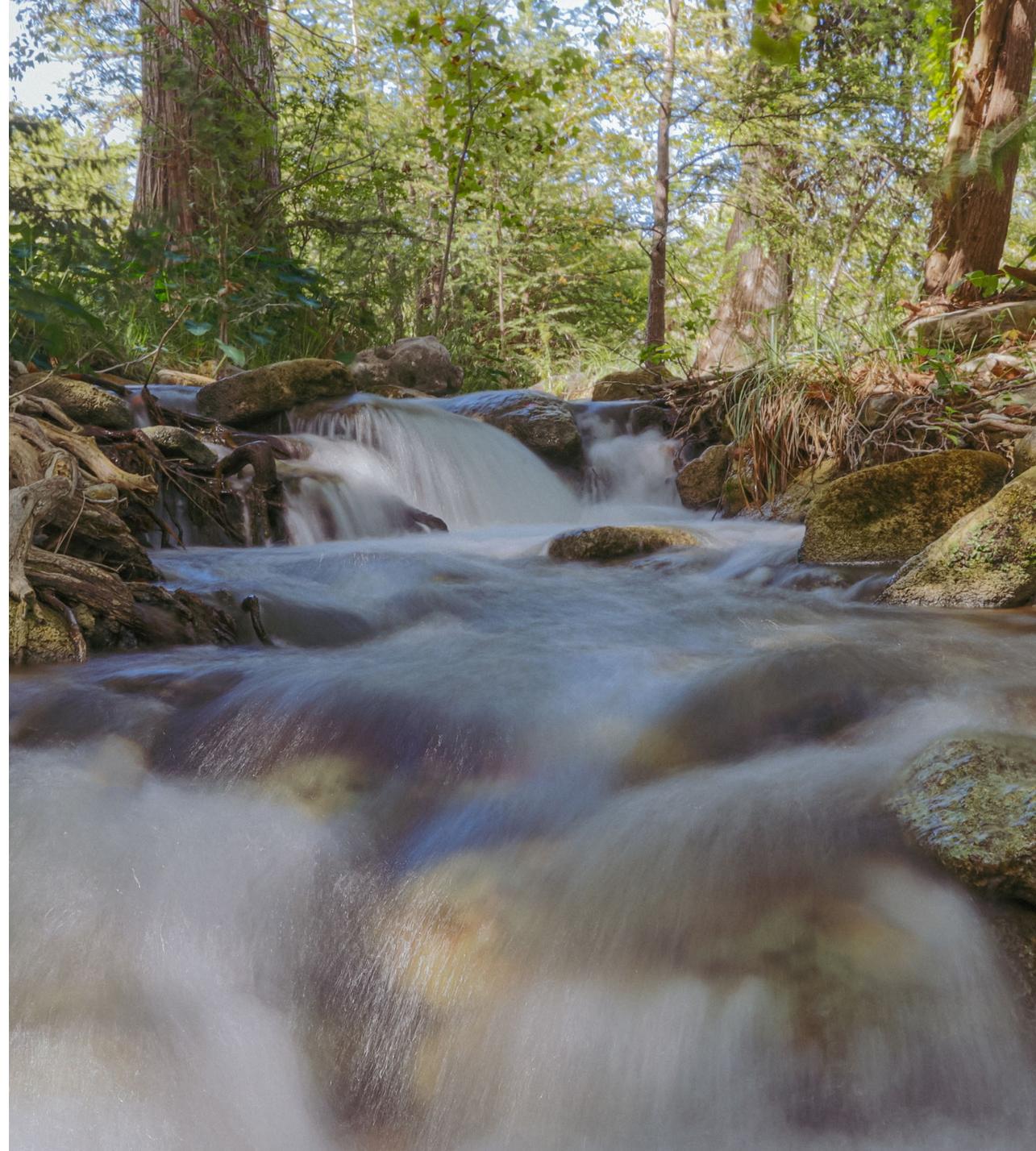
CORE ENVIRONMENTAL MONITORING FORM

A blue-tinted background image of a river. On the left, there are large, leafy trees. On the right, there is a multi-story building with balconies and railings. The water in the river is calm, reflecting the surrounding environment. The overall scene is serene and peaceful.

# 2022 GOALS

# 2022 GOALS

- Protocol Updates
  - Secchi disc rope
  - Advanced ortho method
- Monitoring Protocol Videos
- Outreach Materials and Resources
- Core Equipment Maintenance Videos
- Expanding Field Audit Sessions
- Training Manuals
  - *E. coli* Bacteria
  - Advanced
  - Riparian Evaluation



# QUESTION:

Do you have any proposed goals to contribute?

# ARTIST CREDITS

- Anna Huff
- Andrew Shirey

# CONTACT INFORMATION

**Texas Stream Team**

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**[www.TexasStreamTeam.org](http://www.TexasStreamTeam.org)**