TEXAS STREAM TEAM NEWSLETTER

HOUSTON-GALVESTON AREA COUNCIL CHAPTER

WORKING TO PROTECT OUR WATERWAYS

The Meadows Center for Water and the Environment
Texas State University
Texas Stream Team

Houston-Galveston Area Council

Volume 2022, Issue 3: December 2022

Monitor's Corner

Skills Check: New Conductivity Meters

The Texas Stream Team has switched to a new conductivity meter, and we now have both the meters and the new conductivity standard solution for calibration. For an easy transition, we will switch the meters out when monitors run out of their current stock of calibration solution.

The new Tracer PocketTester conductivity meters are actually easier to calibrate - instead of clicking buttons inside the cap to change the calibration value, the meter automatically recognizes certain solutions. That means as along as you are using the correct calibration solution, you only need to make sure the meter is in the "conductivity" mode and hit the "CAL" button.

The Texas Stream Team YouTube review on conductivity shows both meters and their differences, with the new meter portion starting around minute 2:00. Some key things to remember with the new meter include:

- There are different MODE settings so make sure you are on conductivity.
- The new calibration solution is 1413 microsiemens instead of 1000.
- After you hit "CAL" the meter will flash "SA" and "End" so you know it

The conductivity section of the Texas Stream Team Manual (2020) starts on page 37. You can download digital versions of the manuals on H-GAC's Texas Stream Team web page.

You can also review videos for monitoring procedures on the Texas Stream Team YouTube page.

YouTube Review

calibrated.
- The new meters also read temperature so you do not need to use the kit's thermometer during calibration, but readings should be checked for accuracy.

Monitors will receive an updated laminated cheat sheet with the new meter.

Watching the YouTube videos or re-reading the manual are great ways to refresh your memory and double-check your monthly monitoring procedures between QA sessions. Always review the newest updated manual.

Safety Briefing: Don't Forget the Gloves and Glasses

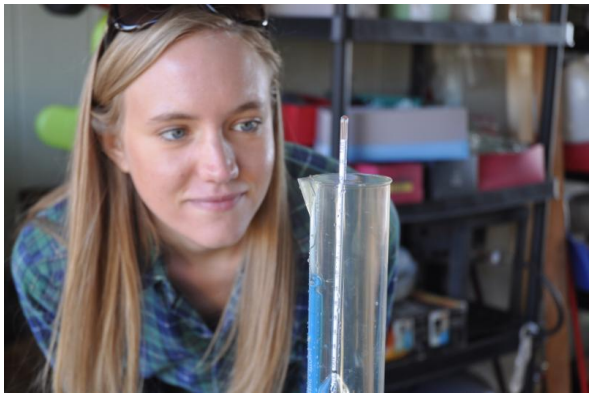
As monitors get more comfortable with the testing techniques, one factor that sometimes gets a little lax is the use of safety gloves and goggles or glasses.

It is important to wear the gloves and glasses, at the very least, when handling the chemical reagents used for the dissolved oxygen and pH tests. While some of these reagents are more harmful than others if they come in contact with your skin or eyes (like sulfuric acid), caution should be exercised with all reagents.

It is also worth remembering that many of our waterways are impaired for high levels of bacteria, so it is recommended to wear glasses to prevent the water from splashing into your eyes and wash your hands thoroughly after monitoring.

As always, it is recommended to sample with a partner or bring someone with you. If you do sample by yourself, be sure to let someone know where and when you are going, and when you expect to return.

Technical Territory: Conductivity vs Salinity - Which Should I Measure?



Texas Stream Team monitors use handheld meters to measure for conductivity in streams. In the Houston-Galveston region there are also many monitoring sites located in tidal segments where monitors measure salinity because conductivity can be too high. The two measurements tend to have a strong correlation, but how are they actually related, and which should you measure?

Salinity is the concentration of dissolved salts in the water. Texas Stream Team records salinity in parts per thousand (ppt), with fresh water typically measuring <1 ppt, oceans averaging 35 ppt, and brackish water of estuaries and tidal streams somewhere in between.

Conductivity is a measure of water's ability to conduct electricity which is related to the concentration of ions in the water.

What impacts my readings?
Several factors can impact conductivity and salinity readings, including higher temperatures which can lead to higher evaporation rates and increased concentrations of dissolved ions (which don't evaporate) in streams.

Conductivity or salinity spikes that do not correspond to increased temperatures might result from conditions such as:

- Runoff
- Tidal influences
- Effluent or illicit discharges

The ions come from dissolved materials like chlorides, sulfides, carbonate compounds - and salts.

Which should I measure?
Typically salinity is measured in tidal streams because the conductivity readings are consistently pretty high. Conductivity meters have to be calibrated, and should not be used to report measurements in streams that have higher conductivity readings than the standard solution used to calibrate the meter.

- Severe drought

Unusual spikes in conductivity or salinity at a monitoring site should be noted, and any relevant factors like those mentioned above should be described in the comments.

Monitor Spotlight: Monitor Milestones

As 2022 winds down, H-GAC wants to thank all Texas Stream Team Citizen Scientists for the time and effort they continue to put into monitoring our waterways and promoting better water quality in our region. In particular, we would like to recognize the following monitoring milestones that were reached in 2022:

1 Year of Monitoring

Christina Brown

2 Years of Monitoring

Bernice Stroh
Denise Wolever
Jeanette Lambert
Tom Rommel

5 Years of Monitoring

Phil Dibert
Bob Lee
Jay Rubens

10 Years of Monitoring

John Hellings

Upcoming Trainings

Texas Stream Team Standard Core Water Quality Trainings

Scheduled Trainings:
H-GAC and our partners are planning more trainings in 2023.

Check the H-GAC website for updates, or email stream.team@h-gac.com to be added to the notification list when a new training is scheduled.

To view trainings held by partners across the state you can view the Meadows Center's calendar of events.

Monitor Resources

Resources on the H-GAC website
H-GAC's Texas Stream Team webpage includes a section just for active monitors, including downloadable manuals, cheat sheets,

Electronic Monitoring Form Available
The Meadows Center for Water and the Environment continues to update the data forms and resources

links to video tutorials, and instructions for submitting and viewing data. It is a great first place to check if you have any questions about your Texas Stream Team monitoring.

Visit the website

available for Texas Stream Team, and now those resources include an electronic monitoring form! Just like with the PDF form, make sure to fill out all necessary fields, and mark your group as H-GAC.

Visit the website

TWPD Kills & Spills
Texas Parks and Wildlife Department's Kills and Spill Team (KAST) investigates fish and wildlife kills resulting from pollution and natural events. To report a Kill or Spill call **(512) 389-4848.**

Learn More

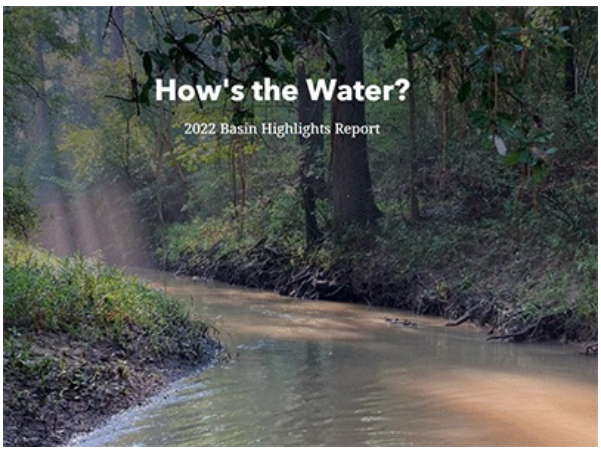
Galveston Bay Action Network
The Galveston Bay Action Network allows you to be the eyes around Galveston Bay. You can report various types of pollution throughout the Galveston Bay watershed, and GBAN will help make sure it gets reported to the appropriate jurisdiction.

Learn More

Water Quality Projects & Plans

Clean Rivers Program

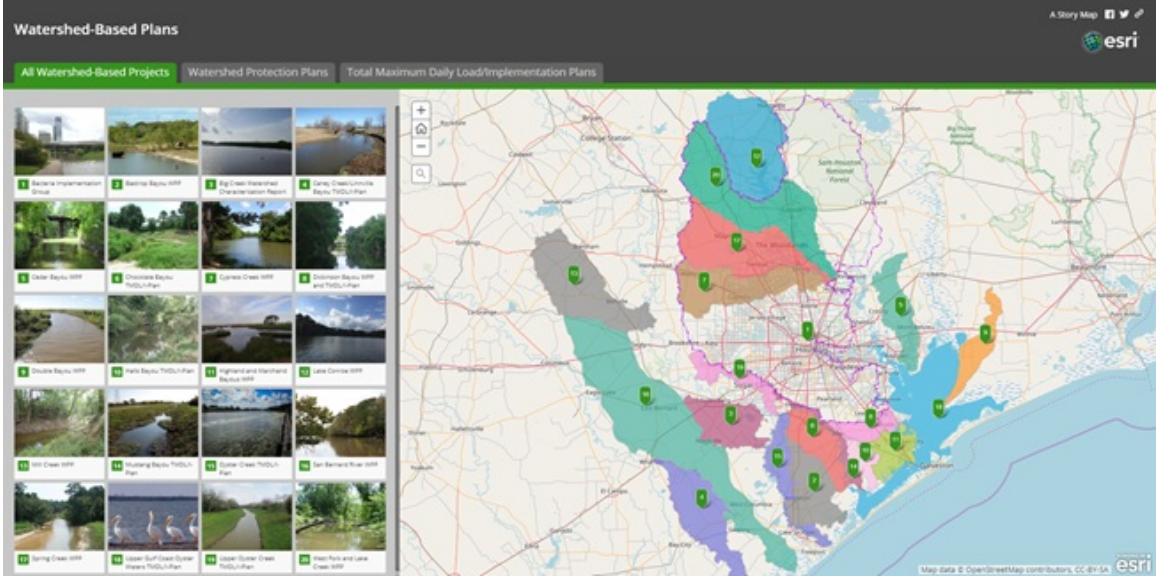
Basin Highlights Reports Available
The Basin Highlights Report for 2022 is now available in PDF and interactive online formats. The Basin Highlights Reports include the status and trends of water quality in the region. Every five years a larger Basin Summary Report is produced that provides a more detailed analysis of the region's water quality. The 2022 and previous years' reports are available online.



Contact Todd Running at 713-993-4549 for more information about the Clean Rivers Program.

Watershed Based Plans

H-GAC and other local partners help facilitate the development of watershed-based plans to improve water quality in the region, including both Total Maximum Daily Load (TMDL) Implementation Plans (I-Plans) and Watershed Protection Plans (WPPs). H-GAC has an interactive story map showing the locations of ongoing and completed projects in the region.



View the Story Map

Ongoing Project Updates

Caney Creek/Linville Bayou watersheds

Status: H-GAC is working with stakeholders to develop a TMDL I-Plan to reduce fecal bacteria levels.

Contact: Steven Johnston

Upcoming Meeting: Thursday, December 8, 2022 - In person

Chocolate Bay watershed

Status: H-GAC is working with stakeholders to develop a TMDL I-Plan to reduce fecal bacteria.

Contact: Steven Johnston

Upcoming Meeting: Tuesday, December 13, 2022. - Hybrid

Clear Creek watershed

Status: H-GAC is beginning to develop a watershed protection plan with local stakeholders.

Contact: Justin Bower

Cotton Bayou

Status: H-GAC is working with stakeholders to develop a TMDL I-Plan to reduce fecal bacteria levels.

Contact: Rachel Windham

Upcoming Meeting: January 2023

Cypress Creek watershed

Status: The WPP was approved by the TCEQ and EPA, and H-GAC is working with stakeholders to move implementation projects forward.

Contact: Justin Bower

East Fork San Jacinto River watershed

Status: Current Status...

Contact: Rachel Windham

Upcoming Meeting: Monday, December 12, 2022 - Hybrid

Oyster Creek watershed

Status: H-GAC is working with stakeholders to develop a TMDL I-Plan to reduce fecal bacteria levels.

Contact: Steven Johnston

Spring Creek watershed

Status: H-GAC worked with stakeholders to draft a WPP. The draft has been submitted for agency review.

Upcoming Meeting: Wednesday, December 14, 2022 - Hybrid

Contact: Rachel Windham

Partner News

Save the Date for Trash Bash

The River, Lakes, Bays 'N Bayous Trash Bash®, Texas's largest single-day waterway cleanup, invites volunteers to the 29th annual event on Saturday, March 25, 2023. Join the thousands of volunteers who attend each year to help cleanup waterways all throughout the Galveston Bay watershed. Cleanup supplies, event t-shirts, and lunch are provided to all volunteers, so bring your family and friends and come "Clean it like you mean it !". Find more information at www.trashbash.org.

RIVER, LAKES
BAYS 'N BAYOUS TRASH BASH®

Get More Involved With Partners

Adopt-a-Beach
Artist Boat
Bayou Land Conservancy
Bayou Preservation Association
Buffalo Bayou Partnership
Cypress Creek Flood Control Coalition
Exploration Green Conservancy
Friends of the River San Bernard
Galveston Bay Estuary Program
Galveston Bay Foundation
Jesse H. Jones Park & Nature Center
Keep Texas Beautiful
River, Lakes, Bays 'N Bayous Trash Bash
SPLASh
Trash Free Texas
Turtle Island Restoration Network
The Woodlands Township
White Oak Bayou Association

About the Newsletter

Newsletter Content Survey: Looking for different content? Complete this 3-question survey to let us know what you would like to see in the newsletter.
Email stream.team@h-gac.com or call 713-993-2469 with questions, comments, or suggestions. You can also view previous issues of our newsletter.

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