Texas Stream Team Newsletter

Houston-Galveston Area Chapter
Working to Protect Our Waterways

Volume 2021, Issue 3: September 2021

Monitor's Corner

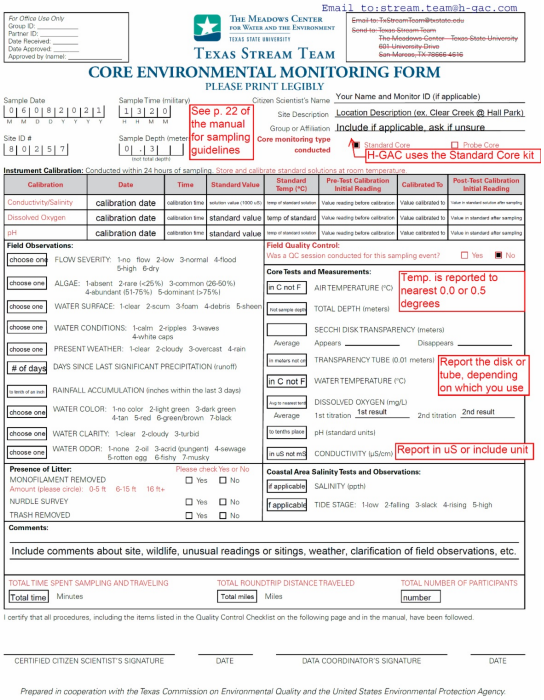
Skills Check: Using the Updated Monitoring Form

As mentioned at H-GAC's Texas Stream Team Monitor Update Meetings this summer, monitoring forms have been updated by the Meadows Center for Water and the Environment.

Please transition to the new form, which can be downloaded as a PDF on H-GAC's Texas Stream Team web page under "Monitor Resources". Also on the webpage is an instructional document (pictured here) that provides tips on how to fill out the form. Key features of the new form include:

- An additional space in the Calibration records to record the post-cal check (see the manual notes below on how to complete this check).
- A single form for all sites, with salinity included as an option for tidal sites.
- Added check boxes to note if you picked up trash, monofilament line, or did a nurdle survey.
- There is no longer a field for your Monitor ID so you can include it with your name.
- The form has a second page with a Quality Control Checklist to complete and help remind you of all QC measures. This includes a spot to mark that none of your reagents are expired. Please submit both pages.

The conductivity calibration portion in the Texas Stream Team 2019 Core Water Quality Monitoring Manual starts on page 45, and post-cal checks are on page 47. You can download digital versions of the manuals on H-GAC's Texas Stream Team web page.



Email to:stream.team@h-gac.com

TEXAS STREAM TEAM
CORE ENVIRONMENTAL MONITORING FORM
PLEASE PRINT LEGIBLY

See p. 22 of the manual for sampling guidelines

H-GAC uses the Standard Core kit

Temp. is reported to nearest 0.0 or 0.5 degrees

Report the disk or tube, depending on which you use

Report in uS or include unit

Include comments about site, wildlife, unusual readings or sitings, weather, clarification of field observations, etc.

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

As always you can review videos for monitoring procedures on the Texas Stream Team YouTube page.

YouTube Review

As we were unable to hold QA sessions in 2020 and 2021, watching the YouTube videos or re-reading the manual are great ways to refresh your memory and double-check your monthly monitoring procedures.

Safety Briefing: Getting (and Keeping) a Good Footing

Every monitoring site is different. The paths to and actual sampling locations vary from concrete trails and docks, to roadways and bridges, to grassy areas and stream banks. All of these environments can present hazards, including debris, wildlife, steep inclines, or (especially after a storm) slippery or muddy surfaces.

To help you travel to and from your site and safely collect your sample, one item is often overlooked when it comes to appropriate attire - a good pair of shoes. While sandals might be tempting in the Texas heat, it important to choose shoes that:

- Are close-toed;
- Have good traction to avoid slipping;

Conditions at your monitoring location might also inform your shoe choice:

- Rubber boots with good soles can be helpful if walking in an area with mud, puddles, or wet grass;
- Shoes that you can tighten with laces might be preferable if you will be going down an incline or walking any distances;

No matter your shoe choice - it is probably best to pick a pair you don't mind getting dirty in case you run into a mess like the dock pictured here.

And if you are concerned about your footing at all, it is better to see if another access point is available close by or if you can put off monitoring until conditions improve.

As always, it is recommended to sample with a partner or take someone with you for safety. If you do sample by yourself, tell someone where you are going and when you expect to return.

Technical Territory: A Natural Confluence - Where Water Sampling and Habitat Restoration Mix

By: Jahnavi Schneider and Christina Brown Student Conservation Association Riparian Technicians with Houston Parks and Recreation Department

As Texas Stream Team monitors, it is not

The trees perform a myriad of helpful things for the water and the life it holds. As the trees grow larger and their canopies expand, the resulting shade helps cool the water. The temperature impacts the behavior and health of aquatic animals as well as the chemistry of the water. Additionally, this temperature regulation our planted trees provide impacts conductivity as well as one of the most important indicators of water quality for aquatic life — dissolved oxygen. The colder the water, the more dissolved oxygen it can hold, which is important to the fish and organisms living within it. Trees and plants along the bank also help with runoff and prevent erosion. Heavy runoff increases water turbidity, which significantly impacts aquatic life, and can prevent fish from being able to find food. It interferes with the penetration of sunlight needed for the growth of algae, and the suspended particles can transport heavy metals and other toxic substrates. Another means of keeping pollution out of the water is by filtering it. The trees and

difficult to remember what we test for in terms of water quality--dissolved oxygen, pH, conductivity, temperature, transparency, and a handful of field observations. The multi-day training combined with the monthly repetition of the procedures instills the information solidly. What is easy to forget, though, is what can be done to improve these features of our bayous and waterways. While we are volunteer monitors for Bayou Preservation Association, our primary roles are riparian and prairie restoration technicians with the Student Conservation Association and Houston Parks and Recreation Department's Natural Resources Management Program.

Our goals in this position are overarching. The work we do aims to improve, strengthen, and expand habitats across the Greater Houston area. This improvement to ecosystems has a ripple effect across the board, benefiting wildlife, insects, water, air, and soil, not to mention the benefits to the city and ourselves as people. As habitat restoration technicians, we do much of the same work that Bayou Preservation Association's Stream Corridor Restoration Program performs in riparian buffer zones, such as removing harmful invasive species, planting native vegetation, and engaging with volunteers in restoration work. Additionally, we collect seeds from native plants to germinate at our Memorial Park greenhouse where we raise them until they are strong enough to be transplanted to our project sites. At our tree farm across the street from Clinton Park and prairie, we raise young native trees for fall tree plantings in parks like Victoria Gardens and Sylvan Rodriguez. At Victoria Gardens, we planted directly along the bayou in order to maximize our benefits to the riparian ecosystem.

plants filter out and dilute pollutants, which can be measured in conductivity. It is important that we measure conductivity, because it not only changes with salinity, but also with inorganic materials like heavy metals, which are toxic to aquatic life.

Our internship, specifically combined with the experience of being Texas Stream Team monitors, makes the work that we do incredibly rewarding. We learn about the impact that our efforts have on an unseen chemical level and are reminded of the benefits of our actions. The changes we make are apparent every time we return to a park and will only compound with every year and every tree and plant. Whether it's new growth on trees, seedlings from a native flower previously planted, or the scanning shadow of a Swainson's Hawk or Northern Harrier specific to grasslands and marshes. As we are able to see these changes every day at work, it is easy for us to forget that you, readers, may not have the same privilege. Your dedication and persistence to improving our waterways is not always readily rewarded, but hopefully we were able to shed some light on the changes that people like us can have on the wonderful places that surround us.

Monitor Spotlight: Thank You for Over a Decade of Monitoring on the San Bernard River

Three of H-GAC's veteran Texas Stream Team Citizen Scientists, and their two monitoring sites, have officially retired from water quality monitoring, and we would like to take this opportunity to thank them and recognize their effort for the Texas Stream Team and the San Bernard River.

Jan and Roy Edwards began monitoring site 80509, the San Bernard River at Fisherman's Isle, in 2008. They officially retired from the Texas Stream Team in

April 2021. Site 80509 is located near the mouth of the river, and Jan and Roy have provided a wealth of information over the years on the wildlife near the mouth as well as the status of dredging projects which they update on the website sanbernardtx.com. Jan and Roy were also featured in the Meadows Center for Water and the Environment's Citizen Scientist Spotlight in June of this year.

Valroy Maudlin has monitored a site upstream on the river for almost as long. Valroy began monitoring site 80594, the San Bernard River at his pier off of CR 496, in 2010 and officially retired in September 2021. Valroy is a member of the Friends of the River (FOR) San Bernard, and his participation in the Texas Stream Team has encouraged other FOR members to begin monitoring as well over the years.

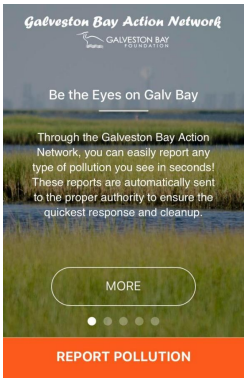
While new Texas Stream Team citizen scientists are encouraged to monitor for at least 2 years, and many continue longer than that, Jan and Roy Edwards, and Valroy Maudlin have consistently monitored their sites for over a decade. Together they have provided data on 259 monthly sampling events on the San Bernard River, rarely, if ever, missing a month.

While we are sad to say goodbye, we are certainly grateful for all of the time and effort they dedicated to the Texas Stream Team and to providing valuable information on the water quality of the San Bernard River. We wish the best of luck, health, and happiness to Jan, Roy, and Valroy in wherever their pursuits take them next!

Monitor Resources

Resources on the H-GAC website
H-GAC's Texas Stream Team website includes a section just for Monitor Resources, including downloadable data sheets, cheat sheets, links to video tutorials, and more. It is a great first place to check if you have any questions about your Texas Stream Team monitoring.

Visit the website



Report Pollution with GBAN
The Galveston Bay Action Network (GBAN) makes it easy to report pollution using a laptop, desktop, or mobile device. Download the mobile app or visit the Galveston Bay Foundation website.

Visit GBAN online

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

Meadows Center Resources
The Meadows Center for Water and the Environment has general Texas Stream Team resources, a state-wide data map, and several publications that monitors might find interesting.

Learn More

Upcoming Events

Texas Stream Team Core Water Quality Trainings

All H-GAC Texas Stream Team trainings are currently on hold. Trainings will resume when it is safe for trainers and participants. Please contact stream.team@h-gac.com with any questions.

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

Learn More

49th Annual Buffalo Bayou Partnership Regatta
Saturday, October 2, 8:00 a.m. to 2:30 p.m.

Participants ages 12 and up are invited to take part in Texas's largest canoe and kayak race, a 15-mile race along scenic Buffalo Bayou. Whether you are entering competitively or are paddling for fun, you can support Houston's historic waterway through this longstanding tradition.

Registration is required. For event pricing and more information, visit the Buffalo Bayou Partnership website.

Bayou Preservation Association's 18th Annual Symposium
Wednesday, October 6 and Thursday, October 7, 8:00 a.m. to 12:00 p.m.

The Bayou Preservation Association's 18th Annual Symposium, titled "Green, in a Word, Is Good", will be held virtually over two days on Zoom. The Symposium will focus on green infrastructure as our path to a sustainable and resilient future. Local agencies and experts will share how implementing nature's best practices enhances our quality of life and the region's economic future by giving us better water quality, improved protection from extreme storm events, and enhanced outdoor recreational opportunities.

Registration is required. For more information or to purchase tickets, visit the Bayou Preservation Association website.

Bike Around the Bay
Saturday, October 23, 7:00 a.m. to Sunday, October 24, 4:00 p.m.

The popular Galveston Bay Foundation fundraiser is a fully supported two-day, 175 mile bicycle ride around Galveston Bay that showcases its natural beauty. The ride provides a one-of-a-kind opportunity to see and experience Galveston Bay on a bike while helping to protect Galveston Bay for years to come.

To register or learn more about the different route options available this year, fundraising requirements, and more, visit the Galveston Bay Foundation website.

Bacteria Implementation Group (BIG) Fall Meeting

Tuesday, October 26, 1:00 to 3:00 p.m.

The BIG will discuss the 2021 Annual Report, BIG Implementation Plan revisions, and Total Maximum Daily Load updates.

The event will be online and registration is required. For more information or to submit public comment, contact Steven Johnston at 832-681-2579.

Galveston Bay Foundation Rain Barrel Workshop
Sunday, November 14

The Galveston Bay Foundation is hosting a Rain Barrel Workshop in partnership with the Interfaith Environmental Network of Houston. Due to COVID-19, the event will be broken up into two parts: a drive-thru barrel pickup from 1:00-3:00 p.m. in Houston, and a virtual Zoom workshop from 5:00-5:45 p.m.

The total cost of the workshop is $35 and registration is required. Learn more on the Galveston Bay Foundation website.

The Woodlands Township Workshops
Saturdays

The Woodlands Township Environmental Services Department is hosting several different workshops related to water quality on Saturdays in October and November. Topics include the pet waste problem, lawn care, rainscaping, and more.

Registration is required for most events. Find more information on the department's website.

Partner News

Save the Date for Trash Bash 2022

The River, Lakes, Bays 'N Bayous Trash Bash®, Texas's largest single-day waterway cleanup, is excited to welcome back volunteers to the 28th annual event on Saturday, March 26, 2022.

Since its inception, more than 114,000 volunteers have collected over 2,300 tons of trash, 20 tons of recyclable materials, and 11,629 tires. Find out how to volunteer and promote a healthy Galveston Bay watershed at one of their many cleanup locations on March 26. Trash Bash hopes you will come out and help “Clean it like you mean it!” ®

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
Galveston Bay Foundation
H-GAC Clean Waters Initiative
Jesse H. Jones Park & Nature Center
Keep Texas Beautiful
SPLASh
Take Care of Texas

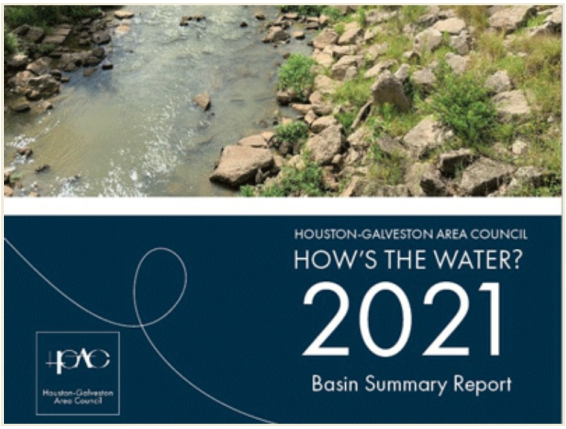
Exploration Green Conservancy
Friends of the River San Bernard
Galveston Bay Estuary Program
Trash Free Texas
Turtle Island Restoration Network
The Woodlands Township

Water Quality Projects & Plans

Clean Rivers Program

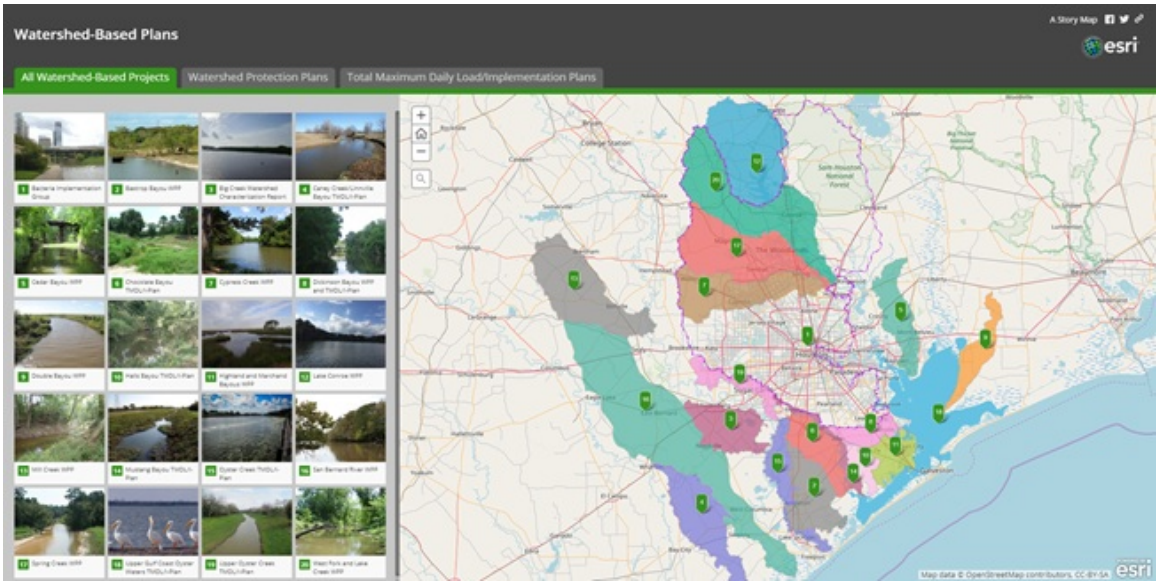
2021 Basin Summary Report Available
The Basin Summary Report (BSR), produced every five years, outlines water quality issues in the H-GAC Clean Rivers Program region based on technical analysis of historical and current trends. The BSR and the Basin Highlight Reports, which are produced in the years without a BSR, are available in PDF and interactive online formats.

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: H-GAC is working with stakeholders to develop a TMDL I-Plan to reduce fecal bacteria levels. Contact: Steven Johnston
- Oyster Creek watershed: H-GAC is working with stakeholders to develop a TMDL I-Plan to reduce fecal bacteria levels. Contact: Steven Johnston
- Spring Creek watershed: H-GAC worked with stakeholders to draft a WPP. The

draft has been submitted for agency review. Contact: Rachel Windham
- Cypress Creek watershed: The WPP was approved by the TCEQ and EPA, and H-GAC is working with stakeholders to move implementation projects forward. Contact: Justin Bower
- Clear Creek watershed: H-GAC is beginning technical work that will help inform stakeholder decisions when the WPP development process begins later this year. Contact: Justin Bower

About the Newsletter

Newsletter Content Survey: please complete this short 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, calendar items, or suggestions. You can also view previous issues of our newsletter.

Join the H-GAC Texas Stream Team mailing list.

Opt-out of the H-GAC Texas Stream Team mailing list by sending us an email. Clicking "unsubscribe" below will remove you from all H-GAC mailing lists.

Texas Stream Team at The Meadows Center for Water and the Environment at Texas State University is dedicated to understanding and protecting the 191,000 miles of Texas waterways. For more information, contact TxStreamTeam@txstate.edu.
