



# Headwaters

River Systems Institute Texas State University-San Marcos EPA Region 6 TCEQ Fall 2011

## 2011 Meeting of the Monitors

by Neal Denton

Over a hundred and thirty attendees (volunteer water quality monitors, environmental professionals, and members of the general public) gathered at the Hilton Houston NASA Clear Lake from September 29th to October 1st for Texas Stream Team's biennial conference: The 2011 Meeting of the Monitors. Attendees were provided many opportunities to engage in the efforts aimed at improving and protecting water quality in Texas. The Houston-Galveston Area Council (H-GAC), which administers the local Texas Stream Team program, co-hosted the conference.

Thursday's agenda featured H-GAC's Clean Waters Initiative. Topics presented were H-GAC's 2011 Basin Summary Report, the watershed protection plans of the San Bernard Watershed and Bastrop Bayou-Cedar Bayou along with the unique Bacteria Implementation Group (BIG). The BIG is responsible for receiving input, establishing workgroups, facilitating communications, developing recommendations, and providing oversight in the development of the Implementation Plan in four Total Maximum Daily Load projects in the Houston area.

Friday's agenda featured a welcome from Andrew Sansom, Executive Director of the River Systems Institute, Todd Running, of Clean Rivers Program Manager and H-GAC, and Neal Denton, Texas Stream Team.

Friday's sessions included Solutions for Urbanizing Areas, The Importance of Volunteer Monitoring, Keeping Your Volunteers Monitors from Swimming Upstream, and Stakeholder Facilitation and Conflict Resolution. The evening wrapped up with an Eco Tour Boat Ride on Clear Lake and Galveston Bay. Our 49 attendees of the boat ride gained new insights from guest speakers representing

the Galveston Bay Estuary Program, Texas Sea Grant, and the Environmental Institute of Houston about the water quality improvements efforts and the historical significance of the area. Both field trips were at capacity.

Saturday's agenda was also packed with a great variety of session and workshop choices. Twenty early risers attended the Sunrise Birding Field Trip at the Armand Bayou Nature Center. Welcoming remarks were presented by Lauren Bilbe, of the Texas Commission on Environmental Quality and Neal Denton. Mike Bira of the U.S. Environmental Protection Agency followed up



Gyotaku Demonstration, Something Fishy Workshop

*(Continued on page 3)*



Barbara Sunderland Manouso, Stakeholder Facilitation & Conflict Resolution Session

## Welcome, Erin, Statewide Volunteer Coordinator



**E**rin McAuley joined the Texas Stream Team in August 2011 as the Statewide Volunteer Coordinator. She has a background in environmental science and water management, with a focus on water quality issues facing Texas.

Erin graduated from Texas State University, Department of Geography with her undergraduate and

graduate degrees. Her graduate studies focused on water quality management and planning. Erin has worked in water resource management and environmental education since 2007. She began as a graduate assistant in the Department of Geography at Texas State University, and then began her professional work at the Texas Commission on Environmental Quality and subsequently at the Texas Water Development Board.

Her work at the Texas Commission on Environmental Quality was in the division of the Surface Water Quality Monitoring Team. Erin is delighted to be back Texas State University as part of Texas Stream Team. Her goal is to develop strong relationships between Texas Stream Team and its partners and volunteer monitors in order to encourage volunteer water quality monitoring across Texas.

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### Texas Stream Team Headwaters Vol. # 4 No. # 3, 2011

The mission of Texas Stream Team is 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.

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*Headwaters* disseminates information about nonpoint source pollution and facilitates the exchange of ideas and monitoring data between environmental monitors and supporting partners throughout the state of Texas.

The newsletter is published three times a year. For a free subscription, call toll free at (877)506-1401 or submit your online request at <<http://txstreamteam.rivers.txstate.edu/newsletter-request.html>>.

Contributions to the newsletter are welcomed and encouraged. Please send any articles, letters, or questions to Texas Stream Team at the postal address listed on the back page or submit them via email to the editor.

If you wish to reprint any material published in *Headwaters*, please notify the editor and submit a copy of the final publication.

# Meeting of the Monitors

*(Continued from page 1)*

with a celebration address of our 20 year anniversary. Morning sessions included, Surface Water Quality Monitoring in Texas and a Texas Stream Team Quality Control Session.

Afternoon workshops for Saturday comprised a Fisheries Workshop, Macroinvertebrate Workshop, Interpreting your Data Workshop, Enviro-scape Watershed Model Workshop, Mussel Watch, and Texas Invasives Citizen Scientist Training. In the late afternoon, Texas Stream Team introduced its new Advanced Water Quality Monitor Training. The Advanced Water Quality Monitor Training includes tests for orthophosphate, nitrate-nitrogen, turbidity, and streamflow. Testing for these parameters enables us to gather data that will give data users a better representation of the extent to which nonpoint source pollution may be affecting a body of water.

Besides sessions, workshops, and outdoor activities, the conference offered an extensive Exhibition and Networking Session on Friday evening. The variety of choices and line-up of guest speakers was our best so far. We would like to express our gratitude to all the agencies that put on these workshops: Texas Sea Grant, the Environmental Institute of Houston, Oklahoma Blue Thumb, Texas Parks and Wildlife, and the Invaders of Texas Program of the U.T. Lady Bird Johnson Wildflower Center.

This conference would not have been possible without the help of our partners: the Houston-Galveston Area Council, the Texas Commission on Environmental Quality, the Texas Clean Rivers Program, the U.S. Environmental Protection Agency, the River Systems Institute, and Texas State University.

ty. We are also very grateful to our sponsors for helping to provide the food and beverage for the conference: Hach Hydromet, LaMotte, HEB, Sweet Leaf Tea, the Gulf Coast Waste Disposal Authority, and EarthShare of Texas.

Texas Stream Team had a great time meeting and speaking with attendees at this year's MoM and we hope you were able to take full advantage of all the great sessions, workshops and networking events during the conference.

Our goal was to provide you with sessions and workshops that offered a stronger understanding of what's new in the water quality monitoring world, key insights into watershed planning and how we are partnering with you to create more connected and skilled community of monitors. We hope you experienced informative and inspiring moments not only from the conference but also from the ability to learn and discuss today's challenges and successes with your peers. If you were unable to attend, please feel free to download our speaker presentations from the events section of our website < <http://txstream-team.rivers.txstate.edu/> >.

Our time in the Houston area was wonderful, and we want to make sure you continue to benefit from the conference beyond the final session.



Armand Bayou Nature Center Birding Field Trip

Sponsored by:

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Meeting of the Monitors Photo Contest Winner: Jerrel Geisler. "Sunrise Over Lake Houston."

## Texarkana College Earth Club Hangs with TST Through 20 Years of Testing and Still Monitoring

by Delores McCright, Biology Professor, Texarkana College

Texarkana College Earth Club, under the supervision of Biology Professor Delores McCright, adopted Swampoodle Creek a little over 20 years ago. It's a typical city creek but has a lively history. Swampoodle Creek was the 1st constructed creek in the city – a project that began about 1900. The creek starts at the railroad yards downtown on the south and runs all the way to Spring Lake on the north end of town. It was the city's sewage dump, with many chamber pots being emptied there. They say the name began from a combination of using the term "swamp" because it was a swamp lands with all of the things dumped in there, plus the use of the term "poodle" because it originated in the red light district at the railroad tracks with many houses of ill repute along there. The trendy hairdo for the "ladies" was permed and curly resembling a poodle.

In our studies through the years, not much has changed chemically. There's always a high coliform count, but everything else is mostly typical of the usual city creek. It is on the 303(d) List. Twice I have called the city about a strange black inky substance in the water during November. The TCEQ came out promptly after each call, but the color was gone. They determined it was high black cyanobacteria count. I was worried because there is a printing company about 2 blocks away and thought somebody was cleaning out something. In the last year, there has been some kind of foamy sludge that smells like sewage. The city checks the creek and our monitoring group will continue keep an eye

on the situation. This summer, the city investigated the presence of a large man from Florida lying in the creek face up, with shriveled arms and hands, so he had been there for a while. When the police and fire departments came to investigate, he became violent and ended up sending 4 officials to the hospital. We still don't know why he was in the creek and why he was so violent. From this incident, I have learned that it is good to water monitor by chemical and biological means, but we should also have volunteers patrol our adopted waterways. I believe our Homeland Security officials would concur.

I called the police department after this issue and informed them about the creek being highly polluted and to watch for E. coli and Hepatitis A problems and told them to see their doctor.

We also adopted our constructed Texarkana College wetland pond in our Environmental Studies Center and have been doing tests monthly on the same day we check Swampoodle Creek. This has been a nice comparison experiment for the students. The various students I have trained every semester the last 20 years have tested all over the area at non-adopted sites. Since we are a border town, they even check on the Arkansas side. It is valuable experience for them, and some of them take their friends and family to do water tests, which is even better.

This program has been great to get my students and the community involved in taking care of their environment. The focus on water quality has proven to be a useful focus in our ecological studies and made this area appreciate this valuable resource even more.

It's an honor to work with such a dedicated agency.



Student, William "Tres" Allen, concentrating on his dissolved oxygen test

# Prevention through Communication

by Jennifer Mandel Buratti

As advocates for environmental awareness and preservation, members of the Texas Stream Team network each work to address various pollution concerns. Our volunteer water quality monitors on the coast may be focused on the pollution concern of high bacteria levels while volunteers in another part of the state are concerned about sediment build up in water bodies.

One example of a mishap in communication was when a monitor found a significant number dead fish floating near the water quality monitoring site. The monitor did not note this in the field observations on the data entry form, nor tell the group administrator/lead until much later. However, there was never a written process on what to do and previous training may not have addressed fish kill reporting.

To clarify how to communicate concerns, the Texas Stream Team has developed a Communication Plan. We have also created a Field Reference Guide and Pollution Concern Form to support our Communication Plan. The Texas Stream Team iPhone app also offers monitors the ability to contact us about a pollution concern and send us pictures. The app utilizes the iPhone's GPS to send coordinates that can be used to relocate the reported site. Our hope is that with every tool we develop, we can strengthen our monitoring network and create a more fluid communication structure.

We ask our monitors to begin using our new Communication Plan and as you use the plan, we hope to hear your feedback so that we can continue to improve polices, trainings, and create tools in order to eliminate confusion and better record and report pollution concerns.

Now is the time to begin educating the public. The scientific community needs an answer for the public on "how clean is clean," and on the rational ways in which industry can be allowed to do the things that it must do while maintaining a healthy society that is as risk free as possible (Brown, 1987).



## WHAT IS THE PURPOSE OF THIS COMMUNICATION PLAN?

The Communication Plan provides guidance to certified volunteer water quality monitors, Texas Stream Team Partners, and Texas Stream Team staff for communication and information exchange with respect to water quality data.

This *Communication Plan* is designed as a flexible guidance document and as information is developed, the *Communication Plan* may be modified. This *Communication Plan* will be updated with each grant contract established between the Texas Commission on Environmental Quality and Texas Stream Team. Versions shall be marked with a numeral and a date of revision. Current versions will be placed online at Texas Stream Team's Program Forms webpage

Texas Stream Team partners and groups can request our new publications below or you can download them from our publications section on our website [txstreamteam.rivers.txstate.edu](http://txstreamteam.rivers.txstate.edu).

- Texas Stream Team Communication Plan
- Communication of Data and Incident – Field Reference Guide
- Pollution Concern Form

### Reference:

Brown, Quincalee. Effective Communication with the Public on Water Pollution Control Issues *Journal of Water Pollution Control Federation*. Vols 32-61. <http://www.jstor.org/stable/25043384>.

# Cypress Creek Project

by Michael C. Clary, River Systems Institute

## Cypress Creek Project

The Cypress Creek Project is a voluntary effort of community stakeholders, coordinated with technical and research assistance provided by the River Systems Institute. The project is funded by grant funds from the Texas Commission on Environmental Quality through the U.S. Environmental Protection Agency Region VI. The River Systems Institute and Texas State University-San Marcos, along with project partners, are providing substantial funds to facilitate project success. The goal of this project is to educate stakeholders about land management practices that can ensure the water quality of the Cypress Creek watershed is preserved and continues to provide recreational and economic benefits for future generations.

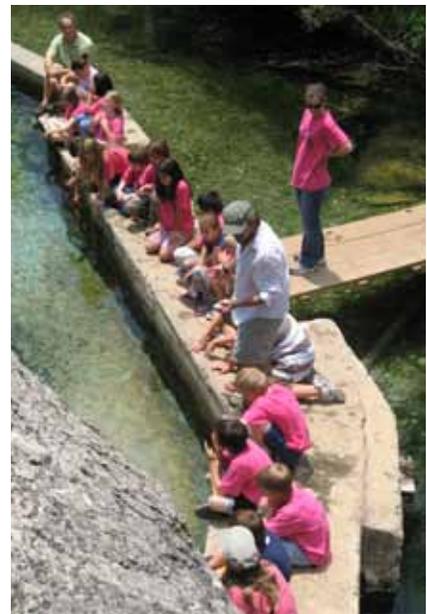
Cypress Creek is attaining water quality standards as established by the State, but the stream shows signs of degradation. Due to its location in Hays County, one of the fastest growing counties in the nation, substantial growth and development is imminent. Stakeholders and experts agree that meeting State water quality standards will be insufficient to maintain the desired health and historical nature of the creek. Efforts to maintain good water quality conditions are constrained by the reliance on adequate base flow conditions from Cypress Creek's artesian headwaters, Jacob's Well. Community expectations of maintaining a clear, clean, and flowing stream can succeed with a watershed approach that incorporates ground and surface water quality management practices, fosters collaboration between local, state and federal agencies, and is comprehensive in its approach for maintaining balance between natural resource management and economic progress.

The Cypress Creek Project consists of two phases: Phase One 2008-2010 and Phase Two 2011-2013. Phase One identified the stakeholders dedicated to preserving their watershed. Monitoring data collected included: stream flow, water quality data and precipitation data which was necessary to determine pollution loads and determining target levels for pollution reduction to be used in Phase Two. Stakeholder meetings were integral in identifying community concerns and what types of management practices are appropriate and practical for the watershed. The knowledge collected in Phase One was compiled into a watershed characterization report.

We are moving forward with Phase Two which involves the development and implementation of a watershed protection plan. A watershed protection plan is a holistic approach to water quality and watershed issues through a collaborative approach by recommending management strategies that address more than one watershed issue and

community concern. Also in Phase Two was the appointment of a new project coordinator, Michael "Chris" Clary.

The Cypress Creek Project is a preventative effort focusing on non-point source pollution using best management practices chosen by the stakeholders that need to take a watershed wide approach. Nutrient, bacteria and depressed oxygen levels identified as a concern by the stakeholders will be modeled using the Soil and Water Assessment Tool (SWAT). The modeling will estimate pollutant loads from projected increased development. Stakeholders will decide on best management practices that will keep pollution at the target levels identified in Phase One. Educating the stakeholders on what they can do as individuals and as a community will lead to good management decisions which will allow future generations to continue benefiting from the Cypress Creek.



*Students learn about Cypress Creek Watershed and Jacob's Well with Texas Stream Team Staff*

## A Message from the Volunteer Coordinator Erin McAuley

As Texas Stream Team celebrates our 20th anniversary, we are exploring new ways to build strong connections within our network of volunteer monitors, volunteer groups, and partner organizations. Texas Stream Team volunteer monitors have played a crucial role in the process of nonpoint source pollution prevention. Communication is a very important aspect of the Texas Stream Team program. In order to keep our rivers, streams, and lakes clean we must strive to make nonpoint source pollution prevention and awareness as automatic as buckling your seatbelt when you get in the car.

In order to achieve this goal, all occupants of a watershed (and that's everyone!) must be educated and talk to each other about best practices to protect their watershed and making this part of your everyday life. On any given day, each and every one of us can produce/prevent nonpoint source pollution. We hope to raise awareness among our community that we can in various ways, and communicating this in a clear, concise way within your watershed can make a large impact on the health of your water bodies. Activities as simple as picking up after your pet, disposing of leaves and yard waste is the proper way, and ensuring your car is not leaking fluids can lead to substantial changes in water quality. It takes active and knowledgeable citizens to ensure local water resources are protected from nonpoint source pollution.

### Texas Stream Team Volunteers of the Month

Fall 2011

August

**Rich Grayson**

North Texas Master Naturalists

Trinity River Basin

September

**Mark Pillion**

San Marcos River Rangers

Guadalupe River Basin

October

**Bob Brischetto**

Bandera Stream Team

San Antonio River

*To nominate a volunteer for recognition, contact [txstreamteam@txstate.edu](mailto:txstreamteam@txstate.edu) or call (512) 245-3461 or toll free (877) 506-1401. To view current and past Volunteers of the Month, go to <http://txstreamteam.rivers.txstate.edu/Vol-Spot>*

So speak up for your watershed – educate a friend, relative, or neighbor today on the importance of nonpoint source pollution prevention.

Online Source for nonpoint source pollution prevention information:

<http://cfpub.epa.gov/npstbx/WhereYouLive.cfm?StateID=44#General%20Stormwater%20and%20Storm%20Drain%20Awareness>



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