Texas StreamTeam *Caring for Our Waters*

Headwaters

River Systems Institute Texas State University-San Marcos EPA Region 6 TCEQ *Summer 2008*

Passing the Torch, Looking Ahead

by Jason Pinchback, Texas Stream Team

The first half of 2008 brought many changes for the Texas Stream Team network. In February, the Texas Watch rebranding process led to the unveiling of our new name and logo. After nine years as the Texas Stream Team's project manager, Greg Bryant retired from the Texas Commission on Environmental Quality (TCEQ). Texas Stream Team wishes him the best and hopes that he would return to our network as a monitor or trainer and join our excellent corps of retired monitors. Our new TCEQ project manager, Jennifer Buratti (see article on page 3), started in March, and she will bring natural resource and management expertise to help improve and maintain our service to volunteer monitors and partners.

Also in March, Eric Mendelman's focus shifted to leading the River Systems Institute's Initiative for Watershed Excellence. In conjunction with this change, Jason Pinchback was pro-

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In This Issue...

The preparation of this publication is financed through grants from the U.S. Environmental Protection Agency through the Texas Commission on Environmental Quality. Printed on recycled paper.

Volunteer Spotlight –

Lone Man Creek Group

by Heidi Moltz, Texas Stream Team

Dramatic changes from urbanization are occurring in the Texas Hill Country of Hays County. These changes may alter the water resources in the region by increasing sedimentation, reducing aquatic habitat, and decreasing water availability due to increased pumping.

One area at risk of impacts by these changes is the Lone Man Creek watershed. Lone Man Creek joins the Blanco River several miles downstream of Wimberley, Texas.

Over the past year, several Hays County Master Naturalists became concerned about maintaining the exceptional water quality in the Lone Man Creek watershed. The group decided to develop an understanding of the changes taking place in the region by participating in a Watershed Steward training from Texas AgriLife Extension Service (formerly Texas Cooperative Extension). The group also attended the Texas Stream Team monitor training at Texas State University-San Marcos in February 2008, where they obtained their water quality monitoring certification for all core parameters plus *E. coli*.

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Looking Ahead

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moted to Texas Stream Team acting director. The 2008 spring semester blessed us with an excellent group of interns and graduate assistants. Nirmala Karunarathna, Josh Oyer, Megan Gunnels, and Lisa Quates performed myriad program functions ranging from data summary reports to outreach in Plum Creek, and from managing a climate station to managing the statewide water quality database. This summer, Josh Oyer has joined our team as a data analyst, and Greg Dannheim is our newest intern.

In addition to our main duties with Texas Stream Team, our staff is working on several other projects, including the Spring Lake Climate Tower, the Cypress Creek Project, the Initiative for Watershed Excellence, the Rio Grande Data Analysis Project, and Dos Laredos.

In late 2007, Texas Stream Team and TCEQ agreed on a new two-year partnership. Highlights of events and activities that the Texas Stream Team network is planning over the next two years include:

- hosting a statewide Volunteer and Partner Recognition event on July 19, 2008, in San Marcos;
- holding a statewide Meeting of the Monitors in spring or summer 2009;
- conducting 40 Certified Water Quality Monitor training sessions;
- training 600 new volunteer water quality monitors;
- completing 15 new data summary reports;
- co-hosting a regional watershed protection workshop in the Gilleland Creek watershed (Pflugerville);
- conducting more than 100 nonpoint source pollution education presentations;
- educating over 100,000 Texans through presentations and special events; and
- communicating volunteer monitors' input at steering committee and other water resource management meetings.

As with many other water resource organizations, Texas Stream Team is working hard to play a positive, active role in ensuring a healthy and sustainable future. Now more than ever, your individual efforts are needed. We welcome your input and invite you to explore new ways to participate with our much-valued Texas Stream Team program. ●

Texas Stream Team
Headwaters
Vol. 1, No. 2, 2008

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.

Subscriptions:
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 send your email request to Julie Tuason, Editor, at jt07@txstate.edu.

Contributions:
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 Julie Tuason, Editor, at jt07@txstate.edu.

Welcome, Jennifer Buratti!

Texas Stream Team welcomes Jennifer Buratti as our new project manager at the Texas Commission on Environmental Quality. Jennifer is a project manager on the TCEQ's Watershed Management Team. Besides working closely with the Texas Stream Team, she also oversees the Arroyo Colorado Watershed Protection Plan, the Trinity River Restoration Project, the Nonpoint Source (NPS) Annual Report, and the NPS Management Program.

After receiving her B.S. and M.S. in Biology from Texas State University-San Marcos, Jennifer began her career with the National Park Service. Experienced in environmental management and outdoor education, she now looks forward to her continued involvement in water quality protection and improvement projects for the State of Texas.

Contact information: Texas Commission on Environmental Quality, P.O. Box 13087, Austin, TX 78711-3087, JBuratti@tceq.state.tx.us. *www.tceq.state.tx.us/nav/eq/nonpointsrcpgm.html/* ●

Mark Your Calendar !

Volunteer Recognition Event

Saturday, July 19, 9 a.m. to 4 p.m., Aquarena Center, San Marcos

Thousands of people volunteer their time to the River Systems Institute to protect the water resources of Texas, including the water quality monitors of Texas Stream Team and the science divers at Aquarena Center. We are excited to announce an event designed to recognize your efforts! All partners and volunteers are invited to attend. There will be a variety of outdoor activities, good food, and a great time. For more information or to RSVP, contact Heidi Moltz at hm1079@txstate.edu or (512) 245-3461 or toll free (877) 506-1401.

Renew Your *Headwaters* Subscription Today!

by Julie Tuason, Texas Stream Team

In order to conserve precious resources, we periodically prune our newsletter mailing list. If you are a regular reader, we need to hear from you right away!

To continue receiving *Headwaters* through the mail, please renew your subscription by filling out and returning the postage-paid reply card that is included inside this issue. As always, your subscription is free of charge.

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Where Does All Your Data Go?

by Jason Pinchback, Texas Stream Team

Some people argue that the ultimate goal of volunteer monitoring is to generate usable data. This is the case for many Texas Stream Team volunteer water quality monitors. From time to time, we get calls from folks asking about their data, where it is, and what is being done with it.

Texas Stream Team (formerly Texas Watch) began in 1991, and all of the data collected since then is stored in our Access database. In the past 17 years, monitors have collected more than 28,450 samples from 848 sites in Texas. After the data is collected from a designated site, the monitor sends the data sheet to their local partner or to Texas Stream Team headquarters in San Marcos.

If the data go to partners, they:

- keep a copy of the data for their records and use;
- screen the data for quality control issues;
- screen the data for potential water quality issues;
- communicate findings to colleagues, volunteers, and local contacts if necessary; and
- send data to Texas Stream Team.

Once the data are sent to Stream Team headquarters, we:

- verify that a certified monitor collected the data from an established site;
- screen the data for quality control issues using a 24-step data review checklist;
- screen the data for potential water quality issues;
- communicate findings to volunteers, partners, and local contacts if necessary; and
- enter the data into the database and proof the values.

Every data sheet that we receive at headquarters in San Marcos undergoes a rudimentary level of analysis. Select sites and stream segments receive a more in-depth level of analysis through data summary reports, which we publish online at *txstreamteam.rivers.txstate.edu/Data-Forum/Data-Reports.html*

Texas Stream Team is working toward making sure that all monitors receive an annual data report, but we are not there yet. For now, we conduct a handful of data summary reports every year. Data summary reports include general basin volunteer monitoring activity, general water quality descriptive statistics, tables and graphs, and comparisons to stream standards as related to "aquatic life use" criteria.

In general, Texas Stream Team uses volunteer data in the following ways:

- to assist monitors with data analysis and interpretation;

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Texas Stream Team

Volunteers of the Month

Spring 2008

March
Mary Ellen Whitworth
Buffalo Bayou

April
Steve Box
Colorado River

May
Sandra Stinson
Prairie Creek

June
Bill Burgin
Little Cypress Bayou

To nominate a volunteer for recognition, please contact Heidi Moltz at hm1079@txstate.edu or call (512) 245-3461 (toll free 1-877-506-1401).

How to Become a Stream Team Bacteria Monitor

by Heidi Moltz, Texas Stream Team

Texas Stream Team's newest parameter, *E. coli,* was approved by the Texas Commission on Environmental Quality in 2007. *E. coli* bacteria originate from the wastes of warm-blooded animals. Although they are generally not harmful themselves, *E. coli* indicate the possible presence of pathogenic (disease-causing) organisms that also live in human and animal digestive systems. Since it is difficult, time-consuming, and expensive to test directly for many different pathogens, water is usually tested for an indicator like *E. coli* instead.

The amount of *E. coli* at a site identifies potential health risks associated with swimming and consuming certain aquatic organisms including shellfish. Sources of bacterial contamination to surface waters include inadequately treated sewage, improperly managed animal waste from livestock, pets in urban areas, aquatic birds and mammals, and failing septic systems. Many Texas waterways have been identified as not suitable for contact recreation due to elevated bacteria levels.

Texas Stream Team bacteria trainings provide volunteers with: (1) background information to develop an understanding of bacterial characteristics and the water quality regulations designed to protect people from contaminated waterways; (2) sample collection procedures to familiarize participants with appropriate use and handling of monitoring equipment and collection of representative samples; (3) media storage and preparation; (4) proper dilution, plating, and incubation procedures; (5) colony counting and mathematical conversion experience; and (6) proper documentation and safety procedures.

The training, which typically takes two and a half hours, consists of both indoor and outdoor segments to provide participants with a hands-on, in-the-field experience that provides exceptional preparation for collecting bacterial data at an approved monitoring site upon certification.

Attending a bacteria monitoring training is an excellent opportunity for new and veteran monitors alike! To date, Texas Stream Team has hosted several bacteria trainings across the state. Trainings have taken place at Texas State University-San Marcos, University of Texas-Brownsville, Shangri La Education Center in Orange, and Texas State Aquarium Sea Lab in Corpus Christi, to name a few.

If you're interested in attending a bacteria training or if you'd like additional information, please contact Heidi Moltz at hm1079@txstate.edu or (512) 245-3461 or toll free (877) 506-1401. For more information on Texas Stream Team programs including bacteriological monitoring efforts, visit our website at *txstreamteam.rivers.txstate.edu* ●

Mark Your Calendar!

Great North American Secchi Dip-in

June 28-July 20

For details on how to participate, please visit the Secchi Dip-in website at *http://dipin.kent.edu/*

Second Annual Earth Day Celebration

by Mary Waters, River Systems Institute

Approximately 1,200 people attended this year's Aquarena Earth Day Celebration, held on Sunday, April 20, 2008, in San Marcos. Featured speakers included Hays County Judge Liz Sumter, Texas State University President Denise Trauth, City of San Marcos Mayor Susan Narvaiz, and River Systems Institute Executive Director Andrew Sansom. The event included a multi-denominational and Native American blessing of the San Marcos Springs. There were kayak tours on the environmentally sensitive Spring Lake, and free Glass Bottom Boat tours in exchange for recyclables.

Twenty-five regional organizations set up information booths along the shores of Spring Lake with educational opportunities designed to help citizens become better stewards of the Earth. Recreational activities included hiking in the newly acquired, city-owned green space. The exciting lineup of local music entertainment included a youth mariachi group and youth folklorico dancers. Snacks and drinks were provided by various San Marcos businesses.

This free event was sponsored by the Hays County Commissioners Court, Environmental Service Committee at Texas State, Common Experience at Texas State, the River Systems Institute, Half Price Books, and Timberland. Assisting in the festivities was a large group of volunteers from the National Association of Environmental Professionals and Timberland. ●

Where Does Your Data Go?

(Continued from Page 4)

- to analyze watershed-level or site-by-site data for monitors and partners;
- to screen all data annually for values outside expected ranges;
- to network with monitors and pertinent agencies to communicate data;
- to attend meetings and conferences to communicate data;
- to participate in the Texas Commission on Environmental Quality Clean Rivers Program and other stakeholder meetings;
- to provide a data viewing forum via the Texas Stream Team Data Viewer; and
- to participate in professional coordinated monitoring processes to raise awareness of areas of concern.

We are working hard to communicate Texas Stream Team data, but it is more important than ever to learn more about what you can do with the data locally. If you would like Texas Stream Team staff to develop a customized query of water quality data or to request a data summary report for your site, please let us know. ●

TMDL Update

by Eric Mendelman, Texas Stream Team

This year, Texas Stream Team is adding three projects – Gilleland Creek, Plum Creek, and Cypress Creek – to its list of priority areas which currently includes Orange County, Oso Creek and Petronila Creek, and the Arroyo Colorado. Texas Stream Team works in areas, designated as priority water bodies by the Texas Commission on Environmental Quality, to develop monitoring and education programs. The projects are part of a partnership with the TCEQ and other entities that support the development of a Watershed Protection Plan (WPP) and/or Total Maximum Daily Load (TMDL) implementation. This year, our general focus is to maintain current activities that were initiated in 2007 and develop new education materials that can be used throughout the state.

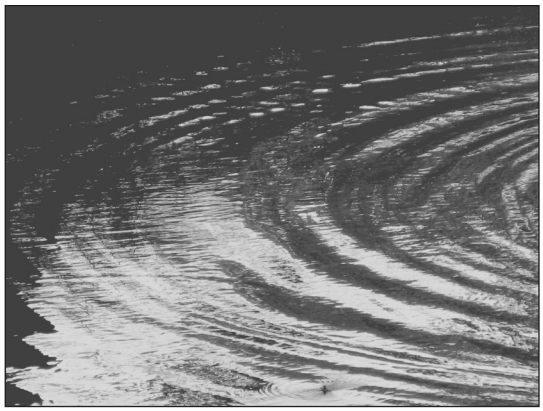
Our "on-location" activities in TMDL/WPP project areas include the following:

- In the Arroyo Colorado (see *www.arroycolorado.org*), Jason Pinchback participated in the Education and Outreach Workgroup meeting on January 15 and conducted a water quality monitor training at the University of Texas at Brownsville on January 31. Five new monitors completed phases 1 and 2 in both the core monitoring parameters and *E. coli*.
- In Orange County, where the TMDL focus is on bacteria, DO, and pH, Heidi Moltz and Eric Mendelman trained 19 monitors in the Texas Stream Team core program. We were also pleased to recognize Woody Cox, an Orange County high school teacher and Texas Stream Team Certified Trainer, as the December 2007 volunteer of the month.
- Julie Tuason conducted an *E. coli* monitor training in the Oso Creek project area. Representatives from the South Texas Colonia Initiative attended the training and plan to conduct sampling in their neighborhoods where standing water is an ongoing health concern.
- Eric Mendelman, Julie Tuason, and volunteer Jackie Mattice trained sixth grade science students from St. Mark's Episcopal School in Wimberley to monitor at Cypress Creek.
- Finally, the program attended steering committee meetings in the Gilleland Creek and Plum Creek watersheds. ●

Lone Man Creek Group

Continued from Page 1

Although the vision of this monitoring group was originally limited to the Lone Man Creek watershed, it quickly expanded due to a flurry of interest beyond the creek to the broader Blanco River watershed. The resulting water monitoring plan currently includes six sites. This network is expected to grow as participation increases among local landowners, Hays County Master Naturalists, and interested community members. Plans are already underway to expand the number of trained monitors in the group. Several members also plan to become certified trainers to train other group members as necessary. The Nature Conservancy–Blanco River Project has generously donated monitoring supplies to the group and is encouraging additional landowners to become volunteer water quality monitors.



The monitoring goal of this group is to document the baseline water conditions in their area. All water quality data collected through this effort will be submitted to Texas Stream Team for inclusion in the statewide database. In the future, monitoring data will provide valuable information regarding the effects of urbanization on water quality in the region. Documenting water quality changes will also provide local decision-makers with necessary information to protect the water resources.

If you are interested in getting involved in this effort, please contact Heidi Moltz at hm1079@txstate.edu or (512) 245-3461 or toll free (877) 506-1401. To learn more about the Nature Conservancy–Blanco River Project, visit their website at *www.nature.org* and search for Blanco River Project. For more information about the Hays County Master Naturalists, their website is *haysmn.org* ●

Congratulations to Our New Water Quality Monitors!

Catherine Allard
Joe Dale Arnold
Margaret H. Baker
Joshua Behrens
Rebecca Bishop
Greg Bonds
Patrick Boze
Deanna Bray
Ashley Briggs
Bill C. Burgin
Kristi Burns
Jared Buske
Larry Calvert
Kimberly Cessac
Ron Coley
Heather Dammeyer
Betty DePhillips
Owen Dickeson
Stephen Eaton
Ginger Geist
Laray Geist
Tabatha Gipson
Sophia Lyla Gonzales
John Gray
Sarah Guy
Casey Hall
Jaclyn Howry
Isaac Hunter
Tom Ivy
Amber Nichole Jackson
Daniel Craig Jackson
Mathew King
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Lisa Kresl
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David Nash
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