Headwaters Riparian Network Launched for Nueces River

As important as the creeks and rivers of Nueces basin headwaters region are for recreation and wildlife they are not the “main thing”. Nor is the “main thing” the qualities of these creeks that we commonly appreciate: water so clear you can see your toes, swift sparkling rapids and deep green holes, a fighting Guadalupe bass or a riverine view at sunset. Rather, the “main thing” is the physical functions that produce those conditions.

Healthy riparian areas contribute greatly to these conditions, although riparian areas themselves are under appreciated and their function not widely understood. This is the message from Sky Lewey, Resource Protection and Education Director for the Nueces River Authority.

Learning to read the functioning condition of riparian areas and identify land management strategies to preserve and improve that function will be the focus of a newly created initiative announced this week by the Nueces River Authority. The new initiative is an offshoot of the authority’s Headwaters Stewardship Project, which began in 2004. The “Headwaters Riparian Network,” will bring riparian management information and expertise to river and creek-side landowners, land managers and other decision makers. The project has received funding from the Dxon Water Foundation and will be implemented in cooperation with interested soil and water conservation districts and Natural Resource Conservation Service (NRCS) offices in the Nueces basin headwaters. Over the next two and half years, the river authority plans to bring the NRCS’s interagency National Riparian Service Team and other noted riparian resource teams to some 40 locations to provide the education.

Headwaters Network continued on page 6.

Cities to Build Effluent Polishing Wetlands

The Texas Commission on Environmental Quality (TCEQ), in partnership with the U.S. Environmental Protection Agency, is providing financial assistance to the cities of San Juan, San Benito, La Feria and Mercedes in the South Texas Arroyo Colorado watershed for the construction of effluent polishing and stormwater treatment wetlands.

Using individual wetlands to treat wastewater discharge and storm water runoff is one of the main strategies listed in the Arroyo Colorado Watershed Protection Plan (ACWPP) to improve water quality. Published in January 2007 by the Arroyo Colorado Watershed Partnership, the ACWPP is a comprehensive, watershed-based strategy to improve water quality and aquatic and riparian habitat and address the impairments and concerns identified in the 2006 Water Quality Inventory and 303(d) List. It is one of the first watershed protection plans completed in the state.

Once completed, the wetlands in these four cities will be capable of polishing up to 750,000 gallons per day of treated municipal effluent, which will significantly reduce the amount of point source loading to the upper part of the stream.

Wetlands can remove pollutants from water by supporting various physical, chemical and biological processes. In addition to acting as nature’s treatment plant, wetlands provide valuable habitat for several species of birds and other wildlife. Many of the cities along the Arroyo Colorado will be building nature trails associated with the wetlands to give local residents and visitors an opportunity to enjoy these ecological benefits firsthand. Along with the trails, some of the cities are planning to conduct educational tours for local schools and the public.

TRA Stream Lines

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The Official Newsletter of the Texas Riparian Association

For more information, contact Kevin Anderson at 512-972-1960 or kevin.anderson@ci.austin.tx.us

Or check us out on the web at www.texasriparian.org

Membership Update.

The Texas Riparian Association is an all-volunteer, nonprofit organization dedicated to encouraging healthy riparian systems in Texas. The TRA’s efforts in education, research and healthy watershed management are possible largely through the funds provided by members like you. Please consider joining us or renewing your membership today. Thank you for your support!

Yes, I want to become a member of the Texas Riparian Association and help to encourage healthy riparian systems within Texas!

Name__________________________________________
Affiliation (if any)________________________________
Address________________________________________________________________________________________________________
Phone (work/home)______________________________________
Phone (cell/pager)______________________________________
Email__________________________________________________

Please check one of the following annual membership categories:
☐ Individual $10
☐ Student Member $10
☐ Non-profit Member $35
☐ Member of Texas Riparian Association $20
☐ Business Member $50
☐ Sponsoring Member $150
☐ Government or Academic $300
☐ Life Member $1000

I would like to serve on a committee! My first choice is:
☐ Administration (finances, incorporation, by-laws, membership)
☐ Program (agendas and logistics for conferences, workshops, seminars, meeting planning)
☐ Outreach (educational materials- except programs- including newsletter, website, brochures)
☐ Research & Demonstration (library, database, demonstration projects)

Please make checks payable to the Texas Riparian Association and mail with this form to:
TRA c/o Center for Environmental Research
2210 S. FM 973
Austin, TX  78725-7103

For more information on membership, contact Kevin at kevin.anderson@ci.austin.tx.us
**Stakeholder Process Initiated for Texas’ Rivers and Bays**

How much water does a river need to stay healthy? How much water can we take from a river for use in cities, on fields, and in factories before we do serious harm?

These are important questions. A new state law passed earlier this year creates a stakeholder process to begin to answer them. At stake is nothing less than the future health of Texas’ rivers and coastal bays—and the fate of many species of fish and wildlife that rely on healthy aquatic systems.

The issue is pressing: Texas’ population is growing and may double by mid-century. Projections, such as the National Wildlife Federation’s 2004 report Bays in Peril, indicate that as our water use increases, many of the state’s rivers and estuaries could end up deprived of adequate freshwater, particularly in drier years.

This new process offers us a chance to change course and to avoid serious long-term damage to Texas’ rivers and estuaries. The law divides Texas up into eight major areas, which largely follow watershed boundaries (see map). The Sabine/Neches/Sabine Lake system and the Trinity/San Jacinto/Galveston Bay systems will go through the process first.

Strong participation from people who care about riparian areas and the state’s natural heritage will make the difference in the outcome of this process.

Industry, river authorities, municipalities, ranchers, farmers, recreational water users, commercial fisher men, public interest groups, and environmental interests and others will all be represented on the stakeholder group.

Stakeholders will not need to be technical or scientific experts, as there will be a science team that makes recommendations based solely on the best available science. Instead, it will be the stakeholders’ job to come up with their own recommendations based on both science and policy considerations. The stakeholder positions are unpaid and will require real commitment.

The Texas Commission on Environmental Quality will consider both sets of recommendations, along with public input, and adopt formal environmental flow standards. These standards will be the goals for the amount of flows in the river and into the associated bay system. The flow standards will likely use a building-block approach, with a minimum level of flows to be provided during droughts and additional flow levels to be provided during wetter periods.

When adopting the flow standards, TCEQ will also “set-aside” some of the water that is not already spoken for by existing permits. In some river systems, however, there will be little water available for the environmental flow set-asides. In these cases, the stakeholder groups will make recommendations on how to make up the difference. The TCEQ could include the dedication of urban return flows, incentives to use water more efficiently, and donations or voluntary purchases of existing water rights.

This process is a once-in-a-lifetime opportunity to help ensure that Texas maintains its healthy natural heritage for future generations. Please consider being a part of it.

Find out more about the new Environmental Flows Allocation Process and how you can get involved at www.texaswatematters.org/flows.htm or by contacting Jennifer Ellis at the National Wildlife Federation, 512-478-6805 or jellis@nwf.org.

This article contributed to TRA Stream Lines by Lucy McCormick of National Wildlife Federation.

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**Educational Opportunities**

The field of ecological restoration is growing by leaps and bounds. One way to get into it is through Texas A&M University’s new Ecological Restoration undergraduate degree program. Those wanting more information can contact the undergraduate advisor, Heather Haliburton at hhaliburton@ag.tamu.edu.

Our own Dr. Georgianne Moore, Asst. Professor of Ecological Hydrology at A&M, is teaching a couple of these restoration courses. The first is Ecological Restoration of Wetland and Riparian Systems, which, among other things will discuss restoration from a watershed perspective, practice ecosystem assessment techniques for water quality and stream bank stabilization, interpret wetland protection laws, and seek to identify problems specific to Texas. The second is Advanced Restoration Ecology, in which Dr. Moore teaches with Dr. Bill Rogers. In this course, students will practice translating and communicating key ecological concepts and case studies in ecological restoration, with an eye to the practical, professional applications of such abilities.

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**Headwaters Network continued from page 1...**

**Note:** Boundaries are preliminary, exact boundary lines will be determined during the stakeholder meetings.

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**A Listserv Primer**

The Riparian Listserv is a service of the University of Texas, created to encourage the exchange of information on riparian issues among the citizens of Texas. You do not need to be a member of TRA to subscribe. Notice about recent riparian research, conferences, training, and activities are posted daily. The listserv also provides a forum for finding, sharing, and discussing riparian-related information and issues. TRA member business is generally conducted through a membership email list and snail mail.

To subscribe to the Riparian Listserv, send an email to: listserv@lists.cc.utexas.edu. Leave the subject line blank. In the body of the email, type: SUBSCRIBE RIPARIAN your first name your last name (for example: SUBSCRIBE RIPARIAN JOHN DOE). Soon afterwards, you should receive an email response confirming your request and providing general listserv info.

To receive listserv postings in a daily digest instead of receiving individual emails for each posting, send an email to the address above, leaving the subject line blank. In the body of the email, type: set RIPARIAN daily.

To remove yourself from the Riparian listserv, follow the instructions for subscribing, except in the body of the email, type: UNSUBSCRIBE RIPARIAN. Again, a confirmation email will be sent when your request has been processed.

To post messages to the listserv, direct your email to riparian@lists.cc.utexas.edu.

Please remember: When using the listserv, please be courteous to other users by not pushing the “Reply” button after viewing a message unless you want your reply sent to everyone that subscribes to the service.

That’s about it! We suggest saving this primer for future reference. If you have questions, or encounter problems using the Riparian listserv, email Kevin at kevin.anderson@ci.austin.tx.us.

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**Newsletter Basics**

It’s difficult to believe, but we’re already into our sixth year of producing TRA Stream Lines. It is our hope that this newsletter will serve as a means of orienting new members and updating existing members to the developments and activities within our organization. I am sure that Stream Lines will evolve with the TRA, and I welcome your comments and suggestions for improvement, topics, and features (as long as you’re nice). I also hope that you will contribute ideas, articles, and calendar entries for future issues.

We plan to publish this newsletter biannually, in the winter and the summer, the deadlines for submissions will be November 1st and May 1st, respectively. I encourage you to submit articles on topics you find interesting, but please be sure to make your submissions ahead of the deadline so that the newsletter can be printed on schedule. I will always edit articles for clarity and space constraints. Please send submissions (text as .doc files and images as .jpg files) and comments to Emily Schiffer at 512-380-0647 or eschiffer@agrup.com. Thank you!

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**The Medina River in West Texas**

Professionals to the area for workshops, field days and a series of on-the-ground landowner assistance visits.

“We hope to create an information network for landowners who want to enhance the water quality function and wildlife benefits of the riparian areas on their lands. Riparian lands in the Nueces headwaters are almost entirely privately owned. Many of the owners are new to the area and/or new to land ownership and may not be aware of the function and importance of riparian resources in the semi-arid desert. This project will build awareness and understanding about how our headwater rivers and streams work, how healthy riparian areas function and how they can help mitigate erosion and gravel migration, maintain water quality and enhance wildlife habitat,” Lewey said.

For more information or to be placed on the information mailing list contact Ms. Lewey at the Nueces River Authority by email slewey@nueces-ra.org or by phone at 830-278-6810.

This article contributed to TRA Stream Lines by Sky Lewey.
Rangeland Watershed Management

“Settlers have been remarkably successful in transforming the desert of the American West,” wrote Marc Reisner in Cadillac Desert, adding, “But the same could have been said about any number of desert civilizations throughout history – Assyria, Carthage, Mesopotamia, the Inca, the Aztec, the Hohokam – before they collapsed.”

With rapid population growth and increasing domestic, industrial, and recreational water use, water is becoming an incredibly valuable resource, but is still largely undervalued at our water meters and irrigation district offices. One of the most natural and effective methods of increasing both the amount and quality of our recharge water into aquifers or of streamflows, is to manage our lands properly. In West Texas, this is being done automatically, but as our population grows and urban and rural development supplements the water catchment. This in turn, affects the fisheries of our rivers and lakes quality cover of native rangeland plants protecting the watershed or aquifers, creeks and rivers. I say most because not all are dependent upon water falling upon a well managed rangeland catchment has a much better opportunity to soak into the soil where it falls, rather than running off and evaporating or causing soil loss and even flooding downstream. Water quality in rivers, lakes and aquifers is improved with a good, high quality cover of native rangeland plants protecting the watershed or catchment. This in turn, affects the fisheries of our rivers and lakes – again affecting social and economic factors in our region. The life of dams, or even stock ponds, is greatly extended by the trapping of soil sediment by rangeland vegetation and a healthy riparian plant community.

Additionally, properly managed rangeland catchments provide good forage and habitats for all of our wildlife species. As wildlife becomes a major economic factor on ranches and in rural communities, the quality of their habitat becomes more important to land managers, especially in times of drought when livestock numbers or other economic factors reduce livestock income. Most other types of ecosystem are likewise positively affected by good resource stewardship.

Water falling upon a well managed water catchment has a much better opportunity to soak into the soil where it falls, rather than running off and evaporating or causing soil loss and even flooding downstream. Water quality in rivers, lakes and aquifers is improved with a good, high quality cover of native rangeland plants protecting the watershed or catchment. This in turn, affects the fisheries of our rivers and lakes – again affecting social and economic factors in our region. The life of dams, or even stock ponds, is greatly extended by the trapping of soil sediment by rangeland vegetation and a healthy riparian plant community.

This article contributed to TRA Stream Lines by Mike Mecke.

Calendar of Riparian Events

August 7-10. Society for Ecological Restoration is holding their annual conference in Fort Davis, TX. www.sere.org/texas/default.asp.

September 5-6. College Station, TX. Beginner and advanced training in the Soil and Water Assessment Tool (SWAT) offered by Texas A&M through Grassland, Soil and Water Research Laboratory and Biological Research Center. More information available at: www.brc.tamus.edu/swat/edu.html

September 30. Abstracts for the 2009 Texas Water Conference are due. The conference will be held April 14-17, 2009 at Moody Gardens in Galveston, TX, and is hosted by the Water Environment Association of Texas and the Texas Section of AWWA. More information is available at www.texas-water.com

October 1-2. San Antonio, TX. Texas Rural Water Association Fall Management Conference. For more information, go to: www.trwa.org/conferences/fall.htm


January 12-16. Texas Watershed Planning Short Course in Bandera, TX, offered by Texas A&M AgriLife and Texas Water Resources Institute. For more information, contact Courtney Swidjen at cswidjen@tamu.edu or see: http://watershedplanning.tamu.edu/courses/2009-07/registration.pdf

Be a part of the future of the Texas Riparian Association

The mission of the Texas Riparian Association is to encourage healthy riparian systems within Texas. Toward this end, we agreed to work on four goals for the organization -

- Education Goal: To promote statewide education on the health of riparian systems.
- Riparian Management Goal: To promote actions statewide that conserve, restore, and maintain healthy riparian systems.
- Research and Demonstration Goal: To promote research and demonstration projects that foster improved systems.
- Future of the Association Goal: To create a sustainable organization

This last goal is the key to all the others, and the core of this goal is you. By reading this newsletter, you identify yourself as part of the community of Texans concerned about the future of our waterways and their riparian ecosystems. As part of this community we need your help and participation in shaping the future of the TRA. We are at a critical moment in Texas history as our population rapidly grows and urban and rural development impacts all of our Texas waterways and our water supply. Proper management and restoration of riparian ecosystems are a key part of a sustainable future for Texas, yet riparian issues are largely neglected by policy makers and media. Together we must end this neglect. The TRA can be the vehicle for that change if you get involved building this organization.

What can you do? Join the Texas Riparian listserve and communicate with others across the state about riparian issues. Join our board or volunteer to help with a TRA project – workshops, website development, newsletter, and more. Contact me with additional ideas about how you can help TRA achieve its goals. Again, the key is you and your active participation in the TRA.

City of Austin Critical Water Quality Zone

Modification to Protect the Colorado River

In February 2008, the Austin City Council passed an amendment to the City Land Development Code relating to Critical Water Quality Zones ("creek buffers") along the shorelines of the Colorado River downstream of Lady Bird Lake (Town Lake) for 26 miles to the boundary of Austin's extraterritorial jurisdiction (ETJ).

Currently, the Critical Water Quality Zone (CWQZ) buffer for the Colorado River is measured from the "stream centerline" and extends landward 200 to 400 feet. This approach was designed for creek buffers within the city, but measuring the river buffer beginning from the center of the river is problematic for the different geometry of a river. Due to the river's greater width, this method frequently results in part of the buffer remaining in open water and the portion of the buffer on land being a fraction of its intended width.

The new ordinance requires the CWQZ buffer to be measured from the bank's edge ("ordinary high water mark") and thereby ensures the full buffer width on land, as intended. (Note: over 90% of the CWQZ buffer will continue to remain in the 100-year flood plain, reducing the impact on most development activities.) The improved buffer will help ensure that development activities occur far enough from the river to prevent slope and bank failures (beyond the "Erosion Hazard Zone") and filter and absorb pollutants prior to the original intent of stream buffers.

This article contributed to TRA Stream Lines by Kevin Anderson.
The Springs of Texas Project recently announced the publication of their “Spring Owner’s Guide.” Healthy flowing springs contribute significantly to healthy riparian ecosystems and are often the primary water source for many of Texas rivers and creeks. This publication is useful for riparian managers as well as spring owners.

The Springs of Texas Project staff, while visiting springs in several Texas counties, noted that spring owners more or less fell into three categories. Some were 3rd or 4th generation spring owners; others were newly transplanted urbanites to a rural setting; and a few represented large corporate holdings. In the first category, longtime owners (often ranchers and farmers) generally knew the importance and source of their springs but often took them for granted. Some had not visited their springs in years. In the second category, newer owners appreciated the aesthetic and economic value of their springs as a property asset but did not know the deeper inherent value to the local or regional ecosystem. Corporate owners, who often used their land for recreation such as hunting and fishing, appreciated the wildlife present, but did not necessarily equate smaller springs and seeps as an integral part of the wildlife habitat.

Recognizing a need for a primer on springs, Helen Besse, with the Springs of Texas Project, and Laura Marbury, with Environmental Defense Fund, co-authored this publication with technical review from several water specialists. The guide is divided into two main sections. The first is the entitled “Getting to know your spring” and encompasses the importance and sources of springs; how springs work and their function as biological habitat; and the history and archaeology surrounding springs. The second section, “Caring for your spring,” gives general advice on ways to protect, maintain, and monitor springs. Also included are suggestions on how to keep a spring flowing; how to find its history; and how to use a spring as an educational resource.

The “Spring Owner’s Guide” was generously sponsored by the Edwards Aquifer Authority, Environmental Defense Fund, Guadalupe-Blanco River Trust, Lower Colorado River Authority, Nueces River Authority, River Systems Institute, Texas Parks and Wildlife, The Nature Conservancy, and Upper Colorado River Authority. Copies are available through these sponsors or from the Springs of Texas Project directly at springsoftexas@bcorpglobal.net.

UT studies Colorado River Alluvial Aquifer at Hornsby Bend

Many people do not realize that there are alluvial aquifers along all of our Texas rivers; with the exception of the Brazos River, which is even listed as “minor aquifers” by the Texas Water Development Board. Professor Jack Sharp and Assistant Professor Bayani Chornes from the Department of Geological Sciences at UT Austin have begun work to study the hydrogeology of the Colorado River alluvial aquifer existing monitoring wells at Hornsby Bend. In cooperation with the Austin Water Utility - Center for Environmental Research, the professors will study the groundwater at Hornsby Bend over the coming years. They began in May 2007 with a team of students by drilling a new well near an existing well to do some “draw-down” studies. For Professor Sharp, this study is a return to research begun in the early 1990s at Hornsby Bend.

Pecos River Basin Assessment Program

Abstract: The Influences of Human Activities on the Waters of the Pecos Basin of Texas: A Brief Overview


This report presents a brief overview of the history and influences that human activities have had on the water resources in the 17 counties that make up the Pecos Basin of Texas (i.e., Andrews, Brewster, Crane, Crockett, Culberson, Ector, Jeff Davis, Loving, Pecos, Reeves, Terrell, Upton, Val Verde, Ward and Winkler). A special emphasis is placed on discussing issues related to surface and groundwater supplies and water quality since the arrival of American settlers in the early 1800s. Data tables provide information on surface and groundwater development, water use, irrigated acreage, and historic development of communities in the Pecos Basin. Those who wish to study these issues in greater detail.

This publication is one part of the Pecos River Basin Assessment Program, which is led by Texas Cooperative Extension and the Texas Water Resources Institute. Funding for this project is provided by the Texas State Soil and Water Conservation Board with funds from a U.S. Environmental Protection Agency Clean Water Act Section §319(h) Nonpoint Source grant.

Austin-Bastrop River Corridor Partnership: 2007 Highlights and 2008 Plans

The Colorado River runs for 90 river miles between Austin and Bastrop from Longhorn Dam in East Austin to the southern boundaries of Bastrop County. This stretch of river played an important role in the history of human settlement in Texas both for Native Americans and early Anglo settlement in the 1820’s and 1830’s. It is consistently rated excellent for water quality, and is a significant natural and recreational resource. However, urbanization is rapidly changing the river between Austin and Bastrop with housing developments, new highways, and more. This transformation is irreversible given population growth in Central Texas, but it is not too late to shape the kind of land-use change affecting the river corridor.

The Austin-Bastrop River Corridor Partnership (ABRPC) is an effort begun in 2003 to gather stakeholders together for a sustained conversation about the future of this river corridor. The ABRCP is not a non-profit organization, but rather a partnership of agencies, organizations, and individuals committed to advancing this conversation and articulating a shared vision for the river corridor. It has grown out of a common commitment to seeking positive, cooperative opportunities to promote a healthy river corridor ecosystem and to enhance public awareness of the Colorado River as a natural, recreational, and economic resource for the Austin-Bastrop area.

The first meeting of the ABRCP took place in February 2003. Four years of meetings, workshops, and community input culminated with the publication of an 80-page report in April 2007, titled Discovering the Colorado: A Vision for the Austin-Bastrop River Corridor. The first part of the report presents the results of public input and highlights the six key issues identified through that stakeholder process:

- Land Development and Sustainable Use
- Sand and Gravel Mining and Reclamation Opportunities
- Natural and Cultural Resource Protection
- Water Quality and Quantity
- Public Access and Recreation
- Public Awareness and Education

The rest of the report is packed with information on the ecology, history, and current land use along the river corridor. To me, the most impressive part of the report is the long list of participants in the ABRCP’s meetings and workshops included as an appendix to the report. See the report online at the TRA website www.texasriverallianc.com

Envision Central Texas (ECT) recognized ABRCP at ECT’s 2007 Community Stewardship awards luncheon. The ABRCP received the Envisioning Public Awareness award for the Partnership’s report, Discovering the Colorado. More info and photos are available on ECT’s website: http://www.envisioncentraltx.org/

Having marked the end of Phase One of the river corridor project with the publication of the Discovering the Colorado report, a new phase of the project began in June. At the request of the Smithville Chamber of Commerce and the Mayor of Bastrop, the ABRCP extended the scope of its work to include Smithville and the entire length of the Colorado River within Bastrop County. At the same time, the Trust for Public Land (TPL) announced that its board of directors had decided to make the Austin-Bastrop River Corridor its top priority project for Texas. TPL is now working with the ABRCP to plan public access enhancements and public awareness of the river corridor.

State Representative Eddie Rodriguez leads the way on ABRCP’s November river trip.

In November, the ABRCP hosted a raft trip on five miles of the Colorado River between Little and “Big” Webberville Parks in Travis County. The Lower Colorado River Authority provided rafts and guides, and TPL provided lunch. We had 60 participants including State Representative Eddie Rodriguez, staff from other state representatives’ offices and Travis County Commissioners’ offices, and a wide range of state, county, and city staff.

The trip showcased the natural, recreational, educational, and economic resources of the Colorado River corridor, the impacts of growth, development, and change along the river corridor, and the steps being taken by the Trust for Public Land and other ABRCP members to implement recommendations for the future of the corridor.

Austin KTBC Fox 7 News Reporter Lauren Petrowski and photographer Kyle Mose participated in our November raft trip, and their report and that about the work of the ABRCP were recognized for advancing community understanding and interpreting issues affecting water in Texas at the Texas Water Conference in San Antonio during the last week of March 2008. The Water Environment Association of Texas and Texas Section of the American Water Works Association recognized Austin KTBC Fox 7 News with a Watermark Award for Media Excellence for their story about the ABRCP and the November VIP River Trip. The Watermark Award for media excellence is designed to recognize Texas media who have raised the public’s level of understanding of water issues in Texas.

Another highlight of 2008 was the creation of a second monthly river monitoring trip, which will traverse the Bastrop County portion of the Colorado River. This effort will compliment the monthly river monitoring trips begun in 2006 along the Travis County end of the river corridor. The Travis monitoring trips, coordinated by Claude Morris, have been very successful, collecting bird species data and identifying and reporting dump sites. With two coordinated monitoring trips, we will be able to cover all 90 miles of the river corridor each year. Alan Kugler volunteered to begin coordinating monthly Bastrop County river monitoring trips. The first trip in Bastrop began April 11 along the river from Bastrop to Smithville and led to the discovery of another bald eagle nest. Thank you Alan and Clause for leading these efforts!

This article contributed to TRA Stream Lines by Kevin Anderson.

Group from UT Austin installing wells at Hornsby Bend.

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