

UPPER LLANO RIVER WATERSHED PROTECTION PLAN NEWSLETTER

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WELCOME FRIENDS OF THE UPPER LLANO BY EMILY SELDOMRIDGE

Welcome to the first Upper Llano River Watershed Protection Plan newsletter and thank you for your interest in preserving our valuable resource. The purpose of this newsletter is to provide information to interested stakeholders in the Upper Llano Watershed that are unable to attend our meetings or do not receive e-mail updates.

We as residents in Edwards, Kerr, Kimble, Menard, Real, and Sutton counties have the obligation to future generations to maintain the health of the Upper Llano Watershed and now we have the opportunity to achieve this through developing and implementing a Watershed Protection Plan (WPP) to preserve the water quality and flows that now exist.

This stakeholder driven initiative crosses county, city, and local political boundaries.

A unique aspect of the WPP is its reliance on partnerships. The Upper Llano WPP effort is being led by the Texas Tech University Llano

River Field Station (LRFS), Texas A&M Water Resources Institute (TWRI), the South Llano Watershed Alliance (SLWA), Texas State Soil and Water Conservation Board, and other key stakeholders. This effort is also being coordinated with a Guadalupe Bass population restoration project led by Texas Parks and Wildlife Department (TPWD) and SLWA.

Historically, WPPs have been drafted for water bodies that fail to meet state water quality standards established by Texas Commission on Environmental Quality under the Clean Water Act (CWA). When a water body is impaired, it is listed on the CWA 303(d) list. This listing requires the state to take action to improve water quality. This restoration process can be costly.

Recently, the EPA recognized that restoration costs as much as 5 times more than preservation efforts.

Fortunately, the upper Llano is not impaired and our goal

is not restoration, but preservation. This, preservation, is a new frontier for EPA. In fact, the Upper Llano WPP is first watershed in Texas to embark on this new "Healthy Watersheds Initiative." This project provides the chance for all stakeholders to play a vital role in addressing issues that currently may be affecting the North and South Llano Rivers and coming up with solution. That said, we have an opportunity to develop a plan that works for the stakeholders (as it is written by the stakeholders). The entire watershed has a voice in this process, so all are invited to become involved in the process.

For more information visit the SLWA web resources listed on page 5 or contact Tom Arsuffi at the Llano River Field Station. Thank you again for your interest and we look forward to seeing you soon!

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YOUR WATERSHED PROTECTION PLAN PROJECT TEAM



Tom Arsuffi is your Watershed Coordinator and also serves as the Director of the Llano River Field Station at Teas Tech-Junction. He received his Ph.D. at New Mexico State University and did a post doctorate at the University of Georgia Marine Institute on Sapelo Island. His research interests are in aquatic and watershed ecology and environmental education and he and his students have worked in a range of aquatic ecosystems. E-mail: tom.arsuffi@ttu.edu



Preston Bean is also a postdoctoral researcher. Preston leads fish assemblage monitoring efforts for the WPPP. He received his B.S. in Fisheries Management from Texas Tech university, M.S. in Aquatic Biology from Texas State University, and Ph.D. in Aquatic Resources at Texas State University. His research interests include fisheries ecology and conservation genetics. E-mail: Preston.bean@ttu.edu



Kevin Wagner is Associate Director of the Texas Water Resources Institute where he provides leadership for institute water programs. He will be the facilitator for stakeholder involvement in developing the WPPP. Kevin received his Ph.D. at Texas A&M and has been involved in numerous watershed scale projects. E-mail: klwagner@ag.tamu.edu



Donn Edwards is a Ph.D. student at the Llano River Field Station and The Institute of Environmental and Human Health at Texas Tech University. Donn leads macroinvertebrate monitoring efforts for the WPPP. His research interests include aquatic toxicology and the use of benthic macroinvertebrate communities as a method of water quality assessment and monitoring. E-mail: Donn.edwards@ttu.edu



Ken Rainwater is the Director of the Water Resources Center at Texas Tech University and a Registered Professional Engineer in the State of Texas. He received his Ph.D at the University of Texas at Austin. Ken and his team will be modeling the effects of brush control on water quantity and quality. E-mail: ken.rainwater@ttu.edu

The goal of the Project Team is to communicate the watershed data to the stakeholders. So let's start building our vision for the Upper Llano Watershed! The Team is available to receive comments or concerns by phone at 325-446-2301.

The field collection team includes Emily Seldomridge, Donn Edwards, and Preston Bean.



Emily Seldomridge is the Llano River Field Station postdoctoral researcher. She works closely with Tom to coordinate WPPP efforts, as well as acting as the research leader for water quality monitoring. Emily received her M.S. in Marine-Estuarine-Environmental Sciences and Ph.D. in Geology at the University of Maryland. Her research interests are in water quality, hydrology, and geomorphology.

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Dr. Arsuffi takes a measurement of the river channel width during the first field sampling event.

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UPPER LLANO RIVER WPP KICKOFF MEETING

On August 14, 2012 the inaugural Upper Llano River Watershed Protection Plan (WPP) meeting was held to discuss strategies to conserve and protect water quantity and quality in the North and South Llano Rivers. There were over 90 people in attendance representing a range of counties including Kimble, Kerr, Real, Edwards, Sutton, and Dallas. Topics discussed included the mechanics of a watershed protection plan, water quality, watershed studies, and the next steps of the WPP.

The WPP effort is guided by the EPA's Healthy Watersheds Initiative, which

"encourages states, local governments, watershed organizations and others to take a strategic, systems approach to conserve healthy watersheds with a goal to protect high quality waters and prevent future water quality impairments." Long-term, preservation of our clean water resource will save money. The cost of conserving a clean water resource is much less than restoring a degraded one. Surface water in the Llano River is a critical source of water in the area," said Dr. Tom Arsuffi, director of the Llano River Field Station. The Upper Llano River WPP aims to address potential threats before they

become a problem, thus making sure the watershed remains healthy, he said.

With the guidance and technical assistance from LRFS, Texas AgriLife Extension Service, and TSSWCB, local stakeholders will work to develop and implement the WPP.

For more information visit the web resources given on page 4.



Inaugural Upper Llano Watershed Protection Plan Meeting held on 8/14/2012 at the Llano River Field Station, Texas Tech University, Junction, TX.

ELEMENTS OF A WATERSHED PROTECTION PLAN

WPPs have several key elements. The WPP will be developed in cooperation with local and regional stakeholders. It is the job of the Watershed Coordinator and Science Team to ensure stakeholders are well-informed and that the WPP is written as a stakeholder, consensus-based plan. The Upper Llano WPP mailing list is constantly growing and evolving to ensure all stakeholder groups are represented. The current recipient list has soared to 421. To join the mailing list notify Emily Seldomridge at 325-446-2301 or by e-mail with contact information.

Elements of a Watershed Protection Plan

1. Detailed strategies for reducing pollutant reduction
2. Estimation of technical and financial assistance
3. Identification of causes and sources of pollution
4. Estimation of pollutant loads and possible reductions
5. Community outreach and education
6. Implementation schedules for pollution reduction strategies
7. Definition of short and long-term goals
8. Criterion to measure success of pollution reductions
9. Water quality monitoring

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SECOND STAKEHOLDER MEETING

On October 9, 2012 a second Upper Llano River Watershed Protection Plan (WPP) meeting was held to discuss strategies to conserve and protect water quantity and quality in the North and South Llano Rivers. The planning process will involve a diversity of interests, collaborative decision-making based on sound science and accurate information, strong communication and outreach, and short-term doable action items and long-term objectives/goals. Therefore, the purpose of the second meeting was to discuss organizational structures and decision making frameworks for stakeholders in the Upper Llano Watershed.

Successful WPPs are developed through stakeholder input and support. Suggested organizational structures of stakeholders included consensus building,

work groups, or combination of the two. Consensus building is utilized by an overall stakeholder group to come up with recommendations on which all agree. Work groups allow for stakeholders to contribute to a specific topic. Together, work groups make recommendations for the WPP to a coordination committee.

During the October meeting, local stakeholders voted to form a single Coordination Committee.

The organizational structure of the local stakeholders remains fluid and may change in the future. If any group representation is lacking please attend the next stakeholder meeting on December 11, 2012 to provide feedback. At the December meeting we will discuss the possibility of ground rules and/or bylaws for the coordination committee and formation of work groups.

Members of the Coordination Committee

- ◆ City of Junction
- ◆ County Extension Agents
- ◆ Edwards, Kimble, Real, and Sutton County Judge/Commissioner/Water Districts
- ◆ Soil Water Conservation Districts of the Edwards Plateau, Upper Nueces-Frio, and Upper Llanos
- ◆ Outfitters – Texas Parks and Wildlife Department Paddling Trail Rep
- ◆ Real estate
- ◆ South Llano Watershed Alliance
- ◆ South Llano State Park
- ◆ Upper Llano Prescribed Burn Association
- ◆ Natural Resources Conservation Service (NRCS)
- ◆ Several Types of Landowners

Edwards County Judge Shanklin welcomes stakeholders to the second Upper Llano Watershed Protection Plan Meeting held on 10/9/2012 at the Llano River Field Station, Texas Tech University, Junction, TX.



Important Websites

- ◆ **Llano River Field Station:** www.lrfs.junction.ttu.edu
- ◆ **South Llano Watershed Alliance:** www.southllano.org
 Watershed Protection Plan: <http://southllano.org/projects/upper-llano-watershed-protection-plan/>
 Watershed Conservation Plan: <http://southllano.org/blog/wp-content/files/SLWA%20Watershed%20Conservation%20Plan%20final.pdf>
- ◆ **Healthy Watersheds Initiative:** www.epa.gov/healthywatersheds
- ◆ **Texas Invasives:** www.texasinvasives.org
- ◆ **Texas State Soil and Water Conservation Board:** <http://www.tsswcb.texas.gov/en/managementprogram/upperllano>
- ◆ **Texas Watershed Steward:** <http://tws.tamu.edu/>

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CONNECTING THE DOTS: CONSERVATION AND WATERSHED PROTECTION PLANS

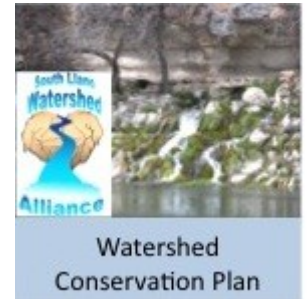
The Upper Llano River is a valuable resource due to its cultural, economic, and recreational values. The South Llano Watershed Alliance in collaboration with TPWD recognized these values and identified opportunities to preserve and restore them through the Watershed Conservation Plan (WCP). The WCP is a living document that identifies opportunities to preserve and restore watershed values. The identification of values in the WCP helps

promote watershed stewardship and shape the development of an environmental ethic.

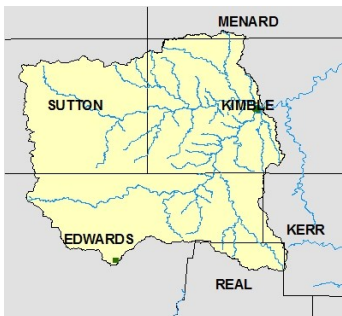
This may sound similar to the Watershed Protection Plan (WPP), a complementary, research-based document. The WPP will identify potential threats to ecosystem health and detail restoration strategies to maintain a pristine ecosystem. The WPP is steeped in stakeholder education to help promote stewardship.

Some, many, or all of the issues addressed in the WCP might also be included in the WPP. Together the plans will be used to leverage local, state, and federal funds to implement restoration strategies and best management practices to keep the Llano River flowing, clean, and clear.

For more information visit the SLWA website or see Page 4 for a listing of web resources.



Stakeholder Watershed Conservation Plan compiled by Tyson Broad, SLWA.



Residents from many counties are affected by the Upper Llano River (Texas Watershed Steward Program graphic).

HOW YOU CAN BECOME A STEWARD

EVERYONE lives in a watershed. This lesson along with methods to improve water quality, and community-driven watershed protection and management were taught to 35 attendees at the recent Texas Watershed Steward (TWS) workshop held on 8/30/2012 at the Llano River Field Station in Junction.

The TWS program provides science-based, watershed education to help citizens

identify and take action to address local water quality issues. "Participating in the TWS program is a great opportunity to get involved and make a difference in your watershed," said Galen Roberts, Texas AgriLife Extension Service program specialist and TWS Program coordinator. Newly trained stewards become an information source for family, friends, and communities, and provide leadership to maintain and restore

the local watershed. Trainings are held throughout the state or can be completed online. Check the TWS website for future workshops: <http://tws.tamu.edu/> or call TWS Program Coordinator Galen Roberts at 979-862-8070.

ELEPHANT EAR ERADICATION



Elephant ears are among the Dirty Dozen invasive plants in the Edwards Plateau.

You don't have to search long to find invasive plants in the Upper Llano. One of them, elephant ears (*Colocasia esculenta*), is among the Edwards Plateau Dirty Dozen. Originally introduced as a replacement crop for potatoes, these exotics are now widely used as ornamentals.

Elephant ears have become a problem because a single plant fragment can grow a new plant. Fragments originate

from private yards and are washed to the river during rains, or hitchhike on animals. Dense stands are found in patches along the North and South Llano Rivers. Elephant ears are dangerous to our ecosystem because they can outcompete native vegetation and evaporate more water from their namesake leaves.

To stop the spread of elephant ear, the Llano River Field Station has partnered

with TPWD to treat South Llano River elephant ear stands with a systemic herbicide; however, we need your help in reporting elephant ear stands and granting land access for treatment.

For more information visit www.texasinvasives.org or contact the Research Team at the Llano River Field Station.



Contact us!

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