

The Remarkable Riparian Network of the Nueces Basin

A Model of Successful Landowner Education

Article and Photos by STEVE NELLE

The Nueces River Authority (NRA) is a small organization doing big things.

Compared to other river authorities in Texas, they have a modest staff and budget, no taxing authority and receive no state or federal appropriations or tax revenue. While they run a lean operation, NRA has generated an impressive educational effort teaching landowners about proper management and stewardship of creeks, rivers and riparian areas. The whys and hows of the NRA education program warrants review and can serve as a model for others around the state.

The opportunities and need for landowner education are great in the Nueces Basin but hardly unique. The Basin's "water catchment" area comprises nearly 11 million acres in the Edwards Plateau and the Rio Grande Plains. This vast area runs from Rocksprings to Corpus Christi and includes thousands of miles of creeks and rivers. The Nueces and its tributaries contribute more than 60 percent of the total water entering the Edwards Aquifer via the critical recharge zone. The Basin also supplies a large portion of the Carrizo Aquifer's recharge and contributes to the recharge of several minor aquifers. The water resources for this part of Texas are vitally important to millions of Texans



SMALL WORKSHOP size encourages discussion and interaction among instructors and participants.

who depend on them for subsistence, livelihood and recreation.

As recently as 10 years ago, the word "riparian" was hardly in our vocabulary of natural resource terminology. Most landowners, conservationists, ranch managers, biologists and policy makers had little or no concept of riparian dynamics. While nearly everyone would say that they appreciate their creeks, there was limited knowledge of what really takes place in the creek bottom and riparian area. There was a great

need for technically sound, yet understandable information to help landowners properly manage this key part of the landscape.

To help meet this educational need, the Nueces River Authority initiated the Nueces Riparian Landowners' Network in 2007. The goal of the network is to equip and encourage landowners to understand and manage their riparian areas through shared information and learning to observe the resource. The main tool of the network has been a series of workshops, starting in





KENNETH MAYBEN, a NRCS engineer, discusses the importance of a wooded floodplain on the lower Frio River near Pearsall.

2008. To date, a total of 30 workshops have been conducted with more than 600 participants who control or influence management on 1.5 million acres.

The energy behind the Network and the workshops has been Sky Jones-Lewey, NRA Director of Resource Protection and Education. Ms. Lewey was raised on the banks of the Nueces River and has spent most of her life there. The enthusiasm, knowledge, innovation and dedication she brings to the network are obvious to anyone who participates in a workshop.

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Lewey originated the concept, secured funding, and solicited the expertise to teach the free, full-day workshops. Intentionally limited to 30 people or less, the small, localized workshops generate lively discussion and interaction

both in the classroom and in the field. Workshops are generally held on ranches and other private lands, usually within walking distance of a creek. The host landowner invites their neighbors, upstream and downstream, and other interested community mem-





ONE OF THE MORE interesting workshops was held in a barn dating back to the 1800s on the banks of Montell Creek in Uvalde County.

bers. Workshops have been held in ranch homes, hunting lodges, barns and even in an old school house. Landowners have said they appreciate having these workshops out in the country, on their own turf, rather than in town.

Each workshop starts with a baseline test designed to assess the knowledge of participants. At the end of the workshop a posttest is given to determine whether the key concepts have been transferred. Following the pretest, the workshop launches with a discussion of some commonly-held myths about creeks and rivers. Ms. Lewey explains that there is usually a degree of truth contained in most myths, but with closer examination, the issues are found to be much more complex and confounding than originally thought. Lewey explains that



SAN PEDRO RANCH Manager Daniel Boone (l) explains how specialized grazing management has restored a properly functioning riparian area on San Ambrosio Creek.

untangling these myths can go a long way in changing our attitudes and actions toward creeks and rivers.

Following are a few of the myths that are examined and dispelled in the workshops:

Floods are bad.

Droughts are bad.

Vertically eroding cut-banks are bad.

Streams should be wide and straight.

Large logs and downed wood clogs a creek and should be removed.

The removal of riparian trees will increase streamflow.

If the upland watershed is in good condition, the creek will also be in good condition.

After the myth discussion, workshop instructors give an indoor, visual presentation on creek and river hydrology, the natural process of erosion and



deposition, and the role of riparian vegetation. Many photos are used to illustrate the important concepts, and attendees often personally relate to some of the photos as looking similar to their creeks and landscapes.

After a hearty lunch provided by NRA, the workshop moves to a nearby creek location to discuss and evaluate the riparian area based on the newly learned information. Standing on the creek bank, leaders and participants identify the variety of riparian vegetation. Participants learn to survey the floodplain limits, notice bank erosion, sediment deposits, large wood and other riparian features, and begin to more fully comprehend how creeks really work.

A frequent comment heard from participants after a workshop is, "I'll never look at a creek the same way again." Lights seem to turn on as riparian dynamics are explained. Most participants have spent their lives around creeks and



TEACHING THE IDENTIFICATION and value of riparian plants is a key part of a successful workshop.

dered. Intensive human intervention is usually not needed and can often do more harm than good.

The workshops do not tell landowners how to fix their creek or how to manage their

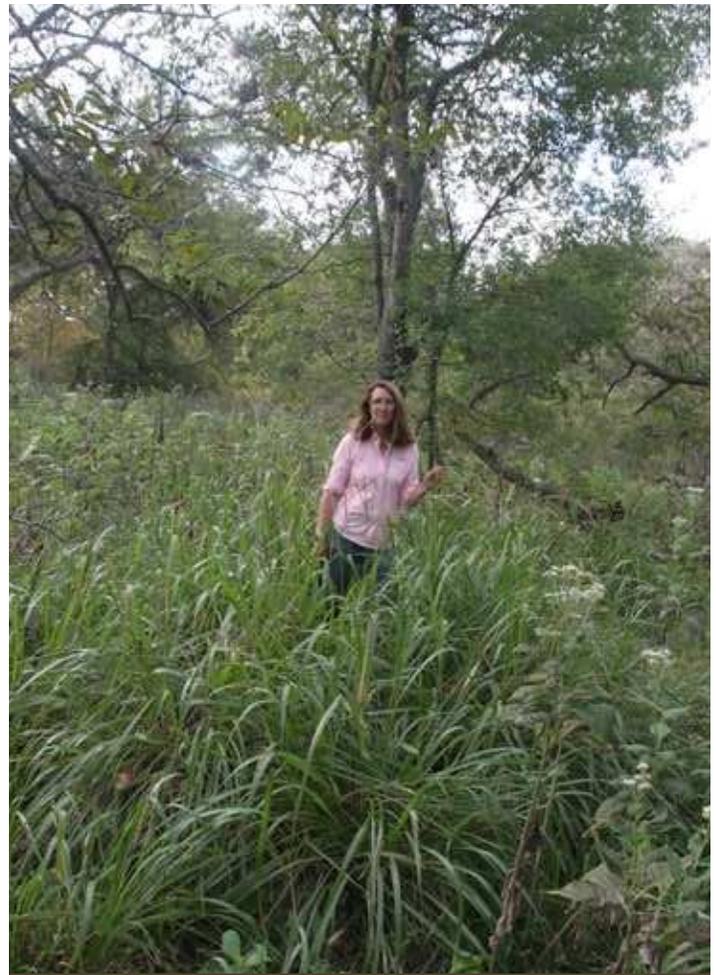
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rippers and have watched a lot of things happen, especially during floods and during droughts. Information learned at the workshop helps them correctly interpret what they've seen and put it in context.

The primary message of the workshops is that a properly functioning riparian area provides the basis for riparian values such as water quality, sustained flow, livestock forage, wildlife habitat and recreational potential. Another important message is that degraded creeks will usually repair themselves, as long as the natural processes are allowed to operate unin-

terrupted. Instead, they are taught the fundamental interaction of hydrology, erosion and deposition, and vegetation. Once a basic level of understanding is gained, landowners can usually see for themselves what needs to be done, or left alone, in order to improve the condition of their particular riparian area.

An independent external evaluation of the Riparian Landowner Network education program was conducted in 2010 by Oregon State University, Department of Geography. The researchers attended workshops, interviewed participants,



SKY JONES-LEWEY and her favorite riparian grass. Eastern gammagrass has a massive binding root system that can stabilize river banks and dissipate the energy of floodwaters.



and compiled the results of the pretest and posttest. This comprehensive evaluation indicates that the workshops are building a network of landowners who are interested in understanding riparian dynamics and who are themselves becoming riparian advocates. Ultimately, the goal is for this new understanding to translate into better riparian management on private lands. There is already some evidence that workshop participants are beginning to change their management practices to favor improved riparian conditions.

Con Mims, NRA Executive Director, underscores the benefits of this landowner education program. “The Riparian Landowners’ Network is empowering private landowners to become ‘the water stewards of Texas.’ Through these stewards, large scale improvements in riparian function can be achieved, resulting in sustainable supplies of good quality water for private and public use,” he said.

Another important tool in the NRA’s landowner education program is their publication *Your Remarkable Riparian*, a field guide to riparian plants within the Nueces River Basin, underwritten by a grant from the Texas Wildlife Association Foundation and others. This well-written, well-illustrated and well-photographed plant guide, edited by Sky Jones-Lewey, points out the variety, succession and function of riparian vegetation that protects creek banks, stabilizes channels, reduces erosion, and dissipates the energy of floodwaters. This attractive book is the first and only riparian plant book for Texas and is given to each workshop participant.

TWA and its members understand that millions of Texans depend upon and benefit from the stewardship activities of private landowners. The Nueces River Authority, with its innovative grassroots Riparian Landowner Network program, is making a difference by providing successful educational services to landowners within the Nueces Basin. This tested and proven model of landowner education is now being replicated across other parts of

Texas. Workshops have been held on the San Saba River, Lampasas River, Helotes Creek, San Geronimo Creek, San Antonio River, South Llano River and Plum Creek.

Con Mims reminds us of the importance of sustaining these types of educational efforts. “The need is immense, and there is a long way to go, but with programs patterned after the Nueces Riparian Land-

owner Network, more and more private landowners are becoming proactive in their knowledge and management of these valuable and vital natural resources. While such programs can be quite successful and have very beneficial long-term outcomes, they cannot continue and expand across Texas without dedicated funding sources and dedicated expertise,” he said. 



LANDOWNER POINTS out the new regeneration of riparian vegetation on a gravel bar near the confluence of Pulliam Creek and the Nueces River.



LEARNING TO APPRECIATE and evaluate riparian vegetation on the Sabinal River near Utopia, where most riverfront property has been divided into numerous small tracts.

