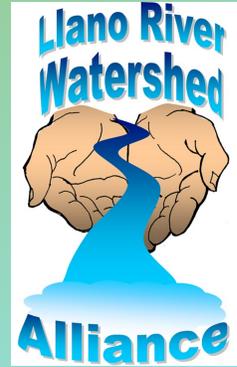


WATERSHED WEEK IN REVIEW



Please Join Us

If you enjoy this newsletter and [Facebook Page](#) and support the efforts of the Llano River Watershed Alliance, please consider becoming a member.

Individual Membership is \$20/year.

Business Sponsorship is \$100/year.

Click on the Donate Button on our [website](#) or [Download a Membership Application](#)

We greatly appreciate your support.

Riparian Zones and Flooding



Earlier this year, a landowner along the South Llano River cleared much of their riparian zone with a bulldozer. Such a practice, unfortunately, greatly diminishes the services the riparian zone provides during flooding: slowing floodwater forces, capturing sediment, filtering nutrients, storing water in the stream banks, protecting stream banks.

Floods along the South Llano River this month emphatically demonstrated the fallacy of this practice. **See page 2.**

Riparian Zones and Flooding (continued)



The photo above shows the same stream bank along the South Llano River following the flooding this month. NOTE: The island in the foreground is not the same island in the picture on page one. Clearing the riparian zone left it exposed to the full force of the floodwaters, scouring away the stream bank, topsoil, and vegetation.

In cleaning up after this flood, or any flood for that matter, the best practice is to be patient and let the river heal herself. Below (right) and on **page 6** are tips from Texas Master Naturalist and from Steve Nelle.

A very timely workshop on Healthy Creeks and Riparian Areas will be held November 3rd in Sunrise Beach.

See page 3

1. **THE GOOD NEWS: THE BEST THING YOU CAN DO FOR YOUR TREES AND RIVER BANK IS TO LEAVE THEM ALONE.** Remove only those items that are a safety hazard. Some trees may recover in the right conditions. You'll save a lot of time and money while helping the recovery of vegetation and the river.
2. **MINIMIZE THE USE OF HEAVY EQUIPMENT AROUND TREES AND ESPECIALLY ALONG YOUR RIVER BANK.** The weight of equipment will compact saturated soil and tree roots beneath the surface, making it more difficult for the trees and the river bank to recover. Trees have a huge root area, extending 2-3 times the length of branches or canopy. If you must use heavy equipment around trees, protect the area with 6-8" of mulch, topped with plywood if possible.
3. **LEAVE DAMAGED TREES AND WOODY DEBRIS IN PLACE ALONG THE RIVER BANK** unless they pose a safety or structural threat. For now, do not burn debris, saw it up, or remove it. The wood helps to stabilize banks and slow water, and new plants will establish themselves in the debris piles. Even damaged trees will help hold the soil in place. This is nature's way to hasten recovery.

Retired Natural Resource Conservation Service (NRCS) employees **Steve Nelle** and **Kenneth Mayben** and **David Riley** of Plateau Land & Wildlife Management will discuss the hydrology and sediment principles and interactions, vegetation, and stewardship and best practices associated with healthy creeks and riparian areas in the Hill Country.

[more details](#)

Healthy Creeks and Riparian Areas Workshop

8:30 am – 2:00 pm, Saturday, November 3rd, 2018

*Sunrise Beach Village Civic Center
124 Sunrise Drive, Sunrise Beach Village, TX 78643*

8:30 am	Welcome & Introductions	Daniel Oppenheimer, Hill Country Alliance
8:45 am	Introduction to Riparian Function	Steve Nelle, NRCS retired
9:30 am	Hydrology and Sediment: Principles and Interactions	Kenneth Mayben, NRCS retired
11:15 am	Riparian Vegetation	Steve Nelle, NRCS retired
12:00 pm	Light Lunch Provided	
12:30	Riparian Stewardship & Best Practices	David Riley, Plateau Land & Wildlife Management
1:00	Sandy Creek Case-Study: Tying it all Together	Steve Nelle and Kenneth Mayben
1:30	Wrap-Up Discussion and Dismiss	

*****\$10 registration includes lunch. Space is limited. To register, go to:**

<http://www.hillcountryalliance.org/event/sandy-creek-healthy-creeks-and-riparian-areas-workshop/>



Saturday is Volunteer Day at South Llano River State Park



The South Llano River State Park suffered major damage to infrastructure and resources from two major floods in the past two weeks. Scott Whitener, superintendent of the park, is asking for volunteers to help the park's recovery on Thursday, October 25th, and **Saturday, October 27th**, weather permitting.

Volunteer labor is needed to address several issues, such as access issues, trail damage, safety issues, plant protection, etc. For more details and to sign up to help, contact Scott Richardson, at scottr@ctesc.net or 325-475-2271.

Worked!

During the summer of 2017, a group of volunteers installed several exclosures at South Llano River State Park in an effort to protect young trees from browsing pressure from axis and white-tailed deer. As an experiment, one of the exclosures constructed in the floodway was constructed horizontally—four T-post were set and a hog panel set horizontally (left). We were very pleasantly surprised to see that the exclosure is still standing, with a slight lean, following the flood (right) and the young pecan the exclosure was built to protect is still surviving.



Photo : Megan Bean, TPWD

James River Crossing



Early in the morning of October 16, more than 110,000 cfs came down the James River, joining the 100,000 plus cfs already in the Llano. This volume of water and its sediment load hit the James River Crossing just downstream of the confluence, burying the road in sediment and removing large pieces of concrete from the downstream side of the bridge. Photo above

courtesy of Alliance Sponsor Tony Plutino of Llano River Region Adventures.

What happens to the aquatic species during the flood?

Several folks have asked this week about the impact of the flooding on aquatic species in the Llano. For that answer, we turn to a past article from Tim Grabowski with U.S. Geological Survey.

FLOODS OFFER CHALLENGES AND OPPORTUNITIES TO FISHES

...Flood events are essential for maintaining the long-term health and diversity of Texas streams, rivers and bays.

The dramatic increase in flows and current velocities associated with flood events help to clear out accumulated debris and sediment, re-working the substrate and morphology of the channel and restoring or rebuilding important instream habitat features, such as gravel bars and riffles...continue

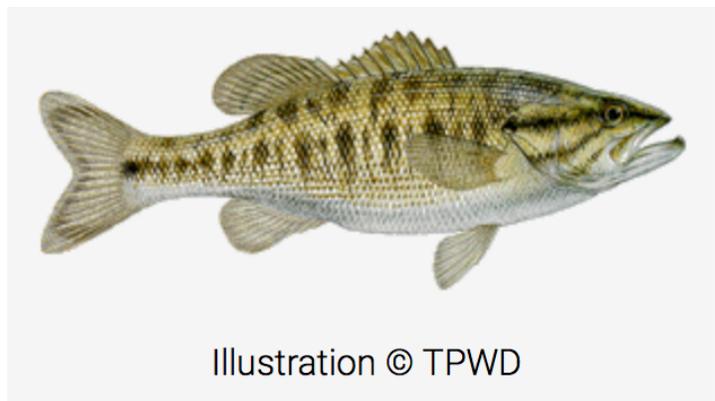
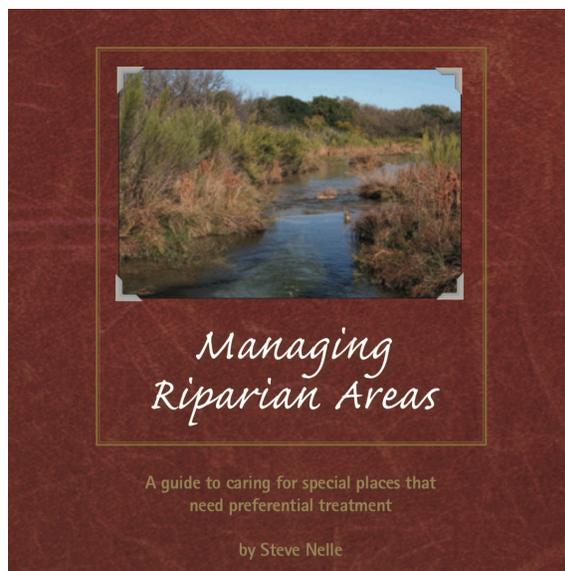


Illustration © TPWD

Nine Recommendations for Riparian Recovery from Steve Nelle

1. The broken and uprooted cypress can be good for the future health and stability of the river.
2. Leave large and small woody debris in place, if possible. Do not burn, remove, or saw it up in small pieces. The wood helps to dissipate energy, and stabilize banks, channel and floodplain.
3. These debris piles are where new plants will establish easily. This is nature's way to hasten recovery.
4. Minimize or eliminate tractors and large equipment unless absolutely necessary. Take protective measures if using heavy machinery.
5. Repairing banks, removing gravel, or altering the channel can do more harm than good to an already fragile area.
6. Be patient – natural recovery processes are very effective when allowed to work.
7. Be aggressive about controlling wildlife, especially Axis deer and other exotics that may be grazing or browsing in the riparian zone while it is trying to recover.
8. Reimagine what is a beautiful riparian area – they are healthiest when thick with wood and vegetation, and most sensitive when clean and manicured.
9. Take photos now and every 6 – 12 months – repeat photos at fixed points to show the recovery process. This will be very meaningful in the future.

– Steve Nelle, retired Natural Resource Conservation Service biologist



Managing Riparian Areas

As Texas' most acclaimed riparian educator, Steve Nelle has created here a thorough, well-organized, and wise guide for riparian stewards everywhere. He has a great deal of knowledge to impart and has done it wonderfully within these pages - almost as good as a walk along the bank of a special stream with Steve as our personal guide. (from Hill Country Alliance)

[Download booklet.](#)