

LRWA Watershed Report

*Opinions expressed herein are not necessarily shared by LRWA

Editor/Layout: Linda Fawcett

REPORT FROM THE ANNUAL HILL COUNTRY ALLIANCE SUMMIT, Sept. 26

For the 4th year in a row, LRWA had representatives at HCA's annual summit, and this was the second consecutive year that LRWA was an official Grassroots Sponsor. Attending this year: LRWA Board members, **Steve Totten**, **Art Mudge** and **Glen Coleman**, plus LRWA President, **Linda Fawcett**.

The Lightning Round

LRWA Board member **Glen Coleman** was a featured speaker during the Lightning Round with a well-received, informative, and light-hearted presentation entitled: *"Private Dams on Public Rivers, A South Llano River Story."* NOTE: the theme this year for the 5-minute Lightning Round was: *Achieving Conservation Wins Through Storytelling.*

Another obvious choice: the story by **Lauren Ice**, lead attorney representing Stephanie Morris and other adjacent landowners long battling the city of Liberty Hill (its wastewater plant) to save the algae-choked South San Gabriel River from years of pollution. As reported in the **March 31 LRWA Report**, the plaintiffs triumphed when the TCEQ Commissioners voted to lower the phosphorus limits to 20 mcg (from 150!) Yes, of course this landmark decision is currently being appealed, but regardless, a win for our team!

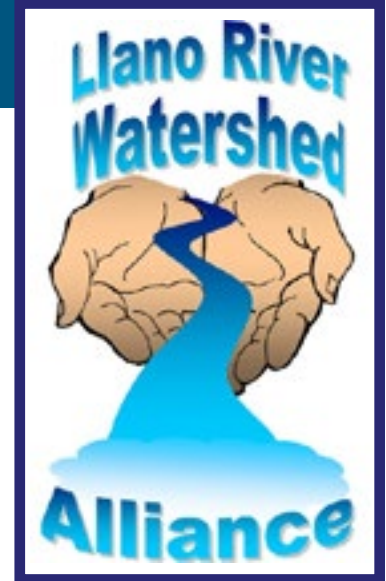
The Keynote

12 Steps to Town-Making: 12 Months in Sabinal. Sabinal (Uvalde County) has been a dying town for decades, more or less a pass-through to Garner State Park. But because of the energy, faith and leadership of two

residents, **Judge Cynthia Casburn** and semi-retired landowner **Dr. Lex Brown, MD**, plus the advice of an award-winning, ol' fashioned

developer named **Monte Anderson**, Sabinal is coming back! Over the past 12 months, town leaders held a "rural roundup" to gather doable ideas and began with a single project that fit the city's current infrastructure and residents' needs. Sabinal had little to no natural food options, a "food desert," so the top priority was to establish a Farmer's Market with a longer range goal to include a brick-and-mortar grocery store and perhaps a restaurant, taking advantage of undeveloped lots or already existing buildings on city property. All of this is underway. Anderson's advice: most towns think they want a major, showy "silver bullet" strategy, but his proven strategy is an incremental approach. Anderson advises finding "your place," involving your neighbors, and "start with small projects that need no zoning." Ideas for the near future (keep 'em coming!): involving Sabinal youth, continuing the Farmer's Market more often, and showcase the city's history – its original 19th century stagecoach station site will be converted into a park.

[Note, early on, Sabinal leaders visited **Junction** and were impressed by its Farmers Market, excellent Library and the non-profit Children After School Program, [CASP](#).



(Summit continued...)

Preserving Our Night Sky

Stephen Hummel from the **McDonald Observatory** gave an update on the progress of Texas Dark Sky initiatives, particularly in the Big Bend area. He said the primary threat is not the light pollution of cities, but from Oil and Gas Production sites, often mistaken for cities from a distance at night. Nevertheless, progress has been made since the 1990s when the McDonald Observatory began its campaign against light pollution in the Big Bend area and now spread across Texas. In 2018, Dark Sky



certification began with co-partners like the Nature Conservancy. **Dark Sky certification** has great tourism value for small cities, and other advantages including less energy waste, better human health and safety, ecological benefits, and the preservation of historical culture. It was noted that even our National Defense is concerned about light pollution. Light pollution is longer just an urban problem.

Artificial light at night disrupts the migration of birds and the life cycles of wildflowers



Dark Sky lighting at home

and also is not good for humans - too much can increase the chance of heart attacks and diabetes and raise blood pressure. *Night sky lighting*, on the other hand, reduces operating costs and conversion is not that expensive.

Light pollution is not just about lights on at night, but **POORLY DESIGNED** lights. It's all about **Shielding, Color, Intensity and Timing**.

- **Shielding:** What you don't want are lights that emit light above, not just below. Instead, they should be pointed down without "side leaks" to the targeted area.



Even an oil & gas site can comply with Dark Sky Lights

- **Intensity: no brighter than what is needed.**
- **Color:** Use amber lights, not white incandescent or blue fluorescent lighting.
- **Time the lights as only when needed.** For example, if used as a security light, a motion sensor is better than a light left on all night. Having a light on all the time may simply draw unwanted attention and make it easier for thieves to identify targets of value, especially in an otherwise dark area. Numerous studies find that turning lights off after 11pm or midnight reduces crime and accidents but leaving lights on can increase crime in some situations. Turning off business signs and decorative lights is recommended upon closure or by 11pm. [For More Information](https://www.bigbenddarkskyreserve.org) and where to find the correct light fixtures (should have a DarkSky certified seal), go to: <https://www.bigbenddarkskyreserve.org>

STEVE NELLE & BRENT EVANS each were awarded the Hill Country Alliance's annual Heart of the Hill Country Award, honoring their lifetime of service promoting conservation and education.

Nelle also spoke at this summit: "Supporting Stewardship, One Landowner at a Time."

Nelle's takeaways included:

1. One cannot tell a new or traditional landowner what to do, but instead should cultivate a meaningful relationship with them from a position of humility and mutual trust. Takes time, requires patience.
2. A land steward should not be regulatory, but strive to educate, motivate and inspire.
3. As an invited advisor, understand your responsibility, because our advice could increase or decrease the value of the landowner's valuable asset.
4. Recognize that, to most multi-generational landowners, their land is sacred, even a spiritual connection. The essence to Land Stewardship is a person's relationship to a piece of land. Nelle quoted once again his mentor Aldo Leopold concerning the need for an ecological conscience, which includes an ethical love and respect for the land itself, not what it's worth monetarily. "The landscape of any farm is the owner's portrait of himself."

Nelle:

"The landscape of any farm is the owner's portrait of himself."

Nelle just released a new book, "Lessons From Leopold," [Click here to preorder.](#)

[Note that Steve Nelle was a featured Speaker at two recent LRWA workshops: one in September 2022 (Riparian Stewardship) and November 2023 (Ranching for Water).]

DID YOU KNOW?

- ★ The cost of land in the Hill Country has increased 687% in the last twenty years, leading to an exponential growth in subdivisions - **Katherine Romans**, Director, Hill Country Alliance, remark during the 2024 HCA Summit.
- ★ **KEEP YOUR EYES PEELED!** In 2023, an advocate and volunteer for the Texas Rivers Protection Association, Alexander Neal, was exploring in his kayak (with a camera) the water bayou in Trinity Forest, Dallas County. He found a little-known but massive water-main leak (City of Dallas). Photographed and put into a TikTok video, the revelation led to emergency repair and was featured in multiple major media outlets. **BAD NEWS:** it was estimated that this leak had inexplicably been allowed for almost 10 years, sending millions of gallons of chlorinated water into the bayou and ruining over 100 acres of valuable wetland.

2024-25: the 89th Texas Legislative Session Has Begun... how to interact

(Linda's notes from a GEAA* general meeting that also included representatives from other Hill Country Grassroots Conservation Alliances.)

*GEAA - Greater Edwards Aquifer Alliance

The following is an introduction to how to keep up with upcoming bills and who is on what Committees. Remember that Texas legislative sessions are only every other year, and with so many important conservation issues coming into focus throughout the Hill Country, now is the time to be informed and even take action for causes important to you!

First, learn to use an important tool, the official Texas legislative website,
<https://capitol.texas.gov>.

Login as a new user by supplying your email, setting a password, and answering a few questions. After submitting you will receive an email with a link to activate your account. Note that the Login page includes useful info about how to use the first tab, **MyTLO** (TLO stands for Texas Legislative Online). There you can create and save a list of bills you want to watch, as well as relevant Committee Hearing Notices, plus Committee Minutes. The **HOUSE** and **SENATE** tabs show who's who and who represents you. You can also find information on filed bills, bills authored versus sponsored, committee membership and where they meet, schedule of committee meetings, daily business, etc. The **LEGISLATION** tab includes bill look-up, bill reports, vote information and file downloads. The **SEARCH** tab helps you find bills by author/sponsor, committee, subject and action. **COMMITTEES** tab: meetings by date, by committee, etc. for both House and Senate. There is also a **CALENDARS** tab.



WHAT IF YOU WANT TO VISIT WITH YOUR REPRESENTATIVE/ SENATOR or their STAFF? How to be effective as a spokesperson for an issue.

Make sure you know who your Representative or Senator is and only speak to them or their Staff.

Dress business casual and be on time. Stick to your subject (don't dilute your main interest) and demonstrate that your issues ARE CONNECTED to your State Rep. or Senator.

After your meeting, it is VERY important to quickly follow-up in writing with a concise summary of the meeting. Include your CURRENT Contact Info (best to leave a Business Card and GET CARDS from whoever you talk to).

If your organization has a particular issue, book appointments with Staff (whoever is in charge of your issue). Do this in September or soon thereafter if possible. FALL IS THE BEST TIME to interact as it is a more relaxed atmosphere than in the Spring. If [GEAA](#) knows of your issue, they can help with this. If all goes well, your issue will then be assigned to a committee and the process begins.

THE IMPORTANCE OF UNINTERRUPTED STREAM FLOW IN WATERSHED RIPARIAN ZONES



[The following is from a recent study of riparian zones in the Upper Guadalupe River Basin (UGRB), South Central Texas. Its conclusions yield lessons for other river basins in the Hill Country. **Dr. Tesnuva Udit**, Ph.D., Texas State University, now working for Austin's Sustainability Program, presented her findings during a **GEAA Water Wonks Zoom lecture** on August 28.]

Land Use maps from satellite imagery over a 30-year span in 10-year increments (1987-2017), and use of GIS (Geographical Info Science) software inspired the study. The results showed an overall 6.5% decline in vegetation associated with development, especially when coupled with *marked increase in impervious cover*. Most of the declining vegetation was along stream channels. **Conclusion: Vegetation was declining because the landscape was being converted.**

Another question asked was "How are aquatic instream and riparian vegetation

connectivity influenced by factors like BARRIERS (mostly dams and river crossings) and/or by land use (especially if it involves impervious cover), fragmentation and habitat loss?"

Conclusion: Barriers are BAD because the connectivity of the watershed is very important. When connectivity is disrupted:

- ★ Aquatic life passage is interrupted.
- ★ Barriers influence sediment buildup in previously free-flowing streams, thus also affecting water quality.
- ★ Barriers change spring flow, affecting water quality. **MOST BARRIERS** are located directly downstream from springs, impounding spring flow (especially in ephemeral streams.)
- ★ Riparian buffers (against floods) are affected negatively, especially their amount of vegetation and soil enrichment.*
- ★ Normal wildlife movement can be affected by barriers.

- ★ Floodwater velocity increases. Energy dissipation is slower.
- ★ There are so many UNREGISTERED barriers. TCEQ estimates 7,280 dams statewide, but only 40 or so are registered.
- ★ SIZE matters; even small barriers sequenced together in one stream can be as equally disruptive [as a big one].
- ★ Many barriers are not sound, therefore can be hazardous after collapse.
- ★ Some barriers simply don't serve their purpose anymore, but current landowners fail to remove them.
- ★ Who owns the barrier (public versus private use) is a factor helping or hindering removal.
- ★ Dr. Uditia also compared Floodplain and non-Floodplain vegetation changes (100 year and 500 year). Floodplain study takes into account elevation and distance from the river or stream.

***You need at least 25-40 feet of riparian buffer (filled with vegetation) on both sides of all streams.**

Ongoing problem: Conservation is greatly hampered by the fact that in Texas, 95.94% of land is privately owned; only 4.06% designated for public use. Impervious cover and urban development have much to do with not meeting the minimum riparian conservation buffer.

Therefore, KEY CHALLENGES become:

- Convincing landowners
- Limited funding
- Fear of decreasing property values
- Recreational disruption
- Historical/cultural attachment
- Ecological views not shared

MORE FINANCIAL INCENTIVES are needed to effect positive change: tax breaks and other benefits, public subsidies, controlled or limited access to green spaces in developed areas, providing funding for property maintenance, establishing that nature-focused properties do increase in their monetary value.

Is Rainbarrel collection illegal anywhere in the U.S.?

The answer is no for all states except Colorado and Utah that have regulations in place. For example, Colorado has a 120-year-old law that prohibits homeowners from filling more than 2 barrels of rainwater at a time from their roof, and the water may only be used for outdoor purposes ([click here for more detail](#)).

On the other hand, TEXAS encourages rainwater collection, citing stormwater retention and overall conservation of resource. Many counties across the state offer tax incentives to residents and businesses that install rainwater harvesting systems as well as there being a sales tax exemption on rainwater harvesting systems.

Building For a Water-Scarce Future

Kerr County has multiple examples in and around Kerrville of large-scale rainwater collection coupled with reuse, in public buildings such as the Hill Country Youth Event Center (rain collection project completed 2012), Petersen Medical Center (2008), Salvation Army KROC Center (2010) and at the HEB Foundation Camps (2022).



WOULDN'T IT BE NICE IF..

Rep. Vicki Goodwin (D-West Travis County) is currently proposing an amendment to the state Constitution that would guarantee Texans' right to a clean and healthy environment. If the enabling legislation is passed by the Legislature and signed by the governor, the amendment would then be placed on a future ballot to be approved by Texas voters. Please write your state representative/senator to support this!

Background:

- The Stewardship Amendment would place our rights to a clean and healthy environment legally on par with our most treasured freedoms such as free speech and freedom of religion.
- Although we all need clean air and clean water to thrive, Texans do not currently have an established right to a clean and healthy environment.
- The connection between Texans' health and the state of our environment is undeniable. Subpar water and air quality not only jeopardize our health but also contribute to chronic conditions such as asthma, cancer, and neurological diseases.

Provisions:

- Calls for a vote on a constitutional amendment guaranteeing a right to a clean and healthy environment.
- Ensures the public has a right to a clean and healthy environment, including clean water, clean air, healthy soil, and diverse and abundant native flora and fauna, and to the preservation of the environment.
- States this right is inherent, inalienable, indefeasible, and equal to other protected rights of liberty.
- Public natural resources are common property of all persons, including future generations.
- All branches of the state government, each state agency, and political subdivisions shall conserve, protect, and maintain the state's public natural resources for the benefit of the public, including future generations.
- Laws may not be enacted to hamper, restrict, or impair the public's right to a clean and healthy environment.



Maintaining Your Native Grasses & Wildflowers

Native grasses and wildflowers (pocket prairies) are excellent ways to build healthy soils. In urban areas, some mowing may be desired for appearances or safety. On public grounds, a supervisor will direct when and how mowing operations should proceed if needed.

When:

1. If mowing is needed, delay until July; wildflower plants will have seeded and ground nesting birds will have matured. If a second mowing is needed, delay until October.
2. To prevent compaction, don't mow if the soil is wet as the mower will leave ruts.
3. Eliminate or reduce mowing during droughts.

How:

1. When cutting is needed, cut at 5-6" high or more except along walkways for pedestrians, then lower to 4".
2. Remove unwanted vegetation selectively, such as with spot treatment or by hand.

Why:

1. Most native grasses have their growing points well above ground level. If cut too low, they will eventually die.
2. Cutting higher will allow the grasses and wildflowers to develop deeper roots so they can survive droughts while continuing to build healthy soils.
3. Unwanted vegetation can often overcome those plants that have been selected for the area.

TOPICS for your next PARTY ...

Water REUSE IRONY

The Texas Water Fund, is a fund for water conservation projects passed in the Fall 2024 general election. AS OF NOW it will NOT fund WATER REUSE (cleaned wastewater for potable and non-potable reuse) because Reuse is not considered a *new* water source. BUT the Fund does say that PRODUCED WATER (cleaned water from fracking and other industrial use) *IS* a new source, and therefore deserves funding. (Obviously the result of INDUSTRY LOBBYING.)

Contact your State Representative and Senator if this seems unfair to you.

BEST BANG FOR YOUR BUCK? Drilling a water well VS. Potable Rain Catchment

With 1" of rain on a 1000 square foot roof, you can collect around 620 gallons of water. According to TTU at Junction, Junction's annual rainfall average is 22 inches. That means that most years you could collect over 13,500 gallons (and more if you also collect condensate from your air conditioner). If you are planning to build a home, why not run the numbers of capturing already available rainwater versus drilling a water well that often could entail several costly attempts to find water. Also, there is wider variation in the quality of groundwater versus rainwater.

LCRA's Hydromet System

The **Lower Colorado River Authority (LCRA)** manages the lower Colorado River – a 600-mile stretch of the Texas Colorado River between San Saba and the Gulf Coast – and the Highland Lakes northwest of Austin. The Highland Lakes provide water for more than a million people, businesses, industries, agriculture and the environment in the lower Colorado River basin. LCRA also operates the six dams on the river that create the Highland Lakes to manage floodwaters and produce hydroelectric power. Read more at [LCRA.org](https://www.lcra.org).

LCRA uses its Hydromet system of river and weather gauges to monitor river and weather conditions in the lower Colorado River basin. Having accurate streamflow and rainfall information is important all year, whether the region is experiencing flooding or drought.

Many LCRA Hydromet gauges are on private property. LCRA works with landowners to install, operate and maintain the gauges at critical locations in the river basin.

What is the Lower Colorado River Authority (LCRA)?

LCRA is a conservation and reclamation district created by the Texas Legislature in 1934. LCRA serves customers and communities throughout Texas by managing the lower Colorado River; generating and transmitting electric power; ensuring a clean, reliable water supply; and offering access to nature at more than 40 parks, recreation areas and river access sites along the Texas Colorado River, from the Hill Country to the Gulf Coast. LCRA and its employees are committed to enhancing the lives of Texans through water stewardship, energy and community services. LCRA receives no state or federal tax money and cannot levy taxes. It operates on revenues from wholesale electric, water sales and other services.

What does LCRA do?

LCRA sells wholesale electricity to retail utilities, including cities and electric cooperatives that serve one of the nation's fastest-growing regions. It also sells water to cities, industries and agriculture.

In addition to managing the region's raw water supply, LCRA manages floodwaters and droughts in the Highland Lakes, protects the water quality of the lower Colorado River and its tributaries, provides parks and recreational facilities, and offers soil and water conservation programs.

What is LCRA's Hydromet?

LCRA's Hydromet is a system of more than 270 automated river and weather gauges throughout the lower Colorado River basin. The gauges provide real-time data on streamflow, river stage, rainfall totals, temperature and humidity to LCRA's River Operations Center in Austin and to the National Weather Service River Forecast Center in Fort Worth.

The Hydromet plays a crucial role during flooding events by enabling the LCRA to track fast-changing conditions in the lakes, river and major tributaries. The River Operations Center also uses the data to issue lake level forecasts... continued if you [download this PDF](#)

INVASIVE SPECIES IN TEXAS


ARUNDO DONAX IMPAIRS CREEK HEALTH.

Invasive species like Arundo (giant cane), privet and others can harm Texas creeks and rivers. They devastate habitat and keep our waterways from providing essential ecosystem services, such as recreation, fresh water supply, and drought and flood protection.

DOCUMENTED IN


136+

Texas counties,
most problematic in several
Hill Country rivers and along
the Rio Grande.




Arundo can grow up to
2 INCHES PER DAY,
crowding out and replacing
native plants.

**FISHING & BOATING
IMPACTS**




Arundo and other invasive plants degrade habitat for fish such as Guadalupe bass, the official state fish of Texas.




Blocks access for bank, wade, and kayak fishing, a **\$14-32 million industry** in the Hill Country.

**DAMAGE TO
RIVER BANKS**




Arundo roots are very weak below the surface, causing river bank erosion.



They crowd out native grasses whose roots reach more than **6 times** deeper, stabilizing banks. An unmowed native buffer acts as a sponge and helps absorb water.

**DROUGHT & FLOOD
RISK**




Arundo's high wax content makes it a wildfire hazard—particularly during drought.

Can increase the area impacted by flooding up to **10%**

Keep our creeks healthy. Prevent invasives:

1 **Don't mow, let it grow**
2 **Let woody debris be**
3 **Plant natives**

Join the Healthy Creeks Initiative: tpwd.texas.gov/HealthyCreeks



Healthy Creeks Initiative to Combat Invasive Arundo

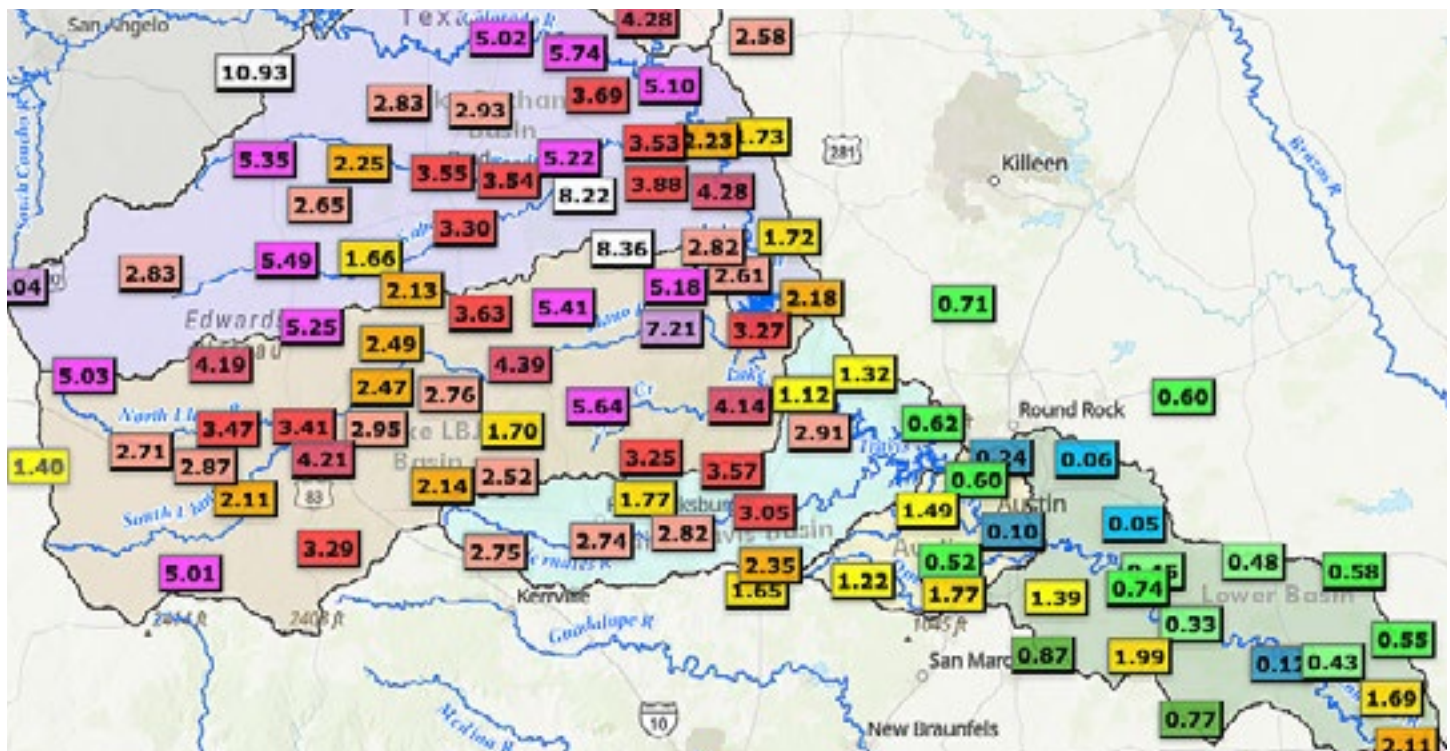
FOR COMPLETE INFORMATION, Please go to <https://www.llanoriver.org> and

then click on the link that reads: **Healthy Creeks Initiative to Combat Arundo**

**LCRA Hydromet Stream Flow
as of 9.29.24**



Lower Colorado River Authority’s Hydromet is a system of more than 275 automated river and weather gauges throughout the lower Colorado River basin in Texas. The website displays gauges maintained by the City of Austin and USGS. The Hydromet provides near-real-time data on stream-flow, river stage, rainfall totals, temperature and humidity. <https://hydromet.lcra.org>



LCRA Hydromet Rainfall Last 30 days (as of 9.29.24)