

Watershed Weeks In Review

Dam updates (mostly R.I.P. !), update on Liberty Hill, Workshop Summary, a Moss story, regional meeting report, new Board member bios

WE DID IT - THREE LESS DAMS! (AND... IT BEGAN TO RAIN ON OCT. 25)

Editor/Layout: Linda Fawcett

Oct. 25 was a good day.

First, thank you Mr. and Mrs. Garland for withdrawing Waterstone LLC’s South Llano dam application from TCEQ consideration.

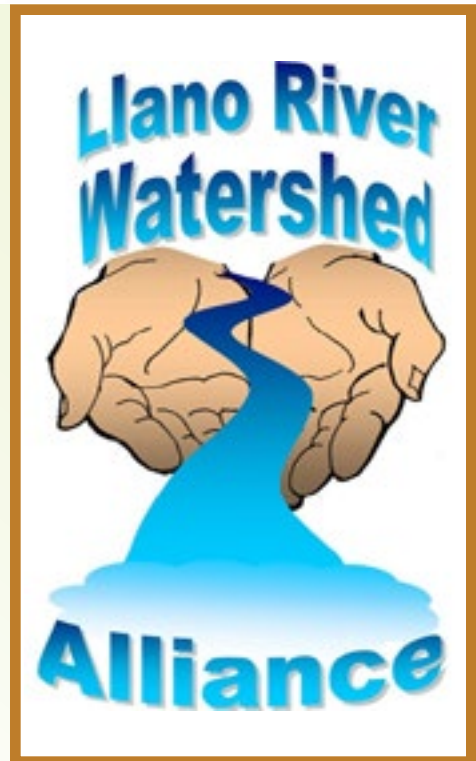
Second, we want to thank the dedicated participation of all stakeholders up and down the Llano River Watershed for their Public Comments and Petition signatures, and especially **Patty Schneider Pfister** of Llano for her timely and informative updates to all for many months! Also special thanks to Representative Andrew Murr, Senator Flores, Save Lake LBJ, Lake Buchanan Communities Alliance, Central Texas Water Coalition, the Greater Edwards Aquifer Alliance, and the Hill Country Alliance, plus see below.

Applicant/Respondent Name, TCEQ Customer Number: WATERSTONE CREEK LLC, CN605567213	Status: CLOSED ← Item Type: NEW 11.121
--	---

Third, we want to thank all attendees to the TCEQ Public Meeting in Rocksprings August 10 of this year, especially those who spoke their mind to the applicant and his team and the attending TCEQ reps. **A gamechanger was TPWD’s Public Comment** sent electronically, [click here](#) to read it!

Fourth, Thank you to all entities that committed to a Contested Case Hearing when and if it became necessary, i.e. the **City of Junction, City of Llano, the Greater Edwards Aquifer Alliance, and perhaps the crowning blow: the City of Austin!**

And Lastly but enormously important, our coverage by the **PRESS**, beginning in 2022, but especially in the days just before the August 10, 2023 Public Meeting and beyond: the Junction, Mason and Llano area Newspapers, KXAN Austin, Austin Chronicle, Austin Monitor, Austin Business Journal, Axios, Bloomberg News, Daily Trib, San Antonio Express & News, San Antonio Report, Texas Monthly, and timely TEXAS TRIBUNE coverage!



UPDATE: R.I.P. James River Dam

As reported in the last Newsletter, in Mason County, a relatively new landowner listed as a liability company named Neusch Mason, without a permit built a concrete dam across the James River, a navigable stream feeding the Llano River (discovered by neighbors in mid-August).



After TCEQ and TPWD investigations, first a \$10,000 fine was levied, but then Neusch received this notice (!):

*"... In order to resolve these violations, TPWD requests that, within 14 days of receiving this letter, you acknowledge receipt and initiate coordination with the Department on a restoration plan for TPWD's review and approval. The restoration plan should include plans **to remove all materials** comprising the constructed structure within the river channel, down to but not including original bed and bank material, so that flow through the impacted river reach is restored to the original channel grade and **all impoundment effects created by the unauthorized structure are removed. The plan should also***

***include stabilizing the exposed earthen bank with native vegetation seed.** The plan should present details of methods, equipment, and personnel to be used, follow-up site monitoring and reporting, and a timetable to initiate plan implementation. Please note, you may be required to notify and get approval from other governmental entities prior to engaging in any removal activities. An electronic copy of a draft pan should be submitted to the TPWD Sand and Gravel Program via email..."*

UPDATE: R.I.P. Dam, North Fork of the Guadalupe (Kerr County)

Although not in the Llano River Watershed, LRWA has been following this fight by local residents to stop a TPWD dam permit on the North Fork of the Guadalupe River (that would have been the 15th dam in Kerr County). According to **Ron Duke** of the **Guadalupe Riverkeeper Alliance**, ours and Patty Pfister's list serve announcements and instructions were enormously helpful.

After being granted Contested Case Hearing status by TPWD, plus the permit being referred to SOAH (State Office of Administrative hearings) and knowing that TPWD initial assessment of the affects of the dam on wildlife was not positive, **the landowner withdrew their permit early November!**

PIVOTING TO WASTEWATER NEWS, LIBERTY HILL 2nd Contested Case Results!



For those of you who've been keeping up with the details of downstream landowners vs. the City of Liberty Hill Wastewater Plant (about toxic phosphorus limits for treated wastewater into a pristine stream), our side got a fantastic result November 10.

The administrative law judges who conducted **the second TCEQ contested case** hearing have recommended that the City of Liberty Hill Wastewater Plant's new permit should include **a phosphorus limit of .015 mg/L**, otherwise known as **15 micrograms per liter (mcg/L)**. *[Note: the TCEQ is still using the language of mg, but most water quality scientists, including Dr. Ryan King at Baylor, recommend using micrograms. Micrograms, expressed in whole numbers, are easier for most of us to remember than milligrams (mg). Mcg is what the rest of this explanation will use.]*

We all owe huge thanks to **Stephanie Morris**, the lead protestant in both the first and second contested cases, for her tremendous work on Liberty Hill's permit. No matter what happens next, she deserves the lion's share of the credit for getting us to this point. **What happens to Liberty Hill's permit has the potential to affect discharge permits on all pristine streams in Texas.** (btw: This is the expensive contested case that LRWA contributed \$1K to last spring.)

A QUICK HISTORY OF THE LIBERTY HILL CASE: Liberty Hill's current permit, which went into effect in 2016, allows it to discharge treated wastewater that still has 500 micrograms of phosphorus per liter into the South San Gabriel River. **But the South San Gabriel is a pristine stream** as defined by water quality experts like Dr. Ryan King, meaning that the highest level of naturally occurring phosphorus in the river is only 10 micrograms per liter.

There's obviously a huge gap between the 10 micrograms of phosphorus occurring naturally in the river and the 500 micrograms that Liberty Hill has been allowed to discharge. No wonder the river has been choked with algae downstream from the wastewater plant. Everyone has agreed that Liberty Hill's new permit needs to have a lower phosphorus limit. The question is, how much? TCEQ's staff has proposed a new phosphorus limit of 150 mcg/L, the lowest it has ever required, used in some permits since 2008. However, the administrative law judges who conducted the first contested case hearing on Liberty Hill's new permit last year decided on a lower limit of 50 mcg/L.

Most of us would think this reduction would make a difference in algae growing in the river.

But the reverse has already been proven: over the past two years, Liberty Hill has actually managed to get the level of phosphorus remaining in its treated wastewater down to 50 mcg/L — yet the South San Gabriel has still been blanketed by the same amount of algae, rather than one-tenth the amount (50 mcg/L being one-tenth 500 mcg/L)

That's because for the purposes of algae growth in pristine streams, there's little

difference between 50 micrograms and 500 micrograms. Any time you start adding phosphorus that's beyond the maximum 10 micrograms of naturally occurring phosphorus in pristine streams, you will start to see algae growth, but it's more than 15 mcg that signals *significant* algae growth. Dr. King has demonstrated this at his lab in Waco (Dr. King was a key expert witness for the protestants at the Second Contested Case hearing).

So... at the end of the second Liberty Hill contested case hearing this summer, the TCEQ asked the judges to decide on a number denoting maximum phosphorus for treated wastewater discharge into pristine streams. They announced Friday, November 10.

Even though we don't know why the judges didn't choose 10 mcg as their low number, we do know, however, **that 15mcg (.015mg) is the lowest phosphorus limit ever proposed for a discharge**

permit in Texas, by a wide margin. So, this could be a win...

What's next? The judges' decision now goes back to TCEQ for consideration. The commissioners still need to vote on whether to approve Liberty Hill's permit, and if so, what phosphorus limit to include. **All coalitions concerned about maintaining the quality of the few remaining pristine streams in the Hill Country will need to urge TCEQ commissioners to adopt the 15 microgram/L phosphorus limit (.015mg/L in TCEQ lingo) recommended by the judges and IF Public Comments are allowed, everyone needs to be prepared to write the TCEQ Commissioners in support for the proposed 15mcg (.015mg) phosphorus limit.**

TIP: when converting milligrams to micrograms, take the milligram number and multiply by 1000. Example: .015 mg/ Liter x 1000 = 15 mcg/Liter

Check out this drone video of the polluted South San Gabriel River. Especially note that near the end of the video, the river clears up, because the view is now upriver from the wastewater plant. BTW, if an ad comes up first, just wait a few moments and you should be able to access a skip button ... <https://youtu.be/0JhhPfw1qMW4>

Report on a VIRTUAL MEETING OF HILL COUNTRY GRASSROOTS WATER ADVOCATES

The LRWA was represented by Board member, Glen Coleman, at a Hill Country Alliance-sponsored gathering of central Texas grassroots groups concerned with water issues.

Around a dozen aligned civic organizations met on October 12 at Government Canyon near Helotes, Texas. Government Canyon is a 12,000+ acre nature preserve on the Edwards Aquifer recharge zone that protects and

recharges the City of San Antonio's water supply.

After a staff-led briefing on the facility and its role, attendees, led by Hill Country Alliance staffer Marisa Bruno, exchanged ideas, concerns, and possible collaborations centering around growth and water resource management in the area. After the day's presentations, attendees and partners then

introduced themselves, lunched, shared local concerns, and thanked the Hill Country Alliance for organizing the regional water summit.

A highlight of the meeting was a presentation by **Paul Bertetti**, Senior Director for Aquifer Science, Research and Modeling with the **Edwards Aquifer Authority (EAA)**.

Bertetti told the audience about a partnership with the South-Central Climate Adaptation Science Center. The South-Central CASC is part of a federal network of nine Climate Adaptation Science Centers managed by the U.S. Geological Survey's National Climate Adaptation Science Center (NCASC). **Their goal is to gather scientific information and build the tools needed to help fish, wildlife and ecosystems adapt to the impacts of climate change.**

This partnership between EAA and NCASC has led to an extensively researched climate and rainfall study underway for the EAA region including the Hill Country (all of the EAA region's contributing zone). The information gathered will be used to model projected springflow and water levels over the next few decades. Some of that work is to support the Edwards Aquifer Habitat Conservation Plan's (EAHCP) permit renewal process.

A couple of summary reports of the ongoing climate study are due to be released by this January and will be the most extensive of its kind for the area. The data will be available to all interested regional agencies after a peer-review process. Stay tuned.

Meanwhile, an inspiring and instructional video (perhaps instructional for other Hill Country regions) explains the current EAHCP. Approved in 2013 (proving state and local cooperation is possible), its broad goals are to keep regional control (versus federal) of conservation efforts in the EA region, to protect endangered species and support spring systems during drought, while at the same time allowing necessary human use of the aquifer. The plan also led to San Antonio's underground reservoir, a storage area for water collected when the aquifer is full, and only used during extreme drought.

You can access this video via the link below:

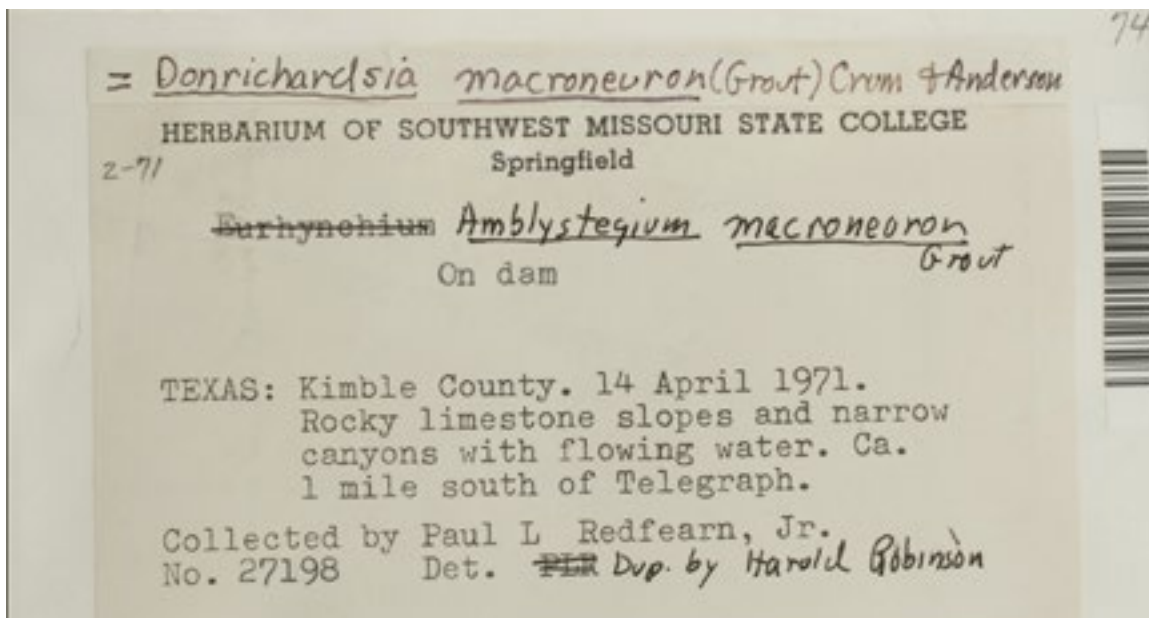
<https://www.edwardsaquifer.org/habitat-conservation-plan/about-eahcp/eahcp-video/>



LONELY ON THE LLANO

by Glen Coleman

When next you are far from home and yearning for the touch of that special someone, stop and consider the sad plight of *Donrichardisia macroneuron*, Texas' newest endangered species. Commonly known as the South Llano Springs Moss by the several dozen people who know of it at all, this little moss in the Brachytheciaceae family is found in one tiny location along the springs that feed the remote headwaters of the South Llano River. Indeed remoteness, aloneness, and a tragic solitude infuse the very story of *D. macroneuron*. Their tale is a sad one. **For you see, every South Llano Springs Moss still in existence, every known specimen left alive ... is male.** In fact, this ridiculously fragile population nestled along the famous waters of the 700 Springs Ranch near Junction, Texas, may be entirely composed of genetic clones of just



one or two lone surviving individual males. While these clones can reproduce asexually, without the vigor and gene swapping afforded by sex, the species cannot adapt to meet future conditions. Absent a miracle hook up on Tinder, things look grim for *D. macroneuron*.

“Whether there is just one individual or more than one, without females the plant cannot undergo sexual reproduction, so its continued existence appears greatly diminished.” says Chris Best, the State Botanist at the U.S. Fish and Wildlife Service. Chris, along with Texas Parks and Wildlife biologist Jason Singhurst, were the lead botanists in the endangered designation.

Perhaps taking its cue from the gentle moss, the U.S. Fish and Wildlife Service took a delicate approach in listing the species last April. The agency has recently consolidated

its Species Status Assessment, imposing a consistency long desired by environmentalists and developers alike. In addition to the moss's paucity, the application noted an anticipated increase in the severity of droughts in the region and increased pumping from the Edwards-Trinity Aquifer.

Like the Bigtooth Maples of Bandera and Real counties, the moss is a relic of Texas' much cooler Pleistocene era, kept at the temperatures of a cooler age by the flowing springs of the aquifer.

In a restrained fashion, the agency honored the culture of privacy and independence at large in the Texas Hill Country. Although they found the species to be endangered in "all or a portion of its range," they were careful to designate the moss as "on private land." Listing of a non-vertebrate in this fashion does not impose any restrictions, **of any kind**, on the landowner, nor does it open a doorway for access for agency personnel wishing to enter the site. In addition, in deference to landowner comment, the agency did not map out and designate a critical habitat for the species. This context sensitive approach has not always been FWS's method and it is to be hoped that this practice continues.

Designation can sometimes empower landowners. A careless trespasser treading on the banks of the springs might currently find that in addition to Texas' Criminal Trespass statutes, the landowner can now also file charges under federal statutes within The Endangered Species Act. Kayakers beware.

The truth is that the final curtain for this species will likely go unobserved by human eyes. The moss itself has been well documented, initially by an A.J. Grout and one Dr. Frederick McAllister in the 1930s, then, by a legendary Texas botanist named Eula Whitehouse in the 1950s. Samples were again collected from an unnamed tributary of the South Llano by a Paul Redfern of Southwest Missouri State College in 1971. Thus, at present, no more samples need ever be taken from the wild population. Science might never view this species alive again.

Meanwhile, the landowner need only let the moss remain, and under the "private land" designation, agency personnel do not have access to the site. It looks like the South Llano Springs Moss will likely play out its final years in the rugged peace of the canyon springs, its privacy intact; a gentle fade for an ancient little creature.



FAWCETT NOTES from the LWRA WATER and LAND STEWARDSHIP WORKSHOP

November 11, Junction, Coke Stevenson Memorial Center (60 participants) 9am - 12:30 pm

First speaker (of 3):

Peter George, Senior Hydrologist, Collier Consulting, the firm that does the Kimble County Groundwater District's groundwater availability study. In 2004 he researched a book about Texas aquifers.

The Aquifers of Kimble County.

In general, Kimble County Aquifers, located on the eastern side of the Edwards-Trinity Plateau, are "well-exposed," meaning very rocky. The Edwards-Trinity Aquifer is so large it has been subdivided. In our area are the **Ellenburger-San Saba, and Hickory** subdivisions.

The geology

Hensel Sand changes in composition from west to east. It is coarser in this area and gets "finer" in texture to the east. It contains some shale, and includes river and beach deposits in a stratigraphic formation (layered). You can see this in Highway 377 cut-outs near the South Llano State Park. Hensel sand is not 'cemented' so water flows easily through it (good permeability).

The Edwards group consists of two limestone formations: **Fort Terrett** and **Segovia**, sometimes overlapping in places. **Fort Terrett limestone** has uniformly thick layers, relatively flat. **Segovia limestone** contains dolomite (similar to limestone but denser), has voids and sometimes collapses, and water gets into it easily. Fort Terrett/Segovia limestone caps the hills that surround Junction and are also found at Roosevelt.

Aquifer water depth:

George said Texas has the best system for groundwater record-keeping (databases) of all 50 states. Even so, there is a new database that records data when a driller drills a well. (Mostly info about the drilling, not so much about the hydrology, so that water depth has to be inferred by the depth of the well - problematic.) Eventually... this input is fact-checked.

George considers the older database more reliable, even though still missing a lot of older wells.

In general, Trinity wells have to be deeper than Edwards wells. North and East also require deeper wells.



Water quality:

Edwards wells generally have fresh water (not saline) as well as most Hickory and Ellenburger-San Saba wells, but if well water is slightly saline (brackish), reverse osmosis filters can correct it. However, the Hickory aquifer sets right under Mason and Llano counties and in places its limestone layers have a potential for radium or radon (a form of radioactivity) that has to be tested for.

George: “There is PLENTY of water DEEP in the ground, but as it gets deeper, it gets more and more brackish.”

Water Flows

All water flows east and southeast in Texas because West Texas is higher than the East. In Kimble County, the hills enable more rainwater to flow directly into the Llano Rivers.

Wanna learn more about Recharge Rates, Alternative Sources of Fresh Water, and where to find well locations? For the rest, [Click here and choose: George, Aquifers of Kimble County.](#)

Second Speaker

STEVE NELLE, Natural Resource Specialist/ Wildlife Biologist, retired NRCS

“Ranching for Water”

PRINCIPLES:

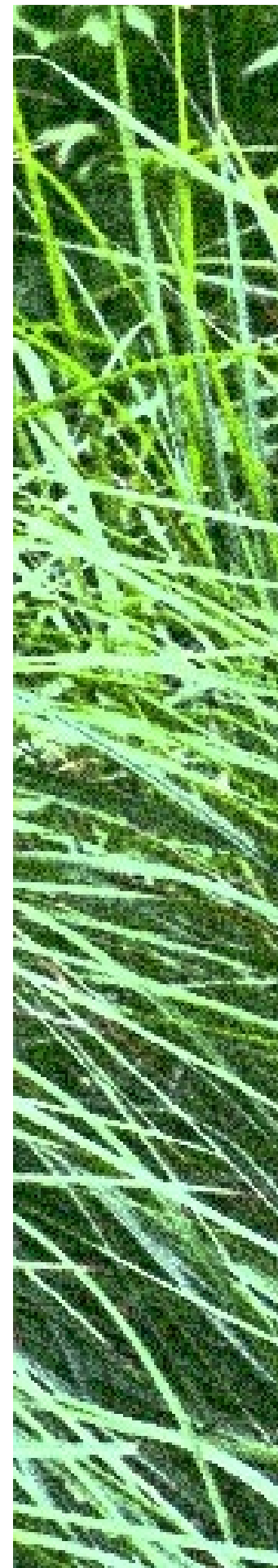
Water comes from the land.... yes, water comes from rain, but THE KEY is how the land processes the rainwater! In other words, what happens when the water hits the land... does it soak in or run off? Water-catching versus Water-shedding. Other countries such as Africa and Australia don’t even use the term ‘watershed’; instead, they say water-catchment.

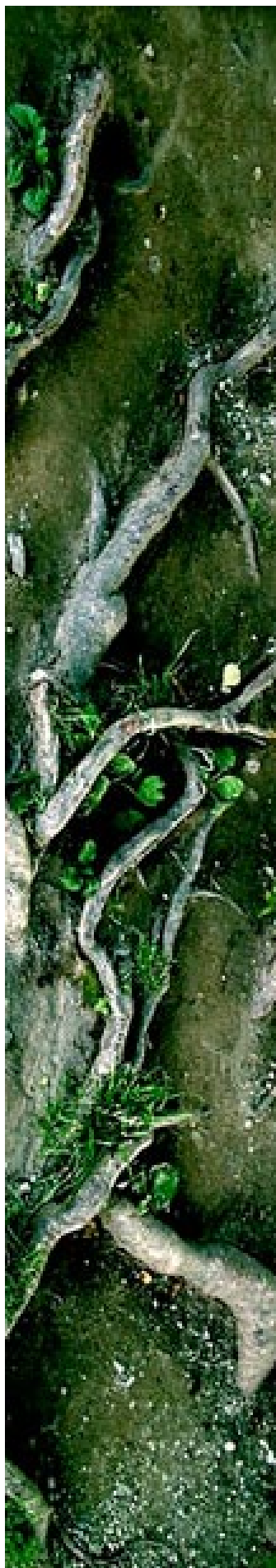
Lyndon B. Johnson: “... saving the water and soil starts with the first raindrop...”

R.E. Dickson, 1914: “Don’t pray for rain if you can’t take care of what you get.”

Key Principle: SLOW the movement of water as it flows downhill and do this as much as possible WITH VEGETATION. In

contrast, bare ground has a crust that is somewhat water-resistant (not good for water capture).





Successful, sustainable livestock ranching says that only IF there is a SURPLUS of grass, then a PORTION of it can be grazed and the proportion of cows to acres of grass constantly changes. GENERALLY – ONLY 25% OF GRASS CAN GO TO CATTLE GRAZING with intermittent grazing of any one area.

Key Principle: *“Leave more leaves to grow more roots to grow more leaves.”* (note: leaves = grass blades).

Grazing 25% of available grass maintains a GOOD ROOT SYSTEM, and rain can follow those blades (of grass) to the ground to the roots, plus the longer the roots the deeper the water can travel. Grass grazed only 25% down will always have much longer roots and a denser root system than overgrazed grass.

“Leave more leaves to grow more roots to soak up more rain.”

Key Principle: TREES ARE GOOD.

More rainfall soaks into the ground UNDER TREES and SHRUBS. Also, tree root systems are more extensive

– outward and depth-wise, providing passages for water to get deep down into the soil. Roots can also crack rocks for more drainage. A mere tree root hair will find the cracks in the rock and as the root grows, the cracks get wider and wider. Then gravity takes over.

UNTRUE: Grass needs to be grazed to be healthy.

BRUSH IS NOT THE ENEMY (for getting water into the ground).

RECAP: Is your stream water-shedding (floods and runoff)? Or is it a water-catchment river or creek, catching the water to soak into the ground? *The answer to this question almost always has to do with the nature and amount of vegetation along the waterway – with the goal being dense, long-rooted vegetation ...*

Wanna learn more about ‘Ranching for Water’ PRACTICES, and LAND STEWARDSHIP ETHICS? For the rest, [Click here and choose: Nelle, Ranching For Water.](#)

Third Speaker

MEREDITH ALLEN, General Groundwater Manager for Kimble, Sutton and Menard GWDs

“GROUNDWATER LAWS”

The Kimble County Groundwater Board is a five-member locally elected body based on five precincts within the county, serving staggered four-year terms.

Definitions:

Surface water (rivers and streams) is owned by the State of Texas and governed by the Texas Commission of Environmental Quality (TCEQ), while groundwater is governed by groundwater conservation districts, or if there is none, then by the concept of “rule of capture,” meaning the owner controls of the use of water on the land with few caveats. Surface water and groundwater are inexorably connected, however, so this dual control can often be a problem.

A groundwater conservation district can limit how much and what for by the creating and enforcement of rules. The Texas legislature likes the local control, therefore most Texas counties are now in groundwater districts. Many of those counties left don't have enough population and/or not enough groundwater to need one, so they are still akin to the “Wild West” in regards to water usage. The Groundwater Conservation District acts as a mediator, open to all types of uses: agricultural, household, and industrial, but not all are equal. The goal is to balance conservation of water to economic use. Multiple factors to keep in mind:

- Some uses are daily, others seasonal.
- Historic use versus newer ideas.
- Competing interests of those who have lived here a long time versus new absentee landowners.
- Population growth in unincorporated areas.
- The effects of out-of-district municipal growth.
- Groundwater NOT evenly distributed in Kimble County

Wanna learn more about GCD Tools? [Click here and choose: Allen, Groundwater Laws.](#)



MEET RICHARD TAYLOR, new LRWA BOARD MEMBER!

Richard P. Taylor was born in Virginia in 1943. He attended college but describes himself as a self-taught learner. After college he began a career in early electronics/computers, working his way up through several startup companies in spacecraft, the Internet, and early robots/A.I. Then a brief interlude teaching young adults with learning disabilities (1971-73), and a construction business specializing in the restoration of Colonial and Victorian buildings in New England.

After this, Taylor re-entered the computer field, employed by the Digital Equipment Corporation, at the time the second largest computer company in the world. He worked his way up to Plant Staff running a \$1 bil dollar business. Taylor moved to Silicon Valley (1982) as V.P. of Operations at 3 start-up storage companies, running factories in San Jose, Puerto Rico and Singapore that designed and built early disk drives, including the first 1 GB disk drive for Toshiba.

Taylor and his wife retired in 1993, and subsequently designed and built a Frank Lloyd Wright-type house in Big Sur, California. They attempted eco-restoration on their land, but were hampered by obstructive government regulations. Disenchanted by the experience, a five-year period ensued in which they visited every state N. and W. of Texas looking for specific characteristics, and finally decided to buy land in Mason County!

Assisted by Texas Parks & Wildlife, Texas Wildlife Association, many conferences/lectures/schools and lots of reading, a significant eco-restoration project began. Widowed in 2007, Taylor now lives with his long-time friend and partner, Suzie Paris, on Blue Mountain Peak Ranch, hosting many studies and scientists who come to see and learn of their progress.

Keeping in mind that the ranch is the highest point in Mason County, the most amazing improvement has been

the return of many springs that, per Taylor's calculations, are now putting an additional 300-500 million gallons of water into the underground aquifers each year. Not only do the grasslands absorb rainwater into the aquifers but the restored native brushy prairie sequesters far more carbon dioxide than does cedar break. Another improvement, says Taylor, was the installation of a small solar energy system as an inspiration to others. Taylor's Blue Mountain Ranch has earned the Lone Star Land Steward Award for the Edwards Plateau (2011) and the Aldo Leopold Award for Texas (2016).

Taylor has also helped found 1) [Green Across the World](#) (GATW), an environmental and cultural exchange for middle and high school students, and 2) [The Conservation Agency](#) (TCA), a scientific non-profit providing global scientific data to protect biodiversity and sustain wildlife.



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**

ALERT:

The Llano River Watershed Alliance **NEEDS YOU TO HELP US HELP YOU** (and the river!)

If you live anywhere along the Llano Rivers or their tributaries, LRWA consultants will do a **FREE** assessment of your riparian condition and vegetation to give suggestions on how to better achieve your objectives! [You also get a free *Your Remarkable Riparian* (book) worth \$50 when purchased from the Nueces River Authority.] Just email us at lrwatx@gmail.com



LCRA Hydromet River Stage as of 11.28.23



LCRA Hydromet 2023 Rainfall as of 11.28.23

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>