

Arroyo Colorado WPP Implementation Update

May 15, 2025

Question about large scale watershed Models

A: 4 available of the watershed, scattered around watershed

ACWP Updates

Jaime Flores left TWRI and watershed coordinator role after 15 years

Position will be refilled and will be based out of Weslaco at Research and Extension Center.

Applicants are being interviewed and hoping to have person onboard by mid-summer.

Primary task will be continued WPP Implementation and to support water related research across the Valley. The new coordinator will be introduced via newsletter when hired.

Active Arroyo WPP Implementation Projects

Ag Education & Outreach Implementation- TSSWCB

-Landowner Education & Outreach to Increase Program Participation- to enhance production that supports and protects land and water resources

-Support and Facilitation of WPP Implementation-

WPP Implementation-OSSF Inventory, MPS Education and Coastal Stormwater BMP/LID Installation- TCEQ

Geodatabase and Inventory Update--create and expand database of known septic systems across the valley

-Rio Hondo ISD Coastal Stormwater BMPs Enhancement- took portion of the campus to create a stormwater feature to support a native habitat

-Support and Facilitation of WPP Implementation

No budget cuts affecting these existing projects. Cuts possible for future projects but much is unknown.

Education and Outreach

Recent- Texas Watershed Stewards event in January, 39 participants

Program is built on educating people about watersheds and their function as well as issues that impact the watershed and water quality

Q: Do we know how many educators attended this event?

A: Do not know immediately but there are multiple different types of CEUs available, Lucas will send info to Allen.

Activities In the Works-

Develop educational signage and resources for Rio Hondo ISD rain gardens/native habitat- 10 different species, signage identifying plants and another signage explaining stormwater features, curriculum will be developed as well

Working with Resaca de la Palma State Park to provide Arroyo focused student programs

Newsletter planned to be released by end of summer, will wait until new coordinator hired though

OSSF Database and Inventory

Report was completed after first of the year, 14,600 known OSSF in Cameron and 19,505 in Hidalgo, high number of non-permitted systems in Hidalgo.

Q: Who handles the permitting?

A: Most commonly its the counties which is the case here.

The counties are charged with enforcement and the only time that enforcement occurs is if there is a complaint. Usually a one or two person operation, so time is limited on permitting and inspections. Failures are usually due to lack of maintenance and lack of education about required maintenance that drives the failures.

-Pumping out tanks, adding disinfectant—a lot of people use pool chlorine which is not what should be used for systems

Q: If you don't have a permit—is it difficult to obtain? Is it common to get a permit on existing systems?

A: There is a cost- varies per county-- \$300-500 range generally. If you tried to get a permit on an existing system, they would likely have to have upgrades or retrofitting. New homes are required to have permits.

Watershed signage update:

Formerly were 40 signs scattered about. Currently remaining signs were identified through Google Earth.

Have funding to replace

Working with TXDOT to determine path forward

- New permit may be needed?
- May have to get contractor to install
- TXDOT sign specs must be used and costs have increased.

Q: can we have a kingfisher that looks like an actual local kingfisher? Didn't we use the Ringed Kingfisher?

A: Yes, to a point—intention was to use existing logo. Are limited by TXDOT requirements on size and detail. We can try to tweak it but may not be able to make it overly specific.

The edges of the watershed are in question so priority replacements will be around the Arroyo crossings.

Comment – I don't know that the signs means much to most people. Relating that to OSSF permits would be nice. It's a nice sign but maybe we can bump up the message somehow? Could we do public notices on TV and radio?. Done in English and Spanish.

Do we have signs like that on Ramsy Park? Places where people are walking and not zipping passed. I'd love to put them in parks/wetlands.

Lucas-the idea is to get people focused on the watershed as they drive across to spark thinking. The original intent is to raise general awareness about the waterbody and proximity where people are driving. Not specific issues. Just not enough space.

Likely unable to put much more on signs due to size and the fact that it's viewed from a moving vehicle.

QR Code? Facebook? Website

We will see what TXDOT will allow us to put on there.

Questions/Comments

Q: Patty- I'm working with San Benito wetlands to apply for large grant for TPWD and part of that will be signage. Can I work with you to create a sign for Ramsy and anywhere else and make that part of the San Benito grant application?

A: all the signages at San Benito were created by TWRI so we can certainly help with that aspect.

Ag Update from Marco Ponce – AgriLife Extension agent

Agriculture in Cameron County

Local producers continue to make difficult management decision based on the ongoing after situation and low commodity prices.

Weather has been a significant factor—drought to 21 inches of rainfall in late March

Lack of irrigation water has forced growers to cut back on cotton and water intensive crops.

Growers are turning towards alternative crops.

Eastern part of county is not in drought currently.

Most irrigation districts in the county have little to no water allocation available for producers. Water shortages can result in reduced crop yields and the loss of entire crops such as sugar cane. The rain did not affect the Falcon Reservoir due to the rain falling below Falcon Dam. The heavy rains in March helped temporarily reduced water demand. Producers are hopeful that renewed water treaty negotiations will lead to improved water availability for next year's growing season?

Q: Is Mexico releasing water?

A: I don't know if they have started it? I think there was an article that said they have started to release a little bit. I think the river is up a little bit.

March 26-28 Flooding in the RGV

Many producers lost their crops due to excessive rain and flooding.

Devastation with neighborhoods under water, row crops underwater for a long time get root rot.

Q: Can you estimate percent crop loss?

A: We did lose about 40-50 percent crop loss (estimated).

Some producers were forced to replant and others could not because of standing water.

Some producers that were able to drain have crops that are thriving.

Extension, USDA, FSA and NRCS drafted a disaster declaration for county agriculture.

Cotton acreages have steadily declined over the past few years at 24,000 acres which is less than half of normal. Fewer acres of corn and grapefruit and orange also decreased due to previous freeze a few years ago.

Vegetables onion and cabbage have remained steady. 600-700 acres.

Producers are planting more grain sorghum and sesame this past year. 10-12000 acres of sesame.

They have been doing a lot of garbanzo beans as well.

Q: Is that mainly going in former sugar fields?

A: Going in some sugarcane and some cotton fields?

Q: How many sugar cane fields used to be here?

A: about 12,000 acres

Q: How many acre feet did they use annually for sugar cane?

A: 3 to 4 acre feet of water used.

Agriculture programming

- Soil and water management program in LA Feria
- Cotton and Grain Pre Plant Conference in Monte Alto
- Improving Soil Health and Managing Weeds and Pastures, San Benito
- TDA Water Treat Workshop
- Bees 101 Program, San Benito—well attended
- Bull Gain Test and Heifer Development Program
- Master Marketer Program, Weslaco

Q: How many producers are leaving the market entirely?

A: I don't know exactly but it is happening due to development into master planned communities and subdivisions. Some are selling to different producers and breaking it up. We are seeing cropland going to pasture land. A lot of smaller fields have for sale signs and little pieces are disappearing. Longtime producers have families that don't want to continue.

Q: Are municipalities lining up to buy water rights?

A: I have heard that municipalities will always have water. When reservoirs are low, municipalities will be the last ones to lose water.

Q: Do we have any hydroelectric plants that depends on river water?

A: I don't know.

Q: There seems to be a lot of talk about regenerative ag—is that happening? Less synthetics, no till...planting cover crops.

A: We have had a no till field day. I have not seen a big push for that recently. It did not take off for a long sustained period. They did demonstrations on no till previously. There were incentives for no till. That is what was pushing it. Incentives go away, practice goes away. If USDA decides they want to push for that—they have to put money behind to incentivize the practices. AgriLife can do work to show the data and the science behind the practice. Through the state boards we had Project Smart program emphasizing cover crop and no till and incentivized payments for their effort. After turn of admin, incentives chopped. We saw interest and it was going to take a lot to convert, cost to buy no till planter?

Q: Was there any estimation on top soil lost in the flood?

A: Unsure on amount.

Ruben Saldana — AgriLife Center Update

We have hired an agronomist for the first time.

Dr Peter Omara—

Dr. Hays/Dr Omara—a lot of the work here is biomass, fiber mass—

We are currently hiring an entomologist. New world screw worm is a problem.

We are looking at relocating faculty to another building which would vacate this vegetable building partially or totally. It is time for a new building and upgrading facilities.

Tan brick buildings were USDA and transferred to state. It was a honeybee research lab and now is vegetable, tomato, and some human health.

People are not putting a lot of stake into the reservoir as their water source. Huge push to start drilling wells. Enterprising people looking at scenarios to pipe water down and talk about desal plants that are costly.

Three bills passed in legislature—billions budgeted for regional water authority.

Force people, cities and counties to work together to build larger plan to resolve water issues regionally.

Mexico now has dams to hold water back and we are living with the consequences.

We will have to see how this works regionally.

Ag in the Valley - Vidal Saenz- AgriLife Extension agent

2025 Programs

- Bull Gain Test and Heifer Development- Starr County
- Last Chance CEU Workshop
- Rio Grande Valley Livestock Show
- Private Applicator Training
- Citrus Grower Meeting- Kingsville, 47 participants 2 hours of CEU, Mexican fruit fly, citrus rust mite, water issues, tree nutrition and tree stresses were areas of concern
- Master Marketer Program
- Mechanical Harvest of Short Day Onions and Vegetable Field Day
- New Developments
- 1944 Water Treaty Grant

Current Ag Challenges:

- New World Screw Worm
- Irrigation Districts are running low of water
- Flood in March
- Citrus challenges
- Corn leaf hopper

Q: Has the fruit fly stopped exports?

A: No.

Follow up to comments about tillage. Mindset in Valley is that deep tillage—provides moisture. If you do cover crop—it uses up moisture and nutrients. Yields on no till were minimal. NW part of county does use strip tillage—leave standing stalks—to prevent wind erosion. Local evidence suggests that fields with deep chiseling grow crops that last longer under water stress.

Q: With the ban of imports of cattle into us from Mexico—is that why beef prices are higher?

A: No. Beef has been high for a while. It's a supply and demand issue. Less cattle and more demand. Feedlots are feeding cheap corn—production is same with less animals—increasing weight per animal.

TSSWCB- Ronnie Ramirez

319 project through districts to implement conservation—2nd year of 3 year project
150,000 already obligated.

12 plans written and certified and obligated.

530.2 acres have been added to number of 532 plans written between 1999 to present.

354.5 acres irrigated pasture put in 135.7 acres in irrigated croplands

Seeing a lot of preventive planting—insurance is paying not to farm.

In the absence of the sugar mill, more irrigated pasture and hayland put in production in lieu of sugar cane. 354.5 acres put in. 79 percent of plans was pasture hayland.

Some brush management- acreage into production.

Agency upped cost share from 15K to 30K.

More money- less plans.

The price in irrigation has increased. \$14 to 24 dollar cost increase in pipeline.

Labor stayed same but the price of plastics increased.. \$7 per foot for raw pipe. Adding labor, components, etc... went up \$10 extra.

3 part partnership, NRCS, local SWCD and TSSWCB

The cost and the actual worth is there.

Q: So we are not seeing a deficit in farmland in the valley?

A: I'm seeing more pasture now days.

Q: I understand irrigation is not delivering unless you have a pond. Is that true?

A: I don't really see that although I have heard it. One guy was next to treated wastewater plant—in order to use for ag—water has to go into holding pond and remain until solids settled.....

Q: Is funding support provided for ponds?

A: No—it is new. And it is a luxury addition to your operation.

Q: Is there no assistance for farm ponds for fishing or recreation?

A: We do ponds and water storage facilities on cow calf operations. Lots in Starr and Zapata. Not many in Cameron or Hidalgo.

Rio Hondo Middle School Stormwater BMP

Original design had gravel paths - not possible in budget.

Native plant landscape that we are going to use as an outdoor teaching tool for the science classes. Planting occurred a year and a half ago. Students helped with the planting. Curriculum development is about to begin.

Texas Stream Team Training being held tomorrow, May 16.

Native plant society has committee on native plants in schools—we would like pictures to share.

- We will get them to you!

Q: What was the cost?

A: About \$15,000 – plants, signs, labor

Q: Was there a holding spot for rainwater to irrigate?

A: No. They have an irrigation system on site. But there isn't a mechanism to retain rainwater onsite.

Allen Williams- Connecting Habitat to Water Quality

American Forest—

School districts—land rich but stewardship poor.

Transformed 30 campuses to have educational gardens.

Does anyone have any ideas on the ESC can support your organizations?

If we can find a way to get in the door at the beginning of the year during in service days to reach out to teachers- that would be great.

Hudson DeYoe - Connections between watershed and the coast.

Natural Resource Management Plan for Lower Laguna Madre (LLM) proposal in the works.

- Watershed function and inputs strongly influence coastal water quality
- Especially true in the LLM
- Turbidity is major issue for seagrass health
- Must highlight significance of land management to health of LLM

Dr. Jude Benavides - Steering Committee Chairman

General update on Arroyo happenings

We have been in autopilot phase brought about by the pandemic and plan updates. This is a great opportunity to move forward with implementation.

We have seen participation from the public dies off.

How do we move forward and get attention of younger folks? Facebook?

We need to advertise the work that is being done on behalf of the partnership.

Who has seen our website?

It provides a general synopsis but needs some updates in some places.

Younger generation pays attention to outdated websites and thinks there is no advocacy.

Who has checked out our story map?

Fantastic GIS story map of what the Arroyo does and what it has done.

Arroyo Colorado Watershed Maps—

We had a stormwater task force—tasked with dealing with water quality runoff issues. We have never had a working group that looks at large scale flooding or drought.

Moving forward I think we need to setup a working group focused on drought and water access issues. Input and output stuff.

Arroyo is little waterway with big job

Water for local rainfall runoff but also return water conduit and floodway conduit.

Just like if you have a car that is trying to do all things—it is ok with all things but not great at one thing. It is always being tasked with doing more than nature intended.

This is what we should focus on for the future.

What should we do with riparian forests in the arroyo and along the city of Harlingen?

- Residents want to preserve it and municipalities want to shave it down to improve floodway efficiency. Two interests at odds.
- There has to be a happy medium.
- We could clear cut invasives and maintaining signature trees.

When it's flooding—water quality isn't the biggest factor—it's getting the water out fast.

Interstate 2 is creating issues that need to be addressed.

High resolution LIDAR should be utilized to give data on surface depression areas.

Height above nearest drainage—

What do we do with drainage districts?

- Hidalgo consolidated into one and had reaped rewards.
- Cameron has resisted.
- Growing push around Harlingen to consider a valley wide drainage district which likely won't happen. Could be Cameron and Hidalgo be combined? Unlikely, but would be great to have it be watershed specific collaborations for regional solutions for flood management.

If we could set up working groups to address large scale rainfall issues—it would be beneficial.

What is the geographical or geological feature that separates the Arroyo from Brownsville?

- Resaca is a depositional feature created by river flood flow that creates natural levees.
- River created natural levee.

We can define watersheds by topography or also off of culture and infrastructure.

Is there any way to deal with these events where we need to move out water quickly?

That's a trillion dollar question.

Clay/alluvial soils, rapid urbanization, flat area generally used for ag now supporting millions of people.

Look at patterns to see how system operates now... computer systems to assess cost.

Best possible solution.

Work on messaging...

Hidalgo and Cameron counties need to work together.

How do we approach that realistically?

Next Steps for Arroyo – Lucas Gregory

Additional grant is on the way—October 2025 unless funding is pulled.

Reinvigorating the implementation effort.

Big items included is the update to the watershed boundary.

- LIDAR data can be used --- its better data.
- Will seek input from cities, drainage, irrigation districts, etc.
- Publish updated watershed boundary maps and GIS layer.

Ronnie- I worked a plan near the Arroyo boundary on the map where the guy was concerned that he was on dead land and outside of the Arroyo. He knew his water drained into the Arroyo but wasn't documented on map, so couldn't receive funds.

Valley Ditch network

Water conveyance systems need to be looked at.

Comment: Allen—Can we rename it to Stormwater instead of ditch because people throw trashes in ditches. Naming does matter.

Comment: Jude- interactive map that shows people where they drain could be a tool for public input.

- The network was never truly digitized so an updated version could be helpful.
- Digital next progression of watershed model might be fun and useful.
- Show what happens when you throw trash in one spot
- Kids would be open to that.

Work Group Topical Discussions

- Agricultural Issues
- Education and Outreach
- Habitat Restoration
- Wastewater Infrastructure

What do you think of these four?

They all have a role.

Ronnie—I was chairman of Ag issues and I would get producers to come to meetings to hash out issues. I would come back to steering committee to report on those things.

- I think it needs to be there to keep the ball balancing on ag issues.

Jude- I think all four are essential.

- Wastewater - we have a better handle on it now, but it's always changing.
- Habitat restoration is our greatest participation from the public.
- We may consider land and aquatic subgroups later.
- Add digital model development to education and outreach.

Q: What happened to water quality run by Nueces River Authority?

A: Work groups disappeared years ago...

Stormwater work group was with Melissa Gonzales who is now with solid waste management.

Need to add flood/drought through Stormwater.

One Flood and One Drought.

I want to split from stormwater from local fluvial issues....

Managing what we did have and what we did well... polishing ponds in San Juan.

If you are interested in serving in any groups—put your name and group interest on card and leave them on table.

It will take some time to get the new coordinator up to speed. I will reach out to schedule meetings with y'all and the new coordinator. If you have any thoughts or ideas on who else to engage, please share.

Flood/Drought work group-- transboundaries, groundwater should be included.

Jude- volunteers to serve.

Where does desal fit?

It would fit in flood/drought working group.

We will start some email conversations about these groups and get them kicked off soon.