



# Updates on Implementing the Arroyo Colorado WPP

Samantha Colunga

Arroyo Colorado Watershed Coordinator – Texas Water Resources Institute  
Texas A&M AgriLife

December 4, 2025



"This work is funded by Clean Water Act Section 319(h) nonpoint source grants from the U.S. Environmental Protection Agency, administered by the Texas State Soil and Water Conservation Board and the Texas Commission on Environmental Quality."

# Fall 2025 Newsletter

- Distributed to Mailing List and Facebook 10/16/2025



## Arroyo Colorado Watershed Partnership

### Email Campaign Archive

from Texas Water Resources Institute

[join our mailing list](#)

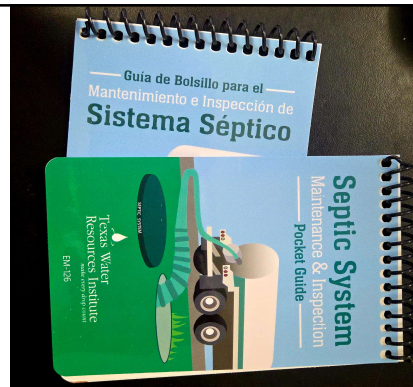
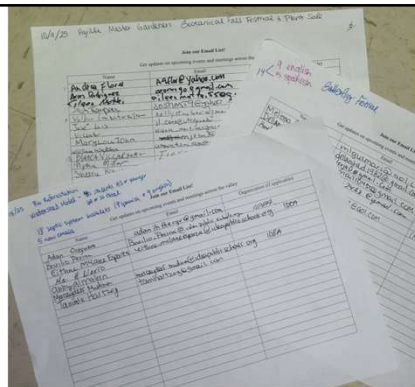
11/19/2025 - [Join us for the Dec. 4 Arroyo Colorado Meeting](#)

10/31/2025 - [Join us for upcoming events: Arroyo Colorado Watershed Partnership Update](#)

10/16/2025 - [Arroyo Colorado Watershed Partnership Newsletter](#)

09/29/2025 - [Join us for October events: Arroyo Colorado Watershed Partnership Update](#)

08/29/2025 - [New events coming soon: Arroyo Colorado Watershed Partnership Update](#)

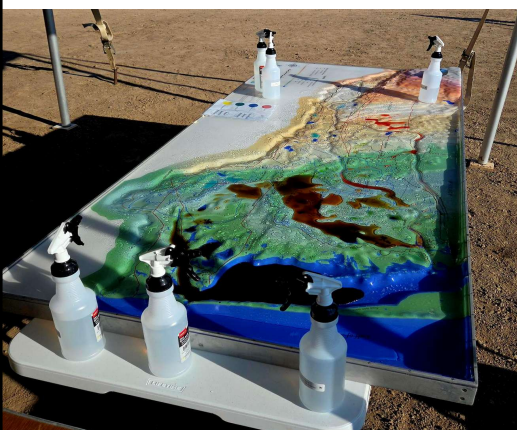
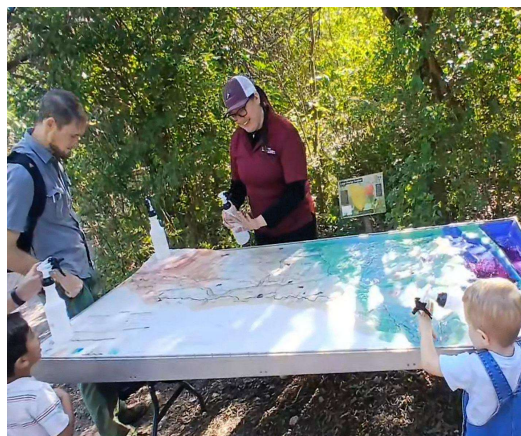


# Education & Outreach Events



- 44 hours spent at events (7 events total)
- 35 Newly Added Emails (176 total emails/ subscribers)
- 56 Septic System Maintenance Guides given
- Arroyo Colorado Clean-Up
  - 30 volunteers
  - 960 pounds of trash collected





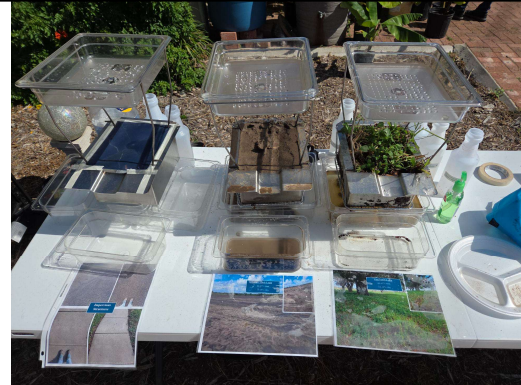
# Education & Outreach Events

- Discussed the Arroyo Colorado watershed and non-point source pollution with the watershed model
- Bentsen State Park – 3<sup>rd</sup> Annual Outdoor Skills Showcase event
- 31<sup>st</sup> Annual Rio Reforestation – hosted by American Forests, the City of Pharr, and others
  - 13,000 trees planted
  - Over 1,000 volunteers
- Texas Butterfly Festival



# Education & Outreach Events

- Discussed the Arroyo Colorado watershed and the importance of trees and native plants in improving water quality with rainfall simulators
- Boo-tanical Event – Cameron County Master Gardeners
- Ag Awareness Day (Kids, Kows, n More)
  - About 30 4<sup>th</sup> grade students per group
  - 20 groups total – 15 minutes each
- Texas Arbor Day Event – Texas Forest Service, City of Edinburg, and ESC Region 1



Students learning about water conservation from one of our former Monte Alto students.

Photo Credit – Allen Williams/ ESC Region 1



# Rio Hondo ISD Native Landscape Update

- In partnership with the Native Plant Society of Texas RGV Chapter
  - Hand-removed weeds and aggressive plants over 4 days (nodding spurge, wild poinsettia, common sow-thistle, asters, and common sunflower)
- Project-Based Learning Materials
  - All curricula approved; curricula and TST kits provided
- Educational Signage
  - Posts have been received; physical signs will be delivered next week (between 12/8-12)
  - Stormwater signage currently being drafted



## Cenizo

*Leucophyllum frutescens*

A native perennial shrub that is typically compact ranging in size from 2-5 feet in height, but can grow to 10 feet. Leaves are silvery gray to greenish due to coverage of tiny hairs. Flowering occurs sporadically for several days at a time throughout summer and fall following rainfall. Flowers are commonly lavender purple, but may be white, pink or violet. Its nectar is beneficial to various insects and it is the larval host plant for the Calleta silkmoth and Theona Checkerspot butterfly.

**Additional Information:**  
 Purple Sage, Texas Ranger, Texas Barometer Bush, Texas Silverleaf, Texas Sage

**Requirements:**  
 Sun: Full to part shade  
 Soil: Limestone-based, sandy, sandy loam, medium loam, clay loam, caliche  
 Drainage: Rocky, well-drained  
 Water: Low, drought-tolerant

**Maintenance:** Low

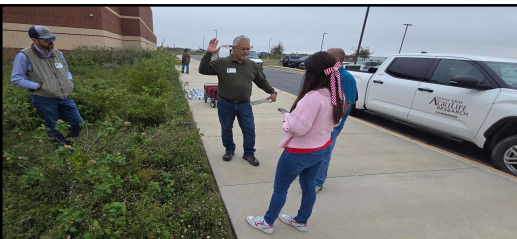
**Propagation:** Seeds, semi-hardwood cuttings, softwood cuttings

**Distribution:** Native to south Texas and northern Mexico

**Wildlife Use:** Nectar, nesting sites, cover


Photo Credit – Allen Williams/ESC Region 1






# Rio Hondo ISD Native Landscape Update

- Signage posts installed 12/3/2025
- Refresher Training on Texas Stream Team Kits – Lucas Gregory
- Plant Maintenance Training – Roberto Gaitan (Native Plant Society of Texas RGV Chapter)



## Cenizo

*Leucophyllum frutescens*



EXAG/SC010


A native perennial shrub that is typically compact ranging in size from 2-5 feet in height, but can grow to 10 feet. Leaves are silvery gray to greenish due to coverage of tiny hairs. Flowering occurs sporadically for several days at a time throughout summer and fall following rainfall. Flowers are commonly lavender purple, but may be white, pink or violet. Its nectar is beneficial to various insects and it is the larval host plant for the Calleta silkworm and Theona Checkerspot butterfly.




**Additional Information:**  
Purple Sage, Texas Ranger, Texas Barometer Bush, Texas Silverleaf, Texas Sage

**Requirements:**  
Sun: Full to part shade  
Soil: Limestone-based, sandy, sandy loam, medium loam, clay loam, caliche  
Drainage: Rocky, well-drained  
Water: Low, drought-tolerant  
Maintenance: Low  
Propagation: Seeds, semi-hardwood cuttings, softwood cuttings  
Distribution: Native to south Texas and northern Mexico  
Wildlife Use: Nectar, nesting sites, cover

Texas Water Resources Institute

TEXAS A&M AGRILIFE



Questions or  
Comments?



## Update to the Arroyo Colorado Watershed Protection Plan

August 2017  
TWRI TR-504



# Implementation Plan

- Identify what still needs to be completed

Table 13.1. Management measure implementation schedule and responsible parties

Management Measure	Responsible Party	Planned Implementation Goal			Units
		Year 0-3	Year 4-6	Year 7-10	
Agriculture and Livestock Management Measures					
WQMPs/RMS	NRCS, TSSWCB, SWCD, Producers	90	90	120	New/updated WQMP/RMS
SWCD technician (technical assistance)	TSSWCB, NRCS, SWCDs	1			SWCD technician (FTEs)
WWTF Permits					
Update remaining 30/90 permit	WWTFs, TCEQ	0	1	0	Permits updated
> 1 mgd facilities' permits updated to 10/15	WWTFs, TCEQ	0	1	0	Permits updated
> 1 mgd facilities' permits updated to 7/12/3	WWTFs, TCEQ	0	0	10	Permits updated
Improve/expand wastewater treatment	WWTFs			5	Facilities
SSOs and Infrastructure					
Reduce SSOs by 5% from FY 2015 total	WWTFs	1%	2%	2%	% Reduction
Increase participation in TCEQ SSO initiative	WWTFs and TCEQ	1	1	1	WWTFs participating
OSSF and Colonias Management Measures					
OSSF inventory/database development/inspection	Counties	Plan	Develop	Complete	
OSSFs repaired/replaced	Counties	50	125	125	OSSF
Households connected to WWTF	WWTFs	50	50	50	Households
Habitat Management Measures					
Wetland creation	Landowners, NRCS, USFWS, TPWD	50	50	50	Acres created
Land protected through purchase or easement	USFWS, TPWD, Landowners	50	50	50	Acres
Enhanced Wastewater Treatment and Reuse					
San Benito Phase II	San Benito, GLO	10			Acres
San Benito Phase III	San Benito, GLO	65			Acres
Pharr Reuse Retention Facility/Reverse Osmosis program	Pharr			1	Facility
Ramsey Park	Harlingen	5			Acres
Wetland/ponds for dredge spoils	POH	Design wetland	Construct wetland		

Table 8.4. Goals for new and updated conservation plans for new 10-year implementation period

Land use	Total acres	Original goal (ac)	Current acres under plan	New goal acres (%)	Update plans > 10 yrs old
<b>Cropland</b>	219,051	150,000 (est. 50%)	130,000 (59%)	165,000 (75%)	45,000
<b>Pasture</b>	24,805	NA	NA	10,000 (40%)	
<b>Range</b>	48,867	NA	NA	7,500 (15%)	
<b>Total ac</b>	<b>292,723</b>	<b>150,000</b>	<b>130,000</b>	<b>182,500</b>	<b>45,000</b>

## Connect Colonias and High-Density OSSF Areas to WWTFs

### Objectives:

- Identify colonias and high-density OSSF areas where WWTF service will generate significant reduction in environmental pollutant loading
- Coordinate with WWTFs to determine feasibility of service extension to identified priority areas
- Facilitate construction of wastewater infrastructure to priority areas and residences

## SWTF LID Institutionalization Plan

### Objectives:

- Continue to expand the NPS training program established by the TAMUK and SWTF
- Work with municipal planners to develop land development codes/ordinances and or drainage policies that include GI/LID
- Work with municipal engineers to develop construction standards and specifications for GI/LID
- Provide municipalities with technical and financial assistance
- Reduce stormwater runoff pollutant loading from bacteria and nutrients

## Existing Development Stormwater Green Infrastructure Plan

### Objectives:

- Work with municipalities to develop specific master plans and strategies to decrease impervious surfaces and/or hydraulically disconnect structures from the MS4 using GI/LID techniques
- Work with municipal engineers to develop construction standards and specifications for GI/LID BMPs.
- Establish a training program and outreach campaign to engage nonprofit organizations and the community in general
- Reduce stormwater runoff and pollutant loading from bacteria and nutrients from the existing urban settings

# Work Group Discussions

## **Agricultural Issues**

- Identify high priority education topics to promote voluntary BMP adoption and reduce NPS pollution
- Need updated numbers – acreage and conservation plans (RMS, WQMPs)

## **Education & Outreach**

- Disseminate information on the Arroyo Colorado and its watershed
- Foster local stewardship
- Increase volunteer opportunities (get residents more involved)

## **Habitat Restoration**

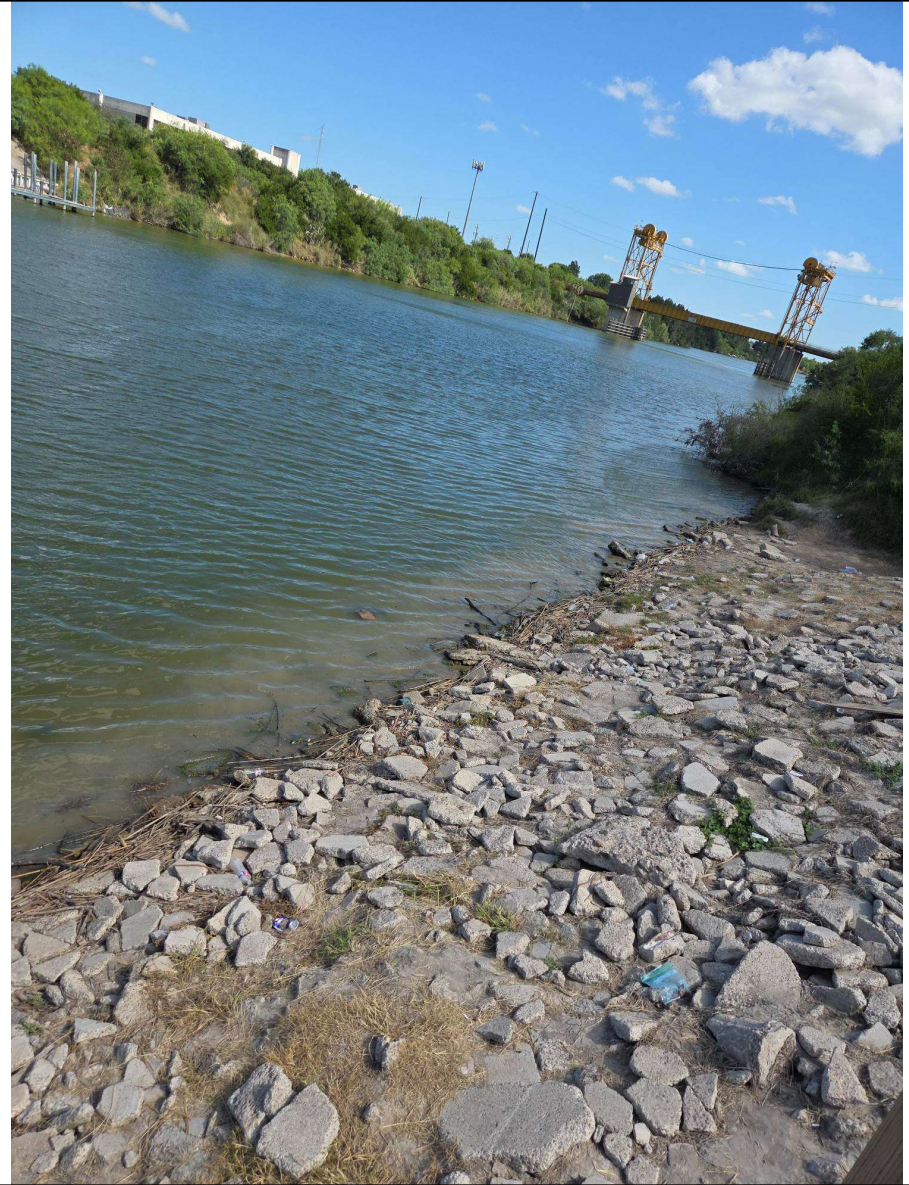
- Restore and protect natural habitats; bank/slope stabilization
- Promote green infrastructure and native plants
- Water quality monitoring

## **Wastewater Infrastructure**

- Education and outreach to homeowners
- Continue to transition treatment levels to 7/12/3
- Enhanced wastewater treatment and reuse

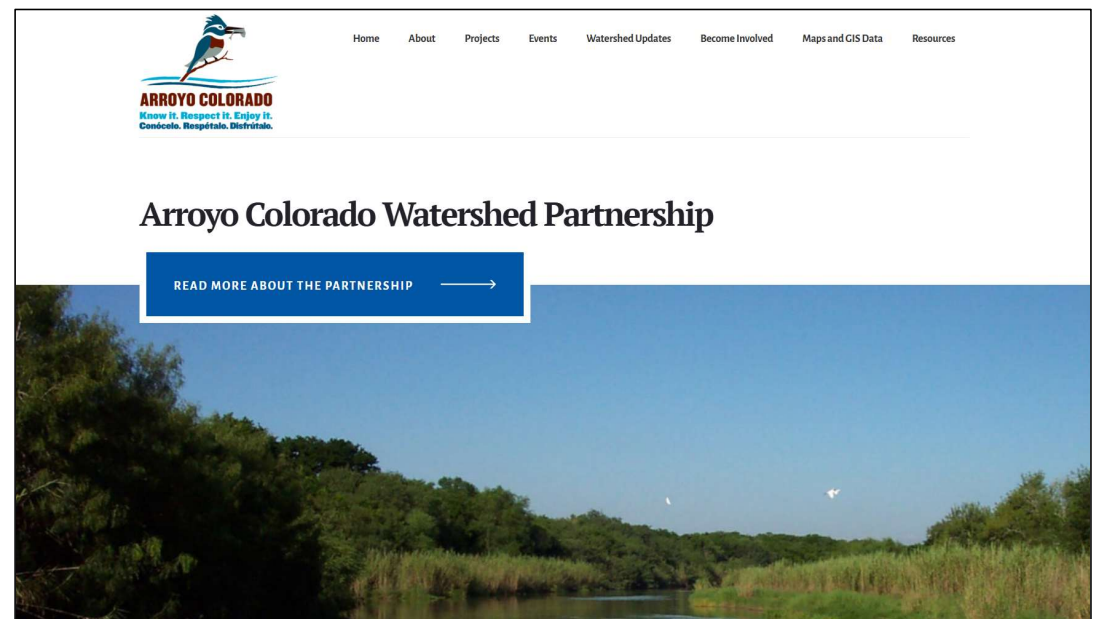


Questions or  
Comments?



# Upcoming WPP Implementation

- TWRI is continuing to make changes and update the website by early next year (mid-January 2026)
- The new Wordpress-based site will have improved security and hosting, improved search engine optimization, and updated content.



What is a Watershed?

The Arroyo Colorado  
Watershed

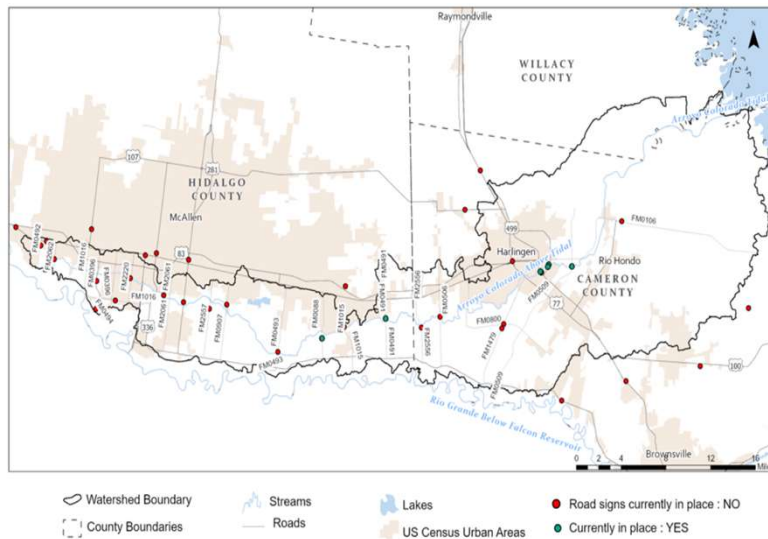
What is a Watershed  
Protection Plan (WPP)?

Arroyo Colorado WPP

# Arroyo Colorado WPP Implementation

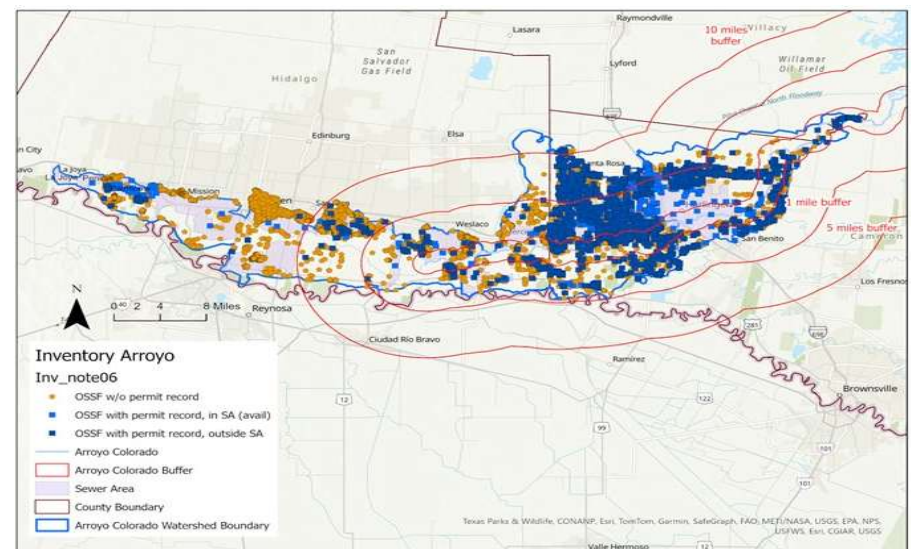
## TXDOT Signage

- Approved to replace signs at locations in the original agreement
- Still a challenge and in discussion



## OSSF Database and Inventory

- Updated in December 2024; final report is complete
- Will continue updating into new TCEQ project once new contract is received





# Upcoming WPP Implementation

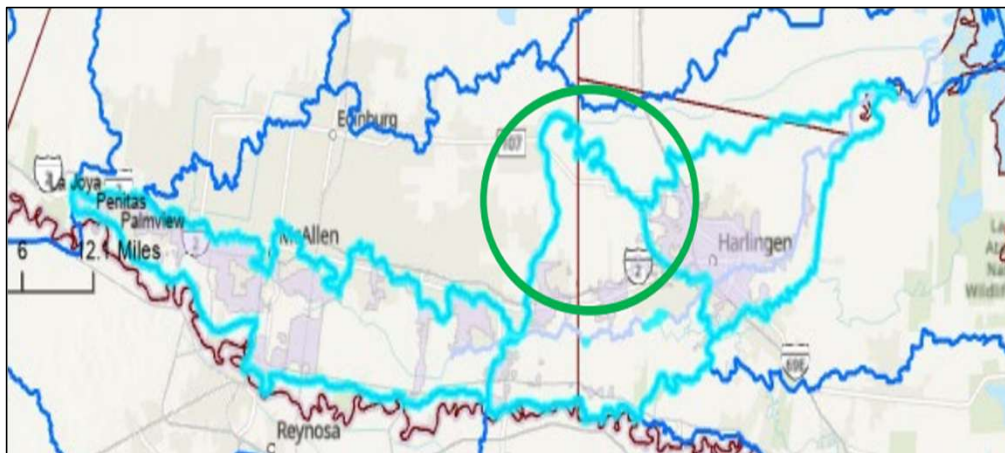
- Continue to find, apply, and secure funds
- Applied to the TSSWCB CWA 319 FY26 RFP (9/18/2025)
  - Free Soil Testing Campaigns
- Applied to the USDA NIFA RFP (11/13/2025)
  - AFRI A1701– biochar as a soil amendment strategy for water and nutrient retention
- 3 valley applications to the TFS Watershed Protection Plan Implementation Grant
  - City of Harlingen
  - City of Weslaco/ LRGVDC
  - American Forests

# Upcoming WPP Implementation

- Continue any education and outreach activities to disseminate information regarding the ACWPP
- Continue connecting and engaging with stakeholders to identify needs
- Maintain the website and share updates on the mailing list/Facebook
- Re-establish and facilitate both steering committee and work group meetings

# Watershed Boundary Update

- TCEQ contract still pending
- Use updated digital elevation data
- Obtain local knowledge and insights (drainage districts and other local stakeholder inputs)







## Contact Info

Samantha Colunga

[samantha.colunga@ag.tamu.edu](mailto:samantha.colunga@ag.tamu.edu)

979-314-9382

<https://arroyocolorado.org/>

Join the mailing list!

