



Region 13. Nueces Flood Planning Group Meeting

*McMullen County EOC
306 Live Oak Street, Tilden,
Texas*

February 24th, 2025

Agenda Item 7 - Survey

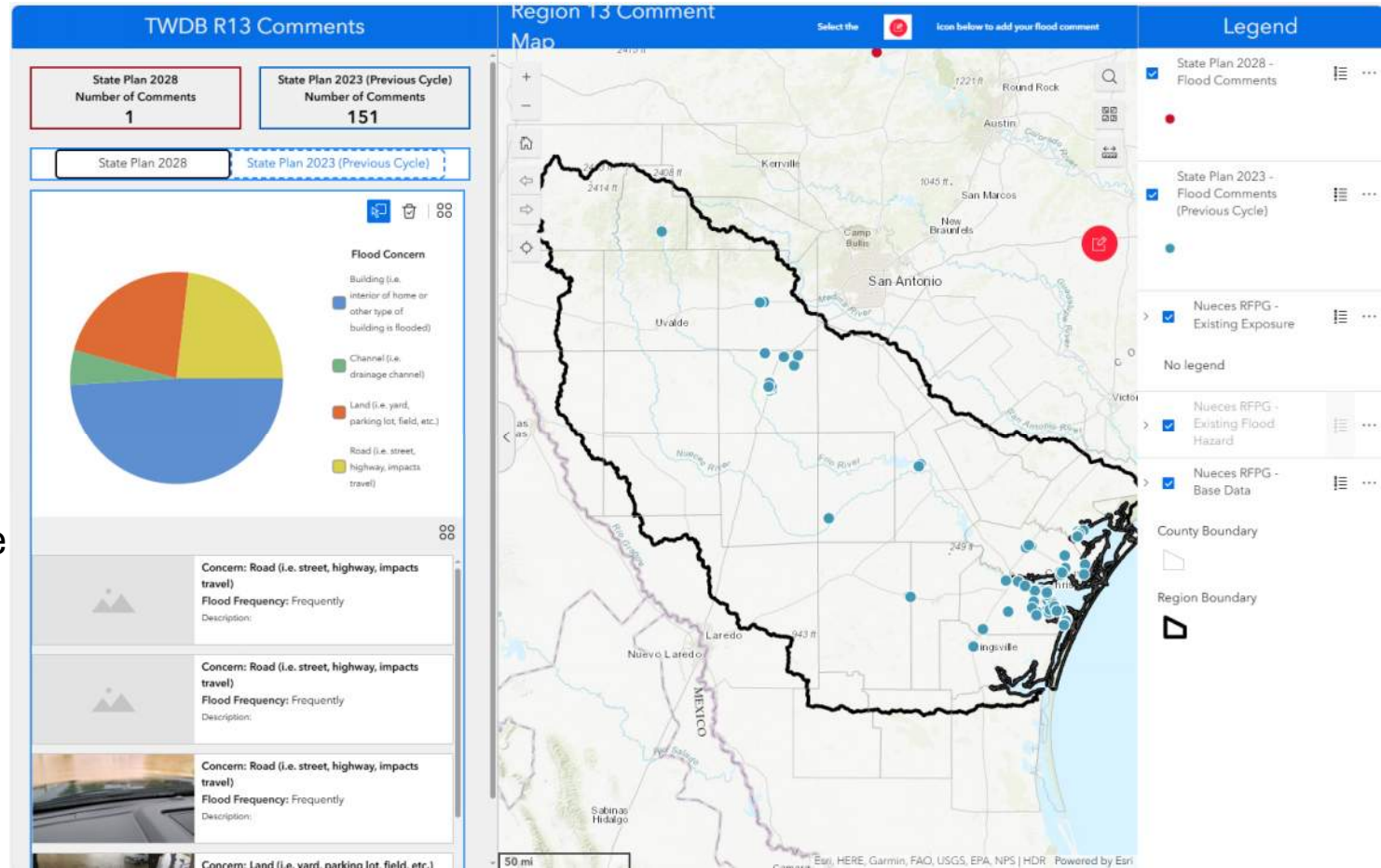
- Flood plan uses bottom-up approach and relies on input
- Short survey, tailored per type of user
- Seeking input from:
 - Government/Industry Professional
 - Concerned Citizens
- Survey open for next 2 months or until end of April 2025
- R13 technical consultants plan to reach out and follow-up during survey



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Agenda Item 7 – Survey - Citizens

- Flood prone areas
- Historical flooding
- Perception of flood risk
- Region 13 Comment Website and Interactive Map



[TWDB Region 13 Comment Map](#)

Agenda Item 7 – Survey - Professional

• Infrastructure

- Missing anything major?
- Aware of deficient or non-functional
- Can use R13 comment map to provide information

https://texasstatefloodplan.org/infrastructure

TEXAS WATER DEVELOPMENT BOARD Overview Flood Risks Recommended Solutions Existing Infrastructure Floodplain Management Explore the Data Resources Sign In

Existing Infrastructure

Assessment of existing flood risk reduction infrastructure

The statewide regional flood planning process is Texas' first attempt to generate a statewide inventory and assessment of major flood infrastructure. The regional flood planning groups reported on existing infrastructure on their region using a two-step process: first inventorying both natural and constructed major flood infrastructure and, secondly, assessing the condition and functionality of that infrastructure. The information that planning groups collected during the first cycle of regional flood planning is invaluable. However, it is not a complete assessment of all major flood infrastructure in Texas. The inventory and assessment of existing major flood infrastructure is expected to improve during each cyclical iteration of the regional and state flood planning process.

Click on the map to view the features, conditions, and functionality of completed, proposed, or ongoing major flood infrastructure projects submitted to the TWDB during the 2020-2023 planning cycle.

Infrastructure layers

Existing Infrastructure

Major Flood Infrastructure (Point)

Infrastructure Type

- Dam
- Revetments
- Low Water Crossings
- Stormwater Management Systems
- High Water Marks
- Sinkholes
- Coastal Infrastructure
- Other Infrastructure

Major Flood Infrastructure (Line)

Infrastructure Type

- Dam
- Levees
- Weirs
- Coastal Infrastructure
- Rivers and Tributaries

Key stats

Statewide	
Total miles of river tributaries	190,000
Total acres of wetlands	3,379,000
Total acres of playas	352,000
Total count of existing flood projects	2,798
Total cost of existing flood projects	\$8.02B
Total acres of open parks	781,000
Total count of sink holes	138
Total count of reservoirs	1,443
Total count of dams	6,731
Total miles of levees	1,884
Total count of low water crossings	11,395
Total count of ponds	266,065
Total miles of storm drain systems	7,940
Total count of existing proposed projects	2,115
Total count of existing ongoing projects	683

*Due to rounding, numbers presented may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

Features

https://texasstatefloodplan.org

Agenda Item 7 – Survey - Professional

- Flood Studies and Existing Projects
 - Provided list from 1st cycle
 - Review and note if anything missing?

Appendix C2 – Previous Relevant Flood Studies

A list of previous flood studies considered by the Regional Flood Planning Group (RFPG) to be relevant to the development of the regional flood plan are provided in the following table:

Previous and Relevant Flood Study	Description	Jurisdictions	Counties	Year
Coastal Texas Protection and Restoration Feasibility Study	This effort, known as the Coastal Texas Protection and Restoration Feasibility Study (Coastal Texas Study), was initiated in 2014 to evaluate large-scale coastal storm risk management (CSR) and ecosystem restoration (ER) actions aimed at providing the coastal communities of Texas with multiple lines of defense to reduce impacts from a wide array of coastal hazards. This study falls under the U.S. Army Corps of Engineers (USACE) Civil Works Mission, which includes but is not limited to inland and coastal flood risk management and the	USACE, GLO	Nueces, San Patricio	2021

Agenda Item 7 – Survey - Professional

- Flood Hazard
 - Historical Flood
 - Flood Model/Map Updates
 - Flood Prone Areas
 - Can you R13 comment map to provide information

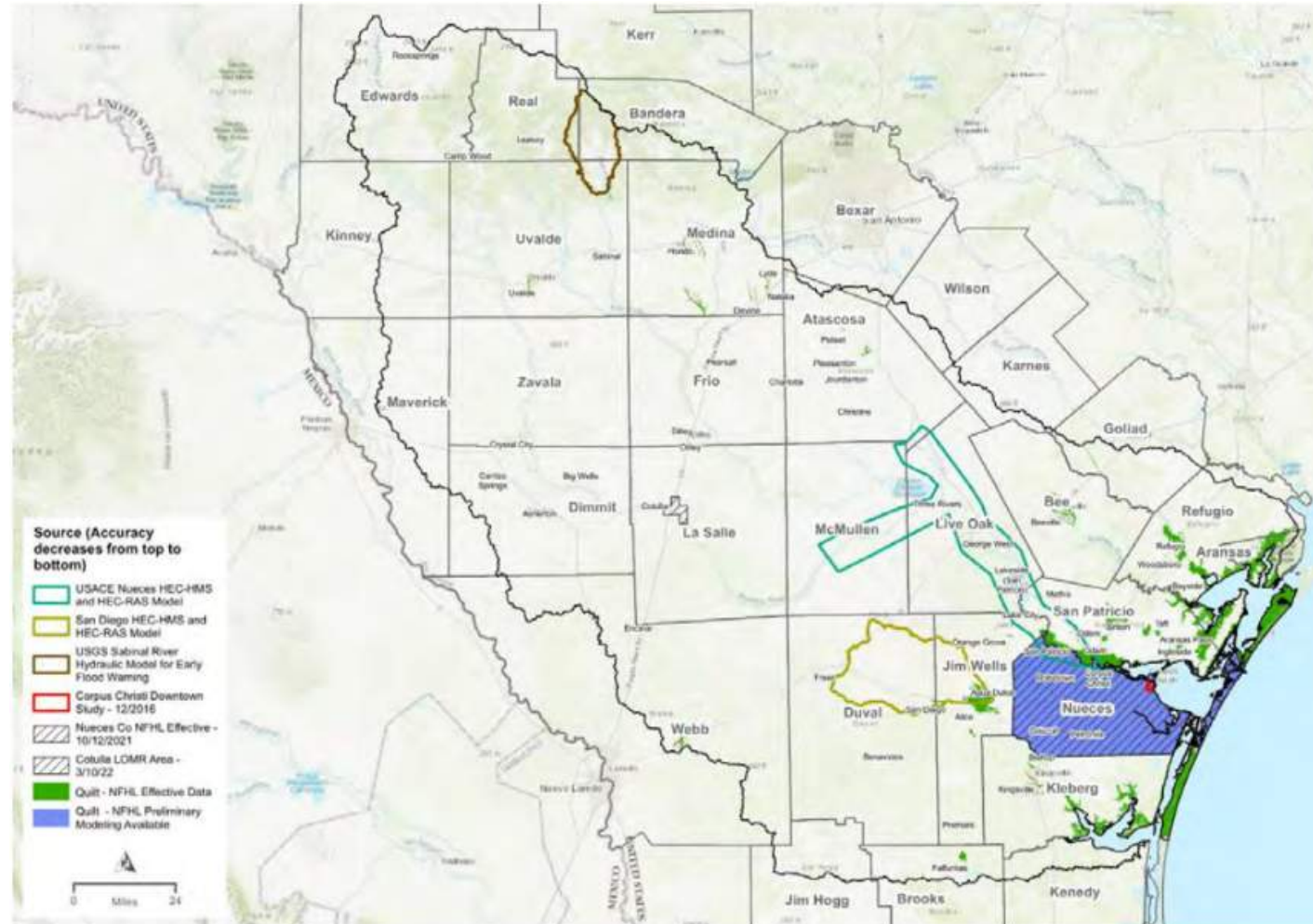
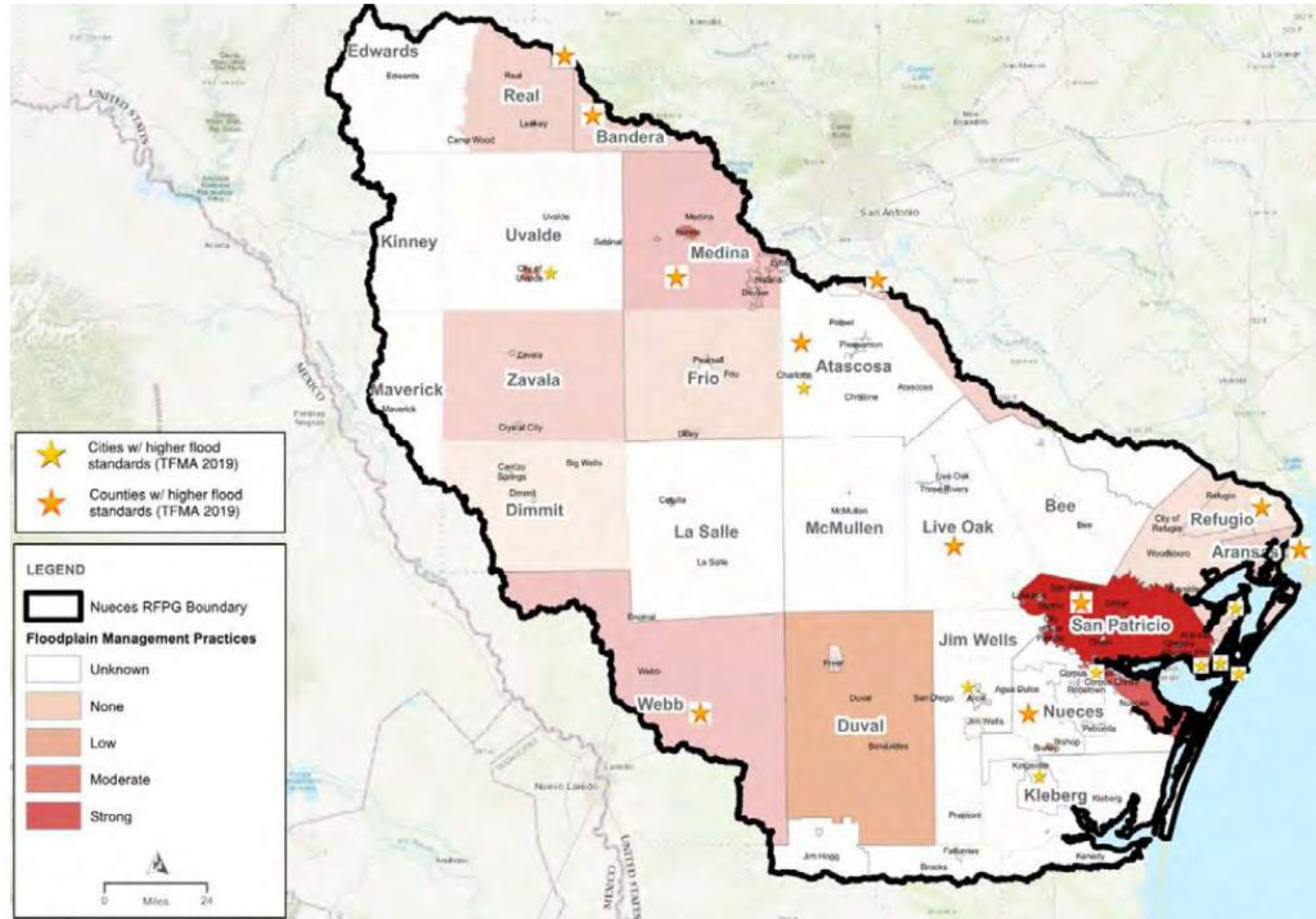


Figure 2-4. Detailed Hydrologic and Hydraulic Model Availability (Map 22)

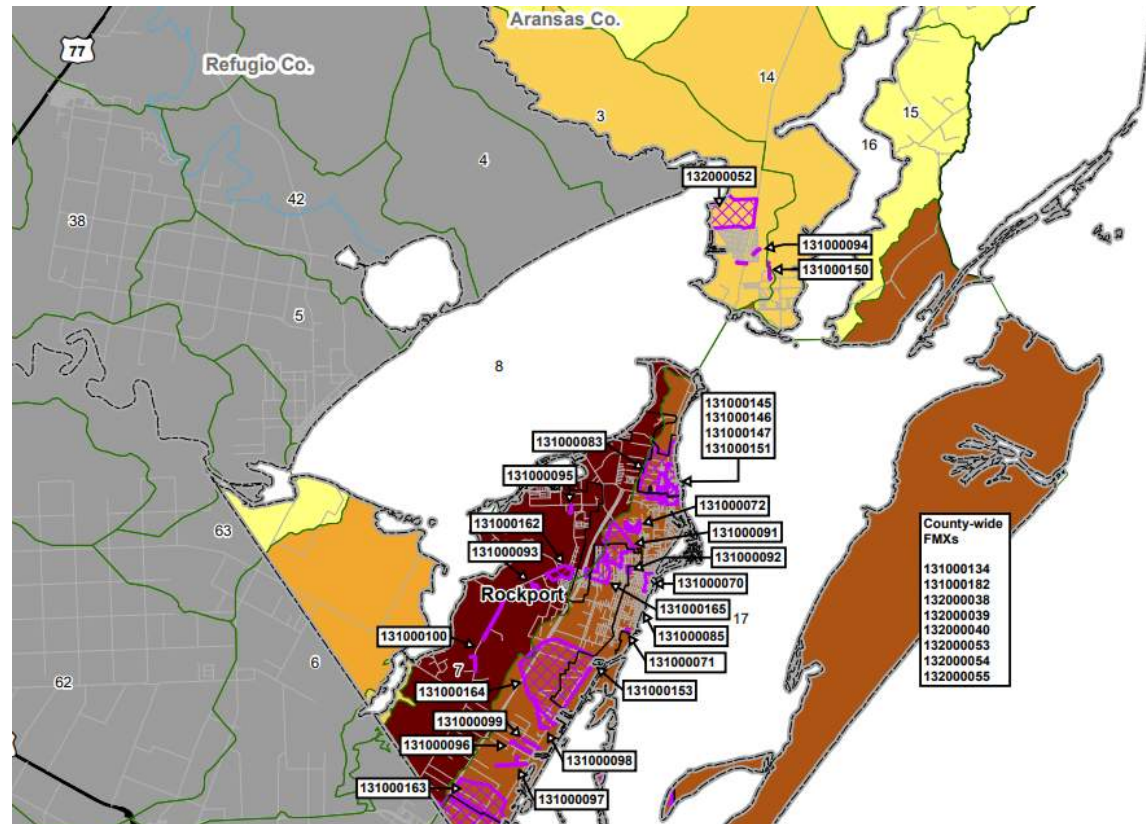
Agenda Item 7 – Survey - Professional

- Flood Management Practices
 - Most effective practice?
 - Adopt or recommend minimum standards?
 - Flood regulation authority survey
- Goals
 - Rank goals
 - Updates?



Agenda Item 7 – Survey - Professional

- Solutions (FMXs)
 - Review prior list
 - Provide new, proposed, or updated solutions



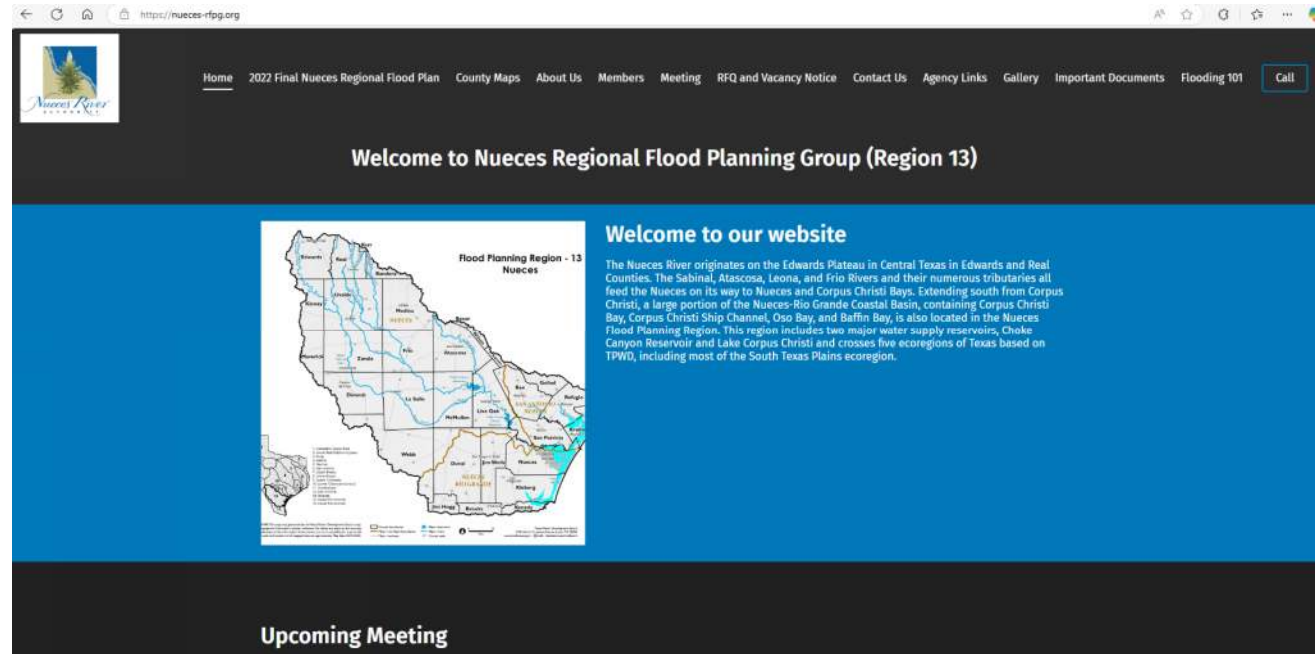
Recommended List of Flood Mitigation Actions (FMX)s,
in Aransas County

Type (FMX)	ID	Name	Description	Estimated Study Cost	Sponsor	RFPG Goal ID	Counties	2024 Amended RFP Action
FME	131000070	Downtown Rockport Drainage Study	Design and conduct an engineering study to address flooding in downtown Rockport	\$ 1,090,000	Rockport	5A	Aransas	-
FME	131000071	Easement Outfall Loop 70 & Shell Ridge Rd	Purchase Drainage easement and construct outfall ditch south of Church St.	\$ 250,000	Rockport	4	Aransas	-
FME	131000072	Rockport County Club Lakes	RCC Lakes - Upgrade drainage system and increase the capacity of the lakes within the Rockport County Club	\$ 62,000	Rockport	5A	Aransas	-

Agenda Item 7 – Survey - Professional

• List of Resources on Flood Planning Group Website

1. County Flood Hazard and Solutions Map
2. Historical Flood Data
3. Previous Relevant Flood Studies
4. On-going Projects and Existing Projects
5. List of Models
6. Floodplain Management Practices and Goals Survey Results
7. TFMA 2018 Higher Standards Survey Results for Nueces Basin
8. Recommended Floodplain Management Practices
9. Goals
10. R13 Comment Map Link
11. Link to Interactive State Flood Plan Viewer
12. Link to R13 survey

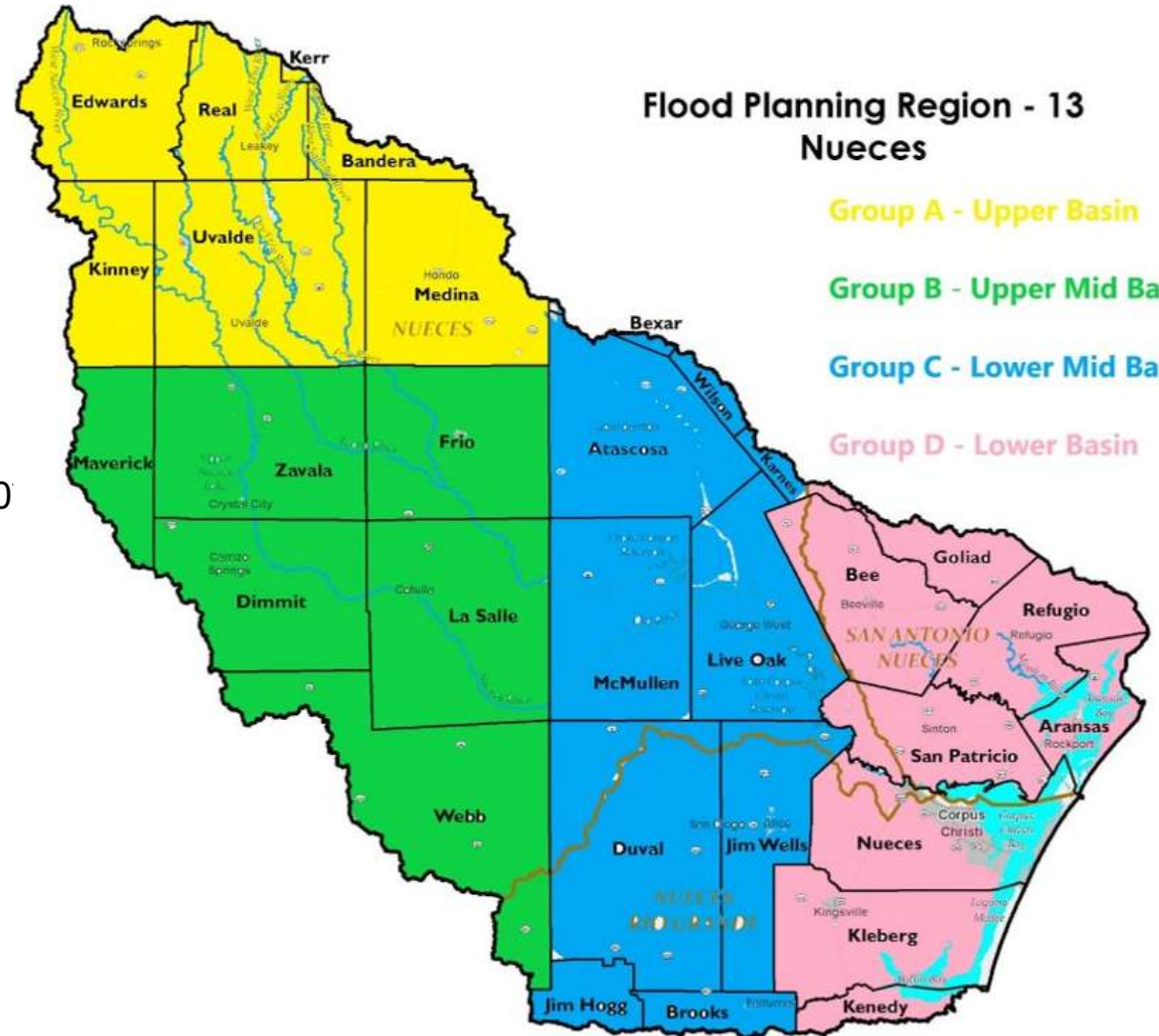


[Home - Nueces Regional Flood Planning Group \(Region 13\)](https://nueces-rfpg.org)

<https://nueces-rfpg.org>

Agenda Item 8 – Road Show Recap

- Road Shows
 - Lower Basin: Robstown. Oct 18th
 - Upper Basin: Hondo. Oct 21st
 - Upper-Mid Basin: Pearsall. Oct 23rd
 - Lower-Mid Basin: Benavides. Oct 30
- Total Attendees: 85



Agenda Item 8 – Road Show Recap

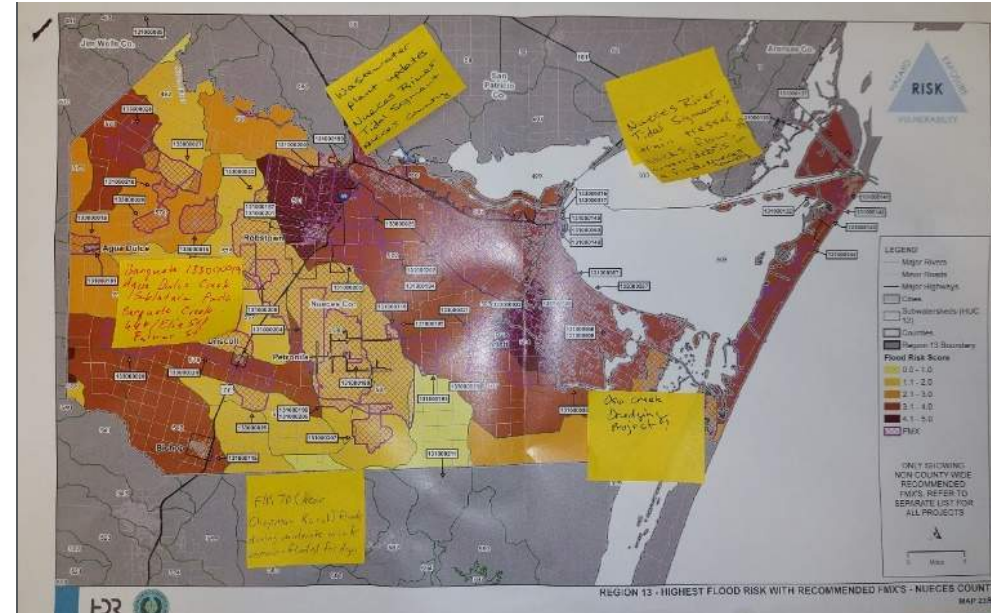
Lower Basin

10.18.2024

- 46 Attendees

- Stakeholders represented:

- AAgriLife - DAR
- Banquete
- Bee County
- CBBEP
- City of Bee
- City of Beeville
- City of Bishop
- City of Corpus Christi
- City of Corpus Christi Dev. Services
- City of Kingsville
- Corpus Christi
- Harte Research Institute/ TAMUCC
- HRI
- Jim Wells Freshwater District
- Keely Construction
- NCDD #2
- North Beach Community Association
- NRCS
- Nueces County
- Nueces/ OEM
- PCCA
- Property owner
- San Patricio County
- TAMUCC Center for Water Supply Studies
- TMN Nueces
- Town of Refugio
- TPWD
- West Region RBS



# of Identified FMXs Sponsored in Subregion		Lower Basin			
FMX	2023 RFP	2024 Amended RFP	2024 Amendment #2	2028 RFP Identified	2028 RFP Total Identified
FME	95	124	122	8	130
FMS	17	17	17	1	18
FMP	0	19	20	2	22
Total	112	160	159	11	170

Agenda Item 8 – Road Show Recap

Upper Basin

10.21.2024

- 13 Attendees
- Stakeholders represented:
 - Keely Construction
 - Kinney County
 - Medina Co. DA's Office
 - Medina County
 - Real County

# of Identified FMXs Sponsored in Subregion		Upper Basin			
FMX	2023 RFP	2024 Amended RFP	2024 Amendment #2	2028 RFP Identified	2028 RFP Total Identified
FME	11	20	20	1	21
FMS	4	4	4	0	4
FMP	0	1	1	0	1
Total	15	25	25	1	26

Agenda Item 8 – Road Show Recap

Upper-Mid Basin

10.23.2024

- 9 Attendees

- Stakeholders represented:

- City of Cotulla
- City of Pearsall
- Frio County
- Webb County Planning



# of Identified FMXs Sponsored in Subregion		Upper-Mid Basin			
FMX	2023 RFP	2024 Amended RFP	2024 Amendment #2	2028 RFP Identified	2028 RFP Total Identified
FME	13	14	14	2	16
FMS	0	0	0	0	0
FMP	0	6	6	0	6
Total	13	20	20	3	22

Agenda Item 8 – Road Show Recap

Lower-Mid Basin

10.30.2024

- 17 Attendees
- Stakeholders represented:
 - Aquilite Extension
 - Atascosa County EMC
 - Benavides Secretary
 - Benavides Water Dist.
 - BISD
 - Brush Country
 - Freer WCLD
 - Jim Wells City
 - Jim Wells Co.
 - Mayor - Jourdanton
 - NRA
 - Rancher
 - San Diego MUD
 - SWCO #337



# of Identified FMXs Sponsored in Subregion		Lower-Mid Basin			
FMX	2023 RFP	2024 Amended RFP	2024 Amendment #2	2028 RFP Identified	2028 RFP Total Identified
FME	38	34	35	1	36
FMS	17	17	17	2	19
FMP	0	5	10	2	12
Total	55	56	62	5	67

Agenda Item 9 – 2024 Flood Plan Amendment No.2

- Amendment due April 1st, 2025
- New FMXs: 6 FMPs, 1 FME
 - Live Oak County
 - FME – Weedy Creek Bridge Study
 - FMP – CR401 and CR402 Drainage Improvements and Evacuation Route
 - FMP – CR233 Drainage Improvements
 - FMP – Timon Creek Drainage Improvements
 - FMP – CR436 Drainage Improvements
 - City of George West
 - FMP – Timon Creek Tributary Drainage Improvements
 - City of Corpus Christi
 - FMP – Williams Ditch Drainage Improvements

Agenda Item 10 – TWDB FIF Draft Priority List

R13 FMEs ranked within the state's top 150

State Rank	Sponsor	FME Name	Requested TWDB Funds
3	Nueces River Authority	Nueces Basin Scaling Up NBS Study	\$1,000,000
3	Nueces River Authority	Nueces Basin Low Water Crossing Study and Upgrade Prioritization	\$775,000
3	Nueces River Authority	Nueces Basin High Hazard Dam Identification and Risk Assessment	\$1,500,000
3	Nueces River Authority	Diversion from the Nueces River to Choke Canyon Reservoir	\$2,000,000
8	Nueces River Authority	Nueces Basin Floodplain Map Updates	\$56,800,000
122	Bee County	Bee County Drainage Master Plan	\$500,000

Agenda Item 10 – TWDB FIF Draft Priority List

R13 FMPs ranked within the state's top 150

State Rank	Sponsor	FME Name	Requested TWDB Funds
40	Nueces County Drainage District #2	Robstown Various Drainage Improvements (FH#8,10,12) – Phase 1 Engineering Design and Land Acquisition	\$17,215,000
55	Devine	Burnt Boot Creek Drainage Project	\$11,557,113
107	Nueces River Authority	City of Benavides Main City Network Storm Drain Improvements	\$9,500,000
121	Crystal City	Downtown Crystal City Regional Detention Pond Improvements	\$4,340,000

Region 13 Road Shows

Stakeholder Notes

Lower Basin Road Show

October 18, 2024

Attendees

Name	Organization/ County of Interest	E-Mail
Marie Lucis	--	
Myra Alaniz	--	Samalaniz24@yahoo.com
Luke Drosche	AgriLife - DAR	
JD Leza	Banquete	
Mario Ybarra	Banquete	mariomybarra@yahoo.com
Orlando Trevino	Banquete	Orlandotrevino@yahoo.com
Tino Olivares	Bee County	
Kathryn Tunnell	CBBEP	
Mary Baker	CBBEP	
Henry Munoz	City of Bee	
Sonya Solo	City of Beeville	Sonya.soto@beevilletx.org
Gerald Benadum	City of Bishop	
Bria Whitmire	City of Corpus Christi	
Jason Alvarez	City of Corpus Christi	
Jason Hola	City of Corpus Christi	jasonholatx@gmail.com
Melanie Barrera	City of Corpus Christi	Melineb2@cctexas.com
Alex Harman	City of Corpus Christi Dev. Services	
Michael Mora	City of Kingsville	
Rudy Mora	City of Kingsville	rmora@cityofkingsville.com
Jim Klein	Corpus Christi	
Robert Scholz	Half	
Chris Hale	Harte Research Institute/ TAMUCC	
Athena Frasca	HRI	
Nina Flores	Jim Wells Freshwater District	
Octavio Flores	Jim Wells Freshwater District	
Eddie Martinez	Keely	
Art Mireles	NCDD #2	
Tracy Jackson	North Beach Community Association	
Carol Taly	NRCS	
Anna Velazquez	Nueces County	
Deanna King	Nueces County	
Kobert Hernandez	Nueces County	
Maria R	Nueces County	
Willie Silva	Nueces County	
Dee Hawkins	Nueces/ OEM	
Yvonne Dives-Gomez	PCCA	
Wayne Kelly	Property owner	

Chesca Newman	San Patricio County	
Melanie Cooper	San Patricio County	
Maurice Galido	Stakeholder	Hipposg22@gmail.com
Shannon Galido	Stakeholder	Hipposg22@gmail.com
Jessica Palitea	TAMUCC Center for Water Supply Studies	
Bob Brown	TMN Nueces	Bob.brown3716@outlook.com
Jose DeLeon	Town of Refugio	
Alicia Walker	TPWD	
Robert Coffin	West Region RBS	

Breakout Sessions

San Patricio County

Note source: x?

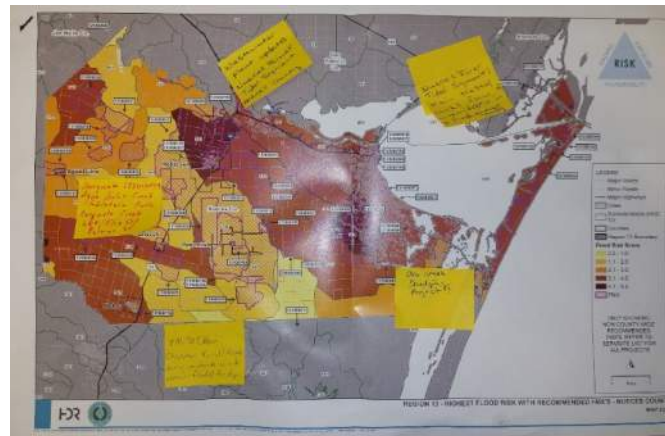
- Melanie Cooper (Grants- San Patricio County) to send information on San Patricio County projects currently being funded and prioritize new ones that are unfunded and of need for inclusion in the 2028 Plan
 - Coordinate with drainage district

Nueces County

Note source: Kristi Shaw, HDR and Sarah West, FNI

- North Beach project.
 - Phase 1 funded (or will be funded by City Council) in Jan 2025. HDR team to stay in touch regarding Council items/approvals. Phase 2 is a larger effort, not currently funded. Needs to be included in 2028 RFP (either FME or FMP)
 - Councilmember Klein very interested in this showing up in the 2028 RFP
 - Carrie Meyer emailed Sarah West with information regarding this project
 - City Project Number #22142
 - City Project Name: North Beach Drainage Improvements
 - Engineer of Record: Scott Harris with Lockwood, Andrews, & Newnam, Inc (LAN)
 - Plans appeared to be substantially complete
 - Kristi to set up an initial meeting to discuss. FNI to follow-up.
- Oso Creek Drainage project
 - Councilmember Hernandez very interested in this showing up in the 2028 RFP
 - Shown in the 2023 RFP as an FME
 - Kristi to set up an initial meeting with Bria (CCW). FNI to follow-up.
- City of Corpus Christi Stormwater Master Plan
 - The City recently completed their Stormwater Master Plan and Melanie Barrera, Floodplain & Coastal Protection Manager, provided a had copy of the supporting documents to Sarah West

- Engineer of Record: Pape-Dawson Engineers
- Project costs estimates with descriptions are included in the document. Add these to the Reg 13 plan.
- May need to coordinate with City staff and/or the engineer of record if need additional information to get the projects to FMP level
- La Volla Creek
 - City of Corpus Christi staff mentioned needing to add the La Volla Creek Phase II project to the Region 13 plan (either FME or FMP)
- Participants identified high priority goals. HDR team to summarize for next RFPG meeting.
- The following comments were picked up on the Risk map.
 - Nueces River Tidal Segment: train trestle blocs flow of water/debris in a flood, Nueces County
 - Wastewater Plant updates, Nueces River Tidal Segment, Nueces County
 - FM 70 (near Chapman Ranch) floods during moderate rain and remains flooded for days
 - Banquete (FMP #133000019), Aqua Dulce Creek Sablatara Park, Banquete Creek – 666/Elia St/Faluar St
 - Oso Creek Dredging project!



Refugio County

Note source: x?

- Jose DeLeon (Ardurra) mentioned there are FMXs for Refugio County that have been identified in recent study. Not sure information is fully formed to qualify for amendment.
- Kristi sent Poteet FMP example (cc: FNI). Needs follow-up from FNI prior to Dec 15th to determine if Refugio County has sufficient information to qualify for amendment

Kleberg County

Note source: x?

- Both sets of stakeholders have kept lists of additional projects they want to share with the RPG
 - Follow up (ACTION)
- Kingsville
 - Have received multiple FIF and GLO grants in previous cycles
 - Can they receive an updated FIF grant for additional funds based on updated costs of construction?
 - LWC crossing headwall fell over. RCPs pulled outward in need of repair
 - New RFQ sent out
 - No Dams in city
 - Flood warning systems upstream of the city
 - Latest data available is 2014 FIRM Map
 - Waiting for award for GLO downstream maps
 - Historical Flood location: 14th street and Lott St - 2021 flooded 1.5-2 feet
 - Highway truck stops are being developed in the town.
 - WWTP in need of upgrade, potential flood aspect.
- TAMUCC Baffin Bay
 - Riviera Coastal Flood Risk
 - Clean Coast Texas Group small scale projects
 - Water quality and flood control at agricultural sites to protect Baffin Bay.

Bee County

Note source: Blaine Laechelin, FNI

- Bee County/City of Beeville
 - Attendees: [Sonya Soto](#) (City of Beeville), [Henry Munoz](#) (City of Beeville), [Tino Olivares](#) (County Commissioner, Precinct 4)
 - Major concerns:
 - Having consistent maintenance of channel waterways throughout City and county areas.
 - Lack of staff or equipment maintenance
 - County and City-wide floodplain mapping
 - Potential Flood projects:
 - FME – Silver Creek Bridge (already an FME in the 2023 plan)
 - This is a low water crossing that traps residents from crossing and also contains a homemade pedestrian suspension bridge that kids use to cross during higher events to make it to school
 - FME – County wide drainage master plan study (already an FME in the 2023 plan)
 - FME – Poesta Creek Drainage Improvements (already an FME in the 2023 plan)
 - Off Old St. Marry's road at Earl's Trail

- Possible levee or dam blocking flow through private land
- Local runoff backing up due to possible manmade obstruction
- Large lot subdivision off CR 519 is low lying and has standing water during rain events
- CR 536 low water crossing is overtopped and strands residents, similar to Silver Creek Bridge
- 7251 CR 610 has flooding issues after a rain event from possibly two ponds not draining.
- City of Beeville – flooding along Emily Dr. and Quarter Horse Dr., drainage channel needs cleaning and possibly widened.
- City of Beeville – Tyler Street has several low water crossings, believe it is funded through GLO and Grant works

Aransas County

Note source: Bryan Martin, HDR

- Bryan Martin spoke with Christine Hale, M.S. of the Harte Research Institute for Gulf of Mexico Studies, Texas A&M University Corpus Christi
- Wanted to make the planning group aware of Geored.org and thought that this platform could potentially be expanded to the basin as a whole with funding.
- Geored.org - Geospatial Resilient Economic Development – a geospatial platform designed to assist the communities of the Coastal Bend in practicing smart growth practices by providing regional hazard, modeling, and economic development data. The hazard impact and planning tool provides similar function to the regional flood plan.
- RFG should coordinate with the Harte Research Institute as the two groups are aiming to achieve similar goals regarding the flood hazard (ACTION)

Jim Wells

Note source: Bryan Martin, HDR

- Octavio Flores – General Manager of Jim Wells County Fresh Water District No.1, Phone: 361-664-0482, e-mail: jwfreshwater@gmail.com
 - Reported flood prone area in the City of Ben Bolt. Need to follow-up to obtain further information on flood prone area (ACTION ITEM)

Upper Basin Road Show

October 21, 2024

Attendees

Name	Organization	County	E-Mail	Phone
Alma Gutierrez	Kinney County	Kinney	4grants@co.kinney.tx.us	830.563.0279
Candy Hobbs	Kinney County	Kinney	grants@co.kinney.tx.us	830.560.5236
Keith Crow		Edwards	crowk@wt.net	713.410.3456
Alex Paz	Keely Construction	All	apaz@keelyconstruction.com	210.859.5129
Larry Sittre	Medina County	Medina	Larry.sitre@medinatx.org	210.284.1240
Margaret Swyers	Medina Co. DA's Office	Medina	Margaret.swyers@medinatx.org	830.741.6187x1723
Danny Lawler	Medina County	Medina	Danny.Lawler@medinatx.org	210.289.1495
Pat Brawner	Medina County	Medina	Pat.brawner@medinatx.org	830.741.9672
Vick Jones	Real County	Real	dartman@hctc.net	830.279.5822
David Lynch	Medina County	Medina	David.lynch@medinatx.org	830.426.1604
Richard Lara	City of Uvalde		rlara@uvaldetx.gov	830.278.3316
Jessica Castiglione	Medina County	Medina	Jessica.castiglione@medinatx.org	210.414.6685
Keith Lutz	Medina County	Medina	Keith.lutz@medinatx.org	830.741.1472

Breakout Session Notes

Medina County

Note source: [Kristi Shaw, HDR](#)

- 18" above the BLE used for floodplain management
- Westwood Engineering (512) 750-8433 (m) (210) 265-831k2 (w)
 - D'Hanis (Hondo)
 - County wide
- Medina County Judge Keith Lutz keith.lutz@medinatx.org
- David.lynch@medinatx.org
- D'Hanis #1 flooding issue. Does Westwood have FMPs for an amendment?
- Chacon Lake blew out 20 years ago - Bexar Medina Atascosa (BMA) Drainage District. Larry Thomas ask him. Chacon Creek from North of Natalia down to Devine
- FM 2790 Bexar/Medina Co. 100' ROW. 20' highway with drainage ditches on either side always full.

- Jessica.Castiglione@medinatx.org
- CR 4516 has low water crossing. Send Jessica low water crossing coverage (ACTION ITEM). Quihi.

Edwards County

Note source: [Kristi Shaw, HDR](#)

- Real/Edwards Flood Warning Program. West side gap in knowledge. Not sure, will talk to fire chief and judge.

Kinney County

Note source: Bryan Martin, HDR

- Met with
 - Candy Hobbs, Kinney County
 - Alma Guterrez, Kinney County
- Greatest flood need is Brackettville.
 - A recent study was conducted to evaluate the flood problem and various alternative improvements identified such as improving the upstream dams, channel cleanup through the city, flood benching, flow diversion, etc.
 - Showed Candy and Alma the flood hazard layers in the State Flood Plan viewer. Later received a call from Candy asking for a link to the State Flood Plan viewer and send via e-mail to grants@co.kinney.tx.us on 10/25/24.
 - Brackettville is within Region 15. Region 13 will need to convey flood information (ACTION ITEM)
- Neither Kinney County nor Brackettville have flood ordinances

City of Uvalde

Note source: Ludivine Varga, HDR

- Ludivine Varga met with City of Uvalde. Below are her notes.
- Dry Leona River Dam
 - Built in the 70s and is still good, main protection of the city
- City Drainage Issues – more information in follow up email below.
 - North Grove Street
 - North Camp Street by HS
 - East Mesquite Street
- Critical Infrastructure
 - New Hospital – make sure its added to the critical infrastructure feature class (ACTION ITEM)
 - Illegal Fill was done to build this
 - No studies have been done yet – need to investigate – add as FME (ACTION ITEM)
- Management
 - Currently no management practices to build in the flood plain

- Mapping
 - Last maps are from 2010 FEMA
- City Website has easy access for the public to access flood plain.
- Others that should be included in the flood discussion for Uvalde County:
 - Monica Lara <mlara@uvaldetx.gov> (FPA for City of Uvalde)
- Follow up Email from Robert Lara (City of Uvalde Building Official)
 - “We were talking yesterday about the dam that sets north of Uvalde. I have the coordinates for the detention pond which is the dry Leona River is actually located 4 miles north of Uvalde along Highway 83 North. The latitude is 29` 17’42.40” North and 99` 46’11.29” West. The owner is James Willingham aka Leona Land Management LP. It appears that the majority of the 500 acres is agricultural. The FEMA map shows it as 48463C)475E effective November 4, 2010.
 - The other local areas that flood during the time of rain is North Camp Street, between Studer Street and East Anglin Street. Another is North Grove Street between West Nueces Street and West Frio Street and the majority of North Uvalde along West Antonio Street between Rio Grande Street, Mackenzie Street, and Cesar Chavez Street.”
 - Add areas to flood prone areas (ACTION ITEM)

Uvalde County

Note source: Ludivine Varga, HDR

- CR 416 Drainage Issue
 - Keeps washing out @ Nueces River
- Others that should be included in the flood discussion for Uvalde County:
 - Forrest Anderson <fanderson@uvaldecountry.com> (FPA for Uvalde County);

Edward County

Note source: Ludivine Varga, HDR

- Mapping
 - WEST
 - No info on population/flooding on the west side of the County
 - Said he will follow up with fire cheif and judge on getting more information to provide us. Follow up to see if they have gotten that information. (ACTION ITEM)
- EAST
 - Population is on stilts
- Infrastructure
 - LWC
 - Will send us the locations for where they believe barrier arms are needed. Follow up.
 - Bull Creek entering into Nueces floods along CR 335
- Management

- No management to prevent building in floodplain
- Issues with this one property owner who build a runway in the floodplain. It was washed out with the recent flood and they are rebuilding it already.

City of Leakey

Note source: Ludivine Varga, HDR

- Infrastructure
 - New medical facility
 - CR337 right as you turn off of HW83
 - Make sure its on the critical infrastructure feature class (ACTION ITEM)
 - East 337
 - Lots of gravel build up
 - Reason for this is no top soil, areas with sheep and goat and cedar drain here
 - Potential solution is they want to drudge it up the creek bed
 - LWC
 - Edge of Leakey East Side
 - Will send a list of most problematic areas. Follow up to get the list.
- Historic Flood
 - 1978 Flood – Kerr County – 13 inches
- R13 Website requested information – Ludivine Sent information on 11/4/2024 (ACTION ITEM)

Upper-Mid Basin

October 23, 2024

Attendees

Name	Organization	County	E-Mail	Phone
Ray Kallio	Frio County	Frio	frioemc@friocounty.org	830.317.3648
Ofilia M. Trevino	Frio County	Frio	ofelia.trevino@friocounty.org	830.505.2986
Krystal Garcia	City of Pearsall	Frio	krystal.garcia@cityofpearsall	830.334.4160
Hector Gandara	City of Pearsall	Frio	hgandora@cityofpearsall.org	830.334.4160
Yolanda Moran	City of Pearsall	Frio	ymoran@cityofpearsall.org	830.334.3646
Sandra Luna	City of Cotulla	La Salle	mayor.luna@cityofcotulla.org	830.202.7436
David Wright	City of Cotulla	La Salle	david79wright@att.net	830.457.4687
Dana Cantu	Webb County Planning	Webb	ecanutu@webbcountytx.gov	956.523.4100
Jorge Calderon	Webb County Planning	Webb	jcalderon@webbcountytx.gov	956.523.4100

Breakout Session Notes

Frio County

Note source: [Kristi Shaw, HDR](#)

Overview

- CDM Smith Engineering contracted to perform [study of Pearsall water system](#)
 - NOT LNV Engineering
- Flood maps available from 1975 and 1981
 - No digital maps available

Pearsall, TX

- **Top-Priority Flood Management Evaluations (FME) - For advancement to Flood Management Project (FMP)**
 - S Roosevelt St. and E Haynes Ave. (FME 13100050)
 - N Roosevelt St. and Chapparral Rd. (FME 13100051)
- **Other Flood Management Evaluations**
 - FME 131000186
 - TxDOT is in the process of replacing two bridges to improve flow and drainage channels.
 - Under Chapters 2401 and 2500 of the Texas Occupations Code.

- **Top-Priority Flood Management Plans**
 - Gilliam Road Drainage Improvements
 - 13300013- Gilliam Road channel lining and conveyance improvements along FM 1581

Frio County

- **Top-Priority Flood Management Evaluations (FME)**
 - Moore Hollow Creek (NEW)
 - Flooded in 2015, 2018, and 2024
 - Flood waters cover parts of IH-35
 - At least one house flooded
 - County owns the park land (CR 2632)
 - CR 4656/ Vine Loop
 - Needs coordination with Dilley, TX

Follow-up Items

- Reach out to [Ray Kallio](#) for additional information on Moore Hollow Creek

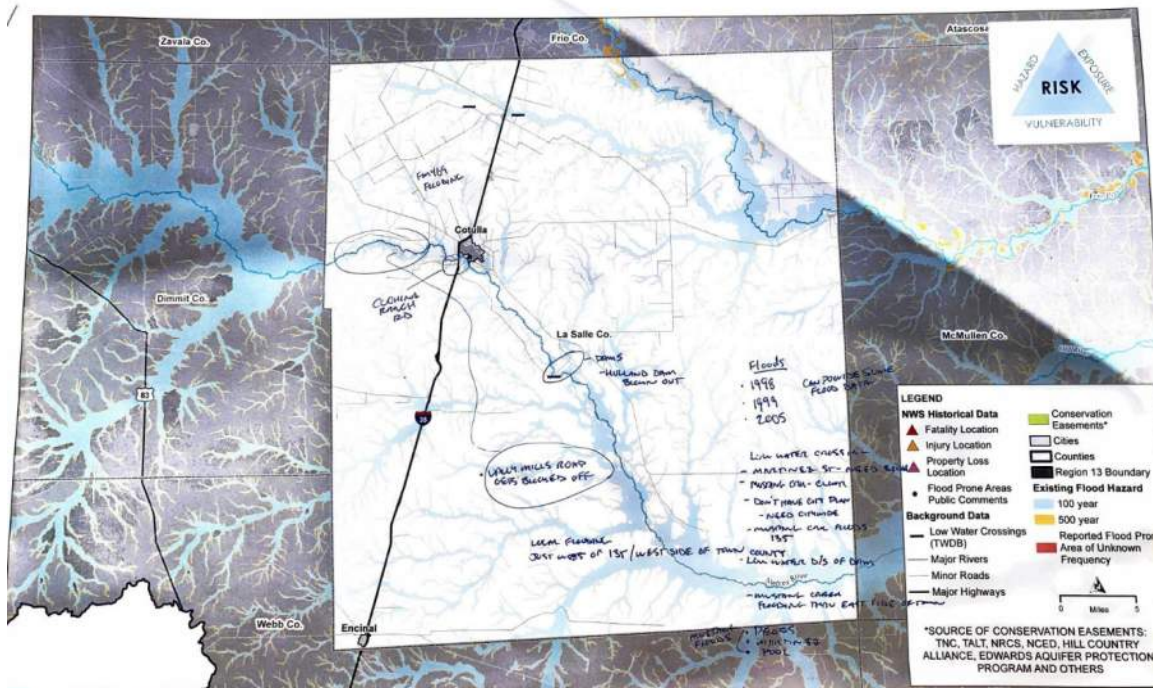
La Salle County

Note source: Bryan Martin, HDR

Met with David Wright and Sandra Luna, representing the City of Cotulla

- Cotulla
 - Don't have city plan, need city-wide study (FME needed)
 - Mustang Creek
 - Floods through east side of town
 - Low water crossings - Mustang floods Pecos, Martinez, and Pool crossings
 - Martinez Streets – needs bridge
 - Mustang Creek – CLOMR completed
 - Mustang Creek floods I35
 - Local flood issues, just west of I35/westside of town
 - Texas Avenue – drainage project needed
 - San Micuel? off back of Elfan
- County
 - Flood plan needs to talk to county (not present), city was aware of some county flood problem areas
 - Dams southeast of Cotulla
 - Low water crossings downstream of dams
 - Holland Dam blown out
 - Northwest of Cotulla - FM469 floods

- Just south of Cotulla - Cochina Ranch Road floods
- West of Cotulla - Valley Mills Road floods and gets cut off
- Historic Floods
 - 1998
 - 1999
 - 2005
 - Cotulla can provide some flood data for these floods (ACTION ITEM)



Webb County

Note source: Kyle Jackson and Henry Ulrich, HDR

Topic 1: Flood Hazards

- Three new MUDs forming
 - 2 are LOMRs
- Formation of a new city (major, private development)
 - Will be responsible for their own studies and efforts
 - Large, multi-family development
- There are several at-risk bridges in low population areas

Topic 2: Floodplain Management

- There are several projects already in progress to support emergency access for highway flooding
 - This project is already funded
- County needs State assistance with enforcement and regulatory compliance

- County can currently withhold permits and electricity, but people find ways to work around or ignore these penalties

Topic 3: Flood Mitigation Solutions

- **3** – Improve regional coordination, data collection/sharing of flood events and impacts, and implement flood warning systems
- **4** – Perform flood mapping evaluations and update floodplain maps and flood hazard data.
 - **4a** – Develop maps to Base Level Engineering (BLE) or National Flood Hazard Layer (NFHL)-level accuracy for 60% of the basin that does not currently have accurate mapping. Identify structures and buildings in the NFHL-Detailed Study Areas with elevations less than 1 foot above base flood elevation (BFE).
- **10** – Identify funding, resources, and technical training for floodplain districts, managers, administrators or designees to enhance technical capacity for identifying floodplain projects, community outreach, and permitting support to verify new projects meet floodplain development requirements

Follow-up Items

- Follow up with [Jorge Calderon](#) about code enforcement

Lower-Mid Basin

October 30, 2024

Attendees

Name	Organization	County	E-Mail	Phone
Mike Pansza	Atascosa County EMC	Atascosa	Mpansza@co.atascosa.tx.us	830.480.7344
Robert Williams	Mayor - Jourdanton	Atascosa	Rwilliams@jourdantontexas.org	830.480.0004
Felicita Rodriguez	Benavides Water Dist.	Benavides, Duval	Efl@grandriver.net	261.227.4367
Annie Recio	Benavides Secretary	Duval	Avecio@benavidesid.net	???720.0004
Diana Adami	Freer WCLD	Duval	Fwcid@sbcglobal.net	361.207.2376
George Gonzales		Duval		
John Barton	Aquillite Extension	Duval	John.barton@aq.tama.edu	361.389.3676
Nita Vela	BISD	Duval	Nvela@benavidesisd.net	361.701.8419
Rene Hinojosa	Rancher	Duval	Esperanzaranch74@yahoo.com	210.287.8244

Rudy Torres. Jr	San Diego MUD	Duval	Rudytorres@yahoo.com	361.701.3357
Samuel Bueno	BISD	Duval	Sbueno@benavidesisd.net	361.460.1502
Emede Gonzalez	Jim Wells Co.	Jim Wells	Emede.gonzales@co.jimwells.tx.com	361.289.8299
Pedro Trevino	Jim Wells City	Jim Wells	Pedro.trevino@co.jim-wells.tx.us	361.701.9618
Louie Pena	Brush Country	Jim Wells, Jim Hogg, Brooks	Lpena@brushcountrygcd.com	???325.5093
Servando Leal	SWCO #337	Webb, Duval, Jourdanton	s.leal1874@?????.com	956.640.7378
Javier Ramirez	NRA	X	Jramirez@nueces-ra.org	361.653.2160
Phil Wiatrek	NRA	X	Pwiatrek@nueces-ra.org	

Breakout Session Notes

Breakout Group 1

Moderator: Bryan Martin; Note source: Kyle Jackson

General Concerns

- Watershed dams are getting old across region
 - There has been some funding available
 - Money is only helping to slow deterioration
 - There isn't enough to money to fully repair the dams
 - Parts are beginning to collapse due to age
- There are widespread issues with clogged dikes, culverts, drains, etc.
 - Some are totally blocked
 - All need cleaning and restructuring
- Need involvement from several cities/ counties who did not have representation
 - MUD representatives and private citizens were present who did not see anyone else from their city/ county
- Hurricane Beula caused major flooding in this area in 1967 with 24" of rain

Benavides ISD

- The creek behind the elementary school has a problem with debris washing up on the shore after flooding
- Concerns about flooding on school properties
 - Schools either flood at least partially or become islands
 - ½" rain causes problems
 - Need here is urgent – floods cancel school
 - There are projects underway that address this, but they need funding to continue

- Some schools are not directly affected, but their surrounding roadways and communities are impacted

San Diego, TX

- Dykes in need of maintenance
 - Falling apart due to age
 - Clogged with silt
 - Need cleaning and restructuring

Freer, TX

- Dykes in need of maintenance
 - Falling apart due to age
 - Clogged with silt
 - Need cleaning and restructuring

Duval County

- Several flood management projects in progress from the previous funding cycle
 - 15 projects currently in progress
 - All need funding if they are to continue

Follow-up Items

- Keep MUD representatives and non-gov. individuals looped into relevant communications
- George Gonzales needs updated maps of Duval County
 - Specifically requested the maps used during breakout sessions and dam maps
 - Would like any maps HDR has and is able to give
 - Duval Co. maps are outdated, some from the 1960s
- Rudy Torres needs updated maps of Duval County

Breakout Group 2 – Jim Wells County

Moderator: Ludivine Varga; Note source: Ludivine Varga

General

- Javier Ramirez – County FPA / NRA
 - Ordinance updates for the county - need a permitting system
 - Wants to put it in as an amendment!
 - Will send us an email with more information
 - Follow up with him
- Louie Pena - Ground water testing
 - His company register wells through a permitting process, also plugs up wells
 - Company has a data base of wells plotted with GPS coordinates
 - Follow up: We need to check if this is a type of infrastructure we are tracking.
 - Well Plug In Program

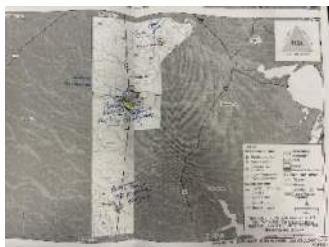
- Is part of the Water Planning Regional Planning Committee for the local region
- Servando Leal – Rancher
 - Contact: 956-740-7378 ; sleal1874@gmail.com
 - Interesting research on agriculture processes to improve infiltration and reduce flooding.
 - Research has been done on a small area of land and works well. Ready to be implemented on a larger area.
 - Is potentially interested in presenting this information to the planning group.
 - Follow-up: *Ludivine Sent a follow up e-mail on 11/4/2024*

Jim Wells County

- Emedie Gonzalas - County EMS, Jim Wells County Judge
 - Said they can't use the word "ordinance" in the county
 - Need to say "rules and regulations"
 - CBDG Grants - Block Grant submitted on projects.
 - Follow-up: Reach out to Emedie Gonzales for a list of these projects.
 - Retaining ponds
 - Bottle neck with Rancho Alegre - Precinct 1
 - Follow-up: Contact Commissioner Margie Gonzales
 - Green acres project
 - Project Built - Frances Street - retention ponds build through the CBDG
 - Last flood was June 26th, 2024 and the project held up well
 - Infrastructure
 - Follow-up: Levee around Alice needs to be added to infrastructure if not already there. Levee works well. See image below.
 - Battery storage units south of County are currently being flooded – see image
 - Follow-up: Find out if this counts as critical infrastructure that needs to be protected? Can this be an FMP?

Follow-Up Items

Follow Ups highlighted in yellow above.



Breakout Group 3

Moderator: Sarah West; Note Source: Sarah West

Pleasanton, TX

- 1980 Fatality at a low water crossing
 - Still an active issue – Jourdanton Mayor Robert Williams has more information

Jourdanton, TX

- Talking to USACE about doing a SWMP for the city

McMullen County

- In need of new/ updated map
 - Maps are outdated, if available at all
- Need ordinances

Atascosa County

- Maps are old and outdated

Follow-Up Items

- Send Mike a list of projects in Atascosa Co. for review
- Send Mike a link to RFP maps for Atascosa Co.
- Send Jess a link to RFP maps for McMullen Co.
 - Ludivine to send?
- Reach out to Robert Williams (Jourdanton)
 - 1980 flood fatality/ low water crossing in Pleasanton

**2023 Nueces Regional Flood Plan
2025 Amendment
Project Check List**

FMP Requirements										
FME Requirements										
FMX Type	Project Study/Name	Scope Description	Sponsor	Shapefile (Study Area or Project Area)	Estimated Study Cost (Non-Construction)	Estimated Construction Cost	Hydrologic & Hydraulic models	Benefit Cost Analysis	No Negative Impacts Certification	Notes
FME	Weedy Creek Bridge Study	Project to address the low water crossing at Weedy Creek and County Road (CR) 233.	Live Oak County	✓	✓					FME is connected to the FMP: CR233 Drainage Improvements
FMP	CR401 and CR402 Drainage Improvements and Evacuation Route	The project would add an evacuation route and stream crossing structures allowing vehicles to safely pass during the 100-year storm event and smaller storm events.	Live Oak County	✓	✓	✓	✓	✓	✓	
FMP	CR233 Drainage Improvements	The project includes upsizing culverts to get drainage safely to the west side without overtopping CR233. An FME is recommended to conduct further analysis at Weedy Creek.	Live Oak County	✓	✓	✓	✓	✓	✓	
FMP	Timon Creek Drainage Improvements	The proposed improvements for this area include channel and low water crossing improvements.	Live Oak County	✓	✓	✓	✓	✓	✓	
FMP	Timon Creek Tributary Drainage Improvements	The recommended improvements include culvert upsizing and channel improvements from upstream of Pecos Street to US 281.	-	✓	✓	✓	✓	✓	✓	Pending George West sponsorship approval.
FMP	CR436 Drainage Improvements	Proposed improvements to CR 436 include elevating the road and adding two bridges (190 ft and 110 ft wide) with channel improvements. If not feasible, a 1-mile route connecting CR 436 with FM 1783 and a 300-ft bridge would mitigate flood risk.	Live Oak County	✓	✓	✓	✓	✓	✓	Includes one alternative solution if the recommended project is infeasible.
FMP	Williams Ditch Drainage Improvements	Proposed improvements include replacing the open ditch with an underground system from Rodd Field Road to about 400 feet east of Lexington Road, and channel improvements from the underground system outfall to Ennis Joslin Road.	City of Corpus Christi	✓	✓	✓	✓	✓	✓	This FMP replaces/ advances 2 FMEs in the 2023 Plan (FME Numbers: 131000068 and 131000069).



2023 Nueces Regional Flood Plan 2025 Amendment FME Project Summary Sheet

Project Name: Weedy Creek Bridge Study

FME ID: 131000235

Project Sponsor: Live Oak County

Project Source: 2025 Live Oak County Drainage Study

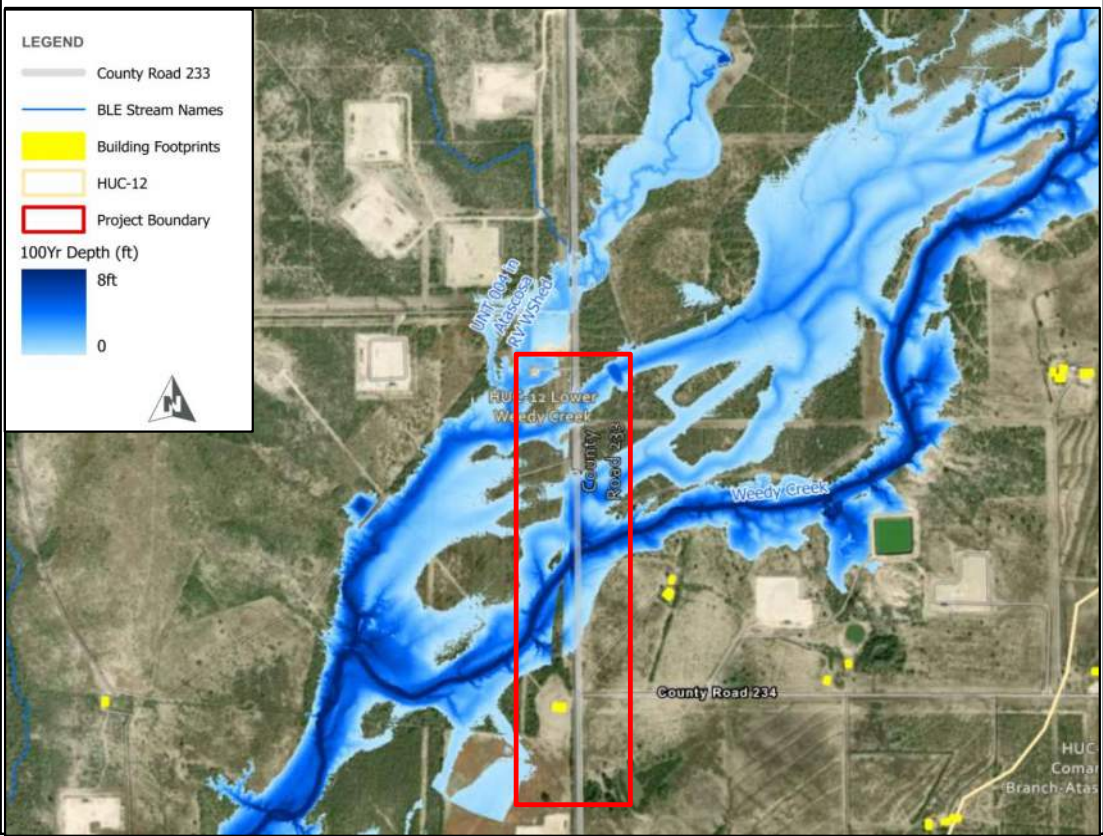
Study Type: Engineering Project Planning

Related Goals: Low Water Crossing

Project Cost: \$100,000
(2020 Prices)

Project Description:

Project to address the low water crossing at Weedy Creek and County Road (CR) 233. Currently there is no existing stream crossing structure at this creek crossing. CR233 is a road used for commercial and residential travel, it also serves as an emergency hurricane evacuation route if the interstate highway 37 is closed down. For the Live Oak County Drainage Study the BLE model was obtained from FEMA, but no study was done due to the hydraulic complexity needing further analysis to find a feasible proposed solution. Project cost was developed using Nueces Regional Flood Plan (RFP) Flood Mitigation Evaluation (FME) cost spreadsheet (RFP Appendix C8 - Supporting Costing Material for Flood Mitigation Actions) for a localized project.





2023 Nueces Regional Flood Plan 2025 Amendment FMP Project Summary Sheet

2/17/2025

Project Name: CR401 and CR402 Drainage Improvements and Evacuation Route
FMP ID: 133000039
Project Sponsor: Live Oak County
Project Source: 2025 Live Oak County Drainage Study
Related Goals: 1 - Low Water Crossing

Cost Information

Category	Cost*
Design	\$ 619,000
Real Estate	\$ 17,000
Environmental	\$ 9,000
Construction	\$ 4,673,000
Total Cost**	\$ 5,318,000
Green Space Cost Percentage	2.16%

Benefit Cost Analysis (BCA)

Event	Baseline	Project
Damages		
25-year storm	\$ 136,465	\$ -
100-year storm	\$ 136,465	\$ -
Benefits (B)	\$ 105,460	
Cost (C)***	\$ 5,643,298	
BCR (B/C)	0.02	

*Costs Adjusted from 2024 to 2020 using CCI

**Rounded up to the nearest thousand

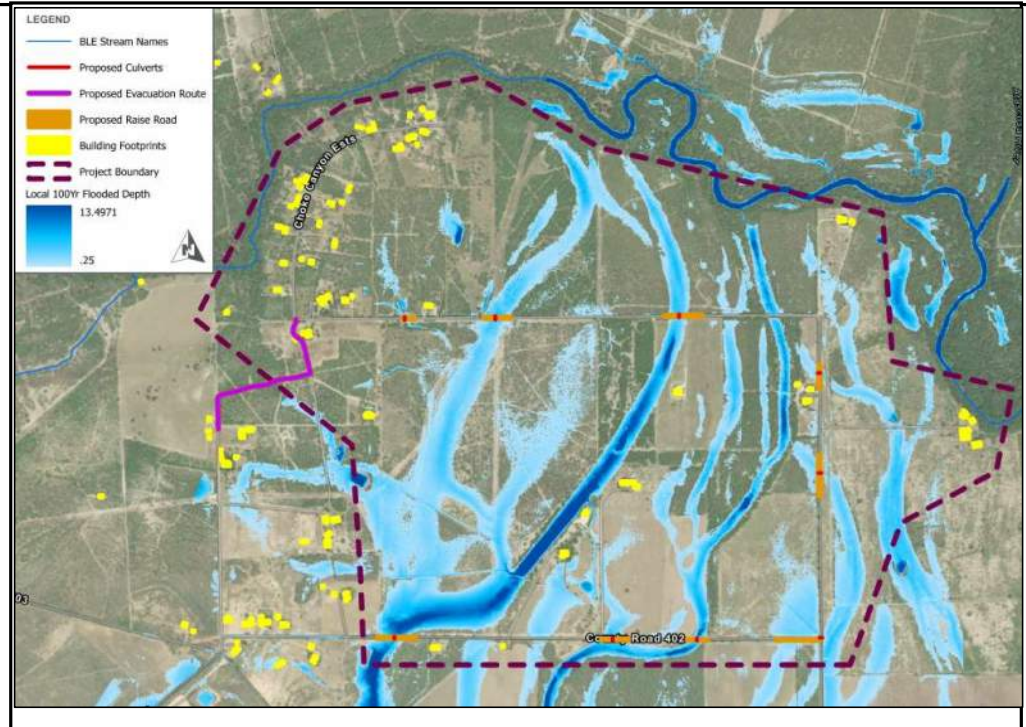
***BCA Costs are calculated using the TWDB BCA Toolkit for the purpose of assigning a project BCR and differ from project costs estimated based on engineering assessment and CCI factors.

Project Benefits

Post-Project Total Removed	100-year Storm Event
Total Structures	-
Residential Structures	-
Commercial Structures	-
Population	-
Critical Facilities	-
LWC Count	9
Road Length (Miles)	0.22

Impacts Analysis

Analysis	Conveyance Calculation
Conclusion	No negative impacts from FMP (per TWDB requirements)



Project Description:

The project area is located east of Choke Canyon Reservoir and west of Three Rivers, Texas in a residential and agricultural area along County Road (CR) 401 and CR402. Currently all existing stream crossing structures along CR401 and CR402 do not pass the 1% annual chance (100-year) storm event. With numerous low spots in vertical roadway alignments and limited existing road drainage infrastructure, CR401 and CR402 flood to significant depths. When CR401 and CR402 becomes flooded the surrounding properties have no safe way to get in or out. In a worst-case scenario, if an emergency arises no emergency vehicles can access this area. The CR401 and CR402 Drainage Improvements and Evacuation Route (the Project) would add an evacuation route and stream crossing structures allowing vehicles to safely pass during the 100-year storm event and smaller storm events. The stream crossing structures that are proposed are: 3-4'x2' Reinforced Concrete Box (RCB), 1-6'x4' RCB, 4-4'x2' RCB, 1-3'x2' RCB, 1-3'x2' RCB, 3-8'x5' RCB, 3-6'x3' RCB, 4-6'x3' RCB, 5-3'x2' RCB.

Nature-Based Solutions

For considerations as a Green or Nature-Based project, the percentage of total project costs that are considered green is 2.16%. The parts of the cost estimate used for this calculation are highlighted in green in the Cost Summary Sheet. Components that could qualify as green include embankments and hydro-mulch seeding due to their potential for natural erosion control and landscaping.



2023 Nueces Regional Flood Plan 2025 Amendment FMP Project Summary Sheet

Project Name: CR233 Drainage Improvements
FMP ID: 133000040
Project Sponsor: Live Oak County
Project Source: 2025 Live Oak County Drainage Study
Related Goals: 1 - Low Water Crossing

Cost Information

Category	Cost*
Design	\$ 1,335,000
Real Estate	-
Environmental	\$ 9,000
Construction	\$ 10,006,000
Total Cost**	\$ 11,350,000
Green Space Cost Percentage	2.60%

Benefit Cost Analysis (BCA)

Event	Baseline	Project
Damages		
25-year storm	\$ 762,655	\$ 3,628
50-year storm	\$ 762,655	\$ 3,628
100-year storm	\$ 762,655	\$ 3,628
Benefits (B)	\$ 544,591	
Cost (C)***	\$ 12,044,876	
BCR (B/C)	0.05	

*Costs Adjusted from 2024 to 2020 using CCI

**Rounded up to the nearest thousand

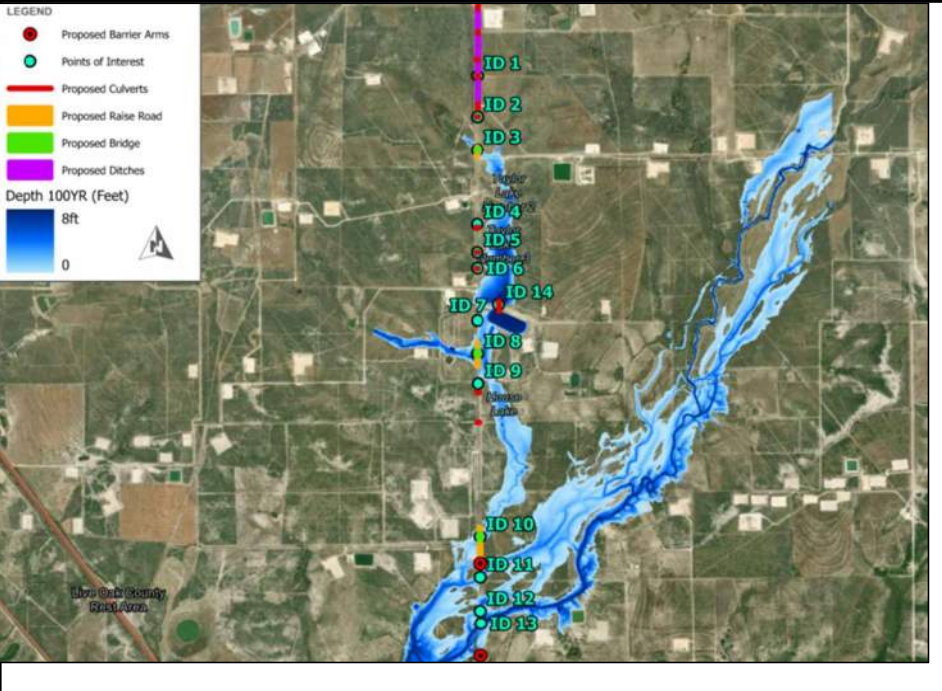
***BCA Costs are calculated using the TWDB BCA Toolkit for the purpose of assigning a project BCR and differ from project costs estimated based on engineering assessment and CCI factors.

Project Benefits

Post-Project Total Removed	100-year Storm Event
Total Structures	-
Residential Structures	-
Commercial Structures	-
Population	-
Critical Facilities	-
LWC Count	13
Road Length (Miles)	0.42

Impacts Analysis

Analysis	HEC-RAS 1D, HY8, FlowMaster, Conveyance Calculation
Conclusion	No negative impacts from FMP (per TWDB requirements)



Project Description:

The project area is located north of Three Rivers, Texas along a 6-mile stretch of County Road (CR)233 going north to south (from FM1091 to C234). Flooding along the road is caused by local runoff from the west side of the road crossing to the east side of CR233 to San Cristobal Creek (UNT 004). Solutions includes upsizing culverts to get drainage safely to the west side without overtopping CR233. The cost of improvements were reduced by keeping proposed culvert elevations at same as existing, not needing to increase the profile of the road which would add more cost and material. At ID 1 proposes to add ditches and increase culvert capacity. At ID 02 proposes to increase culvert capacity. ID 3 proposes to add a 150ft span bridge due to it being a larger stream crossing location. ID 4 through ID 6 proposes to increase culvert capacity. ID 14 at San Cristobal Creek, a berm was put in prior to mining which impedes water and has an opening towards CR233 which floods the road. The proposed solution for ID 14 is to add culverts in line of natural drainage. The proposed solution for ID 8 would be to raise the road and add a 300ft span bridge. ID 9 proposes to add two culverts at the drainage low points. At ID 10 the propose solution is to add a 400ft bridge and increase road profile. ID 11-13 area has a complex flooding issue as the Weedy Creek and UNT 004 hydraulic mix at this location. To properly assess the hydraulic impacts at the CR233 no feasible solution was found at this time and an FME is recommended to conduct further analysis.

Nature-Based Solutions

For considerations as a Green or Nature-Based project, the percentage of total project costs that are considered green is 2.6%. The parts of the cost estimate used for this calculation are highlighted in green in the Cost Summary Sheet. Components that could qualify as green include excavation, embankments, hydro-mulch seeding and topsoil due to their potential for natural erosion control and landscaping.



2023 Nueces Regional Flood Plan 2025 Amendment FMP Project Summary Sheet

Project Name: Timon Creek Drainage Improvements
FMP ID: 133000041
Project Sponsor: Live Oak County
Project Source: 2025 Live Oak County Drainage Study
Related Goals: 1 - Low Water Crossing

Cost Information

Category	Cost*
Design	\$ 889,000
Real Estate	-
Environmental	\$ 9,000
Construction	\$ 6,696,000
Total Cost**	\$ 7,594,000
Green Space Cost Percentage	45.30%

Benefit Cost Analysis (BCA)

Event Damages	Baseline	Project
10-year storm	\$ 164,819	\$ -
25-year storm	\$ 497,032	\$ -
100-year storm	\$ 1,353,236	\$ -
Benefits (B)	\$ 1,070,201	
Cost (C)***	\$ 7,056,187	
BCR (B/C)	0.15	

*Costs Adjusted from 2024 to 2020 using CCI
 **Rounded up to the nearest thousand

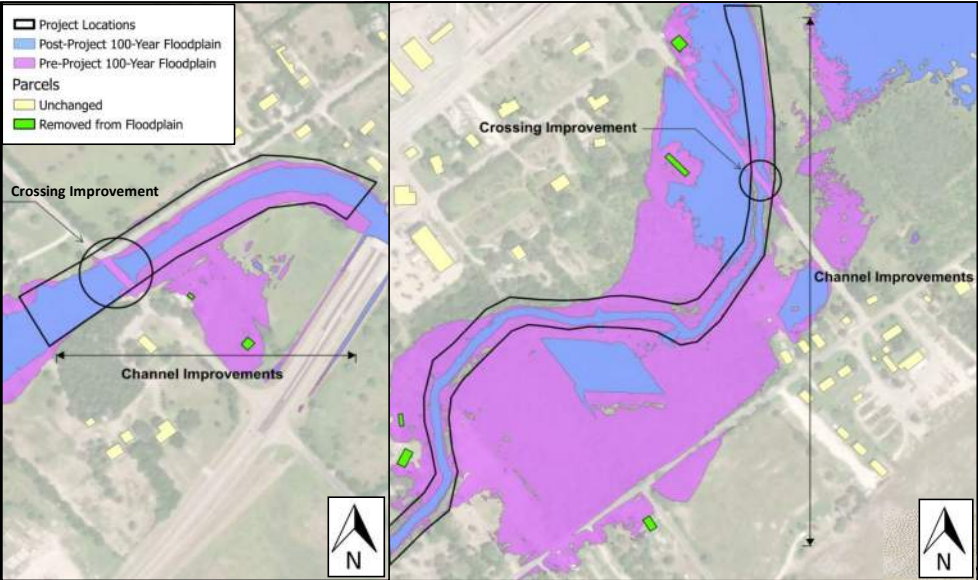
***BCA Costs are calculated using the TWDB BCA Toolkit for the purpose of assigning a project BCR and differ from project costs estimated based on engineering assessment and CCI factors.

Project Benefits

Post-Project Total Removed	100-year Storm Event
Total Structures	8
Residential Structures	8
Commercial Structures	-
Population	4
Critical Facilities	-
LWC Count	1
Road Length (Miles)	0.2

Impacts Analysis

Analysis	HEC-RAS 2D Rain On Grid
Conclusion	No negative impacts from FMP (per TWDB requirements)



Project Description:

The project area is located within the city limits of George West along Timon Creek. There are two areas of flood risk – Timon Creek at Lagarto Road and Timon Creek between South Nueces Street (US 281) and South San Antonio Street. There are several homes in the floodplain and roadways with inundation depths greater than 0.5-feet. Improvements near this area are focused on decreasing the inundation of these homes and roadways. The proposed improvements for this area are twofold. First, there are proposed channel improvements to Timon Creek from a point ~700' downstream of San Antonio Street to a point directly downstream of the South Nueces Street (US 281) crossing. Second, there are proposed culvert improvements on San Antonio Street. This culvert is undersized and overtopping occurs during the 100-yr storm event. Upsizing or adding more culvert barrels will reduce risk by reducing the extent of the floodplain on the upstream side of the crossing. These improvements also benefit the inundated structures along Catholic Cemetery Road.

Nature-Based Solutions

For considerations as a Green or Nature-Based project, the percentage of total project costs that are considered green is 45.3%. The parts of the cost estimate used for this calculation are highlighted in green in the Cost Summary Sheet. Components that could qualify as green include excavation, hydro-mulch seeding and topsoil due to their potential for natural erosion control and landscaping.



2023 Nueces Regional Flood Plan 2025 Amendment FMP Project Summary Sheet

Project Name: Timon Creek Tributary Drainage Improvements
FMP ID: 133000042
Project Sponsor: George West City
Project Source: 2025 Live Oak County Drainage Study
Related Goals: 13 - Reduce Impacted Structures

Cost Information

Category	Cost*
Design	\$ 86,000
Real Estate	-
Environmental	\$ 9,000
Construction	\$ 725,000
Total Cost**	\$ 820,000
Green Space Cost Percentage	19.40%

Benefit Cost Analysis (BCA)

Event	Baseline	Project
Damages		
10-year storm	\$ 1,978,694	\$ -
25-year storm	\$ 2,550,036	\$ -
100-year storm	\$ 2,771,999	\$ -
Benefits (B)	\$ 175,848	
Cost (C)***	\$ 761,372	
BCR (B/C)	0.23	

*Costs Adjusted from 2024 to 2020 using CCI

**Rounded up to the nearest thousand

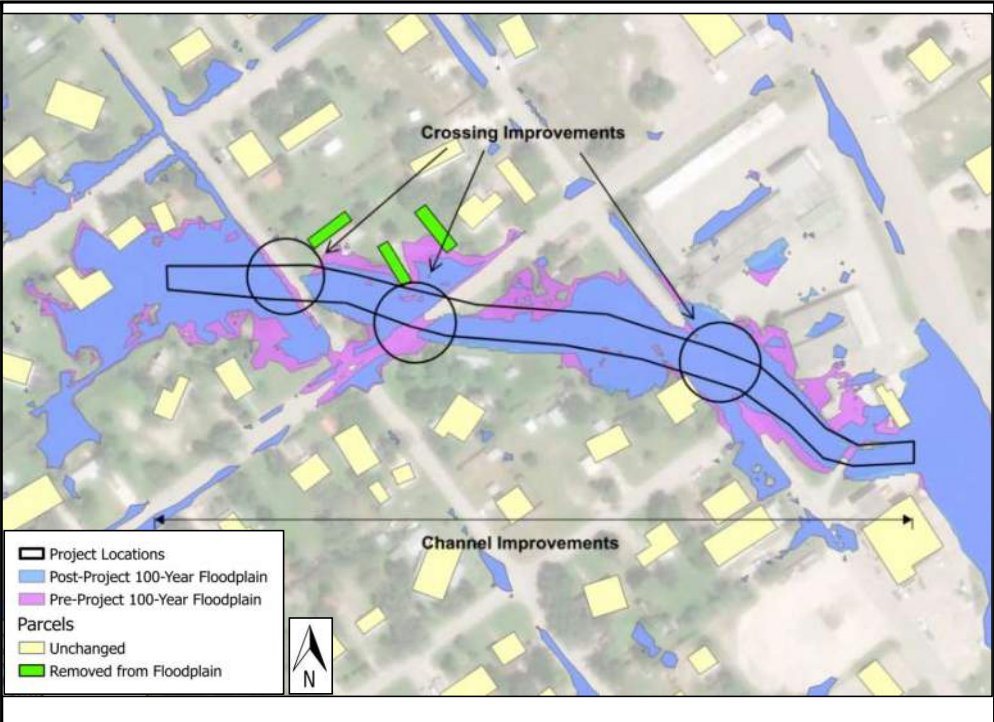
***BCA Costs are calculated using the TWDB BCA Toolkit for the purpose of assigning a project BCR and differ from project costs estimated based on engineering assessment and CCI factors.

Project Benefits

Post-Project Total Removed	100-year Storm Event
Total Structures	-
Residential Structures	-
Commercial Structures	-
Population	-
Critical Facilities	-
LWC Count	-
Road Length (Miles)	0.12

Impacts Analysis

Analysis	HEC-RAS 2D Rain On Grid
Conclusion	No negative impacts from FMP (per TWDB requirements)



Project Description:

The area of flood risk is the Timon Creek tributary along the fringes of the Timon Creek 100-yr floodplain. This is a well-defined tributary that runs through George West, under US 281 and US 59, then discharges into to Timon Creek. There is significant flood risk due to the density of homes in the area. The proposed improvements include crossing upgrades on local roads and channel improvements upstream of US 281. The existing culverts at Pecos Street, Burleson Street, Leona Street are all low water crossings with the potential to be upgraded to a higher level of service. The recommended improvements include culvert upsizing and converting from corrugated metal pipe culverts (CMP) to reinforced concrete box culverts (RCB). Channel improvements are proposed in the upper portion of the tributary, specifically from upstream of Pecos Street to US 281. In the 100-year storm event, 0 buildings are removed in the post project floodplain but many have their depths decreased. Two roadways that were inundated under pre-project conditions, Pecos Street and Burleson Street, have a 100-year level of service in the post-project conditions.

Nature-Based Solutions

For considerations as a Green or Nature-Based project, the percentage of total project costs that are considered green is 19.4%. The parts of the cost estimate used for this calculation are highlighted in green in the Cost Summary Sheet. Components that could qualify as green include excavation, hydro-mulch seeding and topsoil due to their potential for natural erosion control and landscaping.



2023 Nueces Regional Flood Plan 2025 Amendment FMP Project Summary Sheet

Project Name: CR436 Drainage Improvements
FMP ID: 133000043
Project Sponsor: Live Oak County
Project Source: 2025 Live Oak County Drainage Study
Related Goals: 1 - Low Water Crossing

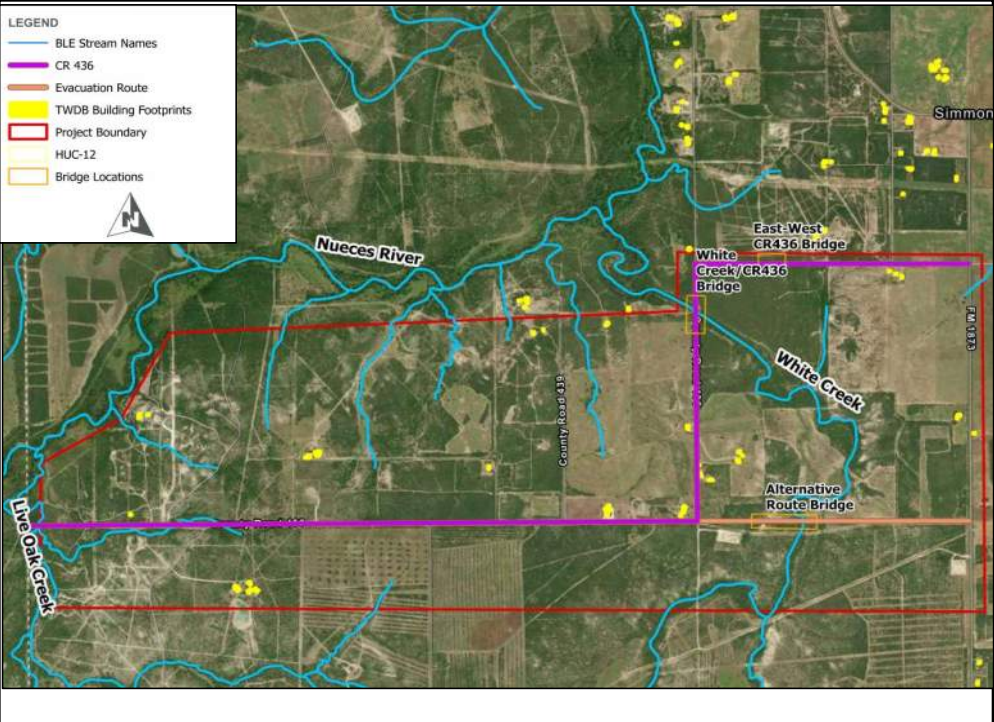
Cost Information	
Category	Cost*
Design	\$ 459,000
Real Estate	\$ 53,000
Environmental	\$ 9,000
Construction	\$ 3,441,000
Total Cost**	\$ 3,962,000
Green Space Cost Percentage	22.60%

Benefit Cost Analysis (BCA)		
Event	Baseline	Project
Damages		
100-year storm	\$ 472,698	\$ -
Benefits (B)	\$ 171,934	
Cost (C)**	\$ 4,204,278	
BCR (B/C)	0.03	

*Costs Adjusted from 2024 to 2020 using CCI
 **Rounded up to the nearest thousand
 ***BCA Costs are calculated using the TWDB BCA Toolkit for the purpose of assigning a project BCR and differ from project costs estimated based on engineering assessment and CCI factors.

Project Benefits	
Post-Project Total Removed	100-year Storm Event
Total Structures	-
Residential Structures	-
Commercial Structures	-
Population	-
Critical Facilities	-
LWC Count	1
Road Length (Miles)	0.25

Impacts Analysis	
Analysis	HEC-RAS 2D
Conclusion	No negative impacts from FMP (per TWDB requirements)



Project Description:
 County Road 436 is near the western boundary of Live Oak County, south of Choke Canyon Reservoir and both South and West of the Nueces River. Currently CR 436 is flooded by White Creek and the Nueces River at their confluence. Residents along CR 436 have their only access route cut off when the roads flood. Proposed improvements along CR 436 include elevating the road and adding two bridges. The proposed bridge over White Creek is 190 feet wide with channel improvements around the opening. The proposed bridge along the West to East portion of CR 436 is 110 feet wide with channel improvements around the openings.
 If the recommended solution becomes infeasible there is an alternative solution that would mitigate the flooding risk. The alternative solution would be to have a new route that would connect CR 436 with FM 1783. This alternative route would be about 1 mile long. The route still crosses White Creek but at a location that has a narrower floodplain. With this alternative route the proposed bridge over White Creek would be about 300 ft long.

Nature-Based Solutions
 For considerations as a Green or Nature-Based project, the percentage of total project costs that are considered green is 22.6%. The parts of the cost estimate used for this calculation are highlighted in green in the Cost Summary Sheet. Components that could qualify as green include embankments and hydro-mulch seeding due to their potential for natural erosion control and landscaping.



2023 Nueces Regional Flood Plan 2025 Amendment FMP Project Summary Sheet

2/17/2025

Project Name:	Williams Ditch Drainage Improvements	
FMP ID:	133000044	
Project Sponsor:	City of Corpus Christi	
Project Source:	City of Corpus Christi Stormwater Master Plan (Oct 2023)	
Related Goals:	5 - Reduce the number of structures within NFHL-Detailed Study Area	
Cost Information	Benefit Cost Analysis (BCA)	
Category	Cost*	Event Damages
Design****	\$ -	Baseline
Real Estate	\$ 2,032,775	Project
Environmental*****	\$ -	100-year storm
Construction	\$ 36,353,379	Benefits (B)
Total Cost**	\$ 38,387,000	Cost (C)***
Green Space Cost Percentage	5.50%	BCR (B/C)

*Costs Adjusted from 2024 to 2020 using CCI

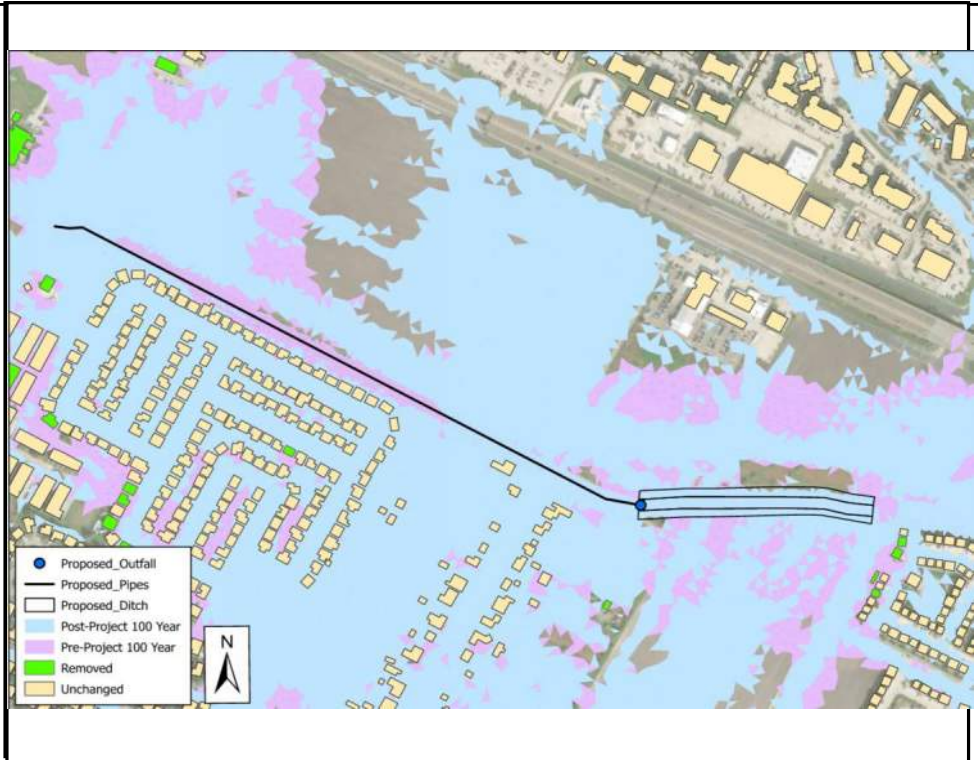
**Rounded up to the nearest thousand

***BCA Costs are calculated using the TWDB BCA Toolkit for the purpose of assigning a project BCR and differ from project costs estimated based on engineering assessment and CCI factors.

****The project sponsor has already budgetted design and environmental costs as part of their Williams Drive (Rodd Field to Lexington Road) street improvements bond funded project (approximate total commitment of \$537,000 for the drainage design and environmental permitting). Additional funds are not requested as part of this FMP.

Project Benefits	
Post-Project Total Removed	100-year Storm Event
Total Structures	35
Residential Structures	30
Commercial Structures	4
Population	148
Critical Facilities	0
LWC Count	0
Road Length (Miles)	0.91

Impacts Analysis	
Analysis	InfoWorks ICM
Conclusion	No negative impacts from FMP (per TWDB requirements)



Project Description:

The project area is within Corpus Christi city limits, starting at Williams Drive and Rodd Field Road, extending east to Ennis Joslin Road. This segment of Williams Ditch is in a FEMA 100-year floodplain, affecting several homes and roads with over 0.5 feet of inundation. The improvements aim to increase the capacity of Williams Ditch and reduce flooding.

The City plans to extend Williams Drive east through Lexington Road to Ennis Joslin Road. Due to the current alignment of Williams Ditch, part of the proposed drainage improvements includes replacing the open ditch with an underground system (five 12x7' RCBs) from Rodd Field Road to about 400 feet east of Lexington Road. From there, channel improvements are proposed to Ennis Joslin Road (increase bottom width from approximately 25-ft to 55-ft, with 4:1 side slopes). The City has already improved the channel between Ennis Joslin Road and SH 358, where Williams Ditch flows into Oso Bay. Enhancing the drainage system between Rodd Field Road and Ennis Joslin Road will help contain flood flows within City property and reduce overflows into adjacent properties.

Nature-Based Solutions

For considerations as a Green or Nature-Based project, the percentage of total project costs that are considered green is 5.5%. The parts of the cost estimate used for this calculation are highlighted in green in the Cost Summary Sheet. Components that could qualify as green include embankments, hydro-mulch seeding, sodding, topsoil, and excavation due to their potential for natural erosion control and landscaping.

2024-2025 Flood Infrastructure Fund Flood Management Evaluation (FME) Prioritization List

Ranking Factor?
Max Values for Score Normalization
Weight Value
Ranking Criteria

FME ID	Region Number	FME Name	Sponsor	FME Type	Previously Awarded FMA 2019- 2022	Federal Funds	Other Funds	Requested TWDB Funds	Total Project Cost	Total Score (with ArcSinh Normalization) ¹	FIF FME Prioritization (Basis)	State Flood Plan FME Total Score ³	State Flood Plan FME Rank ³	Difference in FIF & SFP Score (FIF Score - SFP Score) ⁴	TWDB Comments Regarding Difference in FIF & SFP Scores
131000179	13	Nueces Basin Scaling Up NBS Study	Nueces River Authority	Other	No	\$0	\$0	\$1,000,000	\$1,000,000	71.92299	1	71.92299	3	0.0	
131000177	13	Nueces Basin Floodplain Map Updates	Nueces River Authority	Watershed Planning	No	\$0	\$0	\$56,800,000	\$56,800,000	71.92298	2	71.67168	8	0.3	
131000175	13	Nueces Basin Low Water Crossing Study and Upgrade Prioritization	Nueces River Authority	Project Planning	No	\$0	\$0	\$775,000	\$775,000	71.92298	2	71.92299	3	0.0	
131000176	13	Nueces Basin High Hazard Dam Identification and Risk Assessment	Nueces River Authority	Project Planning	No	\$0	\$0	\$1,500,000	\$1,500,000	71.92298	2	71.92299	3	0.0	
131000174	13	Diversion from the Nueces River to Choke Canyon Reservoir	Nueces River Authority	Project Planning	No	\$0	\$0	\$2,000,000	\$2,000,000	71.92298	2	71.92299	3	0.0	
131000125	13	Bee County Drainage Master Plan	Bee County	Watershed Planning	No	\$0	\$0	\$500,000	\$500,000	47.73029	23	47.73029	122	0.0	
131000126	13	Beeville Drainage Master Plan	Beeville	Watershed Planning	No	\$0	\$0	\$250,000	\$250,000	36.83151	54	36.83154	452	0.0	
131000070	13	Downtown Rockport Drainage Study	Rockport	Watershed Planning	No	\$0	\$0	\$1,090,000	\$1,090,000	33.52450	69	13.31258	2110	20.2	Greater than 20 points change from SFP.
131000189	13	City of Kingsville 2018 Drainage Master Plan- Location 5	Kingsville	Project Planning	No	\$0	\$0	\$125,200	\$125,200	30.16775	80	0.00000	2969	30.2	Greater than 20 points change from SFP.
131000112	13	Paulson Falls Subdivision - Location 17	Kingsville	Project Planning	No	\$0	\$0	\$78,990	\$78,990	27.18371	101	0.00000	2969	27.2	Greater than 20 points change from SFP.
131000190	13	City of Kingsville 2018 Drainage Master Plan- Location 9	Kingsville	Project Planning	No	\$0	\$0	\$92,349	\$92,349	8.50645	175	8.50424	2436	0.0	
131000191	13	Carriage Park 2 Subdivision - Location 15	Kingsville	Project Planning	No	\$0	\$0	\$128,428	\$128,428	8.08900	179	8.08714	2468	0.0	
131000188	13	City of Kingsville 2018 Drainage Master Plan- Location 2	Kingsville	Project Planning	No	\$0	\$0	\$124,164	\$124,164	7.96369	180	7.96032	2478	0.0	
131000111	13	FM 1356 Channel Improvements - Location 16	Kingsville	Project Planning	No	\$0	\$0	\$157,622	\$157,622	1.69537	198	1.69188	2821	0.0	
131000172	13	Nueces Basin Flood Early Warning System	Nueces River Authority	Project Planning	No	\$0	\$0	\$275,000	\$275,000	0.62637	200	0.66018	2874	0.0	

NOTE: The weightings of the 'BCA' and 'FMP Type' factors were corrected within the underlying calculations to match the associated weightings that were approved by the Board for use in the State Flood Plan (SFP) ranking. As a result, there may be some minor differences between certain SFP ranking scores and this corrected prioritization worksheet.

2024-2025 Flood Infrastructure Fund Flood Mitigation Project (FMP) Prioritization List																
B (30%) A (70%) A+B																
FMP ID	Region Number	FMP Name	Sponsor	FMP Type	Previously Awarded FMA 2019-2022	Federal Funds	Other Funds	Requested TWDB Funds	Project Details Weighted Score	Score Based on ArcSinh Normalized Reported Factors	Total Score (with ArcSinh Normalization)	FIP FMP Prioritization (Basis for FIP Prioritization)	State Flood Plan FMP Total Score	State Flood Plan FMP Rank	Difference in FIP & SFP Scores (FIP Score - SFP Score)	TWDB Comments Regarding Difference in FIP & SFP Scores
13300030b	13	Robstown Various Drainage Improvements (FH#8,10,12) - Phase 1 Engineering Design and Land Acquisition	Nueces County Drainage District #2	Infrastructure	No	\$0	\$0	\$17,215,000	19	14.63	33.35	16	34.98	40	-1.60	
13300015	13	Burnt Boot Creek Drainage Project	Devine	Channel	No	\$0	\$0	\$11,557,113	18	14.75	33.00	18	33.01	55	-0.01	
13300008	13	City of Benavides Main City Network Storm Drain Improvements	Nueces River Authority	Storm Drain	No	\$0	\$0	\$9,500,000	18	12.13	29.88	30	30.13	107	-0.25	
13300014	13	Downtown Crystal City Regional Detention Pond Improvements	Crystal City	Detention Pond	No	\$0	\$0	\$4,340,356.83	15	13.70	28.95	34	29.18	121	-0.23	
13300007	13	City of Benavides Las Animas Conveyance Infrastructure	Nueces River Authority	LWC upgrade	No	\$0	\$0	\$5,750,000	21	5.32	26.07	45	26.32	177	-0.25	
13300006	13	Ratlidge Hollow Creek Tributary Regional Detention Pond Improvements	Potter	Detention Pond	No	\$0	\$0	\$1,132,000	19	7.27	26.02	47	26.47	173	-0.45	
13300030a	13	Nueces County North Robstown Regional Detention Facility	Nueces County	Infrastructure	No	\$0.00	\$0.00	\$2,956,513.16	20	4.65	24.90	55	34.98	40	-10.08	greater than 10 but less than 20 points change from SFP.
13300005	13	Jourdanton FIP Phase II - Detention Pond Project	Jourdanton	Channel	No	\$0.00	\$0.00	\$2,319,000	16	6.30	22.55	66	23.79	237	-1.24	