New FMXs (Added to Final Plan)

						Tech Committee	Tech Committee				
						Rec	Rec	RFPG Rec	RFPG Rec		
Action Number	Туре	Action Name	Sponsor	County	Page Number	(Y/N)	Date	(Y/N)	Date	Cost	Notes
101000214	FME	West Brazoria County Drainage District 11 - Master Drainage Plan	WBCDD #11	Brazoria	2					\$ 990,000	New FME from Sponsor
101000209	FME	Jackson County Phase 2 DMP	Jackson County	Jackson	3					\$ 4,000,000	New FME from Sponsor
101000208	FME	Glen Flora Drainage Master Plan and Levee Project	Wharton County	Wharton	4					\$ 300,000	New FME from Sponsor
101000210	FME	City of El Campo Drainage Master Plan Update	El Campo	Wharton	5					\$ 612,500	New FME from Sponsor
101000211	FME	Jarvis Creek Channel Widening and Regional Detention Project	Wharton County	Wharton	6					\$ 150,000	New FME from Sponsor
101000212	FME	Louise Internal Drainage Master Plan	Wharton County	Wharton	7					\$ 400,000	New FME from Sponsor
101000213	FME	Wharton County Drainage Master Plan Update	Wharton County	Wharton	8					\$ 4,000,000	New FME from Sponsor
										\$ 10,452,500	

12/1/2022

Flood Manage	ment Evaluatic	on (FME) _{study}	Lower Colorado-Lavaca REGIONAL FLOOD				
Title West Brazoria County Draina	age District 11 - Master Drainage	PLANNING GROUP					
Sponsor (name of entity) West Braz	zoria County Drainage District						
Technical committee recommend	x Yes No RFPG reco	ommend X Yes No	REGION 10				
Study Type							
Emergency preparedness	Floodplain modeling, mapping a	and risk assessment	Feasibility study Preliminary project engineering				
Other							
Problem Area		N					
City N/A	County Brazoria						
Watershed San Bernard River name(s)			Anglete				
Tributary(ies) Dance, Linnville, Little	e Linnville and Redfish; Bear, Bell,	C R Sk K					
HUC# 12090401,12090402 Str	ream miles (est.) 292.00		Lake Jackson				
Drainage area: square miles, est 50	06.66 or acreage, est. 324,260	Bay City					
Social vulnerability index 0.6 (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.)							
Other			Nat'l Wildlife Refuge				

The Region 10 Flood Planning Group draft plan notes the WBDD#11 area as SEVERE for current and future risk as well as the location of CRITICAL infrastructure. The location of the WBDD#11 has direct connection to Wharton and Fort Bend Counties, resulting in the need for improvements within the WBDD#11 to assist these neighboring counties. The purpose and goal of the MDP is to conduct a comprehensive evaluation of the existing drainage conditions throughout the district, develop an accurate and current understanding of the drainage infrastructure, and make recommendations on future projects and infrastructure. The assessment will include an inventory of the existing data, hydrologic and hydraulics watershed model, flooding problem area identification, and flood mitigation solutions. A drainage Capital Improvement Plan (CIP), including costs, will be developed to address flooding issues. As part of the MDP scope a web based project management tool will be developed to assist the District with monitoring maintenance activities and construction improvements.

Population at risk	12,686	Structures at risk	7,737	Critical	facilities at risk	0
Farm/Ranch land i	mpacted (acres)	37,018	Roadway(s) impacted	l (miles)	219.73	

Scope of Study

Collect and review of existing reports, studies, gage data, etc, verify watershed boundaries, examine flooded structures and NFIP clams data. Develop base conditions models for different storm conditions using Atlas 14 rainfall events, determine level of service for the main stem and tributaries Create HEC-RAS 2D models to determine sheet flow issues. Identify problem areas, areas for future development and constraints affecting the watershed. Perform desktop environmental studies and prepare a technical memorandum on baseline conditions, identify alternatives to solve existing flooding issues, and perform hydraulic analysis to solve future flooding issues. Develop Watershed Strategy via hierarchy of alternatives considering opportunities to team with other agencies, damage reduction, costs, priority areas to be worked and score each of the alternatives, issue a technical note providing documentation on the process of developing the strategy. Create a comprehensive Watershed Plan including a summary of projects and timeline for implementation, including

Related Goal(s)

5.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss through property/easement acquisitions, relocations, floodproofing and/or elevation. 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects.

Estimated Study Cost

Cost \$990,000

Flood Managem	Lower Colorado-Lavaca REGIONAL FLOOD				
Title Jackson County Phase 2 DMP		ID# 101000209	PLANNING GROUP REGION 10		
Sponsor (name of entity) Jackson (Coun	ty)	Commitment x Yes No			
Technical committee recommend X Ye	s No RFPG	recommend X Yes No			
Study Type					
Emergency preparedness F	loodplain modeling, mappii	ng and risk assessment	easibility study Preliminary project engineering		
Other					
Problem Area		N			
City N/A Co	ounty Jackson				
Watershed Navidad, Central Matagorda name(s)	ı Bay, West Matagorda Bay				
Tributary(ies) Brushy Creek, Cox Creek,	Devers Creek, Dry Creek Ea	st			
HUC# 12100402,12100101 Stream	miles (est.) 318.00				
Drainage area: square miles, est 700.13	or acreage, est. 448,0	085			
Social vulnerability index 0.599 (SVI score 0.0 indicates least vulnerable; 1.0 i	ndicates most vulnerable.)	Victoria			
Other					

The county has suffered extreme flooding from recent events such as the floods of 1998, 2004, and 2021 floods.

Population at risk 966

Structures at risk 717

Critical facilities at risk 0

Farm/Ranch land impacted (acres) 58,759

Roadway(s) impacted (miles) 68.25

Scope of Study

This study would include all FEMA streams east and west of the Lavaca watershed.

Related Goal(s)

5.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss through property/easement acquisitions, relocations, floodproofing and/or elevation. 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects.

Estimated Study Cost

Cost \$4,000,000

Flood Manage	ment Evaluati	on (FME) STUDY	Lower Colorado-Lavaca REGIONAL FLOOD
Title Glen Flora Drainage Master	Plan and Levee Project	ID# 101000208	PLANNING GROUP
Sponsor (name of entity) Wharton	(County)	Commitment x Yes No	
Technical committee recommend	x Yes No RFPG r	ecommend X Yes No	REGION 10
Study Type			
Emergency preparedness Other	Floodplain modeling, mappin	g and risk assessment F	easibility study Preliminary project engineering
Problem Area		N	
City Glen Flora	County Wharton		
Watershed San Bernard, Lower Co name(s)	lorado		
Tributary(ies) TBD		AND AND	
HUC# 12090302,12090401 St	ream miles (est.) 0.00	a stall	
Drainage area: square miles, est 0.	60 or acreage, est. 381	All and a second	Glen Flora
Social vulnerability index 0.77 (SVI score 0.0 indicates least vulnerable	; 1.0 indicates most vulnerable.)		
Other		and the second second	

There is a need to evaluate flood risk within the Glen Flora area. Glen Flora flooded severely during Harvey and a levee here could benefit both Glen Flora and Wharton County. Local flooding is also an issue and roadside ditches, culverts, and stormsewer should be upgraded to contain the 10-yr Atlas 14 flow.

Population at risk 36

Structures at risk 48

Critical facilities at risk 0

Farm/Ranch land impacted (acres) 112

Roadway(s) impacted (miles) 1.41

Scope of Study

Study will include InfoWorks ICM and HEC RAS 2D analysis of the urban center of Glen Flora. It will also include a regional evaluation of expanding the USACE levee along FM 102.

Related Goal(s)

5.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss through property/easement acquisitions, relocations, floodproofing and/or elevation. 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects.

Estimated Study Cost

Cost \$300,000

Flood Managemer	Lower Colorado-Lavaca REGIONAL FLOOD						
Title City of El Campo Drainage Master Pla	in Update	ID# 101000210	PLANNING GROUP				
Sponsor (name of entity) El Campo (Municipa	ality)	Commitment x Yes No					
Technical committee recommend 🗴 Yes	No RFPG r	recommend X Yes No	REGION 10				
Study Type							
Emergency preparedness Flood	plain modeling, mappir	ng and risk assessment	Feasibility study Preliminary project engineering				
Other							
Problem Area		N	Willa and a second				
City El Campo County	Wharton						
Watershed Lower Colorado, Central Matagor name(s)	rda Bay, Navidad		71 H				
Tributary(ies) Blue Creek, Tres Palacios, East	Mustang Creek	1300					
HUC# 12100102,12090302 Stream mile	es (est.) 102.50		El Campo				
Drainage area: square miles, est 33.45 or acreage, est. 21,408							
Social vulnerability index 0.64 (SVI score 0.0 indicates least vulnerable; 1.0 indicates							
Other		1160	59 1162				

El Campo was flooded severely in 2004 and the city of El Campo has been working to resolve issues. US 59 By-Pass acts like a dam holding flood waters back into town. Local Street flooding is also an issue.

Population at risk 6,309

Structures at risk 1,820

Roadway(s) impacted (miles)

Farm/Ranch land impacted (acres) 5,707

Critical facilities at risk 0 45.23

Scope of Study

The master plan completed for the City of El Campo in 2004 and needs to be updated. Study will include a drainage master plan for the urban center of El Campo using InfoWorks ICM and a restudy of upper Blue Creek using HEC RAS 1D/2D. This also includes Tres Palacios Tributary 6 Channel widening and Regional Detention which is a known flooding issue and should be considered in connection with the recent Tres Palacios Channel improvements.

Related Goal(s)

5.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss through property/easement acquisitions, relocations, floodproofing and/or elevation. 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects.

Estimated Study Cost

Cost \$612,500

Flo	od Manag	eme	nt Evalı	uatio	n (FME) _{STUD}	V	r Colorado-I IONAL FI	
Title J	arvis Creek Channel Wi	dening and	Regional Detentic	on Project	ID# 101000211		NNING GI	
Sponsor	(name of entity) Whar	ton (County)	С	Commitment x Yes 📃 No			
Technica	al committee recommer	nd x Yes	No	RFPG reco	mmend X Yes No		REGION 10	
Study 1	Туре							
Eme	rgency preparedness	Floo	dplain modeling,	mapping ar	nd risk assessment	Feasibility study	x Preliminary p	roject engineering
Othe	er							
Proble	m Area				N			ENR O
City N/	A	Count	V Wharton			1		
Watersh name	ed Lower Colorado e(s)				59	60	3012	H
Tributar	y(ies) Jarvis Creek					1000		
HUC#	12090302,12090402	Stream mi	les (est.) 44.30		rce	and the second		
Drainage	e area: square miles, est	31.41	or acreage, est.	20,105	1 3 See			20.9
	ulnerability index 0.76 e 0.0 indicates least vulner	able; 1.0 indic	ates most vulnerab	le.)				
Other							Cane Junction	n di i

In recent years, there have been flooding problems along Jarvis Creek, heavy vegetation issues, and the need for improvements to bridges, culverts, and a wider overall channel configuration. Jarvis Creek is a major flood relief channel for the City of Wharton and should be designed based on a future conditions scenario for the City of Wharton.

Population at risk 1,534

Structures at risk 755

Critical facilities at risk 0

Farm/Ranch land impacted (acres) 5,475

Roadway(s) impacted (miles) 22.30

Scope of Study

This study includes a 1D/2D HEC RAS model for Jarvis Creek and development of channel widening and regional detention solutions to mitigate the 25-yr flood risk areas.

Related Goal(s)

5.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss through property/easement acquisitions, relocations, floodproofing and/or elevation. 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways (e.g. low-water crossings, irrigation canals)

Estimated Study Cost

Cost \$150,000

Potential funding source(s) TBD

Flood Manage	ment Evaluat	Lower Colorado-Lavaca REGIONAL FLOOD						
Title Louise Internal Drainage Ma	ister Plan	ID# 101000212	PLANNING GROUP					
Sponsor (name of entity) Wharton	(County)	Commitment x Yes No						
Technical committee recommend	x Yes No RFPG	recommend X Yes No	REGION 10					
Study Type								
Emergency preparedness	Floodplain modeling, mappi	ing and risk assessment	easibility study Preliminary project engineering					
Other								
Problem Area		N						
City N/A	County Wharton							
Watershed Navidad name(s)								
Tributary(ies) East Mustang Creek a	and Middle Mustand Creek							
HUC# 12100102 Stream miles (est.) 0.60								
Drainage area: square miles, est 0.82 or acreage, est. 526								
Social vulnerability index 0.38								
(SVI score 0.0 indicates least vulnerable; Other	: 1.0 indicates most vulnerable.)	20	Louise					
Other		hwa	Louise					

Rain events in November 2004 caused severe flooding. In addition, the 2010 Wharton County drainage master plan revealed a significant flood risk for the area, as East Mustang Creek overflows into Middle Mustang Creek.

Population at risk 26

Structures at risk 20

Critical facilities at risk 0

Farm/Ranch land impacted (acres) 16

Roadway(s) impacted (miles) 0.09

Citical facilities at fisk (

Scope of Study

Conduct a study that will include an InfoWorks ICM 1D/2D surface and subsurface drainage analysis and flood reduction recommendations

Related Goal(s)

5.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss through property/easement acquisitions, relocations, floodproofing and/or elevation. 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects.

Estimated Study Cost

Cost \$400,000

Flood Manag	ement Evaluat	Lower Colorado-Lavaca REGIONAL FLOOD			
Title Wharton County Draina	ge Master Plan Update	ID# 101000213	PLANNING GROUP		
Sponsor (name of entity) Whar	ton (County)	Commitment x Yes No			
Technical committee recommer	nd 🗴 Yes 📃 No 🛛 RFPG	recommend × Yes No	REGION 10		
Study Type					
Emergency preparedness	Floodplain modeling, mappi	ng and risk assessment 🛛 🗧 F	easibility study Preliminary project engineering		
Other					
Problem Area		N			
City N/A	County Wharton	IN CONTRACTOR			
Watershed Navidad, Central M name(s) Matagorda Bay, Sar	atagorda Bay, Lower Colorado, East I Bernard				
Tributary(ies) Blue Creek, Bosq	ue Creek, Clarks Branch, Coon Bran	ch,			
HUC# 12090302,12090401	Stream miles (est.) 385.00	Sector No.			
Drainage area: square miles, es	t 1,090.72 or acreage, est. 698,	058			
Social vulnerability index 0.71 (SVI score 0.0 indicates least vulner	able; 1.0 indicates most vulnerable.)	Sour as the			
Other			Bay City		

The county has suffered extreme flooding from recent events such as the floods of 1998, 2004, 2016, 2019 and Hurricane Harvey.

Population at risk 19,240

Structures at risk 7,119

Critical facilities at risk 0

Farm/Ranch land impacted (acres) 177,474

Roadway(s) impacted (miles) 367.95

Scope of Study

An update to the Wharton County Drainage Master Plan (circa 2008) is needed to include new Atlas 14 1D/2D HEC RAS models for the entire county. This study would include all FEMA Streams except Colorado River, San Bernard River, West Bernard River, Lower Caney Creek, and Jarvis Creek

Related Goal(s)

5.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss through property/easement acquisitions, relocations, floodproofing and/or elevation. 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the implementation of structural flood mitigation projects.

Estimated Study Cost

Cost \$4,000,000