#### Task 13 - Sponsor Requested FMEs (Municipality)

Batch	Page	New Action Number	Old Action Number (To be removed)	Туре	Sponsor	Project	Notes	TC Rec (Y/N)	Tech Committee Rec Date	RFPG Rec (Y/N)	RFPG Rec Date
		101000060	101000060	NA	Hays (Municipality)	City of Hays Little Bear Creek	Sponsor requested removal				
2	2	101000203	101000203	FME	Austin (Municipality)	Highland Hills Crossing Improvements Project	Revised Sponsor only				
2	3	101000215		FME	Bastrop (Municipality)	Hill, Pecan, & Pine Street Drainage Improvements (DMP GB-04)	New FME				
2	4	101000216		FME	Bastrop (Municipality)	Local Storm Drain Improvements Near Piney Creek (DMP PC- 04)	New FME				
2	5	101000217		FME	Bastrop (Municipality)	Pecan Street Bypass & Pond Diversion (DMP PC-05)	New FME				
2	6	101000218		FME	Bastrop (Municipality)	Pecan, Beech, & Haysel Improvements to Gills Branch (DMP GB 05)	New FME				
2	7	101000219		FME	Bastrop (Municipality)	Bastrop CCTV Storm Drain Evaluation (DMP COB-02)	New FME				
2	8	101000220		FME	Bastrop (Municipality)	Water, Spring, & Cedar Street Drainage Improvements (DMP GB-03)	New FME				
2	9	101000226		FME	Hays (Municipality)	City of Hays Drainage Study	New FME				
2	10	101000229		FME	Needville (Municipality)	Wastewater Treatment Plant Floodproofing	New FME				
2	11	101000230		FME	Needville (Municipality)	Fairchild Creek Drainage Mitigation Study	New FME				
2	12	101000231		FME	Pflugerville (Municipality)	Caldwell Elementary Improvements at Upper Gilleland Creek (DMP GC-01)	New FME				
2	13	101000232		FME	Pflugerville (Municipality)	Pflugerville Storm Drain CCTV Evaluation (DMP Pf-03)	New FME				
2	14	101000233		FME	Pflugerville (Municipality)	Hidden Lake Drive Improvements at Wilbarger Creek Tributary 200 (DMP WC-02)	New FME				
2	15	101000234		FME	Pflugerville (Municipality)	Kennemer Drive Improvements at Wilbarger Creek Tributary 200 (DMP WC-05)	New FME				
2	16	101000235		FME	Pflugerville (Municipality)	(DMP GC-02)	New FME				
2	17	101000237		FME	Pflugerville (Municipality)	Railroad Avenue Improvements at Upper Gilleland Creek (DMP GC-04)					
2	18	101000238		FME	Pflugerville (Municipality)	Swenson Farms Improvements at Upper Gilleland Creek (DMP GC-03)	New FME				
2	19	101000239		FME	Pflugerville (Municipality)	Weiss Lane Improvements at Wilbarger Creek (DMP WC-01)	New FME				
2	20	101000246		FME	Bastrop (Municipality)	Riverwood Drive Improvements at Piney Creek (DMP PC-02)	New FME				

	<b>REGIONAL FLOOD</b>
ID# 101000203	PLANNING GROUP
Commitment 🖌 Yes 📃 No	REGION 10
Feasibility study	Preliminary project engineering
2222	
	T T
	Abercrombie
	Commitment 🖌 Yes 📃 No

#### **Flood Risk Description**

The Highland Hills crossing is inundated by small, frequent, storm events (less than 2-year event) leading to unsafe conditions for motorists who need to use this roadway for neighborhood ingress/egress. Existing risk factors are based on available data and will be better defined as part of the study. Study results will include detailed assessments of the potential risk and potential flood risk reduction to be used in evaluating the project.

Population at risk	8	Structures at risk	3 (	Critical facilities at risk (r	number) C	)
•						
Farm/Ranch land ir	npacted (acres) 1	Ro	oadway(s) impacted (mile	es) 0.02		
-			,	•		

#### Scope of Study

Update existing study to evaluate upgrading the hydraulic capacity of the crossing to reduce the frequency and depth of inundation and improve public safety. Study will update existing hydrologic and hydraulic models (with Atlas 14 rainfall) as needed to refine preliminary design and provide additional information needed to meet TWDB requirements for a flood mitigation project including verifying no adverse impacts, updating the cost estimate and providing a benefit-cost-analysis, and updating/verifying there are no potential constraints (environmental, utility conflicts, right-of-way needs, and constructability) that will prevent implementation.

#### **Related Goal(s)**

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

				DI ANNING COOL
Title Hill, Pecan, & Pine Street Drainage	Improvements (DMP GB-04)	ID# <sup>101</sup>	1000215	PLANNING GROU
Sponsor (note if City or County)	strop (Municipality)	Commitment	Yes No	REGION 10
Study Type				
Emergency preparedness	Floodplain modeling, mapping and risk	assessment	Feasibility study	Preliminary project enginee
Other				
Problem Area				
City Bastrop	County Bastrop		N ST N ST	PARM ST
Watershed name(s) Piney Creek-Cold	18	Colorado River	PECA	
		THE PART OF THE		CHESTINUT, ST
Tributary(ies) Gills Branch		OLD AUSS		WADNUT
HUC#(s) 1209030102	Stream miles (est.) NA			
Drainage area: square miles, est 1	or acreage, est			
Social Vulnerability Index (SVI) 0.59	79, 0.3302		<b>n</b>	
(SVI score 0.0 indicates least vulnerable;		HASLER ST		Gills Branch
Other		一面自己的	Jeres / Dy	

#### **Flood Risk Description**

Hill, Pecan, Emile, Pine, Jefferson, and other streets in the surrounding residential area experience significant flooding due to the low-lying nature of the downtown Bastrop terrain. To reduce ponding and flooding during rain events, an upgraded drainage system is proposed to convey runoff into Gills Branch. Approximately 160 properties will benefit from the upgraded stormwater system, reducing private property flooding concerns. These improvements should consider improvements in other portions of the Gills Branch watershed. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

	Population at risk	299	Structures at risk	83	Critical facilities at risk (n	number) <sup>0</sup>	
Farm/Ranch land impacted (acres) 0 Roadway(s) impacted (miles) 1.54							
	Farm/Ranch land in	npacted (acres) 0	Ro	adway(s) impacted (m	iles) <sup>1.54</sup>		

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability).

Potential improvements include approximately 5,940 feet of storm drain to replace the existing undersized storm drain system. The parallel pipes along Jefferson and Pine Strees will be cut, plugged, and abandoned and existing flow will be directed through the new, larger storm drain system. The new system will connect to the existing Hill Street channel and then drain into Gills Branch. The 2023 City of Bastrop Drainage Master Plan estimated potential costs of improvements totaling approximately \$8.7 million.

#### **Related Goal(s)**

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$600,000

Lower Colorado-Lavaca

**REGIONAL FLOOD** 

BASTROP

Title Local Storm Drain Improvements Near P	Piney Creek (DMP PC-04)	ID#	101000216	PLANNING GROUP
Sponsor (note if City or County) Bastrop (	Municipality)	Commitment	Yes No	REGION 10
Study Type				
Emergency preparedness Floo	odplain modeling, mapping and risk a	ssessment	Feasibility stu	dy 🖌 Preliminary project engineering
Other				
Problem Area				
City Bastrop	County Bastrop			EL DIS
Watershed name(s) Piney Creek-Colorado I	River	and the state	S A	
	1		Simol	
Tributary(ies) Piney Creek	R	EIDS		MESQUITE
HUC#(s) 1209030102 s	Stream miles (est.) 0.06	END	7	
Drainage area: square miles, est 1	or acreage, est		MAGNOLIA RD	
Social Vulnerability Index (SVI) 0.5979			Piney Creek	TRUNDEN ST
(SVI score 0.0 indicates least vulnerable; 1.0 inc	licates most vulnerable.)	BASTROP	0 N S	
Other			Survey of the	
	G			H A WTH O RINE ST

#### Flood Risk Description

Streets and residential area experience significant flooding due to the low-lying nature of the downtown Bastrop terrain. To reduce ponding and flooding during rain events, a new stormwater system is proposed to redirect runoff into the Piney Creek. Approximately 115 properties will benefit from the upgraded stormwater system, reducing private property flooding concerns. These improvements should consider improvements in other portions of the Piney Creek watershed. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

Population at risk	81	Structures at risk	92	Critical facilities at risk (r	number) <sup>0</sup>
Farm/Ranch land in	npacted (acres) <sup>1</sup>	R	oadway(s) impacted (mil	les) <sup>1.46</sup>	
			·····		

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability).

Potential improvements include approximately 2,930 ft of storm drain to follow the Main Street right-of-way and convey water directly into the creek, bypassing the existing storm drain system to the east, a 36-in pipe extending approximately 1,580-ft, from Linden Street to Mesquite Street, and two storm drain inlets every 300-ft to capture runoff. Existing pipes following Mesquite and Linden Steets will be cut, plugged, and abandoned to reduce flow through the existing storm drain system. Drainage at Mesquite and Linden Street will be captured and conveyed through the Main Street system. These improvements are tied to the FME for Pecan Street Bypass & Pond Diversion. The 2023 City of Bastrop Drainage Master Plan estimated potential costs of improvements totaling approximately \$5.1 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$360,000

Lower Colorado-Lavaca

REGIONAL FLOOD

Title Pecan Street Bypass & Pond I	Diversion (DMP PC-05)	ID# <sup>101000217</sup>	PLANNING GROUP
Sponsor (note if City or County)	Bastrop (Municipality)	Commitment Yes No	REGION 10
Study Type			
Emergency preparedness	Floodplain modeling, mapping and	l risk assessment 🛛 📕 Feasibility stud	y 🖌 Preliminary project engineering
Other			
Problem Area			
City Bastrop	County Bastrop		A A A A A A A A A A A A A A A A A A A
	-Colorado River		
			The second of the second se
Tributary(ies) Piney Creek		MESQUITE	a la
		BENID	The second se

 HUC#(s)
 1209030102
 Stream miles (est.)
 NA

 Drainage area: square miles, est
 1
 or acreage, est

Social Vulnerability Index (SVI) 0.5979

(SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.)

Other



Lower Colorado-Lavaca

#### Flood Risk Description

Streets and residential area experience significant flooding due to the low-lying nature of the downtown Bastrop terrain. To reduce ponding and flooding during rain events, a Pecan Street bypass is proposed to redirect runoff into the Piney Creek. Approximately 135 properties will benefit from the new stormwater system, reducing private property flooding concerns. These improvements should consider improvements in other portions of the Piney Creek watershed. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

opulation at risk <sup>34</sup> Structures at risk <sup>73</sup> Critical facilities at risk (number) <sup>0</sup>							
	Population at risk <sup>34</sup>	Structures at r	isk <sup>73</sup>	Crit	ical facilities at risk (	number)	0
	· · · · · · · · · · · · · · · · · · ·					,	
Farm/Ranch land impacted (acres) <sup>4</sup> Roadway(s) impacted (miles) <sup>0.89</sup>	Farm/Ranch land impacted (acres) <sup>4</sup>	1	Roadway(s) impacted (r	niles)	0.89		

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability).

Potential improvements include a 1,600 ft diversion from the Hill/Linden pond, approximately 8,900 ft of storm drain along the Pecan Street right-of-way, and a 250 ft pipe to collect runoff between Hawthorne and Linden Street. Existing pipes on Linden and Laurel Streets will be cut, plugged, and abandoned to reduce flow through the existing storm drain system. These improvements are tied to the FMEs for Pecan Street Bypass & Pond Diversion as well as Local Storm Drain Improvements near Piney Creek. The 2023 City of Bastrop Drainage Master Plan estimated potential costs of improvements totaling approximately \$23.7 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

## Estimated Study Cost

Cost \$1,700,000

#### Lower Colorado-Lavaca Flood Management Evaluation (FME) STUDY **REGIONAL FLOOD** ANNING GROUP. Title Pecan, Beech, & Haysel Improvements to Gills Branch (DMP GB-05) ID# 101000218 Sponsor (note if City or County) Bastrop (Municipality) **REGION 10** Commitment Yes No Study Type Feasibility study Preliminary project engineering Emergency preparedness Floodplain modeling, mapping and risk assessment Other Problem Area County Bastrop City Bastrop Watershed name(s) Piney Creek-Colorado River Tributary(ies) Gills Branch HUC#(s) 1209030102 Stream miles (est.) NA or acreage, est Drainage area: square miles, est Social Vulnerability Index (SVI) 0.5979 (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.) Other

#### **Flood Risk Description**

Haysel, Farm, Beech, Pecan, and other streets in the surrounding residential area experience significant flooding due to the low-lying nature of the downtown Bastrop terrain. To reduce ponding and flooding during rain events, an upgraded system is proposed to redirect runoff into Gills Branch. Approximately 180 properties will benefit from the upgraded stormwater system, reducing private property flooding concerns. These improvements should consider improvements in other portions of the Gills Branch watershed. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

					-	
Population at risk 990		Structures at risk	60	Critical facilities at risk (nu	mber) <sup>0</sup>	
					,	
Farm/Ranch land impacted (ac	cres) <sup>0</sup>	Ro	oadway(s) impacted (m	iles) <sup>1.10</sup>		

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include 5,520 feet of storm drain to replace the existing undersized system. The existing pipe conveying flow through the Mina Elementary campus will

be cut, plugged, and aban- doned, and flow will be redirected from Pecan Street through the Hill and Farm Street rights-of-way, eventually rejoining the Haysel Street trunkline. The 2023 City of Bastrop Drainage Master Plan estimated potential costs of improvements totaling approximately \$20.6 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

## Estimated Study Cost

Cost \$1,400,000

Title E	Bastrop CCTV Storm Drain Ev	aluation (DMP COB-02)	ID# 1	01000219	PLANNING GROUP
Sponso	or (note if City or County)	Bastrop (Municipality)	Commitment	Yes No	REGION 10
Stud	ly Туре				
En	nergency preparedness	📕 Floodplain modeling, mapping and risk as	ssessment	Feasibility study	Preliminary project engineering
Oth	her				

#### **Problem Area**

City Bastrop	County Bastrop	Piney Creek
Watershed name(s) Piney Creek-Color		MES GUITE
		Colorado River
Tributary(ies) Gills Branch, Piney Cree	k	
HUC#(s) 1209030102	Stream miles (est.) 1.9	
Drainage area: square miles, est 1.7		CCED AllessI Gills Branch
Social Vulnerability Index (SVI)	79	CHESTINUT ST
(SVI score 0.0 indicates least vulnerable; 1		BASTROP C
Other		Pine Forest Crown 2
		Spring Branch Pine Forest CreekTB

#### **Flood Risk Description**

The existing storm drain system was surveyed, to the extent possible, within the city limits and right of way, during Spring of 2022. Survey points included storm drain inlets, manhole elevations, pipe flowlines and dimensions, and outfall flow lines and dimensions. The survey team captured approximately 360 storm drain inlets, 80 manholes, and 35 outfalls. A storm drain database was developed for the City of Bastrop to map and detail existing storm drain infrastructure within city limits. There is a need to assess the condition and functionality of the storm drainage system to develop a maintenance and improvement plan.

Population at risk 3,060 Structures at risk 775 Critical facilities at risk (number) 3	
Farm/Ranch land impacted (acres) 116 Roadway(s) impacted (miles) 9.13	

#### Scope of Study

Conduct a study to assess the condition of the existing storm drain infrastructure within the urban core of the City of Bastrop. The study should utilize closed-circuit television (CCTV) inspection. Inspection will analyze approximately 17,000 feet of storm drain infrastructure. Evaluation will allow the design consultant to develop a storm drain maintenance and improvement plan.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$350,000

Lower Colorado-Lavaca REGIONAL FLOOD

# Flood Management Evaluation (FME) study Lower Colorado-Lavaca Title Water, Spring, & Cedar Street Drainage Improvements (DMP GB-03) D# 101000220 Sponsor (note if City or County) Bastrop (Municipality) Commitment Yes No Study Type Emergency preparedness Floodplain modeling, mapping and risk assessment Feasibility study Image: Preliminary project engineering

#### **Problem Area**

City Bastrop	County Bastrop	BEND		
Watershed name(s) Piney Creek-Colorado	River	RIVER	Piney Creek ST	
		1000 OF	HA	ST ST
Tributary(ies) Gills Branch				CEDAR ST
HUC#(s) 1209030102	Stream miles (est.)			
Drainage area: square miles, est 1	or acreage, est	BASTROP		Gills Branch
Social Vulnerability Index (SVI) 0.5979				C'HESTNUT ST Pine Forest
(SVI score 0.0 indicates least vulnerable; 1.0 ind	dicates most vulnerable.)		C AN	Creek
Other		8	Colorado River	Pino Foresi Greek 15

#### Flood Risk Description

Water, Spring, Cedar, and other streets in the surrounding residential area experience significant flooding due to the low-lying nature of the downtown Bastrop terrain. To reduce ponding and flooding during rain events, an upgraded system is proposed to redirect runoff into the Colorado River. Approximately 260 properties will benefit from the upgraded stormwater system, reducing private property flooding concerns. These improvements should consider improvements in other portions of the Gills Branch watershed. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

Population at risk	1,205	Structures at risk <sup>1</sup>	140 Cri	itical facilities at risk (n	number)	1
•	1			1 70		
Farm/Ranch land in	npacted (acres)	Roa	dway(s) impacted (miles)	1.79		
-						

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include 17,100 feet of storm drain to replace the existing undersized system. Pipes at Beech and Jefferson will be cut, plugged, and abandoned and flow

will be directed through the new storm drain system. Existing laterals extending down Beech, Buttonwood, & Elm St will remain unchanged. The 2023 City of Bastrop Drainage Master Plan estimated potential costs of improvements totaling approximately \$25.7 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

## **Estimated Study Cost**

Cost \$1,800,000

Title City of Hays Drainage Master	Plan Update	ID#	101000226	PLANNING GROUP
Sponsor (note if City or County)	Hays (Municipality)	Commitment	Yes No	REGION 10
Study Type				
Emergency preparedness	🖌 Floodplain modeling, mapping and risk a	ssessment	✓ Feasibility study	Preliminary project engineering
Other				

#### **Problem Area**

		Little Bear	r Creek
City Hays	County Hays	Little Bear Creek	
/atershed name(s) Onion Creek	-Colorado River	Tributary 1	
			CHAPARRAL
L'ul D O h. I	internet in the second se	Little Bear Creek	RD
Tributary(ies)	ittle Bear Creek Tributary 1A	States 20	Bear
HUC#(s) 1209020504	Stream miles (est.) 10.33	AUSTIN	dian of
Drainage area: square miles, est	4.94 or acreage, est	Liffle Bear Creek Tributary 2A	HAT?
	0.013, 0.0019, 0.0284		
(SVI score 0.0 indicates least vulnera	able; 1.0 indicates most vulnerable.)		S S S S S S S S S S S S S S S S S S S
Other Need identification of risk t	hrough floodplain study, flood risk reduction		
analysis, and protection of	water quality for water supply.	O tel	BUDA

#### **Flood Risk Description**

The City of Hays is located between two tributaries of Little Bear Creek. Historically, this area has been subject to major flooding events resulting in a threat to human and animal life and extensive property/infrastructure damage. Compounding area flooding problems relative to the City of Hays is the recent widening of FM 1626 from a two lane country road to a five lane transportation corridor; completion of SH 45 Southwest; increased upstream impervious cover due to major single family/multi-housing residential development and commercial/retail development. Additionally, several proposed/planned major residential and commercial development will significantly increase population density and impervious cover in the watersheds located upstream from the City of Hays. Potential increases in flood risk threaten the City of Hays and thousands of people sole source drinking water supply derived from the Barton Springs Segment of the Edwards Aquifer. Water quality is a concern as a large portion of the Little Bear Creek Watershed is either located over the Barton Springs-Edwards Aquifer recharge, transition or contributing zones. The City of Hays in 2017 conducted a watershed study to assess flood risk and to prepare a drainage master plan for areas within the City's jurisdiction. This master plan needs to be updated to reflect changed conditions as described above, as well as to incorporate updated Atlas 14 rainfall values.

Population at risk <sup>103</sup>	Structures at r	sk <sup>117</sup>	Critical facilities at risk (number)	0
Farm/Ranch land impacted (acres)	255	Roadway(s) impacted (mi	iles) <sup>1.31</sup>	

#### Scope of Study

Update information and data used to develop the 2017 drainage master plan. Leverage the Atlas 14 hydrologic/hydraulic models for Little Bear Creek and Little Bear Creek Tributary 1A to assess riverine flood risk and exposure for the 10-, 25-, 100-, and 500-year flood events. Assess local drainage patterns using Atlas 14 rainfall data to identify potential local flood exposure in the City and ETJ areas. Identify priority flood risk areas and for such areas identify, evaluate, and recommend structural and non-structural flood risk reduction measures. Alternatives analysis to include potential negative upstream and/or downstream impacts, environmental impacts, cost and benefit analysis for risk reduction measures, and potential adverse impacts and/or benefits associated with groundwater recharge and drinking water supply.

#### Related Goal(s)

3.1 Increase the number of entities that have updated watershed models and floodplain maps to reflect current conditions, including as applicable Atlas 14 (Volume 11) revised rainfall data. 5.1/6.1 Reduce the number of structures and critical infrastructure that are at high risk of repetitive loss.

#### **Estimated Study Cost**

Cost \$200,000

Lower Colorado-Lavaca

**REGIONAL FLOOD** 

Flood Manageme	ent Evaluatio	on (FME)	STUDY	Lower Colorado-Lavaca REGIONAL FLOOD
Title Needville Wastewater Treatment	Plant Floodproofing	ID#	101000229	PLANNING GROUP
Sponsor (note if City or County) City of	Needville	Commitment	Yes No	REGION 10
Study Type Emergency preparedness Flo Other	odplain modeling, mapping and	l risk assessment	Feasibility study	Preliminary project engineering
Problem Area				
City Needville	County Fort Bend	Inse	rt locatio	n map here
Watershed name(s) Cedar Creek, San	Bernard Watershed	intee	i lo callo	
Tributary(ies) Buffalo Creek				
HUC#(s) 12090401	Stream miles (est.) 1.836			
Drainage area: square miles, est 1.17	or acreage, est 750			
Social Vulnerability Index (SVI) TBD (SVI score 0.0 indicates least vulnerable; 1.0 ind	dicates most vulnerable.)			
Other Watershed Study				
Flood Risk Description				
<b>T</b>				

The plant is located adjacent to Buffalo creek that runs through the City of Needville. This area hasn't been studied in detail, but as a critical facility further study is recommended to assess risk of flood from Buffalo Creek. There were no reported loss of service events in initial data gathering. The results of the study will provide additional insight into existing flood risk indicators to evaluate projects for future flood planning cycles.

Population at risk	TBD	Structures at	risk <sup>1</sup>	Criti	cal facilities at risk (	number)	1
•					• • • • • • • • •		
Farm/Ranch land ir	npacted (acres)	TBD	Roadway(s) impacted (m	niles)	TBD		
			······································				

#### **Scope of Study**

The flood risk study of the wastewater treatment plant area will include hydrologic and hydraulic modeling (with Atlas 14 rainfall) to identify priority flood risk areas, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). This information will allow for a better understanding of high risk areas and future potential projects.

#### **Related Goal(s)**

3.2 Increase the number of entities that have evaluated priority flood risk areas and flood risk reduction measures (e.g., alternatives analysis and preliminary engineering). 6.1 Reduce the number of structures and critical facilities that are at high risk of repetitive loss through the

#### **Estimated Study Cost**

Cost TBD

Flood Management Evaluation	(FME) STUDY	Lower Colorado-Lavaca REGIONAL FLOOD
Title Fairchild Creek Drainage Mitigation Study	ID# 101000230	PLANNING GROUP
Sponsor (note if City or County) City of Needville	Commitment Yes No	REGION 10
Study Type Emergency preparedness ✓ Floodplain modeling, mapping and risk Other	Kassessment 🖌 Feasibility study	Preliminary project engineering
Problem Area City Needville County Fort Bend	Insert location	n map here
Watershed name(s)       San Bernard, Lower Brazos Watersheds         Tributary(ies)       Fairchild Creek, Cedar Creek, Buffalo Creek         HUC#(s)       12090401; 12070104       Stream miles (est.)       TBD         Drainage area: square miles, est       15.625       or acreage, est       10,000         Social Vulnerability Index (SVI)       TBD       (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.)         Other       Multi-Watershed Study       Image: Study       Image: Study       Image: Study		
Flood Risk Description		

The southwest portion of the City of Needville and its extraterritorial jurisdiction has been defined as a major flooding area for the City. Portions of the Buffalo Creek watershed have been interconnected with an extension of Fairchilds Creek. Based on preliminary drainage investigations, it appears that this interconnection may contribute to flooding in Needville. Further study is required to understand existing flood risk indicators is required to develop solutions for this problematic flood prone area of the City.

Population at risk 3000	Structures at	risk 1000 (	Critical facilities at risk (nu	mber) <sup>3</sup>
Farm/Ranch land impacted (acres	TBD	Roadway(s) impacted (mile	es) TBD	

#### Scope of Study

This study will include hydrologic and hydraulic analysis (with Atlas 14 rainfall) to assess the existing conditions flooding patterns created by the two creeks across the City problem areas. Additionally, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability) will also be considered. This information will allow for a better understanding of high risk areas and future potential projects.

#### Related Goal(s)

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, invitation accord

#### **Estimated Study Cost**

Cost TBD

#### Lower Colorado-Lavaca Flood Management Evaluation (FME) STUDY **REGIONAL FLOOD** ANNING GROUP. Title Caldwell Elementary Improvements at Upper Gilleland Creek (DMP GC-01) ID# 101000231 Sponsor (note if City or County) Pflugerville (Municipality) Commitment Yes No Study Type Feasibility study Preliminary project engineering Emergency preparedness Floodplain modeling, mapping and risk assessment Other Problem Area ROUND ROCK City Pflugerville County Travis Willbarger Creek-Colorado River PFLUGERVILLE Tributary(ies) Gilleland Creek HUC#(s) 1209030101 1.51 Stream miles (est.) Drainage area: square miles, est 4.14 or acreage, est Social Vulnerability Index (SVI) 0.722, 0.2405, 0.1756, 0.3933 (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.) Other

#### Flood Risk Description

Caldwell Elementatry, multiple streets and residential areas experience significant flooding from Gilleland Creek. The proposed design removes Caldwell Elementary from the 100-year floodplain, prevents Fitzgerald Lane from overtopping during the 100-year storm event, and reduces flood risk for 205 homes. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

	Population at risk <sup>40</sup>		Structures at risk <sup>16</sup>	Crit	ical facilities at risk (	number)	0
Farm/Ranch land impacted (acres) <sup>27</sup> Roadway(s) impacted (miles) <sup>0.39</sup>							
	Farm/Ranch land impacted (acres	) 27	Roadway(s) impacted (	(miles)	0.39		

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include raising the Fitzgerald Lane profile to an elevation of 777 feet, 1,270 linear feet of channel improvements, and a 2,280-foot berm on the eastern border of Gilleland Creek. The 2022 City of Pflugerville Drainage Master Plan estimated potential costs of improvements totaling approximately \$9.7 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

## Estimated Study Cost

Cost \$680,000

				PLANNING GROUP
Title Pflugerville Storm Drain CCTV	'Evaluation (DMP Pf-03)	ID# <sup>10</sup>	01000232	PLANNING GROUP
Sponsor (note if City or County)	Pflugerville (Municipality)	Commitment	Yes No	REGION 10
Study Type				
Emergency preparedness	📕 Floodplain modeling, mapping and risk a	ssessment	Feasibility study	Preliminary project engineering
Other				

#### **Problem Area**

City Pflugerville	County Travis
Watershed name(s) Willbarger C	Creek-Colorado River
Tributary(ies) Gilleland Creek, Wi	ilbarger Creek
HUC#(s) 1209030101	Stream miles (est.) 0.57
Drainage area: square miles, est	
Social Vulnerability Index (SVI)	0.4761, 0.2555, 0.0485
(SVI score 0.0 indicates least vulnera	able; 1.0 indicates most vulnerable.)
Other	

#### **Flood Risk Description**

The City of Pflugerville maintains a storm drain system database to map, size and identify existing storm drain infrastructure within city limits. The geospatial data includes detention ponds, drainge structures, stormwater inlets, lines, manholes, and outfalls. There is a need to assess the condition and functionality of the storm drainage system to develop a maintenance and improvement plan.

Population at risk 8	Structures at i	risk <sup>18</sup>	Critical facilities at risk (r	number) <sup>0</sup>
Farm/Ranch land impacted (acres)	8	Roadway(s) impacted (n	niles) <sup>0.04</sup>	

#### Scope of Study

Conduct a study to assess the condition of the existing storm drain infrastructure within the downtown business district of the City of Pflugerville. The study should utilize closed-circuit television (CCTV) inspection. Inspection will analyze approximately 11,000 feet of storm drain infrastructure. Evaluation will allow the design consultant to develop a storm drain maintenance and improvement plan.

#### **Related Goal(s)**

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$250,000

Lower Colorado-Lavaca

Flood Managem			<b>STUDY</b> 101000233	Lower Colorado-Lavaca REGIONAL FLOOD PLANNING GROUP
Sponsor (note if City or County) Pfluger	<i>v</i> ille (Municipality)	Commitment	Yes No	REGION 10
Study Type Emergency preparedness File Other	oodplain modeling, mapping and ri	isk assessment	Feasibility study	Preliminary project engineering
Problem Area City Pflugerville	County Travis			
Watershed name(s) Willbarger Creek-Col			Pillugerville	WILBARGER CREEK
Tributary(ies) Wilbarger Creek Tributary 2 HUC#(s) 1209030101	00 Stream miles (est.) 0.15			
Drainage area: square miles, est 3.79	or acreage, est			
Social Vulnerability Index (SVI) 0.0245 (SVI score 0.0 indicates least vulnerable; 1.0 in	dicates most vulnerable.)		HIDDER'S CALL	WILBARGER CREEK
Other		WILBARGER GREET TRIB 196		1 Dr.

#### **Flood Risk Description**

Hidden Lake Drive over Wilbarger Creek Tributary 200 currently floods during the 10-year storm event. The proposed improvement allows Hidden Lake Drive to pass the 100-year event. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

Population at risk	0	Structures at risk	0 Crit	ical facilities at risk (	number)	0
•	-					
Farm/Ranch land im	pacted (acres) /	Roa	adway(s) impacted (miles)	0.11		
			· · · / · · · · · · · · · · · · · · · ·			

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include replacing the fourteen 10' x 5' existing culverts with a 200-foot bridge span. Proposed improvements also include raising Hidden Lake Drive to an elevation of 644 feet, 3 feet higher than the current elevation. The 2022 City of Pflugerville Drainage Master Plan estimated potential costs of improvements totaling approximately \$4 million.

#### **Related Goal(s)**

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$280,000

Flood Management Evaluation	(FME) STUDY	Lower Colorado-Lavaca REGIONAL FLOOD
Kennemer Drive Improvements at Wilbarger Creek Tributary 200 (DMP WC-05)	ID# 101000234	PLANNING GROUP
Sponsor (note if City or County) Pflugerville (Municipality)	Commitment Yes No	REGION 10
Study Type Emergency preparedness Floodplain modeling, mapping and risk Other	assessment Feasibility study	Preliminary project engineering
Problem Area City Pflugerville County Travis Watershed name(s) Willbarger Creek-Colorado River	PFLUGER VILLE	
Tributary(ies) Wilbarger Creek Tributary 200 HUC#(s) 1209030101 Stream miles (est.) 0.31 Drainage area: square miles, est 2.46 or acreage, est Social Vulnerability Index (SVI) 0.0955 (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.) Other	WILBARGER CREEK TRUITARY 205 SECTOR 6 N	

#### **Flood Risk Description**

Kennemer Drive over Wilbarger Creek Tributary 200 currently floods during the 5-year storm event. The proposed improvement allows Kennemer Drive to pass the 10-year event and significantly reduces the flooding depth and flood extents of the 100-year storm event. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

2	Population at risk 4	Structures at risk 7	Critical facilities at risk (number) 0
Farm/Ranch land impacted (acres) <sup>3</sup> Roadway(s) impacted (miles) <sup>0.27</sup>	Farm/Ranch land impacted (acres) 3	Roadway(s) impacted (m	niles) 0.27

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include replacing the existing culverts with a 150 foot 3-span bridge and raising the roadway profile by 0.8 feet. Improvements also include widening and stabilizing the channel underneath the bridge. The 2022 City of Pflugerville Drainage Master Plan estimated potential costs of improvements totaling approximately \$3.1 million.

#### **Related Goal(s)**

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

## Estimated Study Cost

Cost \$220,000

#### Lower Colorado-Lavaca Flood Management Evaluation (FME) STUDY **REGIONAL FLOOD** PLANNING GROUP Title North Heatherwilde Improvements at Upper Gilleland Creek (DMP GC-02) ID# 101000235 Sponsor (note if City or County) Pflugerville (Municipality) Commitment Yes No Study Type Feasibility study Preliminary project engineering Emergency preparedness Floodplain modeling, mapping and risk assessment Other Problem Area City Pflugerville County Travis Willbarger Creek-Colorado River Tributary(ies) Gilleland Creek HUC#(s) 1209030101 0.24 Stream miles (est.) Drainage area: square miles, est 5.66 or acreage, est Social Vulnerability Index (SVI) 0.722, 0.2405, 0.4761 (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.) Other

#### **Flood Risk Description**

Multiple streets and residential areas experience flooding from Gilleland Creek. North Heatherwilde Boulevard over Gilleland Creek currently floods during the 50-year storm event. The proposed design design allows North Heatherwilde Boulevard to pass the 100-year storm event, reduces flood risk for 8 homes, and relieves flooding on Cactus Blossom Drive. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

Farm/Ranch land impacted (acres) <sup>6</sup> Roadway(s) impacted (miles) <sup>0.04</sup>	Population at risk 4	Structures at risk 2	Critical facilities at risk (number)
	Farm/Ranch land impacted (acres) 6	Roadway(s) impacted (mi	iles) 0.04

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include include extending the North Heatherwilde bridge opening by 80 feet in the southern direction and 500 feet of channel improvements, including channel benching upstream and downstream of the North Heatherwilde Boulevard bridge. The 2022 City of Pflugerville Drainage Master Plan estimated potential costs of improvements totaling approximately \$8.5 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$1,200,000

#### Lower Colorado-Lavaca Flood Management Evaluation (FME) STUDY **REGIONAL FLOOD** PLANNING GROUP Title Railroad Avenue Improvements at Upper Gilleland Creek (DMP GC-04) ID# 101000237 Sponsor (note if City or County) Pflugerville (Municipality) Commitment Yes No Study Type Feasibility study Preliminary project engineering Emergency preparedness Floodplain modeling, mapping and risk assessment Other Problem Area City Pflugerville County Travis Willbarger Creek-Colorado River Tributary(ies) Gilleland Creek HUC#(s) 1209030101 Stream miles (est.) 0.7 Drainage area: square miles, est 8.14 or acreage, est Social Vulnerability Index (SVI) 0.4761, 0.2555, 0.0485 (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.) Other

#### Flood Risk Description

Multiple streets and residential areas experience flooding from Gilleland Creek. Railroad Avenue over Gilleland Creek currently floods during the 2-year storm event. The proposed design allows Railroad to pass the 10-year storm event and reduces flood risk for 16 homes. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

Population at risk 73 Structures at risk 41 Critical facilities at risk (number) 0 arm/Ranch land impacted (acres) 15 Roadway(s) impacted (miles) 0.46								
		73	<b>a</b> 1 1	41	0.11			0
Farm/Ranch land impacted (acres) <sup>15</sup> Roadway(s) impacted (miles) <sup>0.46</sup>	Population at risk <sup>73</sup>		Structu	Structures at risk 41		Critical facilities at risk (number)		0
	Farm/Ranch land in	npacted (acres)	15	Roadway(s) imp	acted (miles)	0.46		

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include raising Railroad Avenue 5 feet and widening the bridge opening by 220 feet. Proposed improvements also include 1,760 feet of channel improvements including channel benching downstream of Railroad Avenue. The 2022 City of Pflugerville Drainage Master Plan estimated potential costs of improvements totaling approximately \$16.8 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$1,200,000

#### Lower Colorado-Lavaca Flood Management Evaluation (FME) STUDY **REGIONAL FLOOD** PLANNING GROUP Title Swenson Farms Improvements at Upper Gilleland Creek (DMP GC-03) ID# 101000238 Sponsor (note if City or County) Pflugerville (Municipality) Commitment Yes No Study Type Feasibility study Preliminary project engineering Emergency preparedness Floodplain modeling, mapping and risk assessment Other Problem Area City Pflugerville County Travis Willbarger Creek-Colorado River Tributary(ies) Gilleland Creek HUC#(s) 1209030101 0.67 Stream miles (est.) Drainage area: square miles, est 6.57 or acreage, est Social Vulnerability Index (SVI) 0.4761 (SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.) Other

#### **Flood Risk Description**

Multiple streets and residential areas experience flooding from Gilleland Creek. Swenson Farms Boulevard over Gilleland Creek currently floods during the 100-year storm event. The proposed design allows Swenson Farms Boulevard to pass the 100-year storm event, reduces flood risk for 10 homes, and relieves flooding on Pfenning Lane. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

Population at risk <sup>0</sup> Structures at risk <sup>5</sup> Critical facilities at risk (number) <sup>0</sup>	
Farm/Ranch land impacted (acres) <sup>20</sup> Roadway(s) impacted (miles) <sup>0.37</sup>	

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include extending the bridge opening by 50 feet to the north, 200 linear feet of channel improvements, including channel benching upstream and

downstream of Swenson Farms Boulevard, and a 2,000 foot embankment adjacent to Pfennig Lane to contain the floodplain. The 2022 City of Pflugerville Drainage Master Plan estimated potential costs of improvements totaling approximately \$5.2 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

## Estimated Study Cost

Cost \$370,000

#### Lower Colorado-Lavaca Flood Management Evaluation (FME) STUDY **REGIONAL FLOOD** ANNING GROUP Title Weiss Lane Improvements at Wilbarger Creek (DMP WC-01) ID# 101000239 Sponsor (note if City or County) Pflugerville (Municipality) Commitment Yes No Study Type Feasibility study Preliminary project engineering Emergency preparedness Floodplain modeling, mapping and risk assessment Other Problem Area City Pflugerville County Travis PPLUGERVILLE Watershed name(s) Wilbarger Creek-Colorado River Tributary(ies) Wilbarger Creek HUC#(s) 1209030101 Stream miles (est.) 0.3 Drainage area: square miles, est 7.39 or acreage, est Social Vulnerability Index (SVI) 0.0012, 0.1957

(SVI score 0.0 indicates least vulnerable; 1.0 indicates most vulnerable.)

Other

#### **Flood Risk Description**

Weiss Lane over Wilbarger Creek currently floods during the 50-year storm event. The proposed improvement allows Weiss Lane to pass the 100-year storm event. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

	0	0	0
Farm/Ranch land impacted (acres) 9 Roadway(s) impacted (miles) 0.27	Population at risk <sup>0</sup>	Structures at risk	Critical facilities at risk (number)
	Farm/Ranch land impacted (acres) 9	Roadway(s) impacted (r	miles) 0.27

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include raising the roadway profile 4 feet to the south of the Weiss Lane bridge, adding six 10'x5' drainage relief culverts under the newly raised profile, and adding a 100' wide bypass channel to allow flow through the culverts. The 2022 City of Pflugerville Drainage Master Plan estimated potential costs of improvements totaling approximately \$1.6 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

## Estimated Study Cost

Cost \$110,000

Title Riverwood Drive Improvement	ts at Piney Creek (DMP PC-02)	ID#	101000246	PLANNING GR	OUP
Sponsor (note if City or County)	Bastrop (Municipality)	Commitment	Yes No	REGION 10	
Study Type					

Emergency preparedness Floodplain modeling, mapping and risk assessment Feasibility study Preliminary project engineering Other

#### **Problem Area**

City Bastrop	County Bastrop	A Contraction
Watershed name(s) Piney Creek-Colorado		
		-
Tributary(ies) Piney Creek		
1000000100	Stream miles (est.) 1.79	
Drainage area: square miles, est 1	or acreage, est	
Social Vulnerability Index (SVI) 0.5979		Non-second state
(SVI score 0.0 indicates least vulnerable; 1.0 in	dicates most vulnerable.)	
Other		



Lower Colorado-Lavaca REGIONAL FLOOD

#### **Flood Risk Description**

Riverwood Drive becomes flooded by Piney Creek during the 50% ACE storm event. The proposed design prevents Riverwood Drive from overtopping during the 10% ACE storm event and reduces, but does not eliminate, overtopping during the 4% ACE storm event. The existing risk indicators are based on available data and will be better defined as part of the study. Study results will include detailed assessments of existing flood risk and potential flood risk reduction to be used in evaluating projects for future funding cycles.

Population at risk	13	Structures at	risk <sup>15</sup>	Criti	cal facilities at risk (	number)	1
Farm/Ranch land im	npacted (acres)	86	Roadway(s) impacted (m	niles)	0.58		

#### Scope of Study

Conduct a study to evaluate proposed improvements. Study will include hydrologic and hydraulic modeling (with Atlas 14 rainfall), limited field survey and geotechnical investigations, preliminary design of improvements, risk reduction analysis, verification of no adverse impacts, preparation of cost estimates and a benefit-cost-analysis, and an evaluation of potential constraints (environmental, utility conflicts, right-of-way needs, and constructability). Potential improvements include raising Riverwood Drive by approximately 17.25 feet, 375 feet of roadway improvements, replacing the existing culverts with a 210-foot bridge,

8,125 linear feet of channel clearing, and approximately 280 linear feet of channel improvements. The 2023 City of Bastrop Drainage Master Plan estimated potential costs of improvements totaling approximately \$2.3 million.

#### Related Goal(s)

3.2 Increase the number of entities that have evaluated priority flood risk areas. 6.1 Reduce the number of structures and critical facilities that are at high risk through the implementation of structural flood mitigation projects. 6.2 Increase the number of entities that mitigate flood risk at vulnerable roadways or waterways.

#### **Estimated Study Cost**

Cost \$160,000