



Update from Consultant Team

Neches Regional Flood Planning Group

October 17, 2025

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Agenda

- Task 2A
 - Existing Conditions Flood Hazard Update
- Task 3A
 - Existing Floodplain Management Practices Update
- Task 3B
 - Flood Mitigation Needs Analysis
- Task 4A
 - Identification and Evaluation of Potentially Feasible FMXs
- Task 10
 - Traylor DETCOG Report-Out



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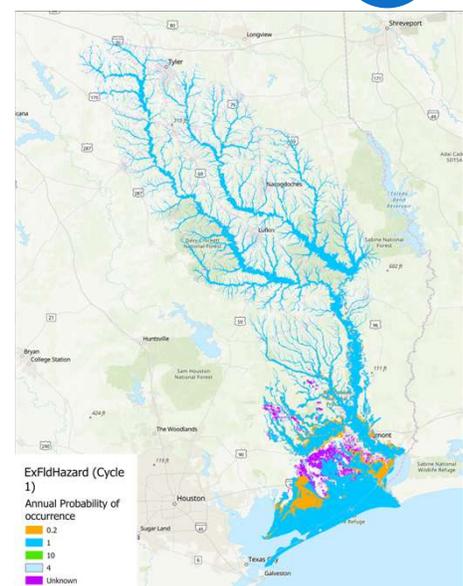
Task 2A – Existing Condition Flood Risk Analyses

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Task 2A – Existing Condition Flood Risk Analysis

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- Existing Condition Flood Hazard Floodplain (Cycle 1)
 - 100-Year and 500-Year
 - NFHL
 - BLE
 - Additional Flood Prone Areas
 - 2021 Cursory Floodplain data

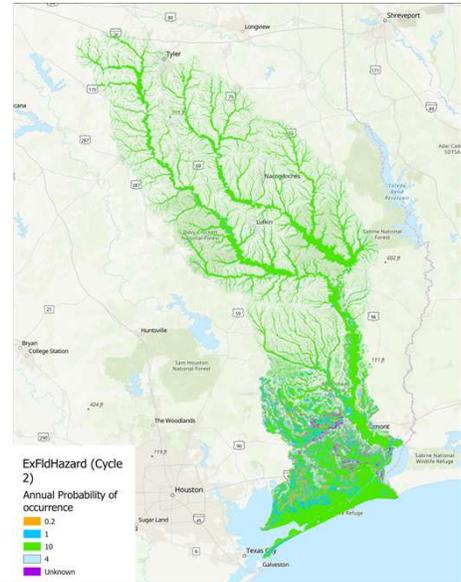


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Task 2A – Existing Condition Flood Risk Analysis

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- Existing Condition Flood Hazard Floodplain (Cycle 2)
 - 10-Year, 100-Year, and 500-Year
 - NFHL
 - BLE
 - FIF Studies in Chambers, Hardin, Liberty, and Jefferson Counties
 - 2025 Cursory Floodplain
 - Additional Flood Prone Areas
 - Extent of Cycle 1 falling outside Cycle 2



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Task 2A – Cycle 2 Data Sources

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Data Source	10-YR	100-YR	500-YR
Jefferson County Drainage District 6 Regional Watershed Study	X	X	X
Chambers – Liberty County Regional Watershed Study	X	X	X
NFHL Riverine Effective Detailed		X	X
NFHL Coastal Effective Detailed		X	
1D BLE	X	X	X
2D BLE	X	X	X
2025 Cursory Floodplain	X	X	X

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Task 2A – Cycle 1 vs. Cycle 2

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Annual Chance of Exceedance	Cycle 1 Area (Square Miles)	Cycle 2 Area (Square Miles)	Difference
10YR	N/A	3,661	N/A
100YR	3,079	4,594 (inclusive of 10YR)	+1,515
500YR	3,453 (inclusive of 10YR + 100YR)	5,039 (inclusive of 10YR + 100YR)	+1,586
Additional Flood Prone Areas	262	68	-194*
TOTAL	3,715	5,107	+1,392

- * Additional Flood Prone Areas (Cycle 1)
- Sourced from 2021 Cursory Floodplain Data
- Additional Flood Prone Areas (Cycle 2)
- Extent of Cycle 1 falling outside Cycle 2

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Task 3A – Floodplain Management Practices

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Task 3A – Floodplain Management Practices

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Entity	Entity Population	Floodplain management regulations	Adopted minimum regulations	NFIP Participant	CRS Participant	Higher Standards Adopted	Floodplain Management Practices	Level of enforcement of practices	Existing Stormwater or Drainage Fee
County 1	####	Yes	Yes	Yes	Yes	No	Moderate	Moderate	Yes
City 1	####	No	No	No	No	No	Low	Low	No
Special Purpose District	####	Unknown	No	No	No	No	None	None	No

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Task 3A – Floodplain Management Practices

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- **NFIP Participation**
 - 100% of Counties participate
 - 85% of Municipalities participate
 - 12 Municipalities are listed as not participating (Community Status Book Report)
 - Combined population of 5,986 in non-participating communities
- **CRS Participation**
 - 4 cities, 1 county
 - Beaumont
 - Bevil Oaks
 - Bridge City
 - Port Arthur
 - Jefferson County

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Task 3A – Floodplain Management Practices

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	None	Low	Moderate	Strong/High
Strength of Floodplain Management Practices (FpMPs)	No Floodplain Management Practices in Place	Regulations meet NFIP minimum standards	Some higher standards, such as freeboard, detention requirements, or fill restrictions	Significant regulations that exceed NFIP standard with enforcement, or community belongs to the CRS
Level of Enforcement of Floodplain Management Practices (FpMPs)	Does not enforce floodplain management regulations	Provides permitting of development in the floodplain, may not perform inspections	Enforces much of the ordinance, performs limited inspections and is limited in issuance of fines and violations.	Actively enforces the entire ordinance, performs many inspections throughout construction process, issues fines, violations, and Section 1316s

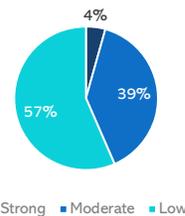
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Task 3A – Region Floodplain Management Practices

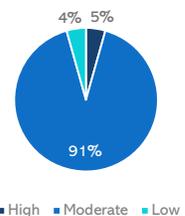
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- 23 Counties in RFP Region
- Strength of Floodplain Management Practices
 - 1 County with Strong Strength FpMPs
 - 9 Counties with Moderate Strength FpMPs
 - 13 Counties with Low Strength FpMPs
- Level of Enforcement of Floodplain Management Practices
 - 1 County with High Level of Enforcement for FpMPs
 - 21 Counties with Moderate Level of Enforcement for FpMPs
 - 1 County with Low Level of Enforcement for FpMPs

Strength of FpMPs



Enforcement of FpMPs



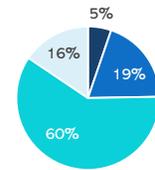
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Task 3A – Region Floodplain Management Practices

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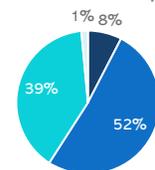
- 77 Municipalities in RFP Region
- Strength of Floodplain Management Practices
 - 4 with Strong Strength FpMPs
 - 15 with Moderate Strength FpMPs
 - 46 with Low Strength FpMPs
 - 12 with None
- Level of Enforcement of Floodplain Management Practices
 - 5 with High Level of Enforcement for FpMPs
 - 34 with Moderate Level of Enforcement for FpMPs
 - 26 with Low Level of Enforcement for FpMPs
 - 12 with None

Strength of FpMPs



■ Strong ■ Moderate ■ Low ■ None

Enforcement of FpMPs



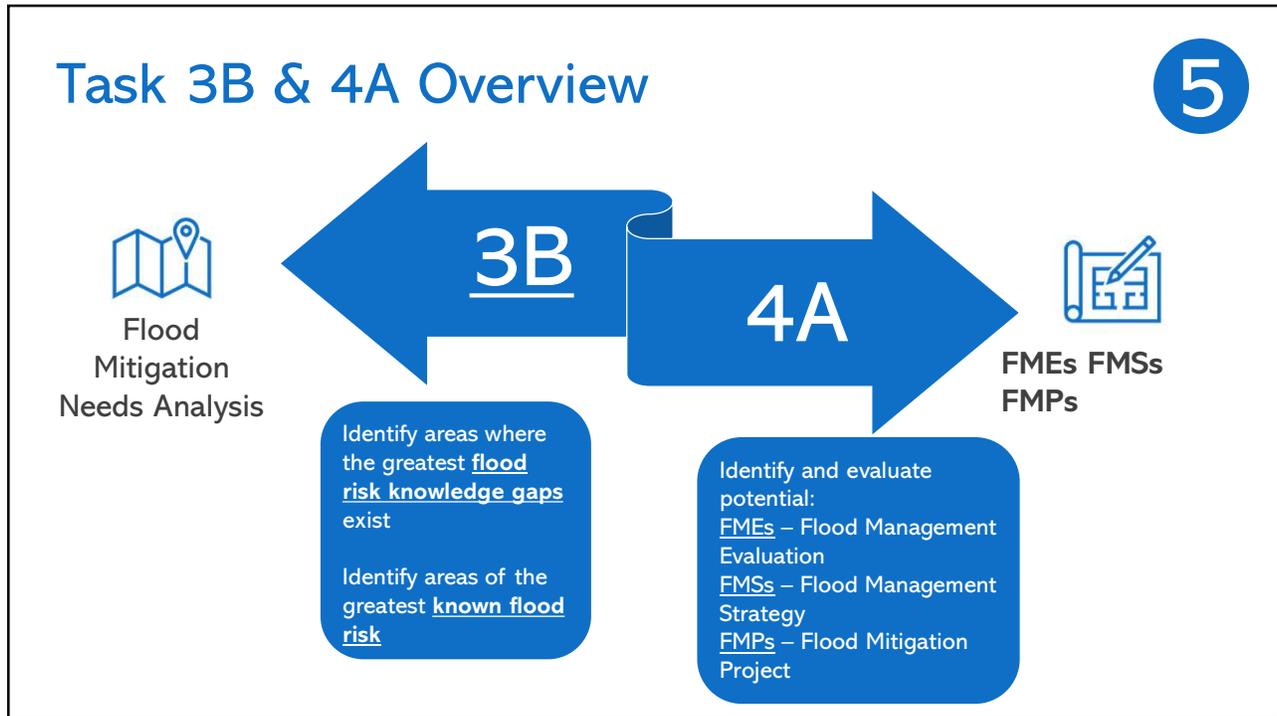
■ High ■ Moderate ■ Low ■ None

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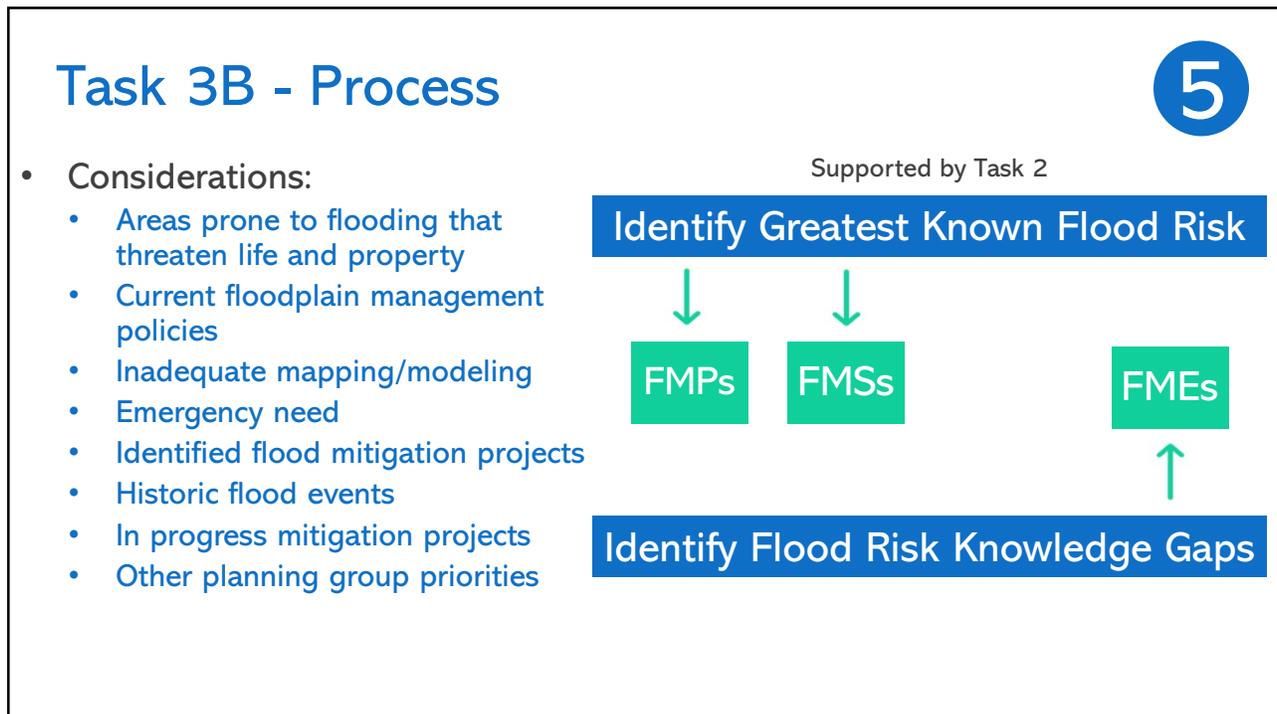
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Task 3B – Flood Mitigation Needs Analysis

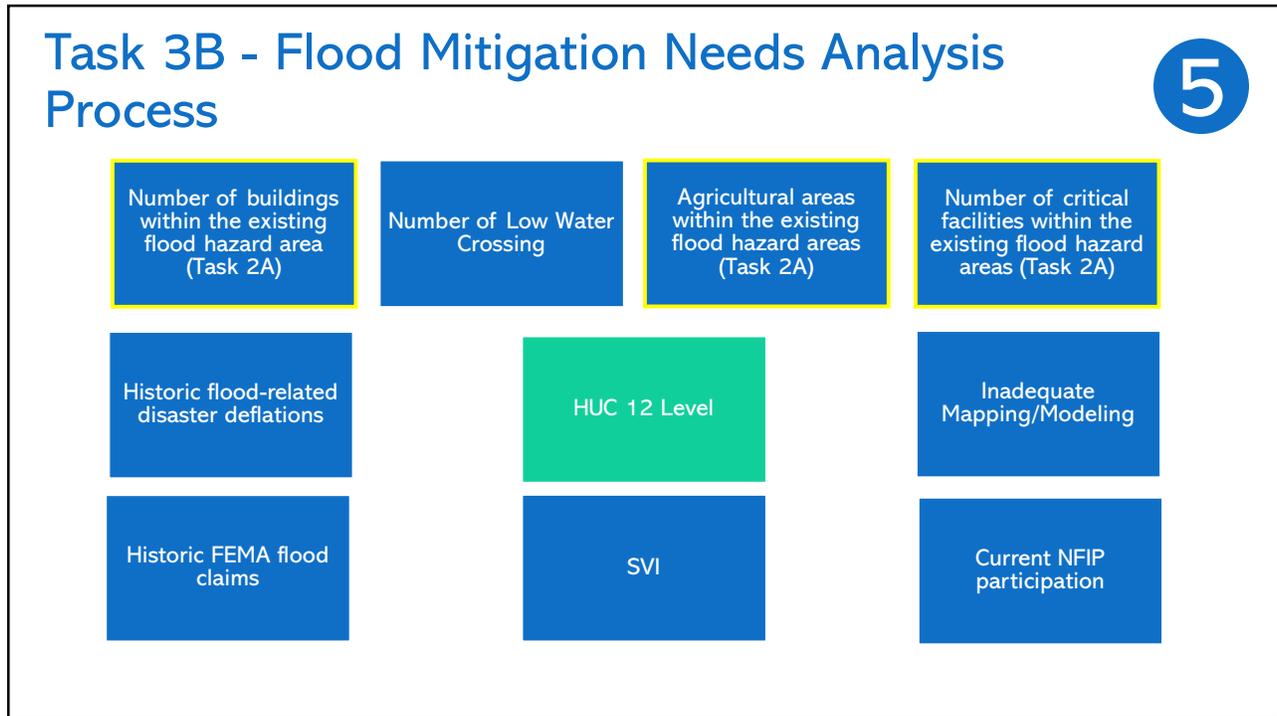
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Task 3B – Flood Mitigation Needs Analysis Process

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- Unit of Analysis
 - HUC = Hydrologic Unit Code
 - HUC 12 will be used as unit of analysis (local sub-watershed level that captures tributary systems)
 - 260 HUC 12 sub-watersheds

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Task 3B – Flood Mitigation Needs Analysis

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- Scoring (Cycle 1)
 - Percentile of numerical category to properly represent the entire region
 - 20th Percentile (bottom 20% of values of all HUC 12's)= 1 Point
 - 80th Percentile (top 20% of vales of a HUC12's)= 5 Points

	Category	Unit	0 points	1 point	2 points	3 points	4 points	5 points
1	Buildings within the Existing Flood Hazard Layer	Count	0	1-2	2-5	5-17	17-97	97+
2	Low Water Crossings	Count	0	1-5	5-10	10-15	15-23	23+
3	Agricultural within Existing Flood Hazard Layer	Square Miles	0		0-0.0013	0.0013-0.0069	0.0069-0.020	0.020+
4	Critical Facilities within the Existing Flood Hazard Layer	Count	0	1				2+
5	NFIP Status	N/A	NFIP community					non-NFIP community
6	Social Vulnerability Index (SVI)	Decimal	0	0-0.35	0.35-0.43	0.43-0.49	0.49-0.62	0.62+
7	Inadequate Mapping (Gap Analysis from Task 2A)	N/A		Atlas 14 Data Update Required		Detailed Study Older Than 10 Years		Approximate Data
8	Historical FEMA Claims	Count	0		0-2		2-9	9+
9	Historical Disaster Declarations	Count	0	0-14	14-15	15-17	17-19	19+

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Task 3B – Flood Mitigation Needs Analysis

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Alternative Scoring (Cycle 1)

- Points allocated for brackets of *approximately equal numerical size*

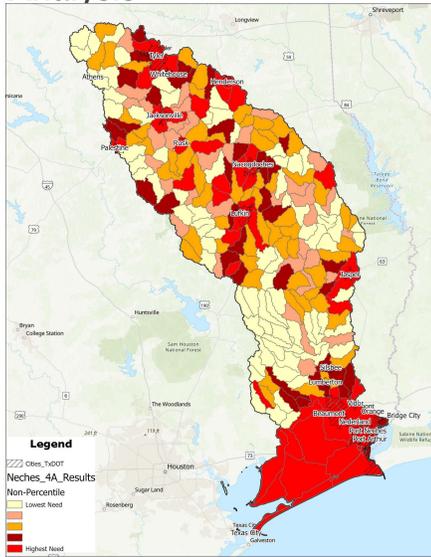
	Category	Unit	0 points	1 point	2 points	3 points	4 points	5 points
1	Buildings within the Existing Flood Hazard Layer	Count	0	1-55	56-110	111-166	167-221	222+
2	Low Water Crossings	Count	0	1-8	9-25	26-34	35-43	44+
3	Agricultural within Existing Flood Hazard Layer	Square Miles	0	0.001-0.013		0.014-0.029		0.029+
4	Critical Facilities within the Existing Flood Hazard Layer	Count	0	1-5	5-10	10-100	100-375	375+
5	NFIP Status	N/A	NFIP community					non-NFIP community
6	Social Vulnerability Index (SVI)	Decimal	0	0.01-0.20	0.20-0.40	0.40-0.50	0.50-0.65	0.65+
7	Inadequate Mapping (Gap Analysis from Task 2A)	N/A		Atlas 14 Data Update Required		Detailed Study Older Than 10 Years		Approximate Data
8	Historical FEMA Claims	Count	0	1-10	10-30	30-100	100-1000	1000+
9	Historical Disaster Declarations	Count	0		1-10		10-20	20+

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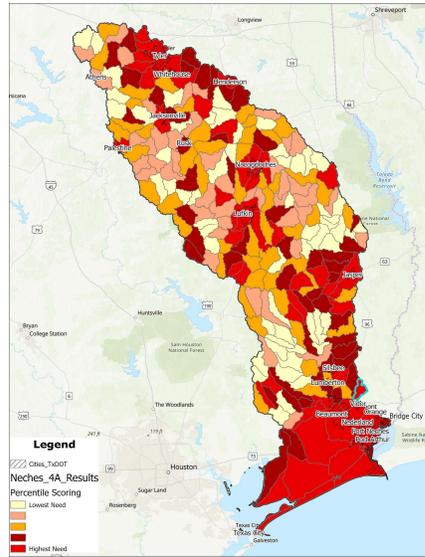
Task 3B – Flood Mitigation Needs Analysis

Scoring Analysis

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Alternative Scoring
(Even Size Numerical Categories)

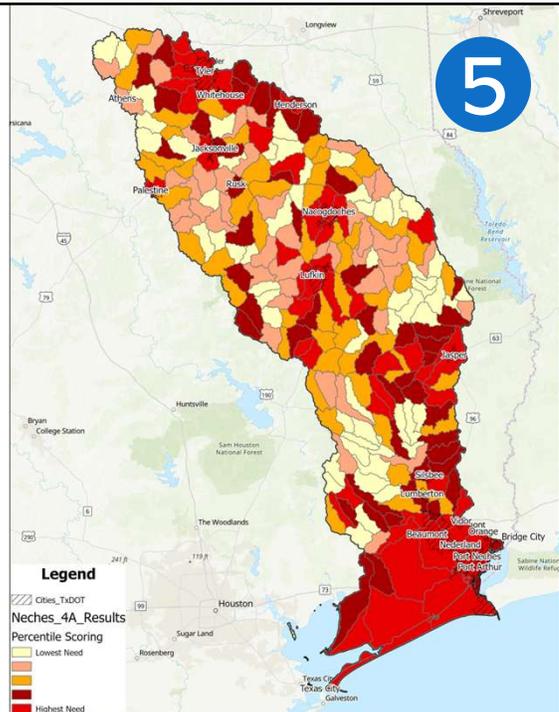


Percentile Scoring

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Task 3B – Flood Mitigation Needs Analysis

- Scoring
 - Percentile of numerical category
 - 20th Percentile (bottom 20% of values of all HUC 12's)= 1 Point
 - 80th Percentile (top 20% of vales of a HUC12's)= 5 Points
 - Top 20% of Total Scores= Highest Need
 - Bottom 20% of Total Scores= Lowest Need
 - ****Lowest Need does not mean there is no need/flood risk****



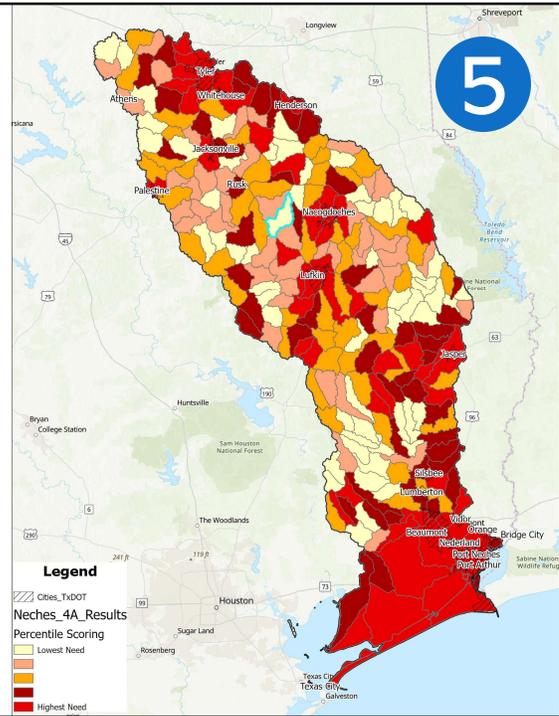
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Task 3B – Flood Mitigation Needs Analysis

Scoring Example: Lower Scoring HUC12

Category	HUC 12 Data	120200040603 Score
Number of Buildings in 1% and 0.2% Floodplain Areas (Existing Flood Hazard)	5	2
Number of Low Water Crossings	8	2
Agricultural Areas in Flood Prone Areas (Square Miles)	0	0
Number of Critical Facilities in 1% and 0.2% Floodplain Areas	0	0
Communities Participating in NFIP	Yes	0
Social Vulnerability Index of HUC 12 (SVI)	0.511	4
Inadequate Floodplain Mapping (Rank by category)	Approximate Data	5
Number of Historical FEMA Claims	0	0
Number of historical flood-related Disaster Declarations	15	2
TOTAL SCORE		15

*Items in blue contribute to overall lower score



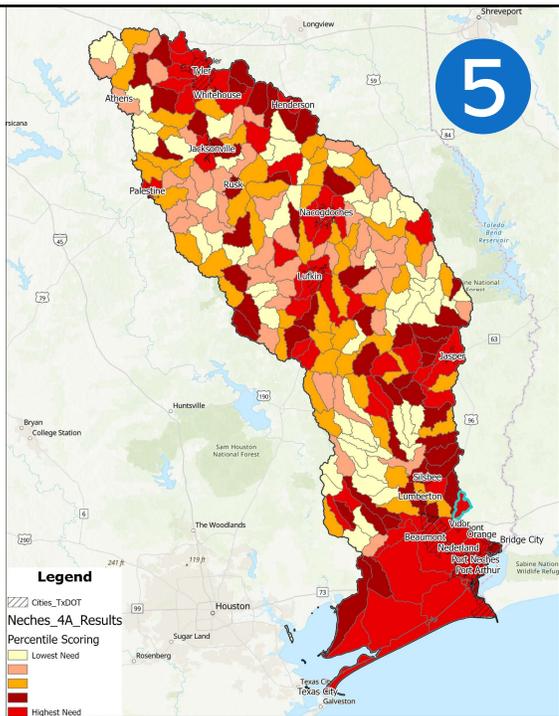
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Task 3B – Flood Mitigation Needs Analysis

Scoring Example: High Scoring HUC12

Category	HUC 12 Data	120200040603 Score
Number of Buildings in 1% and 0.2% Floodplain Areas (Existing Flood Hazard)	1225	5
Number of Low Water Crossings	38	5
Agricultural Areas in Flood Prone Areas (Square Miles)	0.030754	5
Number of Critical Facilities in 1% and 0.2% Floodplain Areas	6	5
Communities Participating in NFIP	Yes	0
Social Vulnerability Index of HUC 12 (SVI)	0.417126	2
Inadequate Floodplain Mapping (Rank by category)	Atlas 14 Data Update Required	1
Number of Historical FEMA Claims	515	5
Number of historical flood-related Disaster Declarations	21	5
TOTAL SCORE		33

*High score in most categories



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Task 4A – Identification of Potentially Feasible FMXs

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Task 4A – Initial List of FMEs, FMPs, FMSs 5

- Carry over list of FMEs, FMSs, and FMPs from Cycle 1
 - All FMXs under evaluation to determine if any were addressed by recent studies/became projects
 - Additional FMEs determined from webmap responses of flood-prone areas
- Prepared initial list based on open-source research
- Contacted stakeholders with potentially feasible FMEs, FMPs, FMSs
 - Initial contact made via email
 - Followed up with phone call if no response provided within 2 weeks
- **Fundamental that entities provide data to go into evaluation and identification of FME, FMP, and FMS**

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Task 4A – Potentially Removed FMEs

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FME Cycle 1 ID	FME Name	FME Sponsor	Reason for Potential Removal
051000067	Spindletop Bayou Ditch Improvement	Chambers County	Examined as an alternative for Chambers FIF
051000069	Southeast Drainage Ditch	City of Anahuac	Examined as an alternative for Chambers FIF
051000085	Hardin County Black Creek Detention Pond	Hardin County	Covered by ongoing Black Creek Drainage Study
051000086	Hardin County Boggy Creek Detention Pond	Hardin County	Covered by ongoing Boggy Creek Drainage Study
051000089	Hardin County South Area Drainage System	Hardin County	Examined as alternatives for DD6 FIF

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Task 4A – Potentially Removed FMEs

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FME Cycle 1 ID	FME Name	FME Sponsor	Reason for Potential Removal
051000143	Tyrrell Park Detention	Jefferson County DD6	Present as FMP
051000144	Mayhaw Lateral Improvemtns	Jefferson County DD6	Examined as an alternative for DD6 FIF
051000152	Feasibility Assessment of Widening and Deepening Segments of Anderson Gully	Orange County Drainage District	Now present as an FMP instead (Anderson Gully Crossings)
051000168	Boggy Creek Channel Study	Hardin County	Covered by ongoing Boggy Creek Drainage Study

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Task 4A – Potentially Removed FMEs

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FME Cycle 1 ID	FME Name	FME Sponsor	Reason for Potential Removal
051000169	Black Creek Study	Hardin County	Covered by ongoing Black Creek Drainage Study
051000170	City of Vidor Community Safe Room	Orange County	Now undergoing grant application phase
051000172	Gore Store Rd. Drainage	Hardin County	Now undergoing grant application phase
051000173	Holland Road Drainage	Hardin County	Now undergoing grant application phase

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Task 4A – Potentially Removed FMPs

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FMP Cycle 1 ID	FMP Name	FMP Sponsor	Reason for Potential Removal
053000001	Bayou Din Detention Basin	Jefferson County DD6	Now in Design
053000020	Blanchette Diversion	Jefferson County DD6	Now in Design
053000023	Delaware Hilcorp Detention Diversion	Jefferson County DD6	Now in Design
053000024	Borley Heights Relief Project	Jefferson County DD6	Now in Design

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Task 4A – Potentially Removed FMPs

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FMP Cycle 1 ID	FMP Name	FMP Sponsor	Reason for Potential Removal
053000025	East China Relief Project	Jefferson County DD6	Now in Design
053000026	South Nome Relief Ditch	Jefferson County DD6	Now in Design
053000027	Ditch 505 Detention	Jefferson County DD6	Now in Design

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Task 10 – Public Participation

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Task 10 – Public Participation

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- Representatives from Traylor & Associates to meet with various County Commissioners in coming weeks:

County	Meeting Dates
Jefferson	Tuesdays
Newton	October 14
San Augustine	October 14
Tyler	October 14
Jasper	October 20
Angelina	October 28
Nacogdoches	October 28
Sabine	November 10
Houston	November 11
Polk	November 11
Trinity	November 11
Shelby	November 12

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Planning Schedule

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October

- Technical Consultant to work on:
 - Task 2 –Future Conditions Flood Risk Analysis
 - Task 3B – Flood Mitigation Needs Analysis
 - Task 4B – Preparation of Tech Memo

November

- Technical Consultant to work on:
 - Task 2 – Future Conditions Flood Risk Analysis
 - Task 3B – Flood Mitigation Needs Analysis
 - Task 4B – Preparation of Tech Memo
 - RFPG to receive Draft Technical Memorandum for review

December

- Technical Consultant to work on:
 - Task 4B – Preparation of Tech Memo
 - RFPG to vote on Submission of Technical Memorandum to TWDB

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