

Update from Consultant Team


Neches Regional Flood Planning Group

June 22, 2023

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Agenda

- Overview of Amended Regional Flood Plan
- Consider adoption and approval of Amended Regional Flood Plan



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Adoption of Amended RFP

- Summary of Updates

RFP Component	Sponsor
Executive Summary	Updated to reflect impact of newly recommended FMXs
Chapter 2	Update Model Coverage map (Map 22) to reflect additional models
Chapter 4	Update to reflect impact of newly recommended FMXs
Chapter 5	Update to reflect impact of newly recommended FMX
Chapter 6	Update to reflect impact of newly recommended FMXs
Chapter 9	Update to reflect results of additional FMX financing surveys
Chapter 10	Update to reflect additional RFPG meetings held through July 14th

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Chapter 4B/5 - Additional FMEs

FME	Description	Sponsor	Study Cost
Mayhaw Bayou Regional Detention Basin	Evaluate a regional detention facility north and west of IH10 in the upper portion of the Mayhaw Bayou watershed.	Jefferson County Drainage District 6	\$75,000
North Taylor Regional Detention Basin	Evaluate a regional detention facility north of FM365 and west of South China Road in the upper portion of the North Fork of Taylors Bayou watershed.	Jefferson County Drainage District 6	\$75,000
South Taylor Regional Detention Basin	Evaluate a regional detention facility west of Heizig Road in the watersheds of both the North and South Forks of Taylors Bayou.	Jefferson County Drainage District 6	\$75,000
Calder Diversions Connections	Evaluate sub-surface diversion primarily located along Calder Avenue that discharges into the Neches River.	Jefferson County Drainage District 6	\$75,000
Diversion to Needmore	Evaluate a diversion channel from downstream of Lower Mayhaw Bayou to Needmore	Jefferson County Drainage District 6	\$75,000
Channel 100A Concrete Repair*	Evaluate repairs and improvements to Channel 100-A located within the City of Beaumont.	Jefferson County Drainage District 6	\$75,000

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Chapter 4B/5 - Identified and Recommended FMEs 5

FME Type	Description	Count	Cost	Amended Count	Amended Cost
Flood Mapping Updates	Updates to floodplain mapping to include new hydrologic and hydraulic modeling for defining flood hazard areas.	22	\$34,679,046	22	\$34,679,046
Master Drainage Plan	An assessment of a watershed or community to estimate flood risk and recommend flood management and flood mitigation projects.	37	\$29,421,728	37	\$29,421,728
Project Planning	Evaluate identified potential flood mitigation projects to define costs, quantify flood reduction benefits, demonstrate no adverse impacts, and evaluate design alternatives. Evaluation may require the creation or updating of hydrologic and hydraulic models.	91	\$24,318,879	91	\$23,768,879
Feasibility	Develop flood mitigation project alternatives for a discrete high flood risk area, estimate construction costs for alternatives, and determine flood reduction benefit for alternatives. Evaluation may require creation of H&H modeling.	7	\$1,026,171	7	\$1,026,171
TOTAL		157	\$89,445,824	157	\$88,895,824

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Chapter 4B/5 - Additional FMPs 5

FMP Name	Project Type	Sponsor(s)	Cost
1 Black Fork Creek Improvement Project*	Comprehensive	City of Tyler	\$22,234,300
2 Sandy Creek Improvement Project (formerly City of Jasper Improvements)*	Comprehensive	City of Jasper	\$224,924,330
3 Sour Lake Channel Improvements	Channel	Hardin County	\$63,303,926
4 Rosedale Improvement System	Comprehensive	Jefferson County Drainage District 6	\$308,620,428
5 Nome Conveyance Improvements	Comprehensive	Jefferson County Drainage District 6	\$163,293,623
6 Pevitot Gully Improvement System	Comprehensive	Jefferson County Drainage District 6	\$319,970,815
7 Willow Marsh Phelan Blvd Detention	Comprehensive	Jefferson County Drainage District 6	\$203,869,200
8 Willow Marsh Main Improvement System	Comprehensive	Jefferson County Drainage District 6	\$1,136,334,277
9 Willow Marsh Downstream System	Comprehensive	Jefferson County Drainage District 6	\$118,142,723
10 Tyrrell Park Improvements	Channel	Jefferson County Drainage District 6	\$25,095,036
11 Green Pond Flow Diversion	Comprehensive	Jefferson County Drainage District 6	\$7,779,088
12 Lucas Diversion	Channel	Jefferson County Drainage District 6	\$130,286,230
13 South Park Diversion*	Channel	Jefferson County Drainage District 6	\$99,908,750

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Chapter 4B/5 - Additional FMPs 5

No.	FMP Name	Project Type	Sponsor(s)	Cost
14	Tevis Diversion*	Channel	Jefferson County Drainage District 6	\$97,327,200
15	Blanchette Diversion*	Channel	Jefferson County Drainage District 6	\$99,173,000
16	Tyrrell Park Detention	Detention	Jefferson County Drainage District 6	\$187,974,220
17	Virginia Street Detention	Detention	Jefferson County Drainage District 6	\$9,751,456
18	Delaware / Hilcorp Detention	Comprehensive	Jefferson County Drainage District 6	\$13,181,257
19	Borley Heights Relief Project	Infrastructure	Jefferson County Drainage District 6	\$4,577,210
20	East China Relief Project	Infrastructure	Jefferson County Drainage District 6	\$2,853,160
21	South Nome Relief Ditch	Infrastructure	Jefferson County Drainage District 6	\$2,286,770
22	Ditch 505 Detention	Detention	Jefferson County Drainage District 6	\$13,803,086

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Chapter 4B/5 - Identified and Recommended FMPs 5

FMP Type	Description	Count	Cost	Amendment Count	Amendment Cost
Channel	Channel extensions and upgrades to increase capacity of water conveyance.	2	\$43,820,866	6	\$456,040,216
Comprehensive	Improve existing levees, build new pump stations, construct/reconstruct floodwalls to higher elevations.	2	\$982,900,000	16	\$3,359,098,233
Detention	New detention pond construction	1	\$85,000,000	4	\$511,701,636
TOTAL		5	\$1,111,720,866	26	\$4,326,840,085

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Notable Edits to Chapters 4/5

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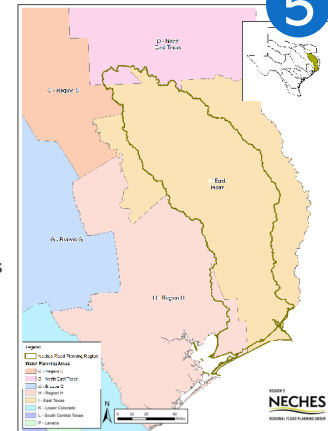
- 6 FMEs added and 6 FMEs removed
 - 4 FMEs elevated to FMPs
 - Tevis Diversion
 - Blanchette Diversion
 - South Park Diversion
 - Delaware Diversion
 - City of Tyler MDP*
 - City of Jasper MDP*
- Additional information supporting no adverse impact of the identified FMPs was found and added to Appendix 5-E.
 - City of Beaumont Master Drainage Plan
 - Drainage Study for Regional Improvements near South and Central Beaumont (Prepared by LAN)
 - No Adverse Impact Memoranda from DD6

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Chapter 6 – Impacts and Contribution of the Regional Flood Plan

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- Impacts to environment, agriculture, recreational resources, water quality, erosion, sedimentation, and navigation all considered during recommendation.
- FMEs and FMSs can reduce future increases in floodplain extents by promoting responsible development.
- No FMPs or FMSs deemed to have impact on water supply, water availability, or other projects in the State Water Plan.



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Notable Edits to Chapter 6

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- Impact Data Updated to reflect addition of new Flood Mitigation Projects

Flood Exposure Region-wide	Existing Conditions	After Implementation (Final Plan)	Reduction in Exposure (Final Plan)	After Implementation (Amended Plan)	Reduction in Exposure (Amended Plan)
	1% ACE	1% ACE	1% ACE	1% ACE	1% ACE
Total Structures	34,728	31,113	3,595	28,686	6,042
Residential Structures	25,145	22,644	2,501	20,604	4,541
Critical Facilities	479	404	75	390	89
Population	65,717	85,266	9,021	49,137	16,580
Low Water Crossings	165	165	0	165	0
Road Length (Miles)	1,505	1,471	34	1,429	76

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Chapter 9 – Flood Infrastructure Financing Analysis

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- Total of 330 flood planning actions recommended
- Stormwater CIP, O&M, and floodplain management activities are historically underfunded
- A survey was sent out to potential sponsors to better understand funding needs
 - ~\$4.2 billion of funding needed beyond the current capacity of local sponsors to implement the recommended actions

Flood Mitigation Action	Number of Recommended Actions	Total Flood Mitigation Action Cost
FME	157	\$88,895,824
FMS	147	\$175,036,700
FMP	26	\$4,326,840,085
Total	330	\$4,590,772,609

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Notable Edits to Chapter 9

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- Funding Survey information edited to account for the new FMEs and FMPs identified in Chapter 4 in addition to FME/FMP Cost Updates

Flood Mitigation Action	Number of Recommended Actions (Final Plan)	Number of Recommended Actions (Amended Plan)	Total Flood Mitigation Action Cost	Total Flood Mitigation Action Cost (Amended Plan)
FME	157	157	\$89,445,824	\$88,895,824
FMS	147	147	\$175,036,700	\$175,036,700
FMP	5	26	\$1,111,720,866	\$4,326,840,085
Total	309	330	\$1,376,203,391	\$4,590,772,609

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Chapter 10 – Public Participation and Plan Adoption

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- Many ways to engage the public
 - Interactive map to identify areas of flood risk/upload data
 - Interactive data dashboard to display developed GIS information
- Public Comment Meetings
 - Existing Flood Risk
 - Nacogdoches, Beaumont, Port Arthur
 - Draft Regional Flood Plan
 - Beaumont (Sept 9, 2022)
- 28 formal planning meetings (including today's meeting) held between October 2020 and June 2023
 - All meetings held in accordance with the Texas Open Meetings Act
- Plan developed following guidance principles from the TWDB

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Notable Edits to Chapter 10

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- Added summary of discussion items from February 2023 to June 2023 meetings.
- Added section for review and adoption of the amended plan
 - Includes summary of comment response and amended regional flood plan adoption

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RFPG Amended Plan Approval

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- RFPG to vote to approve the Amended Regional Flood Plan and authorize the Technical Consultant to submit the plan and required materials to the TWDB contingent upon incorporation of any necessary, non-substantive comments or changes including, but not limited to:
 - Updates necessary to adhere to recently issued TWDB guidance
 - Non-substantive updates necessary to address RFPG comments
 - No changes to content or technical approaches, but updates to how the content is presented/captured in the Amended RFP.

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