APPENDIX 9-A
FUNDING SURVEY RESPONSES

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Table 9A-1: Funding Survey Results

RFPG Number	Sponsor Entity Name	FMS or FMP or FME	FMS FMP FME - Name	FMS/FMP/FME identification number	Target year of full implementation	Estimated costs in plan			Estimated percent (share) of total FMS, FMP, or FME estimated cost			
									Sponsor Funding		Other Funding Needed (including state, federal and/ or other funding)	TOTAL (auto) sum must = 100%
						Non-construction costs	Construction-related costs	Total estimated cost	ANTICIPATED SOURCE of Sponsor funding (e.g., taxes; general revenue; dedicated revenue incl. fees)	FUNDING TO BE FINANCED BY SPONSOR (incl. those local, county, or regional mechanisms available but not yet fully utilized)		
4	Orange County Drainage District	FMP	Terry Gully Regional Detention Pond 1	043000001	2035	$12,759,388	$33,638,387	$46,397,775	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Terry Gully Regional Detention Pond 2	043000002	2035	$3,811,394	$10,048,219	$13,859,613	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Terry Gully Regional Detention Pond 3	043000003	2035	$25,671,329	$67,678,958	$93,350,287	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Terry Gully Regional Detention Pond 4	043000004	2035	$16,627,524	$43,836,199	$60,463,723	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Claiborne Park Regional Detention Pond	043000005	2035	$36,809,262	$97,042,599	$133,851,861	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County	FMP	Kinard Estates Drainage Improvements	043000006	2035	$26,629,266	$70,204,427	$96,833,693	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Elevation of Feeder Road Along IH-10 at Cole Creek	043000007	2035	$271,209	$715,006	$986,215	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Lawrence Road Detention Pond	043000008	2035	$8,034,142	$21,180,920	$29,215,062	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Upper Cow Detention Pond	043000009	2035	$47,366,384	$124,875,011	$172,241,395	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Upper Adams Detention Pond	043000010	2035	$5,379,530	$14,182,399	$19,561,929	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FMP	Cole Creek Detention Pond	043000011	2035	$11,315,680	$29,832,247	$41,147,927	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Hunt County	FMP	CR-2400 Drainage Improvements	043000012	2035	$3,609,283	$10,827,848	$14,437,130	Tax Revenue and Potential Contribution by Other Local Entities	**0%**	**100%**	**100%**

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RFPG Number	Sponsor Entity Name	FMS or FMP or FME	FMS FMP FME - Name	FMS/FMP/FME identification number	Target year of full implementation	Estimated costs in plan			Estimated percent (share) of total FMS, FMP, or FME estimated cost			
									Sponsor Funding		Other Funding Needed (including state, federal and/ or other funding)	TOTAL (auto) sum must = 100%
						Non-construction costs	Construction-related costs	Total estimated cost	ANTICIPATED SOURCE of Sponsor funding (e.g., taxes; general revenue; dedicated revenue incl. fees)	FUNDING TO BE FINANCED BY SPONSOR (incl. those local, county, or regional mechanisms available but not yet fully utilized)		
4	Hunt County	FMP	CR-2706 Drainage Improvements	043000013	2035	$2,281,465	$6,844,394	$9,125,858	Tax Revenue and Potential Contribution by Other Local Entities	**0%**	**100%**	**100%**
4	Hunt County	FMP	CR-3101 Drainage Improvements	043000014	2035	$2,304,373	$6,913,119	$9,217,492	Tax Revenue and Potential Contribution by Other Local Entities	**0%**	**100%**	**100%**
4	Hunt County	FMP	CR-4105 Drainage Improvements	043000015	2035	$1,071,243	$3,213,730	$4,284,973	Tax Revenue and Potential Contribution by Other Local Entities	**0%**	**100%**	**100%**
4	Hunt County	FMP	CR-4106 Drainage Improvements	043000016	2035	$836,050	$2,508,149	$3,344,199	Tax Revenue and Potential Contribution by Other Local Entities	**0%**	**100%**	**100%**

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RFPG Number	Sponsor Entity Name	FMS or FMP or FME	FMS FMP FME - Name	FMS/FMP/FME identification number	Target year of full implementation	Estimated costs in plan			Estimated percent (share) of total FMS, FMP, or FME estimated cost			
									Sponsor Funding		Other Funding Needed (including state, federal and/ or other funding)	TOTAL (auto) sum must = 100%
						Non-construction costs	Construction-related costs	Total estimated cost	ANTICIPATED SOURCE of Sponsor funding (e.g., taxes; general revenue; dedicated revenue incl. fees)	FUNDING TO BE FINANCED BY SPONSOR (incl. those local, county, or regional mechanisms available but not yet fully utilized)		
4	Gulf Coast Protection District, Orange County Drainage District	FMP	Orange County Coastal Storm Risk Management Program	043000017	2034	$113,500,000	$2,156,599,968	$2,270,099,968	Tax Revenue and Potential Contribution by Other Local Entities	**9%***	**81%**	**100%**
4	City of Kilgore	FMP	Kilgore Downtown Storm Sewer Master Plan Improvements	043000018	2035	$223,825	$2,014,427	$2,238,252	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Marshall	FMP	Parker Creek Maintenance	043000020	2035	$70,956	$187,067	$258,023	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Marshall	FMP	Turtle Creek Maintenance	043000021	2035	$138,728	$365,736	$504,464	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Marshall	FMP	Upper Happy Hollow Drainage Improvement - City Park	043000022	2035	$269,796	$711,280	$981,076	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Marshall	FMP	Parker Creek Detention Pond	043000023	2035	$1,388,171	$3,659,722	$5,047,893	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Marshall	FMP	Upper Happy Hollow Drainage Improvement - Smith Park	043000024	2035	$135,263	$356,603	$491,866	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Marshall	FMP	Parker Creek Improvements	043000025	2035	$5,227,782	$13,782,335	$19,010,117	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Longview	FMP	City of Longview Property Acquisition	043000026	2035	$50,000	$9,950,000	$10,000,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Kilgore	FMP	City of Kilgore Property Acquisition	043000027	2035	$50,000	$56,109,648	$56,159,648	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County	FMP	Orange County Property Acquisition	043000029	2035	$0	$10,000,000	$10,000,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County	FMP	Orange County Elevation of Residential Structures Program	043000030	2035	$0	$10,000,000	$10,000,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**

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4	City of Kilgore	FMP	Bighead Creek Flooding - Roadway Improvements to Stone Road	043000031	2035	$14,387,038	$43,161,113	$57,548,151	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Longview	FMP	Harris Creek Tributary Flooding	043000032	2035	$13,473,085	$40,419,256	$53,892,341	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	City of Longview	FMP	Iron Bridge Creek Neighborhood Flooding	043000033	2035	$6,317,702	$18,953,106	$25,270,808	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Kaufman County	FMP	CR-342 Drainage Improvements	043000034	2035	$535,421	$1,606,262	$2,141,682	Tax Revenue and Potential Contribution by Other Local Entities	**0%**	**100%**	**100%**
4	Sabine River Authority	FMP	Sabine Flood Measurement Gages	43000035	2035	$0	$737,148	$737,148	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
												100%

* Orange County Drainage District indicated 25% of non-federal costs which is equivalent to 9% of total project cost

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4	Marshall	FME	Newton County Flood Hazard Mapping	041000001	2034	$380,000	$0	$380,000	Unknown	0%	100%	100%
4	Newton County	FME	Newton County Flood Hazard Mapping	041000002	2034	$2,340,000	$0	$2,340,000	Unknown	0%	100%	100%
4	Smith County	FME	Smith County Flood Hazard Mapping	041000003	2034	$4,275,000	$0	$4,275,000	Unknown	0%	100%	100%
4	Smith County	FME	Smith County Drainage Master Plan	041000004	2034	$1,900,000	$0	$1,900,000	Unknown	0%	100%	100%
4	Harrison County	FME	Harrison County Flood Hazard Mapping	041000005	2034	$1,850,000	$0	$1,850,000	Unknown	0%	100%	100%
4	Van Zandt County	FME	Van Zandt County Flood Hazard Mapping	041000006	2034	$2,230,000	$0	$2,230,000	Unknown	0%	100%	100%
4	Upshur County	FME	Upshur County Drainage Master Plan	041000007	2034	$200,000	$0	$200,000	Unknown	0%	100%	100%
4	Sabine County	FME	Sabine County Flood Hazard Mapping	041000008	2034	$1,100,000	$0	$1,100,000	Unknown	0%	100%	100%
4	Sabine County	FME	Sabine County Drainage Master Plan	041000009	2034	$460,000	$0	$460,000	Unknown	0%	100%	100%
4	San Augustine County	FME	San Augustine County Flood Hazard Mapping	041000010	2034	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	San Augustine County	FME	San Augustine County Drainage Master Plan	041000011	2034	$50,000	$0	$50,000	Unknown	0%	100%	100%
4	Shelby County	FME	Shelby County Flood Hazard Mapping	041000012	2034	$375,500	$0	$375,500	Unknown	0%	100%	100%
4	Rusk County	FME	Rusk County Flood Hazard Mapping	041000013	2034	$1,850,000	$0	$1,850,000	Unknown	0%	100%	100%
4	Panola County	FME	Panola County Flood Hazard Mapping	041000014	2034	$3,700,000	$0	$3,700,000	Unknown	0%	100%	100%
4	Panola County	FME	Panola County Drainage Master Plan	041000015	2034	$1,700,000	$0	$1,700,000	Unknown	0%	100%	100%
4	Longview	FME	Rains County Flood Hazard Mapping	041000016	2034	$2,100,000	$0	$2,100,000	Unknown	0%	100%	100%
4	Longview	FME	Rains County Drainage Master Plan	041000017	2034	$600,000	$0	$600,000	Unknown	0%	100%	100%
4	Rockwall County	FME	Wood County Flood Hazard Mapping	041000018	2034	$3,200,000	$0	$3,200,000	Unknown	0%	100%	100%
4	Hopkins County	FME	Hopkins County Flood Hazard Mapping	041000019	2034	$1,550,000	$0	$1,550,000	Unknown	0%	100%	100%
4	Vidor	FME	Vidor Drainage Master Plan	041000020	2034	$1,200,000	$0	$1,200,000	Unknown	0%	100%	100%
4	Fate	FME	City of Fate Drainage Master Plan	041000021	2034	$450,000	$0	$450,000	Unknown	0%	100%	100%
4	Nevada	FME	Nevada Drainage Master Plan	041000022	2034	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Longview	FME	City of Newton Drainage Master Plan	041000023	2034	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Longview	FME	Newton Drainage Master Plan	041000024	2034	$400,000	$0	$400,000	Unknown	0%	100%	100%
4	Longview	FME	Longview Drainage Master Plan	041000025	2034	$1,100,000	$0	$1,100,000	Unknown	0%	100%	100%
4	Josephine	FME	Josephine Drainage Master Plan	041000026	2034	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Kirbyville	FME	Kirbyville Drainage Master Plan	041000027	2034	$600,000	$0	$600,000	Unknown	0%	100%	100%
4	Longview	FME	Marshall Drainage Master Plan	041000028	2034	$500,000	$0	$500,000	Unknown	0%	100%	100%
4	Longview	FME	Scottsville Drainage Master Plan	041000029	2034	$300,000	$0	$300,000	Unknown	0%	100%	100%
4	Longview	FME	City of Edgewood Stormwater Drain and Culvert Improvement Study	041000030	2034	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Longview	FME	City of Edgewood Stormwater Detention Study	041000031	2034	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Longview	FME	City of Greenville Critical Facilities Flood Protection Study	041000032	2034	$300,000	$0	$300,000	Unknown	0%	100%	100%
4	Longview	FME	City of Fruitvale Drainage Infrastructure Improvement Study	041000033	2034	$200,000	$0	$200,000	Unknown	0%	100%	100%
4	Canton	FME	City of Canton Drainage Infrastructure Improvements Study	041000034	2034	$300,000	$0	$300,000	Unknown	0%	100%	100%
4	Longview	FME	City of Kilgore Drainage Infrastructure Improvements Study	041000035	2034	$300,000	$0	$300,000	Unknown	0%	100%	100%

4	Longview	FME	City of Kilgore Library Drainage Improvement Study	041000036	2034	$400,000	$0	$400,000	Unknown	**0%**	**100%**	**100%**
4	Henderson	FME	City of Henderson Flood Instructure Improvements Study	041000037	2034	$200,000	$0	$200,000	Unknown	**0%**	**100%**	**100%**
4	Henderson	FME	City of Henderson Storm Drain Improvement Study	041000038	2034	$100,000	$0	$100,000	Unknown	**0%**	**100%**	**100%**
4	Longview	FME	City of Longview Critical Facilities Flood Protection Study	041000039	2034	$85,000	$0	$85,000	Unknown	**0%**	**100%**	**100%**
4	Lone Oak	FME	Lone Oak - Dam Inundation Study	041000040	2034	$500,000	$0	$500,000	Unknown	**0%**	**100%**	**100%**
4	Kirbyville	FME	Kirbyville Drainage Improvement Study	041000041	2034	$100,000	$0	$100,000	Unknown	**0%**	**100%**	**100%**
4	Orange County Drainage District	FME	Feasibility Assessment and Conceptual Design of Dredging of Segments of Adams Bayou	041000042	2034	$2,000,000	$0	$2,000,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Feasibility Assessment and Conceptual Design of Dredging of Segments of Cow Bayou	041000043	2034	$600,000	$0	$600,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Feasibility Assessment and Conceptual Design of Dredging of Segments of Little Cypress Bayou	041000044	2034	$1,000,000	$0	$1,000,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Feasibility Assessment and Conceptual Design of Constructing a Stormwater Detention Pond Adjacent to Cow Bayou near Claiborne Park	041000045	2034	$600,000	$0	$600,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Feasibility Assessment and Conceptual Design of Increasing the Size of Culverts and Railroad Trestles on Major Drainage Structures	041000046	2034	$500,000	$0	$500,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Feasibility Assessment and Conceptual Design of Increasing Capacity of Drainage Ditches and Channels that Convey Stormwater from Neighborhoods	041000047	2034	$1,000,000	$0	$1,000,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Fate	FME	City of Fate Culvert Improvement Study	041000048	2034	$100,000	$0	$100,000	Unknown	**0%**	**100%**	**100%**
4	Newton	FME	Newton County Flood and Drainage Study	041000049	2034	$600,000	$0	$600,000	Unknown	**0%**	**100%**	**100%**
4	Orange County	FME	Orange County Drainage Improvements at Kinard Estates Study	041000050	2034	$250,000	$0	$250,000	Unknown	**0%**	**100%**	**100%**
4	Longview	FME	West Orange Drainage Improvements Study	041000051	2034	$350,000	$0	$350,000	Unknown	**0%**	**100%**	**100%**
4	Orange County Drainage District	FME	Adams Bayou Detention Pond Study	041000052	2034	$600,000	$0	$600,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**

4	Orange County Drainage District	FME	Cole Creek Detention Pond Study	041000053	2034	$600,000	$0	$600,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Cow Bayou Detention Pond Study	041000054	2034	$600,000	$0	$600,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Longview	FME	North Airport Retention Pond	041000055	2034	$640,000	$0	$640,000	Unknown	**0%**	**100%**	**100%**
4	Longview	FME	Parker Creek Detention Pond	041000056	2034	$380,000	$0	$380,000	Unknown	**0%**	**100%**	**100%**
4	Orange County Drainage District	FME	Terry Bayou Detention Pond Study	041000057	2034	$600,000	$0	$600,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Gregg	FME	Gregg County Flood Hazard Mapping	041000058	2034	$2,200,000	$0	$2,200,000	Unknown	**0%**	**100%**	**100%**
4	Hunt	FME	Hunt County Flood Hazard Mapping	041000059	2034	$4,000,000	$0	$4,000,000	Unknown	**0%**	**100%**	**100%**
4	Jasper	FME	Jasper County Flood Hazard Mapping	041000060	2034	$700,000	$0	$700,000	Unknown	**0%**	**100%**	**100%**
4	Orange County Drainage District	FME	Elevation of Feeder Road Bridge Along IH-10 at Cole Creek Feasibility Study	041000061	2034	$500,000	$0	$500,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Lawrence Road Detention Pond Feasibility Study	041000062	2034	$400,000	$0	$400,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
4	Orange County Drainage District	FME	Diversion Channel Cow Bayou Feasibility Study	041000063	2034	$5,209,500	$0	$5,209,500	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
5	Marshall	FME	Bell Cutoff Low Water Crossing Study	041000064	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
6	Marshall	FME	Happy Hallow Creek Erosion Protection Study	041000065	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
7	Marshall	FME	Cox Creek Culvert Improvement Feasibility Study	041000066	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
8	Marshall	FME	Cox Creek Drainage Basin Feasibility Study	041000067	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
9	Marshall	FME	City of Marshall Drainage System Improvements Study	041000068	2034	$100,000	$0	$100,000	Unknown	**0%**	**100%**	**100%**
10	Marshall	FME	East Parker Creek Detention Pond Feasibility Study	041000069	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
11	Marshall	FME	Franklin St Underpass Improvement Study	041000070	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
12	Marshall	FME	Happy Hallow Creek Conveyance Improvement Study	041000071	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
13	Marshall	FME	Lower Happy Hollow Creek Detention Pond Feasibility Study	041000072	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
14	Marshall	FME	Parker Creek Maintenance Study	041000073	2034	$10,000	$0	$10,000	Unknown	**0%**	**100%**	**100%**
15	Marshall	FME	Summit St Drainage Improvement Study	041000074	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**

16	Marshall	FME	Town Branch Creek Detention Pond Feasibility Study	041000075	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
17	Marshall	FME	Turtle Creek Detention Pond Feasibility Study	041000076	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
18	Marshall	FME	Turtle Creek Maintenance Study	041000077	2034	$10,000	$0	$10,000	Unknown	**0%**	**100%**	**100%**
19	Marshall	FME	Upper Happy Hollow Creek Detention Pond Feasibility Study	041000078	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
20	Van Zandt	FME	Van Zandt County Master Drainage Plan	041000079	2034	$935,000	$0	$935,000	Unknown	**0%**	**100%**	**100%**
21	Smith	FME	Smith County Drainage Capacity Upgrades	041000080	2034	$225,000	$0	$225,000	Unknown	**0%**	**100%**	**100%**
22	Rusk	FME	Rusk County Drainage Master Plan	041000081	2034	$750,000	$0	$750,000	Unknown	**0%**	**100%**	**100%**
23	Shelby	FME	Shelby County Drainage Master Plan	041000082	2034	$150,000	$0	$150,000	Unknown	**0%**	**100%**	**100%**
24	Jasper	FME	Jasper County Drainage Master Plan	041000083	2034	$280,000	$0	$280,000	Unknown	**0%**	**100%**	**100%**
25	Orange County	FME	Orange County Flood Hazard Mapping	041000084	2034	$1,500,000	$0	$1,500,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
26	Orange County	FME	Orange County Drainage Master Plan	041000085	2034	$675,000	$0	$675,000	Tax Revenue and Potential Contribution by Other Local Entities	**25%**	**75%**	**100%**
27	Kaufman	FME	Kaufman County Flood Hazard Mapping	041000086	2034	$3,500,000	$0	$3,500,000	Unknown	**0%**	**100%**	**100%**
28	Rockwall	FME	Rockwall County Flood Hazard Mapping	041000087	2034	$575,000	$0	$575,000	Unknown	**0%**	**100%**	**100%**
29	Collin	FME	Collin County Flood Hazard Mapping	041000088	2034	$3,750,000	$0	$3,750,000	Unknown	**0%**	**100%**	**100%**
30	Hunt	FME	Hunt County Countywide Drainage Study - Phase 2	041000089	2034	$250,000	$0	$250,000	Unknown	**0%**	**100%**	**100%**
31	Sabine River Authority	FME	Lower Sabine FIF Phase 2	041000090	2034	$250,000	$0	$250,000	Unknown	**0%**	**100%**	**100%**
32	Sabine River Authority	FME	Upper Sabine FIF Phase 2	041000091	2034	$250,000	$0	$250,000	Unknown	**0%**	**100%**	**100%**
33	Collin	FME	Collin County Retention Structures Rehabilitation Project	041000092	2034	$30,000	$0	$30,000	Unknown	**0%**	**100%**	**100%**
34	Collin	FME	Collin County Flooding Hazard/Vulnerability Assessment	041000093	2034	$30,000	$0	$30,000	Unknown	**0%**	**100%**	**100%**
35	Collin	FME	Collin County Dam Inundation Study	041000094	2034	$30,000	$0	$30,000	Unknown	**0%**	**100%**	**100%**
36	Emory	FME	City of Emory Drainage Master Plan	041000095	2034	$100,000	$0	$100,000	Unknown	**0%**	**100%**	**100%**
37	Emory	FME	City of Emory Roadway Flood Evaluation	041000096	2034	$100,000	$0	$100,000	Unknown	**0%**	**100%**	**100%**
38	Kilgore	FME	Bighead Creek Flooding	041000097	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
39	Longview	FME	Guthrie Creek Corridor Flooding	041000098	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
40	Longview	FME	Longview Underpass Flooding	041000099	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
41	Longview	FME	Upper Wade Creek Flooding	041000100	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
42	Longview	FME	Lower Wade Creek Flooding	041000101	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
43	Kilgore	FME	Turkey Creek Tributary Neighborhood Flooding	041000102	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
44	Longview	FME	Elm Branch Flooding	041000103	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
45	Kilgore	FME	Upper Turkey Creek Neighborhood Flooding	041000104	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
46	Longview	FME	Tammy Lynn Drive Neighborhood Flooding	041000105	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**
47	Longview	FME	Upper Guthrie Creek Neighborhood Flooding	041000106	2034	$75,000	$0	$75,000	Unknown	**0%**	**100%**	**100%**

48	Longview	FME	Harris Creek at US 80 Flooding	041000107	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
49	Longview	FME	Grace Creek Flooding at US 80	041000108	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
50	Kilgore	FME	Rabbit Creek at SH 42 Overtopping	041000109	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
51	Longview	FME	US 281 Underpass	041000110	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
52	Longview	FME	Judson Road Neighborhood Flooding	041000111	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
53	Kilgore	FME	SH 135 Underpass Flooding	041000112	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
54	Longview	FME	Drake Blvd Neighborhood Flooding	041000113	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
55	Longview	FME	HG Mosely Roadway Flooding	041000114	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
56	Longview	FME	Eden Drive Flooding	041000115	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
57	Longview	FME	Coushatta Hills Creek Neighborhood Flooding	041000116	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
58	Longview	FME	Grace Creek at Loop 281 Overtopping (South)	041000117	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
59	Longview	FME	Whispering Pines Roadway Flooding	041000118	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
60	Longview	FME	Eastman Road Flooding	041000119	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
61	Kilgore	FME	Florence Street Neighborhood Flooding	041000120	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
62	Longview	FME	Grace Creek at Freemont Street Flooding	041000121	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
63	Longview	FME	Secretariat Trail Neighborhood Flooding	041000122	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
64	Longview	FME	Lorraine Court Neighborhood Flooding	041000123	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
65	Kilgore	FME	Rabbit Creek at SH 31 Overtopping	041000124	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
66	Kilgore	FME	US 259 and Remington Neighborhood Flooding	041000125	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
67	Longview	FME	Harris Creek Local Road Flooding	041000126	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
68	Longview	FME	Harley Ridge Road Flooding (South)	041000127	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
69	Longview	FME	French Drive Neighborhood Flooding	041000128	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
70	Longview	FME	Middle Guthrie Creek Flooding	041000129	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
71	Longview	FME	Upper Iron Bridge Creek Neighborhood Flooding	041000130	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
72	Longview	FME	Lakeport Neighborhood Flooding	041000131	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
73	Longview	FME	Oak Creek Tributary Neighborhood Flooding	041000132	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
74	Longview	FME	S Whatley Road Flooding	041000133	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
75	Longview	FME	Grace Creek at Highway 31 Flooding	041000134	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
76	Longview	FME	Rockwall Drive Neighborhood Flooding	041000135	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
77	Longview	FME	Sabine Street and Railroad Flooding	041000136	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
78	Longview	FME	Hawkins Creek Tributary Flooding	041000137	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
79	Longview	FME	Coleman Drive Neighborhood Flooding	041000138	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
80	Kilgore	FME	Rabbit Creek at SH 135 Overtopping	041000139	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
81	Longview	FME	Grace Creek at HG Mosley Flooding	041000140	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
82	Longview	FME	Grace Creek at Loop 281 Flooding (North)	041000141	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
83	Longview	FME	Circle Road Neighborhood Flooding	041000142	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
84	Longview	FME	N Whatley Road Flooding	041000143	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
85	Kilgore	FME	Meadowbrook Neighborhood Flooding	041000144	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
86	Longview	FME	Hill Street Flooding	041000145	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
87	Kilgore	FME	Rabbit Creek at SH 135 Overtopping	041000146	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
88	Longview	FME	Lynnwood Street Neighborhood Flooding	041000147	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
89	Longview	FME	Harley Ridge Overtopping (North)	041000148	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
90	Kilgore	FME	Rolling Meadows Neighborhood Flooding	041000149	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
91	Longview	FME	Lake Lamond	041000150	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%

92	Longview	FME	Evergreen Street Overtopping	041000151	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
93	Kilgore	FME	Higganbotham Road Neighborhood Flooding	041000152	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
94	Longview	FME	Meadowview Road Flooding	041000153	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
95	Kilgore	FME	White Street Neighborhood Flooding	041000154	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
96	Longview	FME	Airline Road Overtopping	041000155	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
97	Longview	FME	Patio Street Neighborhood Flooding	041000156	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
98	Kilgore	FME	Old Gladewater Highway Overtopping	041000157	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
99	Kilgore	FME	Ray Creek at Piller Precise Rd Overtopping	041000158	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
100	Longview	FME	Cassidy Lane Overtopping	041000159	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
101	Rusk	FME	County Road 1114 Overtopping	041000160	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
102	Lakeport	FME	Mitchell Lake Outfall	041000161	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
103	Rusk	FME	County Road 1115 Overtopping	041000162	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
104	Rusk	FME	County Road 138 Overtopping	041000163	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
105	Rusk	FME	County Road 1110 Overtopping	041000164	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
106	Longview	FME	Grace Creek at Hawkins Pkwy Flooding	041000165	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
107	Kilgore	FME	FM 3053/1639 Flooding	041000166	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
108	Longview	FME	McCann Creek Road Overtopping	041000167	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
109	Kilgore	FME	Meadows Lane Flooding	041000168	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
110	Overton	FME	McKay Street Overtopping	041000169	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
111	Rusk	FME	FM 3053 Overtopping	041000170	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
112	White Oak	FME	Hawkins Creek at George Richey Road Overtopping	041000171	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
113	Smith	FME	Denman Road Overtopping	041000172	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
114	Rusk	FME	County Road 146 Overtopping	041000174	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
115	Kilgore	FME	Rabbit Creek at Spinks Chapman Overtopping	041000175	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
116	Kilgore	FME	Jamestown Road Overtopping	041000176	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%
117	Kilgore	FME	Bighead Creek at US 259 Flooding	041000177	2034	$75,000	$0	$75,000	Unknown	0%	100%	100%

RFPG Number	Sponsor Entity Name	FMS or FMP or FME	FMS FMP FME - Name	FMS/FMP/FME identification number	Target year of full implementation	Estimated costs in plan			Estimated percent (share) of total FMS, FMP, or FME estimated cost			
						Non-construction costs	Construction-related costs	Total estimated cost	Sponsor Funding		Other Funding Needed (including state, federal and/ or other funding)	TOTAL (auto) sum must = 100%
									ANTICIPATED SOURCE of Sponsor funding (e.g., taxes; general revenue; dedicated revenue incl. fees)	FUNDING TO BE FINANCED BY SPONSOR (incl. those local, county, or regional mechanisms available but not yet fully utilized)		
4	Orange County	FMS	Orange County Drainage District Design Criteria	042000001	2029	$50,000	$0	$50,000	Tax Revenue and Potential Contribution by Other Local Entities	25%	75%	100%
4	Orange County	FMS	Orange County Property Acquisition	042000002	2029	$10,000	$90,000	$100,000	Unknown	0%	100%	100%
4	Orange County	FMS	Orange County Drainage District Flood Warning System	042000003	2029	$150,000	$0	$150,000	Tax Revenue and Potential Contribution by Other Local Entities	25%	75%	100%
4	Orange County	FMS	Orange County Detention Ponds Throughout County	042000004	2029	$500,000	$43,500,000	$44,000,000	Unknown	0%	100%	100%
4	Van Zandt	FMS	Van Zandt County Wide Floodplain Development Regulations	042000005	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Rockwall	FMS	Rockwall Countywide Flood Awareness Program	042000006	2029	$2,775	$0	$2,775	Unknown	0%	100%	100%
4	Franklin	FMS	Orange County Emergency Response Staging Area	042000008	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Orange County Drainage District	FMS	Orange County Elevation of Residential Structures Program	042000009	2029	$50,000	$0	$50,000	Tax Revenue and Potential Contribution by Other Local Entities	25%	75%	100%
4	Orange County Drainage District	FMS	Orange County Drainage District Additional Gages And Warning Systems	042000010	2029	$100,000	$100,000	$200,000	Tax Revenue and Potential Contribution by Other Local Entities	25%	75%	100%
4	Orange County Drainage District	FMS	City of Edgewood Emergency Siren Program	042000011	2029	$10,000	$0	$10,000	Tax Revenue and Potential Contribution by Other Local Entities	25%	75%	100%
4	Edgewood	FMS	City of Edgewood Flood Infrastructure Maintenance	042000012	2029	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Edgewood	FMS	City of Greenville NFIP Participation	042000013	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Greenville	FMS	City of Fruitvale "StormReady" Program	042000014	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Fruitvale	FMS	City of Fruitvale Flood Emergency Notification System	042000015	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Fruitvale	FMS	City of Van "StormReady" Program	042000016	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Van	FMS	City of Van Flood Infrastructure Maintenance	042000017	2029	$50,000	$0	$50,000	Unknown	0%	100%	100%
4	Van	FMS	City of Grand Saline "StormReady" Program	042000018	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%

4	Grand Saline	FMS	City of Grand Saline Flood Infrastructure Maintenance	042000019	2029	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Grand Saline	FMS	City of Wills Point "StormReady" Program	042000020	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Wills Point	FMS	City of Wills Point Flood Emergency Notification System	042000021	2029	$10,200	$0	$10,200	Unknown	0%	100%	100%
4	Wills Point	FMS	City of Wills Point Flood Infrastructure Maintenance	042000022	2029	$51,000	$0	$51,000	Unknown	0%	100%	100%
4	Wills Point	FMS	City of Wills Point Flood Awareness Program	042000023	2029	$10,200	$0	$10,200	Unknown	0%	100%	100%
4	Wills Point	FMS	City of Fate Flood Access Improvement	042000024	2029	$400,000	$0	$400,000	Unknown	0%	100%	100%
4	Fate	FMS	City of Fate Flood Infrastructure Maintenance	042000025	2029	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Fate	FMS	City of Gladewater Flood Awareness Program	042000026	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Gladewater	FMS	City of Gladewater Flood Awareness Program	042000027	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Gladewater	FMS	City of Gladewater Flood Infrastructure Maintenance Program	042000028	2029	$20,000	$0	$20,000	Unknown	0%	100%	100%
4	Gladewater	FMS	City of Gladewater Flood Awareness Program	042000029	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Gladewater	FMS	City of Kilgore "StormReady" Program	042000030	2029	$5,000	$0	$5,000	Unknown	0%	100%	100%
4	Kilgore	FMS	City of Kilgore Flood Infrastructure Inspection and Maintenance Program	042000032	2029	$30,000	$0	$30,000	Unknown	0%	100%	100%
4	Kilgore	FMS	City of Clarksville City Flood Infrastructure Inspection and Maintenance Program	042000033	2029	$20,000	$0	$20,000	Unknown	0%	100%	100%
4	Kilgore	FMS	City of Longview Flood Awareness Program	042000034	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Clarksville City	FMS	City of Longview Flood Mitigation Training Program	042000035	2029	$2,000	$0	$2,000	Unknown	0%	100%	100%
4	Longview	FMS	Longview Flood Mitigation Floodplain Development Regulations	042000036	2029	$0	$0	$0	Unknown	0%	100%	100%
4	Longview	FMS	City of Longview Online Flood Awareness Program	042000037	2029	$0	$0	$0	Unknown	0%	100%	100%
4	Longview	FMS	City of Longview Regulatory Flood Hazard Map Program	042000038	2029	$0	$0	$0	Unknown	0%	100%	100%
4	Longview	FMS	City of Longview Property Acquisition Program	042000039	2029	$100,000	$0	$100,000	Unknown	0%	100%	100%
4	Longview	FMS	City of Longview Dam Development	042000041	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Longview	FMS	City of Hideaway Flood Awareness Program	042000042	2029	$10,500	$0	$10,500	Unknown	0%	100%	100%

4	Longview	FMS	City of Hideaway Floodplain Development Regulations	042000043	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Longview	FMS	City of Hideaway Flood Awareness Program	042000044	2029	$10,500	$0	$10,500	Unknown	0%	100%	100%
4	Hideaway	FMS	City of Hideaway Dam Reliability Program	042000045	2029	$60,000	$0	$60,000	Unknown	0%	100%	100%
4	Hideaway	FMS	City of Winona Flood Awareness Program	042000046	2029	$104,000	$0	$104,000	Unknown	0%	100%	100%
4	Hideaway	FMS	City of Royse City Floodplain Management Ordinances	042000047	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Hideaway	FMS	City of Royse City "StormReady" Program	042000048	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Winona	FMS	City of Como Flood Awareness Program	042000049	2029	$10,000	$0	$10,000	Unknown	0%	100%	100%
4	Royse City	FMS	City of Cumby Flood Awareness Program	042000050	2029	$0	$0	$0	Unknown	0%	100%	100%
4	Royse City	FMS	City of Cumby Flood Awareness Program	042000051	2029	$11,500	$0	$11,500	Unknown	0%	100%	100%
4	Como	FMS	Sabine Flood Measurement Gages	042000052	2029	$800,100	$0	$800,100	Unknown	0%	100%	100%
4	Cumby	FMS	Hunt County Flood Warning and Public Safety	042000053	2029	$250,000	$0	$250,000	Unknown	0%	100%	100%
4	Cumby	FMS	Rockwall County Warning Signs and Flood Control Gates	042000054	2029	$250,000	$0	$250,000	Unknown	0%	100%	100%
4	Marshall	FMS	Rockwall County Flood Prevention Ordinance	042000055	2029	$100,000	$0	$100,000	Unknown	0%	100%	100%
5	Marshall	FMS	Wills Point Structure Permitting Requirement Update	042000056	2030	$100,000	$0	$100,000	Unknown	0%	100%	100%
6	Marshall	FMS	Kaufman County Regulation Standards to Protect Open Space Flood-Prone Areas	042000057	2031	$100,000	$0	$100,000	Unknown	0%	100%	100%
7	Marshall	FMS	Kaufman County Agreement to Monitor High Hazard Dams	042000058	2032	$300,000	$0	$300,000	Unknown	0%	100%	100%
8	Marshall	FMS	City of Kilgore Property Acquisition	042000059	2033	$500,000	$63,851,367	$64,351,367	Unknown	0%	100%	100%
9	Marshall	FMS	Kaufman County Flood Education Program	042000060	2034	$50,000	$0	$50,000	Unknown	0%	100%	100%
10	Marshall	FMS	City of Nevada NFIP Floodplain Ordinance	042000061	2035	$100,000	$0	$100,000	Unknown	0%	100%	100%
11	Marshall	FMS	Van Zandt County Flood Safety Improvements and Education	042000062	2036	$50,000	$0	$50,000	Unknown	0%	100%	100%

APPENDIX 9-B
SABINE PASS TO GALVESTON FUNDING FACT SHEET

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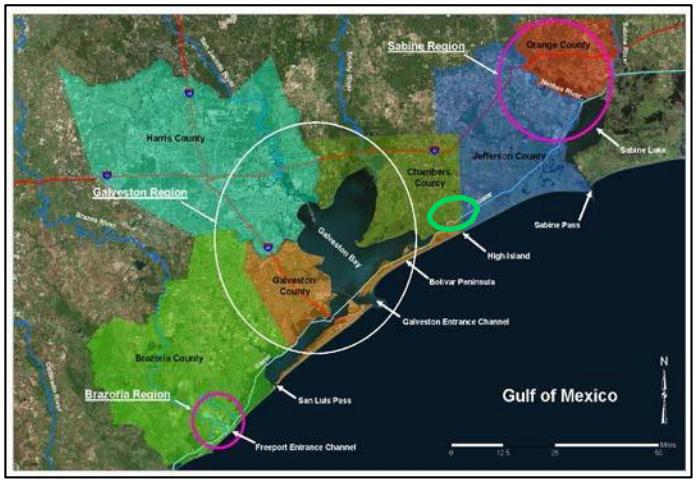
Sabine Pass to Galveston Bay, TX
Supplemental Construction

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

FACT SHEET as of August 28, 2020



AUTHORIZATION: Section 1401 (3)3., Water Resources Development Act of 2018 (P.L. 115-270).

TYPE OF PROJECT: Hurricane and Coastal Storm Risk Management

PROJECT PHASE: Planning, Engineering and Design & Construction

CONGRESSIONAL INTEREST: US Senators Cornyn and Cruz (TX); US Representatives Weber (TX-14), Babin (TX-36), TX Senator Taylor (TX-11),

NON-FEDERAL SPONSOR(S): Texas General Land Office; Velasco Drainage District; Jefferson County Drainage District Number 7; Orange County, TX; Orange County Drainage District, Texas General Land Office

BACKGROUND: The project focus area is a six County area (Galveston, Harris, Brazoria, Jefferson, Chambers and Orange) along the southeast Texas coast. This region is home to more than five million people, three of the Nation's top ten deep-draft ports, and 40 percent of the Nation's petrochemical industry. The Chief's Report for the Sabine Pass to Galveston Bay Project was completed in December 2017. The recommended plan was developed utilizing a region-wide systems approach to achieve the full range of benefits, although the three coastal storm risk management (CSRM) plans are separable and able to function individually. The Sabine Pass to Galveston Bay project recommendation includes (i) increasing the level of performance and resiliency of the existing Port Arthur and Vicinity Hurricane Flood Protection (HFPP) project in Jefferson County, Texas (the Port Arthur and Vicinity CSRM Plan); (ii) the construction of a new levee/floodwall system along the edge of the Sabine and Neches River floodplains from Orange, Texas to the vicinity of Orangefield, Texas that is approximately 26.7-miles; and (iii) increasing the level of performance and resiliency of the existing Freeport and Vicinity HFPP project in Brazoria County, Texas (the Freeport and Vicinity CSRM Plan).

STATUS: The project will be accomplished with Federal funding provided for the disaster recovery in Public law 115-123, the Bipartisan Act of 2018, signed into law February 9, 2018 and cost shared with the non-Federal Partners. The project will result in improvements and additions to the existing coastal storm risk reduction systems in Freeport and Port Arthur, TX, to include levee raises and extensions, and replacement of I-walls with T-walls. It will also include construction of 27 miles of new levees and flood walls, along with 7 new pump stations, 56 drainage structures, and 32 closure gates, in Orange County, TX.

Project Name	Federal cost ($)	Non-Federal cost ($) 1/	Estimated total cost to complete the project ($) 1/
Sabine Pass to Galveston Bay, TX - Freeport-Design and Construction	$457,687,000	$246,447,000	$704,134,000
Sabine Pass to Galveston Bay, TX - Port Arthur - Design and Construction	$560,950,000	$302,050,000	$863,000,000
Sabine Pass to Galveston Bay, TX - Orange - Design and Construction	$1,553,500,000	$836,500,000	$2,390,000,000
TOTAL	$2,572,137,000	$1,384,997,000	$3,957,134,000

1/ Public Law 115-123 provides funding for construction costs with non-federal reimbursement over 30 years after completion of construction.

FINANCIAL SUMMARY ($):	DESIGN AND CONSTRUCTION	
Federal Cost Estimate	$3,957,134,000	1/
Total Project Cost	$3,957,134,000	
Allocation thru FY 2016	$ 0	
Allocation for FY 2017	$ 0	
Allocation for FY 2018	$ 350,000	
Allocation for FY 2019	$13,400,000	
Allocation Request for FY 2020	$ 0	
Balance of Available Funding	$ 3,943,384,000	2/

1/ The project will be accomplished with 100% Federal funding provided for the disaster recovery in Public law 115-123, the Bipartisan Act of 2018, signed into law February 9, 2018. (NFS electing to cost share as we construct with support funding from the Texas General Land Office)
2/ Balance is included in PL 115-123 funds that have yet to be allocated.

SCHEDULE:

FY 2020 Scheduled Milestones:

Freeport - Awarded programmatic task order in AUG 2020 for PED activity.
- Signing Project Partnership Agreement in SEP 2020.

Orange - Awarded programmatic task order in SEP 2020 for PED activity.
- Signing a Design Agreement in SEP 2020 to complete design work.

Port Arthur - Awarded initial construction contract in April 2020.

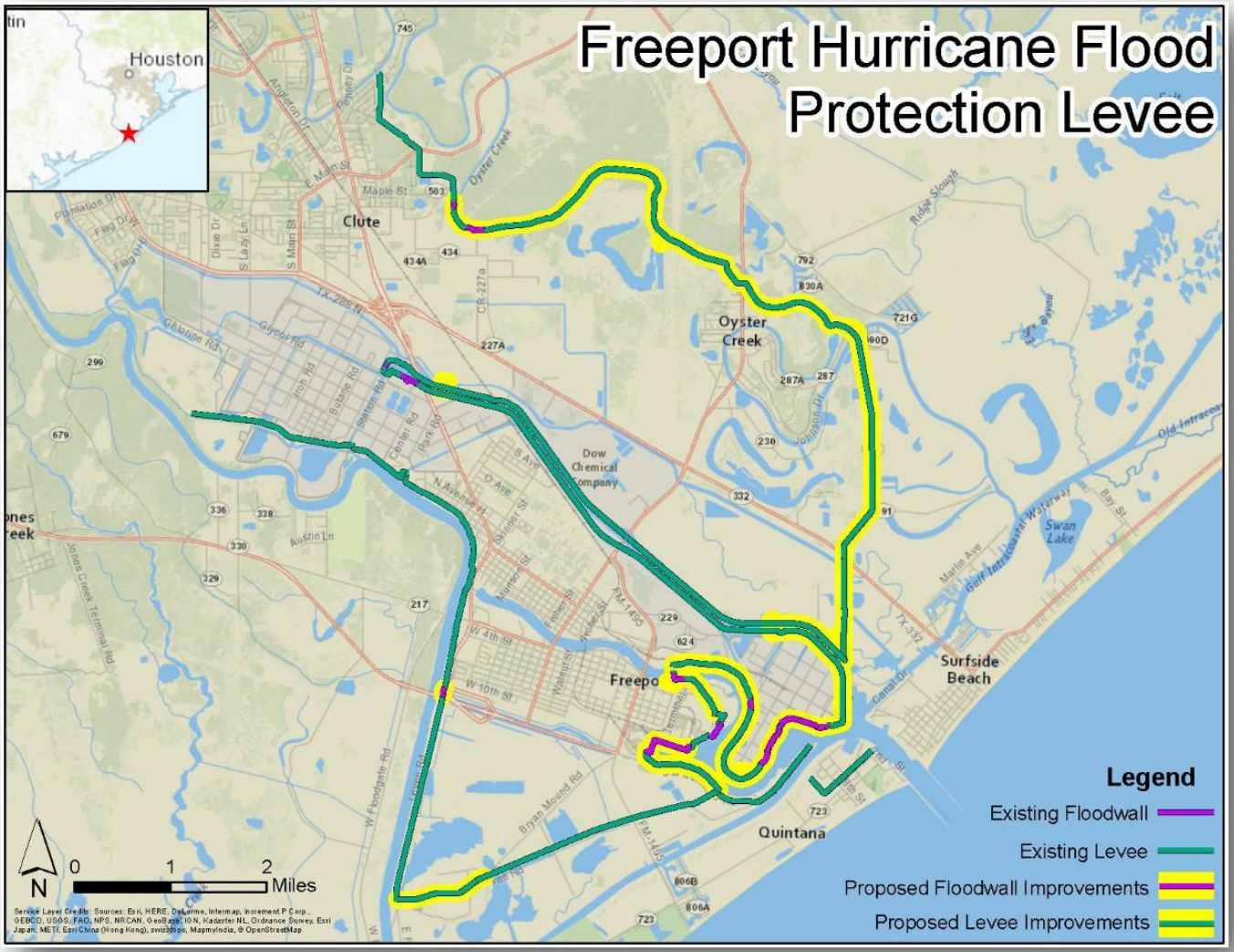
***COMPLETION*:** The estimated construction completion dates:

Freeport - JUNE 2026

Orange - JUNE 2026

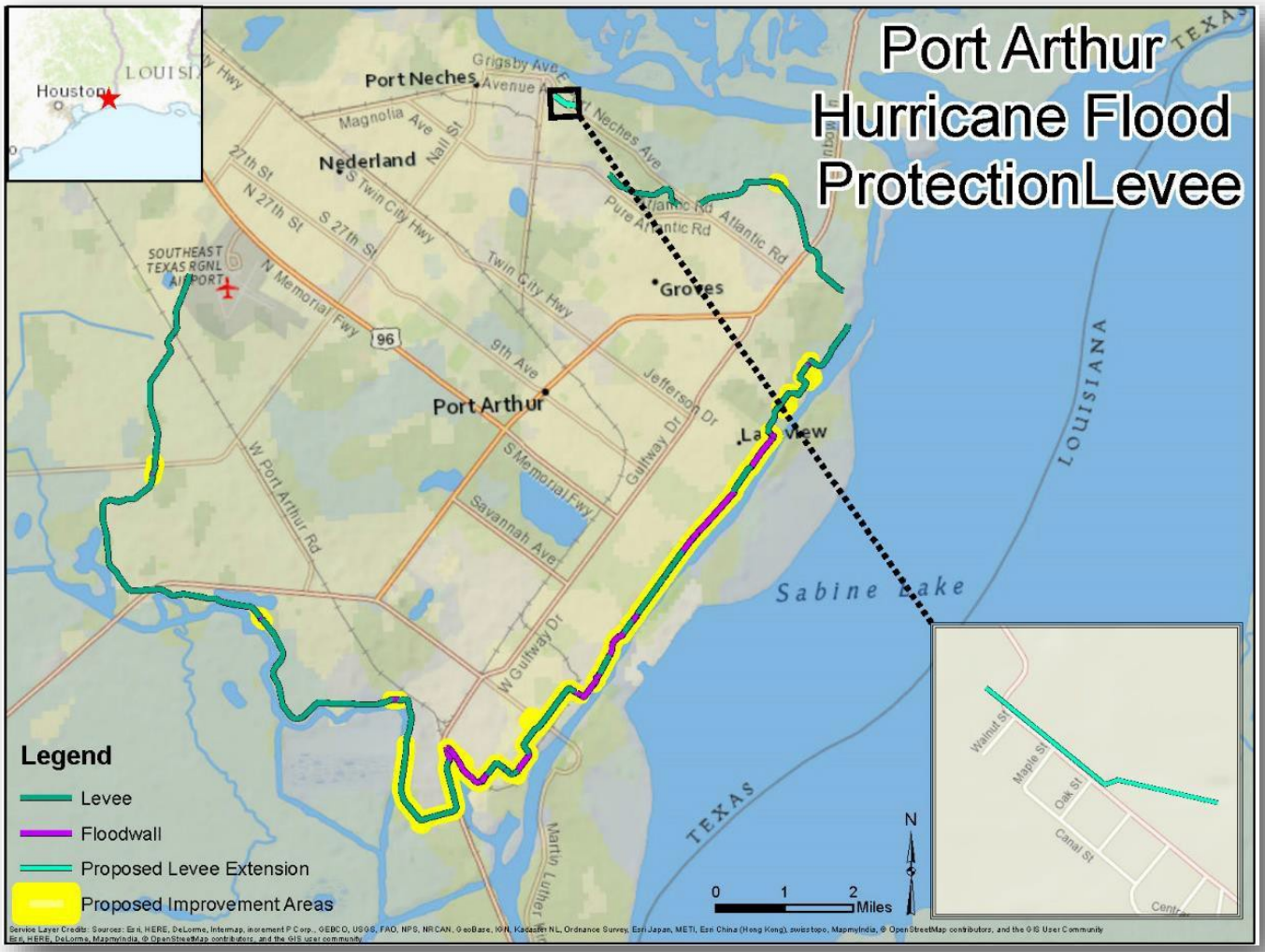
Port Arthur - SEP 2026

For more information regarding the Sabine Pass to Galveston Bay, TX, project, contact Dr. Edmond J. Russo, Jr, P.E. Deputy District Engineer for Project Management at 409-766-3018 or Edmond.J.Russo@usace.army.mil.



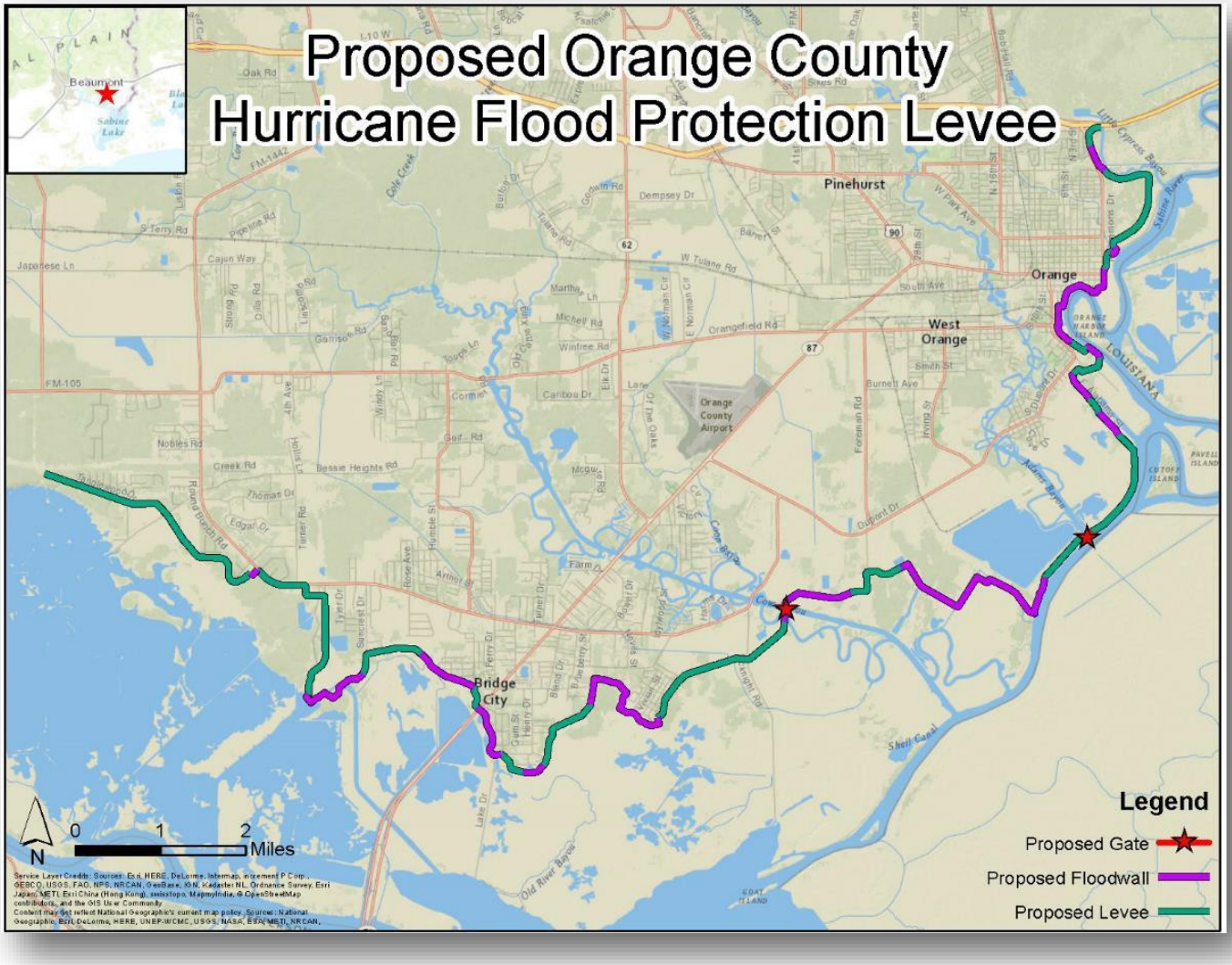
FREEPORT AND VICINITY CSRM PLAN:

The recommended Freeport and Vicinity CSRM Plan would raise approximately 13.1 miles of the existing earthen levee system and construct or reconstruct approximately 5.5 miles of floodwall, improving approximately 43 percent of the existing 43-mile long system. Final elevations would range from 15.8 to 23.8 feet North American Vertical Datum (NAVD) 88. Navigable sector gates would be installed in the Dow Barge Canal to reduce surge penetration in that area. Ten vehicle closure structures at road and railroad crossings would be replaced and erosion protection would be added. Other project features include raising and reconstructing the Highway 332 crossing, installation of four drainage structures, including one at the head of the Dow Barge Canal, and raising the floodwall at Port Freeport's Berth 5 dock. The existing Freeport Harbor Flood Protection Project local sponsor, the Velasco Drainage District, will be the non-Federal cost-sharing sponsor for the Freeport and Vicinity CSRM Plan.



PORT ARTHUR AND VICINITY CSRM PLAN:

The Port Arthur and Vicinity CSRM Plan would raise approximately 5.5 miles of the existing 27.8 miles of earthen levee to elevations ranging from 14.4 to 17.2 feet NAVD 88, and construct or reconstruct approximately 5.7 miles of floodwall to elevations ranging from about 14.4 to 19.4 feet NAVD 88. A separate 1,830 feet of new earthen levee would be constructed in the Port Neches area northwest of the existing northern terminus. Additionally, 26 vehicle closure structures would be replaced and erosion protections would be added. (2) The existing Port Arthur HFPP local sponsor, Jefferson Country Drainage District No. 7, will be the non-Federal cost-sharing sponsor for the Port Arthur and Vicinity CSRM Plan.



ORANGE 3 CSRM PLAN:

The Orange 3 CSRM Plan includes 15.6 miles of newly constructed levee ranging from 12.0 to 17.5 feet NAVD 88 in elevation and 10.7 miles of newly constructed floodwalls and gates ranging from 13.5 to 16 feet NAVD 88. Seven pump stations, 56 drainage structures, and 32 closure gates located at road and railway crossings would be constructed to mitigate interior flooding during surge events. Finally, two navigable sector gates with adjacent vertical lift floodgates for normal channel flows would be constructed in Adams and Cow Bayous to reduce surge penetration. Unavoidable direct and indirect environmental impacts to 2,409 acres of forested wetlands and estuarine marsh associated with the Orange 3 CSRM Plan would be fully compensated by the implementation of the mitigation plan. Monitoring and adaptive management of the mitigation areas will be conducted until the mitigation measures have been demonstrated to be successful. Orange County, Texas and the State of Texas will be the non-Federal cost sharing sponsor for the Orange 3 CSRM Plan.

Talking Points:

<u>USACE Hurricane Protection on the Texas Coast and Response to Hurricane Laura:</u>

- The Army Corps of Engineers Galveston District is in standing partnership with Coastal Storm Flood Control Districts in Orange, Port Arthur and Freeport, TX.

- During Hurricane Laura, the Galveston District Commander co-located with the Orange County Incident Response Center to provide real-time coastal engineering analysis and rapid damage assessment support to the County and County Drainage District. In the event Texas requested support from FEMA, USACE was ready to immediately respond under the National Response Framework.

- Port Arthur and Freeport, TX have existing Hurricane Storm Surge Protective Levee Systems built by the Corps of Engineers and operated by local drainage districts. Jefferson County Drainage District 7 operates the Port Arthur system and Velasco Drainage District operates the Freeport System.

- After Hurricane Harvey, Congress passed the Bipartisan Budget Act in 2018 that fully funded nearly $4B that would provide a new Hurricane Storm Surge Protection System for Orange, TX and improvement of both the existing Port Arthur and Freeport Hurricane Storm Surge Protection Systems so that they would withstand storms with even larger storm surge than Hurricane Laura.

- Current Status - The Corps of Engineers Galveston District is completing design and beginning construction on the Port Arthur improvements with their Partner, Jefferson County Drainage District 7. The Galveston District has also begun design of the new system in Orange, TX with their partner Orange County Drainage District and begin to design the improvements in the Freeport System with their Partners Velasco Drainage District. Combined, all three projects will protect over 100,000 residences, critical infrastructure and industry on the coast from storm surge greater than Hurricane Laura.

- In 2019, the State of Texas passed SB-500 that provided $200M of State funding to fund the initial costs of the non-federal share of the Orange, Port Arthur, and Freeport projects as the Corps proceeds with their local partners.

- The Bipartisan Budget Act of 2018 also funded to completion the Coastal Texas Resilience and Restoration Study to completion. This Corps of Engineers study, being prepared in partnership with the Texas General Land Office, provides a comprehensive solution that accounts for ongoing Hurricane Protection system improvements in Orange, Port Arthur, and Freeport - and provides a plan for additional Hurricane surge protection for Bolivar Peninsula, Galveston Island and Houston. It also provides comprehensive ecosystem restoration for the Southern Texas Coast which will enhance the environment to mitigate impacts from storm surge. All-together this study will provide a plan for Coastal Resilience for the whole of the Texas Coast. The study is due to be complete in May of 2021.

APPENDIX 10-A
SABINE REGIONAL FLOOD PLAN PUBLIC STAKEHOLDER SURVEYS

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1. What is your name?

2. Email*

*required

3. Phone number

4. ZIP Code

5. 1. Do you live in a jurisdiction with flood-related responsibilities in your area, such as a drainage district, levee district, flood control district, utility/improvement district (MUD, SUD, LID), etc?

- [ ] I don't know
- [ ] No
- [ ] Yes, please specify below

6. 2. Provide a list of historical flood events that have affected you or your area. Please identify flood prone areas on the web map (link provided below).

7. 3. What are the top 3 priorities the Regional Flood Planning Group (RFPG) should include in the establishment of regional goals?

Select up to 3

- [ ] Implement protective standards and policies
- [ ] Identify and communicate flood risk
- [ ] Reduce the number of structures in the 100 and 500 yr floodplain
- [ ] Restore failing/aging infrastructure
- [ ] Implement flood warning and response mechanisms
- [ ] Provide or enhance inter-jurisdictional cooperation

- [ ] Other (please specify)

8. 4. Should the Regional Flood Planning Group (RFPG) recommend the same minimum flood risk management standards (examples shown below) to be applied or implemented across the entire Sabine River basin?

These standards would be considered regional best practices and would generally apply to new development. Some examples include storm water detention, elevating new construction above the floodplain, prohibition of development in the floodplains, etc.

- [ ] Yes
- [ ] No (please explain below)

9. 5. Any other suggestions/recommendations for the RFPG (Regional Flood Planning Group) to consider in regard to flooding in the region?

1. What is your name?

2. Email*

3. Phone number

4. 1. Which of the following best describes you?

Select only one.

- [ ] I am the floodplain manager for a community participating in the National Flood Insurance Program (NFIP).
- [ ] I am a public-sector employee with flood-related responsibilities.
- [ ] I am an elected or appointed official with flood-related responsibilities.
- [ ] I am a person interested in the regional flood planning process.
- [ ] Other (describe)

5. 2. What type of entity do you represent?

Select only one.

- [ ] Myself/General Public
- [ ] County
- [ ] Municipality
- [ ] Industrial Interests
- [ ] Agricultural Interests
- [ ] Environmental Interests
- [ ] Small Business Interests
- [ ] Electrical Utilities
- [ ] Water Utilities
- [ ] Water Districts
- [ ] River Authorities
- [ ] Flood Districts
- [ ] State/Federal
- [ ] Other (please specify)

6. 3. What is the name of your entity?

7. 4. What is your job title?

8. 5. In which county is your entity located?

9. 6. In which city is your entity located?

10. 7. Are you aware of any other jurisdiction beyond cities and counties with flood-related responsibilities in your area, such as a drainage district, levee district, flood control district, etc?

- [ ] Yes
- [ ] No

11. 8. If yes, please provide the name of the entity, the name of the contact person, contact information for that entity.

12. 9. Does your entity maintain GIS datasets or other digital inventories for any of the following natural features in your jurisdiction

Select all that apply.
If so, please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] Rivers, creeks, tributaries, and functioning floodplains
- [ ] Wetlands (saturated land - marshes, swamps, etc.)
- [ ] Playa lakes (round hollows that store water after periods of rainfall, only present at certain times of the year)
- [ ] Sink holes (an opening in the ground that can cause surface water to go underground)
- [ ] Alluvial fans (fan-shaped mass of alluvium deposited as velocity in river decreases)
- [ ] Vegetated dunes (topographically elevated ridges or mounds covered with plant life)
- [ ] No digital inventory of natural features
- [ ] Other (please specify)

13. 10. Does your entity maintain GIS datasets or other digital inventories of the following constructed features in your jurisdiction?

Select all that apply. If so, please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] Levees
- [ ] Sea barriers, walls and revetments
- [ ] Tidal barriers and gates
- [ ] Stormwater tunnels
- [ ] Stormwater canals
- [ ] Stormwater pump station(s)
- [ ] Rain gages, Flood gages, Alert systems
- [ ] Flood protection dams
- [ ] Detention/retention ponds
- [ ] Weirs
- [ ] Storm drain systems (storm sewers)
- [ ] No digital inventory of constructed features
- [ ] Other (please specify)

14. 11. If available, provide a link to the location of the data on your entity's website.

15. 12. What percentage of the following infrastructure or natural features within your jurisdiction would you consider non-functional?

Non-functional: The infrastructure is not providing its intended or design level of service.

Stormwater tunnels

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Stormwater canals

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Flood protection dams

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Weirs

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Regional detention facility

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Storm drain systems

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Levees

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Sea barriers, walls, and revetments

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Tidal barriers and gates

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Rivers, creeks, tributaries, and functioning floodplains

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Wetlands

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Playa lakes

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Sink holes

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Alluvial fans

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Vegetated dunes

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Pump stations

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

16. 13. What is the main reason your infrastructure is non-functional?

Please indicate the reason the infrastructure is non-functional.

Stormwater tunnels

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Stormwater canals

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Flood protection dams

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Weirs

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Regional detention facility

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Storm drain systems

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Levees

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Sea barriers, walls, and revetments

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Tidal barriers and gates

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Rivers, creeks, tributaries, and functioning floodplains

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Wetlands

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Playa lakes

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Sink holes

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Alluvial fans

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Vegetated dunes

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Pump stations

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Inherited due to ownership change or annexation
- [ ] Impacts from development
- [ ] Inadequate budget to construct proper system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

17. 14. What percentage of the following infrastructure or natural features within your jurisdiction would you consider deficient?

Deficient: The infrastructure or natural feature is in poor structural or non-structural condition and needs replacement, restoration, or rehabilitation.

Stormwater tunnels

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Stormwater canals

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Flood protection dams

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Weirs

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Regional detention facility

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Storm drain systems

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Levees

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Sea barriers, walls, and revetments

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Tidal barriers and gates

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Rivers, creeks, tributaries, and functioning floodplains

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Wetlands

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Playa lakes

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Sink holes

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Alluvial fans

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Vegetated dunes

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

Pump stations

- [ ] N/A
- [ ] 0%
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] 100%

18. 15. What is the main reason your infrastructure is deficient?

Stormwater tunnels

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Stormwater canals

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Flood protection dams

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Weirs

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Regional detention facility

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Storm drain systems

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Levees

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Sea barriers, walls, and revetments

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Tidal barriers and gates

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Rivers, creeks, tributaries, and functioning floodplains

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Wetlands

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Playa lakes

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Sink holes

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Alluvial fans

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Vegetated dunes

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

Pump stations

- [ ] N/A
- [ ] Lack of adequate standards during original construction
- [ ] Infrastructure has reached its useful life
- [ ] Impacts from development
- [ ] Damage from flood or other natural event
- [ ] Inadequate budget to maintain system
- [ ] Uncontrolled erosion or scour
- [ ] Limited Right of Way
- [ ] Inadequate operation and maintenance budget

19. You may provide written feedback here.

20. 16. Does your community participate in the following programs?

Select all that apply

- [ ] National Flood Insurance Program (NFIP)
- [ ] Community Rating System (CRS)
- [ ] Do not participate but interested in National Flood Insurance Program (NFIP)
- [ ] Do not participate but interested in Community Rating System (CRS)
- [ ] I don't know
- [ ] Do not participate in either program and not currently interested (Please Describe)

21. 17. Does your community participate in the following floodplain management activities?

Select all that apply

- [ ] Development review/regulation
- [ ] Floodplain or drainage capital projects
- [ ] Local assistance with home elevation
- [ ] Acquisition of repetitive loss properties
- [ ] Flood risk communication campaigns and public outreach
- [ ] Flood warning systems (Examples: flashers or staff gages)
- [ ] Emergency alert systems
- [ ] Priority evacuation areas
- [ ] Identification of vulnerable populations
- [ ] Programmed operations & maintenance
- [ ] Reactive maintenance following complaints or damages after a storm
- [ ] Programmed inspection/repair/rehab
- [ ] Asset inventory and comprehensive condition assessments
- [ ] Ordinance enforcement
- [ ] None of the above
- [ ] Other (please specify)

22. 18. Development standards

- [ ] Floodplain ordinance
- [ ] Drainage ordinance
- [ ] Stormwater management ordinances
- [ ] Building standards for flood proofing and flood protection
- [ ] Consideration for fully developed or future conditions land use
- [ ] Zoning/land use regulations
- [ ] None of the above
- [ ] Other (please specify)

23. 19. Infrastructure engineering design standards or Drainage Criteria Manual

- [ ] Roadway
- [ ] Crossings (bridges and culverts)
- [ ] Storm drainage systems
- [ ] Detention facilities
- [ ] Dams
- [ ] Levees/Floodwalls
- [ ] None of the above
- [ ] Other (please specify)

24. 20. Higher standards

- [ ] Freeboard
- [ ] Detention policy
- [ ] Fill restrictions
- [ ] None of the above
- [ ] Restriction of development in floodway
- [ ] No Adverse Impact policy
- [ ] Other (please specify)

25. 21. What future conditions scenarios are required to be evaluated for flood protection projects in your jurisdiction?

Please utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] Existing development
- [ ] Projected development over a future time horizon
- [ ] Fully developed areas
- [ ] 0.2% ACE or 500-year Floodplain as a proxy
- [ ] We do not use future conditions considerations for flood protection projects.
- [ ] Other (please specify)

26. 22. Identify the resources your jurisdiction uses to predict future land use and development.

Please utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] TX Demographic Center Population Projections
- [ ] Future Land Use Plan from Comprehensive Plan
- [ ] Annexation Plans
- [ ] Utility CCNs
- [ ] Public Improvement Districts
- [ ] Texas Enterprise Zones

- [ ] Transportation Plans
- [ ] None of the above
- [ ] Other (please specify)

27. 23. Which of the following best describes how your community enforces its Floodplain Management practices?

Select one

- [ ] We actively enforce the entire floodplain management ordinance, perform many inspections throughout construction process, issue fines, violations, and Section 1316s where appropriate, and enforce substantial damage and substantial improvement.
- [ ] We enforce much of the ordinance, perform limited inspections and are limited in issuance of fines and violations.
- [ ] We provide permitting of development in the floodplain, may not perform inspections, may not issue fines or violations.
- [ ] We do not currently enforce floodplain management regulations.
- [ ] Additional comments on enforcement:

28. 24. Should the Regional Flood Planning Group (RFPG) "recommend" consistent minimum flood risk management standards across the entire Region?

These standards would be considered regional best practices, but would not be required to be adopted by local communities to participate in the Plan and be eligible for funding.

29. Yes (please describe)

30. No (please describe)

31. 25. What are some minimum flood risk management standards the Regional Flood Planning Group (RFPG) should consider recommending?

Select all that apply

- [ ] Participation in the NFIP or equivalent standards
- [ ] Regulate development in the FEMA floodplain or other floodplain designation identified by the RFPG
- [ ] Establish higher standards for development or freeboard (additional feet above) known floodplain, Examples: Future Conditions BFE (base flood elevation), Feet above Existing BFE, 0.2% ACE (500-year floodplain) BFE, Feet Above street or curb

- [ ] Establish infrastructure protection standards, Minimum design criteria for Buildings, critical facilities (hospitals, schools, fire stations, etc.), roadways, drainage infrastructure (culverts, bridges, storm drain, detention facilities, dams, or levees), property acquisition, and open space
- [ ] The RFPG should not recommend minimum flood risk management standards.
- [ ] Other (please specify)

32. 26. Please provide any additional thoughts on minimum flood risk management standards for the Regional Flood Planning Group (RFPG) to consider:

33. 27. What are the top 3 priorities the Regional Flood Planning Group (RFPG) should include in the establishment of regional goals?

Select up to 3

- [ ] Implement protective standards and policies
- [ ] Identify and communicate flood risk
- [ ] Quantify potential reduction in risk to life and property
- [ ] Restore failing/aging infrastructure
- [ ] Implement flood warning and response mechanisms
- [ ] Provide or enhance inter-jurisdictional cooperation
- [ ] Other (please specify)

34. 28. Are there certain areas within the region that have especially unique circumstances that warrant their own sub-regional goals?

For example, the RFPGs may wish to consider the unique needs of coastal vs. inland, urban vs. rural areas, areas with detailed vs. approximate floodplain mapping and modeling, or upstream vs. downstream areas.

- [ ] No
- [ ] Yes (please describe)

35. 29. What types of local and regional flood planning information does your jurisdiction have?

Check all that apply and utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] Hazard Mitigation Plan
- [ ] Master Drainage Plans/Stormwater Drainage Plans
- [ ] Flood Protection Plans
- [ ] Flood Studies/Flood Risk Assessments
- [ ] Watershed Plans
- [ ] CRS Plan
- [ ] Floodplain Management Plan

- [ ] Flood risk screening tools
- [ ] Models, including hydrology, hydraulics or any available screening level models
- [ ] None of the above

36. 30. What additional relevant planning documents or information does your jurisdiction have?

Check all that apply and utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] Flood disaster reports
- [ ] Coastal resiliency master plans
- [ ] Transportation plans
- [ ] Substantial Damage Estimation (SDE) forms
- [ ] Emergency Action Plans (flood-related portions)
- [ ] Other information relevant to the RFPG
- [ ] None of the above
- [ ] Other (please specify)

37. 31. Are there priority areas in your community with no inundation maps or detailed studies that could benefit from a flood study? If yes, please describe the reason for the need.

- [ ] No - No areas in need of study
- [ ] Yes - Limited or no inundation maps
- [ ] Yes - Outdated maps in need of updated study
- [ ] Yes - Need maps to identify flooding for urban areas, low lying areas, and/or streets.
- [ ] Yes - Other (please specify)

38. 32. Is there funding in your community for the necessary flood studies?

- [ ] No funding identified
- [ ] Local funding identified/secured
- [ ] Partial funding identified
- [ ] Partial funding secured
- [ ] Full funding identified
- [ ] Full funding secured
- [ ] Other (please specify)

39. 33. Have grants or loans been secured for all or a portion of this funding?

- [ ] No
- [ ] Yes (please specify)

40. 34. Identify the resources your jurisdiction uses to identify how physical changes to the land might affect future flood risk.

Please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] Subsidence studies
- [ ] Sea level rise studies
- [ ] Analysis of sedimentation of flood control structures
- [ ] Studies on geomorphic changes
- [ ] Watershed/flood studies with future conditions analysis
- [ ] None of the above
- [ ] Other (please specify)

41. 35. What has your jurisdiction done to address flooding concerns?

- [ ] Nothing yet
- [ ] Performed existing drainage system maintenance
- [ ] Performed project identification and planning activities
- [ ] Performed more detailed analyses of areas to identify the source of the flooding
- [ ] Upgraded existing drainage infrastructure
- [ ] Constructed new drainage systems
- [ ] Wetland/floodplain/open space restoration/preservation
- [ ] Implemented and enforced drainage design criteria/floodplain management policies
- [ ] Other (please specify)

42. 36. What, if any, major infrastructure or flood mitigation projects are currently under development?

Select all of the projects that apply. If so, please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- [ ] Levees
- [ ] Sea barriers, walls and revetments
- [ ] Tidal barriers and gates
- [ ] Stormwater tunnels
- [ ] Stormwater canals
- [ ] Flood protection dams
- [ ] Detention/retention ponds

- [ ] Weirs
- [ ] Storm drain systems
- [ ] Channel construction/improvement projects
- [ ] Other (please specify)

43. 37. What is the current status of the major infrastructure or flood mitigation projects currently under development?

- [ ] Project identified
- [ ] Project in conceptual planning phase
- [ ] Project in feasibility analysis phase
- [ ] Project in Preliminary Design
- [ ] Project in Final Design
- [ ] Project in Construction
- [ ] Other or multiple projects in different phases (please specify)

44. 38. Is there funding in your community for the necessary engineering evaluations and/or design and construction of proposed flood mitigation projects?

Select one

- [ ] No funding identified
- [ ] Partial funding available
- [ ] Full funding identified
- [ ] Full funding secured
- [ ] Other (please specify)

45. 39. Have grants or loans been secured for all or a portion of this funding?

- [ ] Yes
- [ ] No
- [ ] N/A

46. 40. Are there non-structural flood mitigation projects (i.e. flood gates, flood warning systems, evacuation procedures, etc.) in your community with funding needs? If so, what level of funding is there in your community for these projects?

- [ ] No non-structural flood mitigation projects are needed in my community
- [ ] There is a need to identify non-structural flood mitigation projects in my community
- [ ] Projects are identified with no funding identified

- [ ] Projects are identified with partial funding identified
- [ ] Projects are identified with partial funding secured
- [ ] Projects are identified with full funding identified
- [ ] Projects are identified with full funding secured
- [ ] Other (please specify)

47. 41. Which of the following describes your local funding sources for flood management activities?

Select all that apply

- [ ] General Fund
- [ ] Bond Program
- [ ] Stormwater utility or Drainage fee
- [ ] Special Tax Districts
- [ ] Impact Fees
- [ ] Permitting Fees
- [ ] Ad Valorem Tax
- [ ] I don't know
- [ ] No current dedicated funding but interested
- [ ] We do not have a local funding source for flood management activities
- [ ] Other (please specify)

48. 42. Have you ever applied for Federal or State grants or loan programs?

If yes, please select which ones below.

- [ ] Flood Infrastructure Fund (FIF) [TWDB]
- [ ] Building Resilient Infrastructure and Communities Program (BRIC) [FEMA]
- [ ] Hazard Mitigation Grant Program (HMGP) [FEMA, TDEM]
- [ ] Pre-Disaster Mitigation (PDM) [FEMA, TDEM]
- [ ] Flood Mitigation Assistance (FMA) [FEMA, TWDB]
- [ ] U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)
- [ ] Community Development Block Grant-Disaster Recovery (CDBG-DR) [HUD, GLO]
- [ ] U.S. Army Corps of Engineers Small Continuing Authorities Program (USACE CAP)
- [ ] Cooperating Technical Partners Program (CTP) [TWDB]
- [ ] State Water Implementation Fund for Texas (SWIFT) [TWDB]
- [ ] Flood Protection Planning Grant [TWDB]
- [ ] Texas Water Development Fund (DFund) [TWDB]
- [ ] Clean Water State Revolving Fund (CWSRF) [TWDB]
- [ ] I don't know
- [ ] Other (please specify)

49. 43. If you have not considered applying for Federal or State grant/loan programs, please state main reasons below?

50. 44. Select the flood response measures your jurisdiction uses for emergency response:

Select all that apply

- [ ] Public Emergency Alert System (i.e. reverse 911)
- [ ] Flood warning signs
- [ ] Flood warning signs with flashing lights
- [ ] Flood gauges
- [ ] Rain/stream gauges with alerts
- [ ] Public-facing website
- [ ] Portable/temporary traffic message boards
- [ ] Coordination with TxDOT message boards
- [ ] Flood forecasting tool
- [ ] Crew(s) set up barricades or close gates
- [ ] Automatic low water crossing gates
- [ ] Outdoor siren/message speaker system
- [ ] Swift water rescue team
- [ ] Cameras
- [ ] None of the above
- [ ] Other (please specify)

51. 45. If your jurisdiction plans to implement changes or additions to the emergency response system over the next five years, select the measures that you anticipate implementing:

- [ ] Public Emergency Alert System (i.e. reverse 911)
- [ ] Flood warning signs
- [ ] Flood warning signs with flashing lights
- [ ] Flood gauges
- [ ] Rain/stream gauges with alerts
- [ ] Public-facing website
- [ ] Portable/temporary traffic message boards
- [ ] Coordination with TxDOT message boards
- [ ] Flood forecasting tool
- [ ] Crew(s) set up barricades or close gates
- [ ] Automatic low water crossing gates
- [ ] Outdoor siren/message speaker system

- [ ] Swift water rescue team
- [ ] Cameras
- [ ] None of the above
- [ ] Other (please specify)

52. 46. Does your community have staff dedicated to flood response activities during emergency situations?

- [ ] No
- [ ] Yes (Please describe)

53. 47. Are the staff embedded within the emergency operations center (or similar centralized location) during the event?

- [ ] No
- [ ] Yes (Please describe)

54. 48a. Indicate the entities with whom you coordinate actions BEFORE a flood event (preparation, response, recovery, and cleanup).

- [ ] Flood Control District
- [ ] City
- [ ] County
- [ ] USACE
- [ ] TxDOT
- [ ] NOAA/ NWS
- [ ] Local dam owner/operator
- [ ] Local levee owner/operator
- [ ] TDEM
- [ ] Ag Extension Agents
- [ ] Brush/ bulk debris contractor (on-call)
- [ ] Consultant engineer (on-call)
- [ ] Local or regional assistance through existing MOUs
- [ ] River Forecast Center
- [ ] None
- [ ] Other (describe)

55. 48b. Indicate the entities with whom you coordinate actions DURING a flood event (preparation, response, recovery, and cleanup).

- [ ] Flood Control District
- [ ] City
- [ ] County
- [ ] USACE
- [ ] TxDOT
- [ ] NOAA/ NWS

- [ ] Local dam owner/operator
- [ ] Local levee owner/operator
- [ ] TDEM
- [ ] Ag Extension Agents
- [ ] Brush/ bulk debris contractor (on-call)
- [ ] Consultant engineer (on-call)
- [ ] Local or regional assistance through existing MOUs
- [ ] River Forecast Center
- [ ] None

56. 48c. Indicate the entities with whom you coordinate actions AFTER a flood event (preparation, response, recovery, and cleanup).

- [ ] Flood Control District
- [ ] City
- [ ] County
- [ ] USACE
- [ ] TxDOT
- [ ] NOAA/ NWS
- [ ] Local dam owner/operator
- [ ] Local levee owner/operator
- [ ] TDEM
- [ ] Ag Extension Agents
- [ ] Brush/ bulk debris contractor (on-call)
- [ ] Consultant engineer (on-call)
- [ ] Local or regional assistance through existing MOUs
- [ ] River Forecast Center
- [ ] None

57. 49. Any suggestions/recommendations to improve flood response?

APPENDIX 10-B
LIST OF ACRONYMS AND DEFINITIONS

LIST OF ACRONYMS AND DEFINITIONS

Acronym	Name	Definition
ASCE	American Society of Civil Engineers	Organization of professionals in civil engineering. ASCE releases state and national Report Cards for infrastructure examining current conditions and needs.
ACE	Annual Chance Exceedance	The estimated mean probability that a flood event will occur in any given year. For example, the 1% ACE has a 1 percent chance of occurring in any given year. A 1% ACE event is sometimes also referred to as a 100-year flood event while a 0.2% ACE event is sometimes referred to as a 500-year flood event.
ASDSO	Association of State Dam Safety Officials	National non-profit organization serving state dam safety programs and the broader dam safety community.
	Atlas-14	Recently developed record of precipitation frequency estimates for the United States that is produced by the National Weather Service and the National Oceanic and Atmospheric Administration.
ARPA	American Rescue Plan Act	Act signed in 2021 that provided a substantial amount of funding to eligible state, local, territorial, and tribal communities to support their response to and recovery from the COVID-19 pandemic.
BCA	Benefit-Cost Analysis	An analysis that is used to ascertain the future risk reduction benefits of a project and compares those benefits to the project's costs. Yields the benefit-cost ratio, a value that represents the project's benefits over the project's costs.
BFE	Base Flood Elevation	Regulatory term meaning the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year.
BLE	Base Level Engineering	BLE is a high-level process using best available data and automated techniques to produce approximate, regulatory-quality flood hazard extents.
BCR	Benefit Cost Ratio	Numerical expression of the "cost-effectiveness" of a project, calculated by a project’s total benefits divided by its total costs.
BRIC	Building Resilient Infrastructure and Communities	Federal funding program run by FEMA. This program supports communities as they undertake hazard mitigation projects to reduce risk from natural hazards.

CAP	Continuing Authorities Program	Group of nine legislative authorities under which USACE can plan, design, and implement certain types of water resources projects without specific congressional authorization. The program is intended to plan and implement projects of limited size, cost, scope, and complexity.
CDBG-MIT	Community Development Block Grant - Mitigation	Funding program that provides funds for grantees to use in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.
CDBG-DR	Community Development Block Grant - Disaster Recovery	Funding program that provides funds for grantees to use in areas impacted by recent disasters to aid in recovery efforts; this assistance is not permanently authorized.
CDC	Centers for Disease Control and Prevention	Federal agency focused on protecting public health including emergency preparedness.
CDR	Community Development and Revitalization	Division of Texas GLO that is responsible for administering funding from CDBG-MIT and CDBG-DR following presidentially declared major disasters.
CFR	Code of Federal Regulations	Codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.
COG	Council of Government	Voluntary associations often comprised of various local governments with the intention of fostering coordination and cooperation between governments on issue of mutual concern that cross jurisdictional lines.
CRS	Community Rating System	FEMA program to provide incentives for those communities that have gone beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.
CSRM	Sabine Pass to Galveston Bay Coastal Storm Risk Management Program	A comprehensive flood infrastructure project along the Texas coastline with three separate components near Freeport, near Port Arthur, and in Orange County. Region 4 includes part of the Orange County project.
CTP	Cooperating Technical Partners	Program intended to create partnerships between FEMA and NFIP-participating communities with the intent of incorporating in the future additional regional/state agencies, tribes, territories, and universities that can become more active participants int he FEMA flood hazard mapping program.

CWSRF	Clean Water State Revolving Fund	Federal-state partnership that provides communities low-cost financing for a wide range of water quality infrastructure projects.
-	Critical Facilities	A critical facility provides services and functions essential to a community, especially during and after a disaster. Typical critical facilities include hospitals, fire stations, police stations, storage of critical records, and similar facilities.
-	Dam Safety Program	The Dam Safety Program monitors and regulates both private and public dams in Texas. The program periodically inspects dams that pose a high or significant hazard.
DCM	Drainage Criteria Manual	A DCM establish the drainage design standards and methods for a community.
DD	Drainage Districts	Special purpose districts charged with maintaining existing drainage and flood control infrastructure to ensure they maintain their level of service.
DETCOG	Deep East Texas Council of Governments	Regional council of governments founded to facilitate planning, eliminate duplication, and promote economy and efficiency in the coordinated development of the region. Members include representatives from Angelina, Houston, Nacogdoches, Newton, Polk, Sabine, San Augustine, San Jacinto, Shelby, Trinity, and Tyler Counties.
Dfund	Texas Water Development Fund	State loan program that provides financing for various types of infrastructure projects. This program enables the TWDB to fund projects with multiple purposes in one loan.
EAP	Emergency Action Plan	An EAP is a written document that identifies potential emergency conditions and specifies pre-planned actions to be followed to minimize property damage, potential loss of infrastructure, and potential loss of life.
EOC	Emergency Operation Centers	Centralized location of emergency response and recovery operations during and in the immediate aftermath of incidents.
EOP	Emergency Operations Plan	Plan used by entities to detail courses of action during disasters.
EPA	Environmental Protection Agency	Federal Agency that monitors environmental conditions including a number of topics related to water.
EWP	Emergency Watershed Protection	Federal emergency recovery program that offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods and other natural disasters that could adversely impact a watershed.

FAFDS	First American Flood Data Services or Fathom	Flood risk data generated by a large, state-wide model and is based entirely on the expected rainfall in a given area. It is considered the least-accurate of the floodplains available to the Regional Flood Planning Group.
FCD	Flood Control District	Special districts that have authority and provide control over rivers, streams, tributaries, and related structures within their jurisdictions to protect people and property from negative flood impact.
FDPO	Flood Damage Prevention Ordinance	Ordinance enacted by local government entities with the purpose of minimizing public and private losses due to flood conditions; often involve floodplain protection and increased enforcement of new construction so as to not exacerbate flood conditions.
FEMA	Federal Emergency Management Agency	Federal Agency responsible for emergency management activities before, during, and after disasters. FEMA manages several flood related grant programs and is responsible for the NFIP and maintains FIRM maps.
-	Flood Exposure	For the purposes of flood planning, flood exposure analyses will identify who and what might be harmed by flood including each structure located in flood hazard area.
FFE	Finished Floor Elevation	
-	Flood Hazard	For the purposes of flood planning, flood hazard analyses will determine the location, extent, magnitude, and frequency of flooding.
FHBM	Flood Hazard Boundary Maps	Maps that depict areas of flood hazard; used by communities that participate in the NFIP.
FIF	Flood Infrastructure Fund	Financial assistance program in the form of loans and grants for flood control, flood mitigation, and drainage projects and is administered by the TWDB.
FIRM	Flood Insurance Rate Map	Official map of a community on which FEMA has delineated the Special Flood Hazard Areas (SFHAs), the BFEs, and the flood zones applicable to the community.
FIS	Flood Insurance Study	A compilation of flood risk data within a community. When a flood study is completed for the NFIP, the information and maps are assembled into an FIS.
FIUP	Flood Intended Use Plan	A document adopted by TWDB that identifies the uses of funds for flood projects.

FMA	Flood Mitigation Assistance Grant Program	Competitive grant program that provides funding to states, local communities, and federally recognized tribes and territories. Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the NFIP.
FME	Flood Management Evaluation	A FME is a proposed flood study of a specific, flood-prone area that is needed in order to assess flood risk and/or determine whether there are potentially feasible FMSs or FMPs.
FMP	Flood Management Project	A FMP is a proposed project, either structural or non-structural, that has non-zero capital costs or other non-recurring cost and when implemented will reduce flood risk, mitigate flood hazards to life or property.
FMS	Flood Management Strategy	A FMS is a proposed plan to reduce flood risk or mitigate flood hazards to life or property. FMSs include any proposed action that the RFPG would like to identify, evaluate, and recommend that does not qualify as either a FME or FMP.
FPR	Flood Planning Region	
-	Flood Readiness and Resilience	Non-structural projects/programs aimed at improving flood preparedness and response to flood events including: plan activation, chain of command, emergency functions, evacuation procedures, flood early warning systems, and/or resilience measures to be implemented to reduce flood damage.
-	Flood Risk	For the purposes of regional flood planning, flood risk analyses will comprise a three-step process of flood hazard, flood exposure, and vulnerability analyses
FRMP	USACE Flood Risk Management Program	Program established by USACE to identify and assess flood hazards posed by all flood risk reduction infrastructures.
-	Flood Vulnerability	For the purposes of flood planning, vulnerability analyses will identify vulnerabilities of communities and critical facilities located within the region.
-	Freeboard	An additional amount of height above the BFE used as a factor of safety in determining a structures elevation.
GCPD	Gulf Coast Protection District	The non-federal sponsor of the Orange County component of the Sabine Pass to Galveston Bay CSRM program; includes Harris, Chambers, Galveston, Jefferson, and Orange counties.
GIS	Graphic Information System	GIS connects data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there).

GLO	General Land Office	State agency in Texas responsible for managing lands and mineral rights properties that are owned by the state.
HEC	Hydrologic Engineering Center	Developers of various modeling software for USACE that are often utilized for conducting hydrologic and hydraulic analysis.
HHPD	High Hazard Potential Dam Grant Program	Program that provides grants for technical, planning, design, and construction assistance regarding rehabilitation of eligible high hazard potential dams.
HMAP	Hazard Mitigation Action Plan	HMAP reduces loss of life and property by minimizing the impact of disasters. Communities identify natural disaster risks and vulnerabilities in the area.
HMGP	Hazard Mitigation Grant Program	Program established by FEMA to provide funding to state, local, tribal, and territorial governments to spur the development of hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities.
H&H	Hydrology and Hydraulic(s)	
HUC	Hydrologic Unit Code	A hierarchical sequence of numbers that defines a hydrologic unit. The sequence is divided into different classifications with two digits used to represent major geographic areas in the United States and twelve digits used to describe different subwatersheds included in a select geographic area.
HUD	Department of Housing and Urban Development	Executive department of the federal government that administers urban housing and urban development laws.
ICS	Incident Command System	A standardized on-scene emergency management hierarchical construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.
IIJA	Infrastructure Investment and Jobs Act	Act passed in 2021 intended to provide funding to modernize much of the existing infrastructure in the United States and address deficient water infrastructure and local water quality challenges.
LiDAR	Laser Imaging, Detection, and Ranging	Method for measuring distances and ranges utilizing lasers; often used in surveying to make three-dimensional representations of an area to aid in mapping.
LOS	Level of Service of Asset	A measure of the level of protection a flood infrastructure asset provides in terms of annual exceedance probability.

LWC	Low Water Crossing	A roadway creek crossing that is subject to frequent inundation during storm events or subject to inundation during a 50% ACE (2-year) storm event. During the first planning cycle, the RFPGs have the flexibility to utilize the community's discretion to identify a roadway creek crossing as LWC.
MSC	Map Service Center	Online public source for flood hazard information and maps produced by FEMA in support of the NFIP.
MS4	Municipal Separate Storm Sewer System	A conveyance or system of conveyances that is owned by a public entity that discharges to waters of the U.S., designed to collect or convey stormwater, is not a combined sewer, and not part of a sewage treatment plant.
MUD	Municipal Utility District	Districts that provide water, wastewater (sewage), drainage, and other services within the district's boundaries to include water conservation, irrigation, firefighting, solid waste collection and disposal, and recreational facilities.
NFHL	National Flood Hazard Layer	NFHL is a geospatial database that contains current effective flood hazard data. FEMA provides the flood hazard data to support the National Flood Insurance Program.
NFIP	National Flood Insurance Program	NFIP is managed by FEMA and provides insurance to help reduce the socio-economic impact of floods.
NHD	National Hydrologic Dataset	Comprehensive hydrography dataset that represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, dams, and stream gages.
NIMS	National Incident Management System	System that guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from incidents.
NOAA	National Oceanic and Atmospheric Administration	Federal Agency that monitors and forecasts weather and climate conditions.
NRC	National Research Council	Operating arm of the United States National Academies of Sciences, Engineering, and Medicine; produces reports that advance development in science, engineering, and medicine.
NRCS	National Resource Conservation Service	An agency under the United States Department of Agriculture that collaborates with farmers, ranchers, communities, and other individuals and groups to protect natural resources on private lands. Formerly known as the Soil Conservation Service (SCS).

NWS	National Weather Service	Federal agency responsible for providing weather forecasts, warnings of hazardous weather, and other weather-related products to organizations and the public for the purposes of protection, safety, and general information.
OCDD	Orange County Drainage District	
OEM	Office of Emergency Management	An agency often attached to a governing entity that is responsible for planning for and coordinating response to disasters that negatively impact their area.
O&M	Operations and Maintenance	
QAQC	Quality Assurance and Quality Control	
PA	Public Assistance	Program administered by FEMA that provides supplemental grants to state, tribal, territorial, and local governments so communities can swiftly respond to and recover from major disasters or emergencies.
PED	Pre-construction Engineering and Design	Phase of a project where the detailed engineering, technical studies, and design behind a project is completed to prepare for construction.
RAS	River Analysis System	Modeling software created by HEC that is used extensively for hydraulic analysis.
RFC	River Forecast Center	Centers operated by NWS that prepare daily river forecasts for the protection of lives and property.
RFP	Regional Flood Plan	
RFPG	Regional Flood Planning Group	The generic term for the planning groups that oversee the regional flood plan development in each region in the State of Texas.
Risk MAP	Risk Mapping, Assessment, and Planning Program	Program administered by FEMA that involves coordination with federal, state, tribal, and local partners across the nation to identify flood risk and promote informed planning and development practices to reduce that risk.
RSLC	Relative Sea Level Change	Change in sea level that is observed with respect to the land surface at a particular location.
SB	Senate Bill	
SETRPC	South East Texas Regional Planning Commission	Voluntary association of local governments in Hardin, Jasper, Jefferson, and Orange Counties; utilizes a 9-1-1 Emergency Network that addresses calls from residents within all four counties.

SE Texas R.A.I.N.	Southeast Texas Regional Alerting & Information Network	Web-based public informational resource which compiles and presents information necessary to make important decisions during threatening weather conditions; covers the southern portion of the Neches and Sabine watersheds.
STAN	Southeast Texas Alerting Network	Network used by local entities to send emergency and outreach messages to the public; serves residents in Jefferson, Orange, Hardin, and Jasper Counties.
STORM	Safeguarding Tomorrow through Ongoing Risk Mitigation	An Act signed into law on Jan 1, 2021 that authorizes FEMA to provide capitalization grants to states or eligible tribal governments to establish revolving loan funds to provide hazard mitigation assistance to local governments to reduce risks to disasters and natural hazards.
SLFRF	Coronavirus State and Local Fiscal Recovery Funds	Part of the American Rescue Plan, allocated $350 billion to state, local, and tribal governments to support their response to and recovery from the COVID-19 pandemic. Can be used to invest in water, sewer, and broadband infrastructure.
SLR	Sea Level Rise	
SFHA	Special Flood Hazard Area	Regulatory term for an area having special flood, mudflow, or flood-related erosion hazards, and shown on an FHBM or FIRM.
SRA-TX	Sabine River Authority - Texas	
SRA-LA	Sabine River Authority - Louisiana	
SUD	Special Utility District	Districts created under Article XVI, Section 59 of the Texas Constitution that can provide water, wastewater, and firefighting services but cannot levy taxes.
SVI	Social Vulnerability Index	SVI ranks each Census tract on 15 social factors that influence a community's ability to prepare for, respond to, and recover from a disaster. High SVI scores indicate a higher degree of vulnerability for a community.
SWCD	Soil and Water Conservation District	Districts that work with public and private organizations and agencies to mitigate soil and water erosion and enhance water quality and quantity in the state.
SWP	State Water Plan	Plan developed by TWDB that addresses the needs of all water user groups in the state during a repeat of the drought of record that the state suffered in the 1950s.

TAC	Texas Administrative Code	The development of the regional flood plan must follow specific criteria as outlined in the Texas Administrative Code (TAC). The flood plan requirements may be found at 31TAC, Chapter 361, Subchapter C, Regional Flood Plan Requirements and 31 TAC, Chapter 362, State Flood Planning Guideline Rules, Subchapter A, State Flood Plan Development. These rules contain procedures and guidelines for the development of the regional flood plan.
TC	Technical Consultant	
TCEQ	Texas Commission on Environmental Quality	Environmental agency for the state of Texas responsible for maintaining water quality and availability and the Texas Dam Safety Program.
TDA	Texas Department of Agriculture	State agency responsible for matters relating to agriculture, rural community affairs, and other related matters.
TDEM	Texas Division of Emergency Management	Division of TxDPS charged with coordinating state and local responses to natural disasters and other emergencies in Texas.
TFMA	Texas Floodplain Management Association	An organization of professionals involved in floodplain management, flood hazard mitigation, the NFIP, flood preparedness, warning and disaster recovery.
TNRIS	Texas Natural Resources Information System	TNRIS is a division of the TWDB that maintains historic and current geospatial data products.
TPDES	Texas Pollutant Discharge Elimination System	Regulatory program to control discharges of pollutants to surface waters; the statewide program is administered by TCEQ.
TP-40	Technical Paper Number 40	Technical document published in 1961 historically used as the rainfall frequency atlas of the United States.
TSSWCB	Texas State Soil & Water Conservation Board	State agency that administers Texas's soil and water conservation laws and coordinates conservation and nonpoint source water pollution abatement programs throughout the state.
TWDB	Texas Water Development Board	Texas Agency with oversight of regional flood plan development.
TXARNG	Texas Army National Guard	Component of the United States Army; often conduct duties relating to disaster relief and emergency preparedness.
TxDOT	Texas Department of Transportation	State agency in Texas charged with providing construction oversight and maintenance of road infrastructure within the state.
TxDPS	Texas Department of Public Safety	State agency responsible for statewide law enforcement and driver license administration.

USACE	US Army Corps of Engineers	Federal agency responsible with providing oversight for several water resource projects in the region to include administering operations at Sam Rayburn Reservoir and managing coastal flood infrastructure projects.
USDA	United States Department of Agriculture	Federal department charged with executing laws on food, agriculture, natural resources, and other related issues. Provides oversight for the Risk Management Agency, which supervises the Federal Crop Insurance Corporation.
USFS	United States Forest Service	Agency of the USDA that oversees the nation's national forests and grasslands.
USGS	United States Geological Survey	Scientific agency of the federal government that studies the landscape of the United States, its natural resources, and the natural hazards that threaten it.
WCID	Water Control and Improvement District	Districts that have authority to supply and store water for domestic, commercial, and industrial use. Some districts may operate sanitary wastewater systems and provide irrigation, drainage, and water-quality services.
WPC	Weather Prediction Center	
WRDA	Water Resources Development Act	Legislation passed typically in two-year intervals to authorize USACE activities for flood control, navigation, and ecosystem restoration.
WSEL	Water Surface Elevation	
WUG	Water User Group	Accounting unit utilized by TWDB for Regional Water Planning processes; often defined as entities serving more than 100 acre-ft per year (ac-ft/yr) for municipal use.

APPENDIX 10-C
DRAFT PLAN COMMENTS AND RESPONSES

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Texas Water Development Board

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Austin, TX 78711-3231, www.twdb.texas.gov
Phone (512) 463-7847, Fax (512) 475-2053

October 21, 2022

Mr. Mark Howard
RMPD Division Manager
Sabine River Authority
12777 Hwy 87 N.
Orange, TX 77632

RE: Texas Water Development Board Comments on Region 04 Sabine RFPG's Draft Regional Flood Plan Contract No. 2101792489

Dear Mr. Howard:

Texas Water Development Board (TWDB) staff has performed a review of the draft regional flood plan submitted by August 1, 2022, on behalf of the Region 04 Sabine Regional Flood Planning Group (RFPG). The attached comments will follow this format:

- **LEVEL 1**: Comments and questions that must be satisfactorily addressed to meet specific statute, rule, or contract requirements; and,
- **LEVEL 2**: Comments and suggestions for consideration that may improve the readability and/or overall understanding of the regional flood plan

Please note that while Level 2 comments are provided for the planning group's consideration, Level 1 comments must be addressed prior to the submission of final Regional Flood Plans by the January 10, 2023, deadline.

It is expected that the data contained in all written report sections, tables, excel spreadsheets, and the geodatabase will be consistent throughout. In cases where there are any discrepancies in data, the geodatabase dataset will supersede other data and the TWDB will utilize the geodatabase dataset when developing the state flood plan.

TWDB review of the draft regional flood plans is comprised of many spot checks of data across several deliverables and is not an all-encompassing data review. Please note that TWDB's review does not imply accuracy of the draft regional flood plan. Each RFPG is responsible for ensuring the completeness and accuracy of the plan and all associated data.

To facilitate efficient and timely completion, and Board approval, of your final regional flood plan, please provide your TWDB Regional Flood Planner with a draft of your response to these comments (e.g., informally via email) on the draft RFP as soon as possible. This will allow TWDB staff to provide preliminary feedback on proposed RFPG responses to assist you in meeting your RFPG's

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timeline for approval and submission to TWDB of the final plan by the deadline. It will also help to minimize the need for subsequent follow-ups after final regional flood plan submission to TWDB.

Title 31 TAC §361.50(c) requires the regional flood planning group to consider any written or oral Comment received from the public on the draft regional flood plan (RFP); and the EA's written comment on the draft RFP prior to adopting a final RFP. Section 361.50(d) requires the final adopted plan include summaries of all timely written and oral comments received, along with a response, for each, explaining any resulting revisions or why changes are not warranted. Copies of TWDB's Level 1 and 2 written comments and the RFPG's responses must be included in the final, adopted RFP. While the comments included in this letter represent TWDB's review to date, please anticipate the need to respond to additional comments or questions, as necessary, regarding data integrity related to the Board's State Flood Plan Database (that is built from the 15 regional databases), even after submission of the final plan to TWDB.

Standard to all RFPGs is the need to include certain content in the final RFPs that was not yet available at the time that drafts were prepared and submitted. In your final RFP, please be sure to incorporate in the final submitted plan, documentation, for example, that a public meeting to receive comments was held as required and that comments received on the draft RFP were considered in the development of the final plan [31 TAC §361.50(d)].

If you have any questions regarding these comments or would like to discuss your approach to addressing any of these comments, please do not hesitate to contact Ryke Moore at 512-475-1564 or via email at Ryke.Moore@twdb.texas.gov. TWDB staff are available to assist you in any way possible to ensure successful completion of your final regional flood plan.

Lastly, on behalf of TWDB, I would like to thank you, the sponsor, the RFPG members and the technical consultants for accomplishing this major milestone of a herculean effort and advancing the flood risk reduction mission in our state.

Sincerely,

Reem J. Zoun, PE, CFM
Director
Flood Planning

Attachment: TWDB Comments

Cc: Travis Williams, RFPG Chair
Mat Leclair, Freese and Nichols, Inc.
Michael Reedy, Freese and Nichols, Inc.

Texas Water Development Board

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Matt Nelson, TWDB
James Bronikowski, TWDB
Anita Machiavello, TWDB
Ryke Moore, TWDB

October 21, 2022

TWDB Comments on Region 04 Sabine Regional Flood Planning Group's Draft Regional Flood Plan

Level 1: Comments and questions must be satisfactorily addressed to meet statutory, agency rule, and/or contract requirements.

General Comments

1. Please ensure that all "Submittal requirements" identified in each of the Exhibit C Guidance document sections are submitted in the final flood plan.

SOW Task 1

2. Entities GIS Feature Class, *Entities:*
    a. Please review entities listed as having flood-related authority within the *Entities* feature class. It is not clear whether all entities listed under "Other" have flood-related authority [31 TAC§361.30(4) & (5)].
    b. It appears that some entities crossing regional boundaries do not start with "00" as required. For additional entities crossing region boundaries, an ID should be requested from TWDB to ensure consistency across regions. Regions may create their own IDs for additional entities entirely within the region, and please refer to the TWDB email sent on December 3, 2021 for more information on adding new entities. [31 TAC§361.30(4) & (5)].
3. Existing Flood Infrastructure GIS Feature Class, *ExFldInfraPol:* Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'POP_PROTEC' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.31 & Exhibit D 3.3].
4. Existing Flood Infrastructure GIS Feature Class, *ExFldInfraLn:* Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'POP_PROTEC' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.31 & Exhibit D 3.3].
5. Existing Flood Infrastructure GIS Feature Class, *ExFldInfraPt:*
    a. Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'POP_PROTEC' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.31 & Exhibit D 3.3].
    b. Please include all low water crossings (LWCs) identified during the flood planning process in this feature layer. The *ExFldExpAll* feature class appears to contain LWCs that are not included in the ExFldInfraPt feature class. Note: This is required in contrast to the optional *LWC* feature class. See Table 7 of Exhibit D for a list of valid entries [31 TAC §361.31].
6. Existing Projects (Exhibit C, Section 2.1): Figure 1-10 does not appear to show the extent of projects, other than the largest which covers the remaining projects. Please revise the map to show the locations of projects in the area [31 TAC §361.32].

SOW Task 2A

7. Existing Condition Flood Risk Analyses, Text (Exhibit C, Section 2.2.A): Please include a reference to Exhibit C Table 3 in the text as per guidance document (page 27): Once Task 2A Existing Condition Flood Risk Analyses is complete, RFPGs must include a summary table with findings summarizing flood risk by county (Exhibit C Table 3).
8. Existing Condition Flood Hazard Analysis, Text (Exhibit C, Section 2.2.A.1): Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (page 24): Submittal requirement number 2.
9. Existing Condition Flood Exposure (Exhibit C, Table 3): The Structure and Residential Structure counts in Table 3 do not appear to match the *ExFldExpAll* feature class counts. Please review and reconcile. [31 TAC §361.33 & Exhibit C 2.2.A.3].
10. Existing Condition Flood Exposure GIS Feature Class, *ExFldExpPol:* Please refrain from using numeric placeholders (such as ”999999”) in numeric fields such as ‘VELOCITY’ as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c) & Exhibit D 3.5.2].
11. Existing Condition Flood Exposure GIS Feature Class, *ExFldExpLn:* Please refrain from using numeric placeholders (such as ”999999”) in numeric fields such as ‘VELOCITY’ as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c) & Exhibit D 3.5.2].
12. Existing Condition Flood Exposure GIS Feature Class, *ExFldExpPt:* Please refrain from using numeric placeholders (such as ”999999”) in numeric fields such as ‘VELOCITY’ as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c) & Exhibit D 3.5.3].
13. Existing Condition Vulnerability GIS Feature Class, *ExFldExpAll:*
    a. The *ExFldExpAll* feature class does not appear to include all *ExFldExpLn* segments. Please review all existing exposure features and ensure that all are included in the *ExFldExpAll* feature class [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].
    b. The Structure and Residential Structure counts in Table 3 do not appear to match the *ExFldExpAll* feature class counts with the 0.2% Annual Chance Flood Risk. Table 3 lists the Structure count as 48,703 and the Residential Structure count as 34,839. In contrast, the *ExFldExpAll* Structure counts are 24,453 and the Residential Structure counts are 10,773. Please review and reconcile [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].
    c. Please refrain from using numeric placeholders (such as ”999999”) in numeric fields such as ‘VELOCITY’ as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].
    d. The feature class does not appear to contain any entries with the 'SOURCE' listed as "Public". Exhibit C Section 2.2.A.1 includes the requirement to identify additional flood prone areas in the region that may not have been identified in the initial map(s) generated by the RFPG. Please confirm that the public did not identify any additional flood prone areas included in this feature class and, in event they did, please note "Public" as the data source [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].
14. Model Coverage GIS Feature Class, *ModelCoverage:* There appears to be invalid entries for the field ‘MODEL_SOFTW’. Please ensure all fields are populated with valid entries. Please

refer to the Summary Update to Exhibit D document available on the TWDB website [31 TAC §361.33(b)(2)].

SOW Task 2B

15. Future Condition Flood Risk Analyses, Text (Exhibit C, Section 2.2.B): Please include a reference to Exhibit C Table 5 in the text as per guidance document (page 35): Once Task 2B Future Condition Flood Risk Analyses is complete, RFPGs must include a summary table with findings summarizing flood risk by county (Exhibit C Table 5).
16. Future Condition Flood Hazard Analysis, Text (Exhibit C, Section 2.2.B.1): Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (page 33): Submittal requirement number 3
17. Future Condition Flood Exposure GIS Feature Class, *FutFldExpPol:* Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].
18. Future Condition Flood Exposure GIS Feature Class, *FutFldExpLn:* Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].
19. Future Condition Flood Exposure GIS Feature Class, *FutFldExpPt:* Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].
20. Future Condition Flood Vulnerability GIS Feature Class, *FutFldExpAll:* Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].

SOW Task 3A

21. Existing Floodplain Management Practices, Text (Exhibit C, Section 2.3.A): Please review the information included in the draft plan and related tables. It appears that the information and tables in Chapter 1 do not match all the information and tables in Chapter 3, for example Tables 1-7 and 3-1 do not appear to align regarding the number and type of entities with flood-related authority. Please review and reconcile [31 TAC See §361.35 & Exhibit C 2.3.A].
22. Existing Floodplain Management Practices GIS Table, *ExFpMp:*
    a. Please review the feature class as it appears there are differences between the *ExFpMp* table and the table from the chapter appendix. For example, Joaquin is listed "s "Low" for 'LEV_ENFC' in the *ExFpMp* table but listed as "None" in the Exhibit C Table 3 located in Appendix 3-B. Please reconcile [31 TAC §361.35 & Exhibit D 3.7].
    b. It appears that some fields contain invalid entries. For example, fields such as 'MIN_CODE' contain "999999". Please review all fields and populate with valid entries as referenced in Exhibit D Table 20 [31 TAC §361.35 & Exhibit D 3.7].

SOW Task 3B

23. Goals Table (Exhibit C, Table 11): Please adhere to Exhibit D guidance regarding GOAL ID structure. GOAL ID should begin with the region number such as '04' and not '4' [31 TAC §361.36 & Exhibit C 2.3.B].
24. Goals GIS Feature Class, *Goals:*
    a. Please adhere to Exhibit D guidance regarding GOAL ID structure. GOAL ID should begin with the region number such as '04' and not '4' [31 TAC §361.36 & Exhibit C 2.3.B].
    b. Please ensure goals adhere to Exhibit C guidance regarding setting objectives, being measurable, etc. It appears that some goals, including but not limited to goal number 18, do not appear to meet this requirement. Please review grammar and goal descriptions to provide a better understanding of how and why policies and criteria would reduce floodplain development, and what their impact would be on education [31 TAC §361.36 & Exhibit C 2.3.B].

SOW Task 4B

25. Flood Management Evaluations (FME) Table (Exhibit C, Table 12): It appears that FME_ID 04100060 is missing from Table 12. Please review and reconcile.
26. Flood Management Evaluations (FME) Map (Exhibit C, Map 16): It appears that an indication of whether an FME area is associated with previous studied area is not noted, as required by the Submittal Requirements for FMEs in Exhibit C Section 2.4.B. Please reconcile [31 TAC §361.38(m) & Exhibit C 2.4.B].
27. Flood Mitigation Projects (FMP) Text (Exhibit C, Section 2.4.B): It appears that the estimated cost of the "Sabine Pass to Galveston Bay" FMP in Table 4-11 ($2,270,100,000) does not match the estimated cost in Table 13 in the Appendix ($2,390,000,000). Please review and reconcile as appropriate [31 TAC §361.38(c-e) & Exhibit C 2.4.B].
28. Flood Mitigation Projects (FMP) Table (Exhibit C, Table 13): It appears that the estimated cost of the "Sabine Pass to Galveston Bay" FMP in Table 4-11 ($2,270,100,000) does not match the estimated cost in Table 13 in the Appendix ($2,390,000,000). Please review and reconcile as appropriate [31 TAC §361.38(c-e) & Exhibit C 2.4.B].
29. Flood Mitigation Projects (FMP) GIS Feature Class, *FMP:* Please refrain from using numeric placeholders (such as ”999999”) in numeric fields such as ‘REDSTRUCT100’ as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.38(c-e) & Exhibit D 3.11.1].
30. Flood Management Strategies (FMS) Text (Exhibit C, Section 2.4.B):
    a. Please review entries for Table 4-12. It appears Table 4-12, and the FMS feature class lists a total of 49 FMSs in contrast to Table 4-13 that lists 51 and the associated Table 14 within the appendix that lists 50. Please review and revise accordingly [31 TAC §361.38(h) & Exhibit C 2.4.B].
    b. For any Maintenance FMS, please review and verify that costs are non-recurring, non-capital. Please review and revise accordingly [31 TAC §361.38(h) & Exhibit C 2.4.B].
31. Flood Management Strategies (FMS) Table (Exhibit C, Table 14):
    a. It appears Table 4-12 and the *FMS* feature class lists a total of 49 FMSs in contrast to Table 4-13 which lists 51 FMSs and the associated Table 14 within the appendix that lists 50 FMSs. Please review and revise accordingly [31 TAC §361.38(d) & Exhibit C 2.4.B].

b. Please review if the FMS_ID 042000024 City of Fate Flood Access Improvement is considered an FMS or includes associated capital costs. If it has no capital costs, please provide brief additional description to clarify the nature of the strategy [31 TAC §361.38(d) & Exhibit C 2.4.B].

32. Flood Management Strategies (FMS) GIS Feature Class, *FMS:*
    a. Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'DAMAGE' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.38(d) & Exhibit D].
    b. It appears Table 4-12 and the *FMS* feature class lists a total of 49 FMSs in contrast to Table 4-13 which lists 51 FMSs and the associated Table 14 within the appendix that lists 50 FMSs. Please review and revise accordingly [31 TAC §361.38(d) & Exhibit C 2.4.B].

SOW Task 5

33. Flood Mitigation Project (FMP) Recommendations, Text:
    a. Each recommended FMP must be accompanied with an associated model or supporting documentation to show no negative impact. Please confirm in the plan that this was done and provide reference to supporting materials. As per the draft report (page 4-18), "For Structural FMPs and FMSs, signed and sealed reports were checked for certified statements that the associated project or strategy would not cause negative impacts upstream, downstream, or within the project area in events up to and including the 1% annual chance flood event. For FMPs and FMSs that certified statements could not be located for, existing H&H models were reviewed for negative impacts as defined above." For each recommended FMP, please identify in the plan how no negative impact was determined as required by the Exhibit C Section 3.6.A (page 108), either via a model or a study, and submit the associated model or include the study name.
34. Flood Management Evaluation (FME) Recommendations Table (Exhibit C, Table 15): FME_ID 04100060 is included in the *FME* feature class but appears to be missing from Table 15. Please revise Table 15 accordingly to include all FMEs [31 TAC §361.39(c), (f) & Exhibit C 2.5.A].
35. Flood Management Project (FMP) Recommendations Table (Exhibit C, Section 2.5.B): Each recommended FMP must be accompanied with an associated model or supporting documentation to show no negative impact. Please confirm that this was done and provide reference to supporting materials. For example, the Sabine Pass to Galveston Bay project does not appear to refer to or describe any associated model or supporting documentation to show no negative impact. The City of Kilgore project includes a model, however there is no description how this model relates to the determination of no negative impact.
36. Flood Mitigation Project (FMP) Recommendations GIS Feature Class, *FMP:* Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'REDSTRUCT100' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile, as appropriate [31 TAC§361.39 & Exhibit D 3.11.1].
37. Flood Mitigation Project (FMP) Details (Exhibit C Section 3.9, Tables 23-40, and Exhibit D Section 3.11.3 *FMP_Details* Geodatabase file): Please ensure agreement across plan

elements of the FMP costs. The FMP costs included in the report, table, and feature class do not appear to be in alignment with each other. For example, the FMP_COST for the Sabine Pass to Galveston Bay Coastal Storm Risk Management Program is listed as $2,270,100,000 in the written portion of the plan on page 5-5 while the cost listed in the geodatabase is $2,390,000,000. Please reconcile, as appropriate [31 TAC§361.39 & Exhibit C 2.5.B].

38. Flood Management Strategy (FMS) Recommendations, Text (Exhibit C, Section 2.5.c):
    a. It appears Table 4-12 and the *FMS* feature class lists a total of 49 FMSs in contrast to Table 4-13 which lists 51 FMSs and the associated Table 14 within the appendix that lists 50 FMSs. Please review and revise accordingly [31 TAC §361.38(d) & Exhibit C 2.4.B].
    b. Please review if FMS_ID 042000024 City of Fate Flood Access Improvement is considered an FMS or includes associated capital costs. If it has no capital cost, please provide brief additional description to clarify. Please review the recommended FMS list for similar occurrences [31 TAC §361.39 & Exhibit C 2.5.C].
39. Flood Management Strategy (FMS) Recommendations Table (Exhibit C, Table 17):
    a. It appears Table 4-12, and the FMS feature class lists a total of 49 FMSs in contrast to Table 4-13 that lists 51 and the associated Table 14 within the appendix that lists 50. Please review and reconcile, as appropriate [31 TAC §361.39 & Exhibit C 2.5.C].
    b. Please review if FMS_ID 042000024 City of Fate Flood Access Improvement is considered an FMS or includes capital costs associated. If there are no capital costs, please provide brief additional description to clarify Please review the recommended FMS list for similar occurrences. [31 TAC §361.39 & Exhibit C 2.5.C].
40. Flood Management Strategy (FMS) Recommendations GIS Feature Class, *FMS:* Please refrain from using numeric placeholders (such as ”999999”) in numeric fields such as ‘DAMAGE’ as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.39 & Exhibit C 2.5.C].

SOW Task 9

41. Flood Infrastructure Financing Analysis, Text (Exhibit C, Section 2.9): It appears that the draft plan does not describe how the data was collected or the survey methodology. Please provide this required information. [31 TAC §361.44 & Exhibit C 2.9].

Level 2: Comments and suggestions for consideration that may improve the readability and overall understanding of the regional flood plan.

General Comments

42. To better align with our agency’s preferred nomenclature, please consider using the name, “Cursory Floodplain Data” instead of “Fathom” or Cursory Fathom Data” throughout the regional flood plan.
43. Please review certain plan figures, as necessary, for legibility. Figure 2-12, for example, may appear difficult to distinguish differences in colors assigned to portions of the chart. Please consider accessibility of readers, as appropriate, and update graphs and figures as appropriate.

SOW Task 1

44. Planning Area Description, Text (Exhibit C, Section 2.1):
    a. For maps similar to Figure 1-9 on page 1-22, please consider modifying map labels, as appropriate, to avoid covering the colored city polygons with their own name labels, especially for smaller cities.
    b. Please consider adding more detailed region analysis under Section 1.A.6.
    c. Please review text included in Chapter 1 for redundancy. For example, within Section 1.A.7.d, on page 1-25, there appears to be a sentence that is repeated in both paragraphs of the section starting with *"drainage master plans describe a community's …"*.
    d. Section 1.A.2.C and Section 1.A.4 include different percentages related to region NFIP participation, 87% and 97% respectively. Please reconcile or provide additional clarification as to why these numbers are different.
45. Existing Flood Infrastructure, Text (Exhibit C, Section 2.1):
    a. Please consider defining abbreviated items and acronyms including HMGP, CDBG-DR, and FIF the first time they are used, or consider including a section on abbreviations and acronyms. For example, on page 1-35 these three terms are used without prior definition in the plan, and members of the public may not be familiar with these terms. HMGP, does not appear to be defined until Chapter 9.
    b. Please provide a description in Chapter 1 of how Low Water Crossings were identified.
46. Existing Flood Infrastructure GIS Feature Class, *ExFldInfraPt:* Please use ENTITY_IDs from the *Entities* feature class for the OPER_ENT field. Please leave as '999999' or NULL if there is no data or unknown.
47. Previous Studies, Text (Exhibit C, Section 2.1): Previous studies were mentioned and discussed within the draft plan text, but a list of the previous studies was not also included. Please consider including a list of previous studies, if available.
48. Existing Projects (Exhibit C, Table 2): Please consider including ongoing project FMA-PJ-06-TX-2019-008. This is a 2019 FMA Grant that Orange County received to mitigate six flood prone structures by elevation with $1,003,984.04 in total project costs and is expected to be complete by Sept 15, 2023.
49. Existing Projects GIS Feature Class, *ExFldProjs:* Please consider including projects FMA-PJ-06-TX-2019-008 as described in the comment provided for Table 2.
50. Existing Projects (Exhibit C, Table 2): Please ensure that all ID fields are entered correctly in all tables and geodatabases. Unique IDs must be accurate for the database to connect and work properly. Please refer to Exhibit D Table 2 or more recent updates for Unique ID guidance. For example, it appears that there are differing starting IDs listed under 'Existing Project ID". Some start with '4' where guidance requires the unique ID to start with '04'.

SOW Task 2B

51. Future Condition Flood Vulnerability GIS Feature Class, *FutFldExpAll:* If the CRITICAL field contains a 'No' entry, then please leave CRIT_TYPE as NULL in associated entries.

SOW Task 3A

52. Existing Floodplain Management Practices, Text (Exhibit C, Section 2.3.A):

a. Please consider expanding, in greater detail, upon the level of enforcement of floodplain management practices within the chapter as they are outlined in Table 6 and the associated GIS submittal.
b. Please review the information pertaining to NFIP minimum requirements. The related NFIP BFE and building elevation requirements appear to be left off. Please review and consider revising as appropriate.

53. Existing Floodplain Management Practices Table (Exhibit C, Table 6): It appears that at least one city may be represented incorrectly in Appendix 3-B, Table 6. For example, Winona does not appear to be included in the FEMA list of NFIP participating communities.
54. Existing Floodplain Management Practices GIS Feature Class, *ExFpMp:* Please consider reviewing the feature class for accurate entities. It is not clear that those listed all have flood authority (e.g., certain MUDs as NFIP participants) [31 TAC §361.35 & Exhibit D 3.7].
55. Existing Floodplain Management Practices Map (Exhibit C, Map 13): Please consider modifying Figure 3-1 within the draft plan on page 3-6 for legibility as may be difficult for some members of the public to interpret including due to the lack of city names in many instances.

SOW Task 3B

56. Goals, Text (Exhibit C, Section 2.3.B): Please consider elaborating within the text section of "Transformed and Residual Risk" by providing descriptions of such risks as they apply if goals are achieved.

SOW Task 4B

57. Streams GIS Feature Class, *Streams:*
    a. Please consider reviewing the Streams with the *FMP* and *FME* feature classes for alignment. For example, FMP_ID: 043000012 and 043000020 polygons do not appear to overlap with streams stated in the descriptions.
    b. It appears the Streams feature class may include erroneous streams. See STREAM_ID: 040041224 and 040033872; It appears to cut across the terrain unrealistically. Please consider reviewing the streamline process.
    c. Please consider joining unconnected stream segments. See STREAM_ID: 040050935 for an example stream segment with a gap.
58. Flood Management Evaluations (FME) Text (Exhibit C, Section 2.4.B):
    a. Please consider if some FMEs should be FMPs. For example, see FME_ID: 041000034, where the name and description appear to indicate this action may be an infrastructure project. Please expand the description field to clarify why it is an FME or consider moving to FMP category if appropriate.
    b. For county-wide watershed strategies where a majority of the county falls outside of the RFPG boundary, please include justification how the strategy benefits the region and coordinate with other RFPGs to make sure the efforts are not duplicated. Additionally, please consider including an entire HUC-10 for the county-wide studies.
    c. For areas with existing BLE models, please state how the FME will improve upon the current BLE models. BLE is available for the entire Region 4 here: https://webapps.usgs.gov/infrm/estbfe/
    d. In areas where there is an ongoing TWDB-funded, FIF Category 1 study, please describe how this would be incorporated into the proposed FME. For example, FME

04100059 is a duplication of FIF ID 40027 (Hunt County Countywide Drainage Study). Please review FIF IDs 40027 (Hunt County Countywide Drainage Study), 40045 (Flood Protection Planning for Watersheds – Lower Sabine River Basin), 40058 (Flood Protection Planning for Watersheds – Upper Sabine River Basin), and 40019 (Sabine River Relief Ditch Extension & Expansion).

59. Flood Management Evaluation (FME) GIS Feature Class, *FME:*
    a. Please consider populating the "MODEL_DESC" field for clarity on existing studies to be used.
    b. Please consider documenting existing or ongoing BLE and FIF studies.
60. Flood Mitigation Projects (FMP) GIS Feature Class, *FMP*: If the 'WATER_SUP' field contains a "No" entry, then please leave WSUP_DESCR as NULL.
61. Flood Management Strategies (FMS) Text (Exhibit C, Section 2.4.B): For county-wide watershed strategies (i.e., Franklin County) where a majority of the county falls outside of the Flood Planning Region boundary, please consider including justification for how the FMS benefits the region.
62. Flood Management Strategies (FMS) Table (Exhibit C, Table 14): Please verify that all non-recurring, non-capital cost fields are $0 in Table 14. FMSs should include non-recuring, non-capital costs if they are known.

SOW Task 5

63. Flood Management Evaluation (FME) Recommendations, Text (Exhibit C, Section 2.5.A):
    a. The first FME_ID listed is 04100002. Please consider, if practical, starting FME_ID numbering at 04100001.
    b. Please consider if some FMEs should be FMPs. For example, see FME_ID 041000034, where the name and description appear to indicate this action as an infrastructure project. Please expand description fields to clarify why they are an FME or consider moving to FMP category if appropriate.
    c. For county-wide watershed FMEs where a majority of the county falls outside of the RFPG boundary, please include justification how the strategy benefits the region and coordinate with other RFPGs to make sure the efforts are not duplicated. Additionally, please consider aligning the county-wide study areas with full watershed boundaries.
    d. For areas with existing BLE models, please state how the FME will improve upon the current BLE models. BLE is available for the entire Region 4 here: https://webapps.usgs.gov/infrm/estbfe/
    e. In areas where there is an ongoing TWDB-funded, FIF Category 1 study, please describe how this would be incorporated into the proposed FME. For example, FME_ID 04100059 is a duplication of FIF ID 40027 (Hunt County Countywide Drainage Study). Please review FIF IDs 40027 (Hunt County Countywide Drainage Study), 40045 (Flood Protection Planning for Watersheds – Lower Sabine River Basin), 40058 (Flood Protection Planning for Watersheds – Upper Sabine River Basin), and 40019 (Sabine River Relief Ditch Extension & Expansion).
64. Flood Management Evaluation (FME) Recommendations GIS Feature Class, *FME:*
    a. Please consider populating the "MODEL_DESC" field for clarity on existing studies to be used.

b. Please consider documenting existing or ongoing BLE and FIF studies.

65. Flood Mitigation Project (FMP) Recommendations GIS Feature Class, *FMP:* If the 'WATER_SUP' field contains a "No" entry, then please leave 'WSUP_DESCR' as NULL.
66. Flood Mitigation Project (FMP) Details Geodatabase, *3.11.3 FMP_Details:* There are NULL score values for multiple entries for FMP_ID 043000017. Please verify if these are correct or should be added.
67. Flood Management Strategy (FMS) Recommendations, Text (Exhibit C, Section 2.5.C): For county-wide watershed strategies (i.e., Franklin County) where a majority of the county falls outside of the Flood Planning Region boundary, please include justification for how the FMS benefits the region.

SOW Task 9

68. Flood Infrastructure Financing Analysis, Text: Please consider reviewing text for proper usage of "Category 2" where appropriate. "Category 2" is referenced on page 9-4, however, there are currently no TWDB-funded, FIF Category 2 projects committed within the Sabine Flood Planning Region.

October 27, 2022

TEXAS PARKS & WILDLIFE

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Sabine Regional Flood Planning Group
Sabine River Authority
12777 State Highway 87
Orange, Texas 77632

Re: 2023 Sabine Regional Flood Plan

Dear Mr. Travis Williams,

In 2019 Senate Bills 7 and 8 established a regional and state flood planning process for Texas, aimed at better managing flood risk to reduce loss of life and property. As part of the process, Texas Parks and Wildlife Department (TPWD) was identified as a member of the regional flood planning groups (Texas Water Code Sec. 16.062). The mission of TPWD is to manage and conserve the natural and cultural resources of Texas and its ability to provide opportunities of hunting, fishing, and outdoor recreation for the use and enjoyment of present and future generations. TPWD values this opportunity to contribute to the flood planning process with the goal of enhancing flood risk management and achieving beneficial flood mitigation outcomes. Toward this effort TPWD members serve a dual role of supporting the voting membership in development of the plans and representing the natural resource interests of the state.

TPWD applauds the Sabine Regional Flood Planning Group for their efforts in completing the inaugural regional flood plan (RFP) especially considering the abbreviated timeline. Through the exceptional efforts of the RFPG, this plan will be a meaningful tool for reducing flood impacts to society, especially in those disastrous events that cause loss of life and injury. Because this represents the initial region-wide plan, it has the potential to be precedent setting for subsequent iterations. As such, it is important this plan recognizes the role nature and nature-based solutions can play in flood risk management and promotes opportunities to protect, enhance and restore the flood mitigation benefits provided by natural landforms.

TPWD is supportive of the planning process outlined by the Texas Water Development Board (TWDB) because it aims to achieve an integrative flood risk management (FRM) approach that prioritizes risk reduction through implementation of floodplain management, land use regulations, policy, and a balanced use of grey and natural and nature-based (NNBS) flood mitigation measures that are formed by inclusive participation at all levels of society. TPWD believes this integrative approach when implemented holistically will achieve the maximum benefits for society and natural ecosystems while minimizing environmental impacts. Recent published works on FRM and NNBS (Bridges et al 2021, Glick et al 2020, World Wildlife Fund 2016, Sayers et al 2013) support TWDB integrative flood management approach and provide extensive resources for flood planners.

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In the interest of achieving the state's flood risk management goals while protecting the state's fish and wildlife resources, TPWD reviewed regional flood plans based on the TWDB guidance principals as described in 31 Texas Administrative Code Chapters 361 and 362. Special focus was provided on the following subset of guidance principals due to its relevance to fish and wildlife management.

- Does the draft flood plan use the best available science, data, models, and flood risk mapping?
- Does the draft flood plan consider the potential upstream and downstream effects, including environmental, of potential flood management strategies (and associated projects) of neighboring areas?
- Does the draft flood plan include strategies and projects that provide for a balance of structural and non-structural flood mitigation measures, including projects that use nature-based features that lead to long-term mitigation of flood risk?
- Does the draft flood plan consider natural systems and beneficial functions of floodplains, including flood peak attenuation and ecosystem services?
- Does the draft flood plan encourage flood mitigation design approaches that work with, rather than against, natural patterns and conditions of floodplains?
- Does the draft flood plan seek to not cause long-term impairment to the designated water quality as shown in the state water quality management plan as a result of a recommended flood management strategy or project?
- Does the draft flood plan consider benefits of flood management strategies to water quality, fish and wildlife, ecosystem function, and recreation, as appropriate?
- Does the draft flood plan minimize adverse environmental impacts and conform with adopted environmental flow standards?
- Does the draft flood plan consider multi-use opportunities such as green space, parks, water quality, or recreation, portions of which could be funded, constructed, and or maintained by additional, third-party project participants?

Additionally, TPWD emphasizes that the following FRM concepts identified in the forementioned literature be incorporated into the RFP.

- Flood is a natural process that has many benefits to human and natural systems.
- Promoting some flooding as desirable and making room for water promotes native species, maintains vital ecosystem services, and reduces the chance of flooding elsewhere.
- Natural landscapes and watersheds provide flood mitigation functions that should be promoted, protected, enhanced, and restored.
- Prioritize risk reduction over flood control by focusing first on reducing loss of life and injury.
- Utilize limited resources fairly.
- Address flood risk using a portfolio approach to first implement non-structural (policy, land management, emergency management) followed by structural (grey and natural and nature-based) strategies.
- Criteria for assessing projects strategies should include a comprehensive suite of measures spanning economical, operational, societal, and environmental

- advantages and disadvantages. Assessments focusing on economics alone (number of buildings, acres) should be avoided.

Sabine Regional Flood Plan Comments

Texas Conservation Action Plan (TCAP) is a guiding document for conservation in the state of Texas, with the goals of realizing conservation benefits, preventing species listings, and preserving our natural heritage for future generations. Species of Greatest Conservation Need (SGCN) include numerous aquatic species such as fish, freshwater mussels, and salamanders. The TCAP handbook (Texas Parks and Wildlife Department, 2012) includes six types of priority habitats, three of which are aquatic: water resources; riparian and floodplains; and caves and karst. Issues affecting these environments include environmental flows, impoundments and dam operations, and water quality issues (including stormwater runoff).

The Draft Sabine Regional Flood Plan calculated and mapped flood risk analysis for both 1% and 0.2% annual chance storm events for current and future conditions. A model of the current conditions risk of flooding was created by compiling local knowledge, Federal Emergency Management Agency (FEMA) Base Level Engineering (BLE) and National Flood Hazard Layer (NFHL), First American Flood Data Service (FAFDS), Fathom data, and National Oceanic and Atmospheric Administration (NOAA) Atlas-14 rainfall data. TPWD appreciates and supports the use of the best available science and most relevant data.

The Draft Sabine RFP identified 19 goals to aid in mitigating and managing floods. These goals include education and outreach, improving flood warning and readiness, increasing the number of flood studies, increasing the prevention of flooding, and supporting flood infrastructure projects. TPWD encourages the inclusion of the ecological and societal benefits of flooding in any education program and appreciates the repeated mention of nature-based solutions in the education and outreach goals of the Sabine RFP.

The Sabine RFP identified 2 potentially feasible Flood Management Projects (FMPs), 59 potentially feasible Flood Management Evaluations (FMEs), and 49 potentially feasible Flood Management Strategies (FMSs). It appears that most of the recommended FMPs are infrastructure based with only one nature-based solution being put forward. TPWD appreciates that Sabine RFP recommends that all new construction to consider nature-based solutions. TPWD understands that the goal of the RFP is to mitigate floods to reduce risk to life and property and would also like to encourage the use of nature-based solutions where possible. The Draft Sabine RFP states that none of the projects or strategies are anticipated to have negative downstream effects.

The proposed Flood Management Evaluations, Plans, and Strategies (FMXs, all together) include numerous infrastructure projects that may affect the aquatic habitats that are prioritized in the TCAP. For example, the removal of low-water crossings can benefit rare species such as mussels and fish if the crossing is replaced with a bridge or culvert that does not form a barrier to species movement. Conversely, building dams and channelizing streams can adversely affect aquatic habitats and species. TPWD would like to encourage all the FMX (an FMP, FME, or FMS) proponents to consider stream crossing designs that allow for sediment transport and passage of aquatic organisms and do not impound

water. Basically, designs that are invisible to the creek. This includes bridges that span the creek where possible or culverted crossings designed with the culvert(s) in the active channel area lower than those in the floodplain benches so that the flow in the channel is not overly spread out. The central/low-flow culvert(s) should be large enough to handle a 1.5-year flow without backing up water. The bottoms of these lower culverts should be set at least a foot below grade (i.e., recessed) to allow natural substrate to cover the culvert bottom and to allow for aquatic organism passage. These lower, recessed culverts should be installed in the thalweg or deepest part of the channel and be aligned with the low flow channel (Clarkin et al., 2006).

The Draft Sabine RFP includes a number of channel improvement projects which may include widening, deepening, and straightening streams. Channelization and over-widening of streams slows flow, which increases deposition of sediment, decreases fish habitat, increases water temperatures, and can result in channel erosion. Streams in good condition naturally reach bankfull and start spilling onto the floodplain during a 1.5 to 2-year flood event. Widening and deepening a stream channel to force it to contain the 100-year flow negatively impacts the adjacent water table and riparian area and has geomorphic effects upstream and downstream of the modification. If channelization is necessary, constructing a two-stage channel with a low-flow channel and a floodplain allows for the continued transport of sediment, habitat for aquatic wildlife, and can reduce maintenance (Rosgen 1996). TPWD encourages the RFPG to protect existing streams, riparian areas, and floodplains.

Thank you for your consideration of these comments. TPWD looks forward to continuing to work with the planning group to develop flood plans that protect life and property but are also beneficial to the environment. Please contact me at (512) 389 – 8214 or at Marty.Kelly@TPWD.Texas.gov or Bob Baker at (936) 569 – 8547 or at Robert.Baker@TPWD.Texas.gov if you have any questions or comments.

Sincerely,

Marty Kelly

Marty Kelly
Water Resources Program Coordinator

Mk:rb

References

Bridges, T. S., J. K. King, J. D. Simm, M. W. Beck, G. Collins, Q. Lodder, and R. K. Mohan, eds. 2021. International Guidelines on Natural and Nature-Based Features for Flood Risk Management. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

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Sayers, P., Y. L.i, G. Galloway, E. Penning-Rowsell, F. Shen, K. Wen, Y. Chen, and T. Le Quesne. 2013. Flood Risk Management: A Strategic Approach. Paris, UNESCO.

Texas Parks and Wildlife Department. 2012. Texas Conservation Action Plan 2012 - 2016: Overview. Editor, Wendy Connally, Texas Conservation Action Plan Coordinator. Austin, Texas.

World Wildlife Fund. 2016. Natural and Nature-based Flood Management: A Green Guide. Washington, DC: World Wildlife Fund. Http://envirodm.org/flood-managment 2016 WWF.

RFPG Comments Regarding Legislative Recommendations, Regulatory and Administrative Recommendations and State Flood Planning Recommendations		
Name	**Flood Plan Recommendations**	**Comments**
Jerry Cotter	**Table 8.1 Legislative**	
	Non regulatory regional flood control or drainage districts should be established and funded for rapidly growing urban areas such as DFW, Houston, San Antonio, etc. Responsibility would be to provide consistency, technical resources, funding and reviews in support of FME's, FMS's. These organizations would also implement or support implementation of FMP's. These organizations would augment communities and counties that just don't have the resources and expertise to manage flooding.	Rapidly developing areas surrounding larger urban centers are at greater risk of having runoff patterns increasing because of development. These urban areas are comprised of many communities and unincorporated county areas. Many of the smaller communities are not funded or resourced to deal with the complexities of floodplain management and therefore there is a lack of or inconsistencies in floodplain management practices.
	Clarify the early 2000's state legislation that provide counties the authority to regulate floodplains to explicidly allow and encorage activiites associated with floodplain management such as development of land use plans, regulatory authorites, e.g. permitting.	Although state legislation was passed in the early 2000's which gave counties the ability to regulate floodplains, interpretation of these regulations varies widely from county to county. The legislate bill lacks implementation guidance in the form of administrative rules. If development is occuring in unincorporated areas, this development can dynamically impact flood risk.
Jerry Cotter	**Table 8.2 Regulatory**	
	Require the use of n-values and channel conditions which would likely result if the channel or project were not maintained. Exceptions would be golf courses or other areas where an organization exists which would maintain the channel in perpetuity. Disallow maintence by marginal organizations such as home owners associations to justify acceptance of lower n-values as this is an unrealistic expectation.	When channels are constructed, most often channel bed, banks and overbanks are cleared; however; with many miles of these channels, it is often difficult for communities to maintain those beds, banks and overbanks at their design conditions. Generally, there is a lack of channel maintenance to ensure flood conveyance areas, established as part of a development or improvement projects, to retain their design level n-values. This results in unexpected changes in channel conveyance and increased flooding. Channel maintenance is very expensive activity that can trigger environmenatl permitting requirements.
	No loss of valley storage to the 500-year level. Communities could allow redistribution of valley storage to allow interactions with natural areas but no loss of storage.	Land development in upstream areas increases runoff in downstream areas. This happens because of increased impervious cover and decreased tree cover, and therefore less ability to absorb rainfall. Additionally, development, in most communities, encroaches into riparian areas and decreases the amount of storage available to accommodate flood waters. Just the main thread of the Trinity River though DFW stors more flood waters during of flood than any three of the USACE reservoirs that provide flood protection for DFW. The many other stream provide even more storage than the main stem. There is limited capacity in rivers and streams to convey floodwaters. This means that all areas above any given conveyance point have to stor flood water until sufficient time has laps to pass the water away from the impacted area. The streams are where this water is stored and depleting these storage areas will impact DS areas.
	Establish future land use plans for unincorporated areas associated with rapidly growing urban areas.	"
	Use of ultimate development land use conditions in the development of future flows. Require use of future flows for regulation of floodplains and development of FMP's.	"
Jerry Cotter	**Table 8.3 State Flood Planning Recommendations**	
	None	
	Potential FMS	
	Encorage storm shifting to validate 100-yr estimates and to provide a broader understanding of communities actual flood risk Storms identified and cataloged as part of the GLO funded USACE led Texas Storm Study could be the primary source of storms to be shifted.	Notes: Great deal of uncertainty in 100-yr estimates. Use of observed storms that approximately match depth duration data from NOAA Atlas 14 or other precipitation frequency sources validates 100-yr estimates. Additionally wet, dry and average conditions as well as conditions at the time the storm occured can be presented. Additionally, communities have and can experience storms that exceed the 100-yr. While not regulatory, this information will provide additional hazard mitigation data so communities can address critical infrastructure impacts and be better prepared.
	Add detail to Watersshed Hydrology Assessments (WHA) for communities within basins with completed WHA's. The WHA for the Trinity has been completed.	The WHA's, funded by FEMA, are considered the best available flood flow frequency estimates, e.g. 100-yr. These estimates consider the latest precipitation frequencies, the variations in watershed response and determine critical flood drivers by employing a wide range of sensitivity analysis for each computation point.
	Update WHA's when future precipitation frequency estimates become available. Efforts to develop future precipitation frequency estimates for Texas are starting.	
	Establish regional efforts, for large urban centers to develop future land use data for all developing areas, not just encorporated areas, for use in developing future flood flow frequency estimates and future 100-yr (and other recurrence interval) hazard boundaries.	

Volume	PDF Page	Chapter	Section	Comments / ?'s
1	82	2	2.A.1.a. Characterization of Existing Condition Floodplains (Data Gaps)	Good comments here, but it seems there is still room for extended discussion of flood forecasting data (existing quality and accuracy in terms of X, Y, Z, T, and P (probability). But it also understood that is a big subject. IMO, this topic (improved accuracy of flood risk analysis) should be one of the highest FME priorities for the region.
1	85	2	2.A.2.a. Existing Dv't w/in Flood Hazard Areas (Structures w/in Flood Hazard Area)	Might be good to produce a chart/graph (or map) showing number of structures in FHAs per county. Similar to Table 2-9, for example.
1	89	2	2.B.4.a. Future Conditions Based on "No Action" Scenario (Sea Level Change)	I realize its probably sensitive, but should glacial ice melt be mentioned (in list of 'affects'). Maybe call it something like 'glacial contraction'?
1	92	2	2.B.4.a. Future Conditions Based on "No Action" Scenario (Sedimentation/Geomorphic)	Area any sedimentation studies or data available? If so that might be helpful to include.
1	92	2	2.B.4.a. Future Conditions Based on "No Action" Scenario (Sedimentation/Geomorphic)	Also, land subsidence is potentially important magnifying factor (along with RSLC). TWDB Groundwater division has good data, maps, studies available on subsidence (historic/projected).
1	97	2	2.B.5.b. Future Potential Flood Exposure	It might be worth mentioning that from a methodology and results standpoint, future flood exposure is a very 'fluid' analysis. By that I mean therea re multiple variables, constant change. Having said that, there is a general trend of increased future flood exposure for the lowest portions of the basin.
1	97	2	2.B.5.b. Future Potential Flood Exposure	Does Figure 2-12 repeat from earlier section?
1	114	3	3.A.4. Recommendation of Minimum Flooplain Mngt and Land Use Standards (Roadways and Habitable Structures)	Should higher standards be suggested that take into account future increases to 1% BFE? Including RSLC, increasing rainfall, subsidence, development runoff, etc?
1	118-119	3	TABLE 3-4: FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS	Could this table be sorted starting with Short Term (10-year) first, then Long Term (30-year)?
1	125	4	Chapter 4.A. Flood Mitigation Needs Analysis	Nice job. This is a tough section to make clear based on the subject matter and prescribed TWDB methodology.
1	129	4	4.B.4.a. Classification of FMPs, FMSs, and FMEs	Nice job. Once again this is a tough section to make clear based on the subject matter and prescribed method from TWDB. FMX's, all very tough to methodically and accurately claasify/categorize. I still think one of the better things for TWDB/RFPG5 to consider (if possible) is a reclassification of buyout/acquisition as a FME or FMP....and also keeping FMS limited to instituitional or regulatory actions which have no phyical substance.
1	129	4	TABLE 4-11: LIST OF POTENTIALLY FEASIBLE FMPS	I think this table might benefit with a preamble, such as: **'FMP is a relatively strict definition per TWDB (and thus only a short list technically qualified). The following table list the two FMPs which met all the FMP criteria as outlined by TWDB. It is expected that in future iterations this list will grow as FMEs are completed and mature into future FMPs'.** (or something to that affect). I also like listing FMP first, but might suggest listing FME's second, with FMS's last. Just an idea, though I understand that is presumably the TWDB prescribed method of listing.
1	129	4	TABLE 4-11: LIST OF POTENTIALLY FEASIBLE FMPS	043000017: This sea wall project seems like ti might stretch the definitions, scope,geography, and purpose of the Sabine Regional Flood Planning Group. Just an obseravation. Also, I wonder if it truly meets the presumed standard of being a 'shovel-ready' project. Feasibility? Signed sealed design? NAI? I realize it might be politically popular but also might lead to questions whether it technically qualifies as an FMP. Just wondering.
1	130	4	TABLE 4-12: POTENTIALLY FEASIBLE FMS TYPE DISTRIBUTION	Preamble might be slightly better to say: 'Table 4-12 classifies by type the 49 potentially feasible FMSs, and Table 4-13 provides the complete listing of of all potentially feasible FMSs regardless of type.
1	131	4	TABLE 4-13: LIST OF POTENTIALLY FEASIBLE FMS	In addition to prior comments re. moving Acquisition and Elevation to FME/FMP category… the following FMS IDs might be more appropriate as FMEs: 2, 4, 9, 39, 40, 45.
1	136	4	TABLE 4-14: POTENTIAL FME TYPE DISTRIBUTION	Page transitions for this and prior table could possibly eliminate a blank page or two.
1	139	4	TABLE 4-15: POTENTIAL FMES	I like the 'post-amble' (narrative following the table), very good. Might consider moving it to the top and making it a preamble description of the table data.
	146	4	TABLE 4-17: FMS ESTIMATED COST ASSUMPTIONS	I think we could improve upon the Cost Estimate Ranges, by both modify the $ figures and providing clarifying notes.
1	148	4	TABLE 4-20: FUNDING SOURCES AVAILABLE FOR FMES, FMSS, AND FMPS	Suggest adding Hazard Mitigation Grant Program (HMGP) to FEMA list. Also, suggest adding Community Development Block Grant – Disaster Recovery (CDBG-DR) to HUD list.
1	148	4	4.B.4.h. Residual Risk	If you have flexibility to do so, I recommend either removing or demoting to #4 or 5 the: 'Potential failure or overtopping of dams and levees'. I say that because generally speaking it shas been a sensitive topic with SRA. Might be preferable to avoid mention when possible, depending on SRA opinion.
1	154	5	TABLE 5-1: RECOMMENDED FME BY EVALU	Similar to comments on Residual Risk, might want to be sure SRA is on board with including. If so, also, I assume this exercise if conducted would extend on past studies (originally conducted by Brown and Root that modeled dam failure projections for two scenarios: "Sunny Day Breach", and 'Worst-Case Scenario'. I think I have that data on file somewhere. Also, that cost estimate might be a little light depending on how detailed the analysis is.
			TABLE 5-3: RECOMMENDED FLOOD MITIGA	Good details, interesting project. Also see prior comments on the sea wall though.
1	166		TABLE 6-1: REDUCTION IN FLOOD RISK EXPOSURE DUE TO REC.FMPS	Good analysis. Benefits surprisingly low relative to cost, but I understand its pupose is mainly to protect industrial installations and shipping (benefits would look better if there was a way to take industrial benefits into account). P.S. I see a discussion on that is presented on page 168. National strategic importance, probably true.
1	167	6	6.A.1.c. No Adverse Impact	Might want to soften the preamble language to say 'The recommended FMPs do not appear to negatively affect neighboring areas located within or outside of the flood planning region.' It's probably the case that the USACE has attested to the NAI for this FMPs, but keeping arms length from such statements might be appropriate.
1	168-171	6		Nice job on this section.
1	172	6	FIGURE 6-1: WATER PLANNING AREAS AND	Might remove 'Chapter 7' reference below map.

RESPONSE LOG TO COMMENTS
DRAFT REGIONAL FLOOD PLAN

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Executive Summary								
1	MPTX	Verified	Exec. Summary	Might be good to include overview/description of the GIS Dashboard in Executive Summary. Emphasize its future utility and statewide pre-eminence.	Dashboard not posted on RFPG website at the moment. No change to the RFP text.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	Exec. Summary	Might be good to show (map) and discuss the entire Sabine watershed (including LA side). Various reasons: SRA-LA, 2016, TBPJO, TB Partners, spillway, Sulphur, Calc./Cameron Par. NAI, etc.	Recommending to stick to just Texas items at this time. No change made to the document.	FNI - Mat	FNI - Mat	N/A
3	MPTX	Verified	Exec. Summary	Diversions (legislative background, current, history, future).	Inserted general statement, ES-18	MPTX - Greg	FNI - Mat	ES-18
4	MPTX	Verified	Exec. Summary	Might be better to title this section 'Document Structure', or 'Document Structure, Chapter Assignments, and RFP Task Correlation'	Recommending to keep it as it is at this time. No change made to the document	FNI - Mat	FNI - Mat	N/A
5	MPTX	Verified	Exec. Summary	Should this table be sorted in order of largest discharge volume per area (highest to lowest)? Or rank? The graph on following page is nice.	Table is formatted in the same way as the TWDB website. Recommending to keep it as it is at this time.	FNI - Mat	FNI - Mat	N/A
6	MPTX	Verified	Exec. Summary	Good info, possibly better sorted highest to lowest.	Table is formatted alphabetically in the same way as the TWDB website. Recommending to keep it as it is at this time.	FNI - Mat	FNI - Mat	N/A
7	MPTX	Verified	Exec. Summary	Possibly better in intro to say, 'Relative to the rest of the nation, the region is subject to intense rainfall and multiple flooding types. Primary among these is riverine flooding, with storm surge as an additional significant risk.'	Inserted , ES-7	MPTX - Greg	FNI - Mat	ES-7
8	MPTX	Verified	Exec. Summary	My opinion, this would be a good place to make the case for increased higher level (state or river basin) involvement, coordination, and construction of flood mitigation work. Legislature could establish a permanent structure and system for doing so. In other words, move away for hyper-local (and the perennial confusion and inefficiency it creates), and move towards state-level coordination. Not sure if that's palatable to RFPG but might be worth considering.	Several discussions have been had regarding items being applied at the regional or state level. Generally, the group has avoided recommended things that would be applied in a larger scope rather than on a smaller level. For example, the Upper Sabine region has been more hesitant to adopt particular floodplain management standards that the Lower Sabine area uses, primarily because the flooding types are quite different. Recommending no change at this time, but the topic could be revisited during the second RFP cycle.	FNI - Mat	FNI - Mat	N/A
9	TWDB	Resolved	General	1. Please ensure that all "Submittal requirements" identified in each of the Exhibit C Guidance document sections are submitted in the final flood plan.	FNI will review the submittal requirements again and adjust as needed to ensure all items are in the plan.	FNI - Allison		
10	TWDB	Verified	General	42. To better align with our agency's preferred nomenclature, please consider using the name, "Cursory Floodplain Data" instead of "Fathom" or Cursory Fathom Data" throughout the regional flood plan.	All instances of "Fathom" were changed to "Cursory Floodplain Data"	FNI - Allison	FNI - Mat	Multiple Locations
11	TWDB	Verified	General	43. Please review certain plan figures, as necessary, for legibility. Figure 2-12, for example, may appear difficult to distinguish differences in colors assigned to portions of the chart. Please consider accessibility of readers, as appropriate, and update graphs and figures as appropriate.	Figures reviewed for color clarity and accessibility. Figure 2-12 updated.	FNI - Alanna	FNI - Mat	2-25
12	FNI	Verified	Exec. Summary	s were a;sp included in the planning process		FNI - Allison	FNI - Mat	
13	FNI	Verified	Exec. Summary	Canadian River not included in Table ES-5	Table with Planning Region Numbers with flow volume comes directly from TWDB website. We don't have numbers at the moment to split out the regions.	FNI - Mat	FNI - Mat	N/A
Chapter 1								
1	MPTX	Verified	TABLE 1-1: PRINCIPAL CITIES IN THE REGION	Might be tter to list these in a 2 column table. It would be easier to read and push the following section (1.A.1.b. to the top of the next page).	When in 2 columns, the table goes onto the next page, but only for the last row. Recommend keeping it as is.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	FIGURE 1-9: EXTENT OF FLOODPLAIN REGULATIONS FOR CITIES	Legend item should maybe be 'Floodplain' (one word).	Updated legend to reflect comment.	FNI - Andrew	FNI - Mat	1-22
3	MPTX	Verified	1.A.7.a. Flood Plain Ordinances	Same, should maybe be 'Floodplain' (one word).	Updated	FNI - Mat	FNI - Mat	1-24

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DRAFT REGIONAL FLOOD PLAN

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4	MPTX	Verified	1.A.7.c. Zoning and Land Use Policies	Might be worth mentioning again the majority of the region is predominantly rural with low population bases and low growth. That means modern zoning and land use practices should be customized to suitable fit the communities.	Added text in Section 1.A.7.c	MPTX - Greg	FNI - Mat	1-25
5	MPTX	Verified	1.B.2.a. Dams, Reservoirs, Levees, and Weirs (Toledo Bend)	Suggest focused discussion of FERC purposes (does not include flood control). 92 MW electric (~46k homes). Water supply contracts, incl. TB Partners WSA.	Added column to Table 1-9 to note that no dams were designed for flood control purposes. Also added a sentence to the paragraph on the Toledo Bend reservoir.	MPTX - Greg	FNI - Mat	1-28
6	MPTX	Verified	FIGURE 1-10: EXISTING FLOOD PROJECTS	Is data missing from this map?	Update symbology to show regionwide "Sabine Stream Gages" with hatch to allow other projects to be seen.	FNI - Alanna	FNI - Mat	1-34
7	MPTX	Verified	1.B.4. Ongoing Flood Infrastructure Improvements	Might be good to spell out the grant funding sources acronyms (HMGP, CDBG-DR, etc.).	The acronyms were defined in the paragraph.	FNI - Allison	FNI - Mat	1-35
8	TWDB	Verified	FIGURE 1-10: EXISTING FLOOD PROJECTS	6. Existing Projects (Exhibit C, Section 2.1): Figure 1-10 does not appear to show the extent of projects, other than the largest which covers the remaining projects. Please revise the map	The figure was updated.	FNI - Alanna	FNI - Mat	1-34
9	TWDB	Verified	Figure 1-9	44. Planning Area Description, Text (Exhibit C, Section 2.1): a. For maps similar to Figure 1-9 on page 1-22, please consider modifying map labels, as appropriate, to avoid covering the colored city polygons with their own name labels, especially for smaller cities.	The labeling was updated.	FNI - Andrew	FNI - Mat	1-22
10	TWDB	Verified	Section 1.A.6	44b. Please consider adding more detailed region analysis under Section 1.A.6.	There is not much additional information that FNI has on Agriculture & Natural Resources. Text was added under Section 1.A.6.d.	FNI - Allison	FNI - Mat	1-23
11	TWDB	Verified	Section 1.A.7.d	44c. Please review text included in Chapter 1 for redundancy. For example, within Section 1.A.7.d, on page 1-25, there appears to be a sentence that is repeated in both paragraphs of the section starting with "drainage master plans describe a community's …".	The noted sentence was removed from Section 1.A.7.d	FNI - Allison	FNI - Mat	1-25
12	TWDB	Verified	Section 1.A.2.C and Section 1.A.4	44d. Section 1.A.2.C and Section 1.A.4 include different percentages related to region NFIP participation, 87% and 97% respectively. Please reconcile or provide additional clarification as to why these numbers are different.	The text below Table 1-7 was updated to reflect the 87% number shown earlier in Section 1.A.2.c	FNI - Allison	FNI - Mat	1-20
13	TWDB	Verified	Page 1-35	45. Existing Flood Infrastructure, Text (Exhibit C, Section 2.1): a. Please consider defining abbreviated items and acronyms including HMGP, CDBG-DR, and FIF the first time they are used, or consider including a section on abbreviations and acronyms. For example, on page 1-35 these three terms are used without prior definition in the plan, and members of the public may not be familiar with these terms. HMGP, does not appear to be defined until Chapter 9.	Acronyms were defined in the paragraph.	FNI - Allison	FNI - Mat	1-35
14	TWDB	Verified	Chapter 1B	45b. Please provide a description in Chapter 1 of how Low Water Crossings were identified.	Text added under Section 1.B.2 "The TWDB-provided several data sources to assist with the identification of flood management infrastructure in the Flood Data Hub, such as Dams, Levees, Reservoirs, Stream gages, High Water Marks, and Low Water Crossings. Low Water Crossings included in the Sabine RFP were provided by TxDOT."	FNI - Allison	FNI - Mat	1-27
15	TWDB	Verified	1.B.4. Ongoing Flood Infrastructure Improvements	47. Previous Studies, Text (Exhibit C, Section 2.1): Previous studies were mentioned and discussed within the draft plan text, but a list of the previous studies was not also included. Please consider including a list of previous studies, if available.	The "previous studies" mentions within the text refer to costs within Chapter 4. These previous studies were ones performed by Freese and Nichols on similar types of projects which aided in identifying a potential cost for FMXs recommended in the Sabine region as well as other regions.	FNI - Allison	FNI - Mat	N/A
16	TWDB	Verified	1.B.4. Ongoing Flood Infrastructure Improvements	48. Existing Projects (Exhibit C, Table 2): Please consider including ongoing project FMA-PJ-06-TX-2019-008. This is a 2019 FMA Grant that Orange County received to mitigate six flood prone structures by elevation with $1,003,984.04 in total project costs and is expected to be complete by Sept 15, 2023.	Added text in Section 1.B.4 and added to Table 2	FNI - Allison	FNI - Mat	1-33
17	TWDB	Verified	1.B.4. Ongoing Flood Infrastructure Improvements	50. Existing Projects (Exhibit C, Table 2): Please ensure that all ID fields are entered correctly in all tables and geodatabases. Unique IDs must be accurate for the database to connect and work properly. Please refer to Exhibit D Table 2 or more recent updates for Unique ID guidance. For example, it appears that there are differing starting IDs listed under 'Existing Project ID". Some start with '4' where guidance requires the unique ID to start with '04'.	The geodatabase uses ID fields which start with 04. In instances of the provided geodatabase, some fields were numeric and would not allow a leading zero to be used in the field. In text fields, a leading zero could be used.	FNI - Allison	FNI - Mat	N/A

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18	TPWD	Verified	General	Incorporate: Flood is a natural process that has many benefits to human and natural systems.	Text was added to Section 1.A.6. Agricultural and Natural Resources Most Impacted by Flooding	FNI - Allison	FNI - Mat	1-23
19	TPWD	Verified	General	Incorporate: Promoting some flooding as desireable and making room for water promotes native species, maintains vital exosystem services, and recudes the chance of flooding elsewhere	Text was added to Section 1.A.6. Agricultural and Natural Resources Most Impacted by Flooding	FNI - Allison	FNI - Mat	1-23
20	TPWD	Verified	General	Incorporate: Natural landscapes and watersheds provide flood mitigaiton functions that should be promoted, protected, enhances, and restored	Text was added to Section 1.A.6. Agricultural and Natural Resources Most Impacted by Flooding	FNI - Allison	FNI - Mat	1-23
21	TPWD	Verified	General	Incorporate: Prioritize risk reduction over flood control by focusing on reducing loss of life and injury	The overarching goal of all regional flood plans must be "to protect against the loss of life and property" as set forth in the Guidance Principles (31 TAC §362.3). The actions reccomended by the Sabine RFPG are flood risk reduction and not focused entirely on flood control. No update was made to the text	FNI - Allison	FNI - Mat	N/A
22	TPWD	Verified	General	Incorporate: Utilize limited resources fairly	State Flood Plan will rank actions. There will be a public comment period to provide input on criteria used to rank actions. Sabine RFPG does not have the authority to rank actions, only recommend. No change was made to the text	FNI - Allison	FNI - Mat	N/A
23	TPWD	Verified	General	Incorporate: Address flood risk using a portfolio approach to first implement non-structural (policy, land management, emergency management) followed by structural (grey and natural and nature-based) strategies.	Plan has recomended FMXs related to all aspects of this noted portfolio approach including criteria updates, freeboard requirements, flood awareness, as well as structural measures with a mention of nature-based alternatives.	FNI - Allison	FNI - Mat	N/A
24	TPWD	Verified	General	Incorporate: Criteria for assessing projects strategies should include a comprehensive suite of measures spanning economical, operational, societal, and envrionmental advantages and disadvantages. Assessments focusing economics alone (number of buildings, acres) should be avoided.	The Task 4A analysis included evaluating Social Vulnerability (SVI) in assessing potential projects. An assessment of the number of buildings was a requirement of TWDB. In addition, the RFPG has made multiple mentions that flood mitigation is needed in areas where structural flooding is greatest as this has a massive impact both socially and economically in the region. The RFPG has reccomended that the TWDB reasses requirements for potentially feasible FMPs. We can also cite the 4A analysis has defining flood need using more than just economic values. No change was made to the text	FNI - Allison	FNI - Mat	N/A
Chapter 2								
1	MPTX	Verified	Chapter 2	Good comments here, but it seems there is still room for extended discussion of flood forecasting data (existing quality and accuracy in terms of X, Y, Z, T, and P (probability). But it also understood that is a big subject. IMO, this topic (improved accuracy of flood risk analysis) should be one of the highest FME priorities for the region.	Section 2.A.1.a covers the existing flood risks in the region, and the types of flood risks. A section/text on flood forecasting is was already included in Chapter 7.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	Chapter 2	Might be good to produce a chart/graph (or map) showing number of structures in FHAs per county. Similar to Table 2-9, for example.	Figure 2C-2 in Vol 2 already shows this information.	FNI - Allison	FNI - Mat	N/A
3	MPTX	Verified	Chapter 2	I realize its probably sensitive, but should glacial ice melt be mentioned (in list of 'affects'). Maybe call it something like 'glacial contraction'?	Added to list under Section 2.B.4.a, Sea Level change	FNI - Mat	FNI - Mat	2-15
4	MPTX	Verified	Chapter 2	Area any sedimentation studies or data available? If so that might be helpful to include.	No action/updates on this as we don't have sedimentation studies	FNI - Mat	FNI - Mat	N/A
5	MPTX	Verified	Chapter 2	Also, land subsidence is potentially important magnifying factor (along with RSLC). TWDB Groundwater division has good data, maps, studies available on subsidence (historic/projected).	Inserted language	MPTX - Greg	FNI - Mat	2-17
6	MPTX	Verified	Chapter 2	It might be worth mentioning that from a methodology and results standpoint, future flood exposure is a very 'fluid' analysis. By that I mean there are multiple variables, constant change. Having said that, there is a general trend of increased future flood exposure for the lowest portions of the basin.	Statement added to Section 2.B.4 regarding the fluidity of future conditions analysis.	FNI - Mat	FNI - Mat	2-14
7	MPTX	Verified	Chapter 2	Does Figure 2-12 repeat from earlier section?	Figure 2-12 shows future conditions numbers. Figure 2-5 shows existing conditions numbers.	FNI - Allison	FNI - Mat	N/A

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8	TWDB	Verified	Chapter 2	7. Existing Condition Flood Risk Analyses, Text (Exhibit C, Section 2.2.A): Please include a reference to Exhibit C Table 3 in the text as per guidance document (page 27): Once Task 2A Existing Condition Flood Risk Analyses is complete, RFPGs must include a summary table with findings summarizing flood risk by county (Exhibit C Table 3).	Table 3 in Appendix 2-B is referenced throughout Section 2.A.2. Table 2-5 within the text was added to summarize the aras of flood risk by county.	FNI - Allison	FNI - Mat	2-7 & 2-8
9	TWDB	Verified	Chapter 2	8. Existing Condition Flood Hazard Analysis, Text (Exhibit C, Section 2.2.A.1): Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (page 24): Submittal requirement number 2.	Table 2-5 within the text was added to summarize the aras of flood risk by county.	FNI - Allison	FNI - Mat	2-7 & 2-8
10	TWDB	Verified	Chapter 2	9. Existing Condition Flood Exposure (Exhibit C, Table 3): The Structure and Residential Structure counts in Table 3 do not appear to match the ExFldExpAll feature class counts. Please review and reconcile. [31 TAC §361.33 & Exhibit C 2.2.A.3].	FNI verified the structure counts in Table 3 matched the geodatabase, chapter text, and Appendix 2C	FNI - Allison	FNI - Allison	Table 3
11	TWDB	Verified	Chapter 2	13b. The Structure and Residential Structure counts in Table 3 do not appear to match the ExFldExpAll feature class counts with the 0.2% Annual Chance Flood Risk. Table 3 lists the Structure count as 48,703 and the Residential Structure count as 34,839. In contrast, the ExFldExpAll Structure counts are 24,453 and the Residential Structure counts are 10,773. Please review and reconcile [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].	FNI verified the structure counts in Table 3 matched the geodatabase, chapter text, and Appendix 2C	FNI - Allison	FNI - Allison	Table 3
12	TWDB	Verified	Chapter 2	13d. The feature class does not appear to contain any entries with the 'SOURCE' listed as "Public". Exhibit C Section 2.2.A.1 includes the requirement to identify additional flood prone areas in the region that may not have been identified in the initial map(s) generated by the RFPG. Please confirm that the public did not identify any additional flood prone areas included in this feature class and, in event they did, please note "Public" as the data source [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].	All flood prone areas identified during public outreach are within the mapped 1% ACE. Thus, the public did not identify and additional areas.	FNI - Mat	FNI - Mat	N/A
13	TWDB	Verified	Chapter 2	14. Model Coverage GIS Feature Class, ModelCoverage: There appears to be invalid entries for refer to the Summary Update to Exhibit D document available on the TWDB website [31 TAC §361.33(b)(2)].	MODEL_SOFTW updated from EPA-SWMM to SWMM in accordance to updated Exhibit D document.	FNI - Allison	FNI - Allison	N/A
14	TWDB	Verified	Chapter 2	15. Future Condition Flood Risk Analyses, Text (Exhibit C, Section 2.2.B): Please include a reference to Exhibit C Table 5 in the text as per guidance document (page 35): Once Task 2B Future Condition Flood Risk Analyses is complete, RFPGs must include a summary table with findings summarizing flood risk by county (Exhibit C Table 5).	Section 2.A.1.a. Possible Flood Prone Areas (Page 2-7) addresses the lack of Public flood prone areas.	FNI - Allison	FNI - Mat	2-7
15	TWDB	Verified	Chapter 2	16. Future Condition Flood Hazard Analysis, Text (Exhibit C, Section 2.2.B.1): Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (page 33): Submittal requirement number 3	Table 2-6 added to Section 2.B.4.c	FNI - Allison	FNI - Mat	2-20
16	TPWD	Verified	Chapter 2	We should acknowlage that additional BLE data became available after all analyses were completed and preliminarily reviewed by TWDB. BLE publically released after March 2022 was not incorporated into the plan but will be considered in future planning efforts.	A statement was added to section 1.A.b.2 to note that BLE data for the entire region became available after the Task 2 Existing Conditions Flood Hazard Analysis was performed. Future cycles of Regional Flood Planning can consider the newly released BLE data.	FNI - Mat	FNI - Mat	1-13
Chapter 3								
1	MPTX	Verified	3.A.4. Recommendation of Minimum Flooplain Mngt and Land Use Standards (Roadways and Habitable Structures)	Should higher standards be suggested that take into account future increases to 1% BFE? Including RSLC, increasing rainfall, subsidence, development runoff, etc?	Not recommending to add higher standards on top of what is already existing, per direction from RFPG over the course of the RFP process. No change to RFP.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	TABLE 3-4: FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS	Could this table be sorted starting with Short Term (10-year) first, then Long Term (30-year)?	Recommend keeping it as is.	FNI - Allison	FNI - Mat	N/A

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3	TWDB	Verified	Chapter 3/1	21. Existing Floodplain Management Practices, Text (Exhibit C, Section 2.3.A): Please review the information included in the draft plan and related tables. It appears that the information and tables in Chapter 1 do not match all the information and tables in Chapter 3, for example Tables 1-7 and 3-1 do not appear to align regarding the number and type of entities with flood-related authority. Please review and reconcile [31 TAC See §361.35 & Exhibit C 2.3.A].	Tables updated to align with GIS data.	FNI - Allison	FNI - Mat	3-3
5	TWDB	Verified	TABLE 3-4: FLOOD MITIGATION AND FLOODPLAIN MANAGEMENT GOALS	24b. Please ensure goals adhere to Exhibit C guidance regarding setting objectives, being measurable, etc. It appears that some goals, including but not limited to goal number 18, do not appear to meet this requirement. Please review grammar and goal descriptions to provide a better understanding of how and why policies and criteria would reduce floodplain development, and what their impact would be on education [31 TAC §361.36 & Exhibit C 2.3.B].	Some goals were revisited during the November 2022 RFPG meeting. All goals that did not have a measureable goal were revised to have a measureable goal.	FNI - Mat	FNI - Mat	3-17 & 3-18
6	TWDB	Verified	Chapter 3	52. Existing Floodplain Management Practices, Text (Exhibit C, Section 2.3.A): a. Please consider expanding, in greater detail, upon the level of enforcement of floodplain management practices within the chapter as they are outlined in Table 6 and the associated GIS submittal.	Tables added to outline the entities with various level of enforcement practices within Chapter 3. Text added after Table 3-1	FNI - Allison	FNI - Mat	3-5 & 3-6
7	TWDB	Verified	Chapter 3	52b. Please review the information pertaining to NFIP minimum requirements. The related NFIP BFE and building elevation requirements appear to be left off. Please review and consider revising as appropriate.	Added stairstep requirements based on data available to minimum NFIP requirements	FNI - Allison	FNI - Mat	3-5
8	TWDB	Verified	Table 6	53. Existing Floodplain Management Practices Table (Exhibit C, Table 6): It appears that at least one city may be represented incorrectly in Appendix 3-B, Table 6. For example, Winona does not appear to be included in the FEMA list of NFIP participating communities.		FNI - Allison	FNI - Mat	Vol. 2 Table 6
9	TWDB	Verified	Map 13	55. Existing Floodplain Management Practices Map (Exhibit C, Map 13): Please consider modifying Figure 3-1 within the draft plan on page 3-6 for legibility as may be difficult for some members of the public to interpret including due to the lack of city names in many instances.	Map 13 and Figure 3-1 were updated.	FNI - Andrew	FNI - Mat	3-7
10	TWDB	Verified	Chapter 3	56. Goals, Text (Exhibit C, Section 2.3.B): Please consider elaborating within the text section of "Transformed and Residual Risk" by providing descriptions of such risks as they apply if goals are achieved.	Residual risk added to Table 3-7. Paragraphs added to page 3-20	FNI - Mat	FNI - Mat	3-20
Chapter 4								
1	MPTX	Verified	Chapter 4.A. Flood Mitigation Needs Analysis	Nice job. This is a tough section to make clear based on the subject matter and prescribed TWDB methodology.	Noted.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	4.B.4.a. Classification of FMPs, FMSs, and FMEs	Nice job. Once again this is a tough section to make clear based on the subject matter and prescribed method from TWDB. FMX's, all very tough to methodically and accurately claasify/categorize. I still think one of the better things for TWDB/RFPGS to consider (if possible) is a reclassification of buyout/acquisition as a FME or FMP....and also keeping FMS limited to instituitional or regulatory actions which have no phyical substance.	Noted.	FNI - Mat	FNI - Mat	N/A
3	MPTX	Verified	TABLE 4-11: LIST OF POTENTIALLY FEASIBLE FMPS	I think this table might benefit with a preamble, such as: 'FMP is a relatively strict definition per TWDB (and thus only a short list technically qualified). The following table list the two FMPs which met all the FMP criteria as outlined by TWDB. It is expected that in future iterations this list will grow as FMEs are completed and mature into future FMPs'. (or something to that affect). I also like listing FMP first, but might suggest listing FME's second, with FMS's last. Just an idea, though I understand that is presumably the TWDB prescribed method of listing.	Inserted, 4-8.	MPTX - Greg	FNI - Mat	4-7

RESPONSE LOG TO COMMENTS
DRAFT REGIONAL FLOOD PLAN

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Comment Response Log								
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4	MPTX	Verified	TABLE 4-11: LIST OF POTENTIALLY FEASIBLE FMPS	043000017: This sea wall project seems like it might stretch the definitions, scope, geography, and purpose of the Sabine Regional Flood Planning Group. Just an obseravation. Also, I wonder if it truly meets the presumed standard of being a 'shovel-ready' project. Feasibility? Signed sealed design? NAI? I realize it might be politically popular but also might lead to questions whether it technically qualifies as an FMP. Just wondering.	This is a high priority project for the Sabine Region. Recommend no change at this time.	FNI - Mat	FNI - Mat	N/A
5	MPTX	Verified	TABLE 4-12: POTENTIALLY FEASIBLE FMS TYPE DISTRIBUTION	Preamble might be slightly better to say: 'Table 4-12 classifies by type the 49 potentially feasible FMSs, and Table 4-13 provides the complete listing of of all potentially feasible FMSs regardless of type.	Added	MPTX - Greg	FNI - Mat	4-8
6	MPTX	Verified	TABLE 4-13: LIST OF POTENTIALLY FEASIBLE FMS	In addition to prior comments re. moving Acquisition and Elevation to FME/FMP category... the following FMS IDs might be more appropriate as FMEs: 2, 4, 9, 39, 40, 45.	Classifications based on TWDB guidance. No update needed.	FNI - Allison	FNI - Mat	N/A
7	MPTX	Verified	TABLE 4-14: POTENTIAL FME TYPE DISTRIBUTION	Page transitions for this and prior table could possibly eliminate a blank page or two.	Printing setup. No update needed.	FNI - Mat	FNI - Mat	N/A
8	MPTX	Verified	TABLE 4-15: POTENTIAL FMES	I like the 'post-amble' (narrative following the table), very good. Might consider moving it to the top and making it a preamble description of the table data.	Similar text was already included on page 4-8. No change to the RFP.	FNI - Mat	FNI - Mat	N/A
9	MPTX	Verified	TABLE 4-17: FMS ESTIMATED COST ASSUMPTIONS	I think we could improve upon the Cost Estimate Ranges, by both modify the $ figures and providing clarifying notes.	At this time, the costs associated with FMXs are simply estimates based on engineering costs FNI has experienced on previous projects and estimates based on judgment from limited information.	FNI - Mat	FNI - Mat	N/A
10	MPTX	Verified	TABLE 4-20: FUNDING SOURCES AVAILABLE FOR FMES, FMSS, AND FMPS	Suggest adding Hazard Mitigation Grant Program (HMGP) to FEMA list. Also, suggest adding Community Development Block Grant – Disaster Recovery (CDBG-DR) to HUD list.	Table updated	MPTX - Greg	FNI - Mat	4-22
11	MPTX	Verified	4.B.4.h. Residual Risk	If you have flexibility to do so, I recommend either removing or demoting to #4 or 5 the: 'Potential failure or overtopping of dams and levees'. I say that because generally speaking it has been a sensitive topic with SRA. Might be preferable to avoid mention when possible, depending on SRA opinion.	SRA has had no comment. No update needed.	FNI - Allison	FNI - Mat	N/A
12	TWDB	Verified	Table 12	25. Flood Management Evaluations (FME) Table (Exhibit C, Table 12): It appears that FME_ID 04100060 is missing from Table 12. Please review and reconcile.	Table 12 has been updated	FNI - Allison	FNI - Mat	Vol. 2, Table 12
13	TWDB	Verified	Map 16	26. Flood Management Evaluations (FME) Map (Exhibit C, Map 16): It appears that an indication of whether an FME area is associated with previous studied area is not noted, as required by the Submittal Requirements for FMEs in Exhibit C Section 2.4.B. Please reconcile [31 TAC §361.38(m) & Exhibit C 2.4.B].	Map 16 and Map 19 updated to include overlap of ongoing studies.	FNI - Andrew	FNI - Allison FNI - Mat	Map 16 / Map 19
14	TWDB	Verified	FMP	27. Flood Mitigation Projects (FMP) Text (Exhibit C, Section 2.4.B): It appears that the estimated cost of the "Sabine Pass to Galveston Bay" FMP in Table 4-11 ($2,270,100,000) does not match the estimated cost in Table 13 in the Appendix ($2,390,000,000). Please review and reconcile as appropriate [31 TAC §361.38(c-e) & Exhibit C 2.4.B].	Costs have been updated in the text to match the FMP cost within the tables.	FNI - Allison	FNI - Mat	Multiple Locations
15	TWDB	Verified	FMP	28. Flood Mitigation Projects (FMP) Table (Exhibit C, Table 13): It appears that the estimated cost of the "Sabine Pass to Galveston Bay" FMP in Table 4-11 ($2,270,100,000) does not match the estimated cost in Table 13 in the Appendix ($2,390,000,000). Please review and reconcile as appropriate [31 TAC §361.38(c-e) & Exhibit C 2.4.B].	Costs have been updated in the text to match the FMP cost within the table 13.	FNI - Allison	FNI - Mat	Multiple Locations
16	TWDB	Verified	FMS	30. Flood Management Strategies (FMS) Text (Exhibit C, Section 2.4.B): a. Please review entries for Table 4-12. It appears Table 4-12, and the FMS feature class lists a total of 49 FMSs in contrast to Table 4-13 that lists 51 and the associated Table 14 within the appendix that lists 50. Please review and revise accordingly [31 TAC §361.38(h) & Exhibit C 2.4.B].	Table 4-13 now shows 49 FMSs	FNI - Allison	FNI - Mat	4-10 thru 4-12
17	TWDB	Verified	FMS	30b. For any Maintenance FMS, please review and verify that costs are non-recurring, non-capital. Please review and revise accordingly [31 TAC §361.38(h) & Exhibit C 2.4.B].	Costs were updated. The Maintenance FMSs are anticipated to be non capital, but recurring since maintenance is a continual process.	FNI - Mat	FNI - Mat	

RESPONSE LOG TO COMMENTS
DRAFT REGIONAL FLOOD PLAN

FREESE AND NICHOLS

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18	TWDB	Verified	FMS	31a. Flood Management Strategies (FMS) Table (Exhibit C, Table 14): a. It appears Table 4-12 and the FMS feature class lists a total of 49 FMSs in contrast to Table 4-13 which lists 51 FMSs and the associated Table 14 within the appendix that lists 50 FMSs. Please review and revise accordingly [31 TAC §361.38(d) & Exhibit C	Table 14 now has 49 FMSs	FNI - Allison	FNI - Mat	Table 14
19	TWDB	Verified	FMS	31b. Please review if the FMS_ID 042000024 City of Fate Flood Access Improvement is considered an FMS or includes associated capital costs. If it has no capital costs, please provide brief additional description to clarify the nature of the strategy [31 TAC §361.38(d) & Exhibit C 2.4.B].	The access improvement appears to be a single time cost to povide secondary access and likely would not have an reoccuring capital costs. It would have a capital cost, but this does not appear to be something that would need a flood study associated with it like a typical flood mitigation project.	FNI - Allison	FNI - Mat	N/A
20	TWDB	Verified	FMS	b. It appears Table 4-12 and the FMS feature class lists a total of 49 FMSs in contrast to Table 4-13 which lists 51 FMSs and the associated Table 14 within the appendix that lists 50 FMSs. Please review and revise accordingly [31 TAC §361.38(d) & Exhibit C 2.4.B].	Table 14 now has 49 FMSs	FNI - Allison	FNI - Mat	Table 14
21	TWDB	Verified	FME	58. Flood Management Evaluations (FME) Text (Exhibit C, Section 2.4.B): a. Please consider if some FMEs should be FMPs. For example, see FME_ID: 041000034, where the name and description appear to indicate this action may be an infrastructure project. Please expand the description field to clarify why it is an FME or consider moving to FMP category if appropriate.	FME 0410000034 cannot be an FMP because this study does not have a model, a BCR, structure counts, etc. that TWDB required for a project to be considered as an FMP. Will update FME names and descriptions accordingly.	FNI - Allison	Table 12	N/A
22	TWDB	Verified	FME	58b. For county-wide watershed strategies where a majority of the county falls outside of the RFPG boundary, please include justification how the strategy benefits the region and coordinate with other RFPGs to make sure the efforts are not duplicated. Additionally, please consider including an entire HUC-10 for the county-wide studies.		FNI - Allison	FNI - Mat	5-2
23	TWDB	Verified	FME	58c. For areas with existing BLE models, please state how the FME will improve upon the current BLE models. BLE is available for the entire Region 4 here: https://webapps.usgs.gov/infrm/estbfe/		FNI - Allison	FNI - Mat	5-2
24	TWDB	Verified	FME	58d. In areas where there is an ongoing TWDB-funded, FIF Category 1 study, please describe how this would be incorporated into the proposed FME. For example, FME 04100059 is a duplication of FIF ID 40027 (Hunt County Countywide Drainage Study). Please review FIF IDs 40027 (Hunt County Countywide Drainage Study), 40045 (Flood Protection Planning for Watersheds – Lower Sabine River Basin), 40058 (Flood Protection Planning for Watersheds – Upper Sabine River Basin), and 40019 (Sabine River Relief Ditch Extension & Expansion).	FME 0059 does not appear to be a duplication of the Hunt County FIF study. FNI coordinated internally with the staff working on that FIF study and found out that the FIF study was going to be relatively limited due to the available budget. FME 0059 is a remapping effort for Hunt County which is intended to be a regulatory floodplain study with FEMA to remap rather than the typical Cat. 1 scope of an FIF study. Information added just below Table 4-14.	FNI - Allison	FNI - Mat	4-14
25	TWDB	Verified	FME	59b. Please consider documenting existing or ongoing BLE and FIF studies.	Added text about ongoing FIF studies	FNI - Mat	FNI - Mat	4-14
26	TWDB	Verified	FMS	61. Flood Management Strategies (FMS) Text (Exhibit C, Section 2.4.B): For county-wide watershed strategies (i.e., Franklin County) where a majority of the county falls outside of the Flood Planning Region boundary, please consider including justification for how the FMS benefits the region.	The Sabine RFPG does not have any countywide FMSs reccomended for Franklin County. Line left in Table 14 and 4-13 was removed.	FNI - Allison	FNI - Mat	Table 14
27	TWDB	Verified	FMS	62. Flood Management Strategies (FMS) Table (Exhibit C, Table 14): Please verify that all non-recurring, non-capital cost fields are $0 in Table 14. FMSs should include non-recuring, non-capital costs if they are known.	GIS data had NRNC cost = to toal cost, table had all 0, updated to all 0	FNI - Allison	FNI - Mat	N/A
28	TPWD	Verified		TPWD encourages the inclusion of the ecological and societal benefits of flooding in any education program and appreciates the repeated mention of nature-based solutions in the education and outreach goals of the Sabine RFP.	Ecological and societal benefits of flooding in all education and outreach FMS descriptions where possible. Added to Table 5-2	FNI - Allison	FNI - Mat	5-4
29	TPWD	Verified		TPWD encourages the RFPG to protect exsisting streams, riperian areas, and floodplains.	Text was added to Table 5-1 regarding nature based solutions that protect existing streams, riparian areas, and floodplains while reducing flood risk to people	FNI - Allison	FNI - Mat	5-2

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DRAFT REGIONAL FLOOD PLAN

FREESE AND NICHOLS

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30	FNI	Verified	FMEs	Add 3 FMEs to the Sabine RFP - Lawrence Road Detention Pond - Cow Bayou Diversion Channel - Elevation of Feeder Road Bridge at Cole Creek	FMEs were added to the final version of the Sabine RFP.	FNI - Mat	FNI - Mat	Multiple Locations
Chapter 5								
1	MPTX	Verified	TABLE 5-1: RECOMMENDED FME BY EVALUATION TYPE	Similar to comments on Residual Risk, might want to be sure SRA is on board with including. If so, also, I assume this exercise if conducted would extend on past studies (originally conducted by Brown and Root that modeled dam failure projections for two scenarios: "Sunny Day Breach", and 'Worst-Case Scenario'. I think I have that data on file somewhere. Also, that cost estimate might be a little light depending on how detailed the analysis is. Cost estimate may be too low for 'Floodplain mapping for dam failure hydrologic and hydraulic modeling to determine flood hazard areas in the event of a dam breach". Also, it might be worthwhile to re-confirm that this FME/evaluation remains a priority for SRA.	As noted in our comment response on Chapter 4, SRA did not have any issues with the item (potential failure from overtopping dams or levees) noted in Chapter 4. The dam inundation study is also in the City of Lone Oak (FME 041000040) which is not one of the 3 SRA dams. The cost for a dam failure and mapping analysis in Table 5-1 was an estimate based on a relatively small dam (City of Lone Oak) and is not a major dam like Lake Fork, Lake Tawakoni, or Toledo Bend. Thus, the $500,000 estimate appears to be reasonable. Recommending no change to the RFP.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	TABLE 5-3: RECOMMENDED FLOOD MITIGATION PROJECTS	Good details, interesting project. Also see prior comments on the sea wall though.	Noted, no updated needed.	FNI - Mat	FNI - Mat	N/A
3	TWDB	Verified	FMP	33. Flood Mitigation Project (FMP) Recommendations, Text: a. Each recommended FMP must be accompanied with an associated model or supporting documentation to show no negative impact. Please confirm in the plan that this was done and provide reference to supporting materials. As per the draft report (page 4-18), "For Structural FMPs and FMSs, signed and sealed reports were checked for certified statements that the associated project or strategy would not cause negative impacts upstream, downstream, or within the project area in events up to and including the 1% annual chance flood event. For FMPs and FMSs that certified statements could not be located for, existing H&H models were reviewed for negative impacts as defined above." For each recommended FMP, please identify in the plan how no negative impact was determined as required by the Exhibit C Section 3.6.A (page 108), either via a model or a study, and submit the associated model or include the study name.	Table 5-3 added to summarize the source of No Adverse Impact Verification. Appendix 5F added to include Final Feasibility Report and Orange County Engineering Appendix from USACE project. Model ID for Kilgore included in Table 5-3	FNI - Allison	FNI - Mat	5-5
4	TWDB	Verified	FME	34. Flood Management Evaluation (FME) Recommendations Table (Exhibit C, Table 15): FME_ID 04100060 is included in the FME feature class but appears to be missing from Table 15. Please revise Table 15 accordingly to include all FMEs [31 TAC §361.39(c), (f) & Exhibit C 2.5.A].	FME Table 15 was updated.	FNI - Allison	FNI - Mat	Table 15
5	TWDB	Verified	FMP	35. Flood Management Project (FMP) Recommendations Table (Exhibit C, Section 2.5.B): Each recommended FMP must be accompanied with an associated model or supporting documentation to show no negative impact. Please confirm that this was done and provide reference to supporting materials. For example, the Sabine Pass to Galveston Bay project does not appear to refer to or describe any associated model or supporting documentation to show no negative impact. The City of Kilgore project includes a model, however there is no description how this model relates to the determination of no negative impact.	Additional documentation was gathered from Orange County and Orange County Drainage District on the proposed USACE levee. Kilgore model proves no adverse impact	FNI - Allison	FNI - Mat	Table 5-3

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DRAFT REGIONAL FLOOD PLAN

FREESE AND NICHOLS

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6	TWDB	Verified	FMP	37. Flood Mitigation Project (FMP) Details (Exhibit C Section 3.9, Tables 23-40, and Exhibit D Section 3.11.3 FMP_Details Geodatabase file): Please ensure agreement across plan elements of the FMP costs. The FMP costs included in the report, table, and feature class do not appear to be in alignment with each other. For example, the FMP_COST for the Sabine Pass to Galveston Bay Coastal Storm Risk Management Program is listed as $2,270,100,000 in the written portion of the plan on page 5-5 while the cost listed in the geodatabase is $2,390,000,000. Please reconcile, as appropriate [31 TAC§361.39 & Exhibit C 2.5.B].	Tables were updated. RFP text already explains the cost split in Section 5.C.6.a	FNI - Allison	FNI - Mat	
7	TWDB	Verified	FMS	38. Flood Management Strategy (FMS) Recommendations, Text (Exhibit C, Section 2.5.c): a. It appears Table 4-12 and the FMS feature class lists a total of 49 FMSs in contrast to Table 4-13 which lists 51 FMSs and the associated Table 14 within the appendix that lists 50 FMSs. Please review and revise accordingly [31 TAC §361.38(d) & Exhibit C 2.4.B].	Table 12 was updated so that there are only 49 FMSs	FNI - Allison	FNI - Mat	Table 14
8	TWDB	Verified	FMS	38b. Please review if FMS_ID 042000024 City of Fate Flood Access Improvement is considered an FMS or includes associated capital costs. If it has no capital cost, please provide brief additional description to clarify. Please review the recommended FMS list for similar occurrences [31 TAC §361.39 & Exhibit C 2.5.C].	The access improvement appears to be a single time cost to povide secondary access and likely would not have an reoccuring capital costs. It would have a capital cost, but this does not appear to be something that would need a flood study associated with it like a typical flood mitigation project. Fate FME is $400,00. NRNC was incorrectly equal to total cost in submittal. NRNC is now 0	FNI - Allison	FNI - Mat	N/A
9	TWDB	Verified	FMS	39. Flood Management Strategy (FMS) Recommendations Table (Exhibit C, Table 17): a. It appears Table 4-12, and the FMS feature class lists a total of 49 FMSs in contrast to Table 4-13 that lists 51 and the associated Table 14 within the appendix that lists 50. Please review and reconcile, as appropriate [31 TAC §361.39 & Exhibit C 2.5.C].	Table 12 was updated so that there are only 49 FMSs	FNI - Allison	FNI - Mat	Table 14
10	TWDB	Verified	FMS	39b. Please review if FMS_ID 042000024 City of Fate Flood Access Improvement is considered an FMS or includes capital costs associated. If there are no capital costs, please provide brief additional description to clarify Please review the recommended FMS list for similar occurrences. [31 TAC §361.39 & Exhibit C 2.5.C].	The access improvement appears to be a single time cost to povide secondary access and likely would not have an reoccuring capital costs. It would have a capital cost, but this does not appear to be something that would need a flood study associated with it like a typical flood mitigation project. Fate FME is $400,00. NRNC was incorrectly equal to total cost in submittal. NRNC is now 0	FNI - Allison	FNI - Mat	N/A
11	TWDB	Verified	FME	63. Flood Management Evaluation (FME) Recommendations, Text (Exhibit C, Section 2.5.A): a. The first FME_ID listed is 04100002. Please consider, if practical, starting FME_ID numbering at 04100001.	Updated to use Parker Creek as FME 01	FNI - Allison	FNI - Mat	Table 12
12	TWDB	Verified	FME	63b. Please consider if some FMEs should be FMPs. For example, see FME_ID 041000034, where the name and description appear to indicate this action as an infrastructure project. Please expand description fields to clarify why they are an FME or consider moving to FMP category if appropriate.	FME 0410000034 cannot be an FMP because this study does not have a model, a BCR, structure counts, etc. that TWDB required for a project to be considered as an FMP. Will update FME names and descriptions accordingly.	FNI - Allison	Table 12	N/A
13	TWDB	Verified	FME	63c. For county-wide watershed FMEs where a majority of the county falls outside of the RFPG boundary, please include justification how the strategy benefits the region and coordinate with other RFPGs to make sure the efforts are not duplicated. Additionally, please consider aligning the county-wide study areas with full watershed boundaries.	Coordination with adjacent consultatns for adjacent RFPGs to verify costs were not duplicated.	FNI - Allison	FNI - Mat	N/A
14	TWDB	Verified	FME	63d. For areas with existing BLE models, please state how the FME will improve upon the current BLE models. BLE is available for the entire Region 4 here: https://webapps.usgs.gov/infrm/estbfe/	Will add text about BLE.	FNI - Allison	FNI - Mat	Section 5.A.2
15	TWDB	Verified	FME	63e. In areas where there is an ongoing TWDB-funded, FIF Category 1 study, please describe how this would be incorporated into the proposed FME. For example, FME_ID 04100059 is a duplication of FIF ID 40027 (Hunt County Countywide Drainage Study). Please review FIF IDs 40027 (Hunt County Countywide Drainage Study), 40045 (Flood Protection Planning for Watersheds – Lower Sabine River Basin), 40058 (Flood Protection Planning for Watersheds – Upper Sabine River Basin), and 40019 (Sabine River Relief Ditch Extension & Expansion).	FME 0059 does not appear to be a duplication of the Hunt County FIF study. FNI coordinated internally with the staff working on that FIF study and found out that the FIF study was going to be relatively limited due to the available budget. FME 0059 is a remapping effort for Hunt County which is intended to be a regulatory floodplain study with FEMA to remap rather than the typical Cat. 1 scope of an FIF study.	FNI - Mat	FNI - Mat	N/A
16	TWDB	Verified	FME	64b. Please consider documenting existing or ongoing BLE and FIF studies.	Text regarding ongoing FIF studies was included on page 4-14.	FNI - Allison	FNI - Mat	4-14
17	TWDB	Verified	FMS	67. Flood Management Strategy (FMS) Recommendations, Text (Exhibit C, Section 2.5.C): For county-wide watershed strategies (i.e., Franklin County) where a majority of the county falls outside of the Flood Planning Region boundary, please include justification for how the FMS benefits the region.	The cost associated with recommended FMSs that extend beyond the Sabine Flood Planning Region boundary were split based on coordination with bordering flood planning regions.	FNI - Allison	FNI - Mat	N/A

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18	OCDD	Verified		to be changed to FMPs in the Sabine Region Flood Plan, I am providing the following comment to the Draft Sabine Region Flood Plan. The following projects, currently classified as FMEs, should be classified as FMPs under the Sabine Region Flood Plan: 041000052Flood Protection Planning Study Cow Bayou & Adams Bayou Alternative OCDD Ponds A-Adams Bayou Detention Ponds Study 041000053Flood Protection Planning Study Cow Bayou & Adams Bayou Alternative OCDD Ponds B-Cole Creek Detention Ponds Study 041000054Flood Protection Planning Study Cow Bayou & Adams Bayou Alternative OCDD Ponds C-Cow Bayou Detention Ponds Study 041000061Lawrence Road Detention Pond StudyLawrence Road Detention Pond Study 041000045Flood Protection Planning Study Cow Bayou & Adams Bayou Alternative OCDD Ponds D-Feasibility Assessment and Conceptual Design of Constructing a Stormwater Detention Pond Adjacent to Cow Bayou near Claiborne Park 041000050Orange County Drainage Improvements at Kinard Estates StudyFirst-time sewer service, detention pond, and other drainage improvements to reduce flooding and environmental impacts. 041000057Flood Protection Planning Study Cow Bayou & Adams Bayou Alternative OCDD Ponds E-Terry Gully Detention Ponds Study 041000047Feasibility Assessment and Conceptual Design of increasing Capacity of Drainage Ditches and Channels that Convey Stormwater from Neighborhoods H&H Study and Modeling for Determination of Need and Feasibility Assessment of the Capacity of Drainage Ditches and Channels that Convey Stormwater from Neighborhoods Located Within Orange County 041000046Feasibility Assessment and Conceptual Design of Increasing the Size of Culverts and Railroad Trestles on Major Drainage StructuresH&H Study and Modeling for Determination of Need and Feasibility Assessment for Increase in Size of Culverts and Railroad Trestles on Major Drainage Structures Throughout Orange County 041000060Elevation of Feeder Road Bridge Along IH-10 at Cole Creek StudyElevation of Feeder Road Bridge Along IH-10 at Cole Creek Study	Because these particular studies do not have a valid model and BCR ratio, these cannot be elevated to FMPs at this time. Many of these are expected to be performed during the amendment period with the Task 12 funding and can be elevated to FMPs when that data is created in 2023. No change to the RFP at this time.	FNI - Mat	FNI - Mat	N/A
Chapter 6								
1	MPTX	Verified	TABLE 6-1: REDUCTION IN FLOOD RISK EXPOSURE DUE TO REC.FMPS	Good analysis. Benefits surprisingly low relative to cost, but I understand its pupose is mainly to protect industrial installations and shipping (benefits would look better if there was a way to take industrial benefits into account). P.S. I see a discussion on that is presented on page 168. National strategic importance, probably true.	Noted. No updated needed.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	6.A.1.c. No Adverse Impact	Might want to soften the preamble language to say 'The recommended FMPs do not appear to negatively affect neighboring areas located within or outside of the flood planning region.' It's probably the case that the USACE has attested to the NAI for this FMPs, but keeping arms length from such statements might be appropriate.	Wording updated	FNI - Mat	FNI - Mat	6-3
3	MPTX	Verified	6.A.3. Other Impacts	Nice job on this section.	Noted. No updated needed.	FNI - Mat	FNI - Mat	N/A
4	MPTX	Verified	FIGURE 6-1: WATER PLANNING AREAS AND SABINE FLOOD PLANNING REGION	Might remove 'Chapter 7' reference below map.	Corrected to remove inadvertent "Chapter 7" as a page divider from the last page of Chapter 6.	FNI - Mat	FNI - Mat	6-8
5	TPWD	Verified	Chapter 6	Comment cities TCAP handbook on priority habitat .	Based on engineering judgement, it was determined that all FMSs and FMPs recommended by the Sabine RFPG align with the Texas Conservation Action Plan (TCAP). The TCAP outlines actions to protect and manage Species of Greatest Conservation Need (SGCN) and important habitats which include freshwater and riparian ecosystems. Texas was added under 6.A.3.b noting the FMXs align with the TCAP.	FNI - Allison	FNI - Mat	6-5

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DRAFT REGIONAL FLOOD PLAN

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6	TPWD	Verified	Chapter 6	The removal of low-water crossings can benefit rare speciers such as mussels and fish if the corssing is replaced with a bridge or culvert that does not form a barrier to specieis movement. Conversely, building dams and channelizing streams can adversely affect aquatic habitats and species. TPWD would like to encourage all the FMXs proponents to consider stream crossing designs that allow for sediment transport and passes of aquatic organisms and do not impound water. Basically, designs that are invisible to the creek. This includes bridges that span the creek where possible or culverted crossings designed with the culvert(s) in the active channel area lower than those in the floodplain enches so that the flow in the channel is not overly spread out. The central/low-flow culvert(s) should be large enough to handle a 1.5 year flood without backing up water. The bottoms of these lower culverts should be set at least a flood below grade to allow natural substrate to cover the culvert bottom and allow for aquatic organisms passage. These lower, recess culverts should be installed in the thalweg or deepest part of the channel and be aligned with the lower flow channel (Clarkin et.al., 2006)	Comment addressed in 3.B.3 because no FMPs are removing LWCs. Additionally, none of the FMXs recommended in the Sabine Plan aim to impound water along streams. Impounding water along streams would cause a negative impact related to flooding as impounding would restrict water from moving downstream and hold it back upstream and cause a negative impact. The goal of the RFP is to improve flooding conditions and ensure that none of them cause a negative impact. Furthermore, items recommended in the RFP must evaluate the 100-year storm, which far exceeds the 1.5 yr flood noted in the comment.	FNI - Mat	FNI - Mat	N/A
7	TPWD	Verified	Chapter 6	TPWD understands that the goal of the RFP is to mitigate floods to reduce risk to life and property and would also like to encourage the use of nature-based solutions where possible. The Draft Sabine RFP states that none of the projects or strategies are anticipated to have negative downstream effects.	A requirement of all recommended FMEs, FMPs, and FMSs is no negative impact. Chapter 3 contains a recommended solution noting "RFPG recommends that all new construction consider nature-based and sustainable solutions."	FNI - Mat	FNI - Mat	N/A
Chapter 7								
1	MPTX	Verified	7.A.4. Flood Recovery	Mightconsider adding a discussion of HUD CDBG-DR to this section. There would need to be a separate preamble since its HUD, and mention that only the most severe disasters result in CDBG-DR. I can work on this if advisable to include.	Inserted	MPTX - Greg	FNI - Mat	7-8
2	MPTX	Verified	7.B.6 Hazard Mitigation Action Plans	I realize this might be a TWDB prescribed section, but including HMP listing here seems off topic with regard to flood response (emergency activities).	Section 7.B.6 is no longer in the report. HMAP information was shifted to other parts of Chapter 7	MPTX - Greg	FNI - Mat	N/A
3	MPTX	Verified	7.B.6 Hazard Mitigation Action Plans	Also, this seems like an incomplete list. I could probably get you more if interested. Also, should probably mention all the official partipating jurisdictions in the HMPs for the region (primarily cities covered in County-Multi-Jurisdictional HMPs).	This is the current list of HMAP that we were able to find during 2021 when the research was being conducted.	MPTX - Greg	FNI - Mat	N/A
Chapter 8								
1	MPTX	Verified	Chapter 8	My opinion, this would be a good place to make the case for increased higher level (state or river basin) involvement, coordination, and construction of flood mitigation work. Legislature could establish a permanent structure and system for doing so. In other words, move away for hyper-local (and the perennial confusion and inefficiency it creates), and move towards state-level coordination. Not sure where this fits.	Flood mitigation work is already being done on a state-wide level through TWDB via the FIF program. We made a recommendation in Chapter 8 already to continue funding the FIF program so that it can continue.	FNI-Mat	FNI-Mat	Section 8.A.1
2	MPTX	Verified	Chapter 8	Wild notion, but my opinion for the best floodplain regutory move would be to turn over local floodplain admin. to either the SRA, or State of Texas. Multiple advantages to doing so.	SRA's focus is primarily on water supply, not floodplain management or regulatory aspects of flooding. No change to the RFP.	FNI-Mat	FNI-Mat	N/A
3	MPTX	Verified	Chapter 8	Totally agree! This is a brilliant observation about the contradictions and ironies with how TxDOT exempts itself out of local floodplain standards. Kudos for including this.	Noted. No change to the RFP.	FNI-Mat	FNI-Mat	N/A
4	MPTX	Verified	Chapter 8	Good observation.	Noted. No change to the RFP.	FNI-Mat	FNI-Mat	N/A
5	MPTX	Verified	Chapter 8	Update on prior comment, these are all very good recommendations. I have more, but this is good start.	Noted. No change to the RFP.	FNI-Mat	FNI-Mat	N/A
6	Jerry Cotter USACE	Verified	Chapter 8	Rapidly developing areas surrounding larger urban centers are at greater risk of having runoff patterns increasing because of development. These urban areas are comprised of many communities and unincorporated county areas. Many of the smaller communities are not funded or resourced to deal with the complexities of floodplain management and therefore there is a lack of or inconsistencies in floodplain management practices.	This is a comment specific to the Trinity RFPG	FNI-Mat	FNI-Mat	N/A
7	Jerry Cotter USACE	Verified	Chapter 8	Clarify the early 2000's state legislation that provide counties the authority to regulate floodplains to explicidly allow and encorage activiites associated with floodplain management such as development of land use plans, regulatory authorites, e.g. permitting. Although state legislation was passed in the early 2000's which gave counties the ability to regulate floodplains, interpretation of these regulations varies widely from county to county. The legislate bill lacks implementation guidance in the form of administrative rules. If development is occuring in unincorporated areas, this development can dynamically impact flood risk.	The only legislation noted within the Sabine RFP is regarding the 2021 STORM (federal) legislation and the state legislation regarding dams. This comment appears to be related to a different region other than Sabine	FNI-Mat	FNI-Mat	N/A

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8	Jerry Cotter USACE	Verified	Chapter 8	When channels are constructed, most often channel bed, banks and overbanks are cleared; however; with many miles of these channels, it is often difficult for communities to maintain those beds, banks and overbanks at their design conditions. Generally, there is a lack of channel maintenance to ensure flood conveyance areas, established as part of a development or improvement projects, to retain their design level n-values. This results in unexpected changes in channel conveyance and increased flooding. Channel maintenance is very expensive activity that can trigger environmenatl permitting requirements.	This is a comment specific to the Trinity RFPG. The Sabine RFP does not have a Chapter 8 recommendation in this area.	FNI-Mat	FNI-Mat	N/A
9	Jerry Cotter USACE	Verified	Chapter 8	Land development in upstream areas increases runoff in downstream areas. This happens because of increased impervious cover and decreased tree cover, and therefore less ability to absorb rainfall. Additionally, development, in most communities, encroaches into riparian areas and decreases the amount of storage available to accommodate flood waters. Just the main thread of the Trinity River though DFW stors more flood waters during of flood than any three of the USACE reservoirs that provide flood protection for DFW. The many other stream provide even more storage than the main stem. There is limited capacity in rivers and streams to convey floodwaters. This means that all areas above any given conveyance point have to stor flood water until sufficient time has laps to pass the water away from the impacted area. The streams are where this water is stored and depleting these storage areas will impact DS areas.	This is a comment specific to the Trinity RFPG.	FNI-Mat	FNI-Mat	N/A
10	Jerry Cotter USACE	Verified	Chapter 8	Establish future land use plans for unincorporated areas associated with rapidly growing urban areas.	In several Sabine RFPG, there were numerous mentions of not wanting to impose any additional regulation or on tracts that could be used for development. Recommending to not add this to the Sabine RFP at this time.	FNI-Mat	FNI-Mat	N/A
11	Jerry Cotter USACE	Verified	Chapter 8	Use of ultimate development land use conditions in the development of future flows. Require use of future flows for regulation of floodplains and development of FMP's.	This is a comment specific to the Trinity RFPG.	FNI-Mat	FNI-Mat	N/A
12	Jerry Cotter USACE	Verified	Chapter 8	Encorage storm shifting to validate 100-yr estimates and to provide a broader understanding of communities actual flood risk Storms identified and cataloged as part of the GLO funded USACE led Texas Storm Study could be the primary source of storms to be shifted.	This is a comment specific to the Trinity RFPG.	FNI-Mat	FNI-Mat	N/A
13	Jerry Cotter USACE	Verified	Chapter 8	Add detail to Watersshed Hydrology Assessments (WHA) for communities within basins with completed WHA's. The WHA for the Trinity has been completed. The WHA's, funded by FEMA, are considered the best available flood flow frequency estimates, e.g. 100-yr. These estimates consider the latest precipitation frequencies, the variations in watershed response and determine critical flood drivers by employing a wide range of sensitivity analysis for each computation point.	This appears to be a comment specific to the Trinity RFPG.	FNI-Mat	FNI-Mat	N/A
Chapter 9								
1	MPTX	Verified	Chapter 9	Nice job on this Chapter, all very good!	Noted. No change to the RFP.	FNI-Mat	FNI-Mat	N/A
2	MPTX	Verified	Chapter 9	An additional barrier is lack of access to federal databases that contain important flood damage details (HWM's, XYZT$ for flood damage). Primarily FEMA, IA, but also PA and SBA-DL.	Text added	MPTX - Greg	FNI-Mat	9-9
3	TWDB	Verified	Chapter 9	41. Flood Infrastructure Financing Analysis, Text (Exhibit C, Section 2.9): It appears that the draft plan does not describe how the data was collected or the survey methodology. Please provide this required information. [31 TAC §361.44 & Exhibit C 2.9].	Text added in Section 9.B - "Contact information for Sponsors was gathered through entity webistes and FEMA's Floodplain Manager contact list. "	FNI-Allison	FNI-Mat	9-9
4	TWDB	Verified	Chapter 9	68. Flood Infrastructure Financing Analysis, Text: Please consider reviewing text for proper usage of "Category 2" where appropriate. "Category 2" is referenced on page 9-4, however, there are currently no TWDB-funded, FIF Category 2 projects committed within the Sabine Flood Planning Region.	Text updated to talk about majority of funding being Cat 1 and not Cat 2.	FNI-Allison	FNI-Mat	9-4
Chapter 10								
1	MPTX	Verified	Chapter 10	Nice job! All relevant, good info, you included many things I wouldn't have thought of.	Noted. No change to the RFP.	FNI - Mat	FNI - Mat	N/A
2	MPTX	Verified	TABLE 10-2: SUMMARY OF RFPG MEETINGS	Only thing worth adding is extending the table to include remaining future steps in the process, with specific dates estimated or TBD.	Add paragraph outlining the timeline of future dates/key events	FNI - Mat	FNI - Mat	10-10
Volume 2								
1	MPTX	Verified	Volume 2	It would be nice if the Volume 2 PDF had 'bookmark indexing' per section. Also, TOC would be nice.	Volume 2 was bookmarked	FNI-Allison	FNI - Mat	Volume 2
2	MPTX	Verified	LIST OF ABBREVIATIONS AND ACRONYMS	Might be good to include a list of acroyms and if so include HWM's (high water marks), and water-surface elevation (WSE)		FNI-Allison		
Geodatabase Submittal								
1	TWDB	Verified	Entites	Please review entities listed as having flood-related authority within the Entities feature class. It is not clear whether all entities listed under "Other" have flood-related authority [31 TAC§361.30(4) & (5)].	All "Other" entities with flood-related authority were added to Table 7-1 to be consistent with Entities feature class. All "Other" Entities were determined to have flood-related authority by the Sabine RFPG.	FNI - Allison	FNI - Allison	Entites

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2	TWDB	Verified	Entites	It appears that some entities crossing regional boundaries do not start with "00" as required. For additional entities crossing region boundaries, an ID should be requested from TWDB to ensure consistency across regions. Regions may create their own IDs for additional entities entirely within the region, and please refer to the TWDB email sent on December 3, 2021 for more information on adding new entities. [31 TAC§361.30(4) & (5)].	No update needed. All 61 entities that extend beyond the region boundary have IDs that start with 00.	FNI - Alanna	FNI - Allison	Entites
3	TWDB	Verified	ExFldInfraPol	Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'POP_PROTEC' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.31 & Exhibit D 3.3].	Placeholder removed.	FNI - Alanna	FNI - Allison	ExFldInfraPol
4	TWDB	Verified	ExFldInfraLn	Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'POP_PROTEC' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.31 & Exhibit D 3.3].	Placeholder removed.	FNI - Alanna	FNI - Allison	ExFldInfraLn
5	TWDB	Verified	ExFldInfraPt	Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'POP_PROTEC' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.31 & Exhibit D 3.3].	Placeholder removed.	FNI - Alanna	FNI - Allison	ExFldInfraPt
6	TWDB	Verified	ExFldInfraPt	Please include all low water crossings (LWCs) identified during the flood planning process in this feature layer. The ExFldExpAll feature class appears to contain LWCs that are not included in the ExFldInfraPt feature class. Note: This is required in contrast to the optional LWC feature class. See Table 7 of Exhibit D for a list of valid entries [31 TAC §361.31].	ExFldExpAll layer contains 113 LWCs. ExFldInfraPt contains 132. The 19 LWCs excluded from the ExFldExpAll layer do not intersect with the ExFldHazard layer.	FNI - Alanna	FNI - Allison	ExFldInfraPt
7	TWDB	Verified	ExFldExpPol	10. Existing Condition Flood Exposure GIS Feature Class, ExFldExpPol: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c) & Exhibit D 3.5.2].	Placeholder removed.	FNI - Alanna	FNI - Allison	ExFldExpPol
8	TWDB	Verified	ExFldExpLn	11. Existing Condition Flood Exposure GIS Feature Class, ExFldExpLn: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c) & Exhibit D 3.5.2].	Placeholder removed.	FNI - Alanna	FNI - Allison	ExFldExpLn
9	TWDB	Verified	ExFldExpPt	12. Existing Condition Flood Exposure GIS Feature Class, ExFldExpPt: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c) & Exhibit D 3.5.3].	Placeholder removed.	FNI - Alanna	FNI - Allison	ExFldExpPt
10	TWDB	Verified	ExFldExpAll	13. Existing Condition Vulnerability GIS Feature Class, ExFldExpAll: a. The ExFldExpAll feature class does not appear to include all ExFldExpLn segments. Please review all existing exposure features and ensure that all are included in the ExFldExpAll feature class [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].	17,167 Line features were identified and 17,167 points are included in ExFldExpAll as ExpGEOM - Line. No update made.	FNI - Alanna	FNI - Allison	ExFldExpAll
11	TWDB	Verified	FutFldExpPol	17. Future Condition Flood Exposure GIS Feature Class, FutFldExpPol: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].	Placeholder removed.	FNI - Alanna	FNI - Allison	FutFldExpPol
12	TWDB	Verified	FutFldExpLn	18. Future Condition Flood Exposure GIS Feature Class, FutFldExpLn: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].	Placeholder removed.	FNI - Alanna	FNI - Allison	FutFldExpLn
13	TWDB	Verified	FutFldExpPt	19. Future Condition Flood Exposure GIS Feature Class, FutFldExpPt: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].	Placeholder removed.	FNI - Alanna	FNI - Allison	FutFldExpPt
14	TWDB	Verified	FutFldExpAll	20. Future Condition Flood Vulnerability GIS Feature Class, FutFldExpAll: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.34(c); Exhibit D 3.6.2].	Placeholder removed.	FNI - Alanna	FNI - Allison	FutFldExpAll
15	TWDB	Verified	ExFpMp	22. Existing Floodplain Management Practices GIS Table, ExFpMp: a. Please review the feature class as it appears there are differences between the ExFpMp table and the table from the chapter appendix. For example, Joaquin is listed "s "Low" for 'LEV_ENFC' in the ExFpMp table but listed as "None" in the Exhibit C Table 3 located in Appendix 3-B. Please reconcile [31 TAC §361.35 & Exhibit D 3.7].	Table 6 updated to align with ExFpMp table.	FNI - Allison	FNI - Allison	ExFpMp
16	TWDB	Verified	ExFpMp	b. It appears that some fields contain invalid entries. For example, fields such as 'MIN_CODE' contain "999999". Please review all fields and populate with valid entries as referenced in Exhibit D Table 20 [31 TAC §361.35 & Exhibit D 3.7].	Placeholder removed.	FNI - Alanna	FNI - Allison	ExFpMp
17	TWDB	Verified	Goals Table	23. Goals Table (Exhibit C, Table 11): Please adhere to Exhibit D guidance regarding GOAL ID structure. GOAL ID should begin with the region number such as '04' and not '4' [31 TAC §361.36 & Exhibit C 2.3.B].	Table 11 updated to align Goal_ID to match Goals.	FNI - Alanna	FNI - Allison	Goals Table

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18	TWDB	Verified	FMP	29. Flood Mitigation Projects (FMP) GIS Feature Class, FMP: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'REDSTRUCT100' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.38(c-e) & Exhibit D 3.11.1].	Placeholder removed.	FNI - Alanna	FNI - Allison	FMP
19	TWDB	Verified	FMP	36. Flood Mitigation Project (FMP) Recommendations GIS Feature Class, FMP: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'REDSTRUCT100' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile, as appropriate [31 TAC§361.39 & Exhibit D 3.11.1].	Placeholder removed.	FNI - Alanna	FNI - Allison	FMP
20	TWDB	Verified	FMP	37. Flood Mitigation Project (FMP) Details (Exhibit C Section 3.9, Tables 23-40, and Exhibit D Section 3.11.3 FMP_Details Geodatabase file): Please ensure agreement across plan elements of the FMP costs. The FMP costs included in the report, table, and feature class do not appear to be in alignment with each other. For example, the FMP_COST for the Sabine Pass to Galveston Bay Coastal Storm Risk Management Program is listed as $2,270,100,000 in the written portion of the plan on page 5-5 while the cost listed in the geodatabase is $2,390,000,000. Please reconcile, as appropriate [31 TAC§361.39 & Exhibit C 2.5.B].	Cost of this FMP is $2,270,099,968. Text and tables updated to align.	FNI - Alanna	FNI - Allison	FMP
21	TWDB	Verified	FMS	10. Flood Management Strategy (FMS) Recommendations GIS Feature Class, FMS: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'DAMAGE' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.39 & Exhibit C 2.5.C].	Remove placeholder.	FNI - Alanna	FNI - Allison	FMS
22	TWDB	Verified	ExFpMp	54. Existing Floodplain Management Practices GIS Feature Class, ExFpMp: Please consider reviewing the feature class for accurate entities. It is not clear that those listed all have flood authority (e.g., certain MUDs as NFIP participants) [31 TAC §361.35 & Exhibit D 3.7].	Union Valley Ranch MUD of Hunt County was updated to reflect no NFIP participation	FNI - Allison	FNI - Allison	ExFpMp
23	TWDB	Need Clarification	Streams	57. Streams GIS Feature Class, Streams: a. Please consider reviewing the Streams with the FMP and FME feature classes for alignment. For example, FMP_ID: 043000012 and 043000020 polygons do not appear to overlap with streams stated in the descriptions.	FMP_IDs stated were not included in the FMP feature class. Clarification requested from Ryke. No response.	FNI - Alanna		Streams
24	TWDB	Verified	Streams	b. It appears the Streams feature class may include erroneous streams. See STREAM_ID: 040041224 and 040033872; It appears to cut across the terrain unrealistically. Please consider reviewing the streamline process.	Will review streams layer. (Level 2)	FNI - Alanna	FNI - Allison	Streams
25	TWDB	Verified	Streams	c. Please consider joining unconnected stream segments. See STREAM_ID: 040050935 for an example stream segment with a gap.	All disconnected stream segments along the Sabine River were connected.	FNI - Alanna	FNI - Allison	Streams
26	TWDB	Verified	ExFldInfraPt	46. Existing Flood Infrastructure GIS Feature Class, ExFldInfraPt: Please use ENTITY_IDs from the Entities feature class for the OPER_ENT field. Please leave as '999999' or NULL if there is no data or unknown.	Remove placeholder.	FNI - Alanna	FNI - Allison	ExFldInfraPt
27	TWDB	Verified	ExFldProjs	49. Existing Projects GIS Feature Class, ExFldProjs: Please consider including projects FMA-PJ-06-TX-2019-008 as described in the comment provided for Table 2.	Project added to ExFldProjs feature class and Table 2.	FNI - Alanna	FNI - Allison	ExFldProjs
28	TWDB	Verified	ExFldProjs	50. Existing Projects (Exhibit C, Table 2): Please ensure that all ID fields are entered correctly in all tables and geodatabases. Unique IDs must be accurate for the database to connect and work properly. Please refer to Exhibit D Table 2 or more recent updates for Unique ID guidance. For example, it appears that there are differing starting IDs listed under 'Existing Project ID". Some start with '4' where guidance requires the unique ID to start with '04'.	No update needed. All ID start with 04 in Table 2 and ExFldProjs	FNI - Alanna	FNI - Allison	ExFldProjs
29	TWDB	Verified	ExFldExpAll	c. Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'VELOCITY' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please reconcile [31 TAC §361.33(c), (d) & Exhibit D 3.5.3].	Remove placeholder.	FNI - Alanna	FNI - Allison	ExFldExpAll
30	TWDB	Verified	FutFldExpAll	51. Future Condition Flood Vulnerability GIS Feature Class, FutFldExpAll: If the CRITICAL field contains a 'No' entry, then please leave CRIT_TYPE as NULL in associated entries.	Make null.	FNI - Alanna	FNI - Allison	FutFldExpAll
31	TWDB	Verified	FME	59. Flood Management Evaluation (FME) GIS Feature Class, FME: a. Please consider populating the "MODEL_DESC" field for clarity on existing studies to be used.	Model description and model availability fields updated to reflect BLE model availability.	FNI - Allison	FNI - Allison	FME
32	TWDB	Verified	FMP	60. Flood Mitigation Projects (FMP) GIS Feature Class, FMP: If the 'WATER_SUP' field contains a "No" entry, then please leave WSUP_DESCR as NULL.	Make null.	FNI - Alanna	FNI - Allison	FMP
31	TWDB	Verified	FME	64a. Flood Management Evaluation (FME) GIS Feature Class, FME: a. Please consider populating the "MODEL_DESC" field for clarity on existing studies to be used.	Will add detail.	FNI - Allison	FNI - Allison	FME
33	TWDB	Verified	FMP_Details	66. Flood Mitigation Project (FMP) Details Geodatabase, 3.11.3 FMP_Details: There are NULL score values for multiple entries for FMP_ID 043000017. Please verify if these are correct or should be added.	Values are unknown and were intentionally left null.	FNI - Allison	FNI - Allison	FMP_Details

APPENDIX 0-A
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