TWDB Comment No.	Task No.	Type - TWDB comment, Public comment, Sponsor	GDB or Chapter Text	Level 1 or 2	Description	Draft Response
2	**1**	TWDB comment	GDB	1	Entities GIS Feature Class, Entities: It appears that some fields contain invalid entries, including 'ACTIVE'. Please leave NULL to represent either "not applicable" or "unknown". Please review fields, as appropriate, and populate with valid entries as referenced in Exhibit D Table 3 [31 TAC §361.30(4) & (5)].	NULL will be used in place of Unknown.
3a	**1**	TWDB comment	GDB	1	Existing Flood Projects GIS Feature Class, ExFldProjs: a. Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'COMP_YR' as this causes errors in calculations.	NULL will be used in place of numeric placeholders.
3b	**1**	TWDB comment	GDB	1	Existing Flood Projects GIS Feature Class, ExFldProjs: Please include the expected year of completion for all ongoing projects in the 'COMP_YR' field. Please leave NULL to represent either "not applicable" or "unknown". Please populate all required fields with valid entries per Exhibit D Table 8 [31 TAC §361.32].	Four projects have completion years identified and are filled accordingly in the geodatabase. For the remaining three projects with unknown completion years, we will reach out to Sponsors to try and identify completion years and we are not able to obtain this information, NULL will be used.
4	**1**	TWDB comment	GDB	1	Existing Flood Infrastructure GIS Feature Class, ExFldInfraPt: Please include all low water crossings (LWCs) identified during the flood planning process in this feature class. 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. Please reconcile [31 TAC §361.31].	As described on page 2-8, "A total of 815 low-water crossings were identified in the region as part of the data collection and outreach described in Chapter 1... Approximately 661 of the low-water crossings were determined to be within existing condition flood hazard areas though this analysis." All LWC, regardless of whether they are in the hazard area, are within the ExFldInfraPt feature class and only the LWC within the hazard area are included in the ExFldExpAll feature class. We verified that there are no LWC within the ExFldExpAll that are not within the ExFldInfraPt. We believe that no changes are needed. Please confirm.

5	**2A**	TWDB comment	GDB	1	Existing Condition Flood Hazard GIS Feature Class, ExFldHazard: The Total Hazard Area in Table 3 and the ExFldHazard feature class do not appear to match for “Possible flood prone areas” and “Unknown” flood risks. Please review for accuracy. Please ensure that the hazard area in Table 3 matches the area in ExFldHazard [31 TAC §361.33(b)].	The sum of "Possible flood prone areas" in Table 3 is 1.2669 sq mi. Sum of the AREA_SQMI in ExFldHazard for FLOOD_FREQ = 'Unknown' is 1.27. We modified the number of significant digits in Table 3 and it is now showing a sum of 1.27. We believe no further changes are needed. Please confirm.
6	**2A**	TWDB comment	Text	1	Existing Condition Flood Hazard Analysis, Text: Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as per guidance document (Exhibit C page 24): Submittal requirement number 2 [31 TAC §361.33(a)].	Land area by flood risk type will be added to the first paragraph on page 2-5. Land area at risk by county is found on Figure 2-6 and the accompanying text on page 2-8. Land area at risk by frequency is found in various places in the chapter, including in Table 2-2 and on page 2-4.
7a	**2A**	TWDB comment	GDB	1	Existing Condition Flood Vulnerability GIS Feature Class, ExFldExpAll: a. Please check that the population count in Table 3 is the maximum of day and night population. The population count in Table 3 does not appear to match either the total day population or total night population from the ExFldExpAll feature class and appears to be higher than both. "Population (daytime)" and "Population (nighttime)" columns are not included in the table but can be added to the left of "Population" in Table 3 to facilitate this check.	We will revise our methodology in accordance with the guidance provided in the consultant conference call on 11/9/22.
7b	**2A**	TWDB comment	GDB	1	Existing Condition Flood Vulnerability GIS Feature Class, ExFldExpAll: Please use the updated ‘CRIT_TYPE’ valid entry list: "Medical, Police, Fire, EMS, Shelter, School, Infrastructure, Water Treatment, Wastewater Treatment, Power Generation, Other". The entry “Emergency” has been removed from the list of valid entries. Please refer to the Summary of Updates to Exhibit D document available on the TWDB website.	We will make this change.
7c	**2A**	TWDB comment	GDB	1	Existing Condition Flood Vulnerability GIS Feature Class, ExFldExpAll: If the ‘CRITICAL’ field contains a 'No' entry, then please leave ‘CRIT_TYPE’ as NULL [31 TAC §361.33(c)].	We will reconcile.
8a	**2A**	TWDB comment	GDB	1	Model Coverage GIS Feature Class, ModelCoverage: It appears that several entries for ‘MODEL_NAME’ include “Data.gdb”, “unknown”, or other non-unique names. Please reconcile.	We will reconcile.

8b	**2A**	TWDB comment	GDB	1	Model Coverage GIS Feature Class, ModelCoverage: It appears that 'MODEL_DESCR' for some entries do not describe the model or scenario modeled. Please include a description of the model and the scenario modeled in 'MODEL_DESCR'. Please review and revise for accuracy [31 TAC §361.33(b)(2)].	We will review for accuracy and revise.
9	**2B**	TWDB comment	Text	1	Future Condition Flood Hazard Analysis, Text: Please include total land areas (square miles) of each flood risk by flood risk type, county, region, and frequency as required (Exhibit C page 33): Submittal requirement number 3 [31 TAC §361.34].	Land area by flood risk type in future conditions will be added to Section 2.1.2. Land area at risk by county is found on Figure 2-6 and the accompanying text on page 2-8. Land area at risk by frequency is found in various places in the chapter, including in Table 2-2.
10	**2B**	TWDB comment	Table	1	Future Condition Flood Exposure Table (Exhibit C Table 5): There appears to be a discrepancy between counts in the FutFldExpAll feature class (366 structures in the 1% annual chance flood risk) and the Table 5 values (362 structures in the 1% annual chance flood risk) for Blanco County. Please reconcile [31 TAC §361.34 & Exhibit C 2.2.B.3].	We calculated 38 agricultural, 26 commercial, 272 residential, and 26 vacant buildings, with a total of 362 in both the feature class and Table 5. We believe that no changes are needed. Please confirm.
11a	**2B**	TWDB comment	GDB	1	Future Condition Flood Vulnerability GIS Feature Class, FutFldExpAll: Please use the updated 'CRIT_TYPE' valid entry list: "Medical, Police, Fire, EMS, Shelter, School, Infrastructure, Water Treatment, Wastewater Treatment, Power Generation, Other". The entry "Emergency" has been removed from the list of valid entries. Please refer to the Summary of Updates to Exhibit D document available on the TWDB website.	We will make this change.
11b	**2B**	TWDB comment	GDB	1	Future Condition Flood Vulnerability GIS Feature Class, FutFldExpAll: For 'CRITICAL' fields containing a 'No' entry, then please leave 'CRIT_TYPE' as NULL [31 TAC §361.33(c)].	NULL will be used in place of 'No' entries for CRIT_TYPE.
12	**3B**	TWDB comment	Table	1	Goals Table (Exhibit C Table 11): Table 11 appears to be missing fields for "Residual Risk" and "How will the Goal be Measured". Please add and populate these required fields for Table 11 [31 TAC §361.36 & Exhibit C 2.3.B].	Missing fields will be added to the table and populated.
13a	**4B**	TWDB comment	GDB	1	Flood Management Evaluations (FME) GIS Feature Class, FME: a. Please refrain from using numeric placeholders (such as '999999') in numeric fields such as 'STRUCT_100' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown.	NULL will be used in place of numeric placeholders.
13b	**4B**	TWDB comment	GDB	1	Flood Management Evaluations (FME) GIS Feature Class, FME: It appears that some fields contain invalid entries, including 'FUND' and 'REGULATORY'. Please review certain fields, as appropriate, and populate with valid entries as referenced in Exhibit D Table 23. Please leave NULL when the field is not applicable or unknown [31 TAC §361.38(i) & Exhibit D 3.10].	NULL will be used in place of Unknown in the Regulatory field and in place of TBD in the FUND field.
14	**4B**	TWDB comment	GDB	1	Flood Mitigation Projects (FMP) GIS Feature Class, FMP: Please refrain from using numeric placeholders (such as '999999') in numeric fields such as 'STRUCT_100' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown [31 TAC §361.38(c-e) & Exhibit D 3.11.1].	Missing values will be updated with current infrormation or NULL will be used in place of numeric placeholders.
15	**4B**	TWDB comment	Table	1	Flood Mitigation Projects (FMP) Table (Exhibit C Table 13): The format of Associated Goals (ID) for FMP_ID 113000035 appears to be set to scientific number formatting and is currently shown as "1.1 E+14". Please update to reflect the required GOAL_ID format as required in Exhibit D Table 2 [31 TAC §361.38(c-e) & Exhibit C 2.4.B].	We will update to reflect the required GOAL_ID format.
16a	**4B**	TWDB comment	GDB	1	Flood Management Strategies (FMS) GIS Feature Class, FMS: It appears that some fields contain invalid entries, including 'FUND' and 'FMS_COST'. Please consider reviewing certain fields, as appropriate, and populate with valid entries as referenced in Exhibit D Table 26. Please leave NULL when the field is not applicable or unknown.	NULL will be used in place of Unknown in the FUND field. FMS_COST will be updated with the correct values per related TWDB comment.
16b	**4B**	TWDB comment	GDB	1	Flood Management Strategies (FMS) GIS Feature Class, FMS: Please refrain from using numeric placeholders (such as '999999') in numeric fields such as 'STRUCT_100' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown [31 TAC §361.38(d) & Exhibit D].	NULL will be used in place of numeric placeholders.

19a	**4B**	TWDB comment	Table and GDB	1	Flood Management Strategy (FMS) Recommendations Table (Exhibit C Table 17): The Nonrecurring, Noncapital Cost field appears to be missing. Please add and populate this field in Table 17 to match the amounts in the 'NRNC_COST' field entries in the FMS feature class.	The missing field will be added and populated.
19b	**4B**	TWDB comment	Table and GDB	1	Flood Management Strategy (FMS) Recommendations Table (Exhibit C Table 17): Some FMSs list $0 for the Estimated Total Strategy Cost field. Please make sure this field at least matches the amounts contained in the Nonrecurring, Noncapital Cost field [31 TAC §361.39 & Exhibit C 2.5.C].	We will review for accuracy and revise.
20	**5**	TWDB comment	GDB	1	Flood Management Evaluation (FME) Recommendations GIS Feature Class, FME: Please refrain from using numeric placeholders (such as '999999') in numeric fields such as 'STRUCT_100' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown [31 TAC §361.39(c), (f) & Exhibit D 3.10].	Missing values will be updated with current infrormation or NULL will be used in place of numeric placeholders.
21a	**5**	TWDB comment	Text	1	Flood Mitigation Project (FMP) Recommendations, Text: 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. As per the draft report (page 6-2), "The RFPG reviewed previous assessments of impact to upstream or downstream areas or neighboring regions, and deferred to the professional engineering judgement expressed in those assessments to determine whether no negative impact exists." 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, include the study name, or identify previous assessment name and associated engineering judgement in tabular format.	Models or studies demonstrating no negative affect will be submitted for each FMP included in the final plan. FMPs related to generators or other non-conveyance projects will not have supporting modeling data provided.
21b	**5**	TWDB comment	Text	1	Flood Mitigation Project (FMP) Recommendations, Text: It appears that the cost for FMP_ID 113000001 in Table 5-2 does not match what is in the FMP feature class and Table 16. Please reconcile [31 TAC §361.39 & Exhibit C 2.5.B].	We will review for accuracy and revise.
22a	**5**	TWDB comment	GDB	1	Flood Mitigation Project (FMP) Recommendations GIS Feature Class, FMP: Please refrain from using numeric placeholders (such as '999999') in numeric fields such as 'STRUCT_100' and 'BC_RATIO' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown [31 TAC §361.38(c-e) & Exhibit D 3.11.1].	We will review for accuracy and revise.
22b	**5**	TWDB comment	GDB	1	Flood Mitigation Project (FMP) Recommendations GIS Feature Class, FMP: It appears that some fields are missing entries, including 'BC_RATIO'. Please ensure all required fields are populated with valid entries per Exhibit D Table 24.	Per guidance received from TWDB, 0 BCR values will be used for certain project types, such as generators and FEWS. For all other types of FMPs, BCR values will be populated in the tables and database.

23	**5**	TWDB comment	Text and GDB	1	Flood Management Strategy (FMS) Recommendations, Text: The cost in Table 5-3 "Education and Outreach" does not appear to not match the costs included in the FMS feature class. Please reconcile [31 TAC §361.39 & Exhibit D 3.11.1].	We will review for accuracy and revise.
24a	**6**	TWDB comment	Text	1	Contributions to and Impacts on Water Supply Development and the State Water Plan, Text: a. Section 6.2.5 notes that the plan does not include recommended FMSs or FMPs for large detention structures that will have a water supply component. However, Table 16 appears to indicate that several recommended FMPs with detention components may have a water supply benefit. “Ordinances and Criteria”, “Recharge Enhancement” and other subsections appear to also describe potential water supply benefits. Please clarify which recommended FMSs or FMPs would measurably contribute to water supply if implemented and, if appropriate, include a single table that lists all recommended FMSs or FMPs that would measurably contribute to water supply and provides the information outlined in Exhibit C Section 2.6.B.	We revised the langauge in Section 6.2.5 to reflect that while some FMPs have the potential to provide water supply benefits, they are not quantified at this time. Since the benefits are not yet quantified, we will mark WATER_SUP as No for all FMPs in the geodatabase.
24b	**6**	TWDB comment	Text	1	Contributions to and Impacts on Water Supply Development and the State Water Plan, Text: The plan does not appear to present a summary of negative impacts of the flood plan on the state water plan. Please provide a summary of negative impacts of the flood plan on the state water plan and a table listing recommended FMSs and FMPs that would negatively impact or measurably reduce water availability volumes or water supply volumes in accordance with Exhibit C, Section 2.6.B. If no negative impacts are identified, please include a statement to that effect [31 TAC §361.41 & Exhibit C 2.6.B].	We revised language in Section 6.1.1, 6.1.2, and 6.1.4 to state none of the FMSs or FMPs recommended in the plan will negatively impact or measurably reduce water availability or water supply volumes and will not impact the State Water Plan.
25	**7**	TWDB comment	Text	1	Flood Response Information and Activities, Text: The plan does not appear to contain a written summary in Chapter 7 of entities involved and actions taken or planned for recovery from past flood disasters in the region. Please reconcile [31 TAC §361.42 & Exhibit C 2.7].	We will review and revise.
26		TWDB comment	Text	2	Please consider including appropriate bookmarks in the pdf of the report.	We will consider and include, if possible.
27	**1**	TWDB comment	Text	2	Planning Area Description, Text: Please consider providing a summary for agricultural and natural resources specific to Region 11 that are most impacted by flooding.	Agricultural land uses in Region 11 can be found on pages 1-17 and 1-18. At this point in the cycle, time and resources do not allow for a new analysis of what types of crops and specific types of agricultural land are most exposed to flooding, separate from the analysis required in Task 2 and described in Chapter 2. The RFPG can consider performing additional analyses in the second cycle to understand specific agricultural and natural resources impacted by flooding in the region.

28	**1**	TWDB comment	Text	2	Existing Flood Infrastructure, Text: Please provide a description of how Low Water Crossings were identified within the text of Chapter 1.	The description found in Chapter 2, page 2-17, will be added to Chapter 1.
29	**1**	TWDB comment	Map	2	Deficient Infrastructure Map (Exhibit C Map 3): Please consider modifying the color scheme to help differentiate between tributaries, rivers, and infrastructure lines on the map.	Currently, all tributaries and rivers are included in the infrastructure line layer with an unknown condition and functionality. Because of this, only the infrastructure lines (drawing in GIS on top of the tributaries and rivers) are showing on the map. We believe no changes are needed. Please confirm.
30	**2**	TWDB comment	Text	2	Existing Condition Flood Exposure, Text: Please consider updating the naming convention for Table 2-3 and 2-4 in the text when describing exposure between the 1% and 0.2% events. Currently the exposure from the 1% and 0.2% are added together for the "TOTAL" count. From the values the 0.2% field includes "Additional structures" exposed, rather than "Total structures" impacted by the 0.2% event.	Table columns will be updated for clarity.
31	**2**	TWDB comment	Table and GDB	2	Existing Condition Flood Exposure Table (Exhibit C Table 3): Please consider adding an additional column of "Total Exposure" that adds 1% and 0.2% exposure values in Table 3. As presented, it is unclear what values are being used to create the rankings of counties with the most exposure.	Total Exposure columns will be added as requested.
32	**2**	TWDB comment	GDB	2	Existing Condition Flood Exposure GIS Feature Class, ExFldExpLn: It appears that this feature class contains several extremely short road segments (<0.05 meters). Please consider merging and consolidating these together to reduce the number of features.	52 of 8596 ExFldExpLn are <0.5m. The ExFldExpLn is intersected with the ExFldHazard layer which creates a separate line for each SOURCE & FLOOD_FREQ. The RFPG will consider changes to the way the ExFldHazard layer is created and how the ExFldExpLn intersect is performed to reduce small road segements in the second cycle of regional flood planning.
33	**2**	TWDB comment	Text	2	Existing Condition Flood Vulnerability, Text: Please consider providing further descriptions on how vulnerability was assessed. Consider providing more details about if proximity to a floodplain, proximity to other bodies of water, past flooding issues, emergency management plans, and location of critical systems like primary and back-up power were assessed.	The vulnerability analysis considered identification of critical facilities and SVI, as required per Exhibit C Section 2.2.A.3 and did not include analysis of other elements such as proximity to water, flooding issues, etc.
34	**2**	TWDB comment	GDB	2	Existing Condition Flood Vulnerability GIS Feature Class, ExFldExpAll: Page 2-16 of the text mentions electrical facilities, however, there doesn't appear to be any power generation or related facilities included in this feature class. Please consider including power generation and related facilities in the ExFldExpAll feature class.	Power Generation will be added as a type in ExFldExpAll in accordance with Level 1 TWDB comments.
35	**2**	TWDB comment	GDB	2	Model Coverage GIS Feature Class, ModelCoverage: For BLE mapping coverage areas please consider labeling 'MODEL_NAME' with "ESTBFE <Model date>" and the 'MODEL_DESCR" field with "Base Level Engineering model".	Based on TWDB clarification during the November 9, 2022 TC call "Model Coverage" will be updated to identify models used to justify recommended FMPs (if available). See comment 8a and 8b.
36a	**2**	TWDB comment	Text and Figure	2	Future Condition Flood Exposure, Text: Please consider clarifying the sentence on Page 2-13, "Then, additional building footprints within the future condition floodplains were generated for the future condition flood exposure analysis." It appears unclear whether additional building footprints were added to approximate areas through some logical methodology and then counted if they intersect with the future condition flood hazard floodplain, or if those footprints were all added to the projected future condition flood hazard floodplain directly.	Clarifying language regarding the methodology used to locate future buildings was added to Chapter 2.

36b	**2**	TWDB comment	Text and Figure	2	Future Condition Flood Exposure, Text: Please consider including in the text on Pages 2-13 and 2-14 the estimated number of occupants used for these additional future buildings.	The HUC10 population growth data was refined based on Water User Groups to provide a more granular estimate. As a result the number of occupants varies. Clarifying text and a Figure showing the density was added to Chapter 2.
37	**2**	TWDB comment	GDB	2	Future Condition Flood Exposure GIS Feature Class, FutFldExpLn: It appears that this feature class contains several extremely short road segments (<0.05 meters). Please consider merging and consolidating these together to reduce the number of features.	See response to TWDB comment #32.
38	**2**	TWDB comment	Text	2	Future Condition Flood Vulnerability, Text: Please consider providing further descriptions on how vulnerability was assessed. Consider providing more details about if proximity to a floodplain, proximity to other bodies of water, past flooding issues, emergency management plans, and location of critical systems like primary and back-up power were assessed.	The vulnerability analysis considered identification of critical facilities and SVI, as required per Exhibit C Section 2.2.B.3 and did not include analysis of other elements such as proximity to water, flooding issues, etc.
39a	**5**	TWDB comment	Text	2	Flood Management Evaluations (FME), Text: Please consider reviewing and comparing FMEs with TWDB-funded, FIF Projects 40085, 40012, and 40133.	We will review.
39a	**5**	TWDB comment	GDB	2	Please verify whether there are capital costs with FME_ID 111000138 Cypress Regional Detention. If capital costs are included, please review and consider if this FME should be classified as an FMP. If this is a study, please add additional description to the text and geodatabase to clarify the study need and alignment with flood risk reduction.	We will revise the description to reflect that the FME is for activities needed to generate the technical data required for recommendation as an FMP.
39b	**5**	TWDB comment	Text and GDB	2	Flood Management Evaluations (FME), Text: For county-wide FMEs where most of the county falls outside of the RFPG boundary, please include justification of how the FME benefits the region and please coordinate with other RFPGs to make sure the efforts are not duplicated.	Justification of the benefits of multi-region FMEs will be added to the Chapter 5 text.
40	**5**	TWDB comment	Map	2	Flood Management Evaluations (FME) Map (Exhibit C Map 16): Please consider including TWDB-funded, FIF Category 1 studies in the indication of previously studied areas.	We will consider and modify, as necessary.
41	**5**	TWDB comment	GDB	2	Flood Mitigation Projects (FMP) GIS Table, FMP_HazPost: Please consider developing an FMP_HazPost feature class showing an updated hazard area that accounts for the impact of recommended FMPs.	We do not currently have the post-project floodplains for all of the FMPs. We will add what we have to the FMP_HazPost layer if time allows.
42a	**5**	TWDB comment	Text	2	Flood Management Evaluation (FME) Recommendations, Text: Please consider organizing Table 5-1 by increasing ID number.	We will consider and modify, as necessary.
42b	**5**	TWDB comment	Text	2	Flood Management Evaluation (FME) Recommendations, Text: For projects that overlap with an existing TWDB-funded, FIF Category 1 Study, please state how the FME will expand on the existing study. Examples include but are not limited to FME_IDs 11100098, 111000126, and 11100003. TWDB-funded FIF Projects 40085, 40012, and 40133 should be reviewed.	We will consider and modify, as necessary.
43	**5**	TWDB comment	GDB		Flood Mitigation Projects (FMP) Details GIS Table, FMP_Details: 'FMP_COST' values appear to be rounded differently within same field (some to decimal, some to dollar). Please consider using consistent approaches to rounding.	We will round to nearest dollar.
44	**9**	TWDB comment	Text		Flood Infrastructure Financing, Text: For clarity, please consider providing additional details regarding the "other means of collecting the required information" for the survey.	The sentence that contains the text "other means..." is referring to the requirement for Task 9 and mirrors the langauge in Exhibit C Section 2.9. Additional clarifying text will be added to the last paragraph of page 9-10 to clarify that the data was gathered via email and, in some cases, by follow up phone calls.

59		Sponsor FMX Changes	Both		Melissa Reynolds, City of Seguin, responded to the FMX funding survey noting that City of Seguin Sewage Treatment Plant Floodproofing Project Planning FME ID 111000067 was funded locally and should be removed. She also noted that City of Seguin Citywide Drainage Project Planning FME ID 111000066 was in 40% design.	FME ID 111000067 was removed. We will follow up with Melissa to discuss potential changes to or reclassification of FME ID 111000066 in the Amended Plan.
60		Sponsor FMX Changes			Annalisa Peace, Greater Edwards Aquifer Alliance Request to add the following two FMEs: FME NAME: Guadalupe Basin Assessment of Flood Mitigation and Performance of Nature-based Solutions (NBS) FME Description: Basin-wide analysis on the flood mitigation value of select nature-based solutions (NBS) at a variety of scales and land use types; study will include both modeling and real-world site monitoring. Methodologies will be designed with input from key stakeholders, including TWDB, FEMA, USACE, and others, looking for consistent, accurate, and broadly applicable methods to quantify flood mitigation benefits of NBS. Sponsor: Texas Nature Conservancy FME NAME: GIS Modeling of Significant Karst Areas for Purchase Protection FME Description: TBD Sponsor: TBD	Pending clarification of requirment for a political subdivision to be sponsor. We will follow up for possible inclusion of these FMEs in the Amended Plan.
61		Sponsor FMX Changes			Bill Barker, Great Springs Project, requested the additon of Technical Study to Enhance Great Springs Project Regional Flood Mitigation as an FME.	RFPG will consider recommending this new FME at the December 7 meeting.
62		Sponsor FMX Changes			Ken Gill, City of Victoria, requested the addition of Victoria WWTP Protection Project Planning FME.	RFPG will consider recommending this new FME at the December 7 meeting.
63		Sponsor FMX Changes			Mary Ellen Schulle, Kendall County requested the additon of the following two FMEs: An FME to complete an H&H model for all of the Guadalupe River within Kendall County. An FME to evaluate locations for stream gauges and flood hazard beacons. Mary also requested reclassification of the Cypress Regional Detention Project FME ID111000138 to FMP in the Amended Plan.	RFPG will consider recommending these two new FME at the December 7 meeting. We will follow up with Kendall County regarding reclassification of Cypress Regional Detention Project to FMP in the Amended Plan.
64		Sponsor FMX Changes			Colin Slagle, Doucet Engineers, consulting engineer for Caldwell County's FIF Category 1 planning study, requested additons of FMPs into the Amended Plan.	We will follow up with Caldwell County regarding addition of new FMPs into the Amended Plan.
65		Sponsor FMX Changes			Virginia Parker, San Marcos River Foundation, requested additon of FMPs into the regional flood plan.	Pending clarification of requirment for a political subdivision to be sponsor. We will follow up for possible inclusion of these FMEs in the Amended Plan.

67		Public	Chapter and GDB		Comment from Betty Murphy (Private Citizen, verbal comments provided at public meeting held in Kerrville): •Planning group must consider the small towns. •In 1978, Comfort was under water- 3 lives lost and millions of dollars of property damage. •Nothing has not been to prevent a similar flood from happening again. •If another flood happens, there will be a loss of 100 lives. •Recommends that sensors (from USGS) should be installed in Cypress Creek in Comfort. These sensors could provide an early warning system for local officials to learn about a possible flood. •USGS has determined the best location and determine the costs of a sensor.	We will schedule a meeting with Kerr and Kendall Counties to discuss potential FME to study solutions to flooding issues in Comfort for inclusion in the Amended Regional Flood Plan.
68		Public	Chapter and GDB		Comment from Emanuel Manny Flatten (Private Citizen, verbal comments provided at public meeting held in Kerrville): •Something needs be done in Comfort. •In 2016, at the Hwy 27 bridge, a woman drowned during the flood outside of his door. •The Comfort volunteer fire department staff had no warning on the last flood. •As mentioned by the previous speaker, Comfort officials needs an early warning system. •But, Comfort, an unincorporated town, is in two counties - Kerr and Kendall counties. •This makes it hard to get things done. So, the solution must be approached on a regional level. •No cost/benefit analysis for human life. Pamphlets telling us to move to somewhere else.	We will schedule a meeting with Kerr and Kendall Counties to discuss potential FME to study solutions to flooding issues in Comfort for inclusion in the Amended Regional Flood Plan.
69		Public	N/A		Comment from Carly Farmer (City of New Braunfels, written comments provided at public meeting held in Kerrville): I will send further documentation for projects for New Braunfels and will want to include changes for the revised regional flood plan. (See Ms. Farmer's written comments on next row.)	N/A

70		Public			Comment from Carly Farmer (City of New Braunfels): On behalf of the City of New Braunfels, I have reviewed the Draft Region 11 Guadalupe Regional Flood Plan. I had a few comments I wanted to share with you about the efforts listed for New Braunfels. Based on our previous conversations, it is my understanding that most of these revisions won't be able to be made until the amended plan next summer. FMPs •The Wood Road/Landa Street Drainage Improvement requires further evaluation and study, so we would request it be included as an FME instead •The following projects are wrapping up preliminary engineering this month and we feel would be better included as FMPs: oThe drainage improvements associated with the Castell Avenue Corridor Plan oLanda Lake Dam and Spillway Improvements oFaust/Nacogdoches Drainage Improvements FMEs •We are good with the projects listed under FME but request to move Faust/Nacogdoches to FMP as we are wrapping up preliminary engineering this month FMSs •The City of New Braunfels is kicking off our Drainage Area Master Plan. This plan includes extensive modeling of streams in the HUCs in our City Limits, ETJ, and beyond, and identification of potential regional drainage projects. Is this project captured in the FMS section of the Draft Plan, or should it be included elsewhere?	FNI had a follow-up phone call with New Braunfels on 11/4/22. The Wood Road/Landa Street Drainage Improvement Project will be reclassified as an FME in the Final Regioanl Flood Plan. FNI will reach out to New Braunfels in January or February 2023 to see which of the other three projects, if any, the City would like to pursue generating the necessary data and information for classification as FMPs in the Amended Regional Flood Plan, based on whether the projects are expected to be funded via City bonds. The DAMP will be listed as an ongoing project in Task 1.
71		Public			Comment from Marvin Bruce Miller (Private Citizen, verbal comments provided at public meeting held in Victoria): •For 46 years he's been battling the river water. While things have improved - not flooding property and business - there is one spot that still floods under the railroad tracks, which flows into the city drains and eventually into his property. •**Would want to have somebody talk to railroad company to plug the hole under the tracks.** •In 1998, when river rose 34 feet it washed the railroad tracks away and he had 4ft of flooding in his building.	This comment will be documented in the appendix of the Fianl Flood Plan.
72		Public			Comment from Grace Renken (Renken Nursery/Private Citizen, verbal comments provided at public meeting held in Victoria): •Purchased property in the 80's. She wanted to know when the last flood plain map was created. •Drainage was put in and elevations taken. A corner of her property is in the floodplain. When TxDOT built an intersection near her property, the water drained away from her property in another direction. The TxDOT engineers eventually agreed with her. •Therefore, **Ms. Renken objected to the boundaries of the current flood plain map and would like to have the map corrected**.	This has been recorded as a potential action. Technical Consultant will contact the potential sponsor to inquire about presenting this to the RFPG for consideration for inclusion in the Amended Flood Plan (July 2023)

73		Public			Comment from Kenneth Schustereit (Private Citizen, verbal comments provided at public meeting held in Victoria): •His family has lived on the Guadalupe since 1939. **Need to clean up the river channel will help the Guadalupe River basin. This is the most important thing to prevent flooding.** •Between Guadalupe and the San Antonio rivers lies a verdant cotton field. This land is now four feet of silt, where it is used to be 25,000 acres of agricultural land. This land is now out of production due to uncontrolled flooding. To clean out the silt from the river channel, Mr. Schustereit suggested to pull the plugs out of the river - the saltwater barrier, the dams in Goff and Hog Bayous, and the log jams. This will prevent the flooding. •He has learned that if there is a repeat of the 1998 flood it will have worse effects. Since that flood, the amount of impermeable ground in the basin has increased resulting in greater flooding. It is mathematically indisputable; it will be a worse flooding. GBRA has promoted the growth in this basin.	This has been recorded as a potential action. Technical Consultant will contact the potential sponsor to inquire about presenting this to the RFPG for consideration for inclusion in the Amended Flood Plan (July 2023)
74a		Public			Comment from Jerry Cotter (USACE): Table 8.1: Legislative Recommendations: **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.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. RFPG will consider at the December 7 meeting. 8.1.11. *Similar recommendation was considered, discussed, and removed by RFPG in July/August 2022 (costs/funding, overlap, regional cooperation between existing entities would be more effective)*
74b		Public			Comment from Jerry Cotter (USACE): Table 8.1: Legislative Recommendations: 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 occurring in unincorporated areas, this development can dynamically impact flood risk. Clarify the early 2000's, state legislation that provides counties the authority to regulate floodplains to explicitly allow and encourage activities associated with floodplain management such as development of land use plans, regulatory authorities, such as permitting.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. RFPG will consider at the December 7 meeting. 8.1.12.

74c		Public			Comment from Jerry Cotter (USACE): Table 8.2 Administrative Recommendations: **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 maintenance by marginal organizations such as homeowners' 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 environmental permitting requirements.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. This appears to be a potential regulatory requirement. The RFPG made the decision not to include mandatory higher standards this planning cycle, but it may be considered during the next cycle (8.3.4).
74d		Public			Comment from Jerry Cotter (USACE): Table 8.2 Administrative Recommendations: **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.**	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. This appears to be a potential regulatory requirement. The RFPG made the decision not to include mandatory higher standards this planning cycle, but it may be considered during the next cycle (8.3.5).

74e		Public			Comment from Jerry Cotter (USACE): Potential FMS: **Encourage 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 occurred 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 Watershed 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 incorporated areas, for use in developing future flood flow frequency estimates and future 100-yr (and other recurrence interval) hazard boundaries.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. Potential New FMSs will be considered for inclusion in the Amended Regional Flood Plan (or next planning cycle).

75a		Public			Comment from Doug Sethness (DeWitt County Drainage District No. 1 & R11 RFPG Member): Comment 1 - Background The DCDD1 performs drainage activities throughout its authorized area of operation, an area initially described in the enabling legislation as the city limits of Cuero, Texas and has remained constricted by this designation. The flooding which the DCDD1 was required to mitigate does not occur because of rainfall or runoff coming solely from within the city boundaries. The flow of water is a result of the topography given the truth that water flows downhill regardless of whether it crosses a city limit boundary or not. Thus, the ability of the DCDD1 to undertake provisions to provide efficient and effective control of flood waters is limited without any authority to mitigate the flow of water into the city from outside the city limits. Other states and jurisdictions have recognized this truth and have provided for drainage districts to expand to the limits of the watershed directs affecting the flooding the district is required to control. DCDD1 has authority only within approximately one-third of the area contributing to the flooding of Cuero, Texas. It is recommended the State of Texas pass legislation to allow the DCDD1 to expand its boundaries to include the total of the areas contributing to the flooding of Cuero, Texas. Comment 1: **Change the legislation pertaining to Drainage Districts to allow the expansion of the authorized area of the Drainage District, specifically DeWitt County Drainage District No. 1, to expand to the watershed boundaries, instead of the current restriction to city. I think this should be a legislative action. I believe this issue may fit into the category of Flood Management Strategy.**	Legislative Recommendation RFPG will consider at the December 7 meeting 8.1.9
75b		Public			Comment from Doug Sethness (DeWitt County Drainage District No. 1 & R11 RFPG Member): Comment 2: **Past and current funds being routed down from the State (Community Development Block Grant Mitigation Action Plan funds)** to the Golden Crescent Regional Planning Commission for distribution to include programs to abate flooding issues (including “Buy Outs”) **do not identify Drainage Districts as a qualified entity for receipt in the distribution of funds although Drainage Districts are designated by the State** for flood control, community health, and safety. In the past, a county or a city was qualified but not a drainage district. This is unreasonable and **the designation of entities qualified to receive this funding should include Drainage Districts.** I am not sure if this is an administrative or legislative issue. I believe this issue may fit into the category of Flood Management Strategy.	Legislative Recommendation RFPG will consider at the December 7 meeting 8.1.10

75c		Public			Comment 3 – Background: The City of Cuero has flooded numerous times. Most remembered of the more recent events resulted from Hurricane Harvey and in the 1998 Flood. Located in very close proximity to the Guadalupe River and being at a low elevation relative to the river at flood stage, the City of Cuero is very subject to flooding resulting from extreme events in other parts of the Guadalupe River watershed resulting is a significant rise in river elevation causing flood waters to go directly from the river into the city. A cursorily review of the topography along the riverbank above and below the City of Cuero create an interest in the possibility of the construction of a levee to prevent a swollen, out of (natural) bank Guadalupe River from causing extreme flooding in Cuero as occurred in 1998. Comment 3: **Identify the need for an engineering study to determine the potential of significant benefit to Cuero from a levee protecting the city from a swollen, out of bank, flooded river from causing extreme life safety and catastrophic damage as has been experienced in Cuero on numerous occasions. I believe this issue may fit into the category of Flood Management Evaluation.**	This will be added as a new FME. RFPG will consider at the December 7 meeting as part of final FMX list(s).
75d		Public			Comment 4 - Background Many governmental and civic organizations rely on data provided by governmental agencies and departments to evaluate various aspects of their services. In the area of flood prevention, the Federal Emergency Management Agency, FEMA, is one agency which provides data on flooding to include, among many other things, the number of homes and businesses flooded and the total cost of the flood damage. It has been found that FEMA uses other data in this evaluation specifically that FEMA uses the number of Flood Insurance Claims filed as an indicator of the number of homes and businesses flooded. Then, other agencies use these numbers when evaluating the severity of an event to a particular location. These data are used in evaluating applicants for grants to be used to mitigate flood damages. However, as reasonable as this might seem, it is not accurate and penalized the most needy. In one flood event in Cuero, Texas there was only ONE reported insurance claim although there were just over 250 flooded homes. Because FEMA only reported one home flooded, funds to assist were denied. The truth was the families in the other homes were not wealthy enough to afford flood insurance, or the damage was not enough to sufficiently exceed the insurance deductable to go through the effort of filing a claim. These homes and businesses were left out of the data, both as to being flooded and as to the total cost of the event, as a result. **Comment 4: It is recommended the method of the identification and counting of the number of flooded homes and the financial cost of the damage be revised to a method of identification which would include homes and businesses which do not have flood insurance.**	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. This appears to be Adminstrative and will be considered by the RFPG for the Amended Plan or in the next Planning Cycle.

76a		Public			Comment from Annalisa Peace (GEAA & R11 RFPG Member): These comments are submitted on behalf of the fifty-five member groups of the Greater Edwards Aquifer Alliance and the undersigned supporting organizations. **Background** State legislation enabling the Regional Flood Plan process provided guidelines and deliverables to be accomplished by each flood planning group, with regional plans becoming the basis of a state flood plan. Included in deliverable was the request for proposed flood mitigation projects to be considered for future funding. Enabling legislation also directed the Texas Water Development Board (TWDB) to identify and evaluate natural flood mitigation features and include Nature Based Solutions (NBS) within proposed flood mitigation projects. While TWDB has been very responsive to the questions and concerns expressed by the various Regional Flood Planning Groups (RFPG), the process highlighted several areas of concern regarding the evaluation of natural flood mitigation features for their level of function and use in flood mitigation. This process highlighted the current lack of data specific to Texas regions needed to accurately evaluate natural flood mitigation features and, therefore, the need for methods beyond a traditional Hydrologic Engineering Center's - River Analysis System (HEC-RAS) approach. In addition, Technical Consultant outreach to communities demonstrated the need to increase knowledge on incorporating not only the protection and restoration of natural flood mitigation features but also in general, NBS into flood control strategies. Nature Based Solutions will need to be woven into every facet of this program and incorporated into future policies and strategies to empower community collaboration and leverage the state's vast network of natural ecosystems in building resilient communities.	Background - no response needed (comments on following rows)
76b		Public			Comment from Annalisa Peace (GEAA & R11 RFPG Member): Recommendations Broad and specific recommendations have been collected from RFPG committee members and collaborators across the state, including: **1. Increase funding for and use of Nature Based Solutions, and reduce hurdles to their incorporation into the Regional Flood Plans as Flood Mitigation Strategies, Evaluations and Projects by:** a.Increasing number of trainings and workshops on accurate cost benefit analysis and use of NBS; b.Improving modeling methods to provide greater sensitivity beyond traditional hydrological models to include soil porosity and moisture holding capacity, plant interception, evaporation, and transpiration; and other processes that affect flows and interactions with groundwater; as well as water quality improvements and groundwater recharge that can be realized with NBS; c.Expanding the TWDB's concept of "adverse impact" to include loss of functioning floodplains and the resiliency that they provide; d.Incentivizing collaboration across watersheds and jurisdictions towards a regional approach to floodplain management using NBS by prioritizing such projects.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. Appears to be Administrative and will be considered by the RFPG for the Amended Regional Flood Plan or future planning cycles. Note some elements are touched on in the plan but could be revised/clarified/expanded: 8.2.3 - consider non-traditional benefits/impacts 8.2.8 - GI training 8.2.9 - Selction criteria 8.2.10 - Riparian Management 8.1.12 - Regional cooperation Note TWDB is starting a project to develop NBS guidance and training document.

76c		Public			Comment from Annalisa Peace (GEAA & R11 RFPG Member): **2.Ensure that the TWDB's cost benefit analysis appropriately weights projects offering:** a.Increased social and environmental benefits, b.Reduced negative environmental impact, c.Reduced cost avoidance for infrastructure replacement (for data on gray infrastructure replacement costs: https://mediaspace.du.edu/media/David+Skuodas+-+Seeing+the+Forest+and+the+Trees/1_g90zp1xz), and d.Increased flood prevention for future conditions while also creating resiliency to recover after natural disasters.	Appears to be Administrative and will be considered by the RFPG for the Amended Regional Flood Plan or future planning cycles. Note some elements are touched on in the plan but could be revised/clarified/expanded: 8.2.3 and 8.2.8 addresss non-traditional BCR and GI training. TWDB will be publishing draft project scoring for public comment in early 2023 (anticipated) and this could be relevant to that conversation
76d		Public			Comment from Annalisa Peace (GEAA & R11 RFPG Member): **3.Recognize the role that land development codes and location of infrastructure have on flood impacts:** a.Educate on the need for counties to use their ability provided by the State to exert authority to influence development and reduce negative impacts to natural features that mitigate flooding and enable counties to levy stormwater/drainage utility fees to retrofit and maintain natural flood infrastructure, b.Promote and fund the use of NBS throughout watersheds with the understanding that most natural flood mitigation features, including floodplains, are in some state of degradation and can be improved with appropriate land use policies, c.Recommend policy changes that enable Counties or Groundwater Conservation Districts to protect Natural Aquifer Storage and Recovery features (e.g., karst, fracture zones, and sinkholes) that help mitigate flood severity while transferring potential flood water into aquifers, and d.Partner with other agencies to incorporate flood considerations into applicable agency activities (e.g., ensure TxDOT builds to 1% annual probability ("100-year") standards and uses updated flood maps defined by the National Oceanic and Atmospheric Administration (currently the Atlas 14 data) and that such infrastructure does not increase downstream flooding nor damage floodplains and riparian corridors.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. Appears to be Administrative and will be considered for the Amended Regional Flood Plan or next Planning Cycle. Note some elements are touched on in the plan but could be revised/clarified/expanded: 8.2.11 Encourages Counties and Cities to use authority Potential new legislative recommendation (above) to clarify County autthority. TWDB is developing NBS guidance.

76e		Public			Comment from Annalisa Peace (GEAA & R11 RFPG Member): **4.Specific project recommendations:** a.Fund a Texas Watershed Initiative similar to Louisiana's with a robust program on use and adoption of NBS, b.Provide training and technical resources to flood districts, river authorities, municipal utility districts, water control and improvement districts, and municipal and county floodplain managers to advance understanding and adoption of NBS and best practices for maintaining floodplains and other natural flood mitigation features to fully realize potential benefits, c.Use all available federal and state programs to prioritize the preservation and restoration of natural flood mitigation features throughout watersheds, d.Develop a compendium of Nature-Based resources for non-coastal communities, and e.Review submitted FMPs, FMEs and FMSs submitted for this first 5-year cycle to determine the feasibility to augment with NBS aspects. Conversely, strategically protecting natural infrastructure and placing Nature Based Solutions throughout a watershed can significantly reduce flood risks along tributaries and major riverine systems alike. Conclusions If preventative flood mitigation strategies are not prioritized for funding, then flood events will be more frequent and will cause greater harm, leading to much higher costs for Texas taxpayers. Similarly, if natural infrastructure that mitigates flooding is degraded, undoing the damage to many of these features may be cost-prohibitive or otherwise impossible. Retrofitting with flood control projects is also short sighted as opposed to incorporating pathways for prevention such as those already in use in many other states.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. Appears to be Administrative and will be considered for the Amended Regional Flood Plan or next Planning Cycle. Note some elements are touched on in the plan but could be revised/clarified/expanded: Recommendations 8.1.5 and 8.1.8 recommend an increase in funding to preserve and restore natural flood mitigation features. Recommendations 8.2.8 and 8.2.10 recommend creation of materials to provide resources for NBS.
77a		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): We are encouraged by the following items included in Region 11's draft Regional Flood Plan: o Adopted short-term and long-term flood mitigation and floodplain management goals o incorporating nature-based practices when acreage exceeds one acre; o increasing higher standards in high growth counties; and o increasing high growth community CRS participation;	Background - no response needed (comments on following rows)

77b		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): We are encouraged by the following items included in Region 11's draft Regional Flood Plan: Legislative recommendations: o 8.1.1. (continue recurring biennial appropriations to FIF); o 8.1.2 (expand municipal and county authority to regulate land use and development in floodplains); o 8.1.3 (Expand city and county authority to ensure that new development does not increase downstream flooding); o 8.1.4 (State adoption of higher flood standards – e.g., 2018 edition of the IBC); o 8.1.7 (Provide guidance and funding for "buy out" programs to remove repetitive loss structures and potentially convert flood prone neighborhoods into green space/parkland); and o 8.1.10 (provide funding to increase the number of conservation easements for riparian areas and land in the 100-year floodplains); · Administrative Recommendations o 8.2.1. (develop model ordinances for general law cities); o 8.2.3. (modify the selection process for flood projects so that project selection is not scored or awarded only on a traditional benefit-cost ratio); o 8.2.4. (continue and increase funding and/or technical assistance to develop updated floodplain maps); o 8.2.7. (provide incentives to local governments to participate in the FEMA Community Rating System program); o 8.2.8. (TWDB, TFMA, river authorities, and local governments should provide Green Infrastructure training to agencies, local governments, engineers, planners and encourage this practice in flood mitigation efforts); o 8.2.9. (TWDB Flood Infrastructure Fund (FIF) project selection process should place additional emphasis on social vulnerability, sustainability, environmental resilience, etc. in addition to benefit cost analysis to guide the funding and implementation of multi-dimensional projects that can provide water supply and other benefits beyond flood mitigation; and o 8.2.10 (TWDB/TFMA or others should develop a riparian management guidance document that addresses vegetation management purpose, timing, and location within the floodplain and floodway);	Background - no response needed (comments on following rows)
77c		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): We are encouraged by the following items included in Region 11's draft Regional Flood Plan: Regulatory Recommendations: o 8.3.1 (TxDOT design criteria should include stormwater detention requirements to not increase downstream flooding from new highway projects); o 8.3.2 (Statewide detention and/or verification of no downstream impact from new development for design storms ranging from the 2-year to the 100-year storm); and o 8.3.3 (State should provide guidance and/or authority to local governments to manage proposed RV parks in the floodplain).	Background - no response needed (comments on following rows)

77d		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): While Region 11 and the TWDB has been very responsive to the questions and concerns expressed by the public and various RFPGs, the process and initial regional planning round has highlighted several areas of concern regarding the evaluation of natural flood mitigation features for their level of function and the incorporation of NBS into flood control strategies. This process highlighted the current lack of data specific to Texas regions needed to accurately evaluate natural flood mitigation features and, therefore, the need for methods beyond a traditional Hydrologic Engineering Center's - River Analysis System (HEC-RAS) approach. In addition, Technical Consultant outreach to communities demonstrated the need to increase knowledge on incorporating Nature Based Solutions into flood control strategies. Equity and nature-based solutions will need to be woven into every facet of this program and incorporated into future policies and strategies in order to empower community collaboration and leverage the state's vast network of natural ecosystems in building resilient communities. Indeed, this sentiment was reflected in the Region, when the Region ranked floodplain practices. During this polling, natural infrastructure and nature-based practices ranked high on the list, while traditional flood infrastructure such as dams, levees, and channel modifications were last.	Background - no response needed (comments on following rows)
77e		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): The following comments and recommendations specific to Region 11 seek to better ensure an equitable flood plan, and one that centers natural infrastructure and nature-based projects. We recognize that the region will not be able to address some comments provided, however it is **our hope that during subsequent rounds, these comments will be taken into consideration.** **1. Refine "future conditions analysis" to better incorporate climate change** Future conditions analysis is a vital component in the Regional Flood Planning Process. A 2020 report published by the Association of State Floodplain Managers highlighted the following statistics: by 2100, the 1% annual chance floodplain would increase in size by 45% in riverine areas and of that growth, 30% would be attributable to development and 70% to climate change; coastal special flood hazard areas would increase by as much as 55% by 2100; and Sea level rise is accelerating and a majority of coastal communities will experience 30 days of high tide flooding annually by 2050. These are just a few statistics that show just how quickly floodplains are changing both due to development and climate change. This makes future conditions analysis critical in determining the flood needs of the region. Region 11 used Method 2 to develop the future condition flood hazard data, using the existing 0.2% ACE floodplain as a proxy for the future 1% ACE floodplain. As noted, using this proxy to determine future conditions analysis has some flaws – including that it does not create a new .2% ACE. Further, climate change impacts such as increased precipitation are not adequately taken into consideration through this proxy. No local studies have been considered for present or future flood risks. Where local models exist, for instance in Austin, TX, the flood risks should be discussed in the light of these existing, refined studies that align with local flood mitigation needs.	The RFPG will consider refining the future conditions analysis in the next planning cycle. Please see Section 2.2.1 for a discussion related to the development/approximation of both the future 1% and 0.2% ACE flood hazard areas.

77f		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): **2. Incorporate minimum floodplain management standards such as NFIP participation and enforceable building code standards for Municipalities** Region 11 did not incorporate any floodplain management standards into its draft plan. Minimum floodplain management standards can be adopted by the region, which local entities must adopt before a FME, FMS, or FMP is included under the Regional Flood Plan, and therefore eligible for funding under FIF. Region 11 stated that it wanted the first planning cycle to be as inclusive as possible, and therefore opted out of adopting any minimum floodplain management standards. We encourage Region 11 to consider NFIP participation as a minimum floodplain management standard. In the Guadalupe FPR, 96.8% of eligible municipalities and 100% of eligible counties participate in the National Flood Insurance Program (NFIP). Participation in the NFIP requires participants to "adopt a floodplain management ordinance and to designate a floodplain administrator who is responsible for understanding and interpreting local floodplain management regulations and reviewing them for compliance with NFIP standards." Since floodplain management ordinances and designation of a floodplain administrator are essential to proper flood planning at the local level, requiring the remaining municipalities to participate in the NFIP seems like an appropriate baseline, before entities can potentially receive funding for flood mitigation projects. Texas Floodplain Management Association (TFMA) developed a guide for communities to implement higher floodplain management standards which reduce flood damage and the overall impacts of floods.	This appears to be a potential regulatory requirement. The RFPG made the decision not to include mandatory higher standards this planning cycle, but it may be considered during the next cycle. Plese note that NFIP participation is required for communities that are seeking future Flood Infrastructre Funds by statute. In addition the RFPG recommend the State consider adoption of higher standards (8.1.2), and provide incentives for local governments to participate in the FEMA Community Ratin system (8.2.7).
77g		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): **3. Refine Assessment and Identification of Flood Mitigation Needs** Critical facilities in particular need additional attention when assessing and identifying flood mitigation needs. Certain critical facilities pose higher risk to surrounding communities during flooding, such as superfund sites and refineries. We recommend that the Region include in its weighted approach risks based on the number of industrial facilities that pose environmental justice risks to neighboring and fenceline communities. If facilities are identified that are within floodplains and are not adequately protected, the region should propose legislative, administrative, and regulatory recommendations to better ensure facilities do not pose a risk to neighboring communities during flooding.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Plan. The RFPG will consider changes to the risk assessment in the next planning cycle and may consider including additional recommendations

77h		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): **4. Increase public participation and outreach through virtual options and translation services** The Regional Flood Planning process is intended to be a bottom-up approach that continuously seeks and incorporates feedback from the public. While the plan details a list of outreach activities (Chapter 10, p. 10-23), the information might not reach all members of the community. To ensure an equitable plan, we recommend promoting outreach events with equity-based organizations, community leaders from underrepresented and marginalized communities and using a combination of in-person and virtual activities to combat broadband connectivity challenges. Region 11 can also work to increase public participation and input by providing virtual options for its meetings. These virtual options are especially important, given the geographic scope of the Region's jurisdiction. Further, Spanish translation of materials and use of translation services during public meetings can increase accessibility for the public. The Guadalupe Regional Flood Plan Comment Map provides an opportunity for community members to share their flood concerns, however, the Draft Plan does not include any information on how these comments are incorporated in the flood risk maps. These citizen science type of data collection is an efficient approach to quantify flood risks that are outside of top-down models and including them helps in a comprehensive flood risk assessment.	RFPG may consider this for future meetings. Page 2-4 provides a description of the process used to collect comments and data using the Comment Map, and summarizes the findings and extent of edits to the floodplain derived from those comments.
77i		Public			Comment from Arsum Pathak and Danielle Goshen (NWF, sent after deadline for comments): **5. Refine the determination of "no negative impact" to include no impact to natural infrastructure;** As it stands, the concept of proving a particular FMP causes "no negative impact" is limited and typically means that a project will "not increase flood risk to surrounding properties (upstream or downstream)." Further, "analysis must be based on best available data and be sufficiently detailed to demonstrate that the post-project flood hazard is no greater than the existing (pre-project) flood hazard." Communities however, as the Region notes, have different thresholds for defining what level of impact is adverse, while the Technical Guidelines and Rules governing state flood planning require 5 specific criteria to be met to establish no negative flood impact. Unfortunately, the Board's criteria to determine no negative flood impact does not adequately consider the impact a FMP may have on functioning floodplains and fails to consider the resiliency they provide. Region 11, along with the TWDB should expand the determination of "no negative impact" to include effects to floodplains.	Due to time constraints, Legislative Recommendations will be considered by the RFPG for the Final Regional Flood Plan (January 2023), so these could be considered during the 2023 Legislative Session. New Administrative and Regulatory Recommendations will be considered by the RFPG for the Amended Regional Flood Plan. Appears to be Administrative and will be considered for the Amended Regional Flood Plan or next Planning Cycle.
78a		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 1. Please include Texas Parks and Wildlife Department (TPWD) in the list of acronyms.	TPWD has been added

78b		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 2. The Guadalupe RFPG recommended 127 flood studies (evaluations), 32 flood projects, and 5 regional flood strategies for funding. Regarding the Flood Management Evaluations, Plans, and Strategies (FMXs, all together) chosen for recommendation, **TPWD would like to encourage all the FMX 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).	Noted
78c		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 3. 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 Guadalupe RFPG plan aligns with many of the goals in the TCAP in its assessment of the importance of undisturbed landscape features such as karst features, floodplains, and wetlands.**	No response needed
78d		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 4. The proposed FMXs 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 (see comment 2). Conversely, building dams and channelizing streams can adversely affect aquatic habitats and species. As such, **TPWD requests that a technical committee be formed to review FMXs. An Environmental Review Technical Committee could provide input on avoiding impacts to rare species and habitats, ensuring that the projects align with the TCAP. An environmental review at early stages of projects can benefit the project later at the permitting stage as well.**	RFPG may consider this for future planning cycles; however, it is important to note that the Sponsors are responsible for developing and implementing projects (including environmental reviews and permitting). As such, the RFPG would need to determine if this falls within its authority prior to initiating action.
78e		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 5. If environmental issues that would be a hurdle to permitting are recognized and addressed in advance of the permit application. TPWD is working to prevent the need for a federal listing of rare species and has found that working in collaboration with developers can minimize impacts to rare species and habitats.	Appears to be related to 78d - no separate response is required.

78f		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 6. The draft report's legislative recommendation 8.1.10 for additional funding for conservation easements along streams and in floodplains is especially beneficial for Texas wildlife and plants, including SGCNs. The administrative and regulatory recommendations include many nature-based solutions for flood control that will benefit wildlife, fish, and plants. **TPWD supports these recommendations and appreciates their inclusion in the plan.**	No response needed
78g		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 7. The Draft Guadalupe Flood Plan 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 bank-full 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.**	Noted
78h		Public			Comment from Marty Kelly (TPWD, sent after deadline for comments): 8. Based on the document cross-reference supplied by Texas Water Development Board in April 2021, it appears that Task 4B is meant to go in Chapter 5 rather than Chapter 4.	No response needed - TWDB did not have any concerns regarding organization of the Draft Plan

79		Public			Comment from Marisa Bruno and Cliff Kaplan (HCA, sent after deadline for comments): Nature-based strategies for flood mitigation tend to be highly effective and less costly than construction-based solutions, while providing additional benefits to local communities and natural systems. For instance, smart floodplain protection policies are not only cost-effective and impactful strategies for flood mitigation, but they also tend to provide the additional benefits of improving aquifer recharge and expanding healthy recreational opportunities for nearby communities and visitors. As such, we strongly recommend the implementation of nature-based solutions to flood mitigation whenever possible. Our partners at the Greater Edwards Aquifer Alliance have written comprehensive recommendations for how we might advance nature-based solutions and protect natural infrastructure through the flood planning process. Their recommendations fully capture our own views on Region 11's Draft Regional Flood Plan, and we endorse them completely. Those recommendations are attached: Recommendations Broad and specific recommendations have been collected across the state from RFPG committee members and collaborators, including: 1. increased use and funding for Nature Based Solutions that appropriately weights projects that offer i.social and environmental benefits, ii.reduced environmental impact, iii.cost avoidance for infrastructure replacement, for example https://mediaspace.du.edu/media/David+Skuodas+-+Seeing+the+Forest+and+the+Trees/1_g90zp1xz iv. future flood prevention while also creating resiliency to recover after a natural disaster b. Increased number of trainings and workshops on the use and cost benefit analysis of Nature Based Solutions. c. Improve the modeling software to include soil absorption, geologic porosity, plant interception, and other variables that slow flows or convey surface water below ground; as well as water quality improvements and ground water recharge that can be realized with NBS. d. Work with FEMA to expand the concept of "adverse impact" to include loss of functioning floodplains and the resiliency that they provide. e. Promote collaboration within major watersheds towards a regional approach to floodplain management using NBS	See response to GEAA comments (#76 above)

80		Public			Comment from Tara Bushnoe (UGRA & R11 RFPG Member, sent after deadline for comments): ES-1: It says, "The Upper Guadalupe River Authority has also constructed several impoundments in the upper basin". We did construct Nimitz dam and then sold that to the City of Kerrville, but that is the only on river impoundment we constructed. I think this sentence was added in reference to a comment we made on chapter 1 mentioning that there are four small impoundments in Kerr County. UGRA did not construct all of these. Could the sentence be changed to "There are also several smaller impoundments in the upper basin as well." Section 1-3: Same comment as above. Consider changing last sentence to: "There are also several smaller impoundments in the upper basin that have an impact on flood storage as well." Section 1-52: I know we made the comment on chapter 1 to add the last sentence, but it sounds like those are on channel dams instead of the small water and sediment control basins that are on dry draws. Consider changing to: Many of the remaining dams in the Guadalupe River Basin are NRCS regional flood control structures and water and sediment control basins constructed by UGRA based on the NRCS model for regional flood control structures.	We will update the wording in the executive summary and Chapter 1 at these locations