

Appendix G-1

Response to Comments on Draft Regional Flood Plan

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

Comment #	Category	Classification	Reviewer		Resolution/ Response	Technical Consultant			
			Comment Reference	Review Comment/Questions		Resolution		Backchecked & Approved	
						Date	Name	Date	Name
1	TWDB - Level 1	Action Required	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.	FNI utilized checklist provided by TWDB to ensure a complete submittal.	1/3/2023	Ella Pettichord (FNI)	1/10/2023	Wylie Gorup (FNI)
2	TWDB - Level 1	Action Required	Executive Summary	2. Please correct the total anticipated cost amount in Table ES-11, the table currently shows a total of \$191.2 M instead of what should appear to be \$262.1 M (page ES-20).	Amounts have been corrected and replaced based on Chapter 5/9 tables.	11/1/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
3	TWDB - Level 1	Action Required	SOW Task 1	1. Watershed, GIS Feature Class, Watersheds: Please ensure that the watersheds referenced in FMEs are included in the Watersheds feature class. For example, watersheds applicable to FME_IDs 011000117, 011000165, and 011000171 do not appear to be listed in the Watersheds feature class. Please review and revise as appropriate as described in Exhibit D 3.2.	Watersheds have been updated where appropriate.	10/31/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
4	TWDB - Level 1	Action Required	SOW Task 1	2. Existing Flood Infrastructure, (Exhibit C Table 1): There appears to be a discrepancy between the total number of Low Water Crossings in Table 1 (1,245 entries) and the ExFldInfraPt feature class (1,249 entries). Please review and revise as appropriate as described in Exhibit D 3.3 [31 TAC §361.31].	Reviewed data to confirm feature counts; four additional LWC were identified in Hutchinson County. It is possible that features were added after creation of Table 1. Table was updated to match feature class.	10/25/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
5	TWDB - Level 1	No Action Needed	SOW Task 2A	3. Existing Condition Flood Risk Analyses, Text: 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 is referenced in the second paragraph of Chapter 2: "TWDB-required Tables 3 and 5 summarize the quantitative results of this analysis by county and are included in Appendix B-2."	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
6	TWDB - Level 1	Action Required	SOW Task 2A	4. Existing Condition Flood Hazard GIS Feature Class, ExFldHazard: The 'Total Hazard Area' shown in Table 3 does not appear to match the total land area of the ExFldHazard feature class for 1% and 0.2% annual chance flood hazard extents. Please review and revise as appropriate. [31 TAC §361.33(b)].	Rounding difference between GIS and Table created small differences in totals. Table 3 has been manually modified to match GIS. In R01_Exhibit_C_Tables, existing and future flood risk values were swapped. This has been corrected.	12/5/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
7	TWDB - Level 1	Action Required	SOW Task 2A	5. Existing Condition Flood Map Gaps GIS Feature Class, Ex_Map_Gaps: Please use the required format for all ID fields, such as 'WS_ID'. Leave these NULL or "999999" if there is no data. For example, EXGAPS_ID 01000875 contains a '-' for 'WS_ID'. Please review and reconcile [31 TAC §361.33(b)(5)].	Updated to latest acceptable data format. See "Accommodations for Draft Comments" attachment included w/Comment letter. EXGAPS_ID 01000875 WS_ID and HUC12 corrected from - to null. All layers checked for '-' and 999999 in HUCs, Counties, and fields using Entity IDs and changed to NULL.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
8	TWDB - Level 1	Action Required	SOW Task 2A	6. Existing Condition Flood Exposure (Exhibit C Table 3): a. Please ensure that the population count in Table 3 is the maximum of day and night population. "Population (daytime)" and "Population (nighttime)" columns may be added to the left of "Population" in Table 3 to facilitate this check. [31 TAC §361.33 & Exhibit C 2.2 A 3]	Population counts have been changed from max per building to max per county in day vs night in Tables 3 and 5.	11/1/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

Comment #	Category	Classification	Reviewer		Resolution/ Response	Technical Consultant			
			Comment Reference	Review Comment/Questions		Resolution		Backchecked & Approved	
						Date	Name	Date	Name
9	TWDB - Level 1	Action Required	SOW Task 2A	6. Existing Condition Flood Exposure (Exhibit C Table 3): b. Please ensure that the values for day and night populations in Table 3 are consistent with the ExFldExpAll feature class. For example, the feature class includes day and night population counts by region, but Table 3 population counts are zero. Please review and revise as appropriate. [31 TAC §361.33 & Exhibit C 2.2.A.3].	Three counties have 0 population: Crosby, Hale, and Young. Crosby has no features in ExFldExpAll. Hale has 30 features in ExFldExpAll, all of which are agricultural land or roadway segments with 0 population. Young has 2 features in ExFldExpAll, both are agricultural land with 0 population. Therefore, we believe no changes are needed. Populations in flood prone areas were corrected by resolving comment 11.	10/25/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
10	TWDB - Level 1	Action Required	SOW Task 2A	6. Existing Condition Flood Exposure (Exhibit C Table 3): c. The Hazard area in Table 3 does not appear to match the ExFldExpAll feature class. Please review and reconcile [31 TAC §361.33 & Exhibit C 2.2.A.3].	Comment meant to refer to ExFldHazard, not ExFldExpAll per conversation with TWDB. Values have been modified to match between Table 3 and ExFldHazard. In R01_Exhibit_C_Tables, existing and future flood risk values were swapped. This has been corrected.	12/5/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
11	TWDB - Level 1	Action Required	SOW Task 2A	6. Existing Condition Flood Exposure (Exhibit C Table 3): d. Please ensure that the total counts in Table 3 for both Residential Buildings and Structures are consistent with the counts in the ExFldExpAll feature class [31 TAC §361.33 & Exhibit C 2.2.A.3].	Vlookup issue has been corrected for all flood prone area columns, which impacted agricultural areas, roadway segments, and population as well.	10/26/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
12	TWDB - Level 1	Action Required	SOW Task 2A	7. Existing Condition Flood Exposure GIS Feature Class, ExFldExpPol: There appears to be an approximately 44 square mile rectangular area missing from the ExFldExpPol feature class near the Cottle County area. This same area is not missing for Cottle County in Map 6. Please check the feature class for consistency with static maps and ensure that no data is missing [31 TAC §361.33(c) & Exhibit C 2.2.A.2].	This area is a nature preserve, so while there are areas of flood hazard, there is no flood exposure because there are no agricultural areas or built infrastructure. A label has been added to the maps indicating the 44 square-mile nature preserve.	12/2/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
13	TWDB - Level 1	No Action Needed	SOW Task 2B	8. Future Condition Flood Risk Analyses, Text: 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).	Table 5 is referenced in the second paragraph of Chapter 2: "TWDB-required Tables 3 and 5 summarize the quantitative results of this analysis by county and are included in Appendix B-2."	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
14	TWDB - Level 1	Action Required	SOW Task 2B	9. Future Condition Flood Hazard GIS Feature Class, Fut_Map_Gaps: a. It appears that some fields are missing entries, including 'COUNTY' and 'HUC8'. Please complete all required fields with valid entries. Please note that the required fields for this feature class will be the same as Exhibit D Table 10, Fld_Map_Gaps feature class [31 TAC §361.34(b)(6)].	Updated to the latest acceptable data format from the "Accommodations for Draft Comments" guidelines.	11/2/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
15	TWDB - Level 1	Action Required	SOW Task 2B	9. Future Condition Flood Hazard GIS Feature Class, Fut_Map_Gaps: b. Please use the specified format for all ID fields such as 'WS_ID'. Leave these Null or "999999" if there is no data.	Updated to latest acceptable data format. See "Accommodations for Draft Comments" attachment included w/Comment letter. HUC12 and WS_ID null for both features, FUTGAPS_ID 01000001 spatial fields all null.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

Comment #	Category	Classification	Reviewer		Review Comment/Questions	Resolution/ Response	Technical Consultant			
			Comment Reference	Resolution			Backchecked & Approved			
							Date	Name	Date	Name
16	TWDB - Level 1	Action Required	SOW Task 2B		10. Future Condition Flood Vulnerability, (Exhibit C Map 12): There is no legend on the index maps and upon review it appears to reference the wrong data set. Please review and revise as appropriate per [31 TAC §361.34(d) & Exhibit C 2.2.B.2].	A legend was added. Confirmed the correct dataset is being mapped.	11/15/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
17	TWDB - Level 1	Action Required	SOW Task 3A		11. Existing Floodplain Management Practices, Text: Values shown in Table 3-1 does not appear to be consistent with text in section 3A.1.3. Please review and revise as appropriate per [31 TAC §361.35 (d), Exhibit C 2.3.A].	Updated the text of 3A.1.3 to reflect the correct number of cities and counties with higher standards adopted.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
18	TWDB - Level 1	Action Required	SOW Task 4B		12. Flood Mitigation Projects GIS Feature Class, FMP: Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'REMSTRUC500' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please ensure valid entries for all required fields per Exhibit D Table 24 [31 TAC §361.38(c- e)].	Updated to latest acceptable data format. See "Accommodations for Draft Comments" attachment included w/Comment letter. All 999999 values were replaced with NULL.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
19	TWDB - Level 1	Action Required	SOW Task 4B		13. Flood Management Strategies GIS Feature Class, FMS: Several required fields contain NULL values. For example, 'REDSTRUCT100', 'REMPPOP', and 'NRNC_COST'. Please ensure valid entries for all required fields per Exhibit D Table 24 [31 TAC §361.38(d)].	Updated to latest acceptable data format. See "Accommodations for Draft Comments" attachment included w/Comment letter. All fields with - replaced with NULL. REDSTRUCT100, REMPOP, and NRNC_COST are all 0, not null.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
20	TWDB - Level 1	Action Required	SOW Task 5		14. Flood Mitigation Project Recommendations, GIS Feature Class, FMP: a. Please refrain from using numeric placeholders (such as "999999") in numeric fields such as 'BC_RATIO', 'REMSTRUC100' and 'REMSTRUC500' as this causes errors in calculations. Please leave NULL when the field is not applicable or unknown. Please ensure valid entries for all required fields per Exhibit D Table 24 [31 TAC §361.39].	Updated to latest acceptable data format. See "Accommodations for Draft Comments" attachment included w/Comment letter. All 999999 values were replaced with NULL.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
21	TWDB - Level 1	Action Required	SOW Task 5		14. Flood Mitigation Project Recommendations, GIS Feature Class, FMP: b. There are some fields that contain invalid entries, including 'NEG_IMPACT'. Please complete all required fields with valid entries per Exhibit D Table 24.	Updated to latest acceptable data format. See "Accommodations for Draft Comments" attachment included w/Comment letter. All 999999 values were replaced with NULL.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
22	TWDB - Level 1	Action Required	SOW Task 5		14. Flood Mitigation Project Recommendations, GIS Feature Class, FMP: c. Several required fields contain NULL values. For example, 'REDSTRUCT100', 'REMPPOP', and 'NRNC_COST'. Please ensure valid entries for all required fields per Exhibit D Table 24 [31 TAC §361.39].	Updated to latest acceptable data format. See "Accommodations for Draft Comments" attachment included w/Comment letter. All 999999 values were replaced with NULL. No NRNC_Cost field in FMPs.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
23	TWDB - Level 2	Action Required	General Comments		15. To help align with TWDB's preferred, standard nomenclature, please use "Cursory Floodplain Data" instead of "Fathom" or Cursory Fathom Data" throughout the regional flood plan.	Updated language throughout report to align with TWDB's preferred nomenclature and remove subsequent references to Fathom.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
24	TWDB - Level 2	Action Required	General Comments		16. Please consider clarifying who, more specifically, if possible, is meant to be indicated when referring to the "State" on page 8-6.	Replaced "the State" with the appropriate state agencies and organizations (TxDOT, TWDB, and TFMA).	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

Comment #	Category	Classification	Reviewer		Resolution/ Response	Technical Consultant			
			Comment Reference	Review Comment/Questions		Resolution		Backchecked & Approved	
						Date	Name	Date	Name
25	TWDB - Level 2	Action Required	SOW Task 1	17. Planning Area Description, Text: Please consider reviewing and revising language for consistency. For example, 'food mitigation' is used instead of "flood mitigation" on pages ES- 1 and 1-1.	Final report was reviewed for spelling, grammar and clarity. Non-substantive changes were made to correct errors and promote consistency.	1/3/2023	Ella Pettichord (FNI)	1/10/2023	Wylie Gorup (FNI)
26	TWDB - Level 2	No Action Needed	SOW Task 1	18. Existing Flood Infrastructure, Text: Please consider providing a description of how Low Water Crossings were identified within the text of Chapter 1.	This text is included in Section 1.2.2.3 which discusses two sources: the TWDB low water crossing dataset and low water crossings generated based on historical flood data from TxDOT.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
27	TWDB - Level 2	Action Required	SOW Task 1	19. Existing Flood Infrastructure, GIS Feature Class, ExFldInfraLn: Please consider including more descriptive language, if available, in the required field 'DESCR' for some of the entries.	More descriptive language has been added where appropriate.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
28	TWDB - Level 2	Action Required	SOW Task 2A	20. Existing Condition Flood Hazard Map (Exhibit C Map 5): Please consider adding a title to the map.	Map title added.	12/13/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
29	TWDB - Level 2	Action Required	SOW Task 2A	21. Existing Condition Flood Exposure, GIS Feature Class, ExFldExpLn: Please consider evaluating the potential flood risks associated with electric power transmission and/or natural gas pipelines. Relevant datasets can be found on the Flood Planning Data Hub for potential incorporation with the ExFldExpLn feature class.	Added language to Chapter 2A.2.3 to discuss flood risks associated with power transmission and gas pipelines and to describe expected losses of function. These features were not included in the flood exposure database at this time but may be considered for inclusion in future cycles.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
30	TWDB - Level 2	Action Required	SOW Task 2A	22. Existing Condition Flood Exposure, GIS Feature Class, ExFldExpPt: There are several power generating facilities that appear to be within the ExFldHazard feature class extent, but not identified in the ExFldExpPt feature class. Please consider evaluating the potential flood risks associated with electric power generating facilities. Relevant datasets can be found on the Flood Planning Data Hub for potential incorporation with the ExFldExpPt feature class.	Added language to Chapter 2A.2.3 to discuss flood risks associated with power transmission and gas pipelines and to describe expected losses of function. These features were not included in the flood exposure database at this time but may be considered for inclusion in future cycles.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
31	TWDB - Level 2	Action Required	SOW Task 2A	23. Existing Condition Flood Exposure (Exhibit C Map 6): Several maps appear to be missing road labels and labels appear over the legend and inset map. For example, Map 6 # 14 of 44. Please consider reviewing and modifying as appropriate.	Labeling conflicts were addressed.	12/13/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
32	TWDB - Level 2	Action Required	SOW Task 2A	24. Existing Condition Flood Vulnerability (Exhibit C Map 7): a. Map 7 # 1 of 17 appears to have two titles on top of one another. Please consider revising.	Title has been corrected.	12/13/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
33	TWDB - Level 2	Action Required	SOW Task 2A	24. Existing Condition Flood Vulnerability (Exhibit C Map 7): b. Some maps include waterway titles that appear to be covering the legend. For example, see Map 7 # 3 of 17 - Moore County. Please consider revising.	Labeling conflicts were addressed.	12/13/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
34	TWDB - Level 2	Action Required	SOW Task 2A	24. Existing Condition Flood Vulnerability (Exhibit C Map 7): c. Some maps appear to be incorrectly labeled as "Existing Exposure". For example, please see Map 7 #1 of 17. Please ensure the correct map title and data are included.	Title has been corrected.	12/13/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

		Reviewer			Technical Consultant				
Comment #	Category	Classification	Comment Reference	Review Comment/Questions	Resolution/ Response	Resolution		Backchecked & Approved	
						Date	Name	Date	Name
35	TWDB - Level 2	No Action Needed	SOW Task 2B	25. Existing Condition Flood Hazard GIS Feature Class, ExFldHazard: Please verify that the lake, reservoir, and riverbank extents are appropriately represented in the floodplain boundary utilizing the USGS National Hydrography Dataset. For example, the hazard levels for Lake Meredith appear to be incorrect. Please review and revise as appropriate.	This comment introduced a new data source to the flood hazard layer that was not discussed in Section 3.3.D of Exhibit C. Therefore, this change was not implemented. If TWDB would like this data to be considered when developing flood hazard information, we recommend noting NHD as a valid data source for flood hazard area in Exhibit C and/or providing source data through the Data Hub .	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
36	TWDB - Level 2	Action Required	SOW Task 2B	26. Existing Condition Flood Exposure GIS Feature Class, ExFldExpAll: a. EXEXPALL_ID 010024116 has "No" listed in the 'CRITICAL' column, but this appears to be the Hardeman County Memorial Hospital (Hospital Layer - ID 0043779252). Please review critical infrastructure layers to ensure that the critical structures in the ExFldExpAll feature class are properly identified.	Hardeman County hospital was marked as critical in the ExFldExpAll feature class.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
37	TWDB - Level 2	Action Required	SOW Task 2B	26. Existing Condition Flood Exposure GIS Feature Class, ExFldExpAll: b. The agricultural coverage layers appear to have irregular missing rectangular features that may be a result of the conversion of a raster to polygon. Please review and revise, as appropriate.	Missing rectangular features were filled in.	11/8/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
38	TWDB - Level 2	No Action Needed	SOW Task 2B	26. Existing Condition Flood Exposure GIS Feature Class, ExFldExpAll: c. The ExFldExpAll feature class does not appear to account for all ExFldExpLn segments. For example, EXEXPLN_ID 01002068Ln does not appear to be accounted for. Please review all existing exposure features and be sure to include them in the ExFldExpAll feature class.	Feature counts were reviewed and confirmed to match.	10/27/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
39	TWDB - Level 2	Action Required	SOW Task 2B	27. Future Condition Flood Hazard Map (Exhibit C Map 8): Map 8 #s 2 and 6 of 44 are missing road numbering information with empty white circles displayed. Some maps include waterway and other titles covering the legend for example please see Map # 3 of 44.	Labeling conflicts were addressed.	12/13/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
40	TWDB - Level 2	Action Required	SOW Task 2B	28. Future Condition Flood Exposure Vulnerability, Text: Consider providing more details on the vulnerabilities of critical facilities to flooding by looking at factors such as 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.	This analysis only identified critical facilities within known flood hazard areas. A paragraph was added to Section 2.A.2.2 (Critical Facilities) discussing the vulnerabilities of critical facilities that are not captured by this analysis.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

Comment #	Category	Classification	Reviewer		Resolution/ Response	Technical Consultant			
			Comment Reference	Review Comment/Questions		Resolution		Backchecked & Approved	
						Date	Name	Date	Name
41	TWDB - Level 2	Action Required	SOW Task 2B	29. Future Condition Flood Hazard GIS Feature Class, FutFldExpPol: a. There are several power generating facilities that appear to be within the FutFldHazard feature class extent, but not identified in the FutFldExpPt feature class. Please consider evaluating the potential flood risks associated with electric power generating facilities. Relevant datasets can be found on the Flood Planning Data Hub for potential incorporation with the FutFldExpPt feature class.	Added language to Chapter 2A.2.3 to discuss flood risks associated with power transmission and gas pipelines and to describe expected losses of function. These features were not included in the flood exposure database at this time but may be considered for inclusion in future cycles.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
42	TWDB - Level 2	Action Required	SOW Task 2B	29. Future Condition Flood Hazard GIS Feature Class, FutFldExpPol: b. There appears to be an approximately 44 square mile rectangular area missing from the FutFldExpPol feature class near the Cottle County area. This same area is not missing for Cottle County in Map 11. Please check feature class for consistency with static maps and ensure that no data is missing.	This area is a nature preserve, so while there are areas of flood hazard, there is no flood exposure because there are no agricultural areas or built infrastructure. A label has been added to the maps indicating the 44 square-mile nature preserve.	12/2/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
43	TWDB - Level 2	No Action Needed	SOW Task 2B	30. Future Condition Flood Hazard GIS Feature Class, FutFldExpLn: Please consider evaluating the potential flood risks associated with electric power transmission and/or natural gas pipelines. Relevant datasets can be found on the Flood Planning Data Hub for potential incorporation with the FutFldExpLn feature class.	Added language to Chapter 2A.2.3 to discuss flood risks associated with power transmission and gas pipelines and to describe expected losses of function. These features were not included in the flood exposure database at this time but may be considered for inclusion in future cycles.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
44	TWDB - Level 2	Action Required	SOW Task 2B	31. Future Condition Flood Vulnerability GIS Feature Class, FutFldExpAll: The agricultural coverage layers appear to have irregular missing rectangular features that may be a result of the conversion of a raster to polygon. Please review and revise as appropriate.	Missing rectangular features were filled in.	11/8/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
45	TWDB - Level 2	No Action Needed	SOW Task 2B	32. Future Condition Flood Hazard GIS Feature Class, FutFldHazard: Please verify that the lake, reservoir and riverbank extents are appropriately represented in the floodplain boundary utilizing the USGS National Hydrography Dataset. For example, the hazard levels for Lake Meredith appear to be incorrect. Please review and revise as appropriate.	This comment introduced a new data source to the flood hazard layer that was not discussed in Section 3.3.D of Exhibit C. Therefore, this change was not implemented. If TWDB would like this data to be considered when developing flood hazard information, we recommend noting NHD as a valid data source for flood hazard area in Exhibit C and/or providing source data through the Data Hub.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
46	TWDB - Level 2	Action Required	SOW Task 4A	33. Greatest Gaps Map (Exhibit C Map 14): Please consider updating the legend to provide greater details on HUC level shown, adding what values are associated with the "Lowest" and "Highest" colors, and including water bodies.	The legend was updated.	12/2/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
47	TWDB - Level 2	Action Required	SOW Task 4A	34. Greatest Risks Map (Exhibit C Map 15): Please consider updating the legend to provide greater details on HUC level shown, adding what values are associated with the "Lowest" and "Highest" colors, and including water bodies.	The legend was updated.	12/2/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

Comment #	Category	Classification	Reviewer		Resolution/ Response	Technical Consultant			
			Comment Reference	Review Comment/Questions		Resolution		Backchecked & Approved	
						Date	Name	Date	Name
48	TWDB - Level 2	Action Required	SOW Task 4B	35. Flood Management Evaluation GIS Feature Class, FME: Please consider including information from completed FEMA BLE studies (https://webapps.usgs.gov/infrm/estbfe/) in Region 1 for the 'HYDRO_DATE' and 'HYDRA_DATE' fields.	Archer County and Farmers-Mud BLE added to FMEs.	11/3/2022	Ella Pettichord (FNI)	12/14/2022	Wylie Gorup (FNI)
49	TWDB - Level 2	Action Required	SOW Task 4B	36. Flood Management Strategies, (Exhibit C Table 14): a. Please consider if FMS_IDs 012000057 and 012000059, which included infrastructure and elevation should be an FMP instead of an FMS. If not, please provide brief additional description. Please review and revise accordingly.	These actions are not defined in sufficient level of detail for inclusion as FMP and were thus listed as FMSs. Additional description was added to Section 4B.4.2.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
50	TWDB - Level 2	Action Required	SOW Task 4B	36. Flood Management Strategies, (Exhibit C Table 14): b. Please review and consider if FMS_IDs 012000052 & 012000053, which includes installation of a flood warning system should be an FMP. If not, please provide brief additional description for clarification. Please review and revise accordingly.	These actions are not defined in sufficient level of detail for inclusion as FMP and were thus listed as FMSs. Additional description was added to Section 4B.4.2.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
51	TWDB - Level 2	No Action Needed	SOW Task 4B	37. Flood Management Strategies (Exhibit C Map 18): This map does not appear to match the FMS feature class. Please confirm if the region-wide feature exists, otherwise revise map and or feature class accordingly.	Confirmed correct feature class was being mapped.	12/2/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
52	TWDB - Level 2	Action Required	SOW Task 5	38. Flood Mitigation Project Recommendations (Exhibit C Map 20): Please review the table included within the map. Based on Table 16 there are 9 FMPs recommended in the plan, however, the table included in this map appears to show that only 5 FMPs are recommended.	Map and table were updated.	12/2/2022	Bryce Hamelwright (FNI)	12/13/2022	Robert Wood (FNI)
53	TWDB - Level 2	Action Required	SOW Task 5	39. Flood Mitigation Project Details, FMP_Details Table: Please consider using the specified format for all ID fields, such as 'SOURCE_ID' and 'WMS_ID'. For example, "N/A" should not be used. These fields should be NULL or "999999" if there is no data.	Update to latest acceptable data format. See "Accomodations for Draft Comments" attachment included w/Comment letter.	11/3/2022	Robert Wood (FNI)	12/13/2022	Robert Wood (FNI)
54	Public - USACE	No Action Needed	Table 8.1	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.	Region 1 does not contain any "rapidly growing urban areas" and the referenced cities are outside of Region 1. Four river and watershed authorities exist in Region 1 and serve this purpose.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

		Reviewer			Technical Consultant				
Comment #	Category	Classification	Comment Reference	Review Comment/Questions	Resolution/ Response	Resolution		Backchecked & Approved	
						Date	Name	Date	Name
55	Public - USACE	Action Required	Table 8.1	Clarify the early 2000's state legislation that provide 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, 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 legislative bill lacks implementation guidance in the form of administrative rules. If development is occurring in unincorporated areas, this development can dynamically impact flood risk.	Added additional explanation under recommendation 8.2.14 to note variability in interpretation of regulatory authority and the need for additional clarification from the State Legislature.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
56	Public - USACE	Action Required	Table 8.2	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 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 environmental permitting requirements.	The RFP is not intended to provide technical modeling recommendations. It is ultimately the responsibility of the engineer to select appropriate roughness coefficients for project design and to the facilities operator to maintain appropriate use of the facility. The recommendation for establishing freeboard is consistent with accounting for changes in conveyance and debris blockages. An additional paragraph was added to Section 3A.1.5 noting unmaintained facilities as a known risk to future population and property.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

		Reviewer			Technical Consultant				
Comment #	Category	Classification	Comment Reference	Review Comment/Questions	Resolution/ Response	Resolution		Backchecked & Approved	
						Date	Name	Date	Name
57	Public - USACE	Action Required	Table 8.2	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 stores 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 store 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.	The RFPG voted to recommend a No Adverse Impact standard for development. Communities may decide the threshold for what constitutes an adverse impact. Language for Section 3A.2 (Recommendation 1) was updated to reflect that this standard can apply to flood storage as well as peak flows, velocities, and runoff volume.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
58	Public - USACE	Action Required	Table 8.2	Establish future land use plans for unincorporated areas associated with rapidly growing urban areas.	Future land use data was developed at a regional scale to assess development trends and flood risks for the 30-year planning horizon. Region 1 is still expected to be over 92% rural in 2053. Communities, rather than the RFPG, are ultimately responsible for creating and enforcing future land use plans to regulate development. However, discussion of future land use data for developing areas was added to Section 3A.1.5.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
59	Public - USACE	No Action Needed	Table 8.2	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.	The authority to require the use of ultimate development land use conditions is a policy decision to be made by entities with flood-related authority. The national governing body for floodplain management (FEMA) does not regulate floodplains based on ultimate conditions. The RFPG chose to recommend a no adverse impacts standard to mitigate increases in flood flows, rather than recommend regulating based on ultimate conditions.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
60	Public - USACE	No Action Needed	Table 8.3	None	This comment does not apply; there is no Table 8-3 in the Region 1 RFP.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
61	Public - USACE	No Action Needed	Table 8.3	Potential FMS	This comment does not apply; there is no Table 8-3 in the Region 1 RFP.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

		Reviewer			Technical Consultant				
Comment #	Category	Classification	Comment Reference	Review Comment/Questions	Resolution/ Response	Resolution		Backchecked & Approved	
						Date	Name	Date	Name
62	Public - USACE	Action Required	Table 8.3	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. 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.	The RFP is not intended to provide technical modeling recommendations. However, discussion of these technical sources to better estimate precipitation depths was added to Section 3A.1.4.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
63	Public - USACE	No Action Needed	Table 8.3	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.	WHAs have been completed for the Trinity, Neches, and Guadalupe River basins and are underway in the Brazos, Lower Colorado and Nueces basins. A WHA has not been completed in the Canadian or Upper Red River basins.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
64	Public - USACE	No Action Needed	Table 8.3	Update WHA's when future precipitation frequency estimates become available. Efforts to develop future precipitation frequency estimates for Texas are starting.	WHAs have been completed for the Trinity, Neches, and Guadalupe River basins and are underway in the Brazos, Lower Colorado and Nueces basins. A WHA has not been completed in the Canadian or Upper Red River basins.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
65	Public - USACE	Action Required	Table 8.3	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.	Future land use data was developed at a regional scale for the 30-year planning horizon. Region 1 is still expected to be over 92% rural in 2053. However, discussion of future land use data for developing areas was added to Section 3A.1.5.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

Comment #	Category	Classification	Reviewer		Resolution/ Response	Technical Consultant			
			Comment Reference	Review Comment/Questions		Resolution		Backchecked & Approved	
						Date	Name	Date	Name
66	Public - TPWD	Action Required	N/A	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 Needs (SGCN) include numerous aquatic species such as fish, freshwater mussels, and salamanders. The TCAP handbook 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). TPWD appreciates and supports the use of the best available science and most relevant data in developing RFPs and encourages RFPGs to take this into consideration.	Reference to the TCAP and expanded discussion of negative impacts on natural resources has been added to Section 1.1.8.3.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
67	Public - TPWD	Action Required	N/A	The goals of the Draft RFP include public education and outreach, improving flood warning and readiness, property acquisition, infrastructure projects to address flood mitigation and floodplain management goals. TPWD encourages the inclusion of ecological and societal benefits of flooding in any education program and appreciates the repeated mention of nature-based solutions and projects in the RFP.	Discussion of the natural flooding process is included in Section 1.1.2. Additional text regarding the focus on the negative impacts of flooding on the built environment rather than the positive impacts of this natural process was added in Section 1.1.8.3. Additionally, Section 4B.4.2 was updated to note that public education and outreach FMSs about flooding should also include components on its ecological and societal benefits.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
68	Public - TPWD	No Action Needed	N/A	The RFP identified 18 FMPs while recommending 9 potentially feasible FMPs, 184 potentially feasible FMEs, and 62 potentially feasible FMSs. It appears that most of the recommended FMPs are infrastructure-based with only one nature-based solution being put forward. TPWD appreciates that the Draft RFP acknowledges the gap in flood risk and mitigation in relation to nature-based infrastructure in the region. TPWD understands that the goal of the RFP is to mitigate floods to reduce risk to life and property but would like to encourage the use of nature-based solutions where possible. The Draft RFP states that none of the projects or strategies are anticipated to have negative effects.	The FMPs in Region 1 for the first round of flood planning were compiled from existing sources. Unfortunately, no existing nature based solutions were identified in Region 1. An adopted goal in the Region is to consider and incorporate nature-based practices in 50% of recommended FMPs and FMSs within 10-years. As FMEs are performed and new FMPs are developed in future cycles, we expect a greater emphasis on nature-based solutions in support of this goal.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)

RESPONSE LOG TO COMMENTS DRAFT REGIONAL FLOOD PLAN



Innovative approaches
Practical results
Outstanding service

Client: Canadian - Upper Red RFPG (Sponsor: PRPC)
Project: Region 1: Canadian - Upper Red RFP
Document: Draft RFP

Comments Received: 9/26/22, 10/10/22, 10/21/22
Discipline: Stormwater
Comments Provided by: USACE, TPWD, TWDB

Comment-Response Log

		Reviewer			Technical Consultant				
Comment #	Category	Classification	Comment Reference	Review Comment/Questions	Resolution/ Response	Resolution		Backchecked & Approved	
						Date	Name	Date	Name
69	Public - TPWD	No Action Needed	N/A	TPWD would like to encourage all the FMX proponents to consider any stream crossing designs to 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 the 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.	The RFP does not provide specific design recommendations for FMPs. However, environmental impacts (benefits and adverse impacts) and permitting are considered within project recommendations and will ultimately be considered by TWDB in project scoring. Crossing designs that promote sediment transport and aquatic passage can be seen as providing environmental benefits.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)
70	Public - TPWD	Action Required	N/A	Lastly, TWPD appreciates the value and role of playas that is mentioned numerous times throughout the RFP. Playas play an important role in the Ogallala aquifer recharge and should be considered as part of the nature-based flood mitigation strategies as warranted.	Comment noted. The role of playas is discussed in Section 1.2.1.4. As nature-based solutions are developed in future cycles, the role of playas will be considered. Impacts on water supply are considered as part of Task 6, and coordination with Regional Water Planning Groups will be undertaken as necessary. A sentence was added under Section 6B.1 to specifically mention the role of playas in groundwater recharge.	12/14/2022	Wylie Gorup (FNI)	12/21/2022	Morgan White (FNI)