

2023 REGIONAL FLOOD PLAN REGION 15 LOWER RIO GRANDE

Amendment No.2 (2025)

DRAFT

Amendment to the 2023 Regional Flood Plan – Region 15
Lower Rio Grande

Prepared for:

Region 15 Regional Flood Planning Group and Texas Water Development
Board

Prepared by:

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TBPELS Firm #312

March 2025

Summary of Changes

2023 Regional Flood Plan Amendment No. 2

Executive Summary

The executive summary was updated to reflect the changes made to the report chapters and appendices. These changes include the addition of new recommended flood risk solutions (FMXs), updated flood exposure analyses based on new detailed data, and public meeting records.

Chapter 1: Planning Area Description

The introduction was revised to incorporate the new amendment approved by the Regional Flood Planning Group.

Chapter 2: Flood Risk Analyses

Following the flood exposure analysis, several figures, tables, and text in Chapter 2 were updated to reflect changes made to the existing and future floodplains after incorporating new studies for the amendment. These updates were necessary to ensure that the most current and accurate flood risk data is represented, addressing refinements in floodplain boundaries, hydrologic and hydraulic studies, and exposure assessments. The revised content provides a more precise understanding of regional flood vulnerabilities by integrating additional local and state data sources, improving both the existing conditions (Task 2A) and future conditions (Task 2B) analyses. The table and list below show a summary of chapter 2 updates:

Updated Text Sections	Updated Figures	Updated Tables
1	13	15

Updated Data includes:

- Structures at Risk (Residential, Non-Residential, Critical Facilities)
- Roadway Segments and Low Water Crossings at Risk
- Agricultural Land at Risk
- Population at Risk
- Existing and Future Flood Quilt

Chapter 3

No changes were made to Chapter 3.

Chapter 4: Assessment and Identification of Flood Mitigation Needs

Chapter 4 was updated to include the addition of 89 potential Flood Mitigation Evaluations (FMEs), 23 potential Flood Mitigation projects (FMPs), and 35 potential Flood Mitigation Strategies (FMSs). The table below shows a summary of changes to the count of potential FMXs included in the plan:

FMX Type	Previous Potential Count	Amended Potential Count
FME	457	546
FMP	98	121
FMS	86	121

Chapter 5: Recommendation of FMEs, FMSs, & Associated FMPs

Chapter 5 was updated to include the addition of 89 recommended FMEs, 111 recommended FMPs, and 35 recommended FMSs. Additionally, costs associated with FMXs, figures denoting FMX locations, as well additional text were adjusted to reflect the changes to the recommended FMXs listed. The table below shows a summary of changes to the count of recommended FMXs included in the plan:

FMX Type	Previous Recommended Count	Amended Recommended Count
FME	406	495
FMP	94	105
FMS	86	121

Chapter 6: Impact and Contribution of the Regional Plan

The chapter was updated to account for the addition of new FMXs and their implementation impact on the statistics presented throughout the chapter. The following items in tables and text were updated to reflect the changes:

- Floodplain area impacted by the FMP implementations
- Population impacted by the implementation of FMPs
- Number of structures removed from the floodplain after FMP implementations
- Number of critical facilities removed from the floodplain after FMP implementations
- Number of low water crossings removed from the floodplain after FMP implementations
- Number of roadways removed from the floodplain after FMP implementations

Chapter 7-8

No changes were made to chapters 7 and 8.

Chapter 9: Flood Infrastructure Financing Analysis

Analysis updated to reflect the new total cost needed to implement the recommended FMXs.

Chapter 10: Public Outreach and Engagement

Table and text updated to reflect the additional RFPG meetings held for the amendment process.

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A.1 Introduction and Planning Group Action

A.1.1 Summary of amendments and associated evaluations

The Texas Water Development Board (TWDB) has recently advertised their intent to solicit applications for the 2026 Flood Infrastructure Funding (FIF) cycle to be awarded in 2027. Only flood mitigation and management actions listed within the 2024 State Flood Plan are eligible for funding through the 2026 FIF and future FIF funding cycles. Within the Lower Rio Grande Flood Planning Region (Region 15), many communities have expressed interest in providing additional flood mitigation needs for incorporation into the 2024 State Flood Plan, so that they are eligible for upcoming FIF cycles.

On December 4, 2024, the Lower Rio Grande RFPG voted to provide an opportunity for communities to incorporate additional flood mitigation and management needs into the Lower Rio Grande 2023 Regional Flood Plan through an amendment to give communities the opportunity to make these additional needs eligible for 2026 FIF funding.

Following the December RFPG meeting, a data collection window was opened to allow communities to submit FMEs, FMSs, and FMPs for inclusion into the amendment. The data collection period ended February 17, 2025. Requests received during this period of time were evaluated by the technical consultant team and presented to the RFPG for their consideration on February 19, 2025. The RFPG voted to proceed with incorporating all received FMXs that met the minimum requirements for inclusion into the Regional Flood Plan based on RFPG and TWDB requirements, into a Draft Regional Flood Plan Amendment. The draft amendment was posted for public comment on March 12, 2025.

A.2 Consistency with Rules and Statute

The Lower Rio Grande 2023 Regional Flood Plan Amendment was developed in conformance with all relevant administrative rules and statute. The amendment was developed in accordance with 31 TAC §361.21 notice requirements and adheres to the requirements and guidance principles for regional flood plans as described in TWC §16.062(h)(1). The recommendations included in this amendment will not negatively impact neighboring areas and would adequately provide for the preservation of life and property.

A.3 Modifications and additions to the 2023 Regional Flood Plan Report

A.3.1 Changes made to the Executive Summary

The executive summary was updated to reflect the changes made to the report chapters and appendices. These changes include an update to the flood exposure analyses due to the inclusion of new detailed mapping, the addition of potential and recommended flood risk solutions (FMXs), statistics measuring benefits provided by the FMP implementation, and public meeting records.

Sentence added to describe the process of the new amendment:

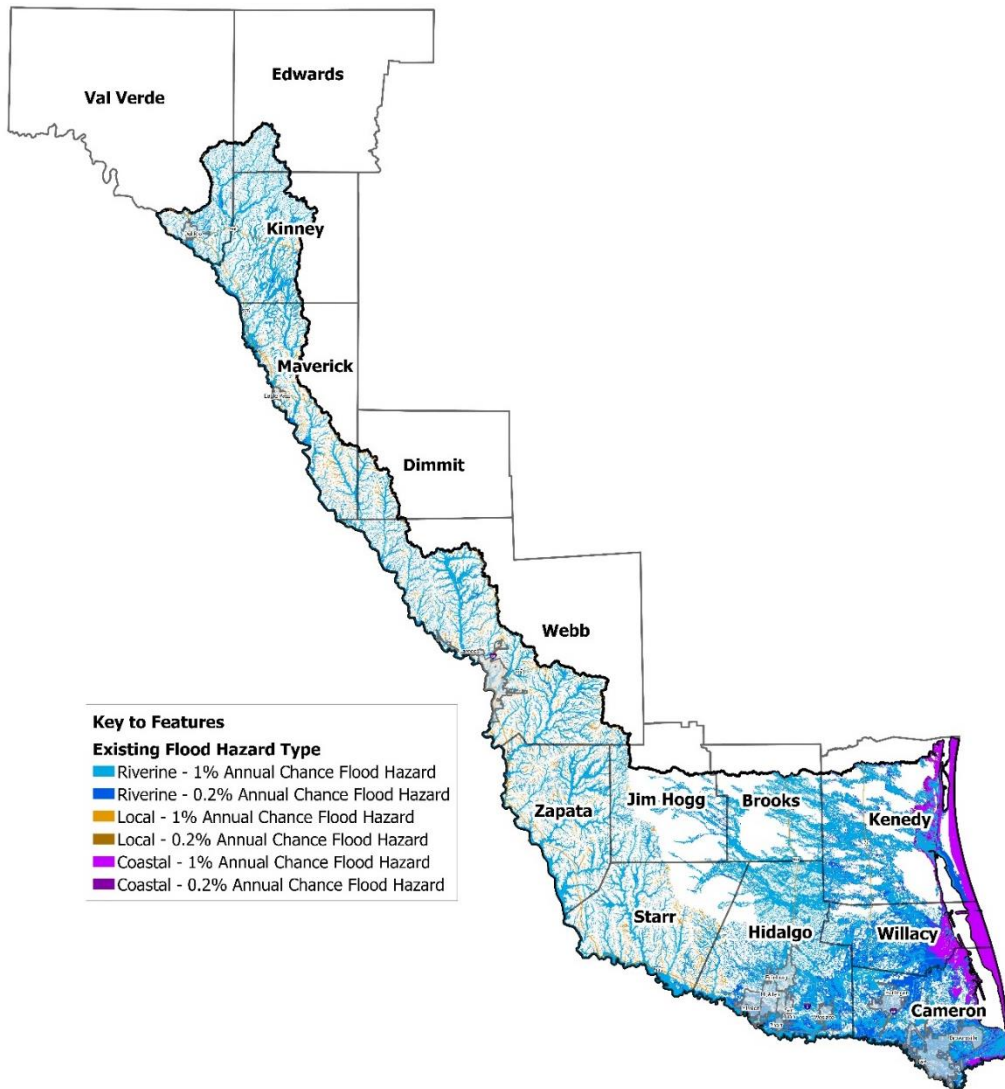
Page ES 2: “The RFPG met on February 19, 2025 to present and approve additional FMXs included in another amendment for submittal to TWDB by April 1.”

Chapter Included in the Plan – Modification to values associated with FMEs, FMPs, and FMSs.

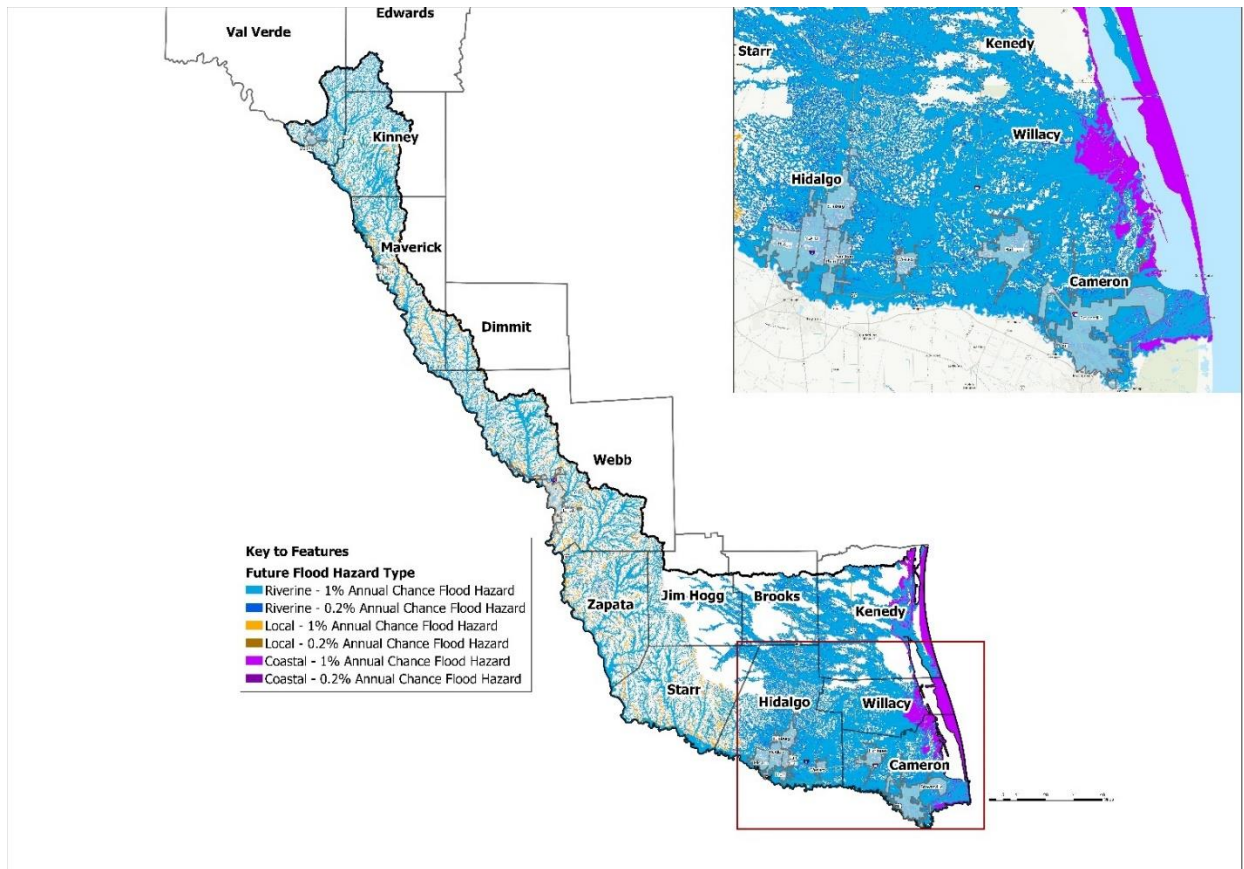
Page ES-4: “A total of ~~95~~ **495** FMEs, ~~2 (previously updated to 97)~~ **105** FMPs, and ~~51~~ **121** FMSs are recommended in this regional flood plan.”

Existing and Future Flood Risks- Existing and Future Floodplain Quilt figures were updated to reflect the Flood Risk Analysis extent after the inclusion of new FMPs.

Page ES-10: Figure ES.4 Lower Rio Grande Existing Conditions Floodplain Quilt



Page ES-11: Figure ES.5 Lower Rio Grande Future Conditions Floodplain Quilt



Identification and Selection of Recommended Floodplain Management and Flood Mitigation Actions – Modification to values associated with FMEs, FMPs, and FMSs. Inclusion of a sentence describing the meeting held for the amendment process.

Page ES-14: “The Lower Rio Grande RFPG recommended 406 **495** FMEs, 97 **105** FMPs, 86 and **121** FMSs.”

Page ES-14: **Table ES.1 Summary of Recommended FMEs**

FME Type	# of Potential FMEs Identified	# of FMEs Recommended	Total Cost of Recommended FMEs
Watershed Planning	46	46	\$35,168,000
	71	71	\$55,418,000
Project Planning	409	358	\$1,184,768,582
	473	422	\$213,880,561
Preparedness	2	2	\$3,371,721
	2	2	\$404,607
Total	457	406	\$1,223,308,303
	546	495	\$269,703,167

Page ES-14: **Table ES.2 Summary of Recommended FMPs**

FMP Type	# of Potential FMPs Identified	# of FMPs Recommended	Total Cost of Recommended FMPs
Infrastructure	76	70	\$407,285,871
Channel	12	2	\$65,975,580
Detention Pond	8	8	\$428,904,356
Storm Drain	6	6	\$53,255,305
Comprehensive	17	17	\$299,368,742
Other	2	2	\$7,967,309
Flood Early Warning System	2	2	\$54,667,000
Flood Proofing	6	6	\$103,417,000
Infrastructure	94	76	\$500,215,852
Regional Detention	16	14	\$381,253,606
Total	117	97	\$1,039,553,458
	121	105	\$1,262,757,163

Page ES-15: Table ES.3 Summary of Recommended FMSs

FMS Type	FMS Description	# of Potential FMSs Identified	# of FMSs Recommended	Total Cost of Recommended FMSs
Education and Outreach	NFIP Education; Flood Education; Floodplain Regulatory Awareness; Emergency Contact Awareness	7 10	7 10	\$875,000 \$763,500
Flood Measurement and Warning	Flood Warning Systems; Mass Notifications during Natural Hazard Incidents; Dam Inundation Studies	47 48	47 48	\$110,400,000 \$107,406,050
Infrastructure Projects	Assessments for flood proofing, building a shelter; funding plan for dredging plan	8 11	8 11	\$36,720,000 \$48,820,000
Regulatory and Guidance	City Floodplain Ordinance Creation/Updates; Zoning Regulations; Land Use Programs	19 45	19 45	\$2,170,000 \$12,020,500
Other	Funding Plans; Formation or union with Drainage District; Renegotiation of Agreements; Levee Recertification Alliances	5 7	5 7	\$1,150,000 \$1,251,000
	Total	86 121	86 121	\$151,315,000 \$170,261,050

Page ES-15: “An additional RFPG meeting was held in February 2025 to present and approve additional FMXs for a new amendment.”

Cost of the Recommended Plan– The total FMX cost was updated based on the amendment results

Page ES-15: “Overall, the estimated cost to implement the recommended FMEs, FMPs, and FMSs in this plan is ~~\$2.4~~ **\$1.3** billion.”

Assessment and Identification of Flood Mitigation Needs – Updated values related to FMXs.

Page ES-16: “Implementation of the ~~97~~ **105** recommended flood mitigation projects (FMPs) included in this RFP is expected to benefit an estimated 101,494 people living in a flood-prone area. ~~Forty-six (46)~~ **Seventy-one (71)** of the recommended FMEs are watershed planning studies that were identified during the needs assessment. These ~~46~~ **71** watershed planning mapping will better define the flood risk for ~~67%~~ **83%** of the floodplain. Implementation of the FMEs will ultimately give entities a tool to address the flood hazard aggressively and effectively in their community. Once the flood hazard is better understood, effective floodplain management and land use strategies can be implemented. Another ~~409~~ **473** proposed FMEs will conduct an alternative analysis to determine the source and extent of a flood-prone area and will identify the most beneficial solution that not only mitigates the flood problem, but also considers the project’s impact on their neighbors and water supply.”

A.3.2 Changes made to Chapter 1

Chapter 1 was modified to include the amendment process.

Introduction – A statement was added to include the new amendment process.

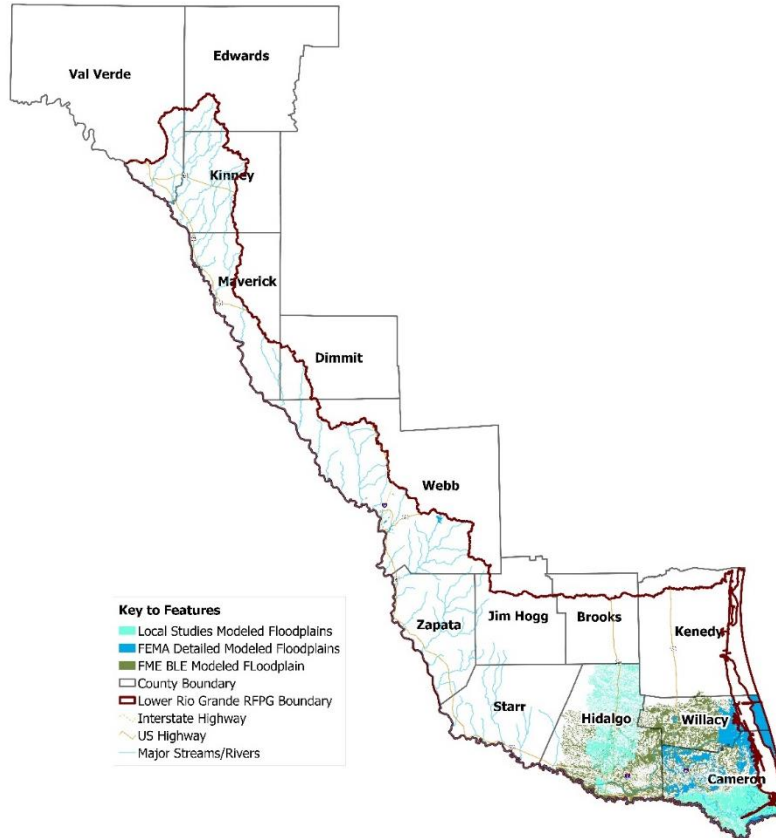
Page 1-1: “**An additional amendment was approved by the group, to be submitted by April 1, 2025.**”

A.3.3 Changes made to Chapter 2

Chapter 2 was updated to reflect the changes made to the existing and future floodplains after incorporating new studies during the March 2025 Amendment process. The changes to the floodplains affected the number of structures, critical facilities, roadways, population, etc. within the floodplains. Several tables and figures, as well specific text was updated to reflect the new floodplains extents.

2A.1.B Existing Hydrologic & Hydraulic Model Availability- Modification to Figure 2.2

Page 2-4: Updated “**Figure 2.2 Existing Conditions Model Availability**” to reflect the inclusion of the new Local studies submitted during the March 2025 Amendment.



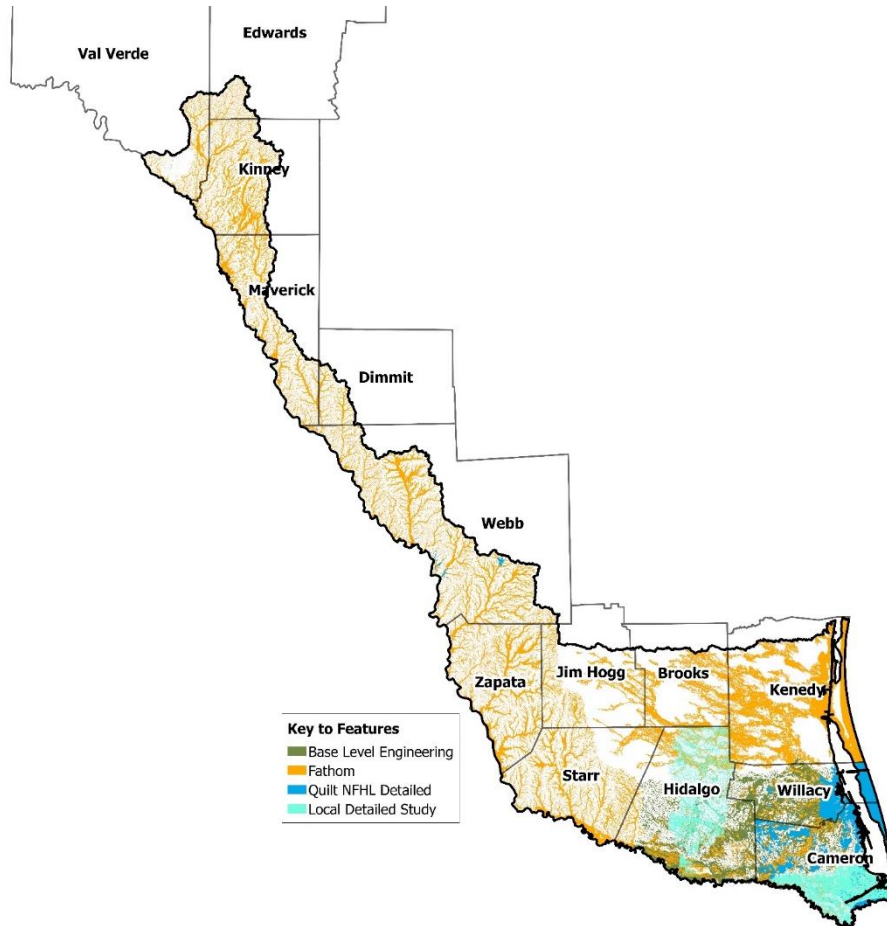
2A.1.C Best Available Existing Flood Hazard Data- Updated Table 2.2

Page 2-8: Updated “**Table 2.2: Detailed Hydrologic and Hydraulic Studies (models) Provided by Entities within Region and Incorporated into the Flood Plain Quilt**” to include the 6 new local models submitted (last 6 entries on table 2.2), also included studies that were not included in the previous submittal (Marked with an “*”).

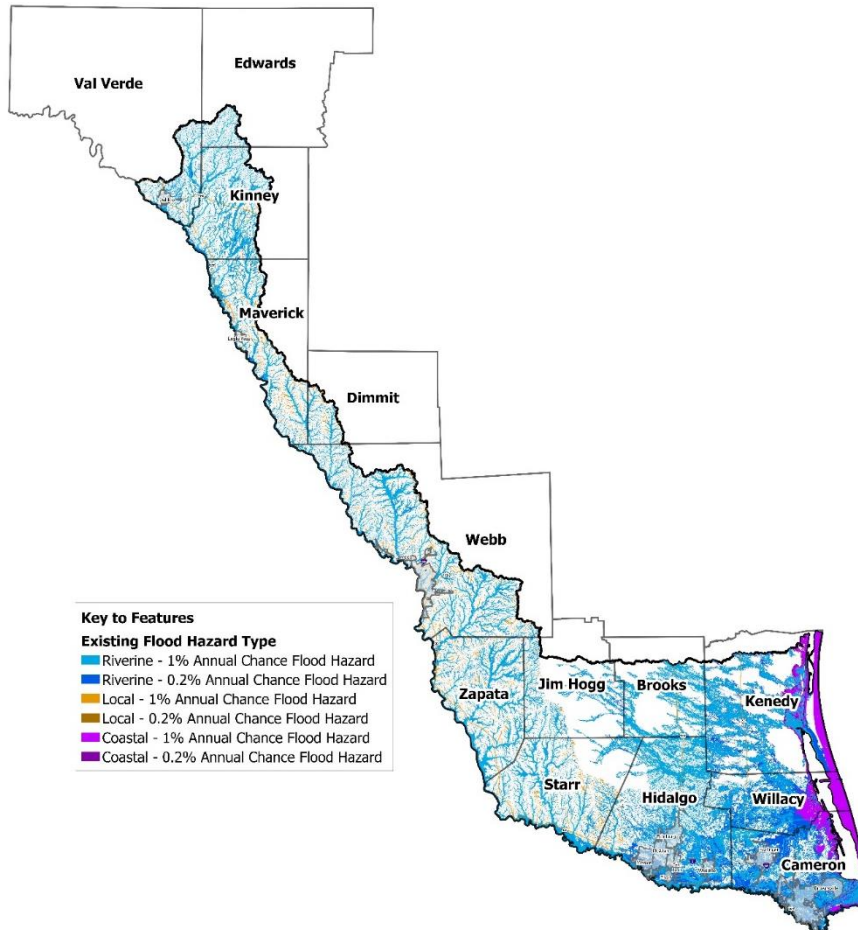
Study Name	Entity	Existing Conditions	
		1% ACE	0.2% ACE
Alton Master Drainage Plan	City of Alton	x	
Cameron County Drainage District No. 5 Flood Protection Plan	Cameron County Drainage District No. 5	x	
Eagle Pass Master Drainage Plan	City of Eagle Pass	x	
Hidalgo County Precinct 1 Drainage Assessment	Hidalgo County Precinct 1	x	
Hidalgo County Precinct 4 Master Drainage Study	Hidalgo County Precinct 4	x	
Pharr Master Drainage Plan	City of Pharr	x	x

Study Name	Entity	Existing Conditions	
		1% ACE	0.2% ACE
Weslaco Stormwater Improvement Plan	City of Weslaco	x	
Brownsville to Port Isabel HUC-10 Watershed Study	City of Brownsville	x	
McAllen Master Drainage Study	City of McAllen	x	
Harlingen HUC 10 FIF Flood Protection Planning Study*	City of Harlingen	x	
Cameron County Drainage District No. 6*	Cameron county Drainage District No. 6	x	
Edinburg Master Drainage Plan*	City of Edinburg	x	
Cameron County Drainage District #3 FIF Flood Protection Plan*	Cameron County Drainage District No. 3	x	
HCDD1 Bond 2023*	Hidalgo County Drainage District No. 1	x	
Hydrologic and Hydraulic Study of the Olmito Townsite Subdivision*	Cameron County	x	
Zacate Creek Feasibility Study*	City of Laredo	x	
HCDD1 Delta Region Water Management Project*	Hidalgo County Drainage District No. 1	x	
City of Brownsville: Los Tomates	City of Brownsville	x	x
City of McAllen: McAllen Lateral	City of McAllen	x	x
City of McAllen: El Rancho	City of McAllen	x	x
City of Del Rio: San Felipe Creek	City of Del Rio	x	x
City of Del Rio: Cienegas Creek	City of Del Rio	x	x
HCDD1 South Lateral	Hidalgo County Drainage District No. 1	x	x

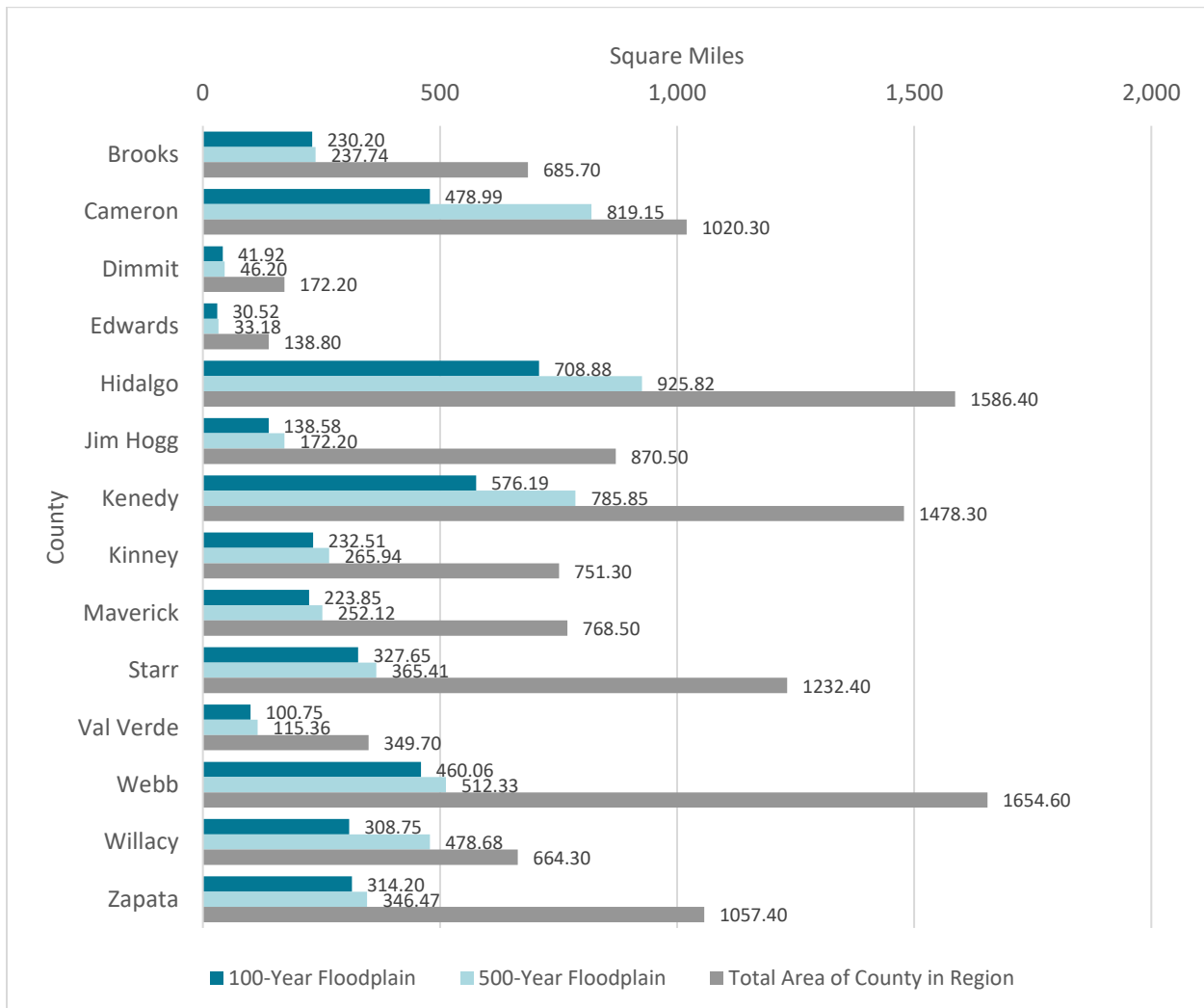
Page 2-10 Updated “**Figure 2.4 Floodplain Quilt Data Sources**” to reflect the extent of the floodplain following the inclusion of the new detailed local studies.



Page 2-11: Updated “**Figure 2.5 Existing Conditions Floodplain Quilt**” to reflect the extent of floodplain following the inclusion of the new detailed local studies.



Page 2-12: Updated “Figure 2.6 Existing Conditions Flood Hazard Areas (in Square Miles) by County to show the total floodplain area distribution for each county after incorporating the new local studies



Page 2-13: Updated “**Table 2.4 Percentage of Land Area in Existing Floodplain Quilt by County**” to update the percentage of land area after new local studies inclusion.

County	1% Flood Hazard	0.2% Flood Hazard*	Possible Flood Prone Areas
Brooks	33.6% 33.6%	34.7% 34.7%	0.0% 0.0%
Cameron	46.9% 46.9%	80.3% 80.3%	1.1% 1.1%
Dimmit	24.3% 24.3%	26.8% 26.8%	0.0% 0.0%
Edwards	22.0% 22.0%	23.9% 23.9%	0.0% 0.0%
Hidalgo	44.6% 44.7%	58.4% 58.4%	0.1% 0.1%
Jim Hogg	15.9% 15.9%	19.8% 19.8%	0.0% 0.0%
Kenedy	39.0% 39.0%	55.5% 53.2%	0.0% 0.0%
Kinney	30.9% 30.9	35.4% 35.4%	0.0% 0.0%
Maverick	29.1% 29.1%	32.8% 32.8%	0.0% 0.0%
Starr	26.6% 26.6%	29.6% 29.7%	0.0% 0.0%
Val Verde	26.2% 28.8%	29.4% 33.0%	0.0% 0.0%
Webb	27.8% 27.8%	31.0% 31.0%	0.5% 0.5%
Willacy	46.4% 46.5%	72.1% 72.1%	0.0% 0.0%
Zapata	29.7% 29.7%	32.8% 32.8%	0.0% 0.0%

**The 0.2 percent Flood Hazard does not incorporate the 1 percent Flood Hazard to avoid overlapping polygons.*

Page 2-14: Updated “Table 2.5 Existing Hazard by Flood Risk Type Summary Table” to update the flood risk areas following new local studies inclusion.

County	1% Flood Hazard			0.2% Flood Hazard*		
	Coastal Flood Risk Areas (sq. mi.)	Local Flood Risk Areas (sq. mi.)	Riverine Flood Risk Areas (sq. mi.)	Coastal Flood Risk Areas (sq. mi.)	Local Flood Risk Areas (sq. mi.)	Riverine Flood Risk Areas (sq. mi.)
Brooks	0 0	0 0	230.2 230.2	0 0	0 0	237.7 237.7
Cameron	114.7 114.7	0 0	364.3 364.6	115.8 115.7	0 0	703.6 704.0
Dimmit	0 0	41.9 41.9	34.3 34.3	0 0	46.2 46.2	37.5 37.5
Edwards	0 0	30.5 30.5	30.1 30.1	0 0	33.2 33.2	32.7 32.7
Hidalgo	0 0	31.2 31.2	701.4 708.2	0 0	36.6 36.6	917.5 926.1
Jim Hogg	0 0	75.0 75.0	131.9 131.9	0 0	84.9 84.9	164.0 164.0
Kenedy	212.0 212.0	0 0	433.3 433.3	252.8 245.9	0 0	640.1 612.2
Kinney	0 0	232.5 232.5	223.5 223.5	0 0	265.9 265.9	254.8 254.8
Maverick	0 0	221.3 221.3	185.6 185.6	0 0	249.5 249.5	208.2 208.2
Starr	0 0	285.3 285.3	286.5 286.5	0 0	319.4 319.4	315.1 315.4
Val Verde	0 0	89.1 89.1	86.7 110.8	0 0	100.1 100.1	97.0 126.2
Webb	0 0	449.7 449.7	394.1 394.1	0 0	500.5 500.5	434.5 434.5
Willacy	109.2 109.2	0 0	199.6 199.6	110.0 110.0	0 0	368.9 368.8
Zapata	0 0	314.2 314.2	269.8 269.8	0 0	346.5 346.5	295.3 295.3
TOTAL	435.9 435.9	1,770.7 1,770.7	3,571.3 3,571.3	478.6 471.6	1,982.8 1,982.9	4,706.9 4,717.2

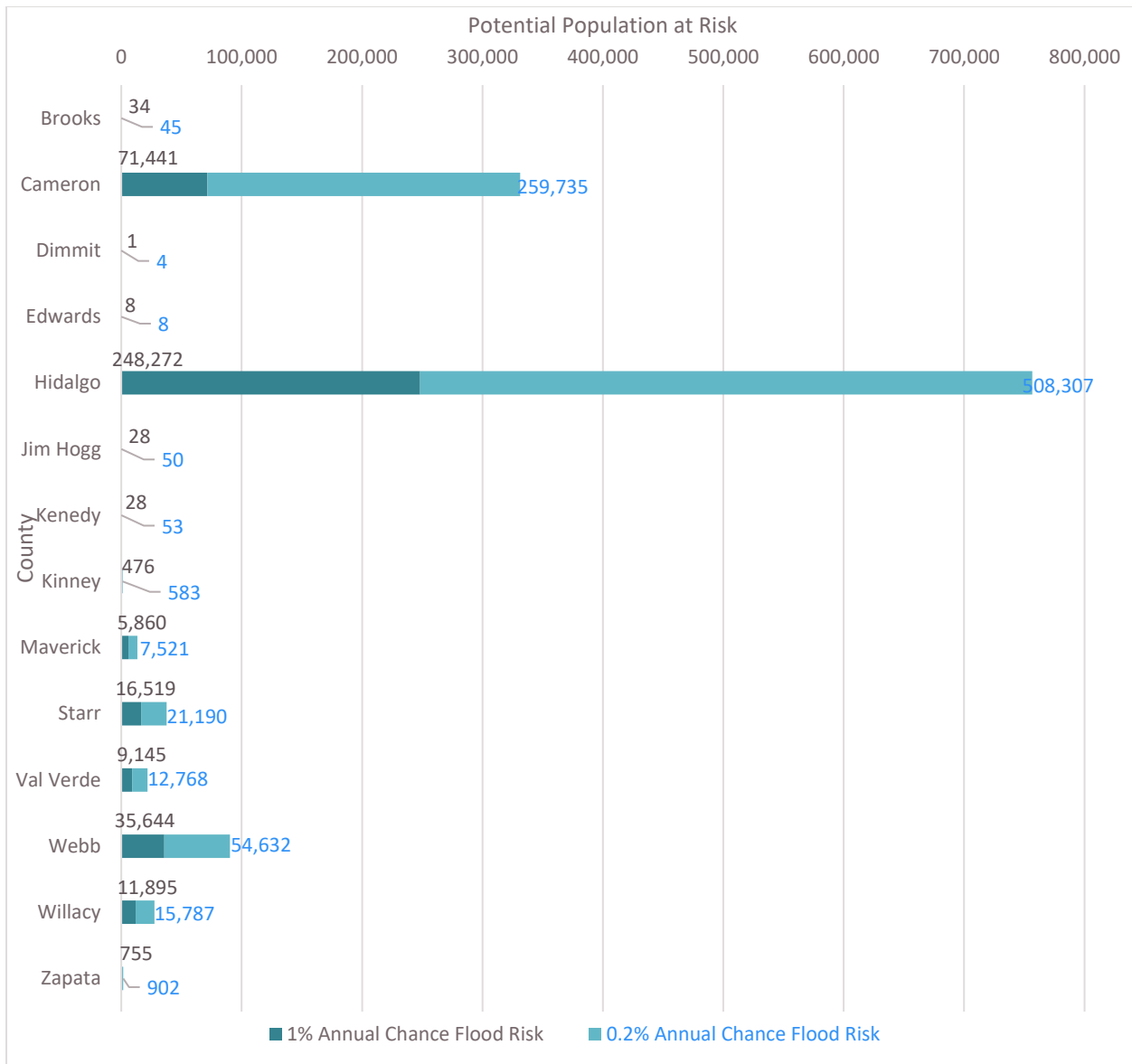
*The 0.2 percent Flood Hazard does not incorporate the 1 percent Flood Hazard to avoid overlapping polygons.

2A.2.C Existing Conditions Flood Exposure

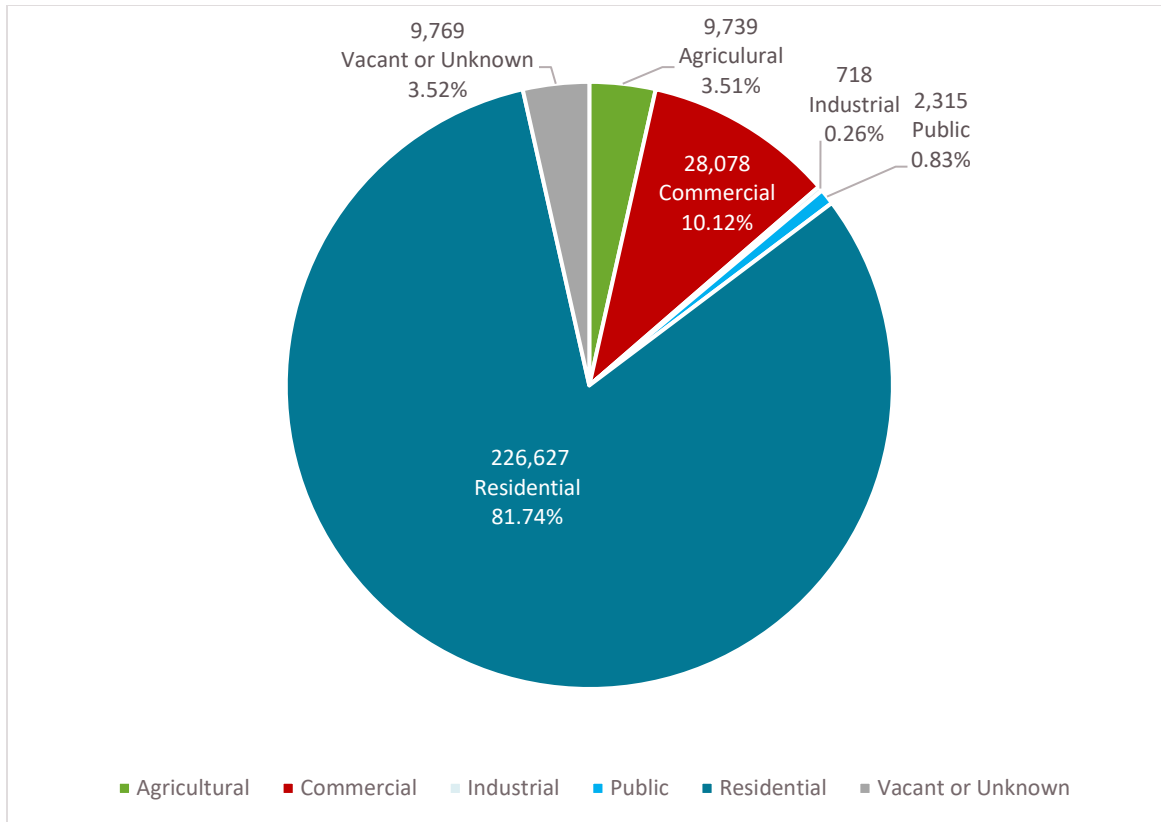
Page 2-21: Updated “Table 2.7 Existing Conditions Flood Exposure of Population by County” to reflect the changes in impacted population after the flood exposure analysis.

County	1% Annual Chance Flood Risk		0.2% Annual Chance Flood Risk	
	Population (Daytime)	Population (Nighttime)	Population (Daytime)	Population (Nighttime)
Brooks	14	40	18	52
	11	34	14	45
Cameron	54,619	59,981	308,187	295,448
	70,858	71,441	246,232	259,735
Dimmit	0	1	0	6
	0	1	0	4
Edwards	0	9	0	11
	0	8	0	8
Hidalgo	153,388	227,375	531,400	562,417
	182,933	248,272	405,200	508,307
Jim Hogg	6	18	31	61
	16	28	29	50
Kenedy	28	28	58	55
	28	28	53	46
Kinney	354	449	689	704
	387	476	455	583
Maverick	3,074	5,421	10,511	10,897
	3,539	5,860	4,453	7,521
Starr	9,732	15,723	19,248	24,277
	11,524	16,519	16,203	21,190
Val Verde	2,575	3,045	10,668	6,643
	9,145	8,566	12,768	12,097
Webb	28,358	35,624	99,649	85,727
	30,568	35,644	46,914	54,635
Willacy	8,644	11,453	15,304	16,347
	9,505	11,895	13,971	15,587
Zapata	525	706	819	1,262
	560	755	635	902

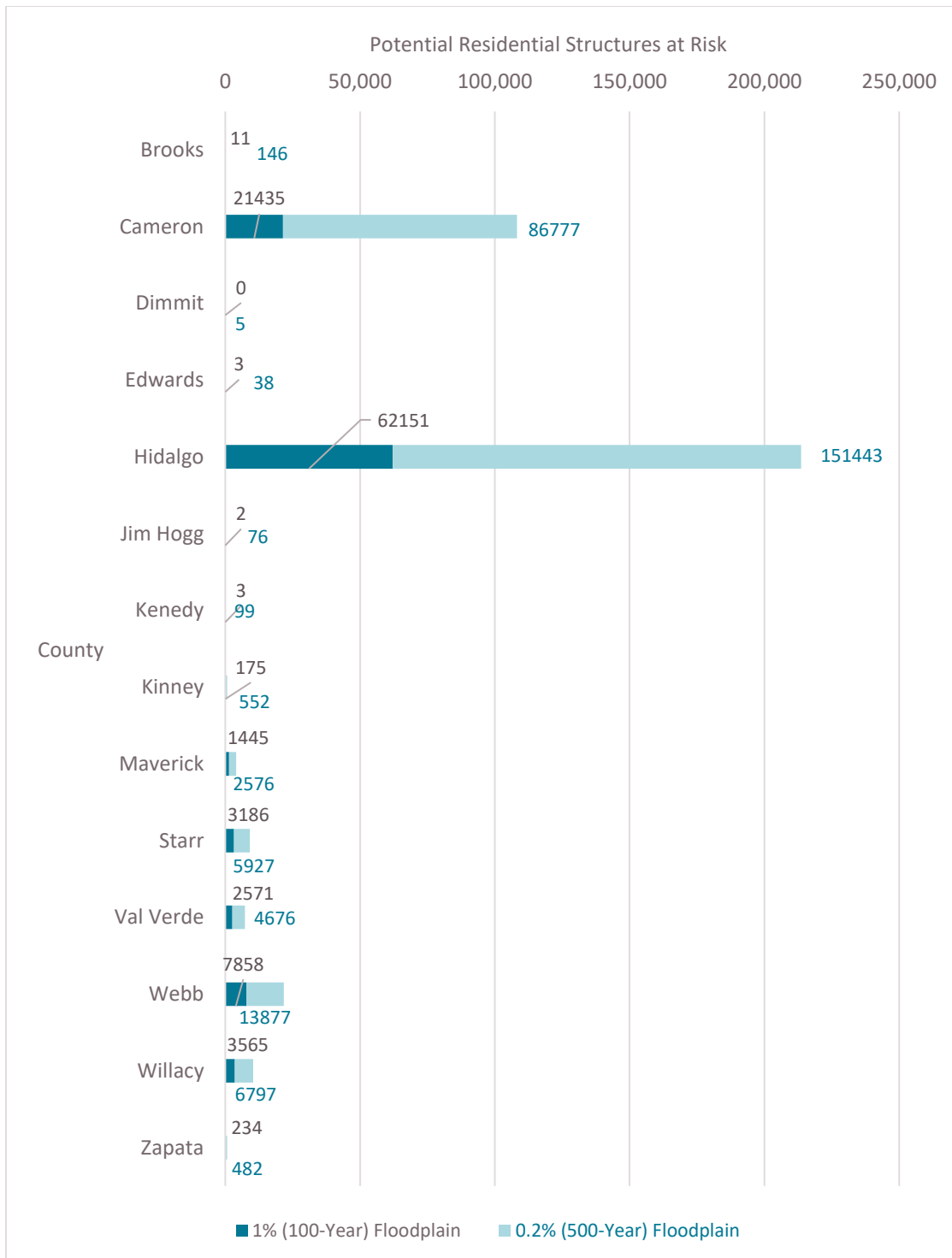
Page 2-22: Updated “Figure 2.9 Population at Risk in Existing Conditions Floodplain Quilt by County” to reflect the changes in impacted population after the flood exposure analysis.



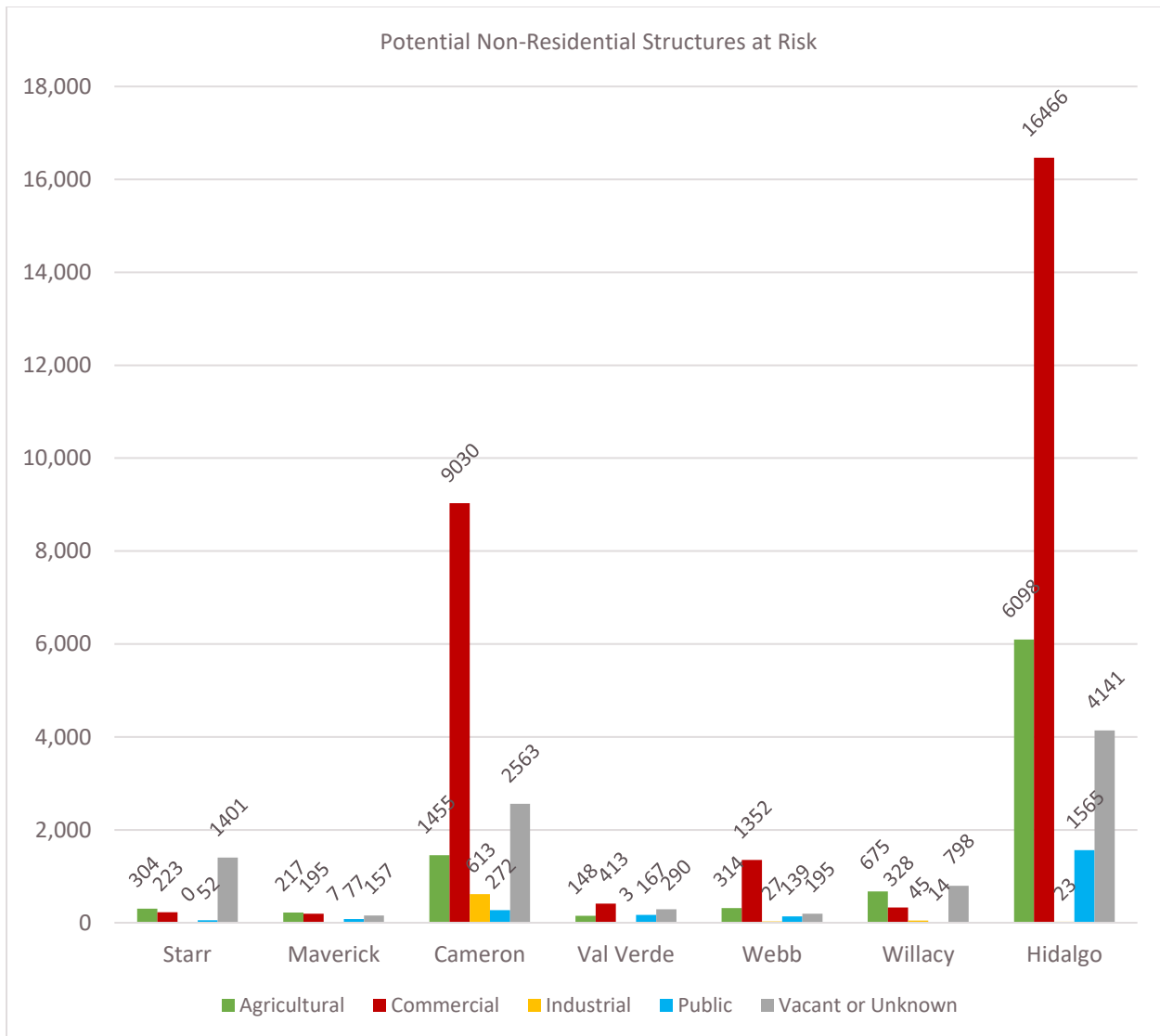
Page 2-23: Updated “Figure 2.10 Building Type Distribution in the Existing Floodplain Quilt” to reflect structures impacted after the flood exposure analysis.



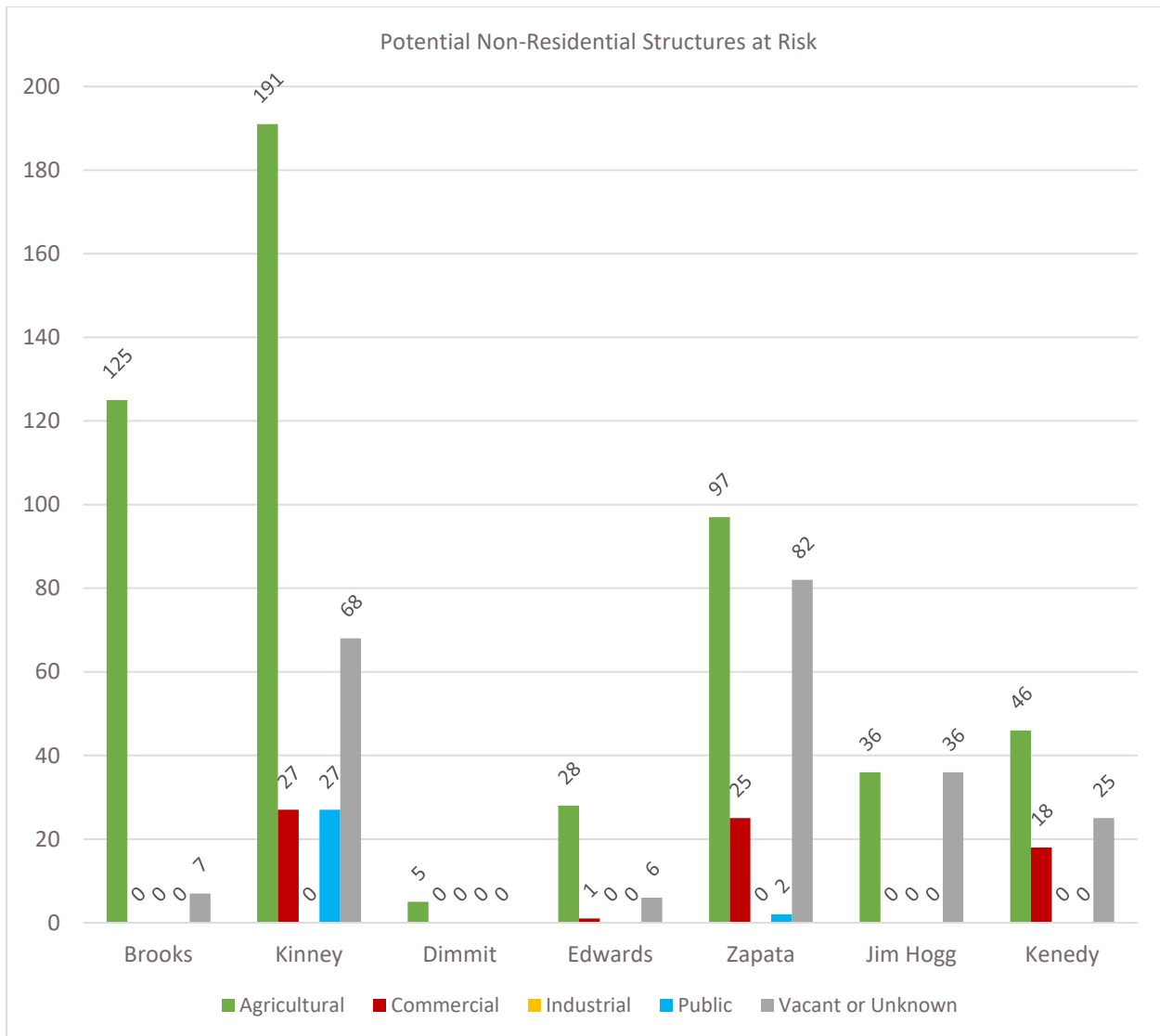
Page 2-24: Updated “Figure 2.11 Residential Structure Counts in Existing Conditions Floodplain Quilt” to reflect Residential Structures impacted after the flood exposure analysis.



Page 2-25: Updated “**Figure 2.12 Non-Residential Structure Counts in Existing Conditions Floodplain Quilt**” to reflect Residential Structures impacted after the flood exposure analysis.



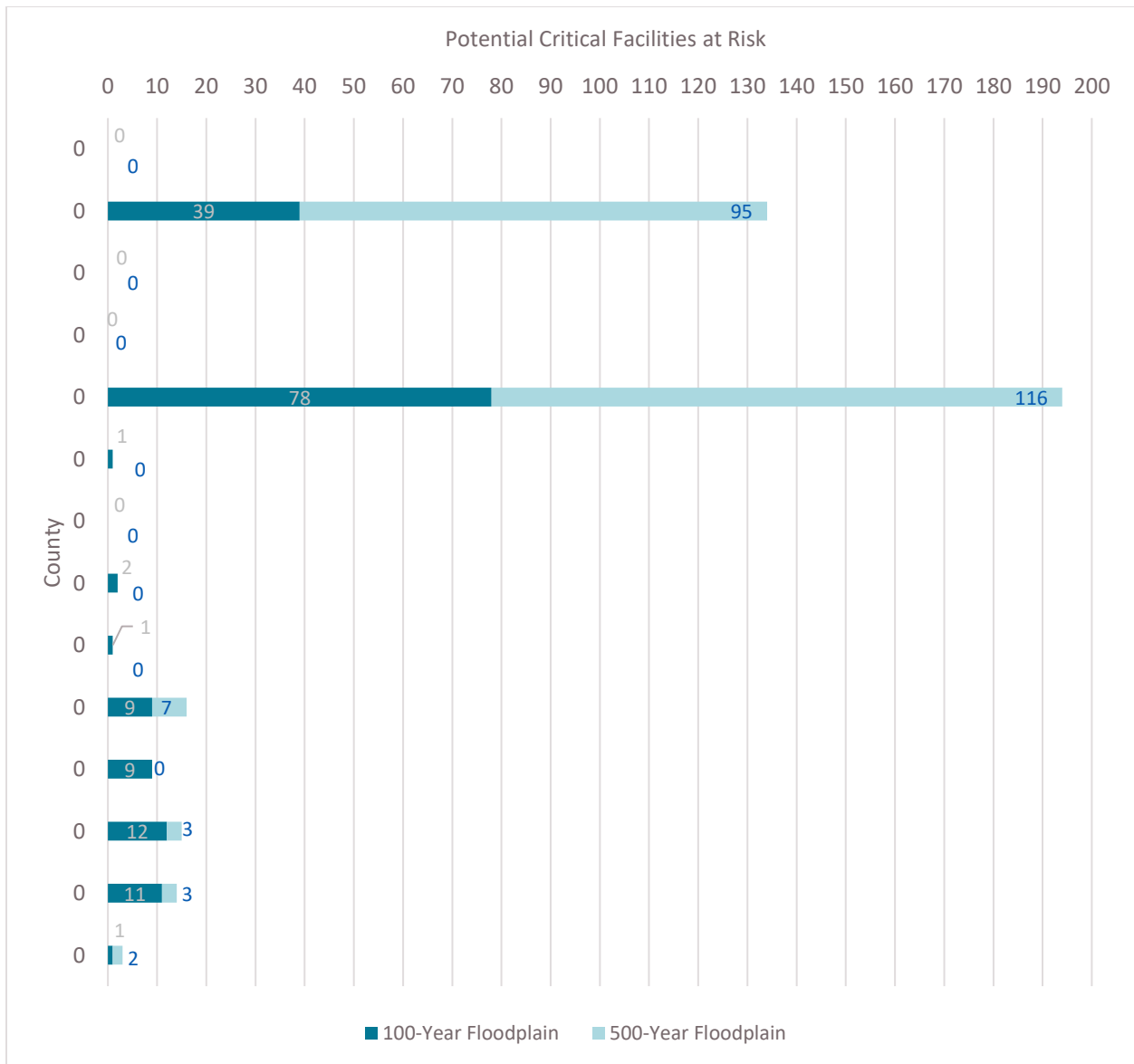
Page 2-26: Updated “**Figure 2.13 Non-Residential Structure Counts in Existing Conditions Floodplain Quilt (Continued)**” to reflect Residential Structures impacted after the flood exposure analysis.



Page 2-27: Updated “**Table 2.8 Existing Conditions Flood Exposure of Structures**” to reflect Residential, Non- Residential Structures and Critical Facilities impacted after the flood exposure analysis.

County	1% Annual Chance Flood Risk			0.2% Annual Chance Flood Risk		
	Non-Residential Structures in Floodplain	Residential Structures in Floodplain	Critical Facilities	Non-Residential Structures in Floodplain	Residential Structures in Floodplain	Critical Facilities
Brooks	138 121	13 11	0 0	152 132	17 14	0 0
Cameron	4,254 4,571	19,444 21,435	34 39	13,904 13,709	68,171 73,068	198 134
Dimmit	3 3	0 0	0 0	6 6	0 0	0 0
Edwards	24 27	3 3	0 0	38 35	5 3	0 0
Hidalgo	13,143 15,243	54,857 62,151	65 78	31,141 27,999	133,801 123,444	282 194
Jim Hogg	39 47	2 2	1 1	95 73	4 3	1 1
Kenedy	43 50	3 3	0 0	106 89	10 10	1 0
Kinney	255 266	164 175	2 2	339 313	282 239	3 2
Maverick	460 497	1,372 1,445	1 1	797 653	2,564 1,923	9 1
Starr	1,452 1,523	3,068 3,186	6 9	2,294 1,982	4,402 3,945	20 16
Val Verde	364 719	1,022 2,571	2 9	751 1,021	2,056 3,655	14 9
Webb	1,345 1,439	7,833 7,858	13 12	2,715 1,974	17,055 1,1903	44 15
Willacy	1,161 1,212	3,455 3,565	10 11	1,976 1,861	5,044 4,936	15 14
Zapata	155 164	214 234	1 1	281 207	360 275	3 3

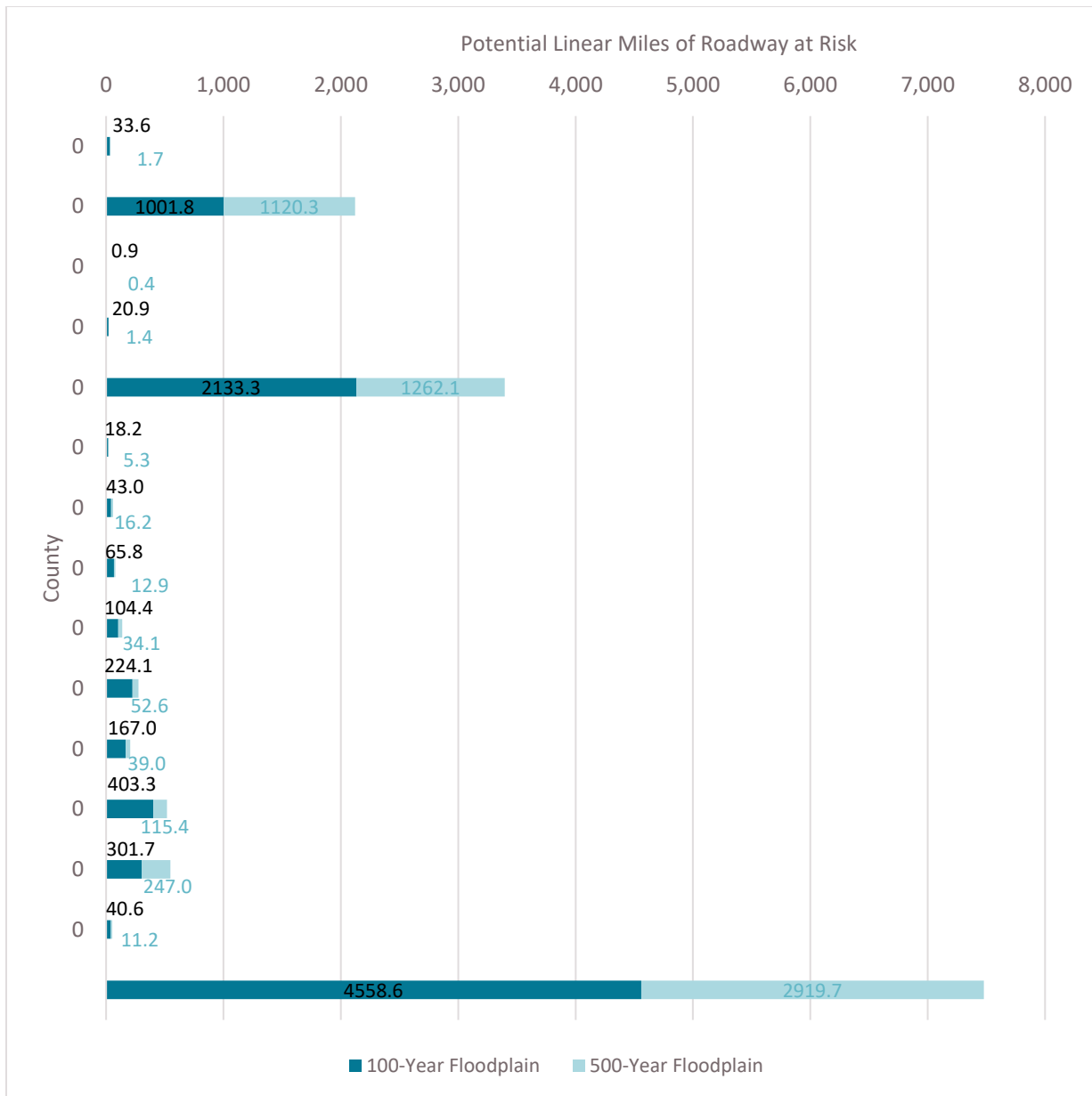
Page 2-28: Updated “**Figure 2.14 Critical Facilities in Existing Conditions Floodplain Quilt**” to reflect the changes in Critical Facilities impacted after the flood exposure analysis.



Page 2-29: Updated “Table 2.9 Existing Conditions Flood Exposure of Roadway Segments by County” to reflect the number of Roadway Segment by county after flood exposure analysis.

County	1% Annual Chance Flood Risk		0.2% Annual Chance Flood Risk	
	Roadway Stream Crossings	Roadway Segments (miles)	Roadway Stream Crossings	Roadway Segments (miles)
Brooks	0 0	29.9 33.6	0 0	31.4 35.3
Cameron	2 2	898.3 1,001.8	2 2	1,917.6 2,122.1
Dimmit	0 0	0.8 0.9	0 0	1.1 1.3
Edwards	6 6	18.1 20.9	6 6	19.3 22.3
Hidalgo	16 16	1,914.0 2,133.3	16 16	3,043.1 3,395.4
Jim Hogg	1 1	16.2 18.2	1 1	20.9 23.5
Kenedy	0 0	38.2 43.0	0 0	52.6 59.2
Kinney	44 44	57.1 65.8	44 44	68.4 78.7
Maverick	5 5	91.2 104.4	6 6	121.1 138.5
Starr	0 0	200.5 224.1	0 0	247.5 276.6
Val Verde	24 24	68.1 167.0	25 25	85.4 206.0
Webb	26 26	356.8 403.3	26 26	458.9 518.7
Willacy	0 0	270.0 301.7	0 0	491.1 548.7
Zapata	0 0	36.2 40.6	0 0	46.1 51.9

Page 2-30: Updated “**Figure 2.15 Linear Miles of Roadway at Risk in Existing Conditions Floodplain Quilt**” to reflect the number of Miles of Roadway by county after flood exposure analysis.



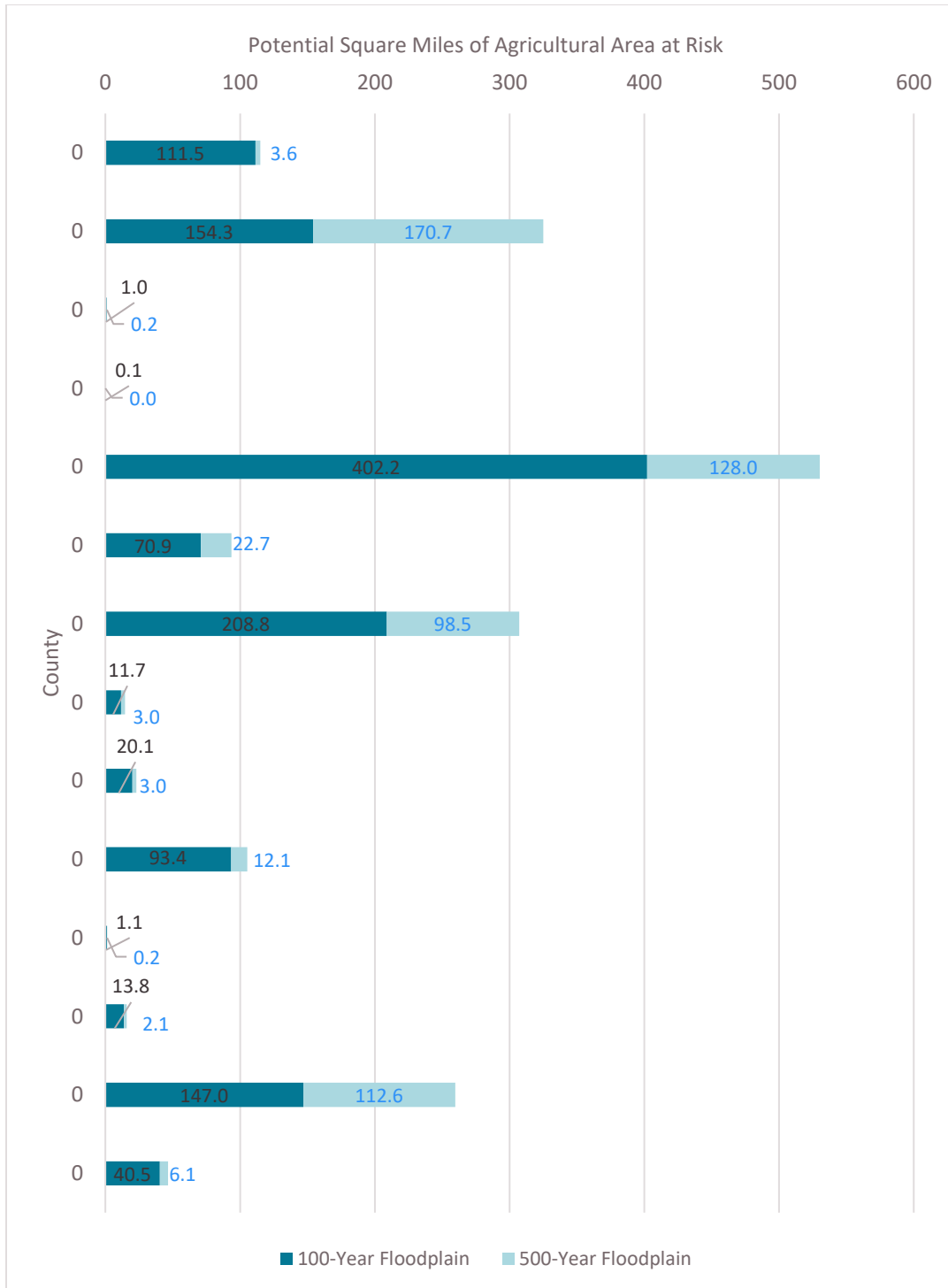
Page 2-31: Updated “Table 2.10 Exposed Bridge and Low Water Crossings and Affected Population in Existing Conditions Floodplain Quilt” to reflect the number of roadway crossings by county after flood exposure analysis.

County	1% Annual Chance Flood Risk		0.2% Annual Chance Flood Risk	
	Roadway Stream Crossings	Population at Risk	Roadway Stream Crossings	Population at Risk
Brooks	1 0	14 34	2 0	18 11
Cameron	495 2	54,619 71,441	989 2	308,187 188,187
Dimmit	3 0	0 1	5 0	0 3
Edwards	60 6	0 8	60 6	0 0
Hidalgo	671 16	153,388 248,272	1,180 16	531,400 260,035
Jim Hogg	19 1	6 28	21 1	31 22
Kenedy	0 0	28 28	0 0	58 25
Kinney	105 44	354 476	115 44	689 107
Maverick	219 5	3,074 16,519	251 6	10,511 1,661
Starr	115 0	9,732 16,519	121 0	19,248 4,671
Val Verde	150 24	2,575 9,145	158 25	10,668 36,623
Webb	541 26	28,358 36,644	587 26	99,649 19,988
Willacy	179 0	8,644 11,895	286 0	15,304 3,982
Zapata	110 0	525 755	121 0	819 147

Page 2-33: Updated “**Table 2.11 Existing Conditions Flood Exposure of Lands and Population by County**” to reflect the Agricultural Areas impacted by county after flood exposure analysis.

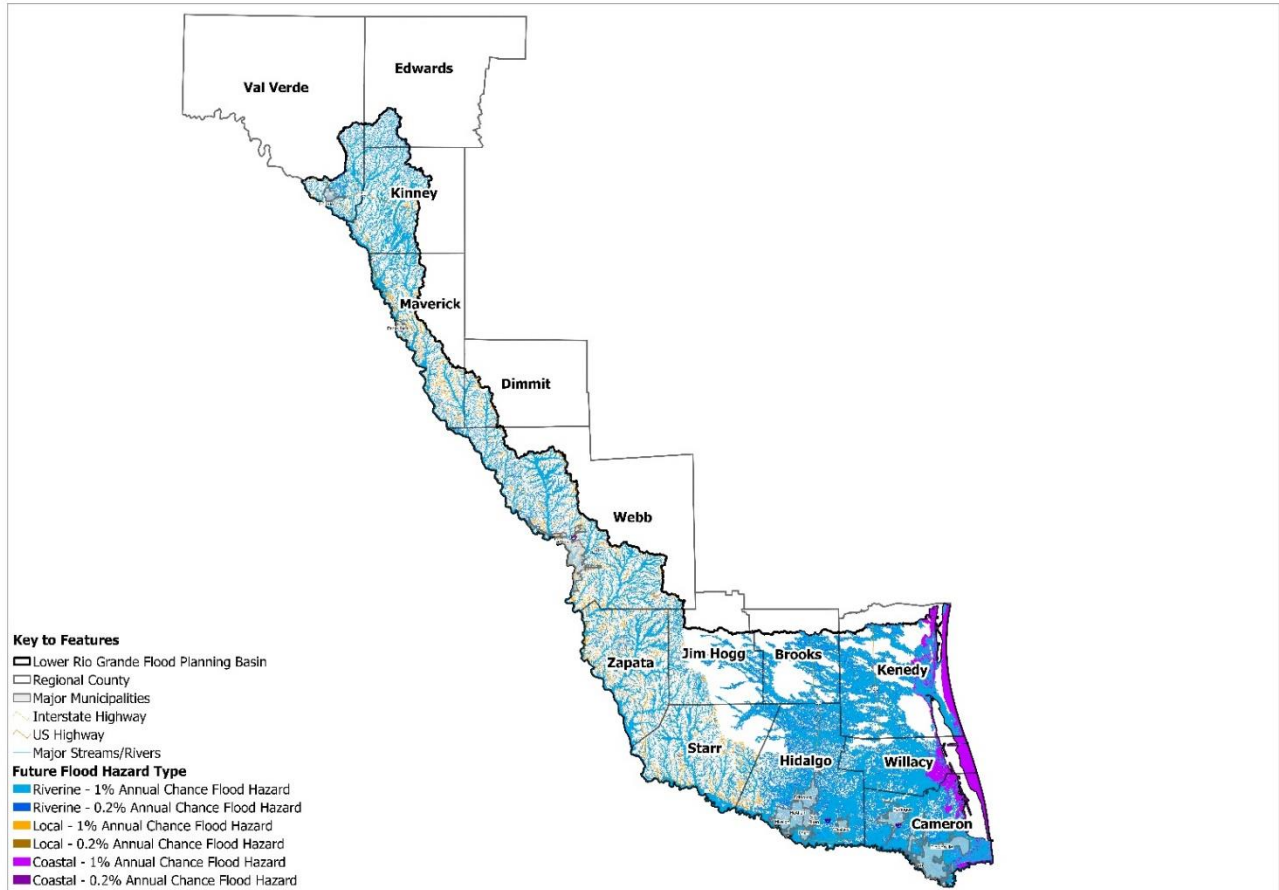
County	1% Annual Chance Flood Risk		0.2% Annual Chance Flood Risk	
	Area in Floodplain (sq mi)	Agricultural Areas (sq mi)	Area in Floodplain (sq mi)	Agricultural Areas (sq mi)
Brooks	230.4 230.2	111.5 111.5	237.7 237.7	115.1 115.1
Cameron	466.7 479.0	154.3 154.3	773.2 819.1	325.9 325.0
Dimmit	41.9 41.9	1.0 1.0	46.2 46.2	1.2 1.2
Edwards	30.5 30.5	0.1 0.1	33.2 33.2	0.1 0.1
Hidalgo	636.3 708.9	401.3 402.2	880.1 925.8	530.1 530.2
Jim Hogg	138.6 138.6	70.9 70.9	172.2 172.2	93.6 93.6
Kenedy	576.4 576.2	208.8 208.8	820.6 785.8	308.5 307.3
Kinney	232.5 232.5	11.7 11.7	265.9 265.9	14.7 14.7
Maverick	223.9 223.9	20.1 20.1	252.1 252.1	23.1 23.1
Starr	327.6 327.6	93.4 93.4	365.4 365.4	105.4 105.4
Val Verde	91.7 100.7	1.0 1.1	102.8 115.4	1.2 1.3
Webb	460.1 460.1	13.8 13.8	512.3 512.3	16.0 16.0
Willacy	308.7 308.7	147.0 147.0	478.8 478.7	259.6 259.6
Zapata	314.2 314.2	40.5 40.5	346.5 346.5	46.6 46.6

Page: 2-34: Updated “**Figure 2.16 Agricultural Land Exposure (in Square Miles) to Existing Conditions Floodplain Quilt**” to reflect the Agricultural Areas impacted by county after flood exposure analysis.



2B.1.C One and 0.2 Percent Annual Chance Exceedance Floodplains

Page 2-49: Updated “**Figure 3.3.1 Future Conditions Floodplain Quilt**” to reflect floodplain extent changes after incorporating new local studies.



Page 2-50: Updated “**Table 2.16 Percentage in Future Floodplain Quilt by County**” to reflect the change in percentage of Land Area within the Future Conditions Floodplain

County	1% Flood Hazard	0.2% Flood Hazard	Possible Flood Prone Areas
Brooks	34.7% 34.7%	45.9% 45.9%	0.0% 0.0%
Cameron	80.3% 80.3%	95.0% 94.8%	0.4% 0.7%
Dimmit	26.8% 26.8%	35.5% 35.5%	0.0% 0.0%
Edwards	23.9% 23.9%	36.7% 36.7%	0.0% 0.0%
Hidalgo	58.4% 58.4%	77.1% 77.4%	0.1% 0.1%
Jim Hogg	19.8% 19.8%	27.3% 27.3%	0.0% 0.0%
Kenedy	55.5% 53.2%	65.4% 63.0%	0.0% 0.0%
Kinney	35.4% 35.4%	43.6% 43.6%	0.0% 0.0%
Maverick	32.8% 32.8%	42.4% 42.4%	0.0% 0.0%
Starr	29.6% 29.7%	38.1% 38.1%	0.0% 0.0%
Val Verde	29.4% 33.0%	39.6% 47.0%	0.0% 0.0%
Webb	31.0% 31.0%	41.9% 41.9%	0.4% 0.4%
Willacy	72.1% 72.1%	84.7% 84.6%	0.0% 0.0%
Zapata	32.8% 32.8%	42.8% 42.8%	0.0% 0.0%

Page 2-51: **Future Flood Hazard by Flood Risk Type Summary Table**

County	1% Flood Hazard			0.2% Flood Hazard		
	Coastal Flood Risk Areas (sq. mi.)	Local Flood Risk Areas (sq. mi.)	Riverine Flood Risk Areas (sq. mi.)	Coastal Flood Risk Areas (sq. mi.)	Local Flood Risk Areas (sq. mi.)	Riverine Flood Risk Areas (sq. mi.)
Brooks	0 0	0 0	237.7 237.7	0 0	0 0	314.8 314.8
Cameron	115.8 115.7	0 0	703.6 704.0	122.9 122.9	0 0	845.5 845.5
Dimmit	0 0	46.2 46.2	37.5 37.5	0 0	61.1 61.1	47.2 47.2
Edwards	0 0	33.2 33.2	32.7 32.7	0 0	50.9 50.9	49.9 49.9
Hidalgo	0 0	36.6 36.6	917.5 926.1	0 0	45.0 45.0	1,224.3 1,244.3
Jim Hogg	0 0	84.9 84.9	164.0 164.0	0 0	113.7 113.7	222.3 222.3
Kenedy	252.8 245.9	0 0	640.1 612.2	264.0 264.0	0 0	743.9 743.9
Kinney	0 0	265.9 265.9	254.8 254.8	0 0	327.7 327.7	309.5 309.5
Maverick	0 0	249.5 249.5	208.2 208.2	0 0	322.3 322.3	253.7 253.7
Starr	0 0	319.4 319.4	315.1 315.1	0 0	408.6 408.6	384.6 384.6
Val Verde	0 0	100.1 100.1	97.0 126.2	0 0	135.4 135.4	169.4 168.4
Webb	0 0	500.5 500.5	434.5 434.5	0 0	680.5 680.5	551.6 551.6
Willacy	110.0 110.0	0 0	368.9 368.8	115.8 115.8	0 0	447.3 447.3
Zapata	0 0	346.5 346.5	295.3 295.3	0 0	452.6 452.6	360.2 360.2
TOTAL	478.6 471.6	1,982.8 1,982.9	4,706.9 4,717.2	502.7 502.7	2,597.9 2,597.9	5,924.1 5,294.1

Page 2-51: **Table 3.3.1 Increase in Flood Hazard Area for Future Condition Compared to Existing Condition**

Flood Frequency	Existing Conditions Area (Sq. Mi)	Future Conditions Area (sq. mi.)	Increase (sq. mi.)	% Increase
1% Annual Chance	4,163 4,173	5,379 5,356	1,216 1,183	29.2% 28.4%
0.2% Annual Chance	5,379 5,356	6,794 6,787	1,415 1,431	26.3% 26.7%

2B.2.A Future Conditions Flood Exposure - Tables 2.19 – 2.22 and Figure 2.22 were updated to include the latest exposure analysis.

Page 2-52: Table 3.3.2 Summary of Increased Exposure in the Flood Hazard Area

Feature	1% Flood Hazard			0.2% Flood Hazard		
	Existing Conditions	Future Conditions	Increase	Existing Conditions	Future Conditions	Increase
Population	359,873 400,106	814,692 881,585	454,819 481,479	1,003,907 881,585	1,344,614 1,380,369	340,707 498,784
Total Structures	115,711 128,521	254,465 273,471	138,754 144,950	301,286 273,471	400,231 415,315	98,945 141,844
Residential Structures	92,825 102,639	208,482 223,418	115,657 120,779	245,344 223,418	326,005 339,040	80,661 115,622
Non-Residential Structures	22,886 25,882	45,983 50,053	23,097 24,171	55,942 50,053	74,226 76,275	18,284 26,222
Critical Facilities	135 163	342 389	207 226	590 389	866 741	276 352
Low Water Crossings	124 124	126 126	2 2	126 126	137 134	11 8
Roadway Segments (miles)	3,995 4,559	6,605 7,478	2,609 2,920	6,605 7,478	10,041 11,396	3,437 3,918
Agricultural Area (sq. mi)	1,275 1,276	1,842 2,310	567 1034	1,841 1,839	2,340 2,310	499 471

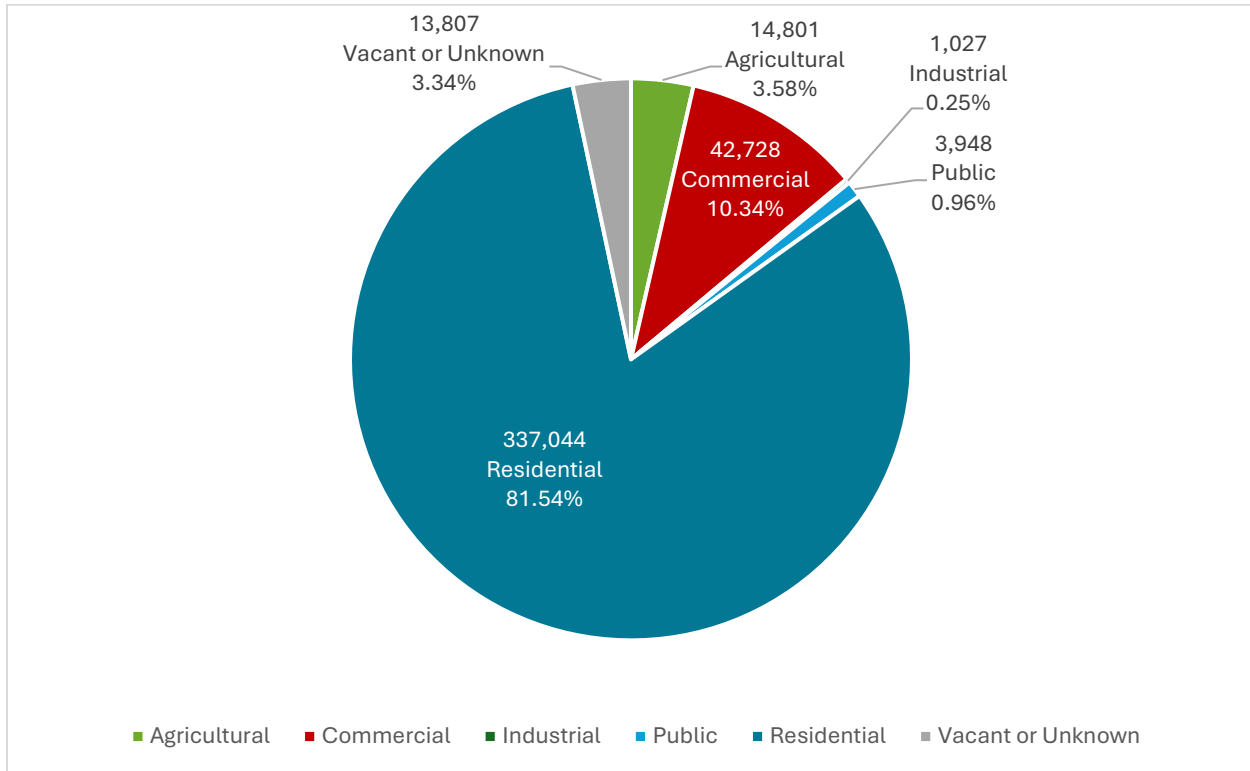
Page 2-53: **Table 3.3.3 Counties with the Highest Population Exposure within the 0.2 percent ACE Flood Hazard Area**

County	Existing Conditions Population	Future Conditions Population	Increase
Hidalgo	562,417 508,307	738,758 774,550	176,341 266,243
Cameron	295,448 259,735	392,250 406,458	96,802 146,723
Webb	85,727 54,632	133,733 106,855	48,006 52,223
Starr	24,277 21,190	30,549 26,727	6,272 5,537

Page 2-55: **Table 3.3.4 Counties with the Highest Structural Exposure within the 0.2 percent ACE Flood Hazard Area**

County	Existing Conditions Structures	Future Conditions Structures	Increase
Hidalgo	165,300 151,443	216,588 227,807	51,288 76,364
Cameron	94,637 86,777	122,450 126,978	27,813 40,201
Webb	19,770 13,877	32,458 27,448	12,688 13,571
Starr	6,696 5,927	8,649 7,769	1,953 1,842

Page 2-56: **Figure 3.3.2 Distribution of Structures at Risk of Flooding by Structure Type**



Page 2-58: **Table 3.3.5 Counties with the Highest Critical Facilities Exposure within the 0.2% ACE Flood Hazard Area**

County	Existing Conditions Critical Facilities	Future Conditions Critical Facilities	Increase
Hidalgo	282	445	163
	194	373	179
Cameron	198	267	69
	134	271	137
Starr	44	65	21
	16	16	0
Webb	20	25	5
	15	22	7

A.3.4 Changes made to Chapter 4

The chapter was modified to include the addition of potential FMEs, FMPs, and FMEs that were received for the amendment process. Tables and text related to the potential FMX was updated to reflect the new values.

4B.3.a. FME Types – Updated the total number of potential FMEs identified in Table 4.8 and paragraph.

Page 4-18: “In total, ~~457~~ **546** potential FMEs were identified and evaluated.”

Page 4-18: **Table 3.4.1 FME Types and General Description**

FME Type	FME Description	# of Potential FMEs Identified
Watershed Planning	Promotes the development and/or refinement of detailed flood risk maps to address data gaps and inadequate mapping. Creates FEMA mapping in previously unmapped areas and updates existing FEMA maps as needed.	46 71
Project Planning	Supports the development and analysis of H&H models to evaluate flood risk within specific problem areas, evaluate potential alternatives to mitigate flood risk, and develop a project.	409 473
Preparedness	Study to develop evacuation center plans and design of rehabilitation of pumps for flood relief.	2 2
	Total	457 546

4B.4 Evaluation of Potentially Feasible FMPs and FMSs – Updated Tables 4.10 values and the FMP type to match the Exhibit C FMP types. The number of potential FMSs in Table 4.11 was also updated to reflect the addition of FMSs.

Page 4-20: “The Lower Rio Grande RFPG identified ~~117~~ **121** potentially feasible FMPs for the Lower Rio Grande Planning Region.”

Page 4-21: **Table 3.4.2 Summary of FMP Types**

FMP Type	Potential FMP Sponsor	# of Potential FMPs Identified
Flood Early Warning System	City of Los Fresnos	2
Flood Proofing	Hidalgo County Precinct No. 1 City of Los Fresnos	6

FMP Type	Potential FMP Sponsor	# of Potential FMPs Identified
Infrastructure	City of Alton City of Eagle Pass City of Edinburg City of Harlingen City of Laredo City of McAllen City of Pharr City of Weslaco Cameron County Cameron County Drainage District No. 3 Cameron County Drainage District No. 5 Cameron County Drainage District No. 6 Hidalgo County Drainage District No. 1 Hidalgo County Precinct 4	94
Regional Detention	City of Harlingen City of McAllen City of Pharr City of Brownsville	16
Infrastructure	Los Fresnos La Joya Starr Combes Valley MUD 2 Laredo La Villa Cameron County Drainage District 3 McAllen Hidalgo County Drainage District 1 Harlingen Cameron County Drainage District 6 Pharr Alton Cameron Del Rio Cameron County Irrigation District 6 Cameron County Drainage District 1 Brownsville Rancho Viejo	76

FMP Type	Potential FMP Sponsor	# of Potential FMPs Identified
Channel	Brownsville Hidalgo County Drainage District 1 Raymondville Cameron County Drainage District 1 Cameron Cameron County Drainage District 6	12
Detention Pond	Brownsville Del Rio Hidalgo County Drainage District 1	8
Storm Drain	Los Fresnos Brownsville McAllen	6
Comprehensive	La Villa McAllen Harlingen Cameron County Drainage District 6 Pharr Hidalgo County Drainage District 1 Los Fresnos Brownsville	17
Other	Del Rio	2
	Total	118 121

Page 4-22: “The Lower Rio Grande RFPG identified ~~86~~ **121** potentially feasible FMSs for the Lower Rio Grande Planning Region.”

Page 4-22: **Table 3.4.3 Summary of FMS Types**

FMS Type	FMS Description	# of Potential FMSs Identified
Education and Outreach	NFIP Education; Flood Education; Floodplain Regulatory Awareness; Emergency Contact Awareness	7 10
Flood Measurement and Warning	Flood Warning Systems; Mass Notifications during Natural Hazard Incidents; Dam Inundation Studies	47 48
Infrastructure Projects	Upgrade existing stormwater storage, develop shelter facilities, identify improvements to flood proof critical facilities	8 11

FMS Type	FMS Description	# of Potential FMSs Identified
Regulatory and Guidance	City Floodplain Ordinance Creation/Updates; Zoning Regulations; Land Use Programs;	19 45
Other	Communicate with current land owners on increasing conveyance into their property, develop plans to secure future funding, secure funding to become or join an existing drainage district	5 7
	Total	86 121

A.3.5 Changes made to Chapter 5

Chapter 5 was updated to include the addition of new recommended FMEs, FMPs, and FMSs. Text and tables related to the modified FMXs were updated to reflect the changes.

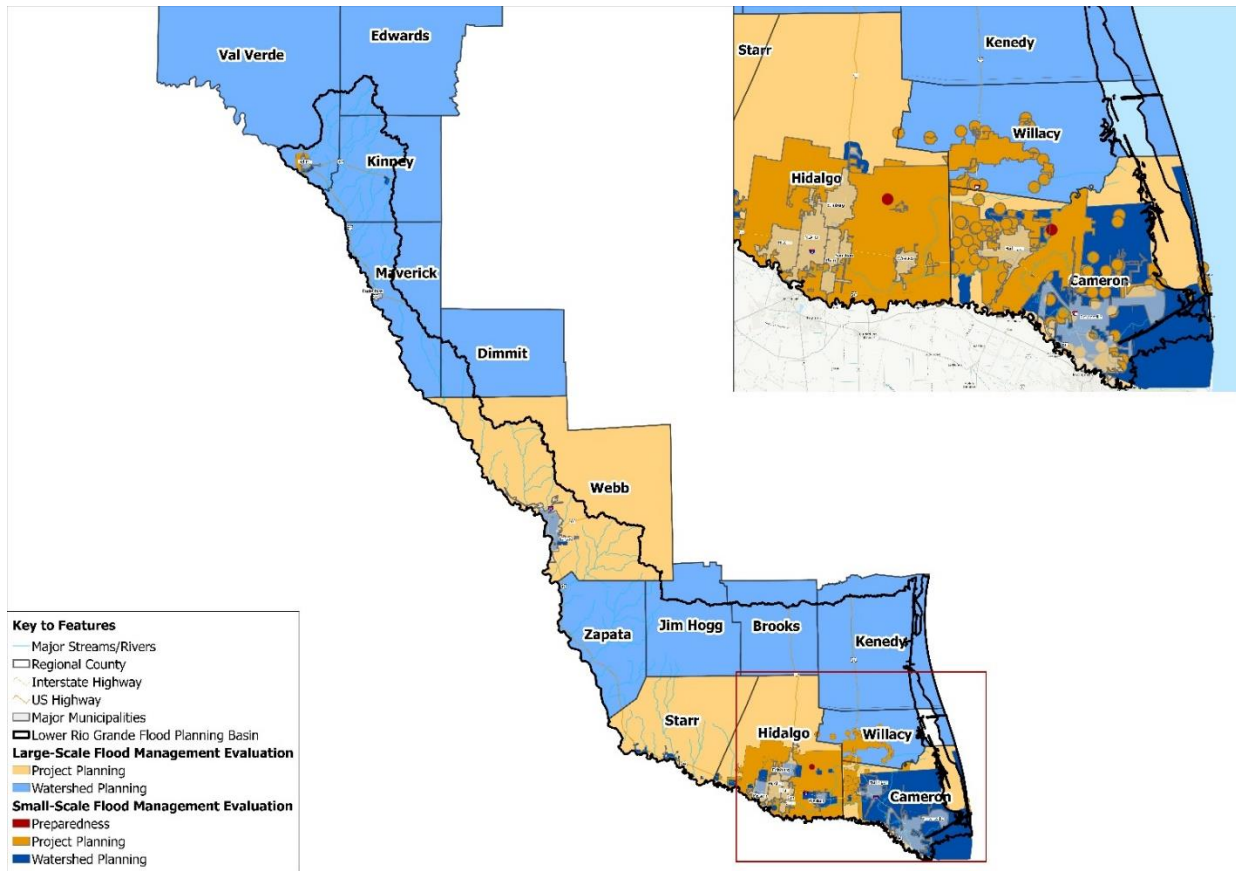
5.2.2 Description and Summary of Recommended FMEs – Updated numbers on Table 5.1 and replaced Figure 5.2. Additionally, text related to the FME numbers was updated to match the new table.

Page 5-5: “A total of ~~457~~ **546** potential FMEs were identified and evaluated by the Lower Rio Grande Planning Region. Of these projects, ~~406~~ **495** were recommended, representing a total of approximately ~~\$1.2 billion~~ **\$270 million** of FME needs across the region.”

Page 5-5: **Table 3.5.1 Summary of Recommended FMEs**

FME Type	# of Potential FMEs Identified	# of FMEs Recommended	Total Cost of Recommended FMEs
Watershed Planning	46 71	46 71	\$35,168,000 \$55,418,000
Project Planning	409 473	358 422	\$1,184,768,582 \$213,880,561
Preparedness	2 2	2 2	\$3,371,721 \$404,607
Total	457 546	406 495	\$1,223,308,303 \$269,703,167

Page 5-6: Updated “**Figure 5.2 Map of Recommended FMEs**” to include the additional FMEs.



5.4.3 Description and Summary of Recommended FMPs– Updated numbers on Table 5.2 and replaced Figure 5.3. Text referencing table data was updated to match the new values on the updated table. Note that the reported total cost on Page 5-9 below has a typo when it was converted to million dollars, the correct number was supposed to be \$968 million instead of \$9.6 million. FMP type was updated to match the Exhibit C FMP types, for consistency.

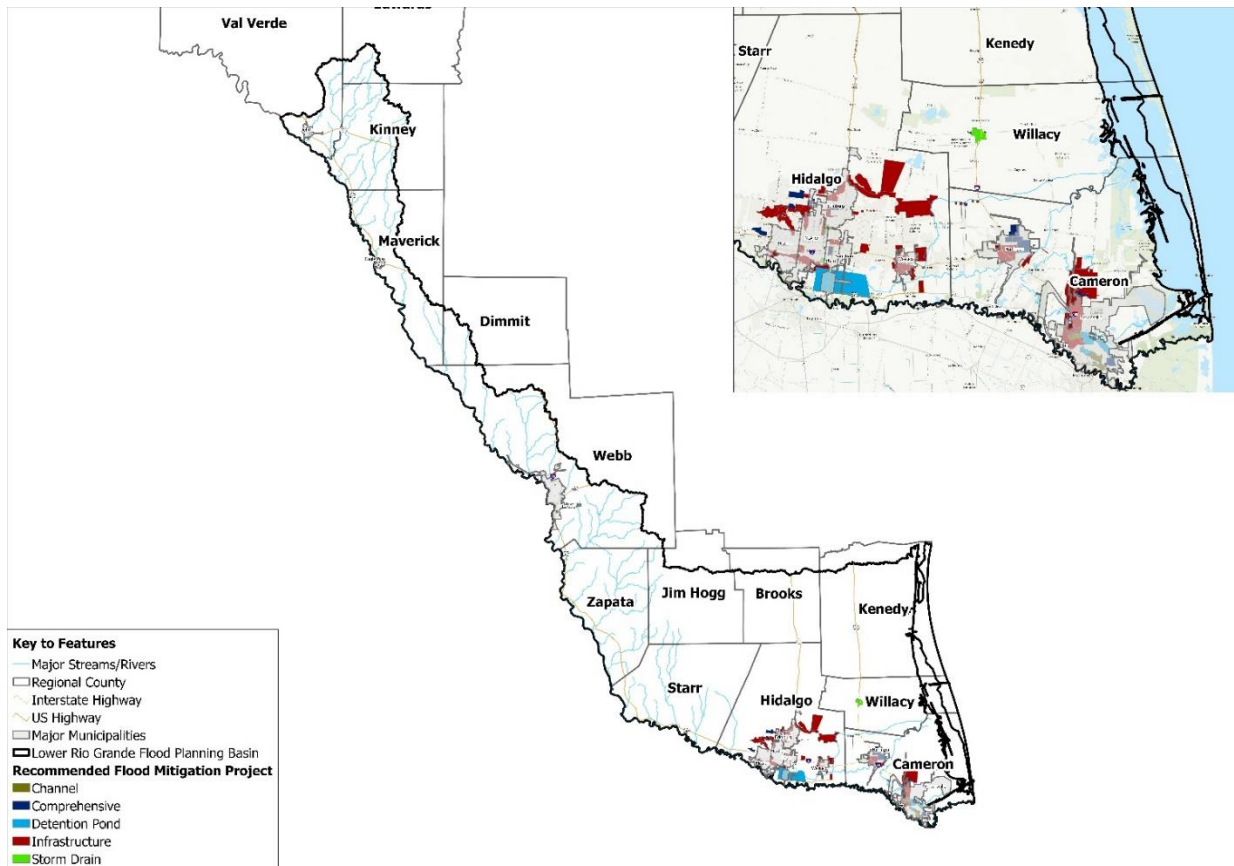
Page 5-9: “Due to the level of detail required for consideration as an FMP, ~~94~~ **105** out of ~~98~~ **121** potentially feasible FMPs were determined to have enough details available for evaluation and potential recommendation for inclusion in the Regional Flood Plan. Based on the FMP evaluation described in Section 5.4.2, the Lower Rio Grande Planning Region has determined that ~~94~~ **105** FMPs comply with all the TWDB requirements and recommend them for inclusion in the Regional Flood Plan representing a combined total project cost of ~~\$968,383,868~~ **\$1.3 billion**. A map of project areas for the recommended FMPs is provided in Figure 5.3 on the next page.

A summary of the recommended FMPs for inclusion in the Regional Flood Plan is presented in *Error! Reference source not found.*. These projects represent a combined total construction cost of \$ ~~9.6 million~~ **\$1.3 billion**.”

Page 5-9: **Table 5.2 Summary of Recommended FMPs**

FMP Type	# of Potential FMPs Identified	# of FMPs Recommended	Total Cost of Recommended FMPs
Flood Proofing	32	30	\$358,386,210
Infrastructure	48	47	\$318,613,002
Regional Detention	18	17	\$291,384,656
Infrastructure	76	70	\$407,285,871
Channel	12	2	\$65,975,580
Detention Pond	8	8	\$428,904,356
Storm Drain	6	6	\$53,255,305
Comprehensive	17	17	\$299,368,742
Other	2	2	\$7,967,309
Total	98	94	\$968,383,868
	121	105	\$1,262,757,163

Page 5-10: Updated “*Figure 5.3 Map of Recommended FMPs*” to include the additional FMPs.



5.4.2 Description and Summary of Recommended FMSs – Updated numbers on Table 5.3 and replaced Figure 5.4. Additionally, text related to the FMS numbers was updated to match the new table.

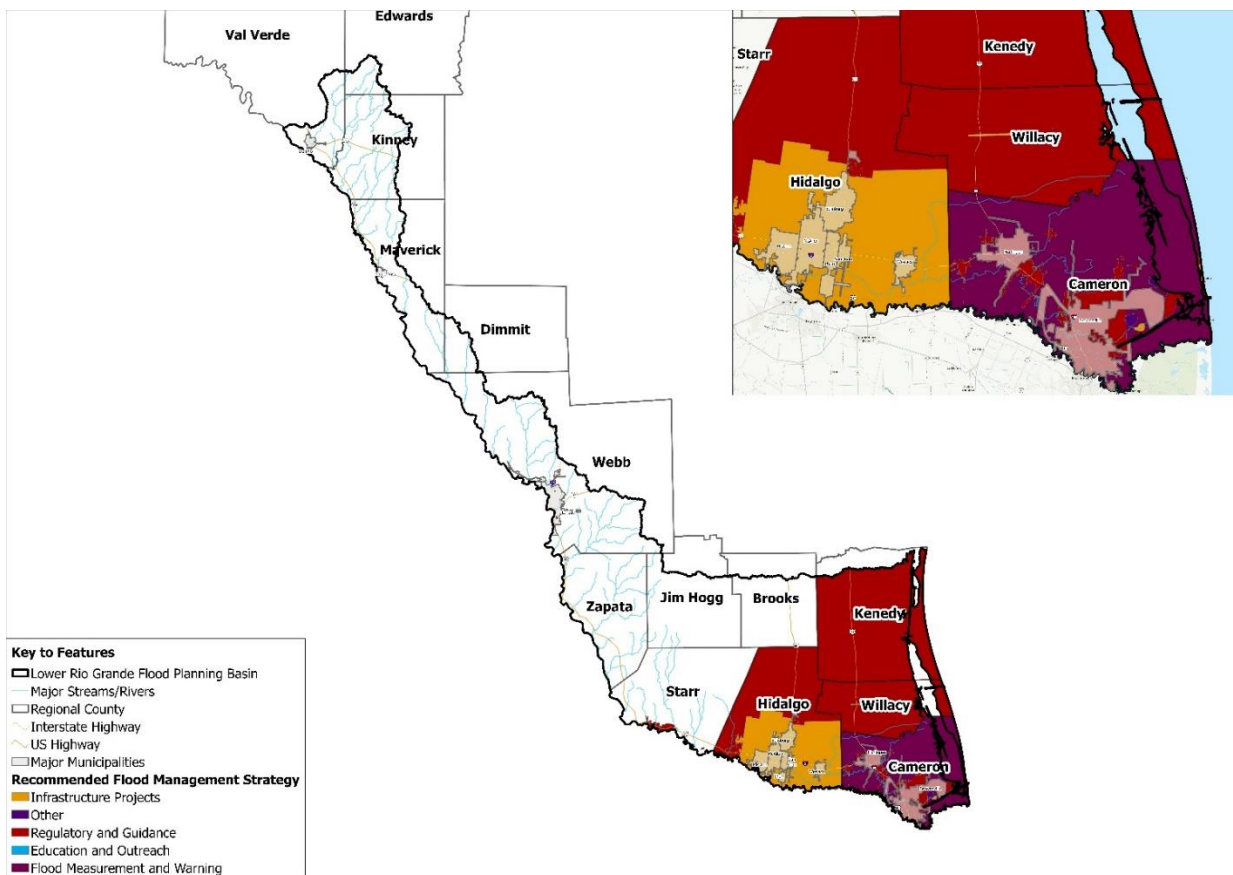
Page 5-11: “A wide variety of FMS types were identified and evaluated for the Lower Rio Grande Planning Region. The Lower Rio Grande Region considered a total of ~~86~~ **121** potentially feasible FMSs and all ~~86~~ **121** were recommended for inclusion in the Regional Flood Plan. Generally, these FMSs recommend city-wide and county-wide strategies and initiatives that represent a combined total cost of approximately ~~\$151~~ **\$170** million.”

Page 5-12: **Table 3.5.2 Summary of Recommended FMSs**

FMS Type	FMS Description	# of Potential FMSs Identified	# of FMSs Recommended	Total Cost of Recommended FMSs
Education and Outreach	NFIP Education; Flood Education; Floodplain Regulatory Awareness; Emergency Contact Awareness	7 10	7 10	\$875,000 \$763,500
Flood Measurement and Warning	Flood Warning Systems; Mass Notifications during Natural Hazard Incidents; Dam Inundation Studies	47 48	47 48	\$110,400,000 \$107,406,050
Infrastructure Projects	Assessments for flood proofing, building a shelter; funding plan for dredging plan	8 11	8 11	\$36,720,000 \$48,820,000
Regulatory and Guidance	City Floodplain Ordinance Creation/Updates; Zoning Regulations; Land Use Programs	19 45	19 45	\$2,170,000 \$12,020,500
Other	Funding Plans; Formation or union with Drainage District; Renegotiation of Agreements; Levee	5 7	5 7	\$1,150,000 \$1,251,000

FMS Type	FMS Description	# of Potential FMSs Identified	# of FMSs Recommended	Total Cost of Recommended FMSs
	Recertification Alliances			
	Total	86 121	86 121	\$151,315,000 \$170,261,050

Page 5-13: Updated “**Figure 5.4 Map of Recommended FMSs**” to include the additional FMSs.



A.3.6 Changes made to Chapter 6

Chapter 6 was modified to account for the additional FMPs included in the amendment. Tables and text referencing the benefits of the FMP implementation were updated. Changes include the reduction of flood-impacted areas, population removed from the floodplain, structures removed from the floodplain, critical facilities removed from the floodplain, low water crossings removed, and at-risk roadways removed.

6.1 Impacts of Regional Flood Plan – Sentence modified to account for the additional FMPs.

Page 6-1: “Implementation of the ~~97~~ **105** recommended flood mitigation projects (FMPs) included in this RFP is expected to benefit an estimated ~~95,994~~ **101,494** people living in flood-prone areas.”

1.1.a. Summary of Relative Reduction of the Flood Risk - Sentence modified to account for the additional FMEs. Text and Tables 6.1 – 6.7 modified to account for the additional FMPs benefits after implementation.

Page 6-2: “A total of ~~457~~ **495** FMEs are recommended in this RFP. ~~Forty-six (46)~~ **Seventy-one (71)** of the recommended FMEs are watershed planning studies identified during the needs assessment. These ~~46~~ **71** floodplain mapping will better define the flood risk for ~~67%~~ **83%** of the floodplain. Implementing the FMEs will ultimately give entities a tool to address the flood hazard aggressively and effectively in their community. Once the flood hazard is better understood, effect floodplain management and land use strategies can be implemented. Another ~~409~~ **473** proposed FMEs will conduct an alternative analysis to determine the source and extent of a flood-prone area and will identify the most beneficial solution that not only mitigates the flood problem but also considers the project’s impact on their neighbors and water supply. The last 2 FMEs will provide the analysis to design an evacuation center and rehabilitate pumps for flood relief.”

Page 6-2: “Implementing the Regional Flood Plan will reduce areas previously impacted by approximately ~~4.3~~ **3.4** percent, or a reduction of approximately ~~12.1~~ **17** square miles.”

Page 6-2: **Table 3.6.1 Reduction in Existing Flood-Impacted Areas**

Annual Chance Event Flood Event	Area in Floodplain (sq. mi.)	Reduction of Floodplain after Implementation (sq. mi.)	Decrease in floodplain impacted, (%)
1% (100-Year Event)	237.2 343.4	8.5 12.2	3.6% 3.5%
0.2% (500-Year Event)	45.2 153.9	3.6 4.9	8.0% 3.2%
Total	282.4 497.3	12.1 17.0	4.3% 3.4%

Page 6-3: **Table 3.6.2 Population Removed from the Floodplain**

Annual Chance Event Flood Event	Existing At-Risk Population	Reduction of At-Risk Population after Implementation	Decrease in Population Impacted
1% (100-Year Event)	282,017 302,564	43,930 49,430	15.6% 16.3%
0.2% (500-Year Event)	689,125 538,143	52,064 74,019	7.6% 13.8%
Total	971,142 840,707	95,994 123,449	9.9% 14.7%

Page 6-3: **Table 3.6.3 Structures Removed from the Floodplain**

Annual Chance Event Flood Event	Existing At-Risk Structures	Reduction of At-Risk Structures after Implementation	Decrease in Structures Impacted
1% (100-Year Event)	53,276 56,907	15,487 17,025	29.1% 29.9%
0.2% (500-Year Event)	174,084 179,381	24,204 24,673	13.9% 13.8%
Total	227,360 236,288	39,691 41,698	17.5% 17.6%

Page 6-4: **Table 3.6.4 Critical Facilities Removed from the Floodplain**

Annual Chance Event Flood Event	Existing At-Risk Critical Facilities	Reduction of At-Risk Critical Facilities After Implementation	Decrease in Critical Facilities Impacted
1% (100-Year Event)	65 81	2 2	-3.1% 2.5%
0.2% (500-Year Event)	428 428	20 20	4.7% 4.7%
Total	493 509	22 22	-4.5% 4.3%

Page 6-4: **Table 3.6.5 Low Water Crossings Removed**

Annual Chance Event Flood Event	Existing At-Risk Low Water Crossings	Reduction of At-Risk Low Water Crossings after Implementation	Decrease in Low Water Crossings Impacted
1% (100-Year Event)	3262 3,269	44 44	1.3% 1.3%
0.2% (500-Year Event)	3,524 3,524	0 0	0% 0%
Total	6786 6,793	44 44	-0.7% 0.6%

Page 6-4: **Table 3.6.6 At-Risk Roadways Removed**

Annual Chance Event Flood Event	Existing At-Risk Roadways (miles)	Reduction of At-Risk Roadways after Implementation	Decrease in Roadways Impacted
1% (100-Year Event)	6,093	0	0%
	6,199	28	0.4%
0.2% (500-Year Event)	2,583	0	0%
	2,583	0.0	0%
Total	6,376	0	0%
	8,782	28	0.3%

A.3.7 Changes made to Chapter 9

Chapter 9 was updated to include the additional recommended FMEs, FMSs, and FMPs in the financial analysis. It should be noted that the total cost number of \$2,414,176,760 of implementing all FMEs, FMSs, and FMPs was incorrectly stated in the 2023 Regional Flood Plan due to an inconsistency with the values reported in Table 15 of Exhibit C for cost of FMEs. The total cost of implementing FMEs as reported in Table 15 is \$227,172,167 and not the \$1,223,308,303 previously reported in Table 5.1. This error transferred to the text in chapter 9 where the total cost of implementing all FMXs was reported at \$2,414,176,760. The correct number in the 2023 Regional Flood Plan should have been reported as \$1,428,040,624. The new total cost of implementing all FMEs, FMSs, and FMPs with the additions included in this project is now \$1,702,721,380.

9.3 Flood Infrastructure Financing Survey – Modified total estimated cost of FMEs, FMSs, and FMPs to include additional entries.

Page 9-13: “Overall, a total cost of ~~\$2,414,176,760~~ **\$1,702,721,380** is needed to implement the recommended FMEs, FMSs, and FMPs in this regional flood plan. From the total cost, it is project that ~~\$2,172,759,084~~ **\$1,532,449,242** of state and federal funding is needed.”

A.3.8 Changes made to Chapter 10

Chapter 10 was updated to include the additional RFPG meetings that were held to approve the RFPGs intent to prepare an amendment and when received FMXs were reviewed and approved for incorporation into the amendment.

10.1 Regional Flood Planning Group Meetings (2022-2022 2025) - Modified to include two additional entries to Table 10.1.

Page 10-2: **Table 10.1 RFPG and Technical Committee Meeting Calendar and Summary**

Year	Date	Meeting	Highlights
2020	November 5	Planning Group Virtual Meeting	RFPG convening hosted by TWDB
2020	December 3	Planning Group Virtual Meeting	Planning Group Sponsor (TWDB) hosts
2021	January 13	Planning Group Virtual Meeting	Pre-planning public comment Nominating members
2021	February 24	Planning Group Virtual Meeting	Pre-planning public comment Technical consultant selected/hired
2021	June 30	Planning Group Virtual Meeting	Award contract to Technical consultant Award contract for public website
2021	July 28	Pre-planning Virtual Meeting	The technical consultant presented and discussed the scope of work, goals, and strategies for public engagement and project completion.
2021	August 18	Planning Group Virtual Meeting & Pre-Planning Meeting	Pre-planning public comment and technical consultant provided updates on Regional Flood Plan Task 1-3
2021	October 13	Planning Group Virtual Meeting	The technical consultant provided tasks 1, 3B, 4A, and 4B updates.
2021	November 17	Planning Group Virtual Meeting	The technical consultant presented the potential adoption of Region 15 overarching flood mitigation and floodplain management goals for the Lower Rio Grande Regional Flood Plan. The Regional Flood Plan approved the process used by the RFPG to identify and evaluate potential FMEs, FMPs, and FMSs. The technical consultant also discussed Floodplain management standards.
2021	December 15	Pre-Planning Virtual Meeting	The technical consultant presents the technical memo for approval to submit to the TWDB by January 7, 2022
2022	January 19	Planning Group Virtual Meeting	The technical consultant provides an update on flood mitigation resolution and reaching out to different entities regarding missing data for the best models to reflect the information given
2022	March 9	Planning Group Hybrid Meeting	The technical consultant provides updates on Tasks 2A, 2B, 3A, and 4B.
2022	April 12	Planning Group Hybrid Meeting	The technical consultant introduces RATES to RFPG and provides updates on Tasks 3A.

Year	Date	Meeting	Highlights
2022	May 18	Planning Group Virtual Meeting	The technical consultant introduces RATES to RFPG and provides updates on Tasks 3A.
2022	July 21	Planning Group Virtual Meeting	The Technical consultant presents summaries of Chapters 3a, 4, 5, 6,7,8, and 9 of the draft Regional Flood Plan for comments and approval to submit to TWDB and post for Public Comment.
2022	September 21	Planning Group Virtual Meeting	The Technical consultant presents plan for Task 12 for consideration and approval to the TWDB.
2022	November 16	Planning Group Virtual Meeting	The Technical consultant presents revisions to Chapter 7, comments received on draft Regional Flood Plan, and reviewed responses for consideration and approval to the TWDB.
2022	December 7	Planning Group Virtual Meeting	The Technical consultant presents Final Regional Flood Plan for approval to be submitted and FMEs to be studied further for FMPs for consideration and approval to the TWDB.
2023	February 21	Technical Sub-Committee Virtual Meeting	The Technical Sub-Committee reviewed and evaluated the expanded list of FMEs and models to recommend a short list of FMEs for approval to the RFPG for further study.
2023	April 26	Planning Group Virtual Meeting	The Technical consultant presented new FMXs for evaluation and approval, received approval for additional FMEs for further study un Task 12, reviewed TWDB’s comments on the Final Plan and responses, and reviewed TWDB’s proposed ranking criteria for FMXs to provide comments.
2023	May 19	Planning Group Virtual Meeting	The Technical consultant presented the plan and request for use of Task 13 funding, reviewed new possible FMXs for recommendation, and requested additional FMEs for further study. Additionally, consultant presented the proposed changes to Chapters 1, 2, 4, 5, 6, 7, 8, 9 and 10 for the Amended RFP.
2023	June 28	Planning Group Virtual Meeting	The Technical consultant presented new FMXs for evaluation and approval and presented the Draft of the Amended Regional Flood Plan for approval, subject to comments and final reconciliation revisions.
2024	December 4	Planning Group Virtual Meeting	The technical consultant presented the optional amendment, and the group decided to proceed with the amendment process.

Year	Date	Meeting	Highlights
2025	February 19	Planning Group Virtual Meeting	The Technical consultant presented the additional FMXs included in the amendment. The group approved incorporating the additional FMXs into the amendment.

A.4 Modifications and Additions to Appendices

A.4.1 Exhibit C Tables

The Lower Rio Grande Regional Flood Plan includes many deliverable components that support the narrative in the report. The TWDB prescribed Exhibit C Tables are one of these components. Several of the tables were updated to reflect the new FMEs, FMPs, and FMSs made during the amendment process. Summaries of the changes are provided in the subsequent sections.

Table 3: Existing Flood Risk

Table 3 was revised to incorporate updates to the existing conditions exposure analysis as a result of incorporating the 11 additional FMPs.

Table 5: Future Flood Risk

Table 5 was revised to incorporate updates to the future conditions exposure analysis as a result of incorporating the 11 additional FMPs.

Table 12: Potential Flood Management Evaluations

Table 12 was revised to include the 89 additional FMEs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

Table 13: Potential Flood Mitigation Projects

Table 13 was revised to include the 11 additional FMPs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

Table 14: Potential Flood Mitigation Strategies

Table 14 was revised to include the 35 additional FMSs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

Table 15: Recommended Flood Management Evaluations

Table 15 was revised to include the 89 additional FMEs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

Table 16: Recommended Flood Mitigation Projects

Table 16 was revised to include the 11 additional FMPs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

Table 17: Recommended Flood Mitigation Strategies

Table 17 was revised to include the 35 additional FMSs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

Table 18: Previous Studies Models

Table 18 was revised to add the models that were received with the submittals of the 11 new FMPs.

Table 20: Recommended Flood Mitigation Project Details

Table 20 was revised to include the 11 additional FMPs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

Table 20B: Scoring Summary

Table 20B was revised to include the 11 additional FMPs incorporated into the Lower Rio Grande Regional Flood Plan as part of the amendment.

No Negative Impact Table

No Negative Impact table was revised to include negative impact analysis description for 11 additional recommended FMPs.

A.4.2 List of Models Submitted/Uploaded to MS2

Model ID	Model Name
150000000051	Los Tomates
150000000052	McAllen Lateral
150000000053	El Rancho
150000000054	City of Del Rio Watershed Addendum San Felipe Creek
150000000055	City of Del Rio Watershed Addendum Cienegas Creek
150000000056	South Lateral

A.4.3 Maps

Map 4: Existing Condition Flood Hazard

Map 4 was updated to incorporate the new existing condition flooding maps that were developed for the new FMPs.

Map 8: Future Condition Flood Hazard

Map updated to include the new future condition flooding maps that were obtained from the existing condition flooding maps developed for the additional FMPs.

Map 10: Extent of Increase of Flood Hazard

Map 10 was updated to incorporate the new existing condition and future condition flooding maps that were developed for the new FMPs.

Map 16: Potential Flood Management Evaluations

Map updated to incorporate the additional potential FMEs received.

Map 17: Potential Flood Mitigation Projects

Map updated to incorporate the additional potential FMPs received.

Map 18: Potential Flood Management Strategies

Map updated to incorporate the additional potential FMSs received.

Map 19: Flood Management Evaluations

Map updated to incorporate the additional recommended FMEs received.

Map 20: Recommended Flood Mitigation Projects

Map updated to incorporate the additional recommended FMPs received.

Map 21: Recommended Flood Management Strategies

Map updated to incorporate the additional recommended FMSs received.

Map 22: Model Coverage

Map updated to incorporate the additional models received for FMPs