

LOWER RIO GRANDE REGIONAL FLOOD PLANNING GROUP MEETING

Technical Consultant Agenda Item 8 –
Discussion and Update on 2028 Regional
Flood Plan, Chapters 1-4

July 16, 2025

AGENDA

- ❑ Item No. 8 – Discussion and update on 2028 Regional Flood Plan, Chapters 1-4
- ❑ Item No. 9 – Regional Flood Planning Group Cycle 2 Pre-Planning Meeting No. 2



Agenda Item No. 8

**Discussion and update on
2028 Regional Flood
Plan, Chapters 1-4**



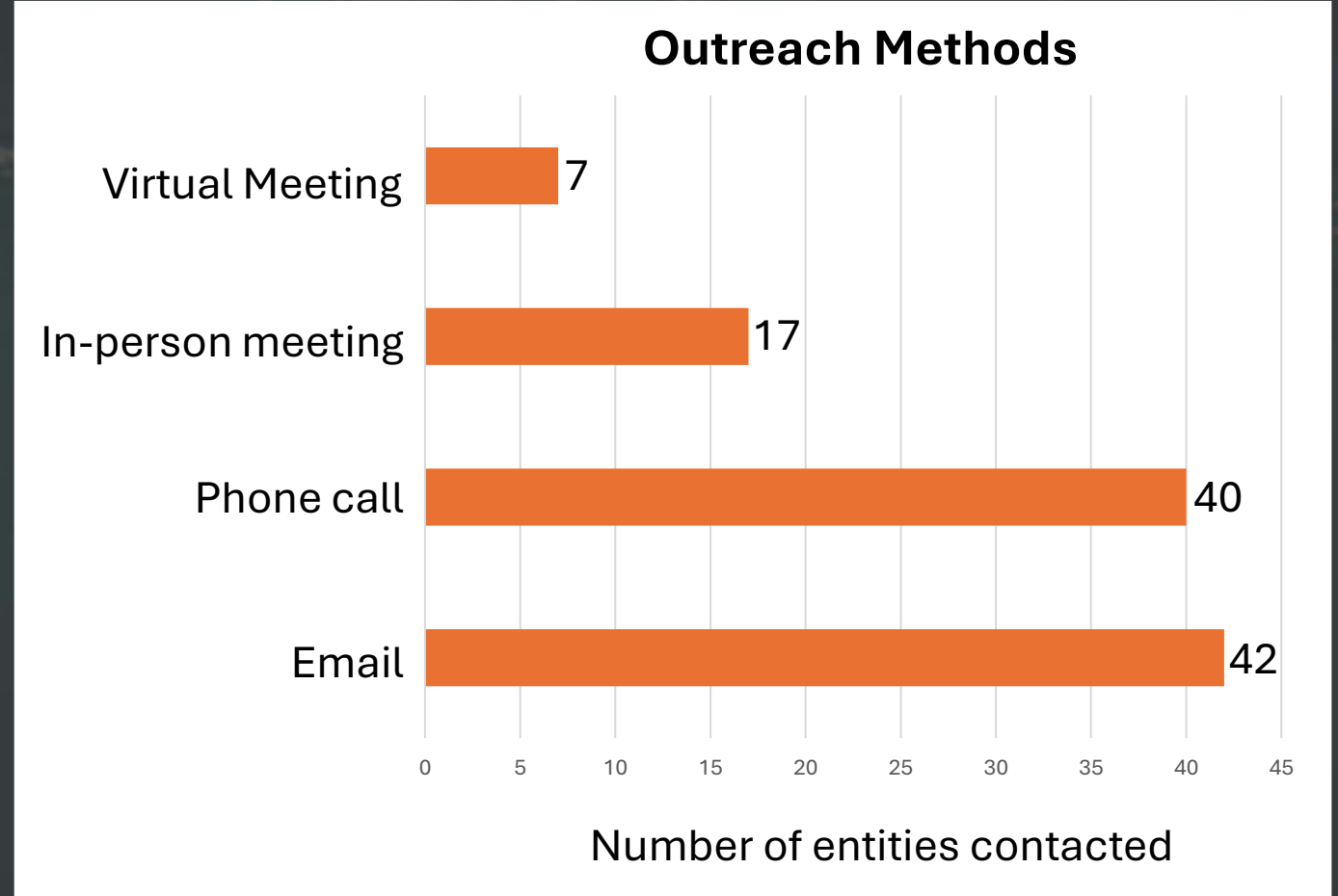
Chapter 1 Update

Task 1: Planning Area Description



CH. 1 UPDATE – SURVEY AND DATA COLLECTION TOOL

- Survey posted February 17, 2025
- Survey to close **July 25, 2025**
- 106 Entities contacted through four methods
- 18 Entities responded

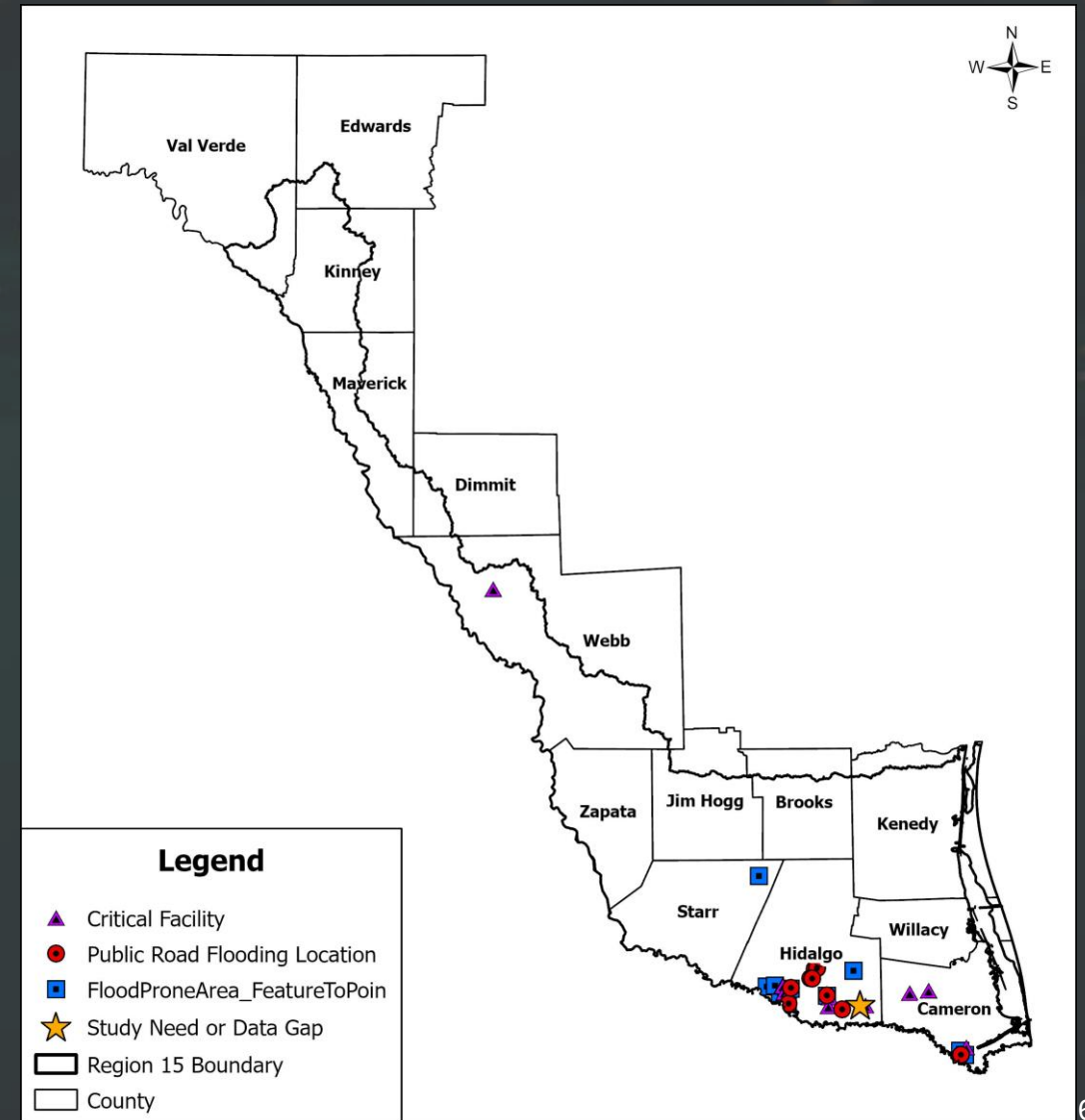




CH. 1 UPDATE – SURVEY AND DATA COLLECTION TOOL

Online Web Map Survey Responses:

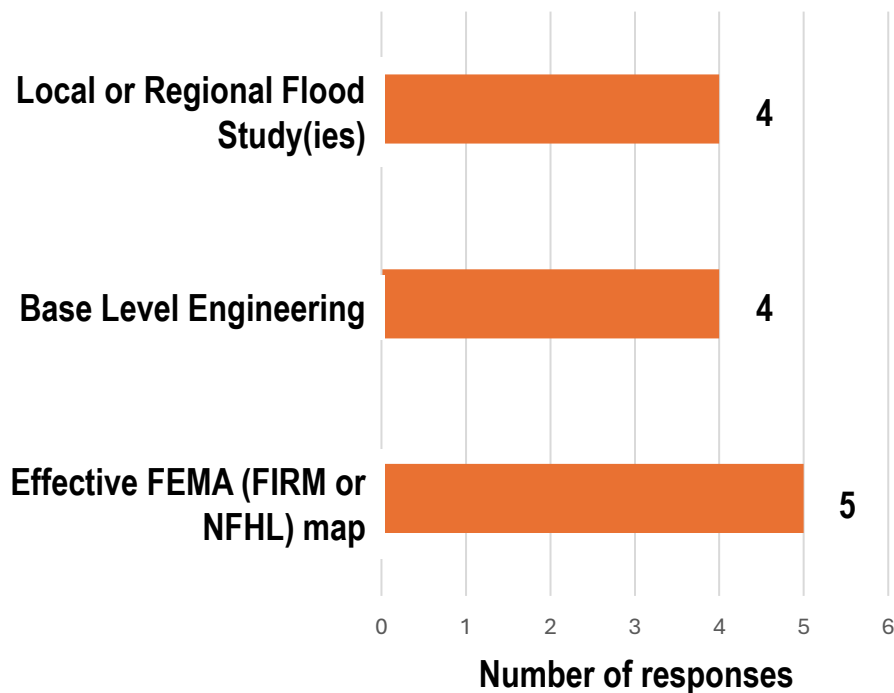
Feature Class	Number of Responses
Flood Prone Area	13
Public Road Flooding Location	15
Study Need or Data Gap	1
Critical Facility	15



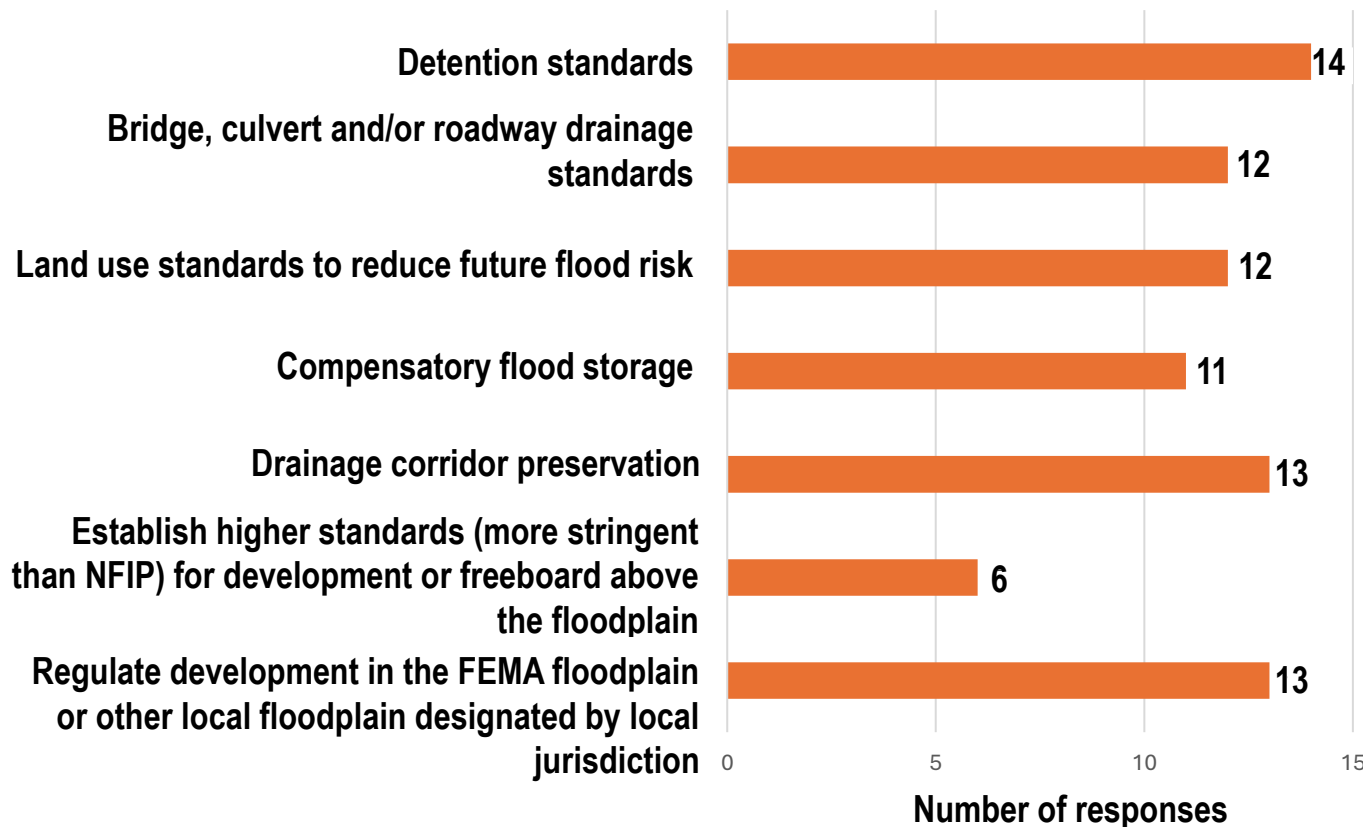


CH. 1 UPDATE – SURVEY AND DATA COLLECTION TOOL

Which of the following is used to define best available flood risk (floodplains) in your community or jurisdiction in addition to FEMA studies and Base Level Engineering?



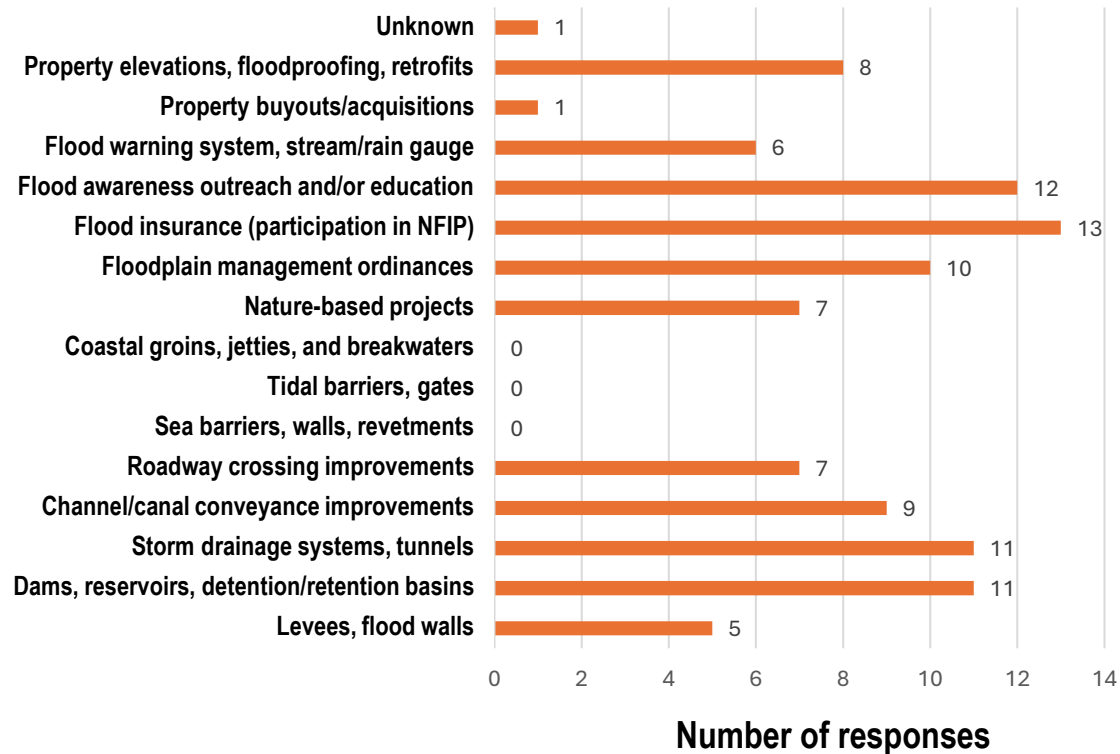
In your opinion, should the RFPG recommend any of the following minimum standards for all jurisdictions within the region?



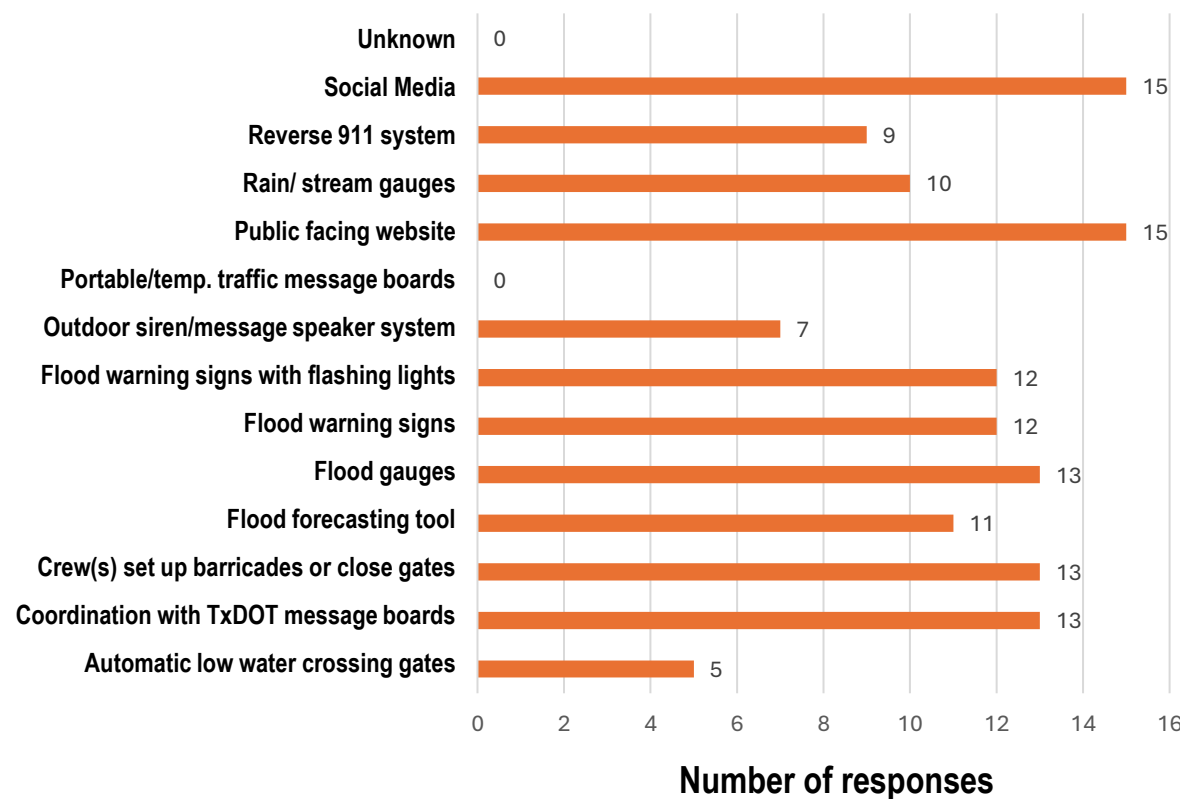


CH. 1 UPDATE – SURVEY AND DATA COLLECTION TOOL

Does your jurisdiction have flood risk reduction planning or information for your community that you would like considered for inclusion in the plan?



Flood response methods currently used in your jurisdiction for emergency response?





CH. 1 UPDATE – INFRASTRUCTURE ASSESSMENT TOOLKIT

<https://www.twdb.texas.gov/flood/research/Infrastructure-Assessment-2022/index.asp>



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Infrastructure Assessment Methodologies

Project summary: The regional flood planning process asks each of the 15 Texas flood planning regions to identify its flood infrastructure and the associated condition (functional vs non-functional; deficient vs. non-deficient). Few communities have been able to generate and provide this information during the first planning cycle, which is currently underway.

The goal of this research is to develop readily usable planning-level infrastructure condition assessment methods, including a toolkit for assessing the condition of flood infrastructure at a regional planning level for future planning cycles. This research will also look at infrastructure assessment indicators currently identified in the TWDB Flood Planning Program and recommend enhancements as applicable.

Project deliverable(s):

 [Infrastructure Assessment Classification Guidance](#): This document provides guidance on classifying the condition, functionality and data confidence rating of constructed and natural flood infrastructure.

 [Infrastructure Assessment Toolkit](#): This is a spreadsheet-based resource designed for communities without a GIS-based inventory.

Contractor (and Principal Investigator, if appropriate): Freese and Nichols

Contract amount: Approximately \$200,000

Project lead: Reem Zoun, Jennifer Jackson

Project timeline: September 2022 - February 2025

[Learn About Flooding](#)

[State Flood Plan](#)

[Regional Flood Planning](#)

[Flood Financial Assistance Programs](#)

[National Flood Insurance Program \(NFIP\)](#)

[Flood Science](#)

[Flood Research](#)

[Floodplain Management Training](#)

[Community Resources](#)

[Flood Science and Community Assistance Staff](#)

[Flood Planning Staff](#)

[TxGIO](#)

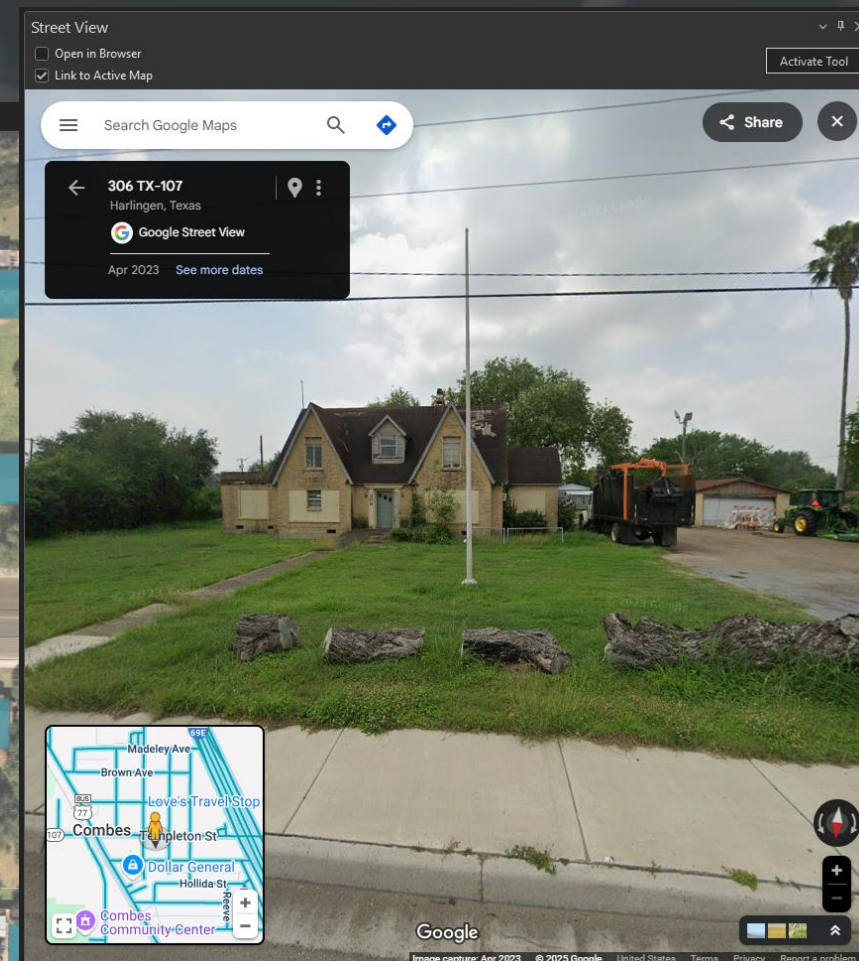
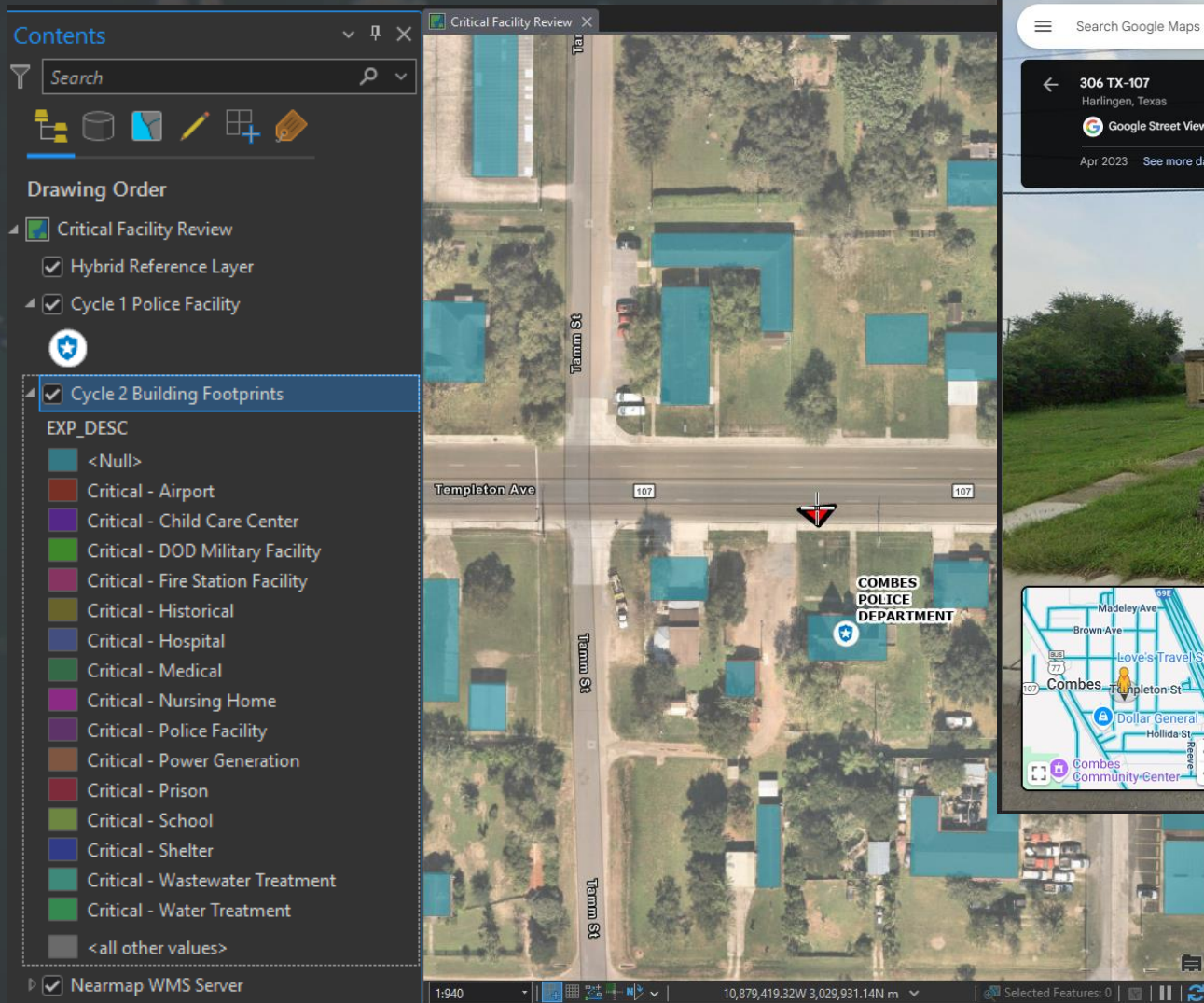
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CH. 1 UPDATE – CRITICAL FACILITIES UPDATE

Critical Facility Verification

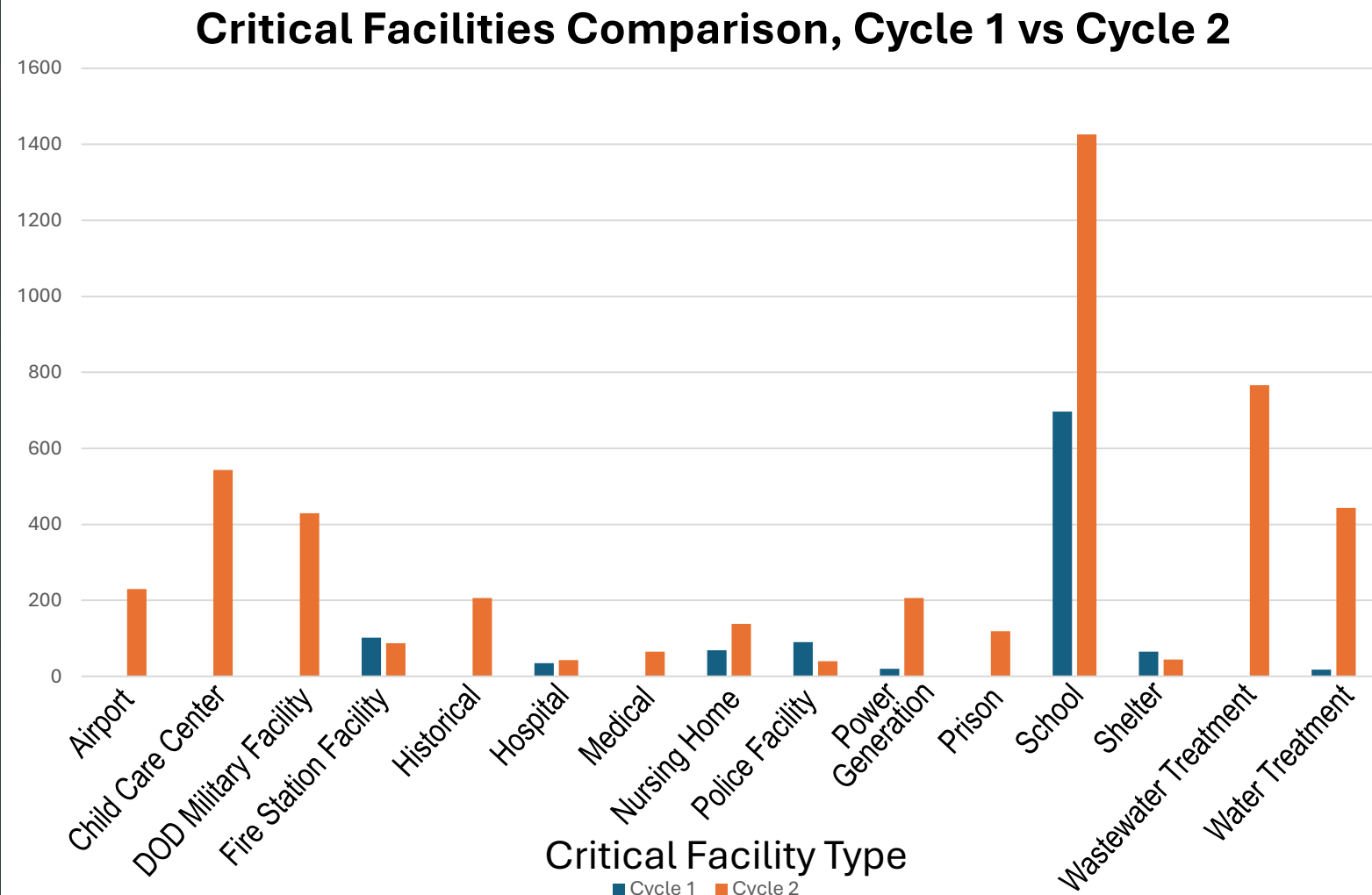
- Reviewed Cycle 1 critical facilities using imagery and Google Street View.
- 3,689 more critical facilities identified
- Ex. HIFLD police station point is inaccurate upon further inspection.





CH. 1 UPDATE – CRITICAL FACILITIES UPDATE

Critical Facility Type	Cycle 1	Cycle 2
Airport	0	230
Child Care Center	0	543
DOD Military Facility	0	429
Fire Station Facility	102	87
Historical	0	206
Hospital	35	43
Medical	0	65
Nursing Home	69	138
Police Facility	90	40
Power Generation	20	206
Prison	0	119
School	697	1426
Shelter	65	44
Wastewater Treatment	0	766
Water Treatment	18	443





Chapter 2 Update Flood Risk Analysis

Task 2a: Existing Conditions

Task 2b: Future Conditions



CH. 2 TASK 2A – EXISTING CONDITION FLOOD QUILT

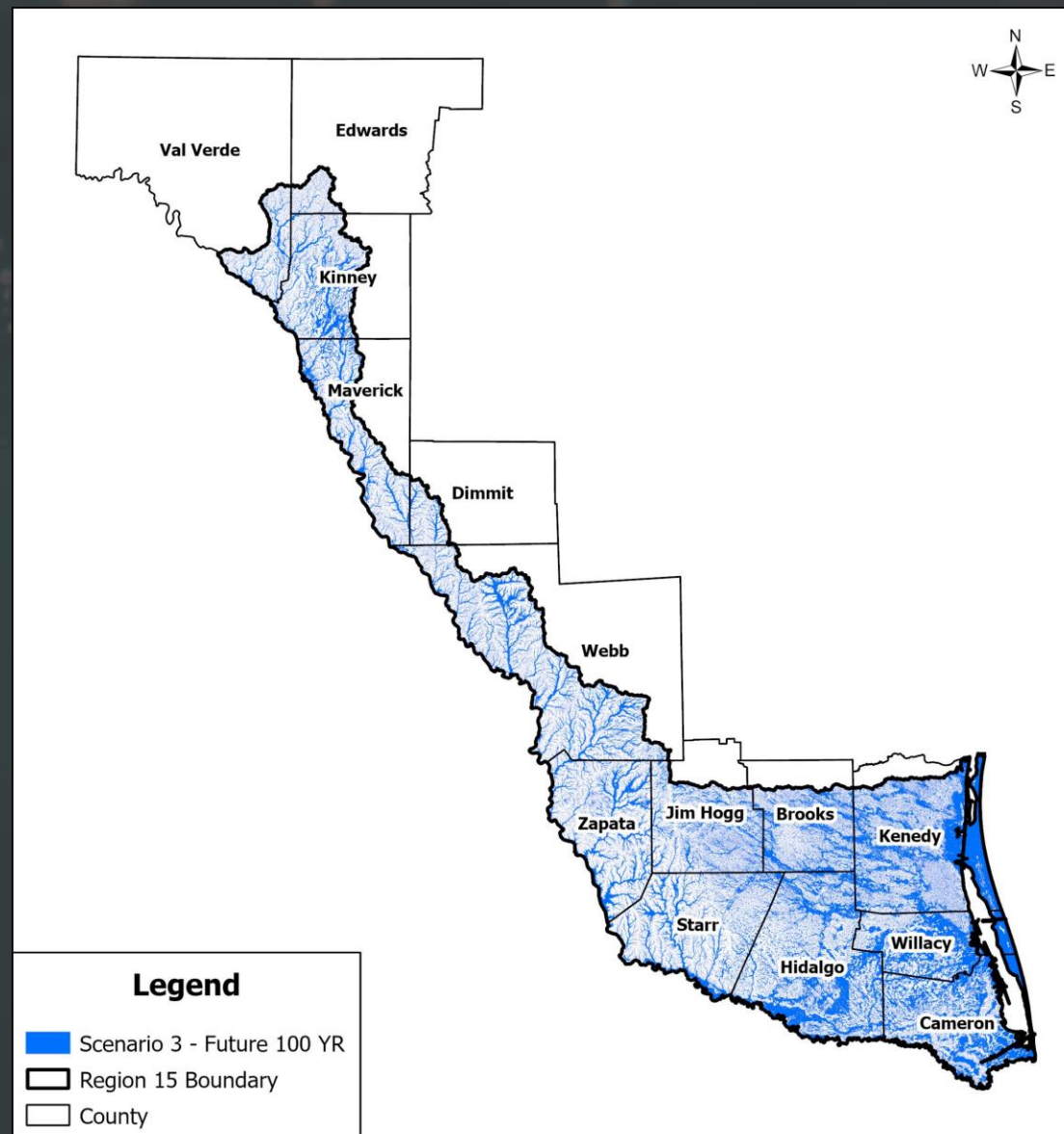
- Currently reviewing TWDB Flood Quilt
- Evaluating potential other sources of existing flood hazard info:
 - GLO study on North Main Drain (Hidalgo/Willacy) and Coastal Cameron County
 - BLE study for Central Laguna Madre Watershed
 - Other local studies
- *Update at August RFPG meeting*
- *Public Meeting – Early September, tentatively*



CH. 2 TASK 2B – FUTURE CONDITION FLOOD QUILT

Year 2060 Future Floodplain Scenarios:

- Scenario 1: Minimal future climate forcing with future subsidence and land use change
- Scenario 2: Moderate future climate forcing with future subsidence and land use change
- **Scenario 3: Significant future climate forcing with future subsidence and land use change**
- Scenario 4: Moderate future climate forcing only without future subsidence and land use change

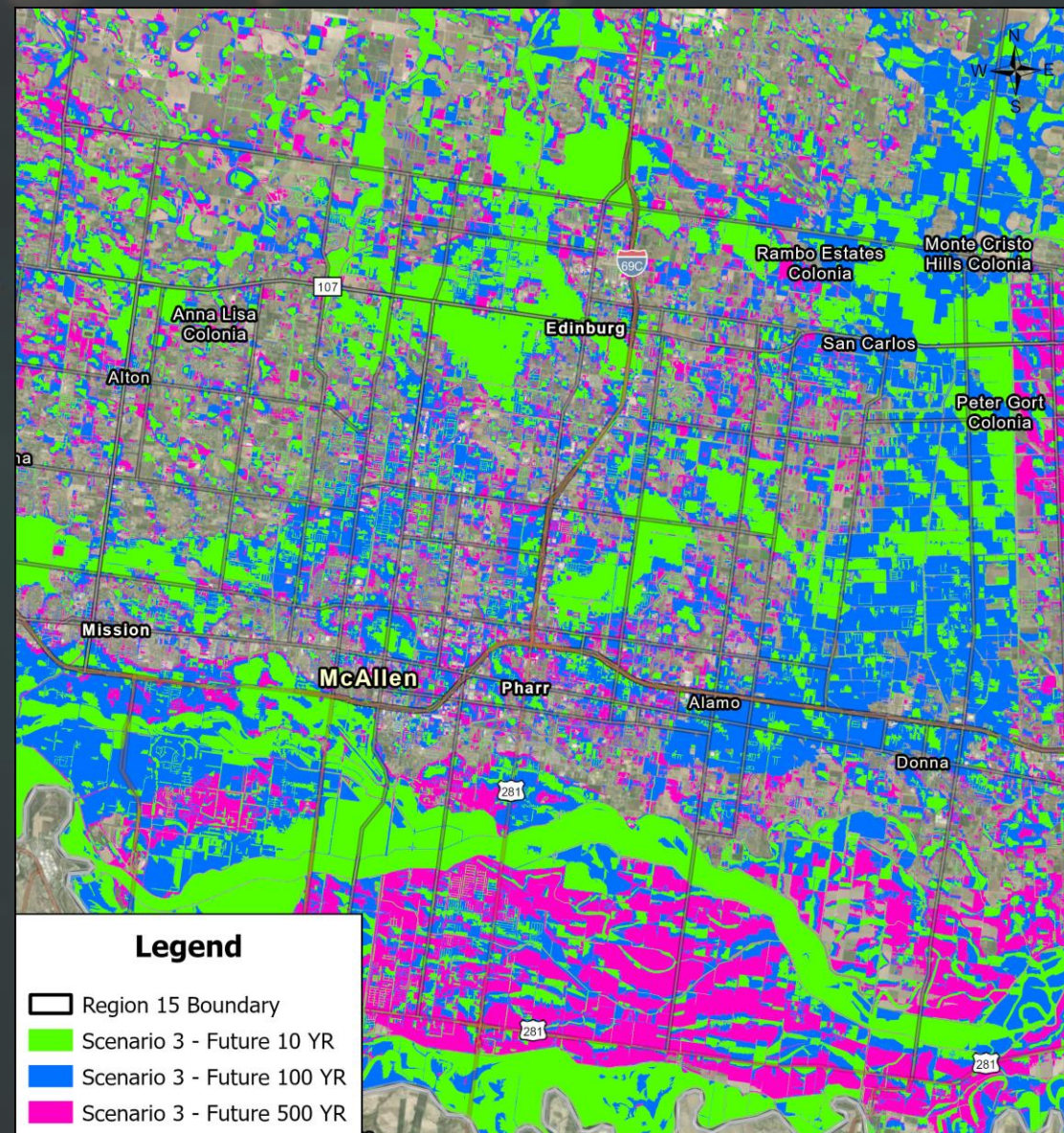




CH. 2 TASK 2B – FUTURE CONDITION FLOOD QUILT

TWDB/Halff Recommendation: Scenario 3

- Accounts for significant future climate variation, subsidence, and land use change
- Represents the worst-case scenario in Texas
- Review of land use sources and WSEL grids yielded no major discrepancies





Chapter 3 Update

Task 3a: Floodplain Management Practices

Task 3b: Flood Mitigation Needs Analysis

Task 3c: Floodplain Management Goals



CH. 3 TASK 3A – FLOODPLAIN MANAGEMENT PRACTICES

Entity	Floodplain management regulations (Yes/ No/ Unknown) ¹	Adopted minimum regulations pursuant to Texas Water Code Section 16.3145? (Yes/ No) ¹	NFIP Participant (Yes/ No) ¹	Higher Standards Adopted (Yes/ No) ²	Floodplain Management Practices (Strong/Moderate /Low/None) ²	Level of enforcement of practices (High/ Moderate/ Low/ None) ²	Existing Stormwater or Drainage Fee (Yes/No) ²
Brooks	Yes	Yes	Yes	No			
Cameron	Yes	Yes	Yes	No	Moderate	High	
Dimmit	Yes	Yes	Yes	No			
Edwards	Yes	No	No	No	None	None	No
Hidalgo	Unknown	Yes*	Yes				
Jim Hogg	No	No	Yes	No	Low	None	No
Kenedy	Unknown	Yes*	Yes				
Kinney	Yes	Yes	Yes	No			
Maverick	Yes	Yes	Yes	No	Low	Moderate	
Starr	Yes	Yes	Yes	No			
Val Verde	Yes	Yes	Yes	No	low		
Webb	Yes	Yes	Yes	Yes	Moderate		
Willacy	Yes	Yes	Yes	No	Low	Moderate	
Zapata	Yes	Yes	Yes	No	Low	Low	

¹ At a minimum, the RFPs must list all counties, cities and communities in the region with flood related authority in the region and identify whether entity they have any established floodplain management practices.

² RFPs are not required to provide information for these fields and may choose to leave these fields blank.



CH. 3 TASK 3A – FLOODPLAIN MANAGEMENT PRACTICES

Review of standards established by County

- Flood Ordinances
- County/City subdivision standards
- City Code of Ordinances

County	Entities Exceeding Minimum Standards
Brooks	0
Cameron	5
Dimmit	0
Edwards	0
Hidalgo	3
Jim Hogg	0
Kenedy	0
Kinney	0
Maverick	1
Starr	1
Val Verde	0
Webb	2
Willacy	0
Zapata	0



CH. 3 TASK 3C – FLOODPLAIN MANAGEMENT GOALS

- Currently estimating baseline on goals established during the 2023 Regional Flood Plan
- *Will be sending a short handout to RFPG members on goals and baselines in July*
- *Will review during the August meeting and possibly take action to adopt goals*



Chapter 4 Update

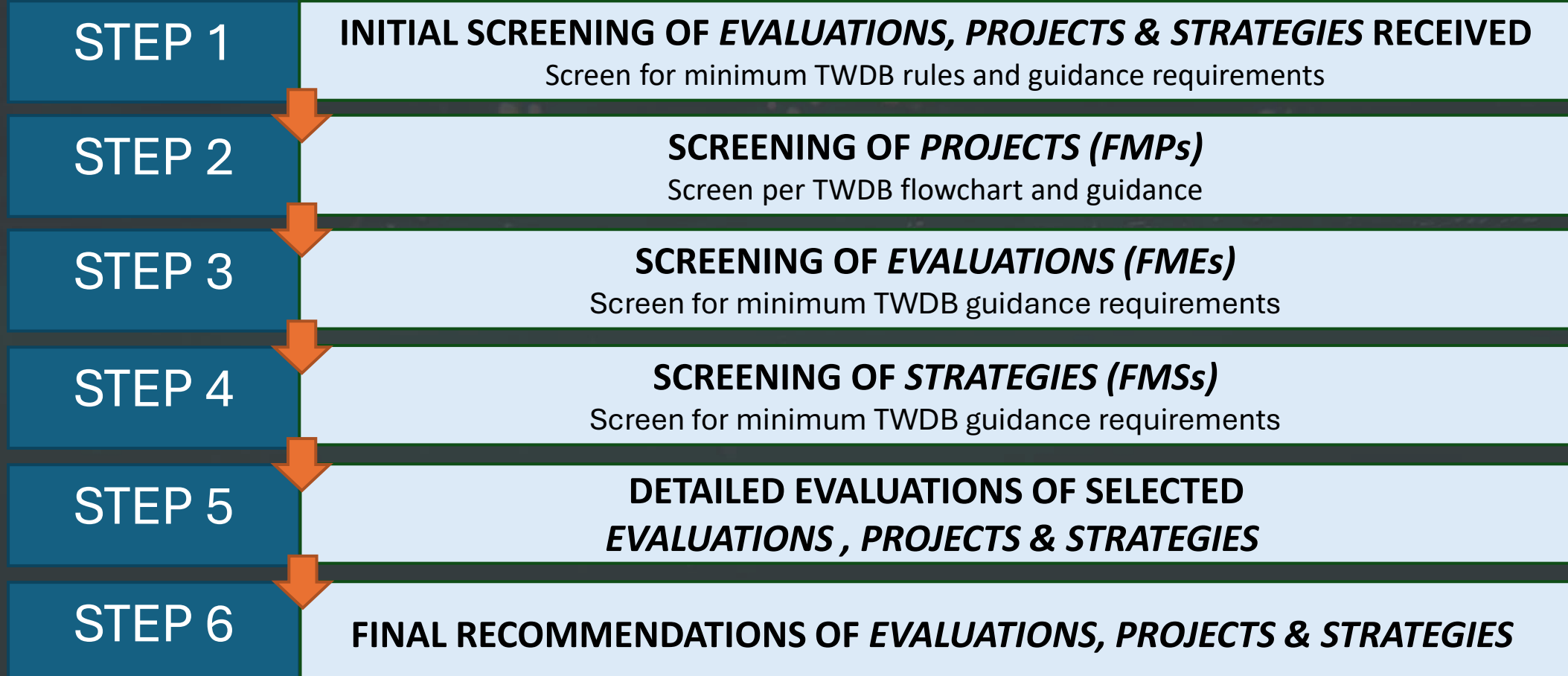
Task 4a: ID Potential FMXs

Task 4b: Tech Memo

Task 4c: Performance of FMEs



CH. 4 – TASK 4A – PROCESS FOR IDENTIFYING FMXS





CH. 4 – TASK 4A – PROCESS FOR IDENTIFYING FMXS

STEP 1

INITIAL SCREENING OF *EVALUATIONS, PROJECTS & STRATEGIES* RECEIVED

Screen for minimum TWDB rules and guidance requirements

Does it address the following?

- 1.1 Flood mitigation or floodplain management goal (Task 3B)
- 1.2 Meet an emergency need
- 1.3 Flood problem with drainage area of 1 square mile or greater*
- 1.4 Reduce flood risk for 100-year (1% annual chance) flood

*except in instances of flooding of critical facilities or transportation routes or for other reasons, including levels of risk or project size, determined by the RFPG

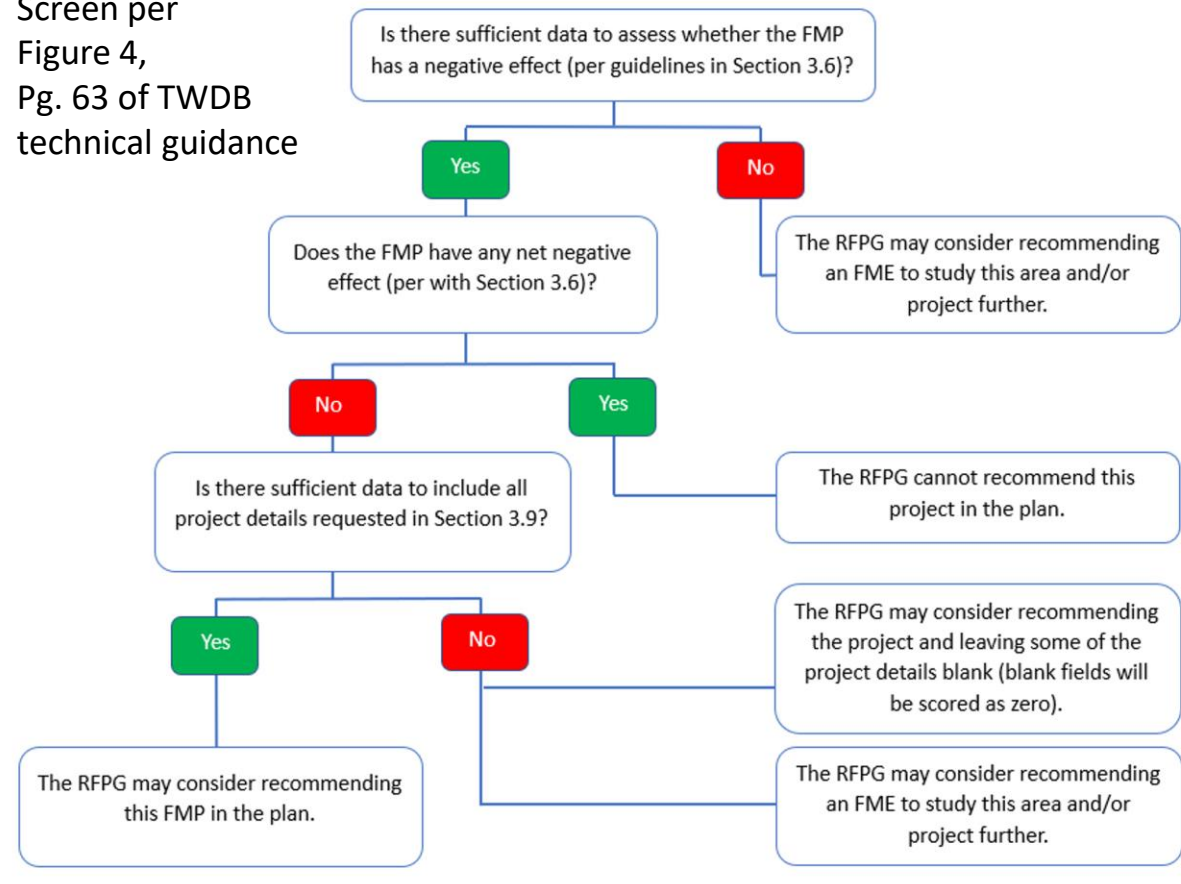


CH. 4 – TASK 4A – PROCESS FOR IDENTIFYING FMXS

STEP 2

SCREENING OF PROJECTS

Screen per
Figure 4,
Pg. 63 of TWDB
technical guidance



“Sufficient data”

- H&H modeling, mapping, and basis for mitigation project analysis generally meets Section 3.5 of TWDB technical guidelines
 - Reliable
 - Minimal uncertainty

“Negative effect”

- For the 100-year (1% annual chance) flood event, no rise in flood elevation or discharge should be permissible. Projects should not:
 - Increase inundation on homes or commercial buildings
 - Increase inundation beyond ROW or easements
 - Increase inundation beyond existing drainage infrastructure capacity

SCHEDULE UPDATE

