

Technical Committee Meeting



SAN JACINTO REGIONAL FLOOD PLANNING GROUP

REGION 6

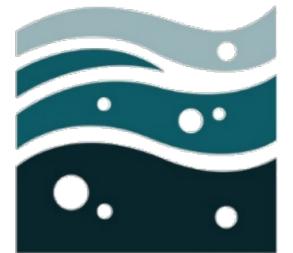
July 2, 2025

2:00 PM

Public Meeting

Agenda Item #1

Call to Order



SAN JACINTO REGIONAL FLOOD PLANNING GROUP
REGION 6

Agenda Item #2

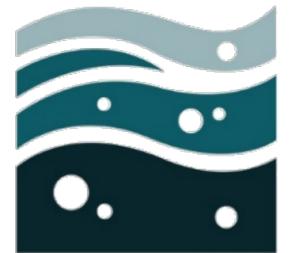
Welcome and Roll Call



SAN JACINTO REGIONAL FLOOD PLANNING GROUP
REGION 6

Agenda Item #3

Registered Public Comments on Agenda Items
(Limit of 3 Minutes Per Person)

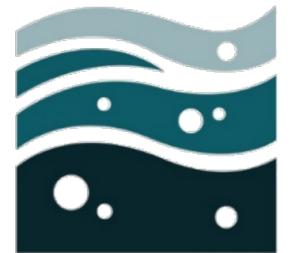


SAN JACINTO REGIONAL FLOOD PLANNING GROUP
REGION 6

Agenda Item #4

Approval of Minutes

April 11, 2025



SAN JACINTO REGIONAL FLOOD PLANNING GROUP
REGION 6

Agenda Item #4 - Approval of Meeting Minutes

Meeting Minutes

Region 6 San Jacinto Regional Flood Planning Group

April 11, at 2 PM

Hybrid Meeting

Freese and Nichols, 10497 Town & Country Way #500, Houston, TX 77024

Buffalo Bayou Conference Room

<u>Technical Committee Member</u>	<u>Interest Category (Technical Committee role)</u>	<u>Present (x) / Absent () / Alternate Present (*)</u>
Imelda Diaz	Upper Watershed (Chair)	X
Larry Goldberg	(Vice Chair)	X
Auggie Campbell	Public #1 (Secretary)	X
Elisa Donovan	Agricultural Interests	X
Jil Arias	Small Municipalities	X

<u>In Person Name</u>	<u>Entity</u>	<u>Present(x)/Absent()/ Alternate Present (*)</u>
Tanner Helweg	FNI	X
Cory Stull	FNI	X
Ericka Reyes	FNI	X
Jonathon Spellman	HCED	X
Mike Garcia	HCED	X
Isabel Fung	HCED	X
Rachel Herr	Halff	X
Johnny Kim	Halff	X

Quorum:

Number of voting members or alternates that were present: 5 total, 4 at time of quorum. Number required for quorum per current voting membership of 5: 3.

Remote Attendees**:

***Meeting attendee names were gathered from the Teams meeting platform.*

- Maggie Puckett (FNI)
- Auggie Campbell
- Elisa Donovan



Agenda Item #4 - Approval of Meeting Minutes

Meeting Date: April 11, 2025

Start Time: 2:00 PM

AGENDA ITEM 1: Call to Order

- **Discussion/Action Items:**
 - The meeting was called to order at 2:04 PM.

AGENDA ITEM 2: Welcome and Roll Call

- **Discussion/Action Items:**
 - Roll call was conducted (see attendee list).
 - A quorum was established.

AGENDA ITEM 3: Public Comments on Agenda Items

- **Discussion/Action Items:**
 - No public comment received.

AGENDA ITEM 4: Nominations, discussion, and possible action to elect Committee Chair, Vice Chair, and Secretary

- **Discussion/Action Items:**
 - Imelda Diaz was nominated and elected as Committee Chair.
 - Larry Goldberg was nominated and elected as Committee Vice Chair.
 - Auggie Campbell was nominated and elected as Committee Secretary.

AGENDA ITEM 5: Approval of Meeting Minutes – September 2, 2022

- **Discussion/Action Items:**
 - There were no further comments or discussions on the September 2022 meeting minutes.

AGENDA ITEM 6: Task 2A - Existing Condition Flood Risk Analysis

- **Discussion/Action Items:**
 - Tanner presented the hierarchy for prioritizing data sources for mapping flood risk in the San Jacinto region. Hierarchy includes the following:
 - 1) Community models and maps
 - 2) 2D Base Level Engineering Studies (BLE)

Agenda Item #4 - Approval of Meeting Minutes

4) FEMA NFHL or Fathom

- Augie and Imelda requested more clarity on where lower-ranking data sets would fill and the specific tributaries that would be mapped using additional data sources.

AGENDA ITEM 7: Task 2B - Future Condition Flood Risk Analysis

● Discussion/Action Items:

- Johnny presented the approach for analyzing future flood risk for the 10-, 100-, and 50-year events. Possible data sources include as future conditions community models, modifying existing models, and future conditions Fathom data.
- TWDB's preference is to use future conditions fathom data which incorporates factors like future climate, sea level rise, subsidence, and land use change.
- Future conditions fathom data expected to be released soon.

AGENDA ITEM 8: Task 4C - Selection of FMEs

● Discussion/Action Items:

- Tanner and Maggie presented different ranking criteria for selecting FMEs to be performed to maximize FMEs elevated to FMPs.
 - Ranking criteria discussed included top-ranked FMEs with either estimated cost less than \$900k, unique sponsors, or FMEs that require minor updates.
- Elisa emphasized the need to distinguish between FMEs and FMPs and ensure funds are used effectively to elevate FMEs to FMPs.
- Auggie suggested prioritizing FMEs that are likely to lead to completed FMPs.
 - Tanner and Maggie plan to reach out to sponsors to confirm the relevance and necessity of FMEs before proceeding to elevating FMEs.
- The committee is interested in a refined list of top projects with updated feedback and provide updated list of prioritized FMEs for May 1st regional flood planning meeting.
- The committee also requested consultants to provide spreadsheet with methodology/math behind the prioritized list.



Agenda Item #4 - Approval of Meeting Minutes

AGENDA ITEM 9: Consider Agenda Items for the next Technical Committee Meeting

- **Discussion/Action Items:**
 - No additional discussion on action items for the next meeting.

AGENDA ITEM 10: Public Comments - Limit of 3 Minutes Per Person

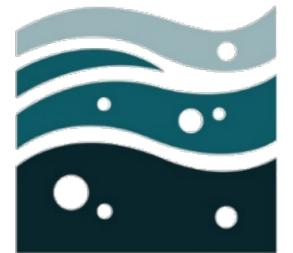
- **Discussion/Action Items:**
 - No public comments were submitted.

AGENDA ITEM 11: Adjournment

- **Discussion/Action Items:**
 - The meeting was adjourned at 3:55 PM
- 

Agenda Item #5

GLO - Update on the Central Region River Basin Studies



SAN JACINTO REGIONAL FLOOD PLANNING GROUP
REGION 6



Central Region Update

*San Jacinto Regional Flood
Planning Group*

GLO River Basin Flood Studies (RBFS)

Central Region Team

PROJECT MANAGER
Krista Bethune Melnar



DEPUTY PM
Ashley Poe



OUTREACH TECHNICAL LEAD
Pam Hawkins
H2O Partners



ALTERNATIVES ANALYSIS MANAGER
Maggie Puckett



MODELING MANAGER
Garrett Johnston



OUTREACH SPECIALIST
Will Parker
H2O Partners



OUTREACH SPECIALIST
Jerri Daniels
Dewberry



GLO Representatives



Shonda Mace

MANAGER

Community Revitalization and
Development



Krystle Haney

PROJECT MANAGER

Community Revitalization
and Development



Skyler LeVrier

PROJECT MANAGER

Community Revitalization
and Development



Shannon Longoria

IGR REPRESENTATIVE

Community Revitalization
and Development



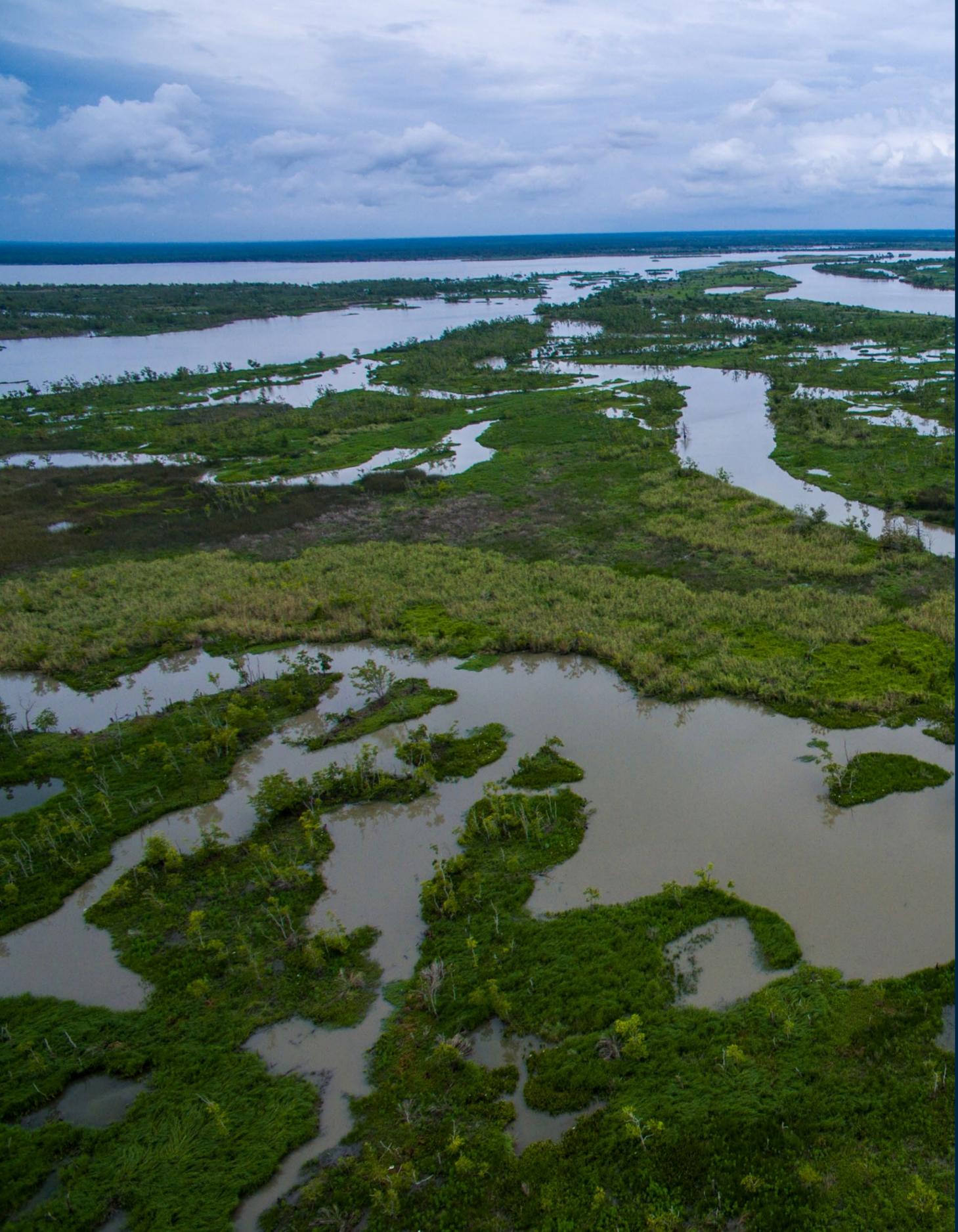
Melissa Washington

IGR REPRESENTATIVE

Community Revitalization
and Development

Texas General Land Office
Commissioner Dawn Buckingham, M.D.





Agenda

Study Overview
Region-wide Recap
Data Sharing
MATCH Tool
Next Steps

Texas General Land Office
Commissioner Dawn Buckingham, M.D.



GLO's River Basin Flood Studies (RBFS)

The Texas General Land Office (GLO) initiated the RBFS to provide declared disaster-impacted counties with flood modeling that identifies flooding hotspots and supports project development. The goals for the flood study are to:

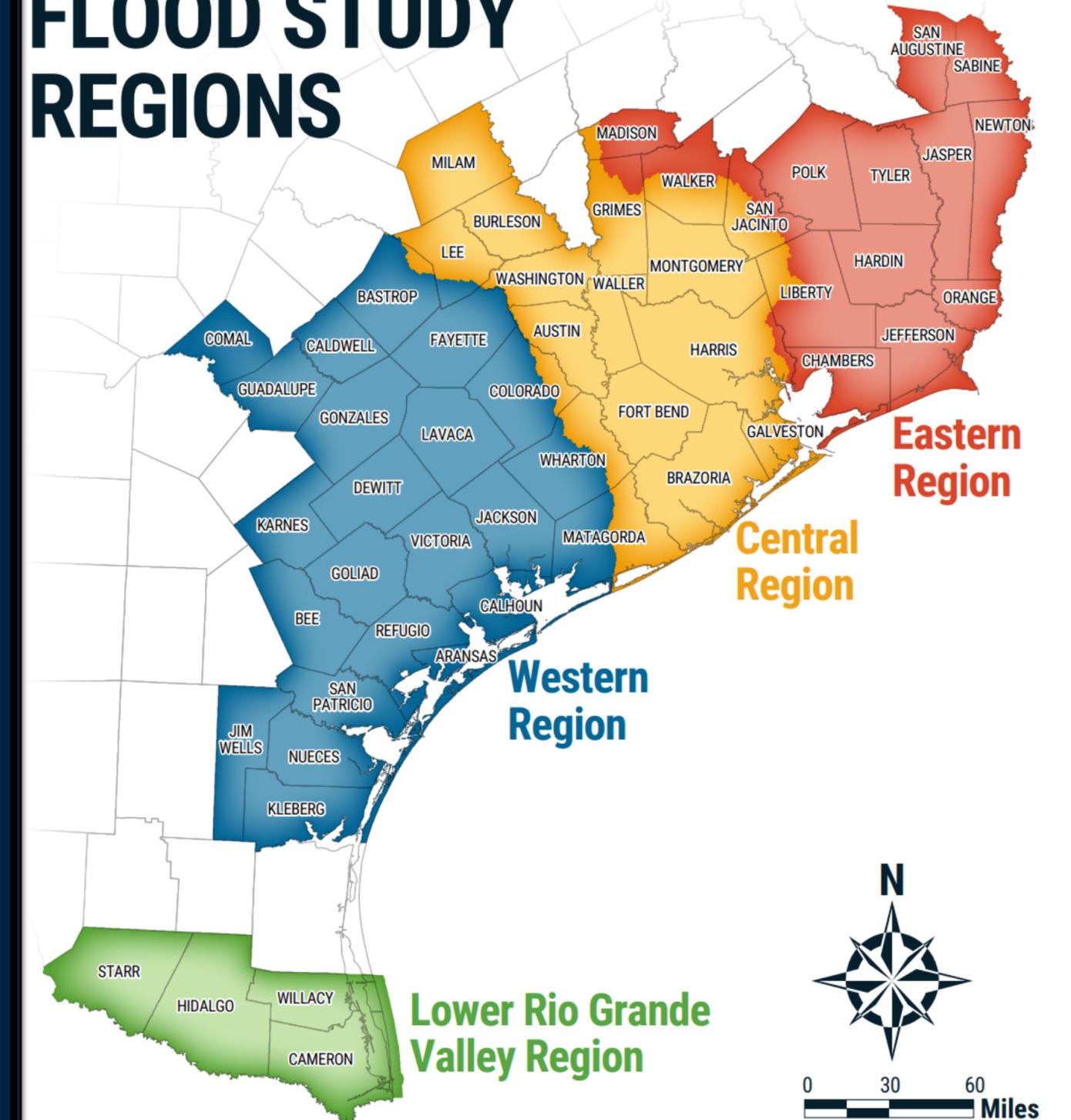
- Develop modeling to support flood mitigation and understanding of flood risk
- Identify large-scale or regional flood projects that strengthen the resilience of our communities
- Align identified projects with funding opportunities

This is a one-time planning effort, and the data produced by RBFS will also be used to support current and future Texas State Regional Flood Plans.



Texas General Land Office | CDR
Commissioner Dawn
Buckingham, M.D.

FLOOD STUDY REGIONS

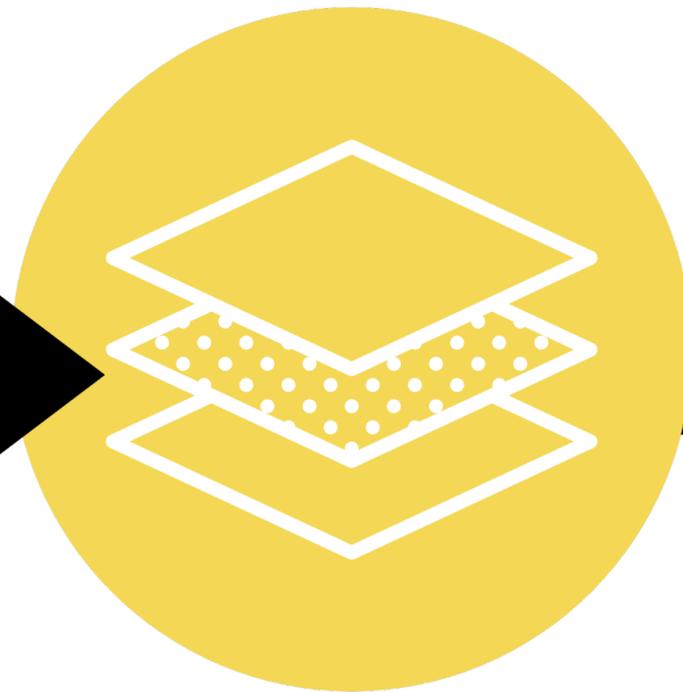


Study Phases

Stakeholder Outreach



Data Collection



Evaluation of Flood Risk



Alternative Analysis and Project Identification



Project Funding Support and Technical Assistance

Central Region Milestones



64 Stakeholder Meetings Held



78,956 Pieces of Data Received



Baseline Modeling covering 5,941 square miles



1,010 Projects Identified

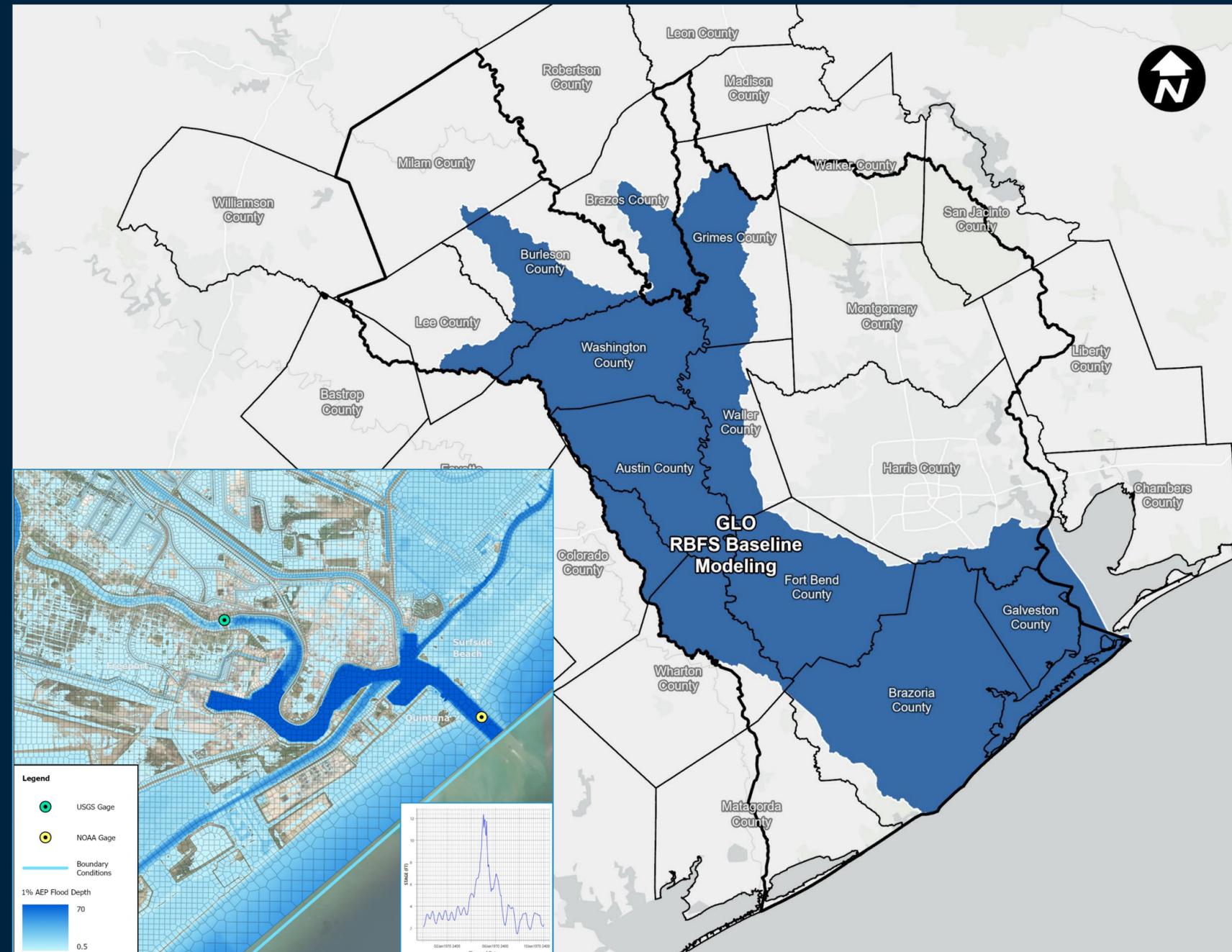


Input from 40 Jurisdictions



RBFS Baseline Modeling Overview

- 9 individual study areas covering 5,941 mi²
- Comprehensive modeling of flood risk:
 - 50% - 0.2% Annual-Chance Events (2YR – 500YR)
 - Riverine Atlas 14
 - Coastal and Compound Flooding
- Rainfall-Runoff and Rain-on-Mesh Hydrology
- Detailed 2D HECRAS hydraulic models
- Calibration and Validation w/ historical events



Data Sharing with TWDBB Regional Flood Planning Groups

- GLO/TWDBB Data Sharing Agreement signed 07/2021
- Collaboration during the 1st RFPG Planning Cycle
- Continuation of Collaboration during the 2nd RFPG Planning Cycle



**TEXAS WATER
DEVELOPMENT BOARD**



1st Flood Planning Cycle Successes

RFPGs/TWDB provided:

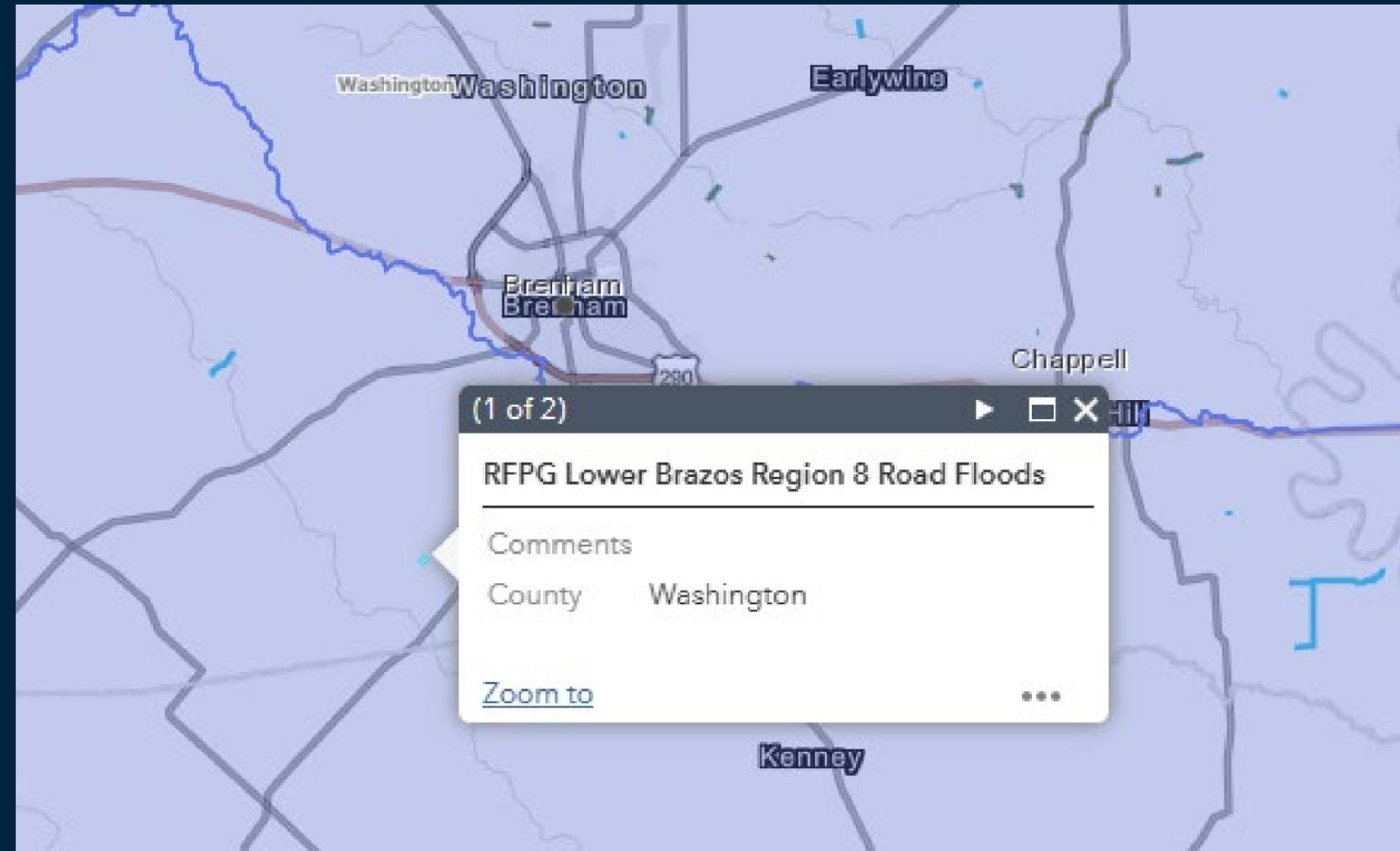
- Flood-prone areas
- Ongoing projects identified by stakeholders
- Regional Flood Plans and supporting data

GLO FBS provided:

- Project data:
 - FIF projects
 - CDBG MIT projects
 - Hazard Mitigation Plans

Successful Coordination

- Stakeholders witnessed the benefits of data sharing
- Both RFPGs and GLO FBS incorporated shared data into their efforts



2nd Flood Planning Cycle Opportunities

Continued sharing of data

- GLO/TWDB Data Sharing Agreement signed 07/2021
- GLO FBS modeling available to share with RFPGs in Spring 2025
- Identified flood mitigation projects (FMPs)
- Potential funding sources for identified FMPs



**TEXAS WATER
DEVELOPMENT BOARD**



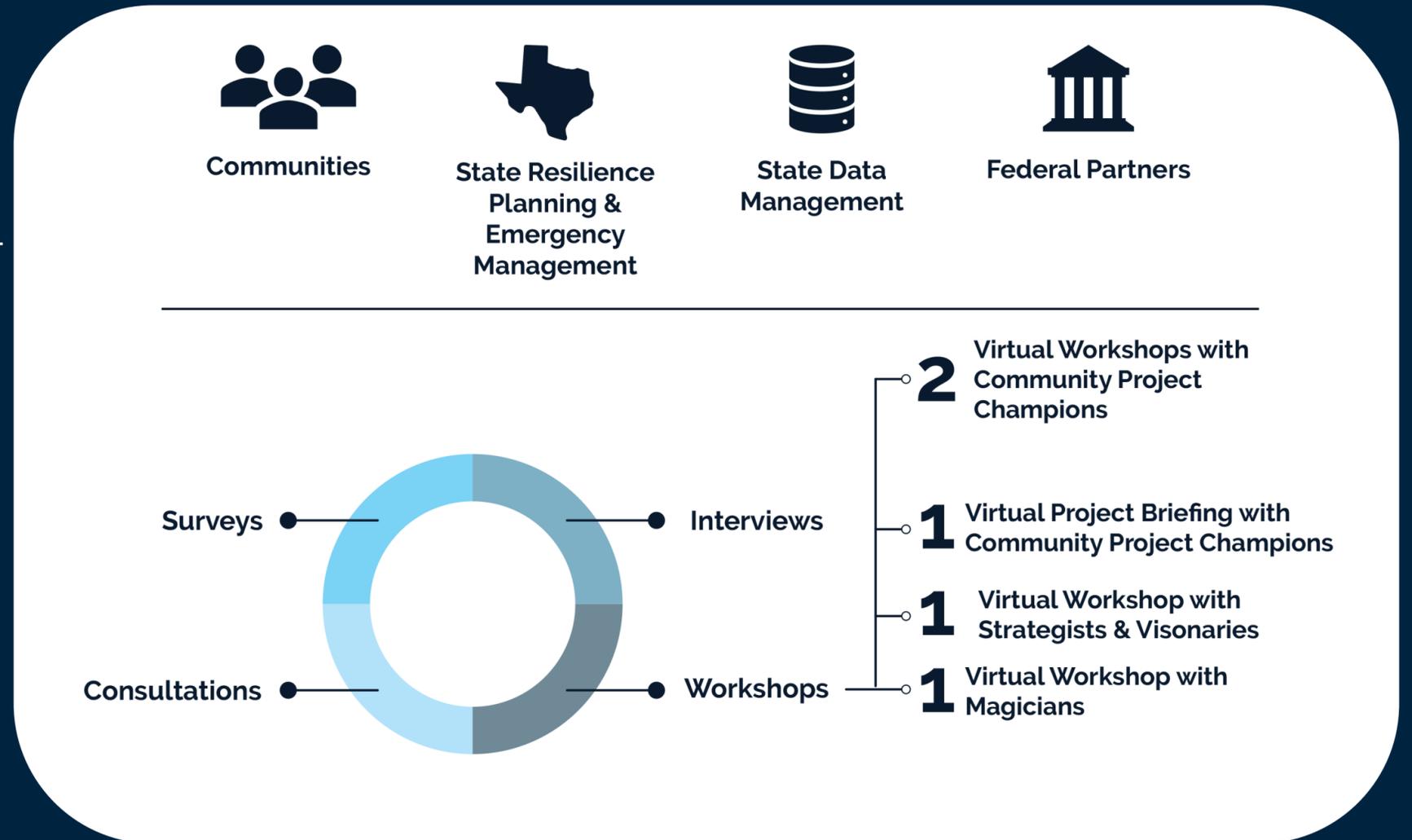
Texas General Land Office | CDR
Commissioner Dawn Buckingham, M.D.

Mitigation Assistance for Tailoring Choices (MATCH) Tool

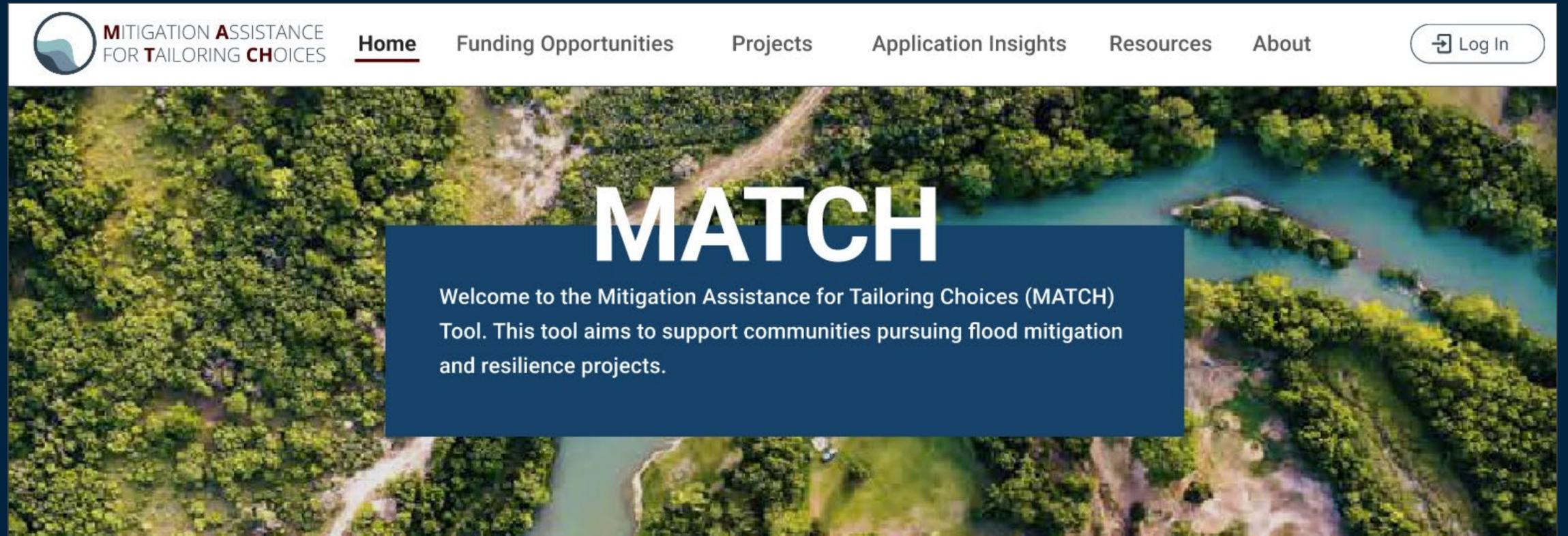
The Tool's objective is to align unfunded or concept mitigation projects with funding sources.



The Approach



Draft Mockup



MITIGATION ASSISTANCE FOR TAILORING CHOICES

[Home](#) [Funding Opportunities](#) [Projects](#) [Application Insights](#) [Resources](#) [About](#) [Log In](#)

MATCH

Welcome to the Mitigation Assistance for Tailoring Choices (MATCH) Tool. This tool aims to support communities pursuing flood mitigation and resilience projects.



Funding Opportunities

View and compare available sources of funding for flood mitigation projects.



Projects

Discover funded structural and non-structural flood mitigation projects across Texas.



Application Insights

Generate insights and suggestions for your funding and project match.



Resources

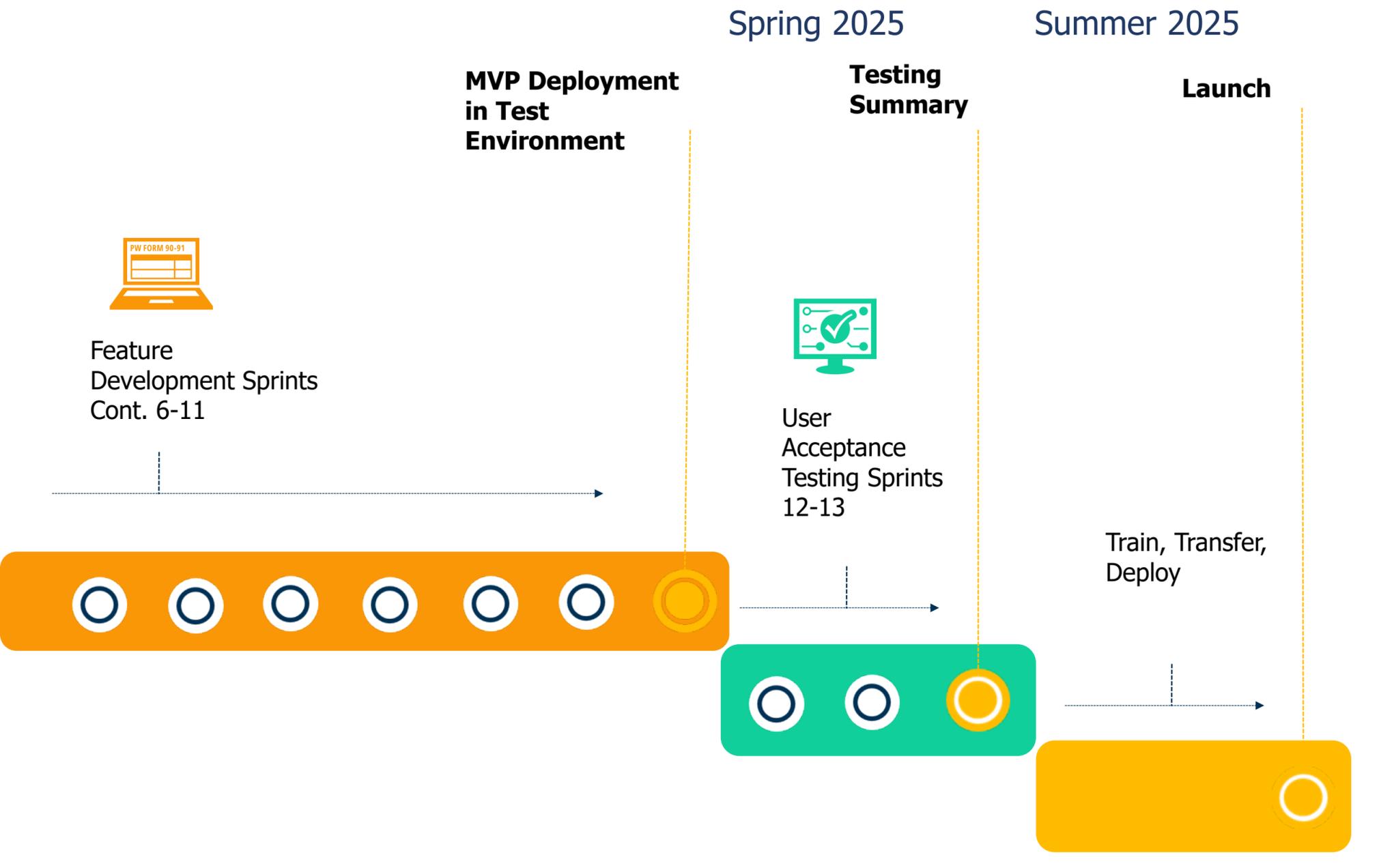
Explore resources to support application development and answer frequently asked questions.

MATCH
409.741.4331
idrt@tamug.edu
Institute for a Disaster Resilient Texas
Texas A&M University

[View Announcements](#)



MATCH Next Steps



- Help Spread the Word
- Provide Feedback



Central Region Next Steps



Alternatives Analysis and Project Identification

Funding and Technical Assistance

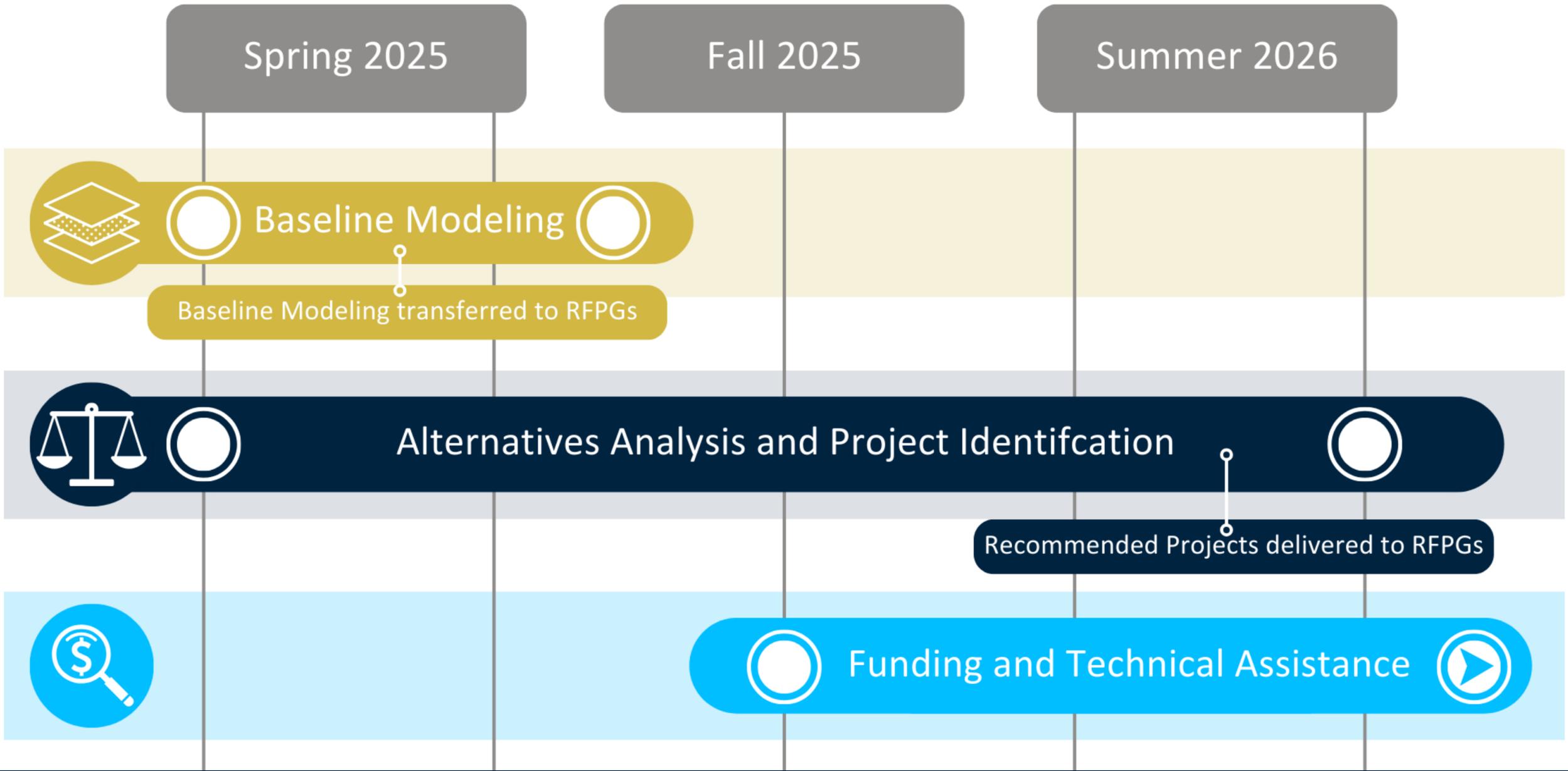


Modeling Next Steps (Alternative Analysis)

- Flood risk “hot-spots” determined throughout Central Region
 - Based on several factors including:
 - Social Vulnerability (SoVI)
 - Flood risk to structures
 - Flood risk to critical infrastructure
 - Flood risk to agricultural land
 - Flood risk to roadways
- Regional-scale alternatives developed and modeled in detail
 - Baseline models or best-available data will be used as a starting point
 - Emphasis on multi-jurisdictional mitigation projects and strategies
 - Coordination with ongoing studies/projects to manage duplication of effort and maximize benefit to communities in Central Region



Central Region Timeline



QUESTIONS?

Contact GLO-CDR by email at
glofloodstudies.central@recovery.texas.gov

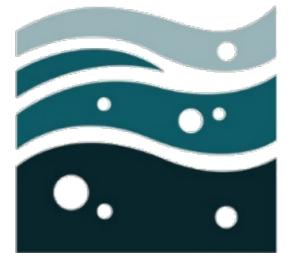
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Commissioner Dawn Buckingham, M.D.



Agenda Item #6

Task 2A

Existing Condition Flood Risk Analyses



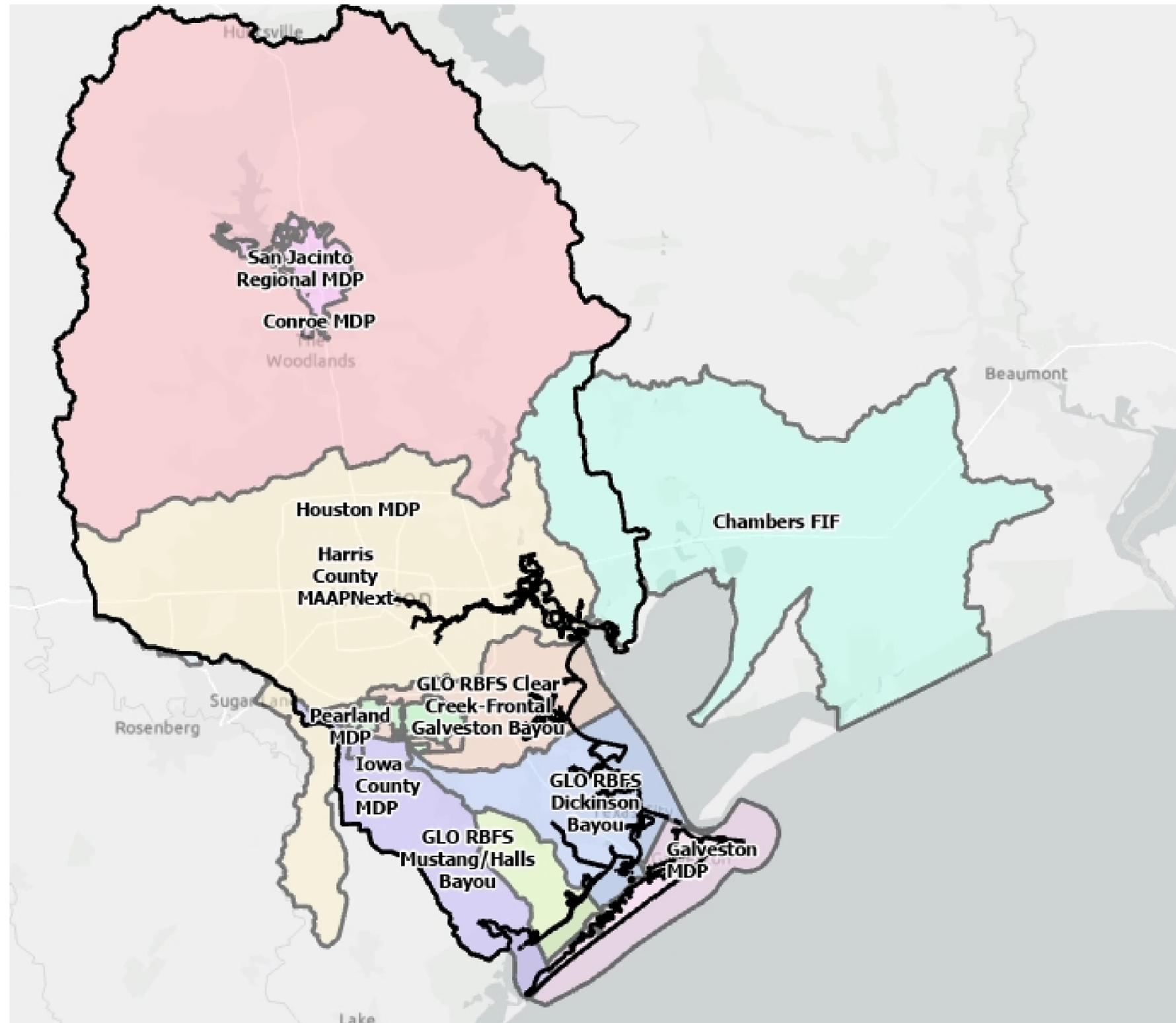
SAN JACINTO REGIONAL FLOOD PLANNING GROUP
REGION 6

Task 2A - Existing Condition Flood Risk Analysis

Second Cycle - Technical Consultant Recommended

1. Community Models & Maps
 - Recent modeling with Atlas 14 rainfall (GLO, FIF Studies, MDPs, and MAAPnext*)
2. 2D BLE
3. FEMA Detailed NFHL
4. 1D BLE
5. Fathom

*MAAPnext Update: HCFCD has approved use of MAAPnext. Caveat that mapping is not publicly posted until official release from HCFCD.

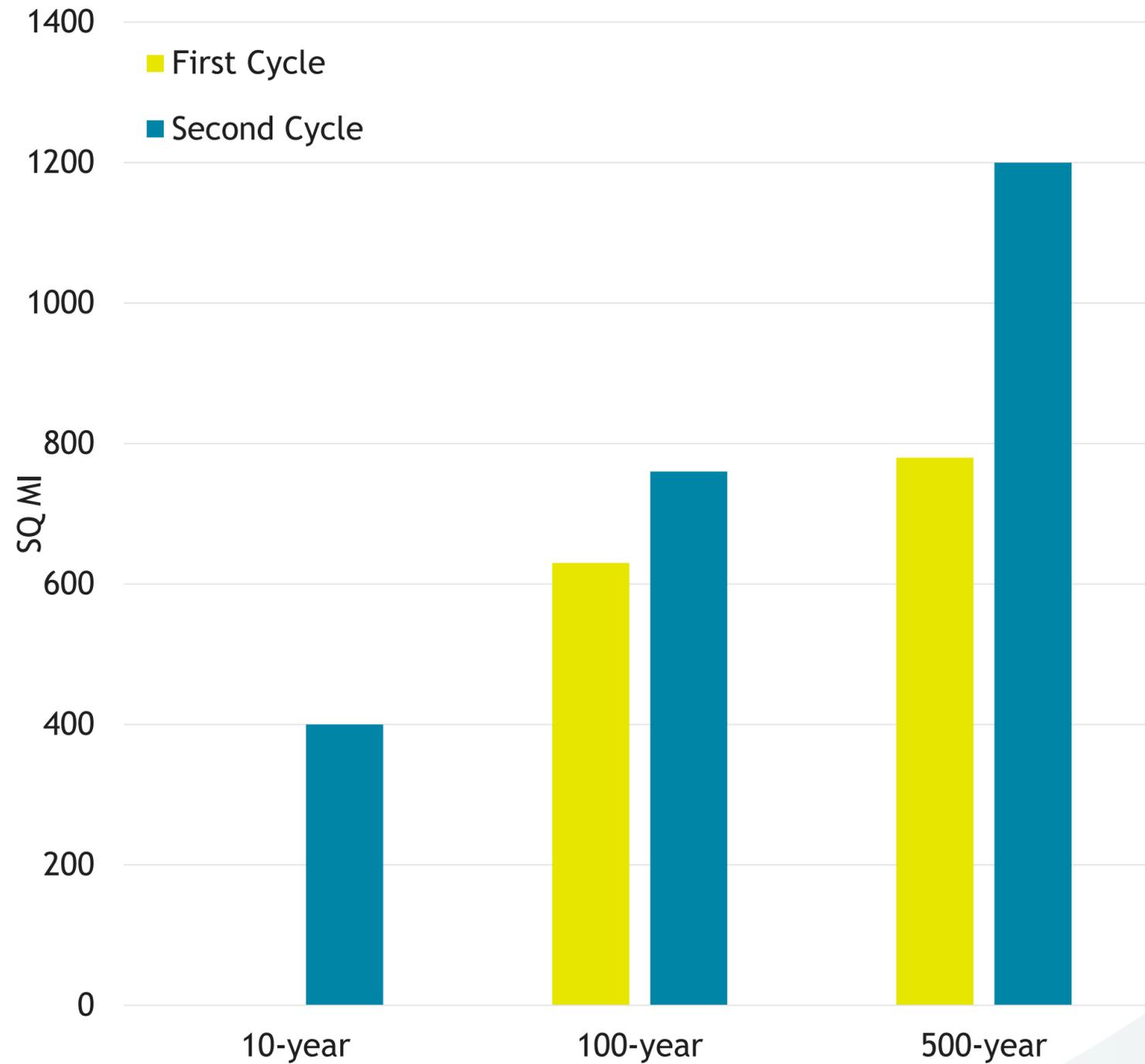


Task 2A - BLE Processing

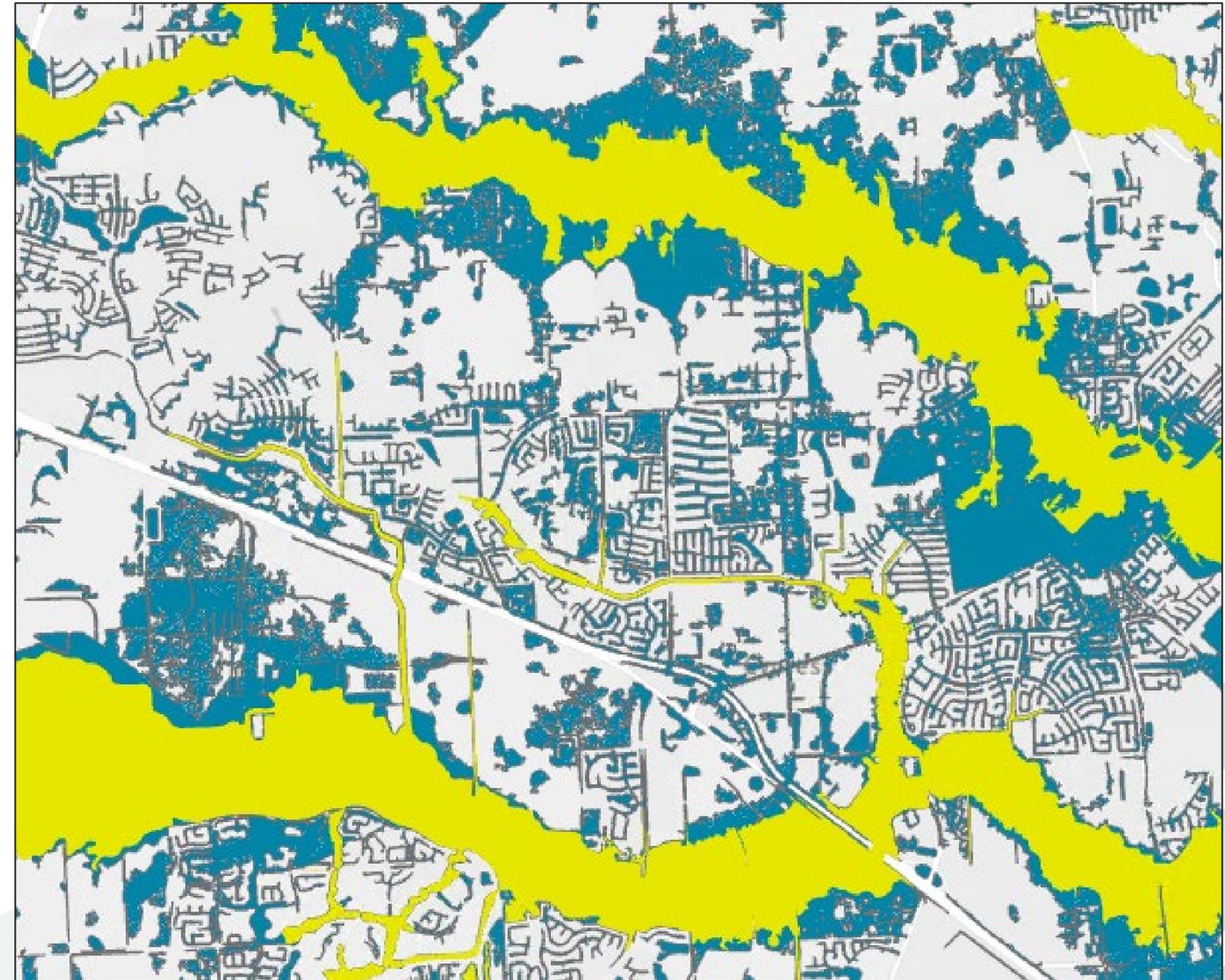
- Remove ≤ 0.5 AC
- Remove ≤ 0.5 FT Depth
 - Shallow Flooding
 - High Uncertainty
- Smooth (20 FT), Simplify (2.5 FT)



Task 2A - Upper Watershed Analysis



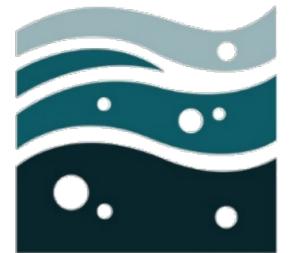
Preliminary 100-year Existing Flood Hazard Comparison



Agenda Item #7

Task 2B

Future Condition Flood Risk Analyses



SAN JACINTO REGIONAL FLOOD PLANNING GROUP
REGION 6

Task 2B - Future Condition Flood Risk Analysis

TWDB Goals: Perform future condition flood risk analyses for the region comprising:

- Flood hazard analyses (location, magnitude, and frequency of flooding)
- Flood exposure analyses (who and what might be harmed)
- Vulnerability analyses (communities and critical facilities)



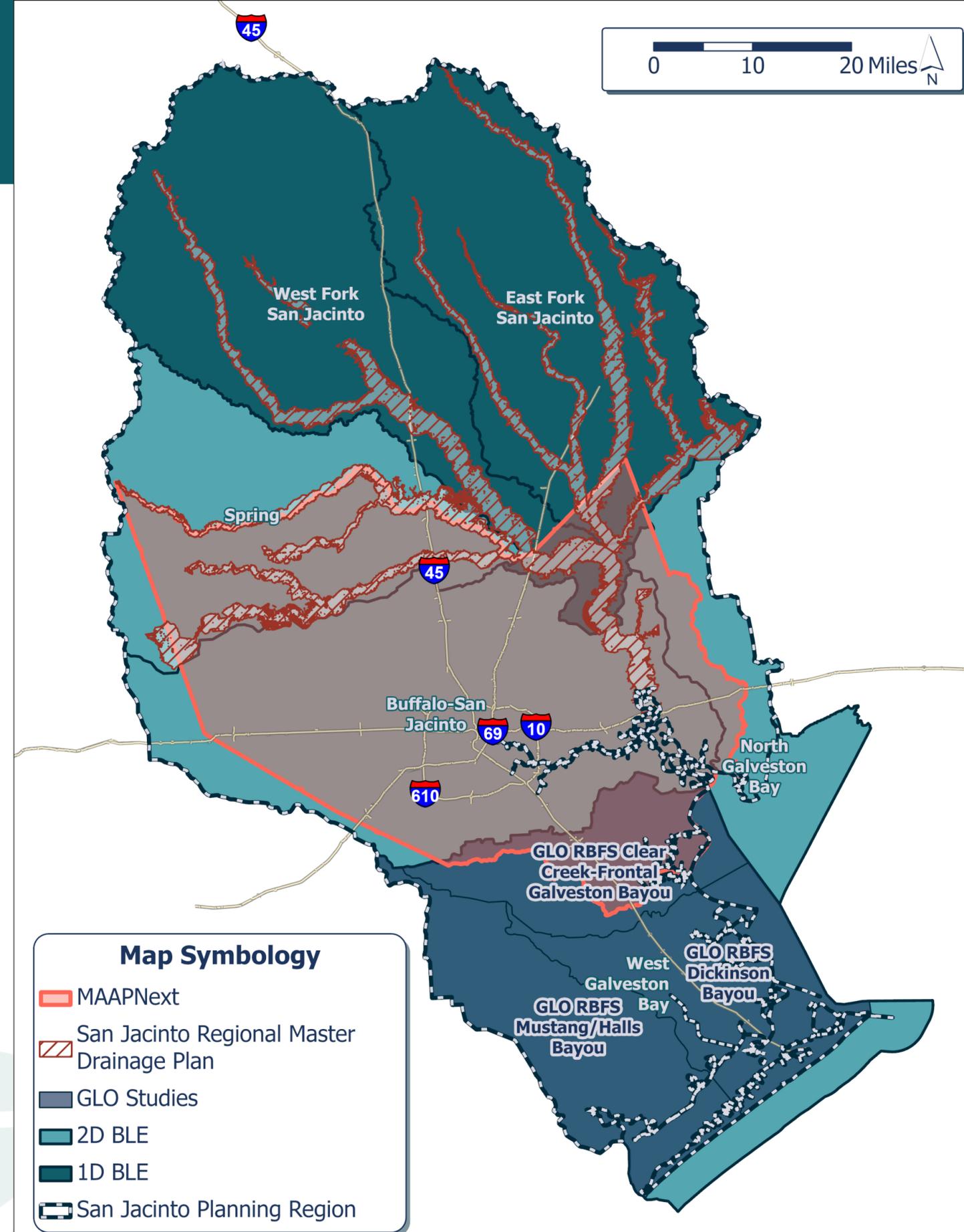
- Obtain a general understanding of future flood risk for planning purposes
- Not a regulatory product

Task 2B - Scope

Scope: RFPGs will analyze future flood risk (year 2060) for 10-year, 100-year, and 500-year events

Possible Data Sources

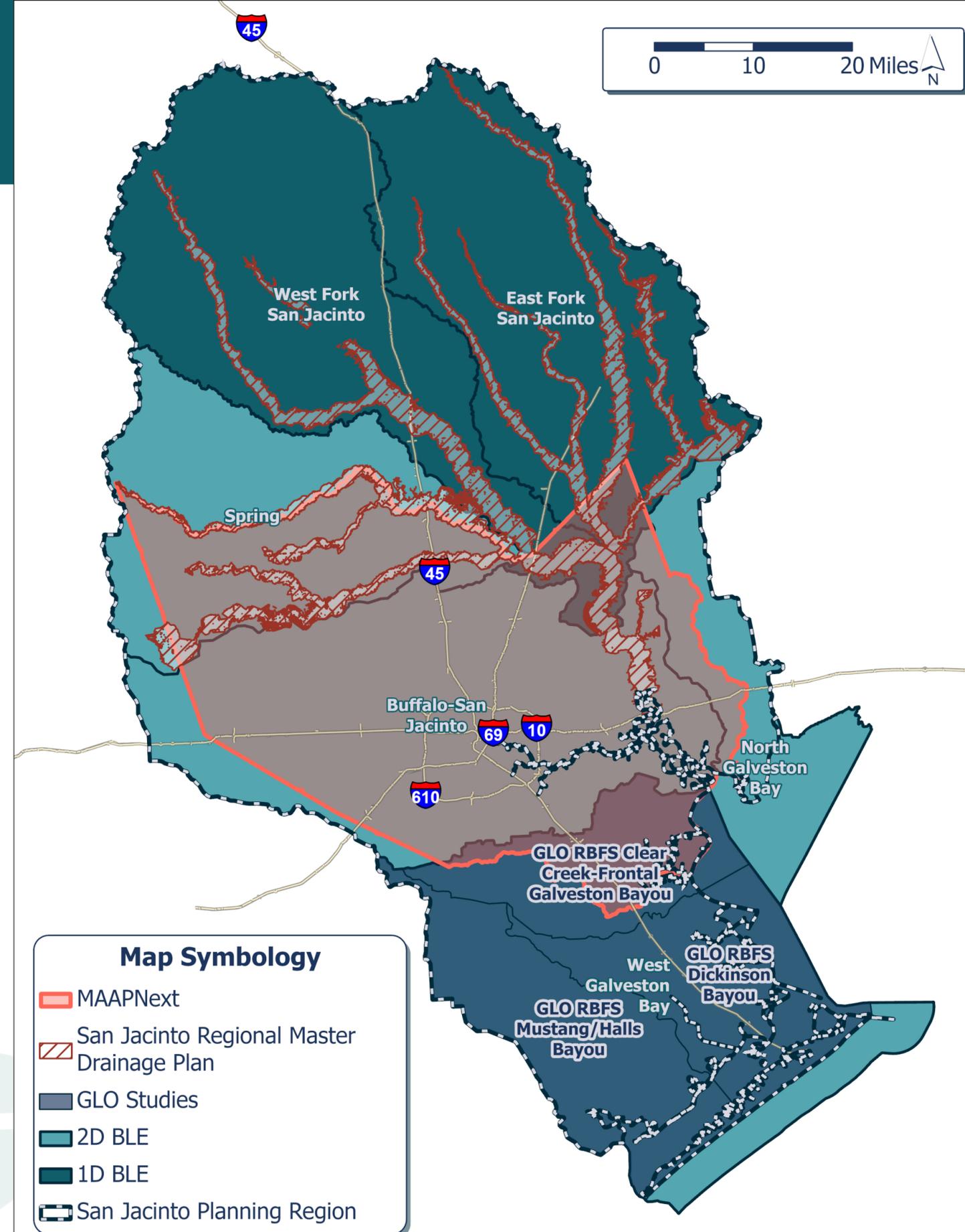
- Future condition Fathom data
- Future condition community models
- Modified forms of existing condition models/maps using factors that affect future flood risk



Task 2B - Approach

1. Northern Zone (north of Harris County):
 - a. SJRMDP future models *simulated with future rainfall*
 - b. 2D BLE model *simulated with future rainfall*
 - c. 1D BLE models + *vertical buffer*
 - d. Future Fathom Scenario 3
2. Central Zone (Harris County):
 - a. MAAPnext models + *vertical buffer*
 - b. Future Fathom Scenario 3
3. Coastal Zone (south and east of Harris County):
 - a. 2D GLO models *simulated with future rainfall + SLR*
 - b. 2D BLE models *simulated with future rainfall + SLR*
 - c. Future Fathom Scenario 3

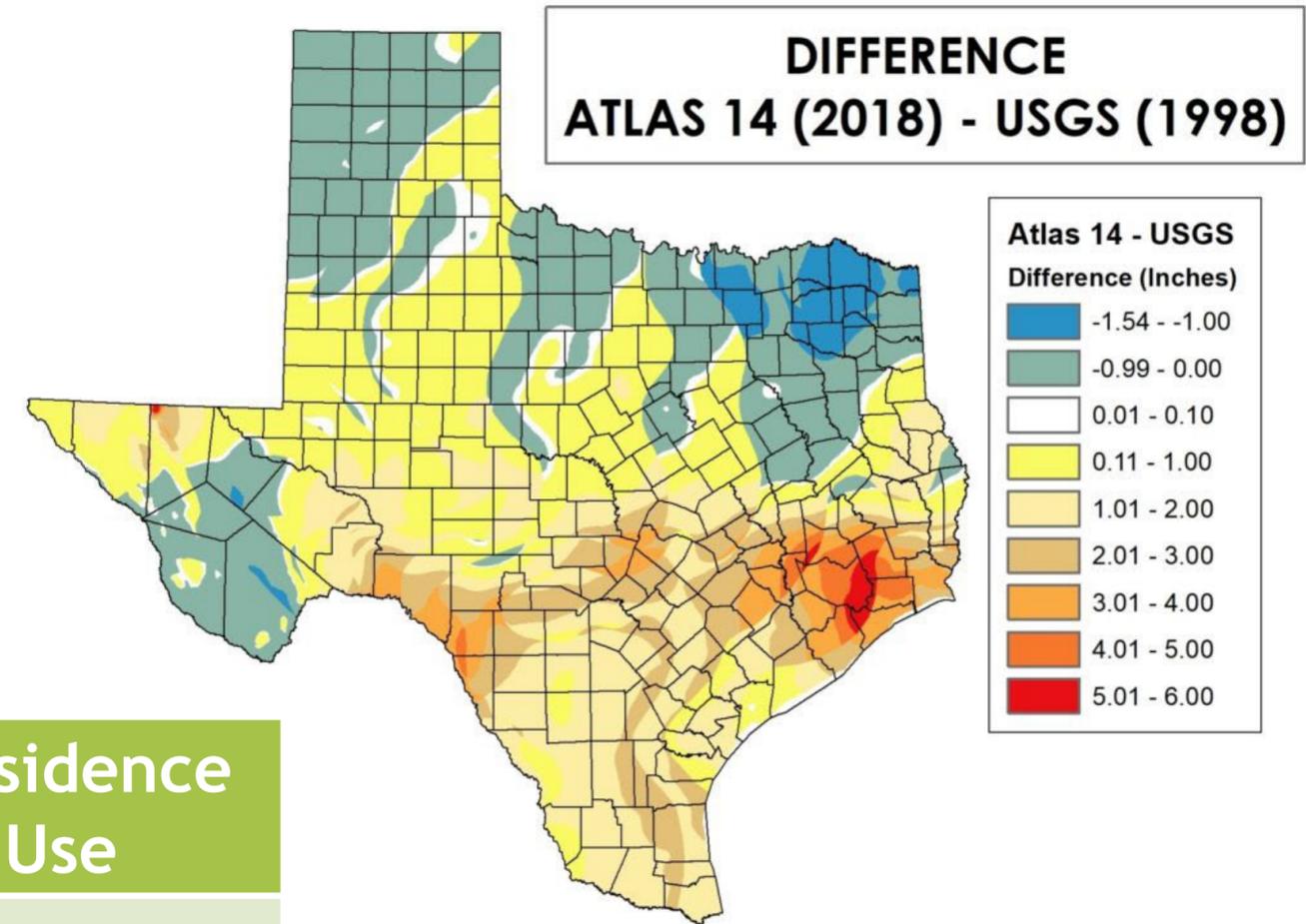
Match existing extents wherever future floodplain is smaller



Task 2B - Future Condition Fathom Data

Future condition Fathom models incorporate:

- Future climate variability rainfall patterns
- Sea level rise
- Subsidence
- Land use change



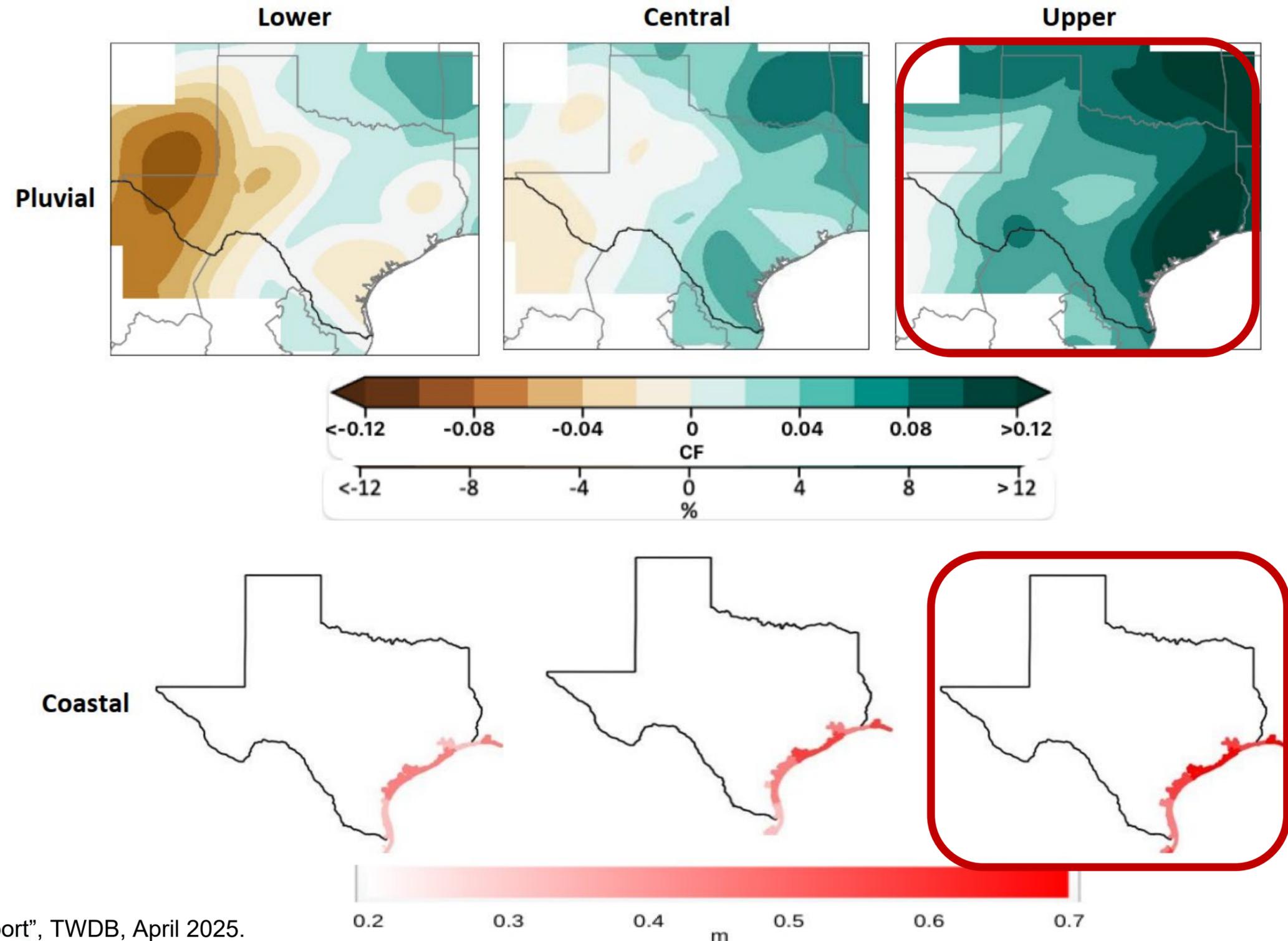
Future Scenarios	Future Climate Forcing	Future Subsidence & Land Use
Scenario 1	Minimal	Yes
Scenario 2	Moderate	Yes
Scenario 3	Significant	Yes
Scenario 4	Moderate	No

Scenario 3 represents “worst case” and is suitable for the San Jacinto region

Task 2B - Future Condition Fathom Data

Future Change Factors

- Pluvial: Existing rainfall is multiplied by a percentage
- Fluvial: Existing river discharges are multiplied by a percentage
- Coastal: Absolute changes in sea level



Task 2B - Future Condition Fathom Data

Conclusions from Fathom report

- For fluvial/pluvial scenarios: When future land use and subsidence are introduced (no changes in climate), median change in WSEL is **zero**.
- For coastal scenarios: When future land use and subsidence are introduced, median increase in WSEL is **2 inches**.
- For all scenarios: Future climate forcing is the biggest driver in WSEL increases
 - Fluvial: Almost 2-foot increase from minimal to significant climate forcing

Task 2B - Future Condition Fathom Data

How does future condition Fathom compare to existing floodplains in the region?

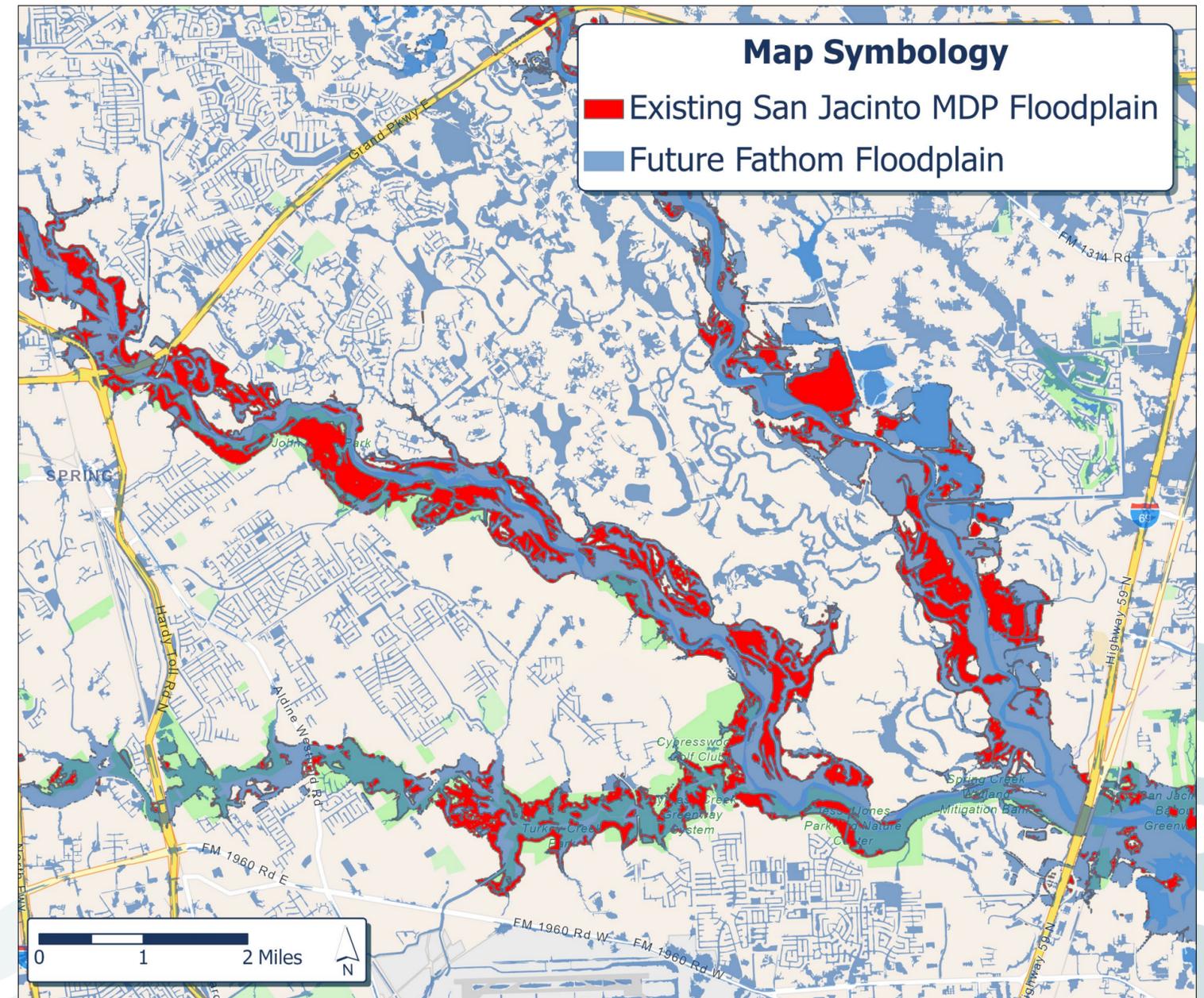
Expectation: *Future floodplain should be wider than existing floodplain.*



Task 2B - Future Fathom vs. Existing San Jac MDP

Future Fathom floodplain is commonly **smaller** than existing San Jacinto MDP floodplain for all storm events.

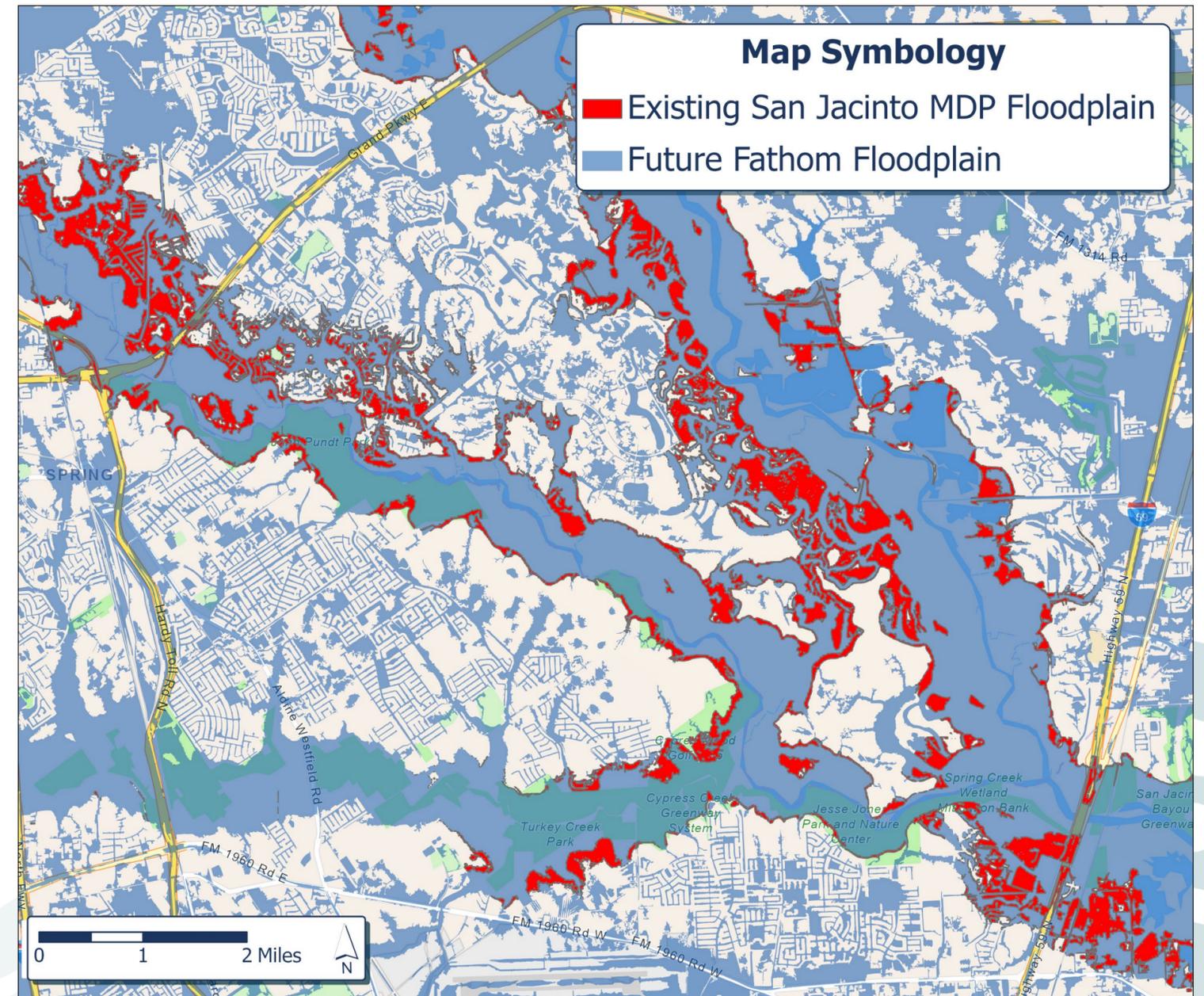
10-year



Task 2B - Future Fathom vs. Existing San Jac MDP

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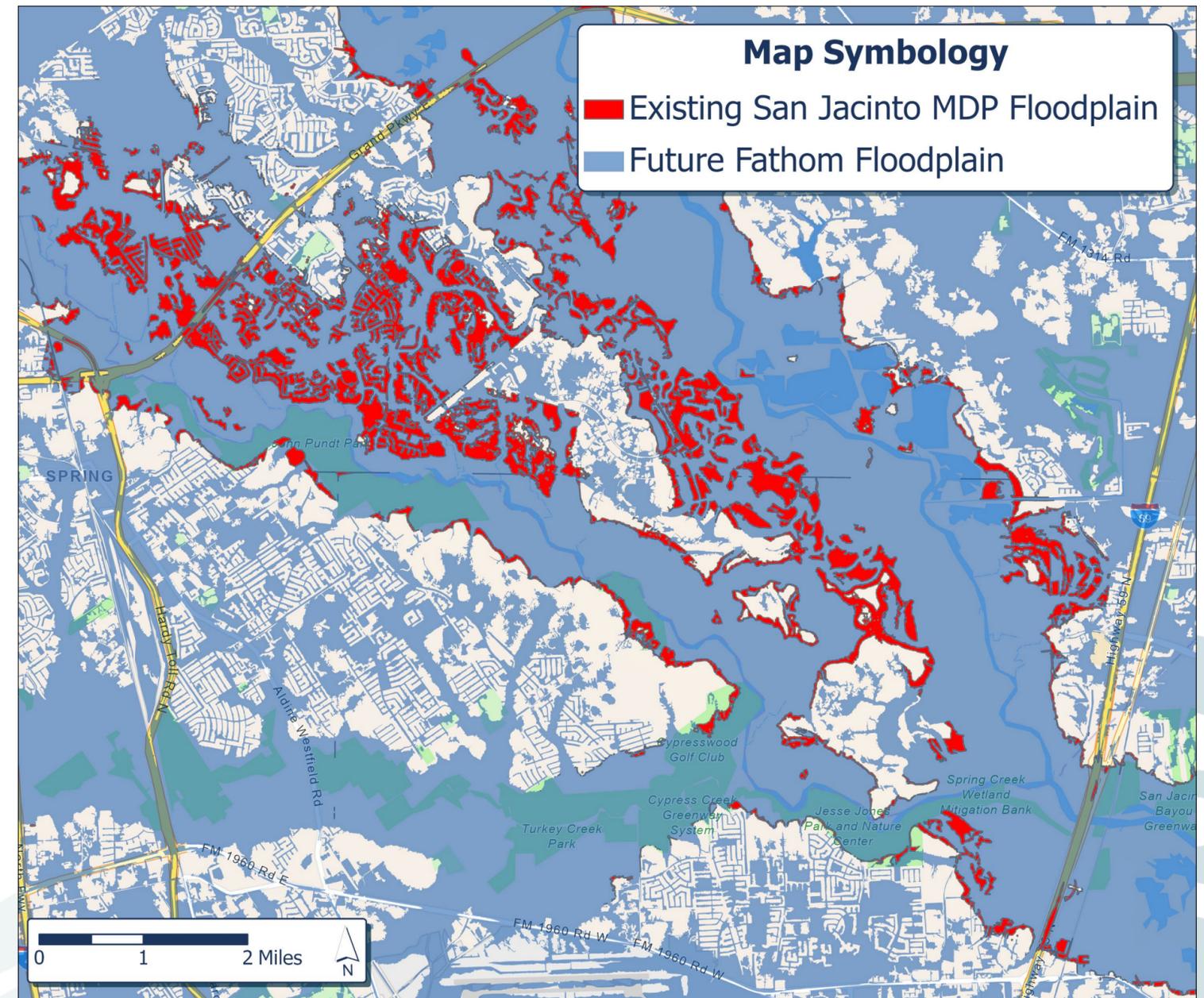
100-year



Task 2B - Future Fathom vs. Existing San Jac MDP

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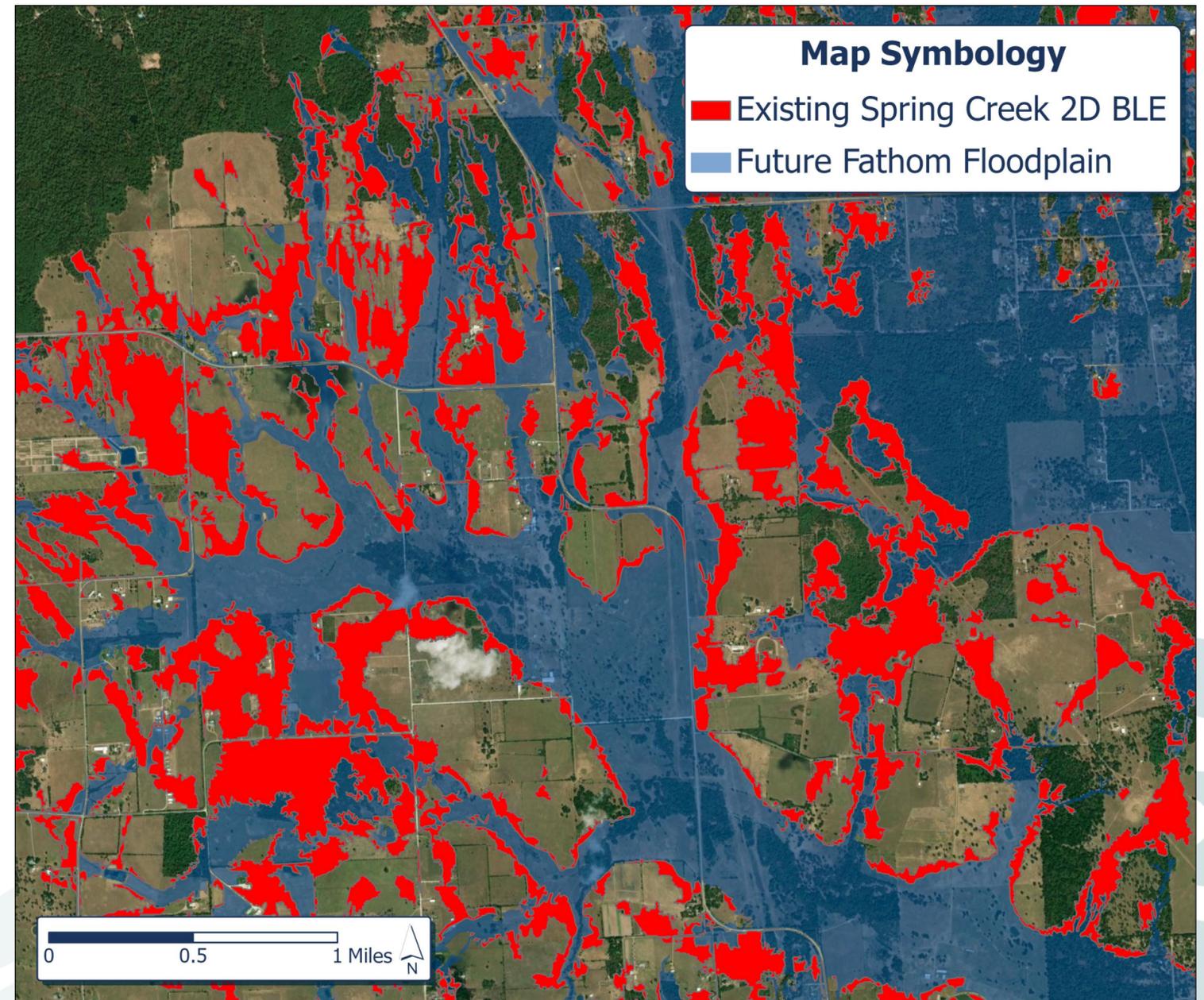
500-year



Task 2B - Future Fathom vs. 2D BLE

Future Fathom floodplain is commonly **smaller** than 2D BLE for all storm events.

100-year Spring Creek 2D BLE



Task 2B - Future Fathom vs. Existing MAAPnext

Future Fathom floodplain is commonly **smaller** than existing MAAPnext floodplain for most storm events.

Greens Bayou watershed example:

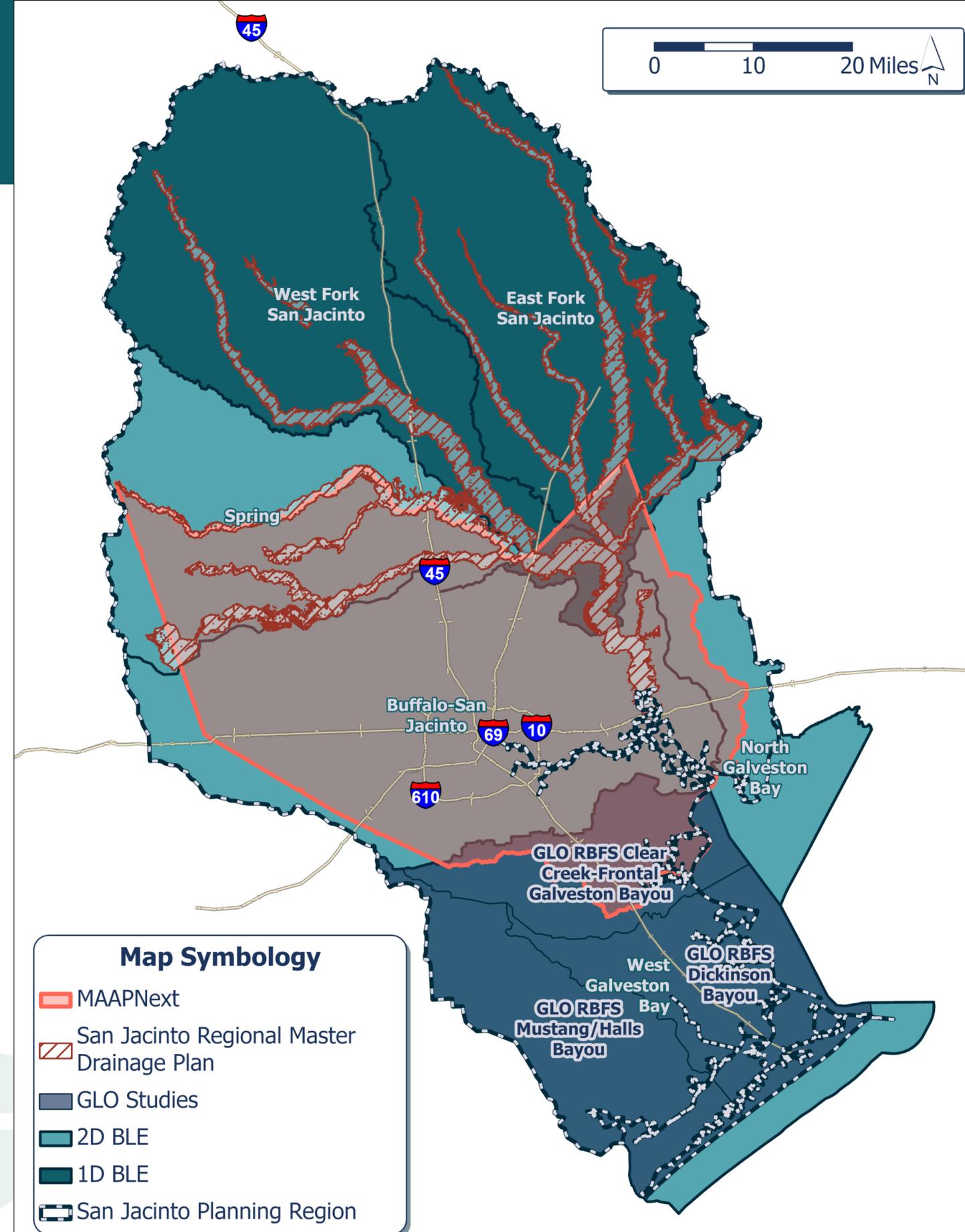
On average, existing MAAPnext water surface elevations are 9 inches greater than future Fathom in the 10-year event.



Task 2B - Approach

1. Northern Zone (north of Harris County):
 - a. SJRMDP future models *simulated with future rainfall*
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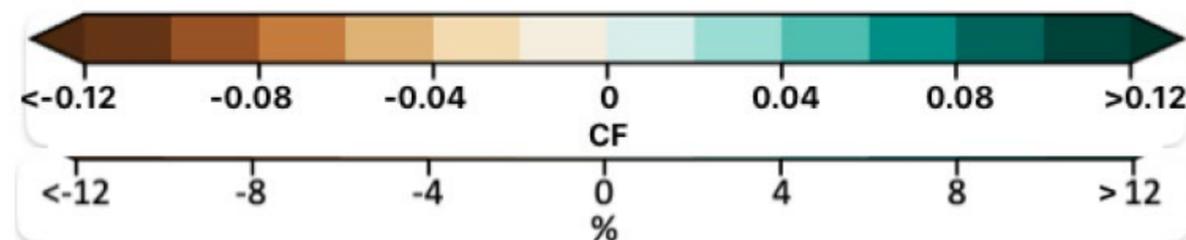
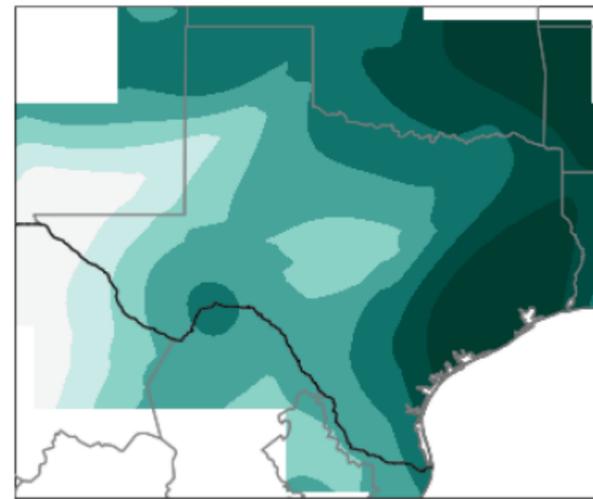
Match existing extents wherever future floodplain is smaller



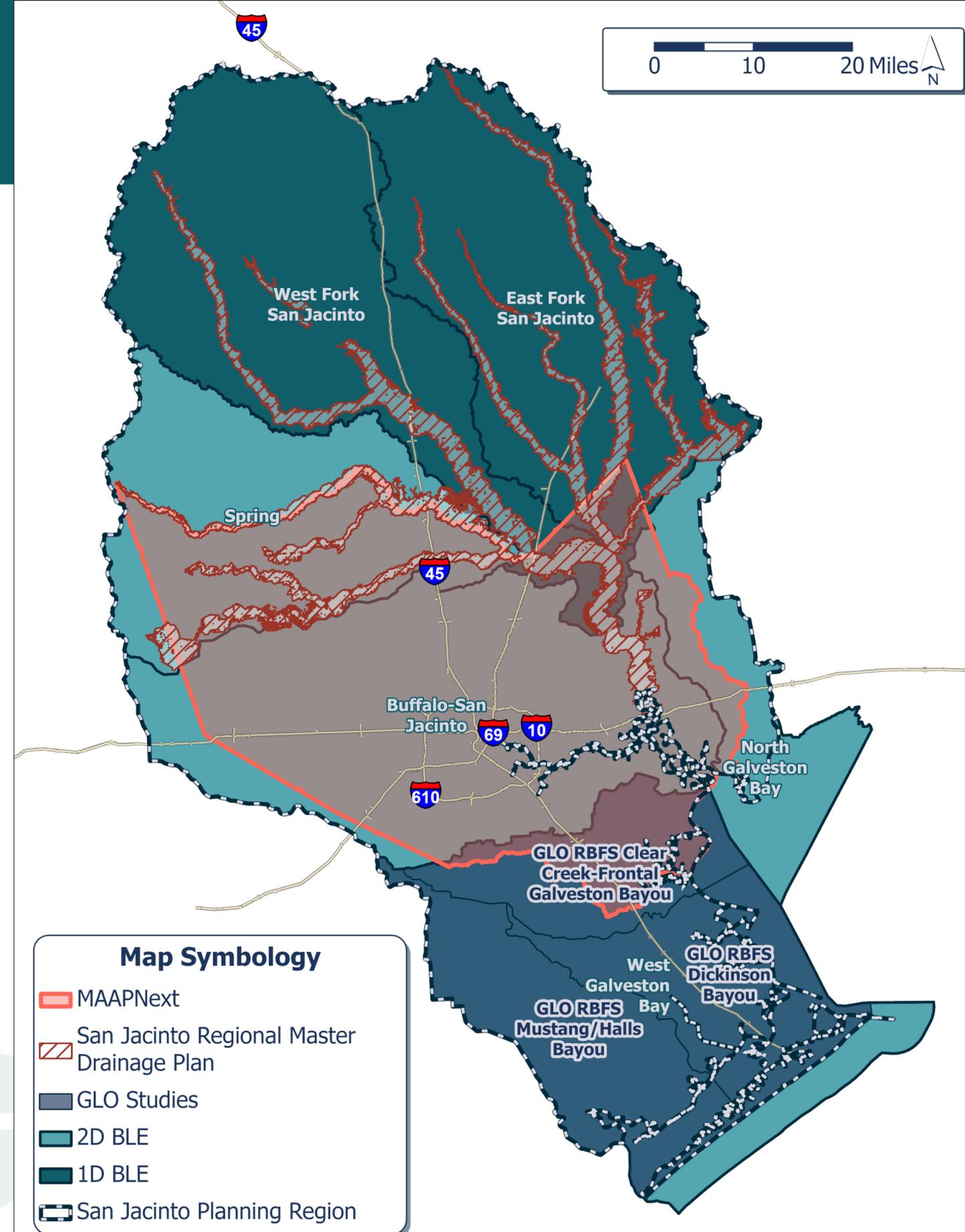
Task 2B - Approach

1. Northern Zone (north of Harris County):

a. SJRMDP future models *simulated with future rainfall*



Source: "Year 2060 Floodplain Maps for Texas – Final Report", TWDB, April 2025.



Task 2B - Approach

1. Northern Zone (north of Harris County):

- a. SJRMDP future models *simulated with future rainfall*
- b. 2D BLE model *simulated with future rainfall*

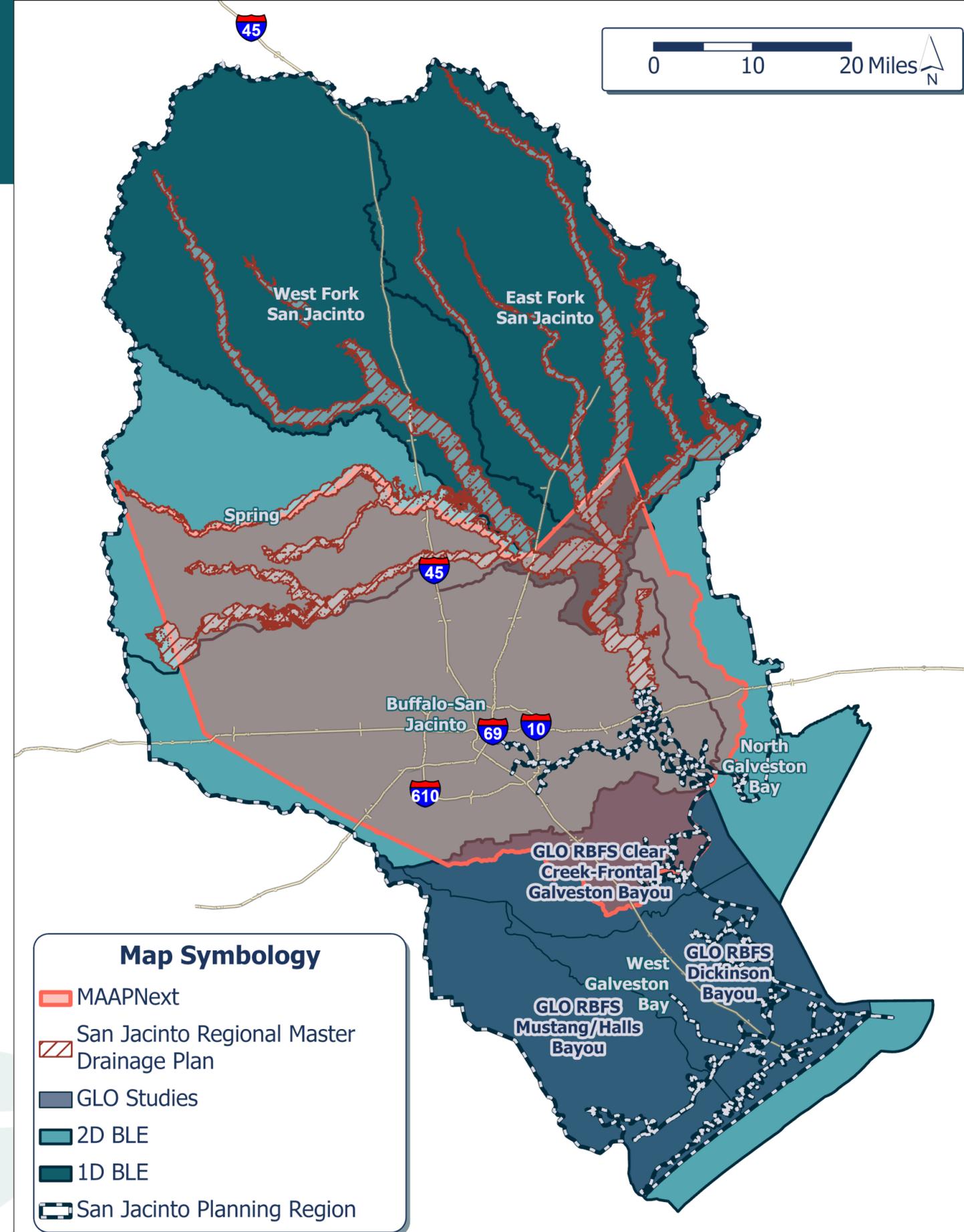
Update rainfall
using pluvial
change factor



Rerun 2D
model



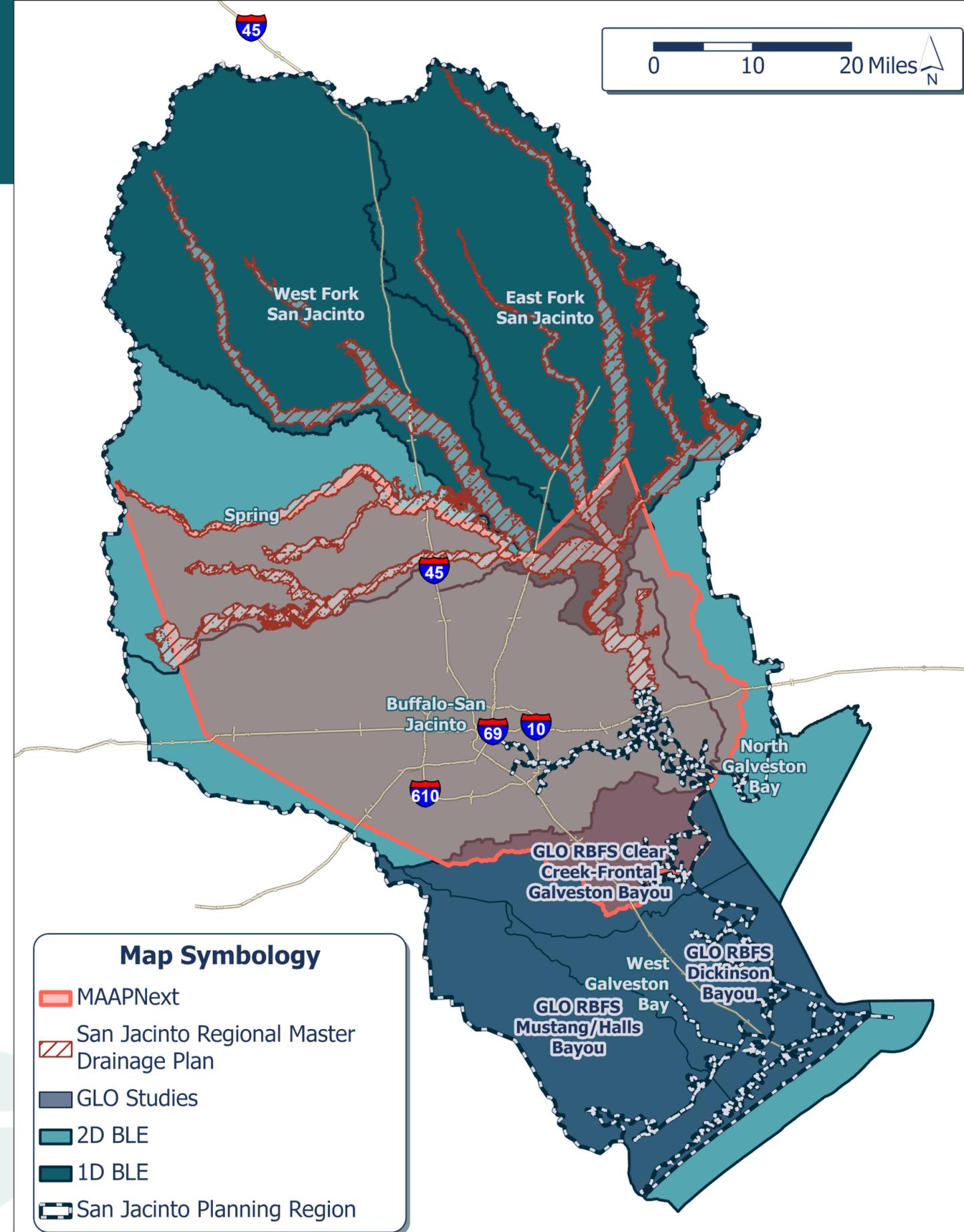
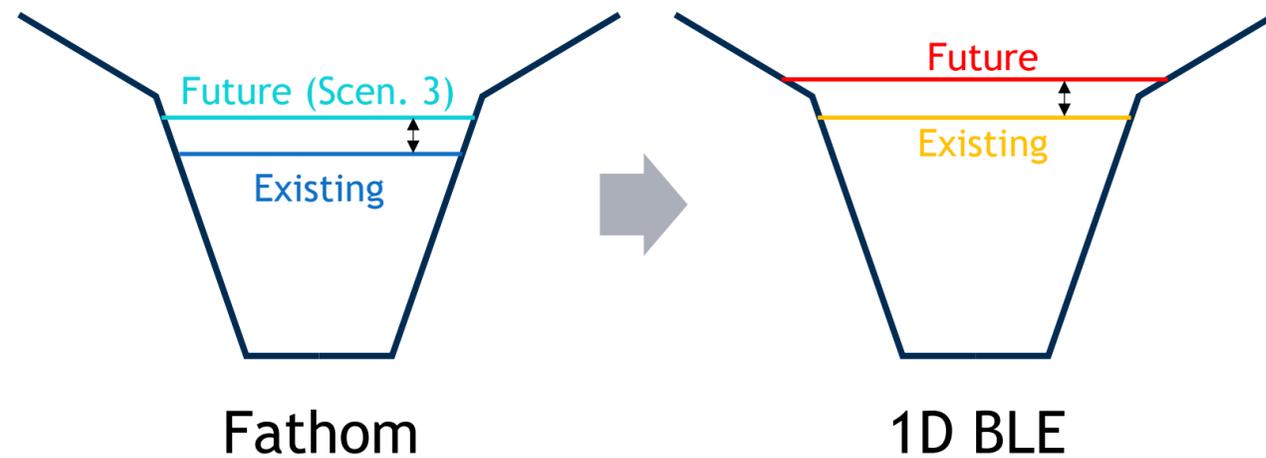
Remap



Task 2B - Approach

1. Northern Zone (north of Harris County):

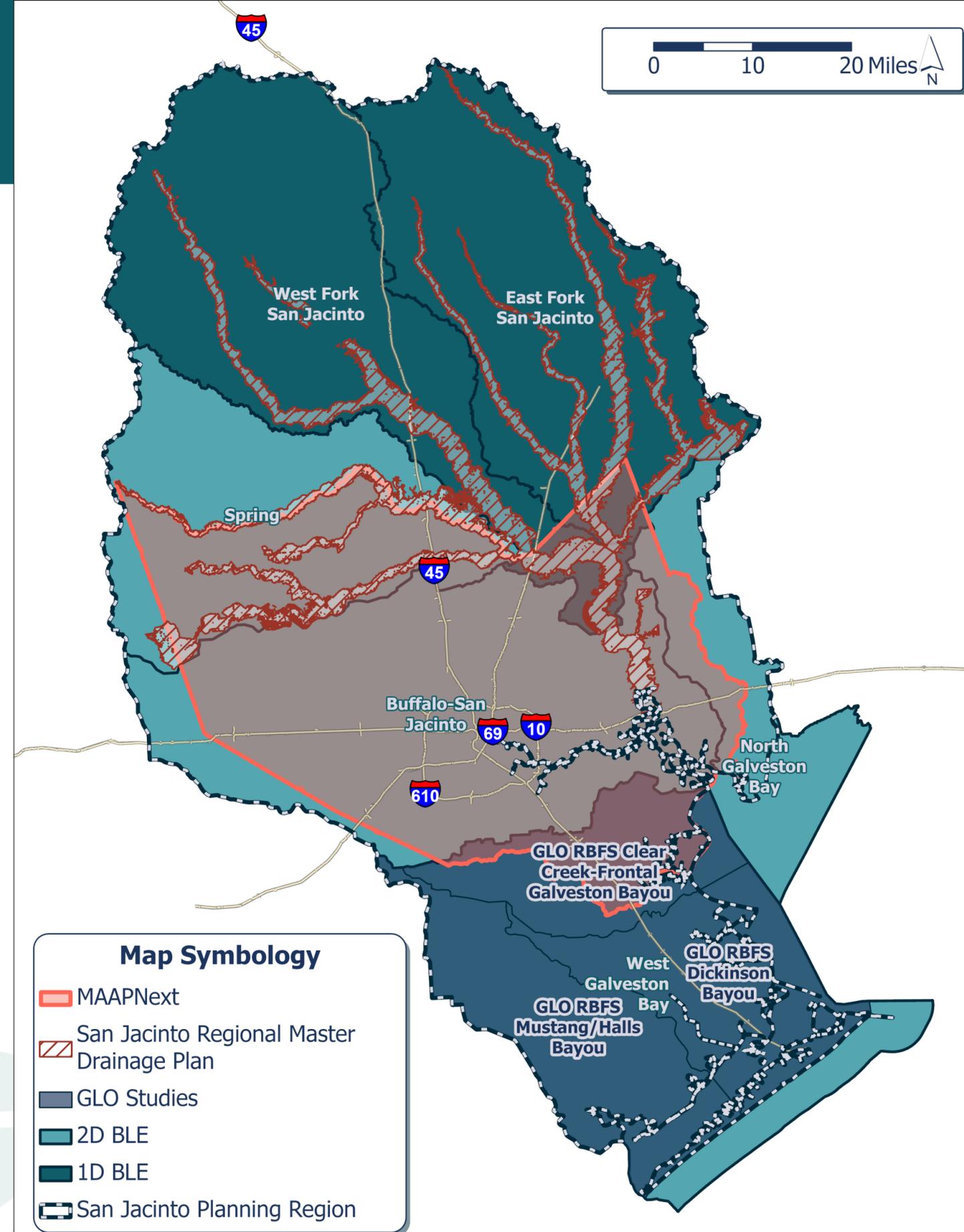
- SJRMDP future models *simulated with future rainfall*
- 2D BLE model *simulated with future rainfall*
- 1D BLE models + *vertical buffer*



Task 2B - Approach

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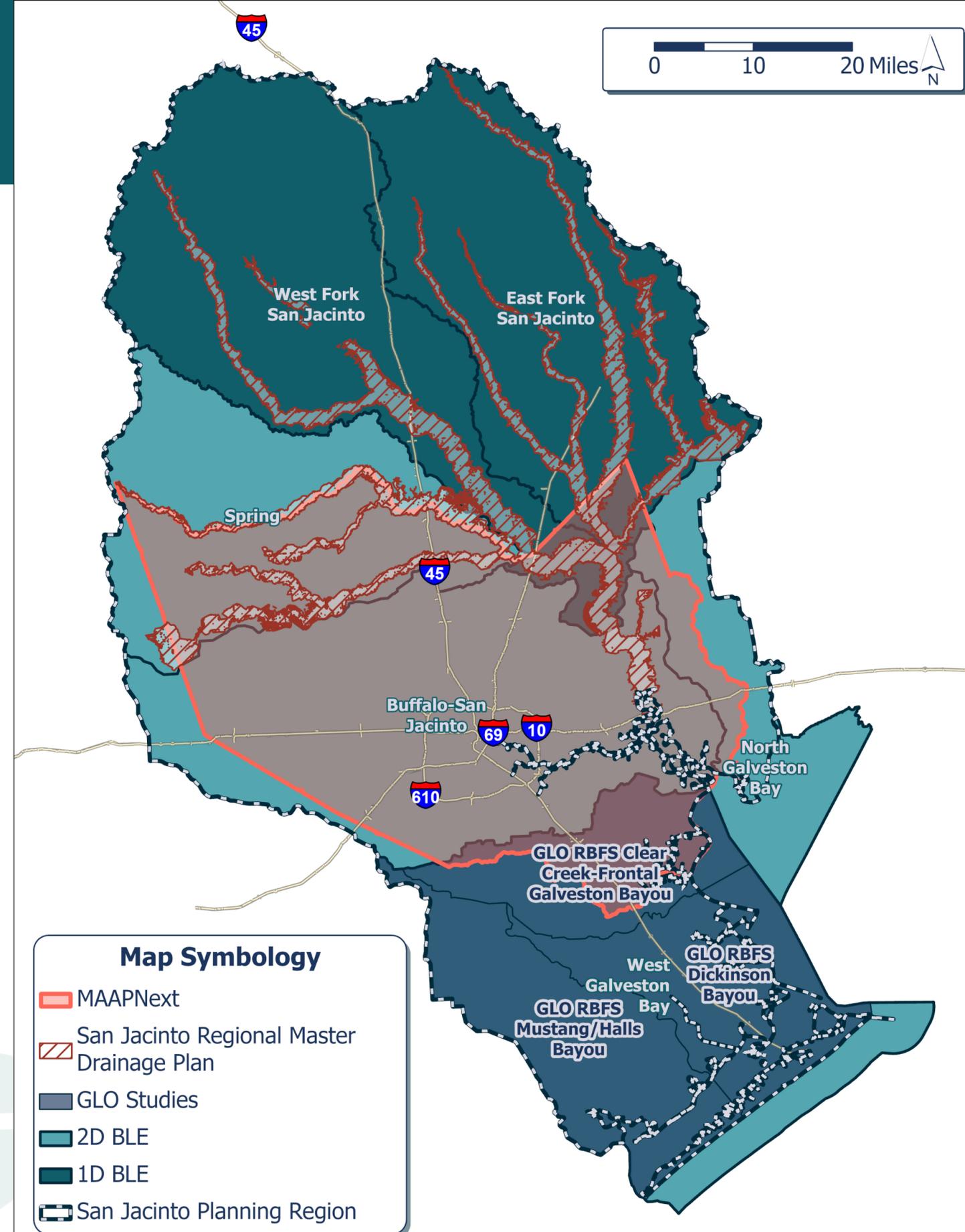
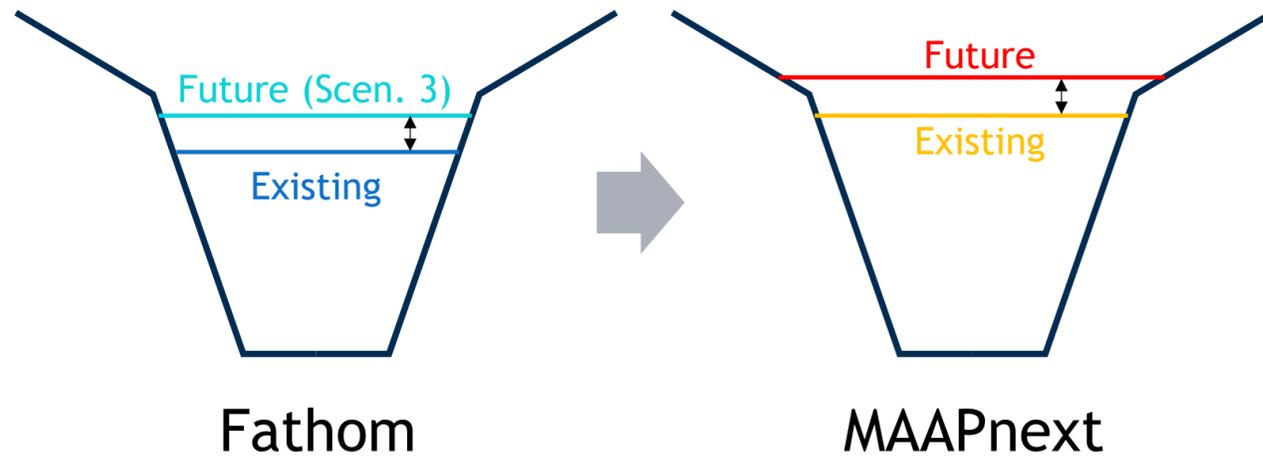
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- d. Future Fathom Scenario 3



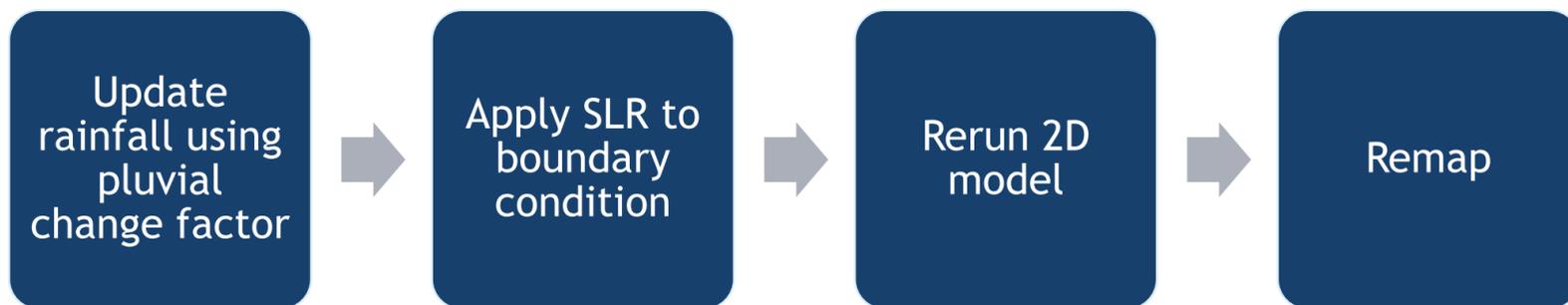
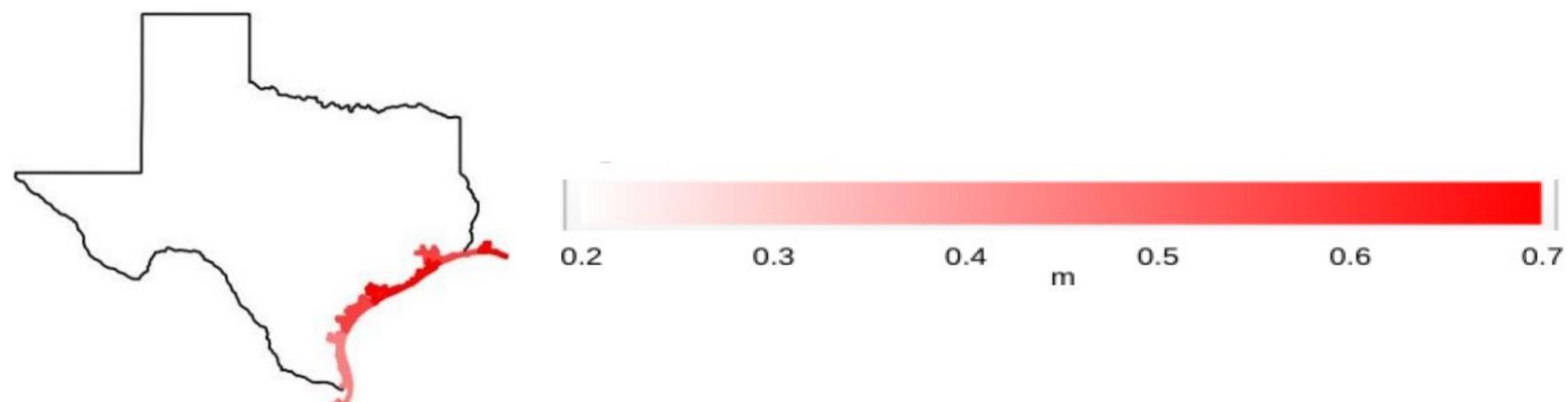
Task 2B - Approach

1. Central Zone (Harris County):

a. MAAPnext models + vertical buffer

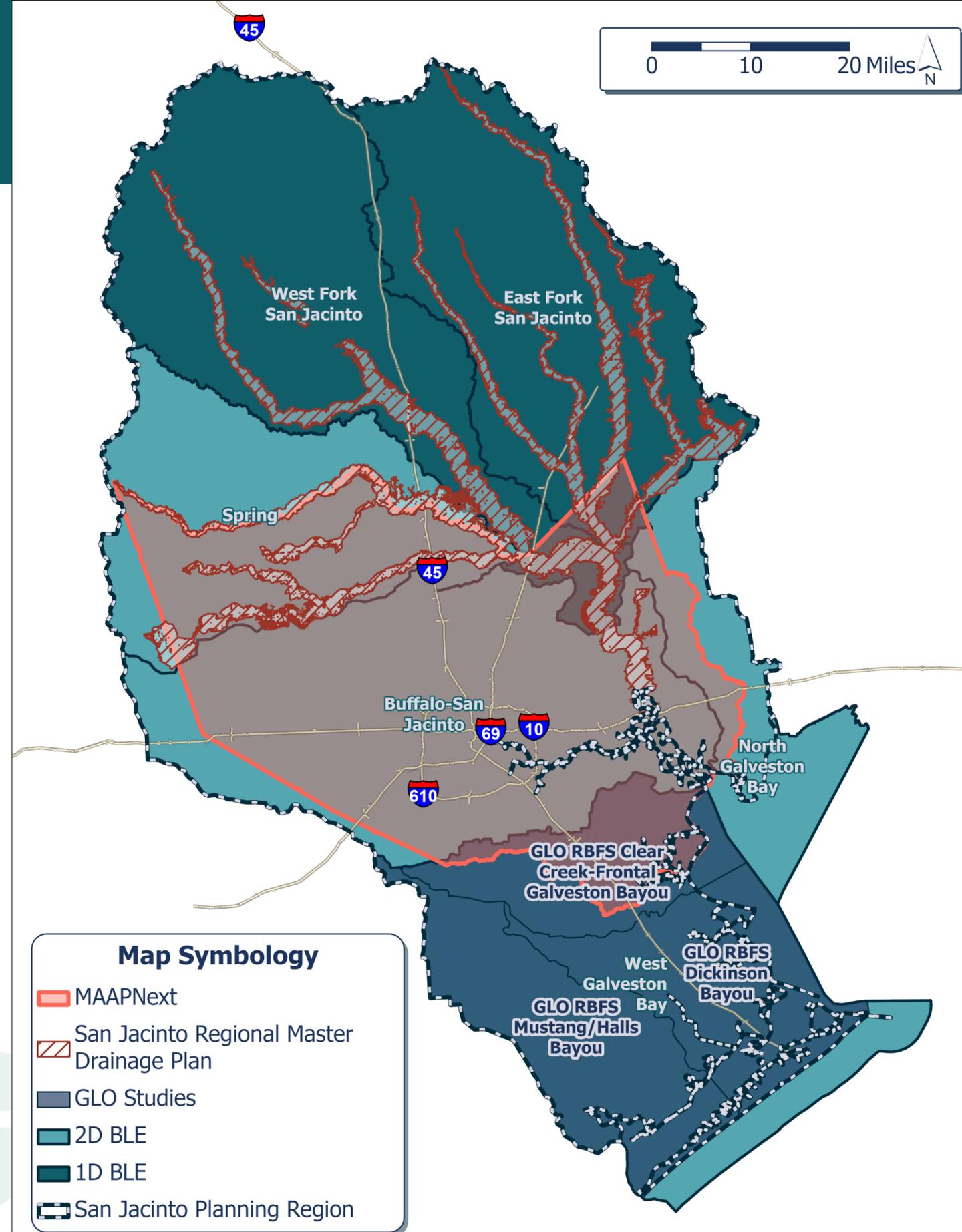


Task 2B - Approach



3. Coastal Zone (south and east of Harris County):

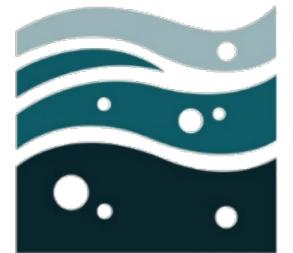
- 2D GLO models *simulated with future rainfall + SLR*
- 2D BLE models *simulated with future rainfall + SLR*



Agenda Item #8

Task 3A

Floodplain Management Practices



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Task 3A - Scope Requirements

- General description and summary of floodplain management practices
- Summary of key floodplain management practices by the respective regulatory entities
- Summary of recommendations and/or adopted minimum standards for floodplain management practices

RFPG Standards are either:

- 1. Recommendations for consideration by local entities or*
- 2. They represent RFPG adopted minimum standards that are required to be adopted by local entities prior to the RFPG including any FMEs, FMSs, or FMPs that are sponsored by or that will otherwise be implemented by that entity in the RFP*

Task 3A Schedule

Collect Survey Responses

Desktop Analysis of updated DCMs, NFIP and CRS participation, TFMA Higher Standards Survey

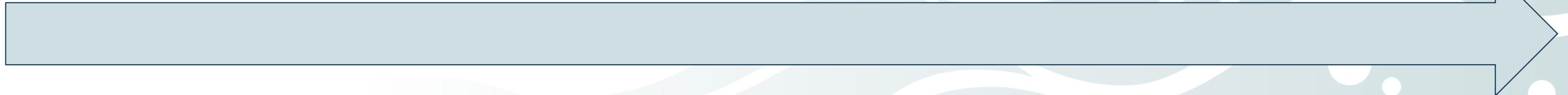
Review and Compare to 2024 State Flood Plan/ Other 2023 Regional Flood Plans

Technical Committee

- Review data collected with Tech Comm
- Interactive Workshop on Minimum Standards

Develop Updated List of Minimum Standards to distribute to the RFPG

Fall 2025
RFPG to Recommend and/or Adopt Minimum Standards



Task 3A - 2023 SJRFP Minimum Standards

Recommended Minimum Standards

Participation in the National Flood Insurance Program (NFIP)

Development of No Adverse Impact Policies

Establish Minimum Finished Floor Elevations (FFE)

Encourage Use of Best Available Data

Compensatory Storage Requirements in the 1.0% ACE Floodplain

Compensatory Storage Requirements in the 0.2% ACE Floodplain

Development of Detailed Hydrologic and Hydraulic Analysis Criteria/Requirements

Incentivizing the Preservation of the Floodplain



Add specification to previously recommended standards

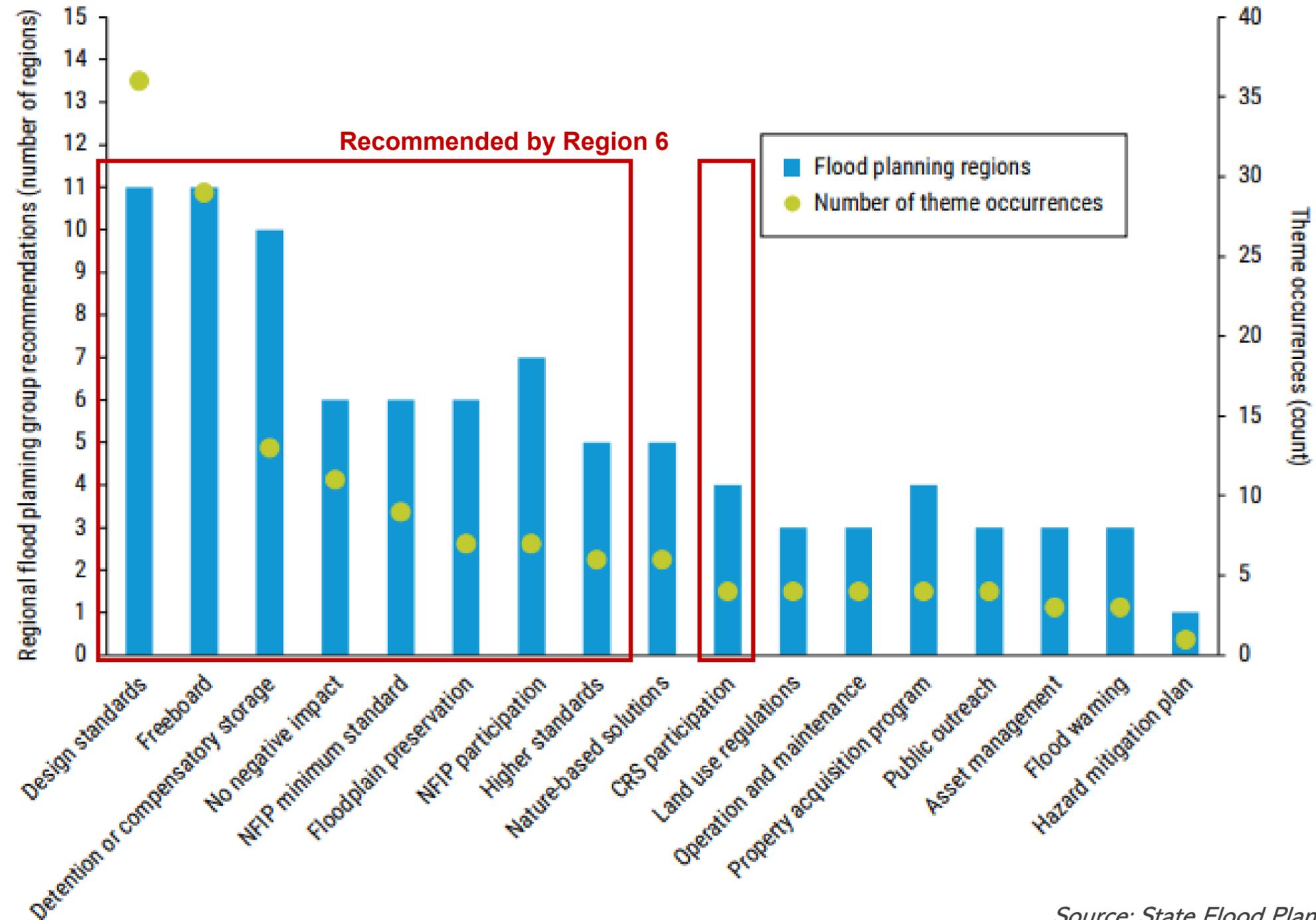
Expand the list of minimum standards



Consider *adopting* standards

Task 3A State Flood Plan Recommendation Comparison

Figure 5-9. Floodplain management recommendations by flood planning region



Source: State Flood Plan

Task 3A Updates

- Entity Population and CRS Participant added Second Cycle
- Level of Enforcement required Second Cycle
- 32 Regulation links updated/added

Entity	Overall Population of Entity	Floodplain Management Regulations (Yes/ No/ Unknown)	Adopted minimum regulations pursuant to Texas Water Code Section 16.3145? (Yes/ No)	NFIP Participant (Yes/ No)	CRS Participant (Yes/ No)	Higher Standards adopted (Yes/ No)	Floodplain Management Practices (Strong/ Moderate/ Low/ None)	Level of Enforcement of Practices (High/ Moderate/ Low/ None)	Existing Stormwater or Drainage Fee (Yes/ No)	Web Link to entity regulations
City of Alvin	27098	Yes	Yes	Yes	No	Yes	Moderate	Moderate	No	https://library.municode.com/tx/alvin/codes/code_of_ordinances?nodeId=PTIICOR_APXAFLDAPR
City of Arcola	2034	Yes	Yes	Yes	No	Yes	Moderate	Moderate	No	

Task 3A Overview

Participation in
the NFIP

97%

Entities with
Strong Standards

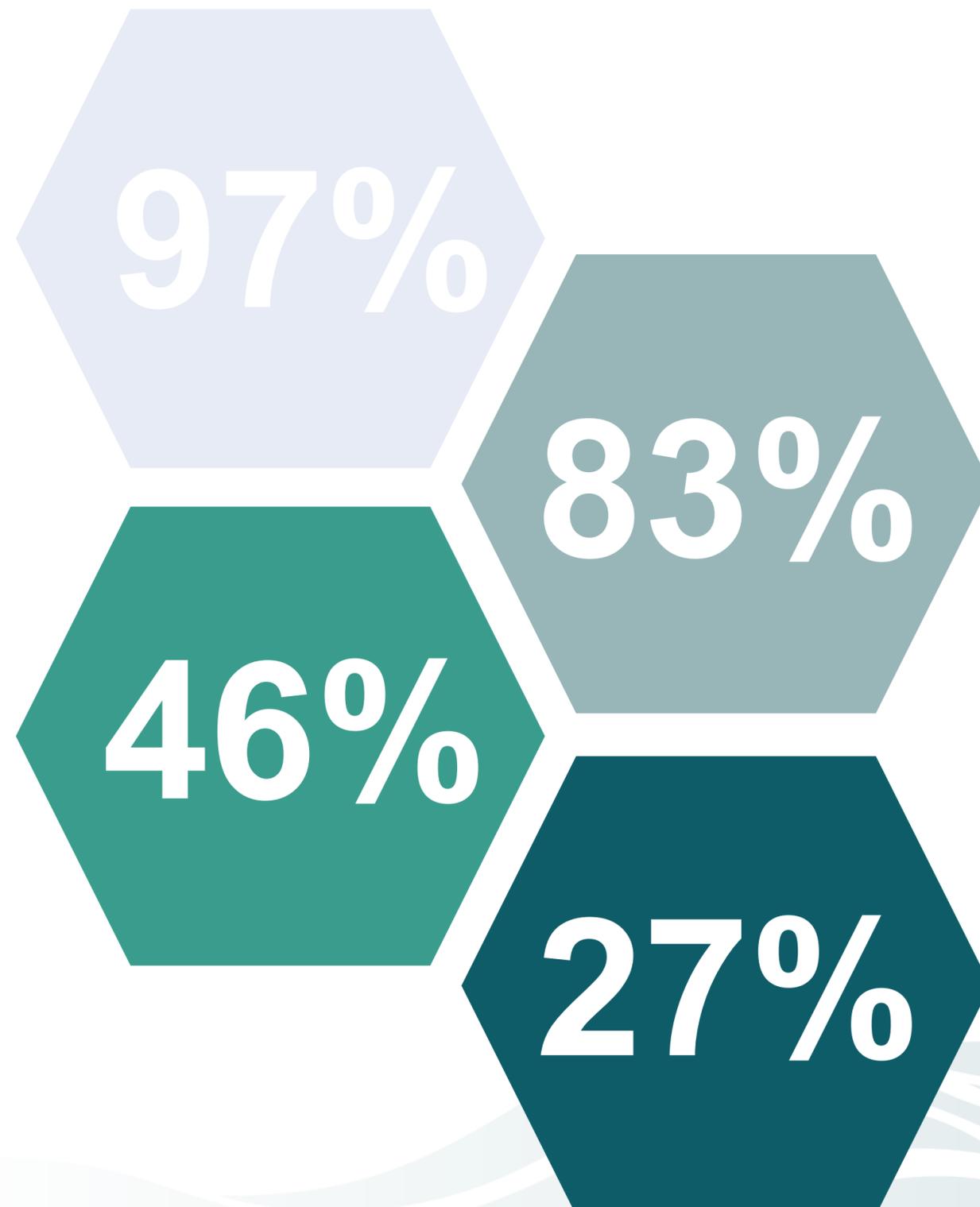
46%

83%

Entities with
Higher Standards

27%

Entities with CRS
Participation



Task 3A Interactive Workshop on Minimum Standards

- Should First Cycle Recommendations be carried over to the Second Cycle?
- Should the RFBG continue to recommend minimum standards or adopt select standards?

Recommended Minimum Standards

Participation in the National Flood Insurance Program (NFIP)

Development of No Adverse Impact Policies

Establish Minimum Finished Floor Elevations (FFE)

Encourage Use of Best Available Data

Compensatory Storage Requirements in the 1.0% ACE Floodplain

Compensatory Storage Requirements in the 0.2% ACE Floodplain

Development of Detailed Hydrologic and Hydraulic Analysis Criteria/Requirements

Incentivizing the Preservation of the Floodplain

Task 3A Interactive Workshop on Minimum Standards

Should Additional Minimum Standards be Considered?

1. Nature-Based Solutions

- Entities should encourage new construction to consider nature-based solutions.

2. Operations & Maintenance

- To prevent replacement expenses, regulatory entities to create a maintenance plan for drainage infrastructure.

3. Property Acquisition Program

- Encourage regulatory entities to develop property acquisition program for repetitive loss structures.

4. Flood Warning System

- Regulatory entities recommended to develop flood warning system for public awareness.

Task 3A Interactive Workshop on Minimum Standards

Should Additional Minimum Standards be Considered?

5. Critical Facilities

- Entities recommended to establish additional FFE regulations for coastal and non-coastal critical facilities.

6. Hazard Mitigation Plan

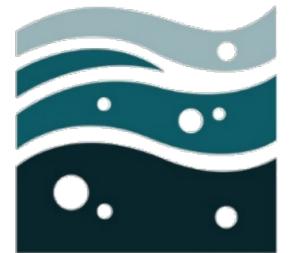
- Encourage regulatory entities to develop a Hazard Mitigation Plan to help prepare for, respond to, and recover from flood events.

7. Additional Design Regulations

- Designate roadway, storm drains, and culvert/bridge crossing design requirements.
- 

Agenda Item #8

Consider Agenda Items for Next Meeting

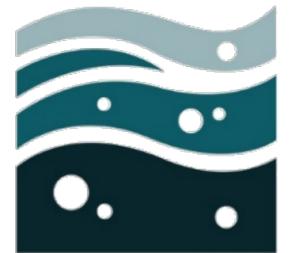


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Agenda Item #9

Public Comments

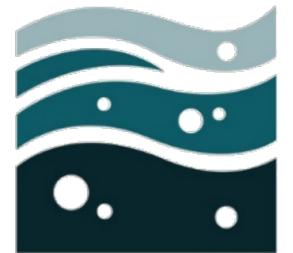
Limit 3 Minutes Per Person



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Agenda Item #10

Adjournment



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