


**Region 6 - San Jacinto
Regional Flood Planning Group
Technical Committee Meeting
June 28, 2021
1:00 p.m.
Virtual Meeting**



Item 1: Call to Order



Item 2:

Welcome and Roll Call



Item 3:

Registered Public Comments on
Agenda Items
(limit of 3 minutes per person)



Item 4:

Announcement of new member to
the Technical Committee



Item 5:

Discussion and possible
recommendations for in-person
meeting location/platform



Item 6:

Overview of Project Timeline

Working Conceptual Schedule**

First Cycle of Regional Flood Planning

As of December 2020



Item	Entity	Activity	Planning SOW Task #	2020			2021												2022												2023				
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	TWDB	Designation of RFPG members																																	
2	RFPG	RFPG First Meetings																																	
3	RFPG	Public participation, stakeholder input, post notices, hold meetings, maintain email lists and website.	10																																
4	TWDB	Publish Request for Regional Flood Planning Grant Applications																																	
5	RFPG/Sponsor	Submission of Applications for Regional Flood Planning Grants to TWDB																																	
6	TWDB/Sponsor	Review and Execution of Regional Flood Planning Grant Contracts																																	
7	RFPG/Sponsor	Solicitation for Technical Consultant by RFQ process																																	
8	RFPG	Pre-Planning Meetings for Public Input on Development of RFP																																	
9	RFPG	Selection of Technical Consultant																																	
10	RFPG/Sponsor	Execution of Technical Consultant Subcontract																																	
11	RFPG	Planning Area Description	1																																
12	RFPG	Existing Condition Flood Risk Analyses	2A																																
13	RFPG	Future Condition Flood Risk Analyses	2B																																
14	RFPG	Evaluation and Recommendations on Floodplain Management Practices	3A																																
15	RFPG	Flood Mitigation and Floodplain Management Goals	3B																																
16	RFPG	Flood Mitigation Need Analysis	4A																																
17	RFPG	Identification and Evaluation of Potential FMEs and Potentially Feasible FMSs and FMPs	4B																																
18	RFPG	Preparation and Submission of Technical Memorandum to the TWDB	4C																																
18	TWDB	Issue Notice-to-Proceed on Task 5																																	
20	RFPG	Recommendation of FMEs, FMSs, and FMPs	5																																
21	RFPG	Impacts of Regional Flood Plan	6A																																
22	RFPG	Contributions to and Impacts on Water Supply Development and the State Water Plan	6B																																
23	RFPG	Flood Response Information and Activities	7																																
24	RFPG	Administrative, Regulatory, and Legislative Recommendations	8																																
25	RFPG	Flood Infrastructure Financing Analysis	9																																
26	RFPG	Preparation and Submission of Draft RFP to the TWDB	10																																
27	RFPG	Public Input on Draft RFP	10																																
28	TWDB	TWDB Review and Comment on the Draft RFP																																	
29	RFPG	Incorporate TWDB & Public Input into Final RFP	10																																
30	RFPG	Adopt and Submit the 2023 RFP to the TWDB	All																																

(DUE JAN 21, 2021)

(DUE JAN 7, 2022)

(DUE AUG 1, 2022)

(DUE JAN 10, 2023)



Item 7:

**Review and Discussion of TWDB
Technical Guidelines**

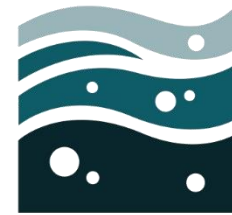


Item 8:

Receive Presentation from Technical Consultant and Consider Recommendations to RFPG on approach to Task 1 (Planning Area Description)



Task 1 & 2A



SAN JACINTO REGIONAL FLOOD PLANNING GROUP

R E G I O N 6

June 28, 2021

Agenda Item 8 – Task 1

- Task 1 – Planning Area Description Overview
- Review & Discuss Data Collection Survey
- Update on GLO Data Collection Coordination
- RFPG Priorities as related to Task 1

End-Goal Decisions by Committee:

- Recommendation on Data Collection Survey to RFPG
 - Content
 - Format
 - Duration
 - Outreach Approach

Task 1: Planning Area Description

Goals:

Describe the Flood
Planning Region

Inventory and Assess
Existing
Infrastructure

Describe Funded or
Ongoing Flood
Mitigation Projects

Flood Planning Region Description

- Social and Economic Character
 - Development
 - Population
 - Economic Activity
 - Economic Sectors at Risk
- Political Subdivisions
 - Flood-related authorities
 - Document engagement in flood planning, management, and mitigation activities
- Areas of Flooding
 - Flood-Prone Areas
 - Types of Major Flood Risk
 - Agriculture & Natural Resources at Risk
- Historical Flood Events
 - Key Historical Events
 - Fatalities
 - Loss of Property

Inventory & Assess Existing Infrastructure

Existing Infrastructure

Natural



Constructed



Location

- Maps
- Geodatabases



Condition

- Functional
- Non-functional
- Deficient



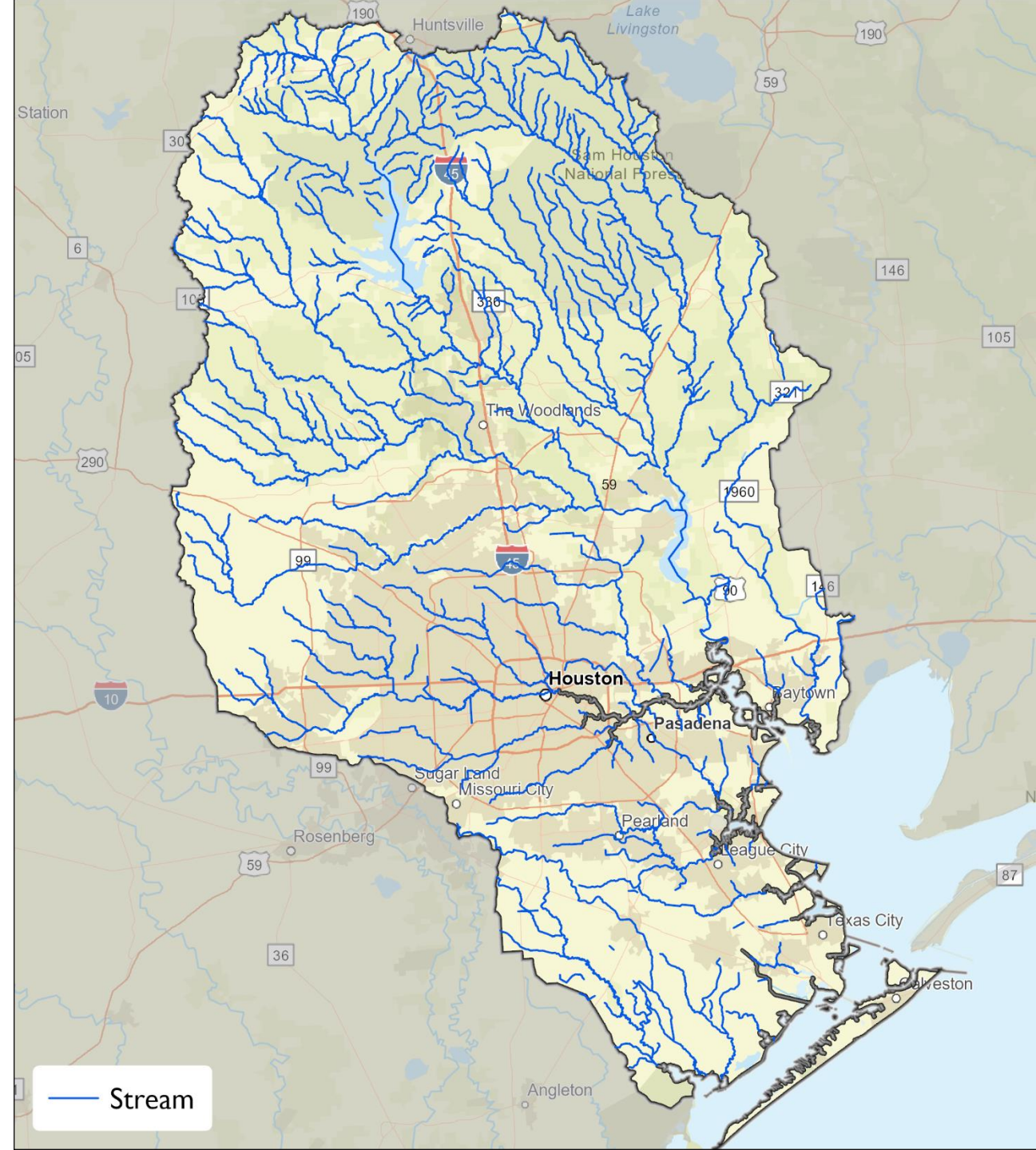
Functionality

- Level of Service
 - 2-yr, 5-yr, 10-yr, 25-yr, 50-yr, 100-yr, 500-yr

Natural Features

Explicitly required, but not limited to, the following based on *Exhibit C: Technical Guidelines for Regional Flood Planning*.

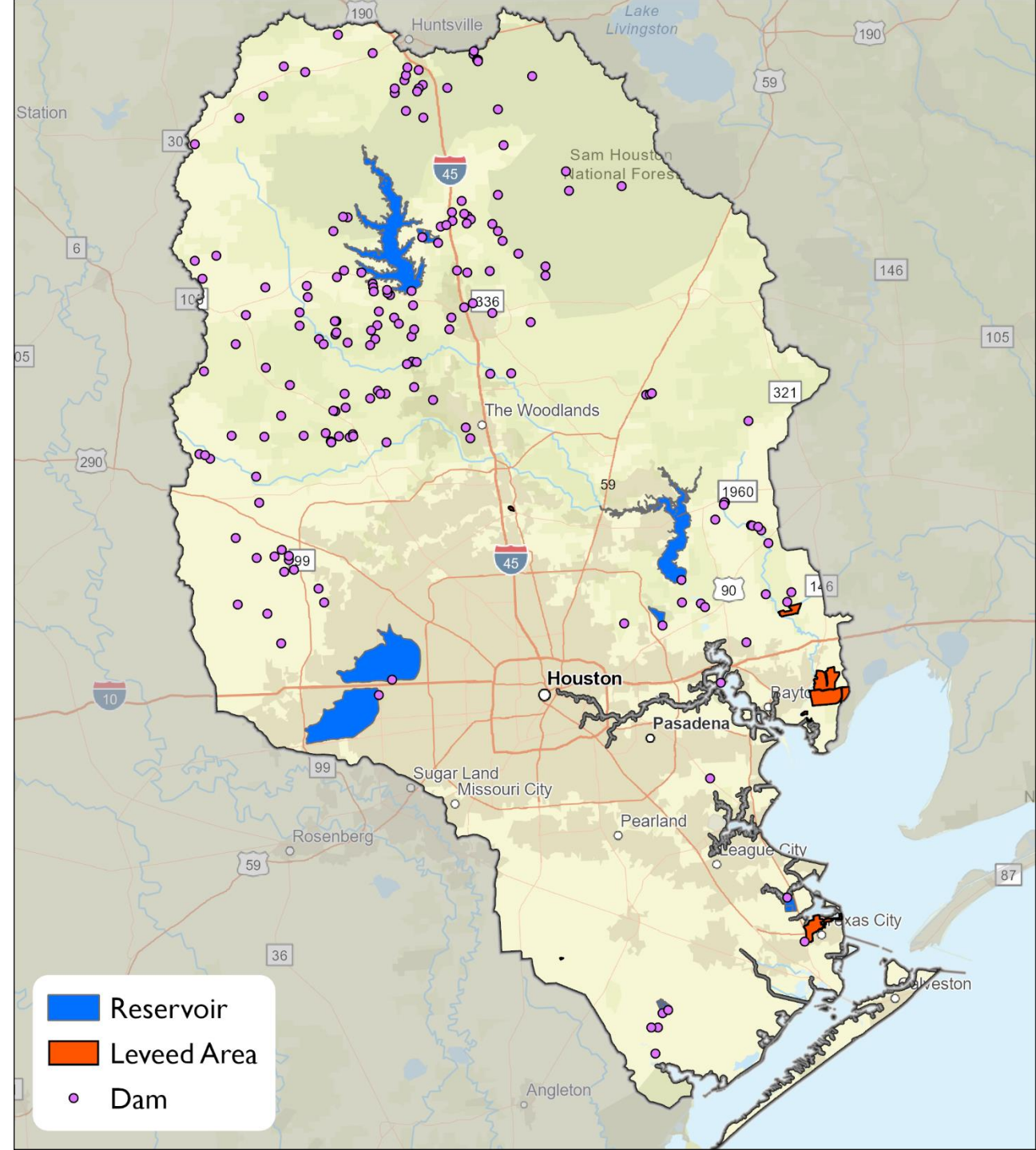
- Rivers, tributaries, and functioning floodplains
- Wetlands
- Alluvial fans
- Vegetated dunes



Large Structural Features

Explicitly required, but not limited to, the following based on *Exhibit C: Technical Guidelines for Regional Flood Planning*:

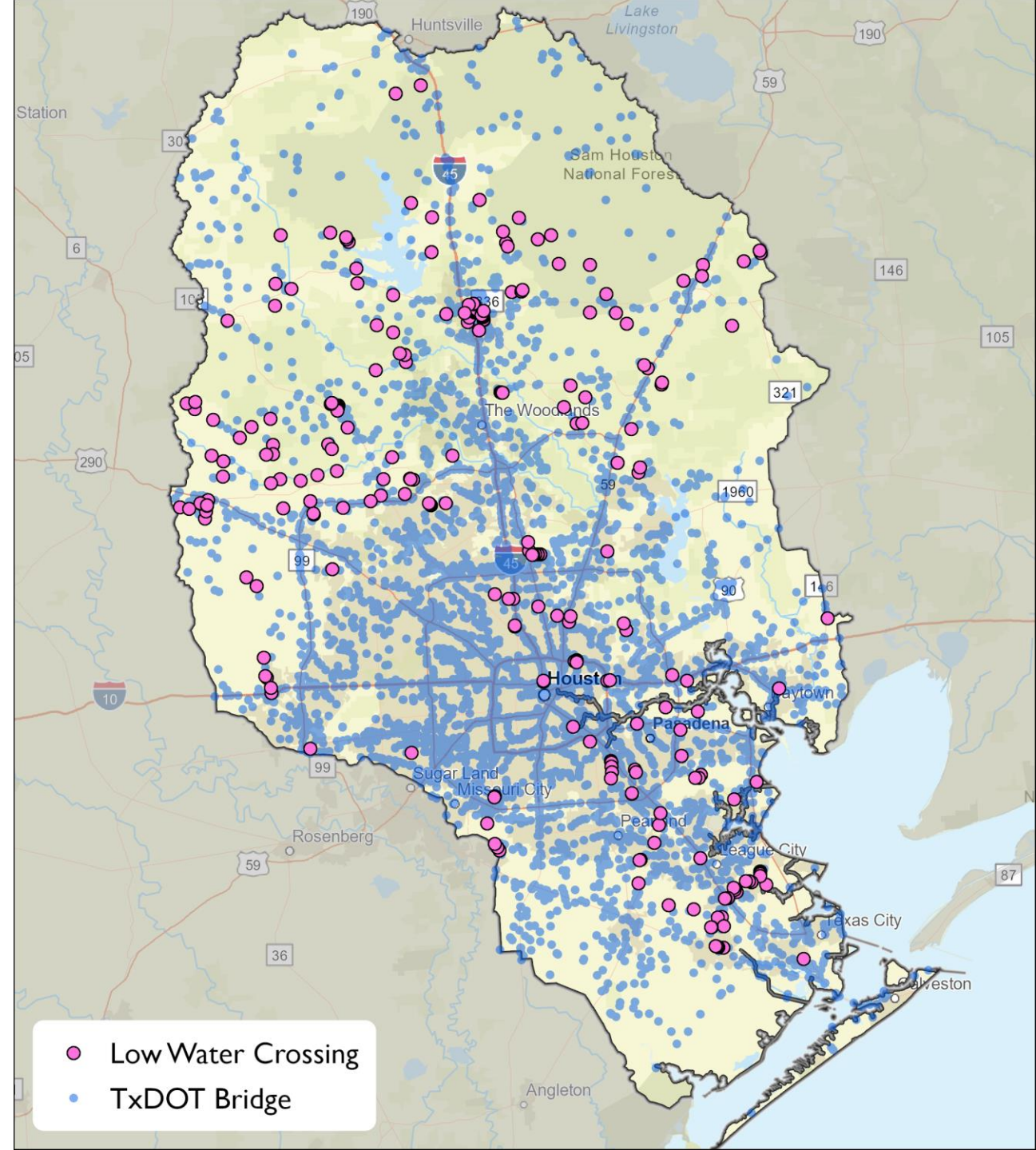
- Dams and reservoirs
- Levees
- Sea barriers and gates
- Stormwater tunnels



Other Stormwater Infrastructure

Explicitly required, but not limited to, the following based on *Exhibit C: Technical Guidelines for Regional Flood Planning*:

- Stormwater canals
- Storm drain systems
- Detention and retention ponds
- Weirs
- Low water crossings



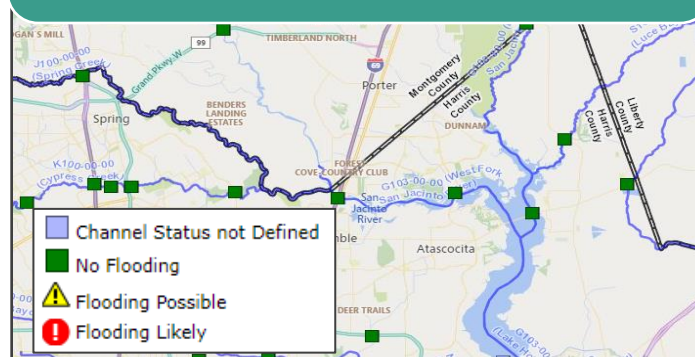
Funded or Ongoing Mitigation Projects

Mitigation Projects

Structural



Non-Structural



Location

- Maps
- Geodatabases



Funding Source

- Local
- Grant/loan program

Anticipated Benefits

- Structures removed from floodplain
- Damages reduced

Data Collection Survey Demo

Get Involved!

We are looking for your help to develop the first-ever flood plan for the San Jacinto Region. Please use the links below to provide your input.



Put it on the Map

Use the interactive map to help us identify areas of flood risk in your region.

[See the interactive map](#)



Take the Survey

Take the survey to provide input on flooding issues and floodplain management goals specific to your region.

[Take the Survey](#)



Upload Data

Help us collect data to strengthen this plan.

[Upload Data](#)

Interactive Webmap

- Flood Prone Areas
- Flood Management Projects

Questionnaire

- Questions based on user profile
- Community official/stakeholder vs Public

Data Upload

- Opportunity for officials/stakeholders to upload data

Data Collection Survey

Public-facing Survey

- 16 total questions
 - General Information
 - Flood Prone Areas
 - Floodplain Management

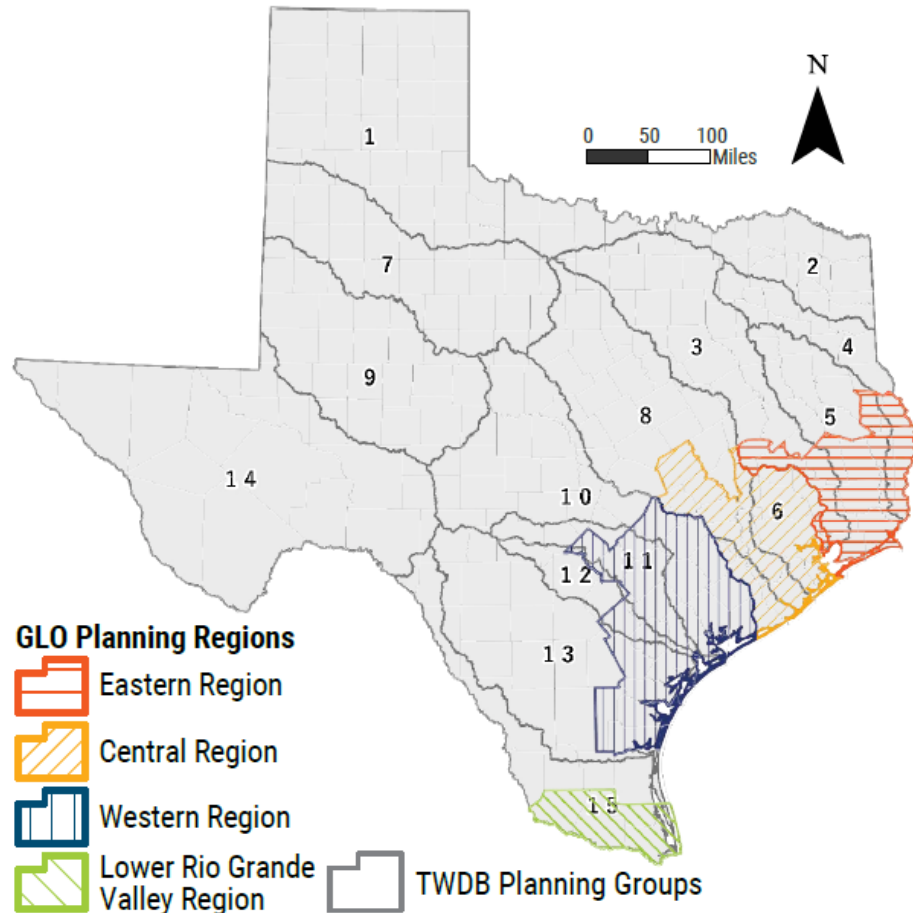
Targeted Survey

- 54 total questions
 - General Information – 8
 - Inventory – 7
 - Flood Prone Areas – 1 (Webmap)
 - Floodplain Management Standards – 16
 - Flood Planning – 13
 - Funding – 3
 - Flood Response – 6
- Data Upload/GIS

Data Collection – GLO Coordination

Flood Planning Areas

Texas General Land Office and
Texas Water Development Board



- GLO PMs have approved coordination with RFP efforts
- GLO has approved release of GLO survey results.

Opportunity: Leverage GLO survey to target future stakeholder outreach

Task 1 Priorities & Recommendations

San Jacinto RFPG Priorities Inform Approach and Content

Identify RFPG Priorities related to:

- Survey and Data Collection efforts
- Targeted Outreach
- Approach to major Task 1 goals

Develop Recommendations to present to the RFPG



Item 9:

Receive Presentation from Technical Consultant and Consider Recommendations to RFPG on approach to Task 2A (Existing Conditions Flood Risk Analysis)

Agenda Item 9 – Task 2A

- Review of Task 2A and TWDB Floodplain Quilt Data
- Discuss hierarchy of flood risk data sources & supplemental data
- Review data collection Interactive Webmap
- Discuss format and timing of Existing Flood Risk public meeting
- RFPG Priorities as related to Task 2A
- Schedule

End-Goal Decisions by Committee:

- Recommendation on format and timing of Existing Flood Risk public meeting to RFPG
- Recommendation on approach to mapping Existing Flood Risk to RFPG
 - Data hierarchy
 - Supplemental Data



Task 2A: Existing Condition Flood Risk Analysis

Goal: Determine the location and magnitude of both the 1% and 0.2% annual chance events.

Flood hazard analysis

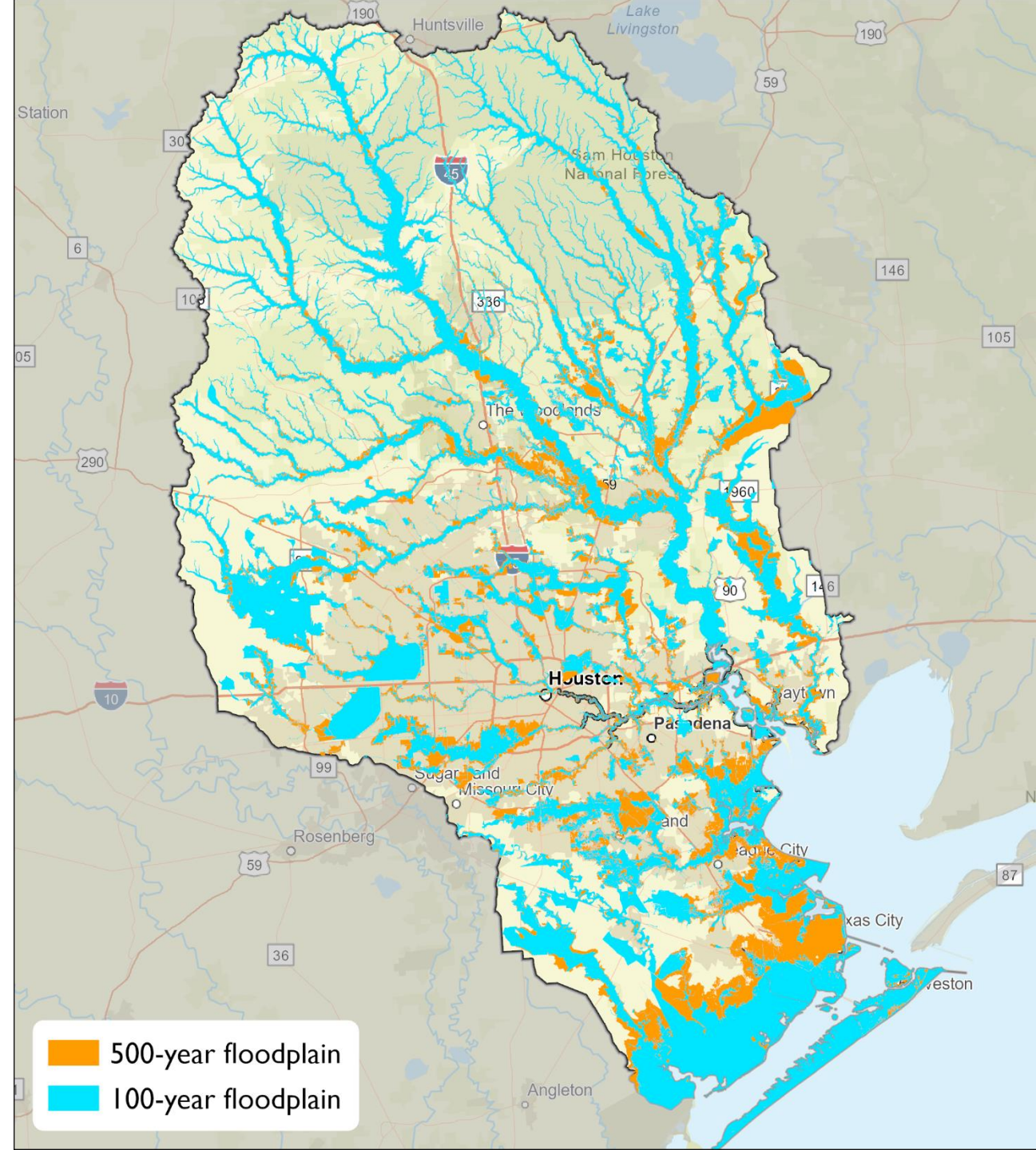
Flood exposure analysis

Vulnerability analysis

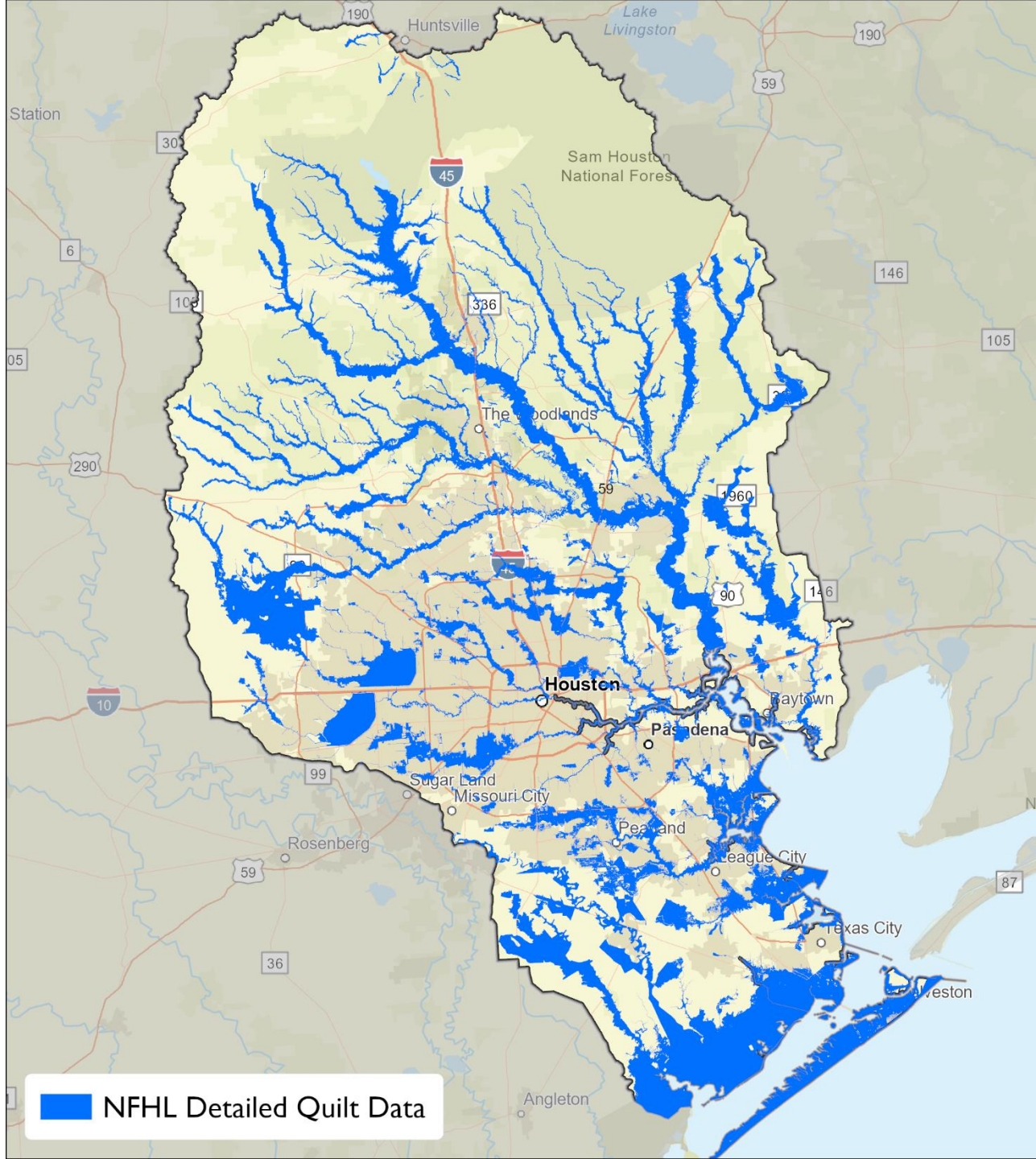


TWDB Floodplain Quilt

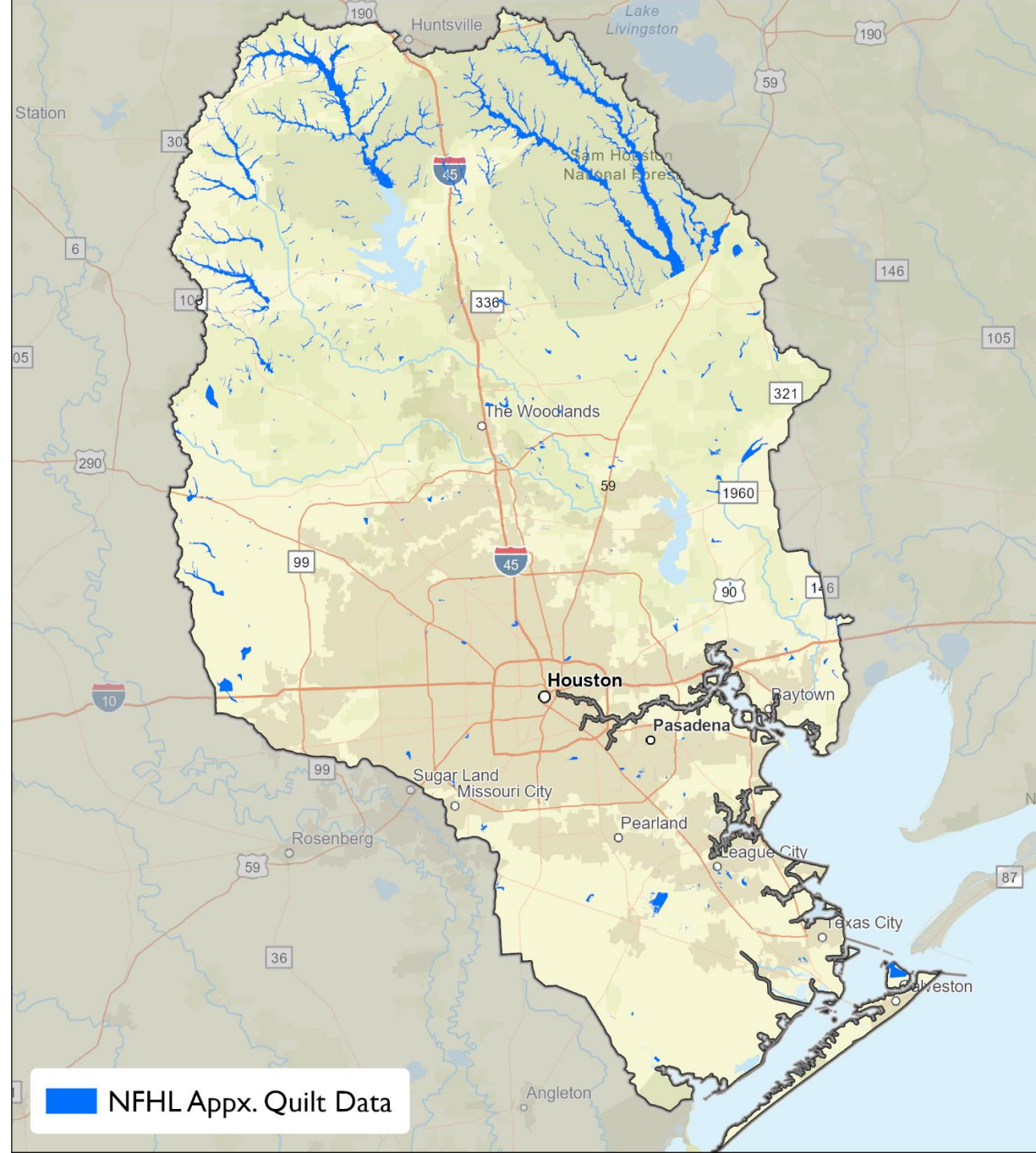
- 100-year & 500-year floodplain data
- Source:
 - National Flood Hazard Layer (NFHL)
 - Base Level Engineering (BLE)
 - First American Flood Data Services (FAFDS)
 - *Coarse Fathom data to be released late June/early July by TWDB*



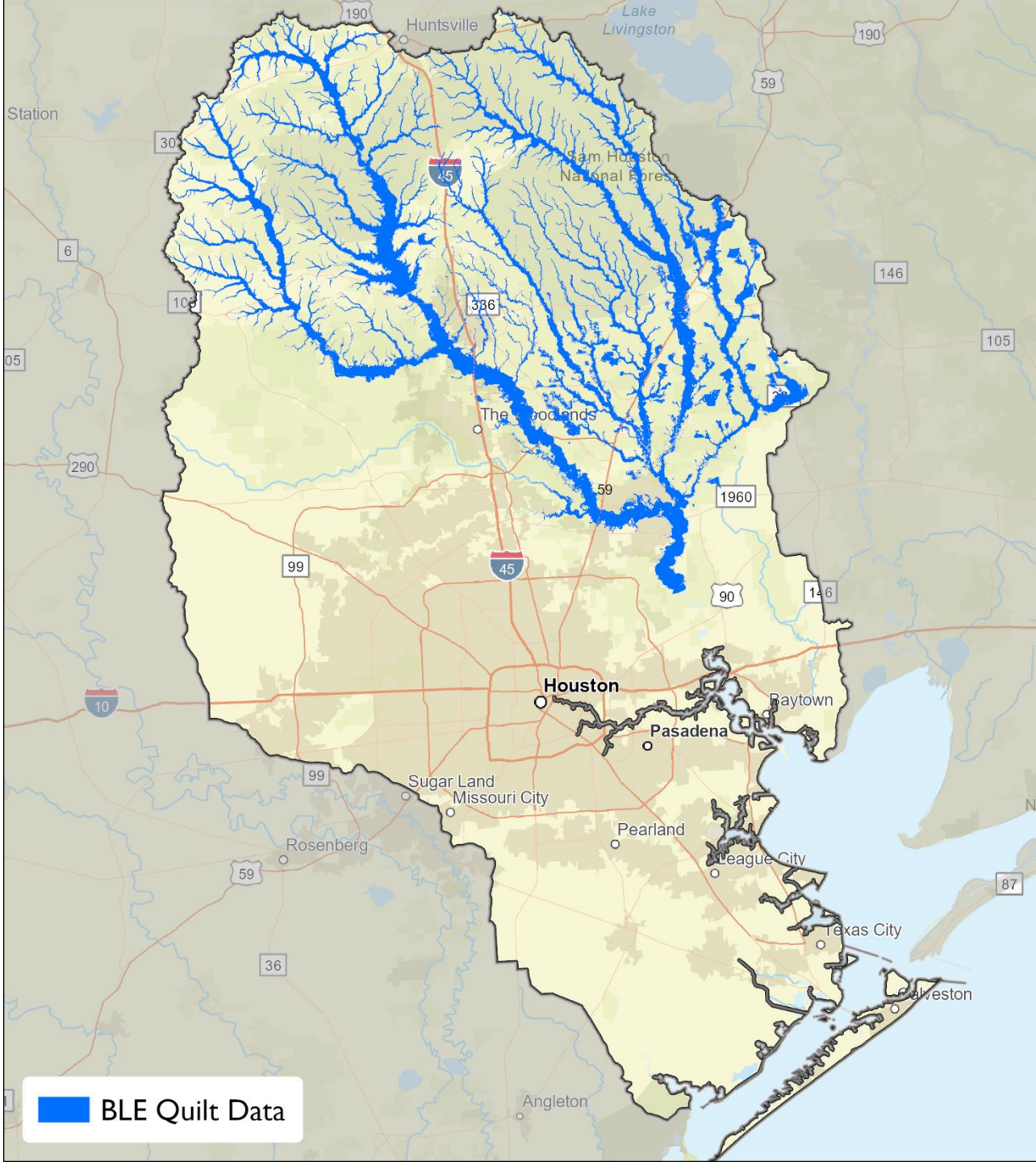
National Flood Hazard Layer (NFHL) – Detailed



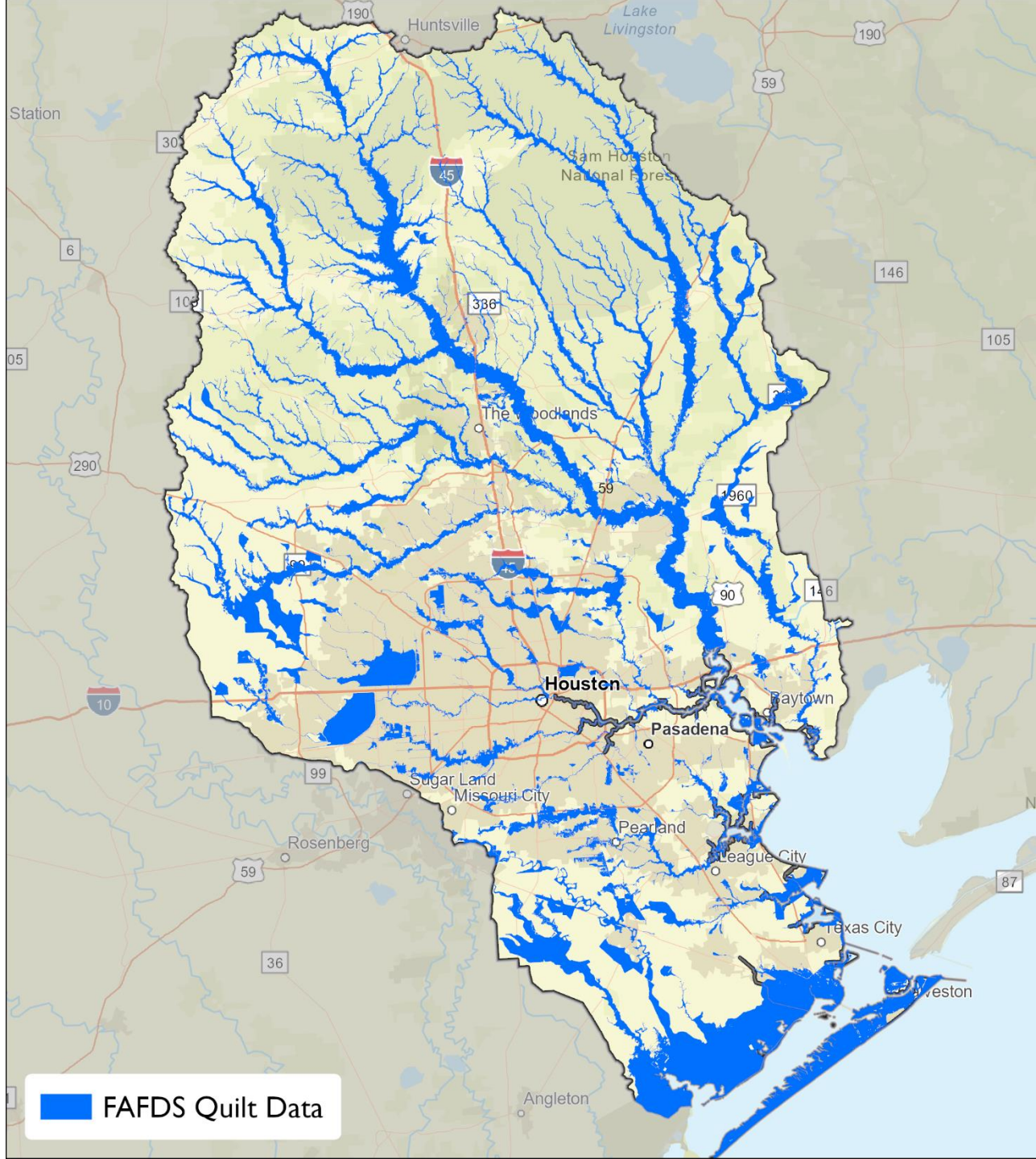
National Flood Hazard Layer (NFHL) – Approximate



Base Level Engineering (BLE)



First American Flood Data Services (FAFDS)



Quilt Data Hierarchy Process



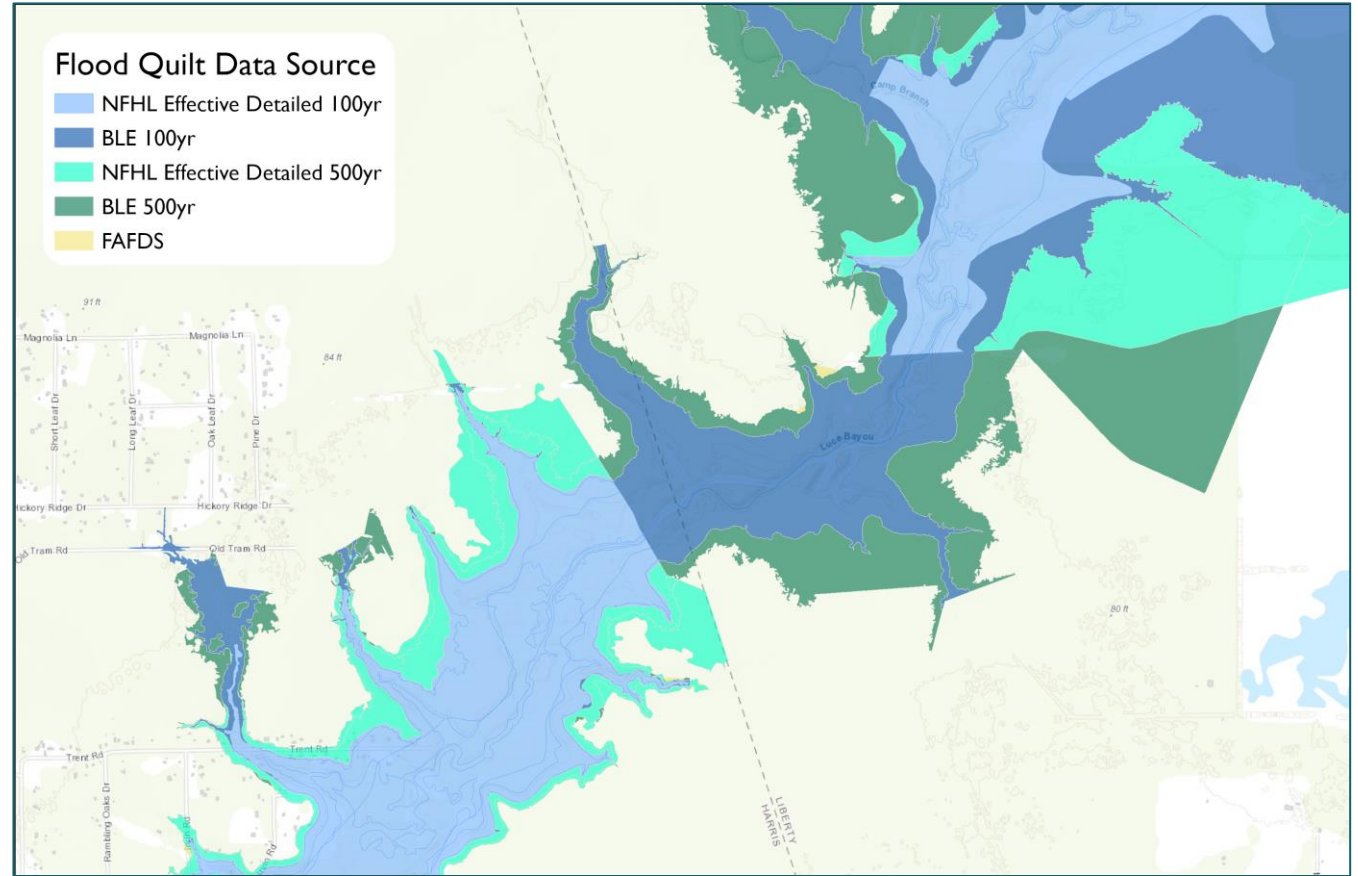
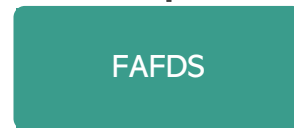
100-year floodplain



500-year floodplain



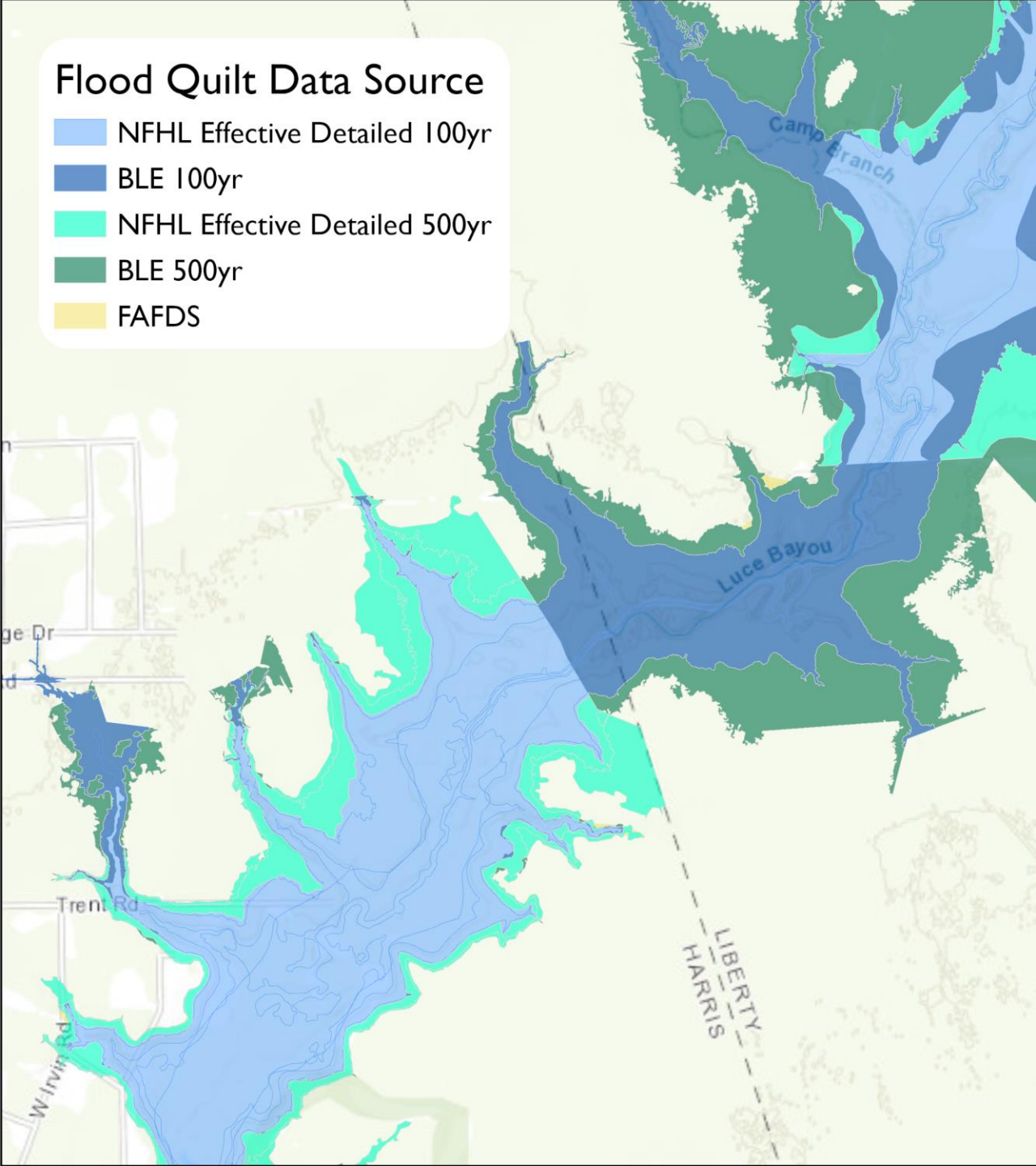
100 & 500- year floodplain



➡ The arrow above denotes erasing/merging of overlapping layers. In this process, the prior layer takes precedence over the latter layer. However

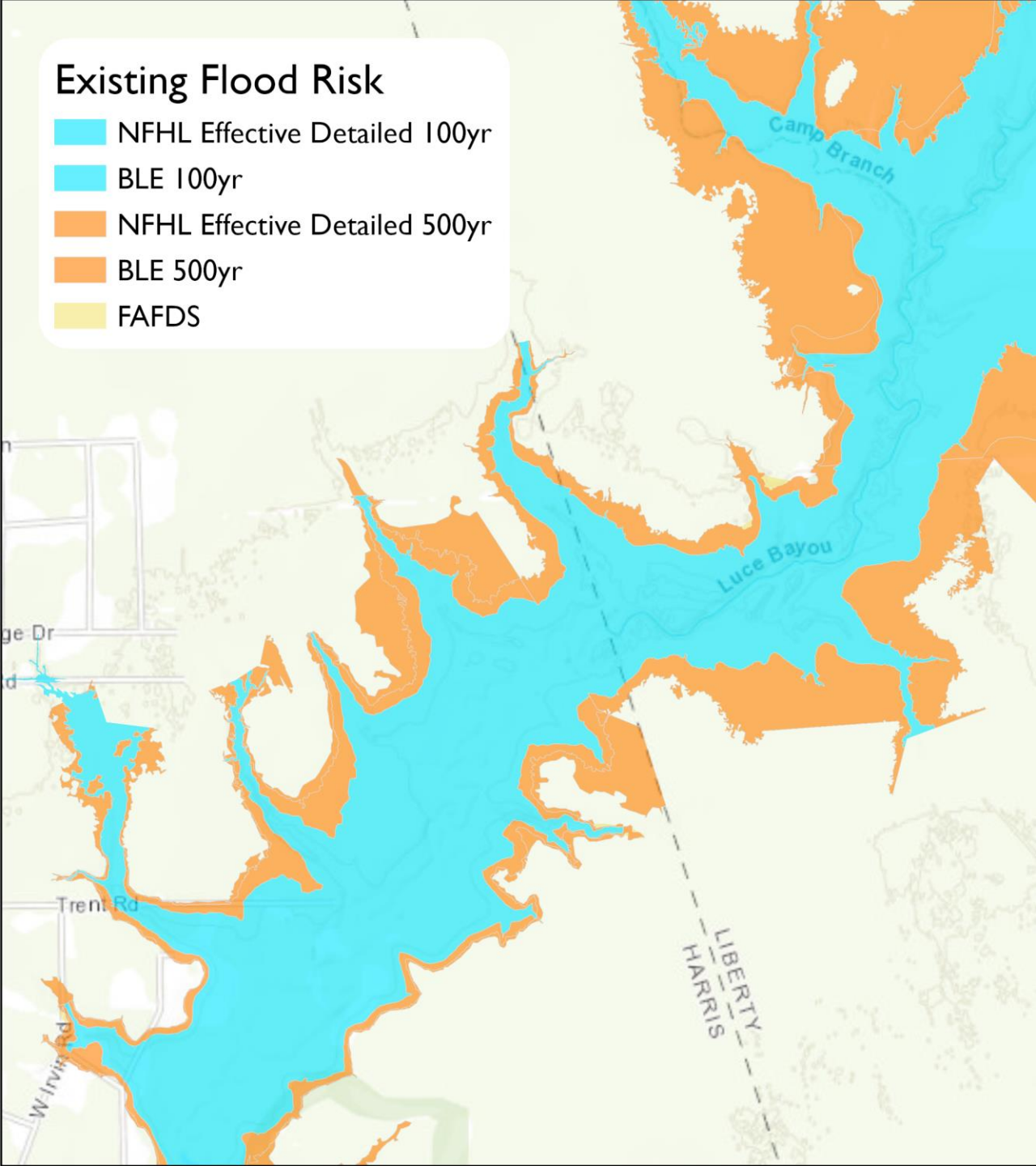
Flood Quilt Data Source

- NFHL Effective Detailed 100yr
- BLE 100yr
- NFHL Effective Detailed 500yr
- BLE 500yr
- FAFDS

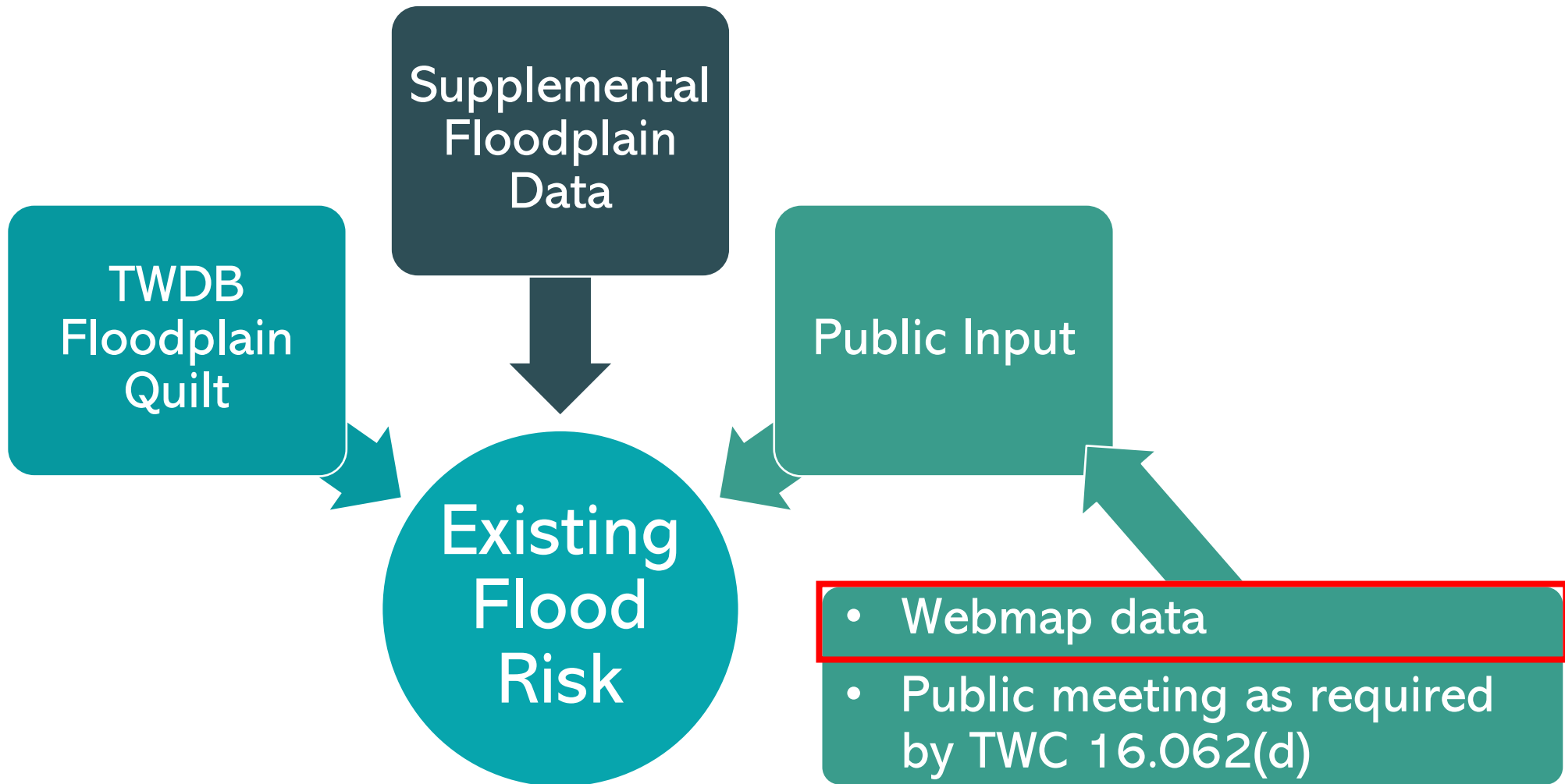


Existing Flood Risk

- NFHL Effective Detailed 100yr
- BLE 100yr
- NFHL Effective Detailed 500yr
- BLE 500yr
- FAFDS



Existing Flood Hazard Analysis



Interactive Webmap Demo



San Jacinto Regional Flood Plan Comment Survey Sign In

Map navigation controls: +, Home, -, Location, Search, Menu

Map content: Flood prone areas (teal), Location marker (yellow square with dot), Tooltip: "Click to add a point"

Map footer: Maxar | Esri Community Maps Contributors, Texas Parks & Wildlife, BuildingFootprintUSA, Esri, HER...

Flood Prone Areas

Location
Click the map to draw the location.
Enter an address to search

Details

What is impacted by the flooding? (required)

How often does the location flood? (required)

What level of storm intensity causes the area to flood? (required)

What appears to be the main cause of the flooding at each location? (required)

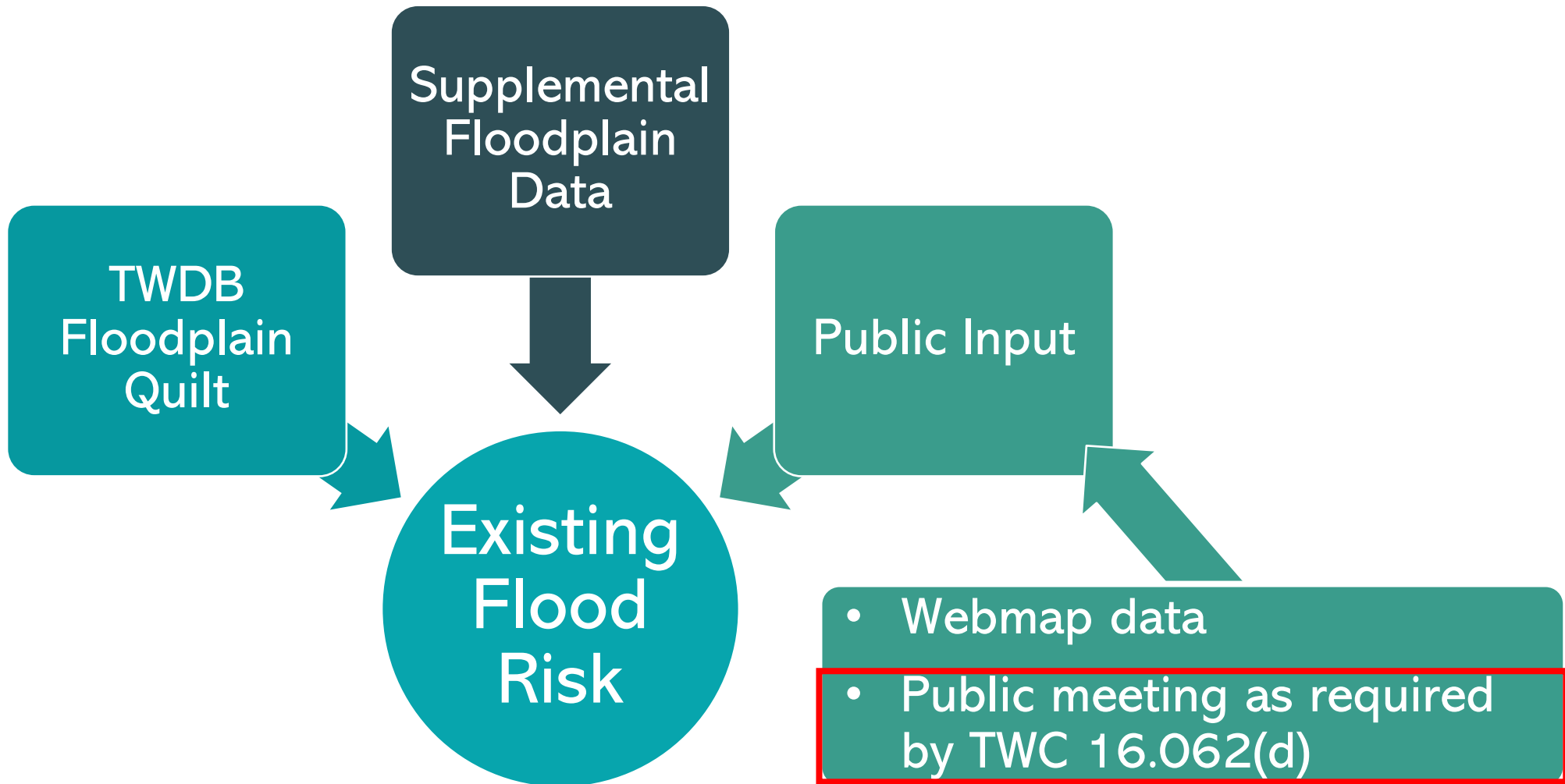
Name

Email (required)

Phone Number

Attachments

Existing Flood Hazard Analysis



Task 2A Priorities & Recommendations

San Jacinto RFPG Priorities Inform Approach and Content

Identify RFPG Priorities related to:

- Interactive Webmap and Data Collection efforts
- Data hierarchy of TWDB floodplain quilt
- Defining Existing Flood Risk

Develop Recommendations to present to the RFPG

Schedule



July

- Discuss Task 3 with Technical Committee
- RFPG to approve:
 - Technical approaches for Tasks 1 & 2A
 - Survey
- RFPG to decide on date and format of Existing Flood Risk Public Meeting (Task 2A)

August

- RFPG to decide on:
 - Floodplain Management Standards
 - Regional Goals
- RFPG to discuss technical approach on defining future flood risk (Task 2B) with the Technical Committee

September

- RFPG to discuss process to identify FMEs, FMSs, and FMPs (Task 4)
- RFPG to discuss Public Meeting on potential FMEs, FMSs, and FMPs (Task 4)



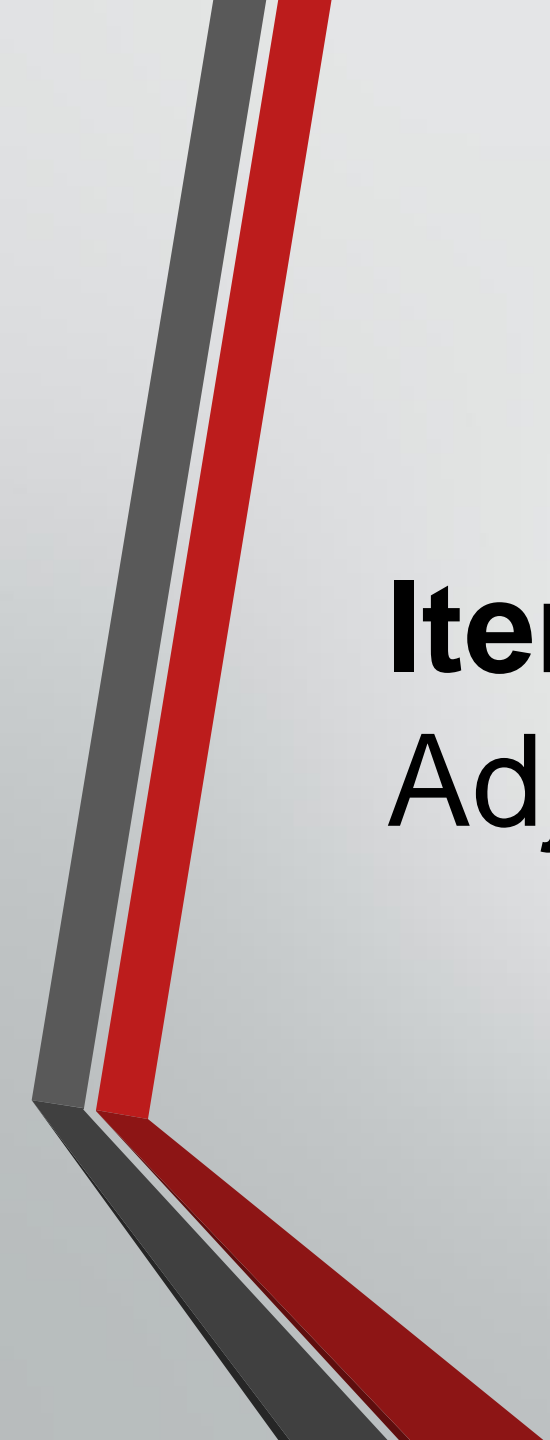
Item 10:

Discuss future agenda items



Item 11:

**Public comments – limit 3 minutes
per person**



Item 12:
Adjourn

San Jacinto Regional Flood Plan Community Officials Survey

San Jacinto Regional Flood Plan

In the wake of historic flooding in Texas, the 2019 Texas Legislature passed legislation to create Texas' first-ever regional and state flood planning process. The Region 6 San Jacinto Regional Flood Planning Group (RFPG) was established by the Texas Water Development Board (TWDB) on October 1, 2020. The RFPG is responsible for developing the first regional flood plan by January 2023, which will culminate in the first-ever state flood plan for Texas.

Short on time? The survey allows for incomplete responses. Fill out as many questions as you have information for. Please also provide feedback on the flooding areas and flood projects in your region by using the Map.

Introduction

Tell us about yourself and your community.

1. Phone number

2. Email

3. 1. Which of the following best describes you?

Select only one.

- I am a representative of a non-governmental organization with flood-related interests.
- I am the floodplain manager for a community participating in the National Flood Insurance Program (NFIP).
- I am a public-sector employee with flood-related responsibilities.
- I am an elected or appointed official with flood-related responsibilities.
- I am a person interested in the regional flood planning process.
- Other (describe)

4. 2. What type of entity do you represent?

Select only one.

- Myself/General Public
- Council of Governments
- County
- Municipality
- Industrial Interests

San Jacinto Regional Flood Plan Community Officials Survey

- Agricultural Interests
- Environmental Interests
- Small Business Interests
- Electrical Utilities
- Water Utilities
- Water Districts
- River Authorities
- Flood Districts
- State/Federal
- Other (please specify)

5. 3. What is the name of your entity?

6. 4. What is your job title?

7. 5. In which county is your entity located?

- Brazoria
- Chambers
- Fort Bend
- Galveston
- Grimes
- Harris
- Liberty
- Montgomery
- San Jacinto
- Walker
- Waller
- Not listed

8. 6. In which city is your entity located?

- Alvin
- Arcola
- Bayou Vista
- Baytown
- Beach City
- Bellaire

San Jacinto Regional Flood Plan Community Officials Survey

- Brookside Village
- Bunker Hill Village
- Clear Lake Shores
- Cleveland
- Coldspring
- Conroe
- Cut and Shoot
- Dayton
- Deer Park
- Dickinson
- El Lago
- Friendswood
- Fulshear
- Galena Park
- Galveston
- Hedwig Village
- Hillcrest Village
- Hilshire Village
- Hitchcock
- Houston
- Humble
- Hunters Creek Village
- Huntsville
- Iowa Colony
- Jacinto City
- Jamaica Beach
- Jersey Village
- Katy
- Kemah
- La Marque
- La Porte
- League City
- Liverpool
- Magnolia
- Manvel
- Meadows Place
- Missouri City
- Mont Belvieu
- Montgomery

San Jacinto Regional Flood Plan Community Officials Survey

- Morgan's Point
- Nassau Bay
- New Waverly
- North Cleveland
- Oak Ridge North
- Panorama Village
- Pasadena
- Patton Village
- Pearland
- Piney Point Village
- Plum Grove
- Prairie View
- Roman Forest
- Santa Fe
- Seabrook
- Shenandoah
- Shoreacres
- South Houston
- Southside Place
- Splendora
- Spring Valley
- Stafford
- Stagecoach
- Sugar Land
- Taylor Lake Village
- Texas City
- Tiki Island
- Todd Mission
- Tomball
- Waller
- Webster
- West University Place
- Willis
- Woodbranch Village
- Woodloch
- Not listed

9. 7. Are you aware of any other jurisdiction beyond cities and counties with flood-related responsibilities in your area, such as a drainage district, levee district, flood control district, etc?

Yes

No

10. 8. If yes, please provide the name of the entity, the name of the contact person, contact information for that entity.

Inventory

The Regional Flood Plan will develop an inventory of natural features and major flood infrastructure within the region. The following section will help us identify and evaluate key features in your community.

11. 9. Does your entity maintain GIS datasets or other digital inventories for any of the following natural features in your jurisdiction

Select all that apply.

If so, please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

Rivers, creeks, tributaries, and functioning floodplains

Wetlands

Sink holes

Alluvial fans

Vegetated dunes

No digital inventory of natural features

Other (please specify)

12. 10. Does your entity maintain GIS datasets or other digital inventories of the following constructed features in your jurisdiction?

Select all that apply. If so, please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

Levees

Sea barriers, walls and revetments

Tidal barriers and gates

Stormwater tunnels

Stormwater canals

Flood protection dams

Detention/retention ponds

San Jacinto Regional Flood Plan Community Officials Survey

- Weirs
- Storm drain systems
- No digital inventory of constructed features
- Other (please specify)

13. 11. If available, provide a link to the location of the data on your entity's website.

14. 12. What percentage of the following infrastructure or natural feature within your jurisdiction would you consider non-functional?

Non-functional: The infrastructure is not providing its intended or design level of service.

Stormwater tunnels

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Stormwater canals

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Flood protection dams

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

San Jacinto Regional Flood Plan Community Officials Survey

Weirs

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Storm drain systems

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Levees

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Sea barriers, walls, revetments

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Tidal barriers and gates

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

San Jacinto Regional Flood Plan Community Officials Survey

Rivers, creeks, tributaries, and functioning floodplains

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Wetlands

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Sink Holes

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Alluvial fans

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Vegetated dunes

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

15. 13. What is the main reason your infrastructure is non-functional?

Please indicate the reason the infrastructure is non-functional.

Stormwater tunnels

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Stormwater canals

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Flood protection dams

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Weirs

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Storm drain systems

- N/A
- Lack of adequate standards during original construction
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- Impacts from development
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San Jacinto Regional Flood Plan Community Officials Survey

Levees

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Sea barriers, walls, revetments

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Tidal barriers and gates

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Rivers, creeks, tributaries, and functioning floodplains

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Wetlands

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Sink holes

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Alluvial fans

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

Vegetated dunes

- N/A
- Lack of adequate standards during original construction
- Inherited due to ownership change or annexation
- Impacts from development
- Inadequate budget to construct proper system

16. 14. What percentage of the following infrastructure or natural feature within your jurisdiction would you consider deficient?

Deficient: The infrastructure or natural feature is in poor structural or non-structural condition and needs replacement, restoration, or rehabilitation.

Stormwater tunnels

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Stormwater canals

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Flood protection dams

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

San Jacinto Regional Flood Plan Community Officials Survey

Weirs

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Storm drain systems

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Levees

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Sea barriers, walls, revetments

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Tidal barriers and gates

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

San Jacinto Regional Flood Plan Community Officials Survey

Rivers, creeks, tributaries, and functioning floodplains

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Wetlands

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Sink Holes

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Alluvial fans

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

Vegetated dunes

- N/A
- 0%
- 25%
- 50%
- 75%
- 100%

17. 15. What is the main reason your infrastructure is deficient?

Please indicate the reason the infrastructure is deficient.

Stormwater tunnels

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Stormwater canals

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Flood protection dams

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Weirs

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Storm drain systems

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

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Levees

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Sea barriers, walls, revetments

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Tidal barriers and gates

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Rivers, creeks, tributaries, and functioning floodplains

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Sink Holes

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

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Alluvial fans

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Vegetated dunes

- N/A
- Lack of adequate standards during original construction
- Infrastructure has reached its useful life
- Impacts from development
- Damage from flood or other natural event
- Inadequate budget to maintain system

Flood Prone Areas

The Regional Flood Plan will identify flood hazards and vulnerability in the region. The following section will help us identify who and what might be harmed by flooding in your community.

16. Provide a list of historical flood events that have affected your jurisdiction. Please provide as much information as possible, such as the date(s), specific location(s) (if appropriate), newspaper articles, the financial value of damages (if known), number of swift water rescues, injuries and/or fatalities (if known). Identify areas on the web map, and/or upload historical information through the upload data page.

18. You may provide written feedback here.

Floodplain Management

The Regional Flood Plan will consider how current floodplain management practices and regulations impact flood risks. The following section will help us evaluate these practices and identify specific flood mitigation and management goals appropriate for this region.

19. 17. Does your community participate in the following programs?

Select all that apply

- National Flood Insurance Program (NFIP)
- Community Rating System (CRS)
- Do not participate but interested in National Flood Insurance Program (NFIP)
- Do not participate but interested in Community Rating System (CRS)
- I don't know
- Do not participate in either program and not currently interested (Please Describe)

20. 18. Does your community participate in the following floodplain management activities?

Select all that apply

- Development review/regulation
- Floodplain or drainage capital projects
- Local assistance with home elevation
- Acquisition of repetitive loss properties
- Flood risk communication campaigns and public outreach
- Flood warning systems (Examples: flashers or staff gages)
- Emergency alert systems
- Priority evacuation areas
- Identification of vulnerable populations
- Programmed operations & maintenance
- Reactive maintenance following complaints or damages after a storm
- Programmed inspection/repair/rehab
- Asset inventory and comprehensive condition assessments
- Ordinance enforcement
- None of the above
- Other (please specify)

Does your community have any of the following floodplain management regulations and policies?

Select all that apply.

21. 19. Development standards

- Floodplain ordinance
- Drainage ordinance
- Stormwater management ordinances
- Building standards for flood proofing and flood protection
- Consideration for fully developed or future conditions land use
- Zoning/land use regulations
- None of the above
- Other (please specify)

22. 20. Infrastructure engineering design standards or Drainage Criteria Manual

- Roadway
- Crossings (bridges and culverts)
- Storm drainage systems
- Detention facilities
- Dams
- Levees/Floodwalls
- None of the above
- Other (please specify)

23. 21. Higher standards

- Freeboard
- Detention policy
- Fill restrictions
- None of the above
- Other (please specify)

24. 22. What future conditions scenarios are required to be evaluated for flood protection projects in your jurisdiction?

Please utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- Existing development

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- Projected development over a future time horizon
- Fully developed areas
- 0.2% ACE or 500-year Floodplain as a proxy
- We do not use future conditions considerations for flood protection projects.
- Other (please specify)

25. 23. Identify the resources your jurisdiction uses to predict future land use and development.

Please utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- TX Demographic Center Population Projections
- Future Land Use Plan from Comprehensive Plan
- Annexation Plans
- Utility CCNs
- Public Improvement Districts
- Texas Enterprise Zones
- Transportation Plans
- None of the above
- Other (please specify)

26. 24. Which of the following best describes how your community enforces its Floodplain Management practices?

Select one

- We actively enforce the entire floodplain management ordinance, perform many inspections throughout construction process, issue fines, violations, and Section 1316s where appropriate, and enforce substantial damage and substantial improvement.
- We enforce much of the ordinance, perform limited inspections and are limited in issuance of fines and violations.
- We provide permitting of development in the floodplain, may not perform inspections, may not issue fines or violations.
- We do not currently enforce floodplain management regulations.
- Additional comments on enforcement:

The Regional Flood Plan Group (RFPG) will consider recommending or adopting consistent minimum standards across the entire region. “Recommended” standards would not require the communities to adopt the minimum standards to have projects included in the Regional Flood Plan and to be eligible for funding. “Adopted” standards would require the communities to adopt the minimum standards to have projects included in the Regional Flood Plan and to be eligible for funding. Recommended and Adopted standards can consider the unique needs of urban vs. rural, geographic needs, or other subregions defined by the RFPG.

27. 25. Should the Regional Flood Planning Group (RFPG) “recommend” consistent minimum flood risk management standards across the entire Region?

These standards would be considered regional best practices, but would not be required to be adopted by local communities to participate in the Plan and be eligible for funding.

28. Yes (please describe)

29. No (please describe)

30. 26. What are some minimum flood risk management standards the Regional Flood Planning Group (RFPG) should consider recommending?

Select all that apply

- Participation in the NFIP or equivalent standards
- Regulate development in the FEMA floodplain or other floodplain designation identified by the RFPG
- Establish higher standards for development or freeboard (additional feet above) known floodplain, Examples: Future Conditions BFE (base flood elevation), Feet above Existing BFE, 0.2% ACE (500-year floodplain) BFE, Feet Above street or curb
- Establish infrastructure protection standards, Minimum design criteria for Buildings, critical facilities (hospitals, schools, fire stations, etc.), roadways, drainage infrastructure (culverts, bridges, storm drain, detention facilities, dams, or levees), property acquisition, and open space
- The RFPG should not recommend minimum flood risk management standards.
- Other (please specify)

31. 27. Should the Regional Flood Planning Group (RFPG) “adopt” consistent minimum flood risk management standards across the entire Region?

These standards would be required to be adopted by local communities to participate in the Plan and be eligible for funding.

32. Yes (please describe)

33. No (please describe)

34. 28. What are some minimum flood risk management standards the Regional Flood Planning Group (RFPG) should consider adopting?

Select all that apply

- Participation in the NFIP or equivalent standards
- Regulate development in the FEMA floodplain or other floodplain designation identified by the RFPG
- Establish higher standards for development or freeboard (additional feet above) known floodplain, Examples: Future Conditions BFE (base flood elevation), Feet above Existing BFE, 0.2% ACE (500-year floodplain) BFE, Feet Above street or curb
- Establish infrastructure protection standards, Minimum design criteria for Buildings, critical facilities (hospitals, schools, fire stations, etc.), roadways, drainage infrastructure (culverts, bridges, storm rain, detention facilities, dams, or levees), property acquisition, and open space
- The RFPG should not adopt minimum flood risk management standards.
- Other (please specify)

35. 29. Please provide any additional thoughts on minimum flood risk management standards for the Regional Flood Planning Group (RFPG) should consider.

36. 30. What are the top 3 priorities the Regional Flood Planning Group (RFPG) should include in the establishment of regional goals?

Select up to 3

- Implement protective standards and policies
- Identify and communicate flood risk
- Quantify potential reduction in risk to life and property
- Restore failing/aging infrastructure
- Implement flood warning and response mechanisms
- Provide or enhance inter-jurisdictional cooperation
- Other (please specify)

37. 31. Are there certain areas within the region that have especially unique circumstances that warrant their own sub-regional goals?

For example, the RFPGs may wish to consider the unique needs of coastal vs. inland, urban vs. rural areas, areas with detailed vs. approximate floodplain mapping and modeling, or upstream vs. downstream areas.

38. Yes (please describe)

39. No

32. Do you have any suggestions in the categories of Legislative, Regulatory/Administrative, or Revenue Generation that could help the region in the areas of floodplain management, flood mitigation planning, and mitigation, and/or reducing flooding impacts to life and property?

40. Legislative

41. Regulatory/Administrative

42. Revenue Generation

Flood Planning

The Regional Flood Plan will identify potential study needs and potentially feasible flood management strategies and projects. The following section will help us incorporate the needs of your community.

43. 33. What types of local and regional flood planning information does your jurisdiction have?

Check all that apply and utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- Hazard Mitigation Plan
- Master Drainage Plans/Stormwater Drainage Plans

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- Flood Protection Plans
- Flood Studies/Flood Risk Assessments
- Watershed Plans
- CRS Plan
- Floodplain Management Plan
- Flood risk screening tools
- Models, including hydrology, hydraulics or any available screening level models
- None of the above

44. 34. What additional relevant planning documents or information does your jurisdiction have?

Check all that apply and utilize the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- Flood disaster reports
- Coastal resiliency master plans
- Transportation plans
- Substantial Damage Estimation (SDE) forms
- Emergency Action Plans (flood-related portions)
- Other information relevant to the RFPG
- None of the above

45. 35. Are there priority areas in your community with no inundation maps or detailed studies that could benefit from a flood study? If yes, please describe the reason for the need.

- No or limited inundation maps
- Outdated maps in need of updated study
- Need maps to identify flooding for urban areas, low lying areas, and/or streets.
- No areas in need of study

Please use the [web map](#) to identify specific areas.

46. 36. Is there funding in your community for the necessary flood studies?

- No funding identified
- Partial local funding available
- Full funding identified
- Full funding secured
- Other (please specify)

47. 37. Have grants or loans been secured for all or a portion of this funding?

48. Yes (please describe)

49. No

50. 38. Identify the resources your jurisdiction uses to identify how physical changes to the land might affect future flood risk.

Please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- Subsidence studies
- Sea level rise studies
- Analysis of sedimentation of flood control structures
- Studies on geomorphic changes
- Watershed studies with future conditions analysis
- None of the above
- Other (please specify)

51. 39. What has your jurisdiction done to address flooding concerns?

- Nothing yet
- Performed existing drainage system maintenance
- Performed project identification and planning activities
- Performed more detailed analyses of areas to identify the source of the flooding
- Upgraded existing drainage infrastructure
- Constructed new drainage systems
- Wetland/floodplain/open space restoration/preservation
- Implemented and enforced drainage design criteria/floodplain management policies
- Other (please specify)

52. 40. What, if any, major infrastructure or flood mitigation projects are currently under development?

Select all of the projects that apply. If so, please provide this information by utilizing the Upload Data engagement tool on the homepage to provide any supporting data and documentation.

- Levees
- Sea barriers, walls and revetments
- Tidal barriers and gates

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- Stormwater tunnels
- Stormwater canals
- Flood protection dams
- Detention/retention ponds
- Weirs
- Storm drain systems
- Other (please specify)

53. 41. What is the current status of the major infrastructure or flood mitigation projects currently under development?

- Project identified
- Project in conceptual planning phase
- Project in feasibility analysis phase
- Project in Preliminary Design
- Project in Final Design
- Project in Construction
- Other (please specify)

42. Describe the project location(s) using the [web map](#) feature.

Please utilize the [Upload Data](#) engagement tool on the homepage to provide any supporting data and documentation.

54. 43. Is there funding in your community for the necessary engineering evaluations and/or design and construction of proposed flood mitigation projects?

Select one

- No funding identified
- Partial funding available
- Full funding identified
- Full funding secured
- Other (please specify)

55. 44. Have grants or loans been secured for all or a portion of this funding?

- Yes
- No
- N/A

56. 45. Are there non-structural flood mitigation projects in your community with funding needs? If so, what level of funding is there in your community for these projects?

- No non-structural flood mitigation projects are needed in my community
- There is a need to identify non-structural flood mitigation projects in my community
- Projects are identified with no funding identified
- Projects are identified with partial funding available
- Projects are identified with full funding identified
- Projects are identified with full funding secured
- Other (please specify)

Funding

Flood studies (evaluations), management strategies, and projects identified in the Regional Flood Plan will be eligible for TWDB funding through grants and loans. The following section will help us understand the current funding mechanisms in your community and identify the proposed role of State financing.

57. 46. Which of the following describes your local funding sources for flood management activities?

Select all that apply

- General Fund
- Bond Program
- Stormwater utility or Drainage fee
- Special Tax Districts
- Impact Fees
- Permitting Fees
- Ad Valorem Tax
- I don't know
- No current dedicated funding but interested
- We do not have a local funding source for flood management activities
- Other (please specify)

58. 47. Have you ever applied for Federal or State grants or loan programs?

If yes, please select which ones below.

- Flood Infrastructure Fund (FIF) [TWDB]
- Building Resilient Infrastructure and Communities Program (BRIC) [FEMA]

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- Hazard Mitigation Grant Program (HMGP) [FEMA, TDEM]
- Pre-Disaster Mitigation (PDM) [FEMA, TDEM]
- Flood Mitigation Assistance (FMA) [FEMA, TWDB]
- U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)
- Community Development Block Grant-Disaster Recovery (CDBG-DR) [HUD, GLO]
- U.S. Army Corps of Engineers Small Continuing Authorities Program (USACE CAP)
- Cooperating Technical Partners Program (CTP) [TWDB]
- State Water Implementation Fund for Texas (SWIFT) [TWDB]
- Flood Protection Planning Grant [TWDB]
- Texas Water Development Fund (DFund) [TWDB]
- Clean Water State Revolving Fund (CWSRF) [TWDB]
- I don't know
- Other (please specify)

59. 48. If you have not considered applying for Federal or State grant/loan programs, please state main reasons below?

Flood Response

The Regional Flood Plan will document the existing flood response preparations in the region. The following section will help us understand the practices your community uses for emergency response.

60. 49. Select the flood response measures your jurisdiction uses for emergency response:

Select all that apply

- Public Emergency Alert System (i.e. reverse 911)
- Flood warning signs
- Flood warning signs with flashing lights
- Flood gauges
- Rain/stream gauges with alerts
- Public-facing website
- Portable/temporary traffic message boards
- Coordination with TxDOT message boards
- Flood forecasting tool
- Crew(s) set up barricades or close gates
- Automatic low water crossing gates

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- Outdoor siren/message speaker system
- Swift water rescue team
- Cameras
- None of the above
- Other (please specify)

61. 50. If your jurisdiction plans to implement changes or additions to the emergency response system over the next five years, select the measures that you anticipate implementing:

- Public Emergency Alert System (i.e. reverse 911)
- Flood warning signs
- Flood warning signs with flashing lights
- Flood gauges
- Rain/stream gauges with alerts
- Public-facing website
- Portable/temporary traffic message boards
- Coordination with TxDOT message boards
- Flood forecasting tool
- Crew(s) set up barricades or close gates
- Automatic low water crossing gates
- Outdoor siren/message speaker system
- Swift water rescue team
- Cameras
- None of the above
- Other (please specify)

62. 51. Does your community have staff dedicated to flood response activities during emergency situations?

- No
- Yes (Please describe)

63. 52. Are the staff embedded within the emergency operations center (or similar centralized location) during the event?

- No
- Yes (Please describe)

64. 53. Indicate the entities with whom you coordinate actions related to flood events (preparation, response, recovery and cleanup).

Select all that apply.

	Before	During	After	N/A
Flood Control District	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USACE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TxDOT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NOAA/NWS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
local dam owner/operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
local levee owner/operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TDEM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ag Extension Agents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brush/bulk debris contractor (on-call)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consultant engineer (on-call)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
local or regional assistance through existing MOUs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

65. 54. Any suggestions/recommendations to improve flood response?

Thank you for participating in the Flood Planning process.