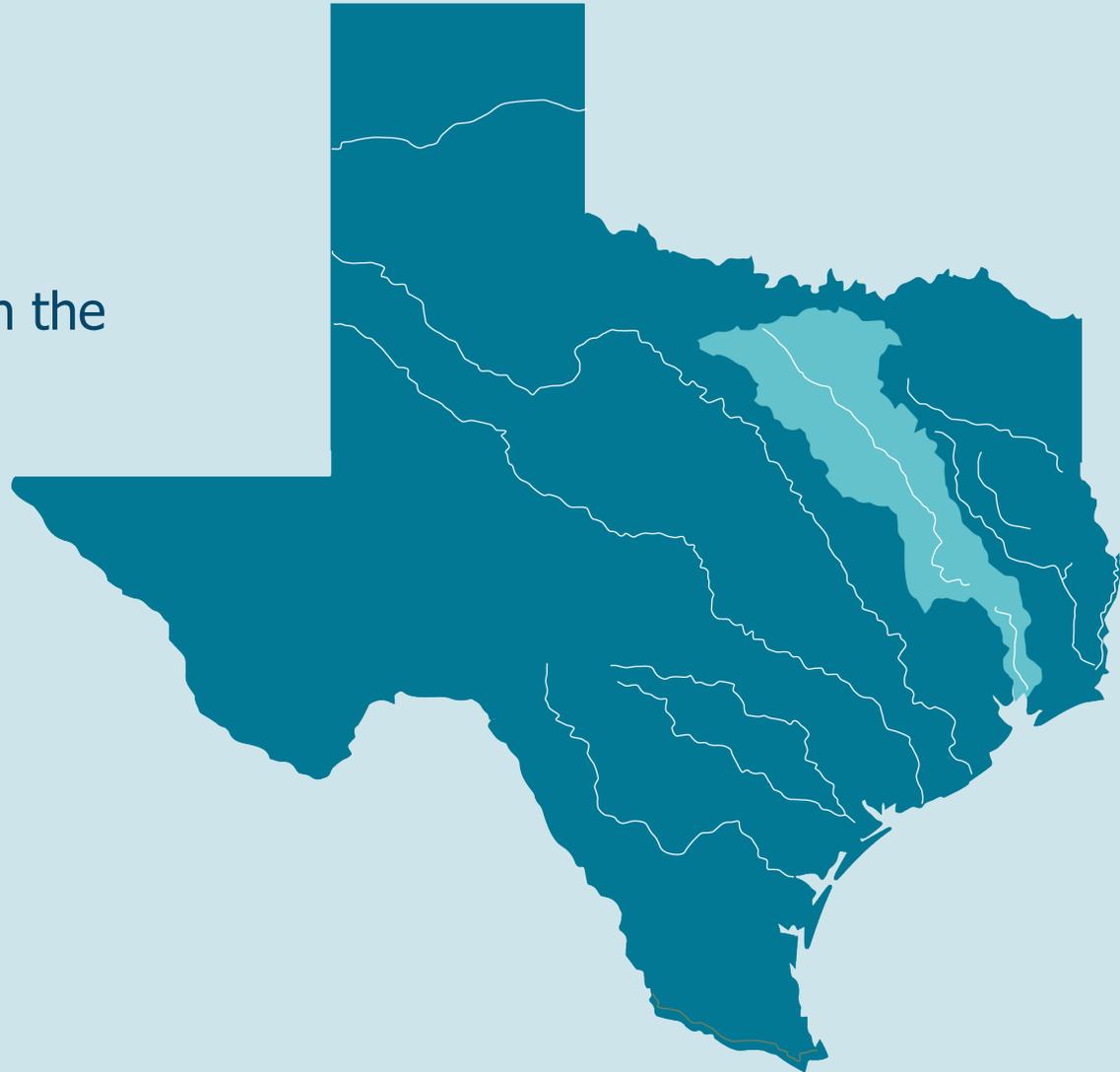




Public Meeting to Accept Comments on the
Draft Regional Flood Plan
Arlington, Texas (hybrid meeting)
September 8, 2022





AGENDA

- **Call to Order / Purpose and Format of the Meeting**
- Roll Call
- Approval of Minutes From Previous Meeting
- Texas Water Development Board Comments
- Overview of Regional Flood Planning Process
- Presentation on the Draft Region 3 Trinity Regional Flood Plan
- Receive Public Comments (limit 3 minutes per person)
- Adjourn



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Region 3 Trinity Flood Planning Group Hybrid Meeting
Thursday, July 21, 2022
10:00 a.m.
Dallas County Records
Building Results Training
Room #7.Y11 (7th Floor)
500 Elm St
Dallas, TX 75202

The Region 3 Trinity Flood Planning Group held a meeting, in person as well as virtual, on Thursday, July 21, 2022, at 10:00 AM. Chairman Glenn Clingenpeel called the meeting to order at 10:00 AM.

Voting Members Present:

Melissa Bookhout
Lissa Shepard
Sano Blocker (absent)
Jordan Macha (absent)
Rachel Ickert
Craig Ottman (alternate for Rachel Ickert)
Matt Robinson
Sarah Standifer
Andrew Isbell
Glenn Clingenpeel
Chad Ballard
Galen Roberts
Scott Harris

10 voting members were present at the time of roll call, constituting a quorum.

Ex Officio Members Present:

Adam Whisenant
Rob Barthen
Allen Nash for Steve Bednarz
Kevin Enoch for Andrea Sanders
Richard Bagans
Humberto (Bert) Galvan
Kris Robles for Brittany Frazier (joined after roll call)
Greg Waller (absent)
Ellen Buchanan
Todd Burrer (joined after roll call)
Jerry Cotter (joined after roll call)
Lisa McCracken (absent)
Cameron Cornett for Diane Howe
Edith Marvin (joined after roll call)
Justin Bower
Lonnie Hunt (absent)

Approval of the Minutes of the Last Meeting

Motion: Sarah Standifer moved to approve the minutes as presented;
Second: Galen Roberts; Action: Minutes were unanimously approved.

Approval of the Minutes of the previous Technical Subcommittee meeting

Motion: Scott Harris moved to approve the minutes as presented;
Second: Lissa Shepard; Action: Minutes were unanimously approved.

Acknowledgement of written public comments received

No written public comments were received.

Receive registered public comments on specific agenda items

No registered public comments were received.

TWDB Update

Richard Bagans with TWDB provided an agency update.

Region 3 RFPG is the first region to have executed all contracts for the additional funding provided for Task 11, 12, and 13.

The RFPG and consultants were reminded of the recent email that was distributed regarding the submission requirements for the Draft Regional Flood Plans. In the next 3 weeks, all other regions will meet to approve their Draft Regional Flood Plans, followed by public hearings in September.

Once the Draft Regional Flood Plan has been approved for submission, members of the RFPG have the discretion to include language to accommodate edits, such as “the RFPG approves to submit the Draft Regional Flood Plan with the updates discussed today or with substantial updates from the Technical Consultant.” Once the Draft Regional Flood Plan is submitted to the TWDB, no edits can be made. However, edits may be allowed through documented public comments or TWDB comments. Every comment received from the public and TWDB will need to be documented and responded to prior to adopting the Final Regional Flood Plan. Members of the RFPG are allowed to submit public comments on the Draft Regional Flood Plan to permit additional review. In summation, edits are allowed, but they will need to be made through a formal documentation process until the final adoption. The Final Regional Flood Plan is expected to be adopted in December 2022 or January 2023. The Amended Regional Flood Plan will allow for continued outreach and for updates in data collection as necessary to enhance Chapters 1-9. In

addition, it will allow for revisions of FMXs and the addition of FMXs under Tasks 4b and 5.

Update from Region 3 Technical Consultant – Stephanie Griffin with Halff Associates:

Ms. Griffin provided an overview of the agenda. Ms. Griffin stated that a summary of individual chapters within the Draft Regional Flood Plan would be presented. The Draft Regional Flood Plan chapters one, two, three, four, five, seven, and eight had previously been discussed in detail with the RFPG members and so only a short summary of those chapters would be presented. Chapters six, nine, and ten were recently finalized and provided to the RFPG members for review. Ms. Griffin stated that those chapters would be presented in more detail and that TWDB responses to the Technical Memorandum Addendum would also be presented before the members would be asked to consider adoption of the draft plan. In addition, she stated that Public Outreach initiatives, including the upcoming open houses, would also be discussed.

a. Overview of the Draft Region 3 Trinity Regional Flood Plan including goals and recommended FMEs, FMPs and FMSs

▪ Executive Summary, Stephanie Griffin with Halff Associates:

The Executive Summary was limited to 20 pages and provided background on the Regional Flood Planning process, key findings, recommendations and highlights of the Draft Regional Flood Plan. TWDB required statements were also included.

▪ Chapter 1 Planning Area Description, Stephanie Griffin with Halff Associates:

Disaster Declarations and flood issues from the past twenty years were summarized in Chapter 1. The chapter also includes a summary of land uses in the region, such as working lands and urbanized areas. In order to identify vulnerable areas within the region, a Social Vulnerability Index (SVI) was used. The SVI supported the development of the Draft Regional Flood Plan by assisting in the identification of proposed and recommended FMXs.

▪ Chapter 2 Flood Risk Assessment, Samuel Amoako-Atta with Halff Associates:

Chapter 2 included a summary of the [regional online data collection tool](#) that was created as an outreach tool to gather local flood-risk information. The regional online data collection tool is still publicly accessible, but is no longer actively monitored. The tool will be actively monitored during the amendment process. Chapter 2 also included the flood risk analysis for the region. The analysis examined current and future flood risk conditions, flood exposure, and the

vulnerability of communities and critical facilities to floods. More information had been collected since the last RFPG meeting, therefore an updated flood risk analysis table was presented side by side with the initial flood risk analysis table.

There was discussion on the regional online data collection tool. It was proposed that a funding mechanism be explored in future flood planning cycles to enable continuous submissions and active monitoring.

- Chapter 3 Floodplain Management Practices and Goals, Stephanie Griffin with Halff Associates:

The RFPG solicited local entity and public input in the development of floodplain management practices and flood protection goals for the Trinity Region. The RFPG recommended six floodplain management standards that were based on responses and input received. In addition, the RFPG developed seven overarching flood mitigation and floodplain management goals that met TWDB requirements. Each goal has at least one specific goal statement provided in the chapter.

- Chapter 4 Assessment and Identification of Flood Mitigation Needs, David Rivera with Freese and Nichols, Inc.:

Chapter 4 describes the process adopted by the RFPG to conduct a flood mitigation needs analysis to identify the areas of greatest known flood risk and areas where the greatest flood risk knowledge gaps exist. The assessment guided the effort of identifying the FMXs. 356 FMEs, 33 FMPs, and 143 FMSs were identified across the basin and subsequently divided into different categories prior to the deadline of April 2022. Additional FMXs have been submitted after the deadline and will be reviewed under the amended plan process.

- Chapter 5 Recommendation of FME, FMS, and Associated FMP, David Rivera with Freese and Nichols, Inc.:

Chapter 5 utilized the information developed in Chapter 4 to recommend flood mitigation actions, also known as FMXs, for inclusion in the Draft Regional Flood Plan. The RFPG Technical Subcommittee met several times to review all FMXs to ensure they met the TWDB requirements. 342 of the 356 FMEs were recommended and included in the Draft Regional Flood Plan. During the review process, 14 FMEs were not recommended due to the study being completed, the sponsor's lack of interest, or duplication. The total cost for implementing 342 recommended FMEs was estimated at \$145,966,000 million dollars.

During the review process, seven of 33 FMPs were recommended and included in the Draft Regional Flood Plan. These seven FMPs

had the necessary supporting documentation to be fully evaluated and met the TWDB requirements. The total cost for implementing seven recommended FMPs was estimated at \$175,770,000 million dollars.

During the review process, 136 of 143 FMSs were recommended and included in the Draft Regional Flood Plan. Seven FMSs were not recommended due to similarities to other FMSs, with which they were ultimately combined in the plan. The total cost for implementing seven recommended FMSs was estimated at \$746,900,000 million dollars.

- Chapter 6 Impacts of Regional Flood Plan, David Rivera with Freese and Nichols, Inc.:

Chapter 6, Task 6A summarizes the overall impacts of the FMXs recommended in the Draft Regional Flood Plan. Chapter 6, Task 6B summarizes the recommended FMXs that would measurably contribute to or impact water supply development and the State Water Plan. A few FMX examples were presented.

Impact of FME example: It was determined that approximately 70% or 38,000 stream miles of the Trinity River Basin had outdated or approximated floodplain mapping. The Draft Regional Flood Plan recommended 35 county-wide FMEs to improve floodplain mapping coverage. The recommended FMEs would provide up-to-date floodplain mapping for approximately 9,500 streams or 25% of the entire Trinity River Basin.

Impact of FMP example: One of the recommended FMPs presented was a regional detention project that would replace an existing undersized detention pond and provide sufficient storage capacity to mitigate flood events associated with the 100-year flood. The benefits of implementing the seven recommended FMPs would provide flood risk reduction benefits to over 4,000 people within their zone of influence and help ameliorate roadway flooding conditions. Chapter 6 will be updated as the consultants continue with the amendment process.

Impact of FMS example: Because of the nature of the actions, recommended FMSs are not readily quantifiable. However, sponsors of three of the recommended FMSs dealing with property acquisitions provided detailed evaluations regarding the estimated effects of implementation. They estimated that the three recommended property acquisition FMSs would reduce flood exposure to 183 structures and 207 people.

Task 6B evaluated and summarized the impacts of the recommended FMSs and FMPs on the State Water Plan. The recommended FMSs or FMPs will not have a measurable impact on water supply, water availability, or the operation of existing water supply reservoirs.

Similarly, the recommended FMSs and FMPs are not anticipated to have any measurable impact on the State Water Plan.

A comment was provided to the Consultants regarding the duplication of Region C text in Chapter 6. It appeared on page 6-19 and again on page 6-22.

- Chapter 7 Flood Response Information and Activities, Audrey Giesler with Halff Associates:

Chapter 7 summarizes the current flood response preparations in the Trinity Region using demographic, historical, projected, and statistical data from Chapters 1 through 6. Survey responses received from entities through the online data collection tool were also documented. The survey revealed that 1) most participating jurisdictions do not have comprehensive flood plans, 2) coordination between city and county entities is essential at all stages of a flood event, and 3) online and on-the-ground outreach regarding mitigation measures is essential.

- Chapter 8 Administrative, Regulatory & Legislative Discussion, Audrey Giesler with Halff Associates:

Chapter 8 included Legislative, Administrative, Regulatory, Flood Planning, and New Funding Recommendations. Eight Legislative recommendations, nine Administrative and Regulatory recommendations, and 17 Flood Planning recommendations were approved by the RFPG for inclusion in the Draft Regional Flood Plan. New Funding recommendations were not identified through the regional flood planning process. However, several existing funding mechanisms as well as recommended changes to those existing funding recommendations were proposed and included under Legislative or Administrative recommendations. The RFPG recommendations emphasize Counties' responsibilities and abilities, the acquiring of additional funding or the State providing additional funding, and rural and small communities challenges faced due to minimized resources.

It was proposed that a working group be established to revisit these recommendations prior to the next flood planning cycle.

- Chapter 9 Flood Infrastructure Financing Analysis, David Rivera with Freese and Nichols, Inc.:

Chapter 9 summarized how sponsors of recommended FMXs proposed to finance the recommended actions. The chapter focused on understanding the funding needs of the sponsors and recommended the role the State should have in financing the recommended FMXs. Methodology and results of the financing survey

were presented. As of July 5th, 2022, only 22 of 158 sponsors had responded to the survey. The overall total cost needed to implement the recommended FMXs was estimated at over one billion dollars. It was projected that the majority of the funds, \$961,274,000 dollars, would need to be provided by state and federal sources. It was mentioned that the financing survey will continue to be promoted throughout the region, and that the amendment process will allow information from future responses to be included in the Amended Plan.

It was stated that the RFPG had met with several sponsors to address outstanding questions. Further comments and additional FMXs received will be documented as public comment and will be responded to and addressed after the public comment period closes, but they cannot be added to the Draft Plan. However, edits and additions may be incorporated in the Amended Draft Regional Flood Plan. TWDB stated that they will review the public comment process and provide clarification to the RFPG.

There was some discussion on the availability of funding for recommended FMXs, and how those funds would be allocated. It was clarified that all data and supporting materials submitted in the Region 3 Regional Flood Plan will be incorporated into the Statewide Flood Plan which the TWDB will then use to determine which actions receive funding. A prioritization review may occur if limited funding is available. Chapter 5 of the Regional Flood Plans will be used by the TWDB as one resource in the ranking process.

The first regional flood plan erred on the side of inclusion and sought to identify all eligible FMXs and areas at risk of flooding within the region. During subsequent flood planning cycles, additional efforts will be made to identify potential FMXs in areas of flood risk that do not have local or regional champions. It was suggested that an RFPG meeting be held during the interim flood planning cycles to discuss FMX funding and provide input.

- Chapter 10 Public Participation and Plan Adoption, Owen Ramsey with Cooksey Communications:

An overview of Chapter 10 was provided. Chapter 10 highlights the efforts that have been undertaken to increase public awareness about flood planning, gather data for the regional flood plan, and encourage continued engagement throughout the flood planning process. Chapter 10 includes four appendices that encompass informational flyers, written comments received prior to submissions of the Draft Regional Flood Plan, oral comments that will be received, and written comments that will be received.

- i. Responses to select TWDB comments on the Technical

Memorandum and Technical Memorandum Addendum, Stephanie Griffin with Halff Associates:

TWDB provided informal comments on the Technical Memorandum that was submitted in January 2022 and the Technical Memorandum Addendum that was submitted in March 2022. TWDB requested clarification on short-term goals to establish a baseline measurement. A "Baseline" column was added to the short-term goals that are found in Chapter 3 and baselines were clarified. TWDB also provided comments on the included tables, maps, and the geodatabase. The consultants have addressed all comments.

TWDB provided a checklist to the consultants on July 1st to ensure that all deliverables associated with the Draft Plan have been met. It was requested that in the motion to adopt the Draft Region 3 Regional Flood Plan, that the RFPG provide flexibility to the consultants to allow for modifications based on the checklist or other non-material changes such as typographical errors.

- b. * Consider approval of the Draft Regional Flood Plan to be submitted to the TWDB, the RFPG website and three libraries within the region

Chairman Glenn Clingenpeel called for a motion to approve the Draft Regional Flood Plan to be submitted to the TWDB contingent upon the incorporation of any necessary non substantive comments or changes, published to the RFPG website and provided to three libraries within the region for public access.

Motion: Scott Harris approved the Draft Regional Flood Plan to be submitted to the TWDB contingent upon the incorporation of any necessary non substantive comments or changes, published to the RFPG website and provided to three libraries within the region for public access; Second: Rachel Ickert; Action: Motion passed unanimously.

- c. Process to receive, review and respond to comments received on Draft Regional Flood Plan, Stephanie Griffin with Halff Associates:

Written comments from the public must be received by October 10th, 2022. Oral comments will be received at the September 8th RFPG meeting. TWDB is expected to provide comments in mid-October. The Consultant Team will group comments together by common topics and develop draft responses for RFPG's consideration. An RFPG meeting will be scheduled in November or December to review all comments and consider draft responses. Any additional FMXs received will be considered for potential inclusion in the amended plan.

- d. Public outreach updates, Allison Chvojan with Cooksey Communications:

Open House Informational Sessions have been scheduled for August 29th – August 31st. For the purpose of preventing a quorum, members of the RFPG should notify the consultants if they wish to attend. Scott Harris, Andrew Isbell, and Glenn Clingenpeel confirmed they will attend the Open House meeting in Dayton on August 29th. Andrew Isbell tentatively confirmed and Glenn Clingenpeel confirmed they will attend the Open House meeting in Crockett on August 30th. Rachel Ickert and Glenn Clingenpeel confirmed they will attend the Open House meeting in Arlington on August 31st.

The purpose and format of the Open House Informational Sessions was presented. Breakout sessions are planned for the public to ask specific questions. Informational postcards will be sent to interested parties. Informational flyers and news releases will be provided via email to the RFPG and interested stakeholders to share.

It was requested that the flyers include a Regional Flood Planning overview and Draft Regional Flood Plan highlights.

Updates from liaisons for adjoining coastal regions

- a. Region 5 Neches RFPG: Andrew Isbell reported that the Region 5 meeting will be held on Friday, July 22nd.
- b. Region 6 San Jacinto RFPG: Scott Harris reported that Region 6 has approved the Draft Regional Flood Plan and is open for public comment. Todd Burrer also reported via WebEx Chat Feature:

“My report from the San Jacinto basin is that our plan is finished and online ready for review. Will be having our public engagement meeting on August 5.”

Update from Planning Group Sponsor

There were no updates.

Review administrative costs requiring certification

There were no administrative costs requiring certification.

Receive registered public comments – limit 3 minutes per person

Mr. Clingenpeel opened the floor for public comments. No public comments were received and the public comment section was closed.

Announcements

Scott Harris suggested that the RFPG start engaging with the [Gulf Coast Protection District](#) on current and future projects in the lower basin. Scott Harris

will provide a point of contact and continue the discussion with Glenn Clingenpeel.

Confirm meeting date for next meeting

Thursday, September 8th, 2022, at 6:00 p.m. the Public Hearing will take place at the NCTCOG Transportation Meeting Room

Thursday, November 17th, 2022, at 10:00 a.m. Location TBD

Thursday, December 8th, 2022, at 11:00 a.m. Location TBD

Consider agenda for next meeting

Adjourn

11:51 am pm adjourned

THE ABOVE AND FOREGOING ARE CERTIFIED TO BE TRUE AND CORRECT MINUTES OF THE REGULAR MEETING OF THE REGION 3 TRINITY FLOOD PLANNING GROUP HELD JULY 21, 2022.

SCOTT HARRIS, Secretary
REGION 3 TRINITY FLOOD
PLANNING GROUP

Date

GLENN CLINGENPEEL, Chair
REGION 3 TRINITY FLOOD
PLANNING GROUP

Date



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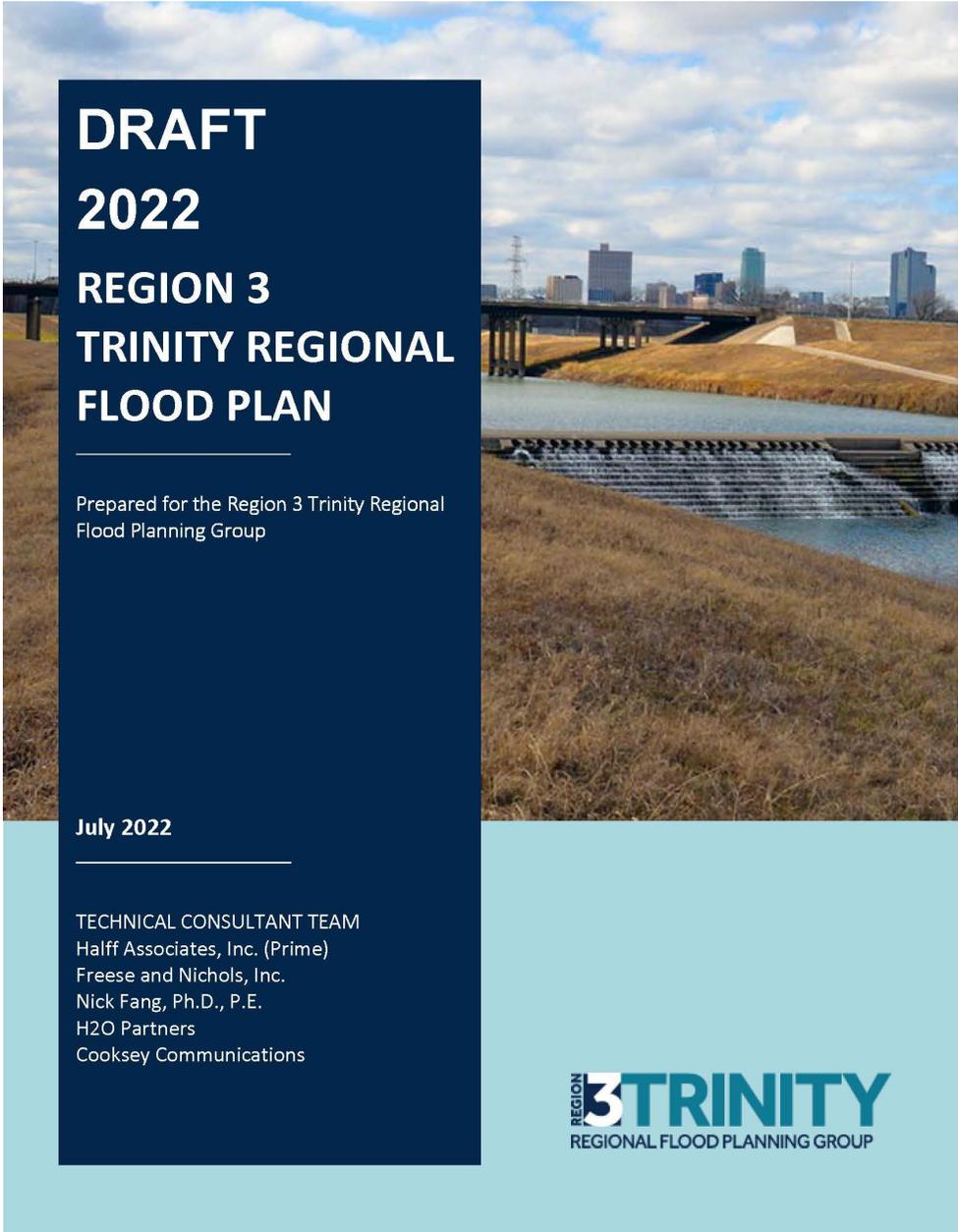


Regional Flood Planning Overview

Glenn Clingenpeel

Chair, Trinity Regional Flood
Planning Group

Executive Manager, Technical
Services and Basin Planning,
Trinity River Authority



DRAFT

2022

**REGION 3
TRINITY REGIONAL
FLOOD PLAN**

Prepared for the Region 3 Trinity Regional
Flood Planning Group

July 2022

TECHNICAL CONSULTANT TEAM
Half Associates, Inc. (Prime)
Freese and Nichols, Inc.
Nick Fang, Ph.D., P.E.
H2O Partners
Cooksey Communications

REGION 3 TRINITY
REGIONAL FLOOD PLANNING GROUP

The Trinity Regional Flood Planning Group

Voting Members

Chad Ballard
Sano Blocker
Melissa Bookhout
Glenn Clingenpeel
Scott Harris
Rachel Ickert
Andrew Isbell
Jordan Macha
Galen Roberts
Matt Robinson
Lissa Shepard
Sarah Standifer

Interest Represented

Small business
Electric-generating utilities
Agricultural interests
River authorities
Water utilities
Flood districts
Public
Environment
Water districts
Industries
Counties
Municipalities



The Trinity Regional Flood Planning Group



Non-Voting Members

Organization Represented

Richard Bagans

Texas Water Development Board

Rob Barthen

Texas Department
of Agriculture

Steve Bednarz

Texas State Soil and Water
Conservation Board

Justin Bower

Houston-Galveston Area Council

Ellen Buchanan

Region 5 Neches Flood Planning
Group (liaison)

Todd Burrer

Region 6 San Jacinto Flood Planning
Group (liaison)

Jerry Cotter

US Army Corps of Engineers, Fort
Worth Rep.

Bert Galvan

Texas Commission on
Environmental Quality

Diane Howe

Federal Emergency
Management Agency

Lonnie Hunt

Deep East Texas Council
of Governments

Edith Marvin

North Central Texas Council
of Governments

Lisa McCracken

US Army Corps of Engineers,
Galveston Rep.

Kris Robles

General Land Office

Andrea Sanders

Texas Division
of Emergency Management

Greg Waller

National Weather Service /
West Gulf River Forecast Center

Adam Whisenant

Texas Parks and Wildlife Department

An underwater photograph showing the surface of the water with gentle waves. The water is a deep teal color, and the lighting is soft, creating a serene and slightly mysterious atmosphere. The surface of the water is visible in the upper third of the frame, with light reflecting off the ripples.

What is State and Regional Flood Planning?

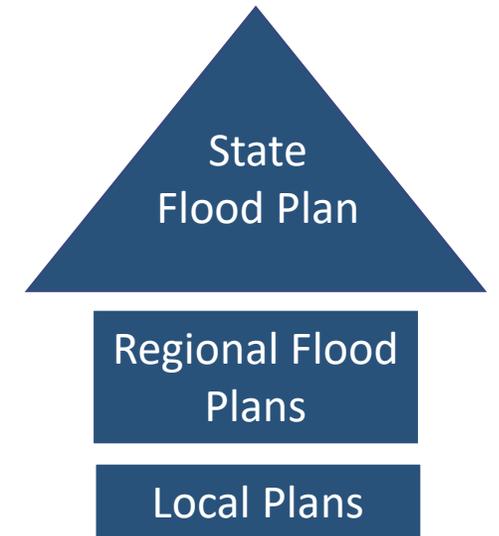
Texas' State Flood Planning Process

- 2019: 86th Texas Legislature passed Senate Bill 8, providing new process for statewide flood planning
- Texas Water Development Board (TWDB) charged with implementation
- 15 regional flood planning groups (RFPGs)
- 12 interest categories represented
- First planning cycle started 2020, nearing end (future cycles: 5 years)
- Regional Plans to become part of State Flood Plan Sept. 2024



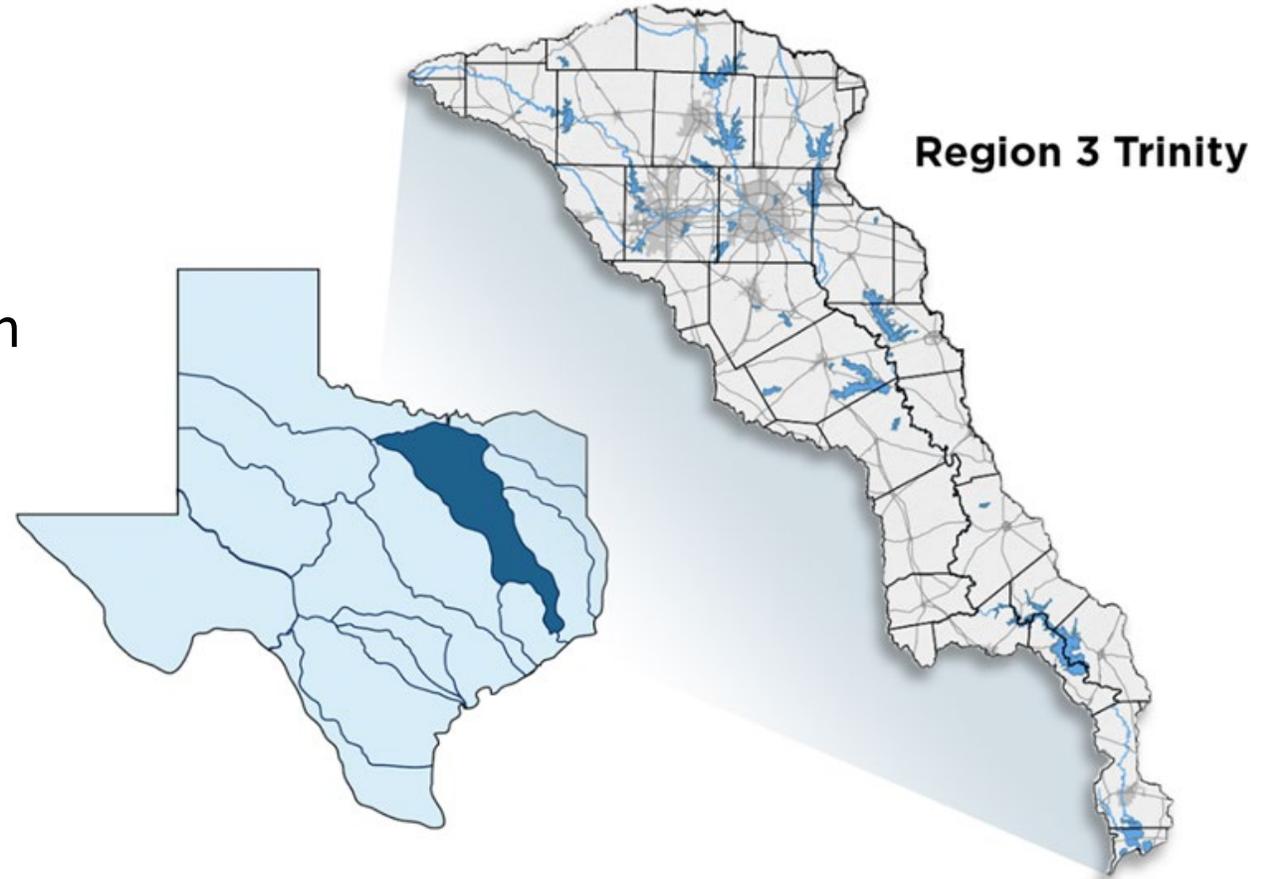
Regional Flood Planning Process

- Approach modeled after regional water planning
- Grassroots ("bottom up") approach
- Same scope of work for each RFPG
- Regional flood plans will roll up to become State Flood Plan
- Public process



Region 3 Trinity River Basin

- From Cooke County in north to Chambers County on Gulf Coast
- All or part of 38 counties
- Nearly 18,000 square miles, with almost 16,000 stream miles
- 30+ major lakes and reservoirs
- Population approximately 8 million and rapidly growing



The background is a solid teal color with a horizontal line across the middle, suggesting a water surface. Above the line, there are subtle, wavy patterns that look like reflections on water. Below the line, the teal is a uniform, slightly darker shade.

Draft Regional Flood Plan Overview

Regional Flood Plan Components

Existing & Future Conditions

Task 1

Introduce region

Task 2

Determine current and future flood risk

Task 3

Establish planning goals

Task 4

Identify potential solutions

Recommended Solutions

Task 5

Select recommended solutions

Task 6

Identify potential impacts

Task 7

Summarize flood response info

Task 8

Recommend improvements

Task 9

Identify funding sources

Task 10

Encourage public participation

Amended to Include

Task 11

Perform additional outreach

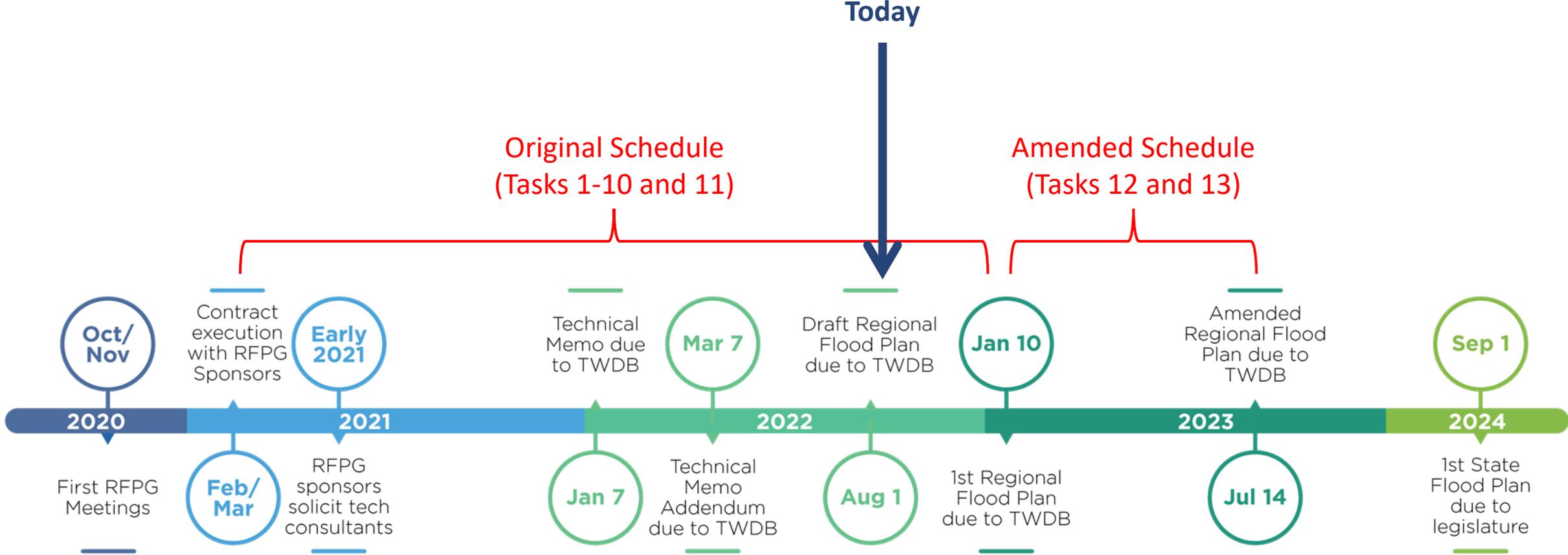
Task 12

Advance FMEs to FMPs

Task 13

Adopt amended plan

Schedule



Chapters 1 through 3

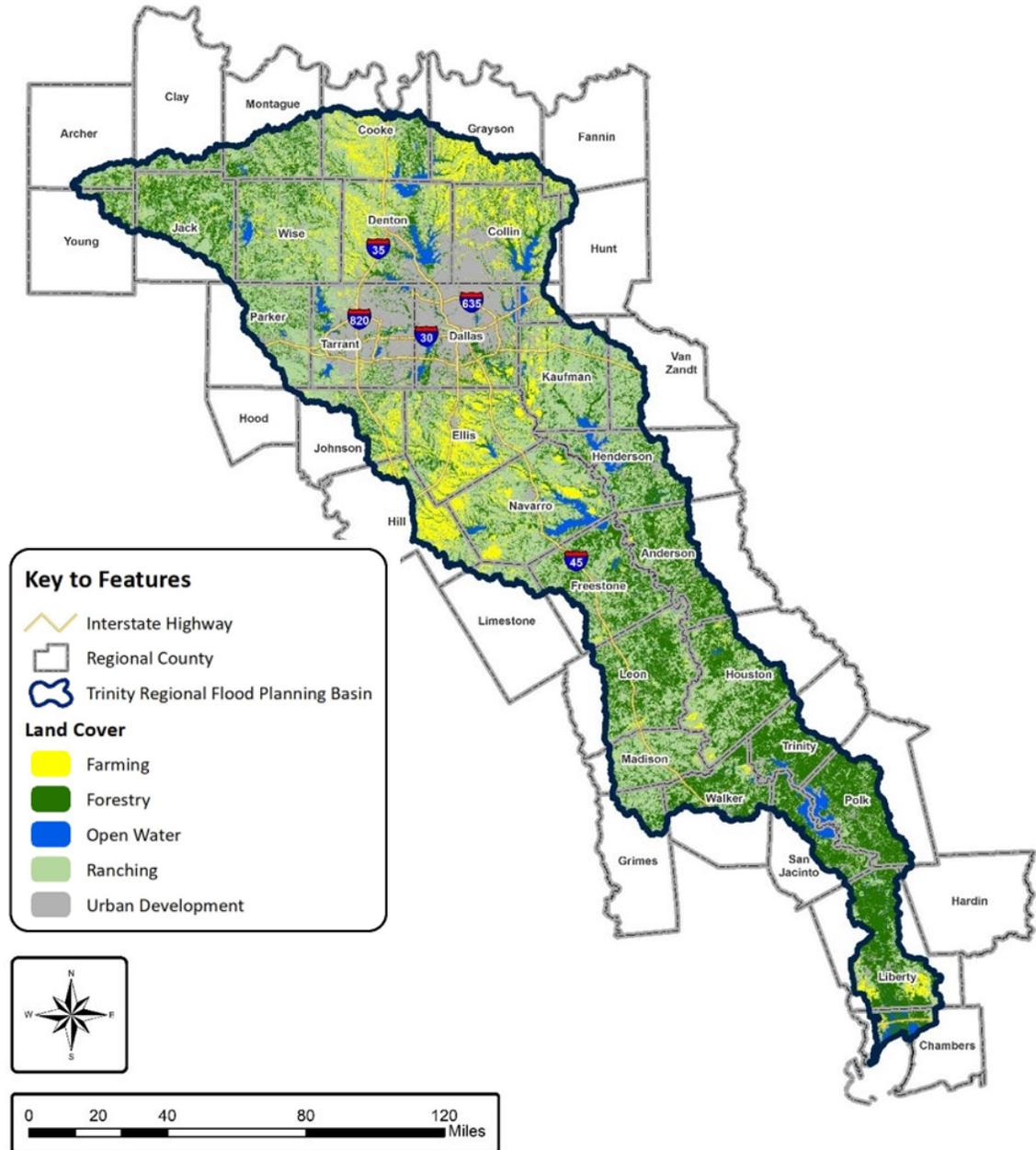
Overview of Region

Current and Future Flood Risk

Planning Goals

Basin-by-Basin: Working Lands

- Farming/ Crop Production
 - Predominant in Upper and Mid Basin areas
 - Concentrations of farming area in Liberty Co.
- Forestry
 - Predominant working land type in Lower Basin
 - Relationship to national forests and preserves
- Ranching
 - Prominent land use throughout basin
 - Largest concentration of ranching areas to NW of Metroplex and in Mid Basin area



Data Collection Website & Outreach

Community Representative?

Community Stakeholders in the RFPG process include individuals with flood-related responsibilities, such as County and Community officials and Staff as well as Federal, State, regional, and local authorities, utilities and districts.

By logging on with your email address and the password provided, you can help provide the RFPGs with localized knowledge of flood planning resources and validate a wide array of flood risk data. Through this data collection effort the RFPG is requesting community stakeholders:

- Provide information about your contact information and flood-related responsibilities.
- Verify collected flood information through an entity-specific background.
- Respond to questions to support the development of the regional flood plan.
- Verify and provide geospatial data through data uploads and web maps.

The RFPG appreciates any information you are able to verify and provide with the understanding that it may not be possible to provide response to all items.

[Entity Login](#)

Member of the Public?

Public Stakeholders in the RFPG process include general public individuals, groups, and organizations including non-profit and non-governmental organizations with an interest in providing information to support flood planning efforts.

By providing your name, address, and email address, you can help provide the RFPG with localized knowledge of flood prone areas and areas where flood mitigation is needed. Your contact information is used to document who is providing information in case we have any follow-up questions.

Name

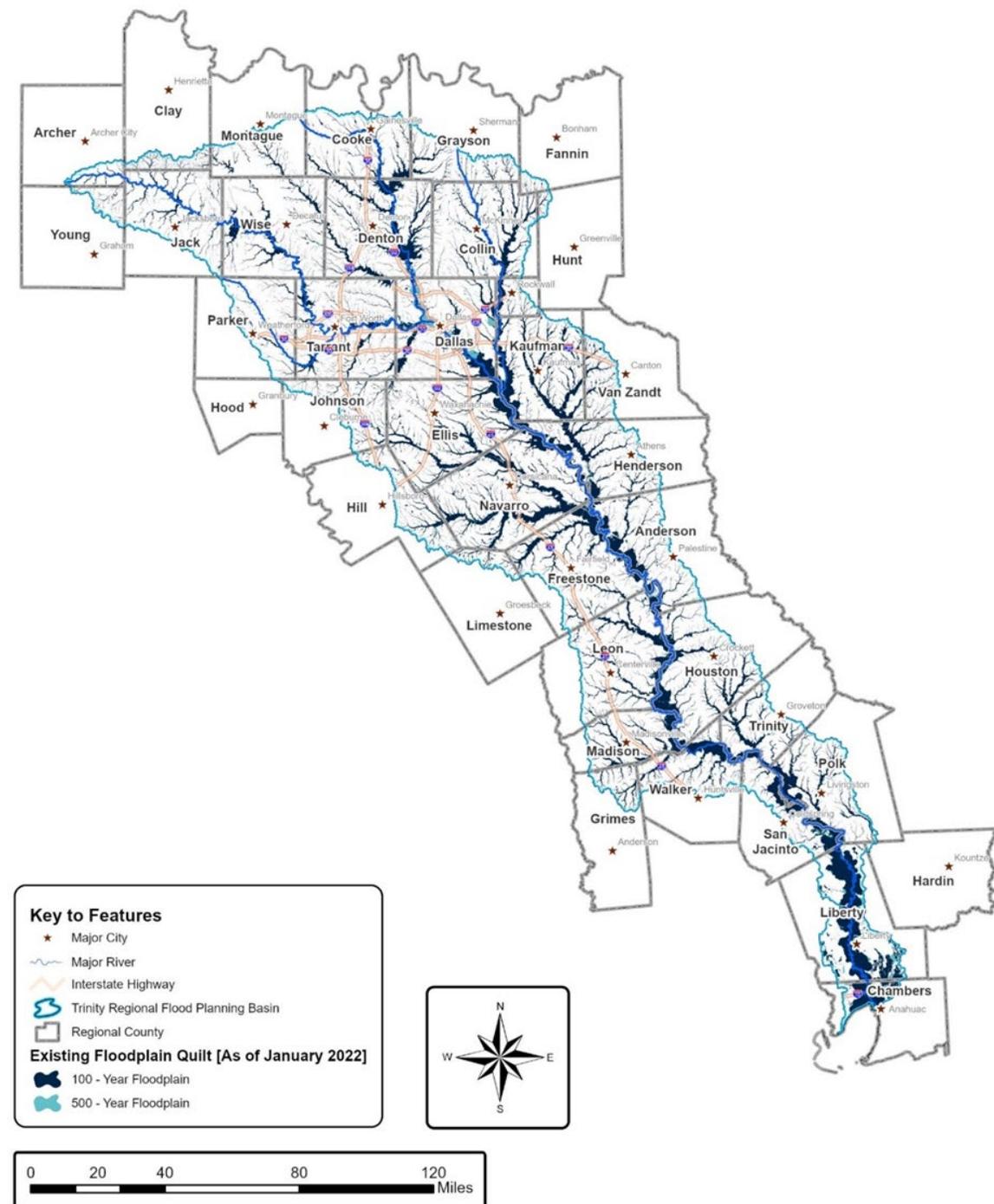
Address

Email

[Take me to the map](#)

Key Findings: Existing Conditions

- Region-wide 1.32 million people displaced by 1% Annual Chance Event (ACE)
- Total value of exposed buildings > \$636 billion
- Even more impact from 0.2% ACE
- Assessed impacts of flooding on socially vulnerable populations and community's ability to recover

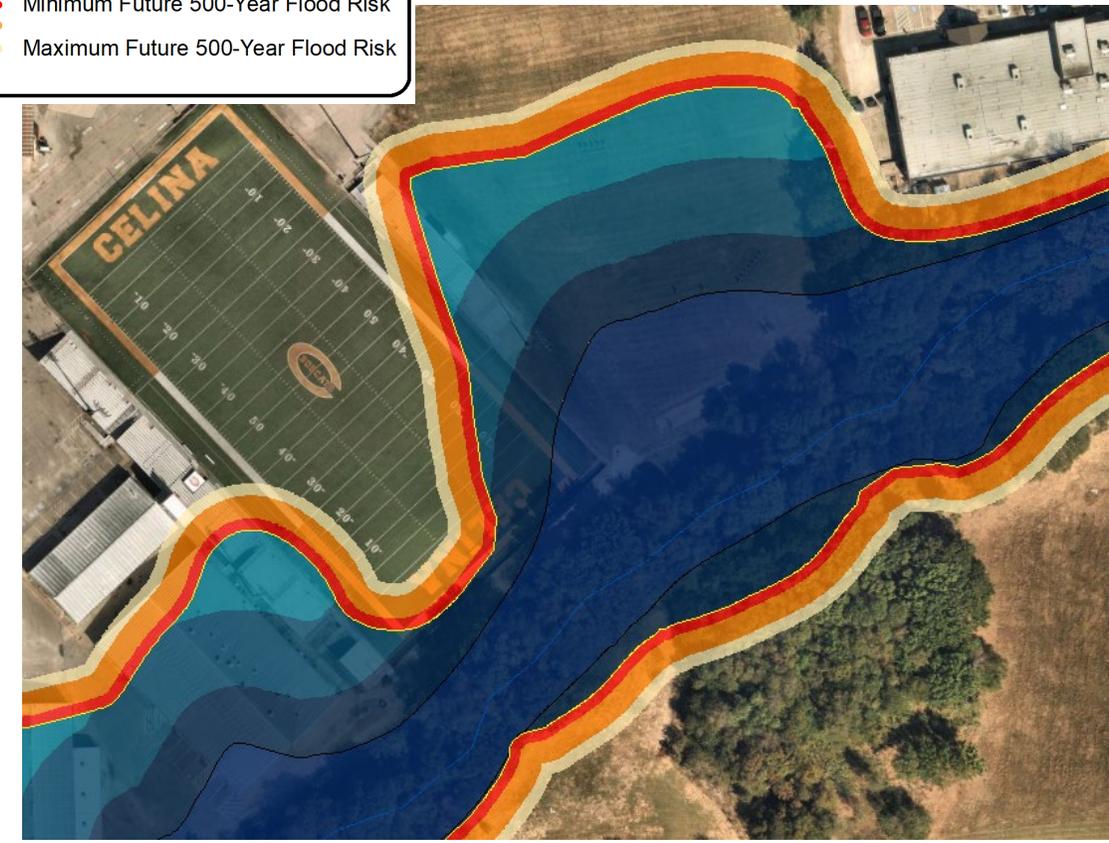


Key Findings: Future Conditions

- Hard to assess because few communities map or model
 - RFPG recommended future 1% ACE floodplain as range between current 1% and 0.2% ACE events
 - RFPG recommended 40-foot max buffer for future 0.2% ACE floodplain
- Result: *29% more structures and 25% more people would be potentially impacted by future flood risk conditions*

Key to Features

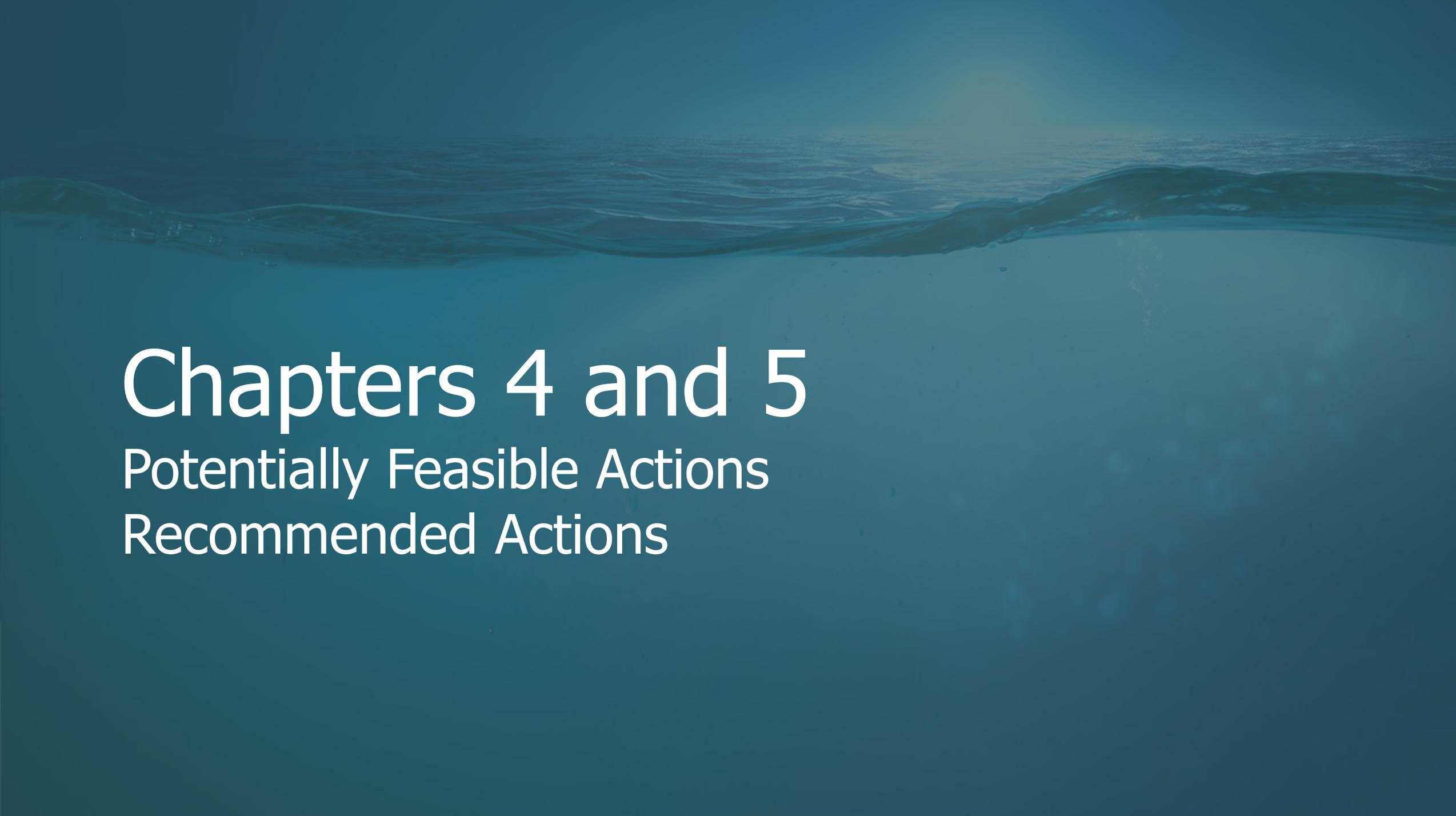
- Stream Centerline
- Existing 100-Year Limit
- Existing 500-Year Limit
- Zone of Potential Expanded Risk**
 - Minimum Future 100-Year Flood Risk
 - Maximum Future 100-Year Flood Risk
 - Minimum Future 500-Year Flood Risk
 - Maximum Future 500-Year Flood Risk





Regional Flood Planning Goals

- (1) Improve flood warning and public safety
- (2) Improve flood analyses
- (3) Reduce property damage and loss
- (4) Preserve the floodplain
- (5) Improve flood infrastructure
- (6) Expand flood education and outreach
- (7) Expand funding



Chapters 4 and 5

Potentially Feasible Actions

Recommended Actions



Potential Actions

Flood Management Evaluations = FME = *studies*

Flood Mitigation Projects = FMP = *projects*

Flood Management Strategies = FMS = *plans*

The Draft Plan includes a variety of recommendations for each category, totaling over \$1 billion in recommended solutions.

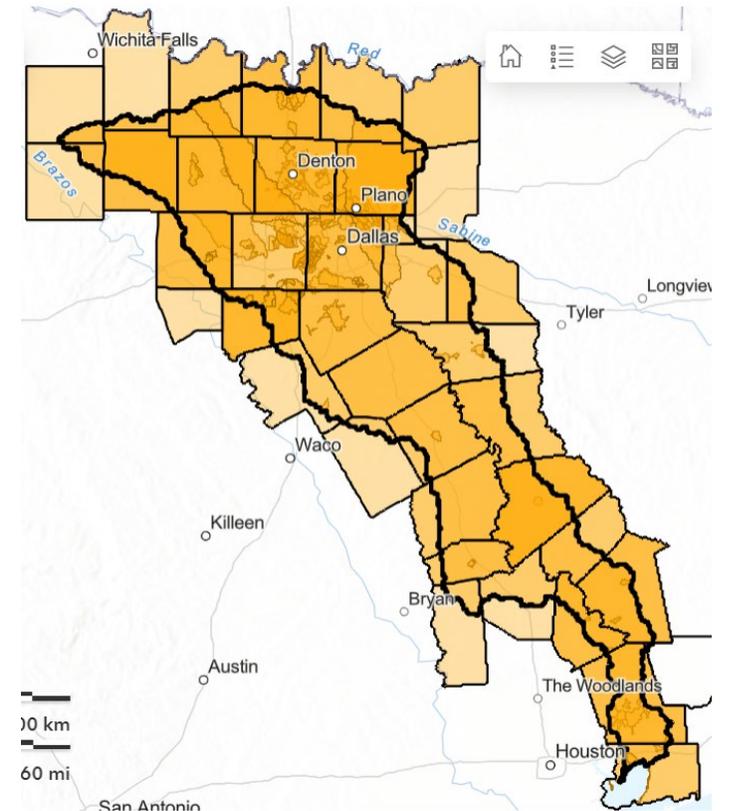
FME: Region-Wide

- 342 out of 356 recommended and included in Draft Plan

| FME Type | FME Description | # of FMEs Recommended | Total Cost |
|---------------------------|-----------------------------------------------------------------------------------|-----------------------|----------------------|
| Preparedness | Studies on Flood Preparedness | 5 | \$3,150,000 |
| Project Planning | Previously Identified Drainage Projects and Flood Studies | 228 | \$60,937,000 |
| Watershed Planning | Flood Mapping Updates, Drainage Master Plans, H&H Modeling, Dam and Levee Failure | 108 | \$79,879,000 |
| Other | Dam Studies | 1 | \$2,000,000 |
| | Total | 342 | \$145,966,000 |

Regional Flood Planning Goals

- (1) Improve flood warning and public safety
- (2) Improve flood analyses**
- (3) Reduce property damage and loss
- (4) Preserve the floodplain
- (5) Improve flood infrastructure
- (6) Expand flood education and outreach
- (7) Expand funding



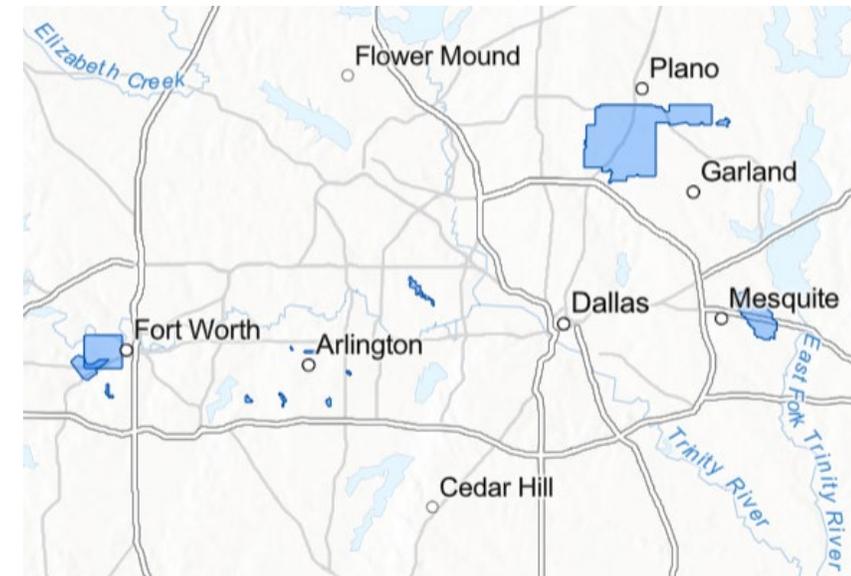
FMP: Region-Wide

- 7 FMP fully evaluated and recommended so far, based on currently available data
- Many others (30+) still being evaluated for potential inclusion in the Amended Plan

Regional Flood Planning Goals

- (1) Improve flood warning and public safety
- (2) Improve flood analyses
- (3) Reduce property damage and loss**
- (4) Preserve the floodplain**
- (5) Improve flood infrastructure**
- (6) Expand flood education and outreach
- (7) Expand funding**

| FMP Name | Sponsor | Total Cost |
|-----------------------------------------------------------|------------|----------------------|
| Spring Meadows Estates Detention Pond Design | Sachse | \$1,868,000 |
| West Irving Creek Phases 2, 3, and 4 | Irving | \$98,746,000 |
| Arlington VC(A)-1 Drainage and Erosion Improvements | Arlington | \$2,601,000 |
| Lancaster/Foch Area Mitigation | Fort Worth | \$11,771,000 |
| Linwood Park Flood Mitigation (Western Arlington Heights) | Fort Worth | \$50,523,000 |
| Sunnyvale Urban Flooding Reduction Improvements - Area 1 | Sunnyvale | \$4,560,000 |
| Sunnyvale Urban Flooding Reduction Improvements - Area 2 | Sunnyvale | \$5,701,000 |
| | | \$175,770,000 |



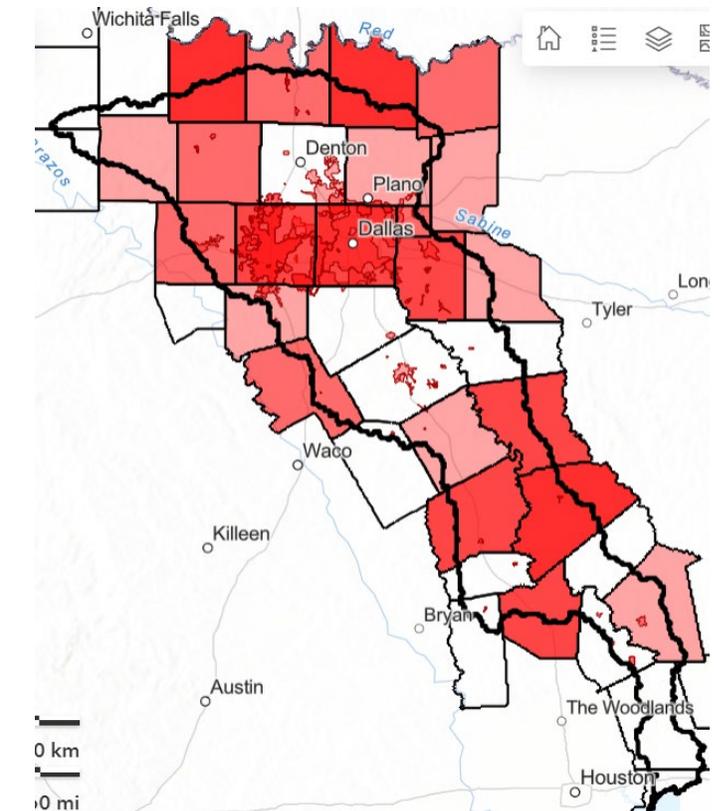
FMS: Region-Wide

- 136 out of 143 recommended and included in Draft Plan

Regional Flood Planning Goals

- (1) **Improve flood warning and public safety**
- (2) Improve flood analyses
- (3) Reduce property damage and loss
- (4) **Preserve the floodplain**
- (5) Improve flood infrastructure
- (6) **Expand flood education and outreach**
- (7) **Expand funding**

| FMS Type | FMS Description | # of FMSs Recommended | Total Cost |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|
| Education and Outreach | Turn Around, Don't Drown Campaigns; NFIP Education; Flood Education; Dam Safety Education; Floodplain Regulatory Awareness | 19 | \$975,000 |
| Flood Measurement and Warning | Flood Warning Systems; Rain/Stream Gauges and Weather Stations; Low Water Crossings (LWCs) | 20 | \$5,300,000 |
| Infrastructure Projects | Hazardous Roadway Overtopping Mitigation Program; Citywide Drainage Improvements; Flood-Proofing facilities | 5 | \$430,000,00 |
| Other | Debris Clearing Maintenance; Channel Maintenance and Erosion Control; Dam Inspections; Levee Inspections; City Parks; Green Infrastructure; Open Space Programs | 12 | \$8,525,000 |
| Property Acquisition and Structural Elevation | Acquire High Risk and Repetitive Loss Properties; Acquire and Preserve Open Spaces; Flood-Proofing Facilities | 28 | \$295,500,000 |
| Regulatory and Guidance | City Floodplain Ordinance Creation/Updates; Zoning Regulations; Land Use Programs; Open Space Regulations | 52 | \$6,600,000 |
| Total | | 136 | \$746,900,000 |



Chapters 6 through 9

Potential Impacts of Actions

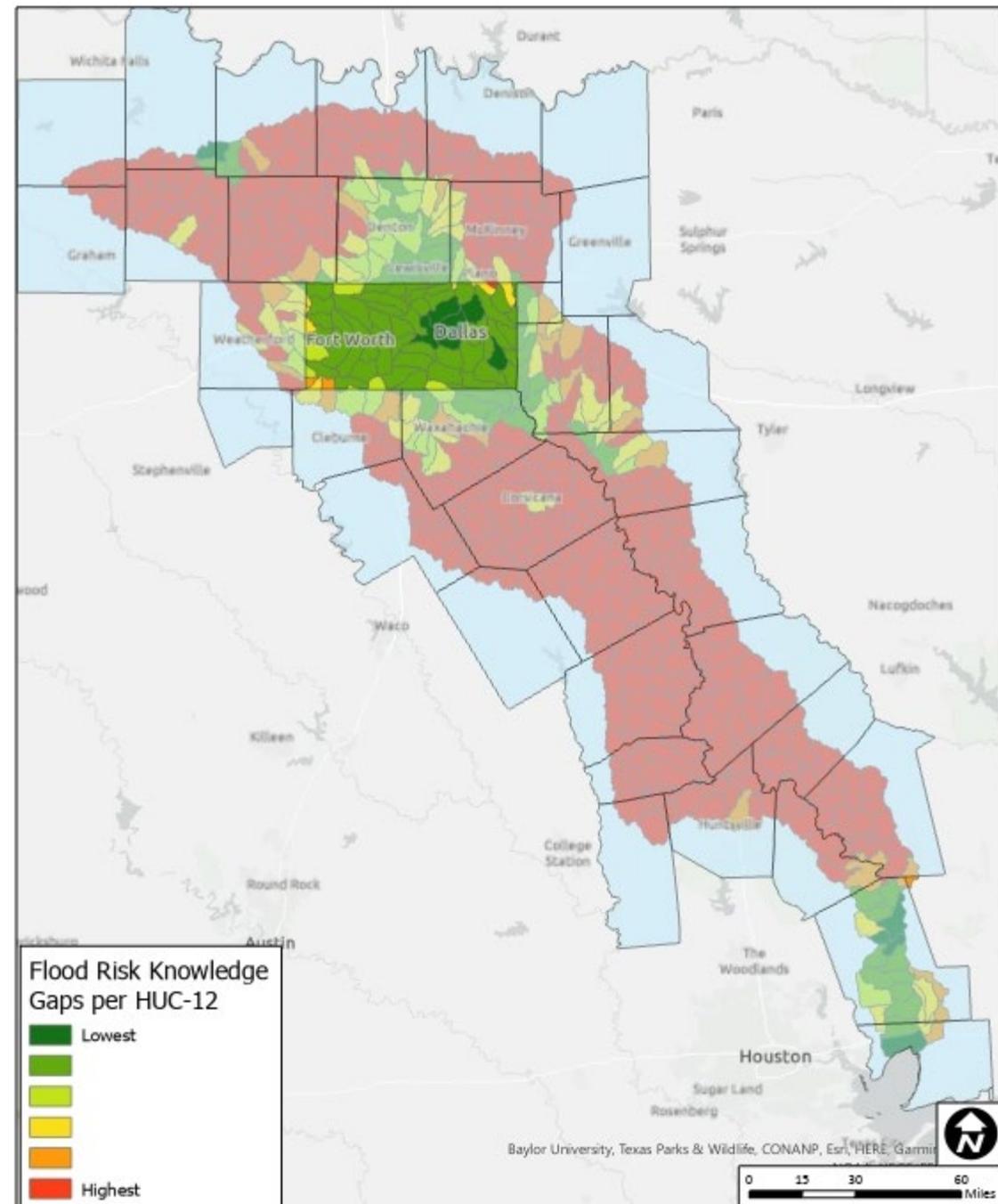
Flood Response Summary

Recommended Planning Process Improvements

Potential Funding

Impacts of the Regional Flood Plan

- Total area in need of flood risk identification vs. total area to be evaluated by recommended FMEs
- ~**70%** of mapped areas considered outdated and/or approximate
- ~**38,000** stream miles classified as outdated and/or approximate
- Draft Plan includes **35** county-wide FMEs to improve mapping coverage



Impacts of the Regional Flood Plan - FMP

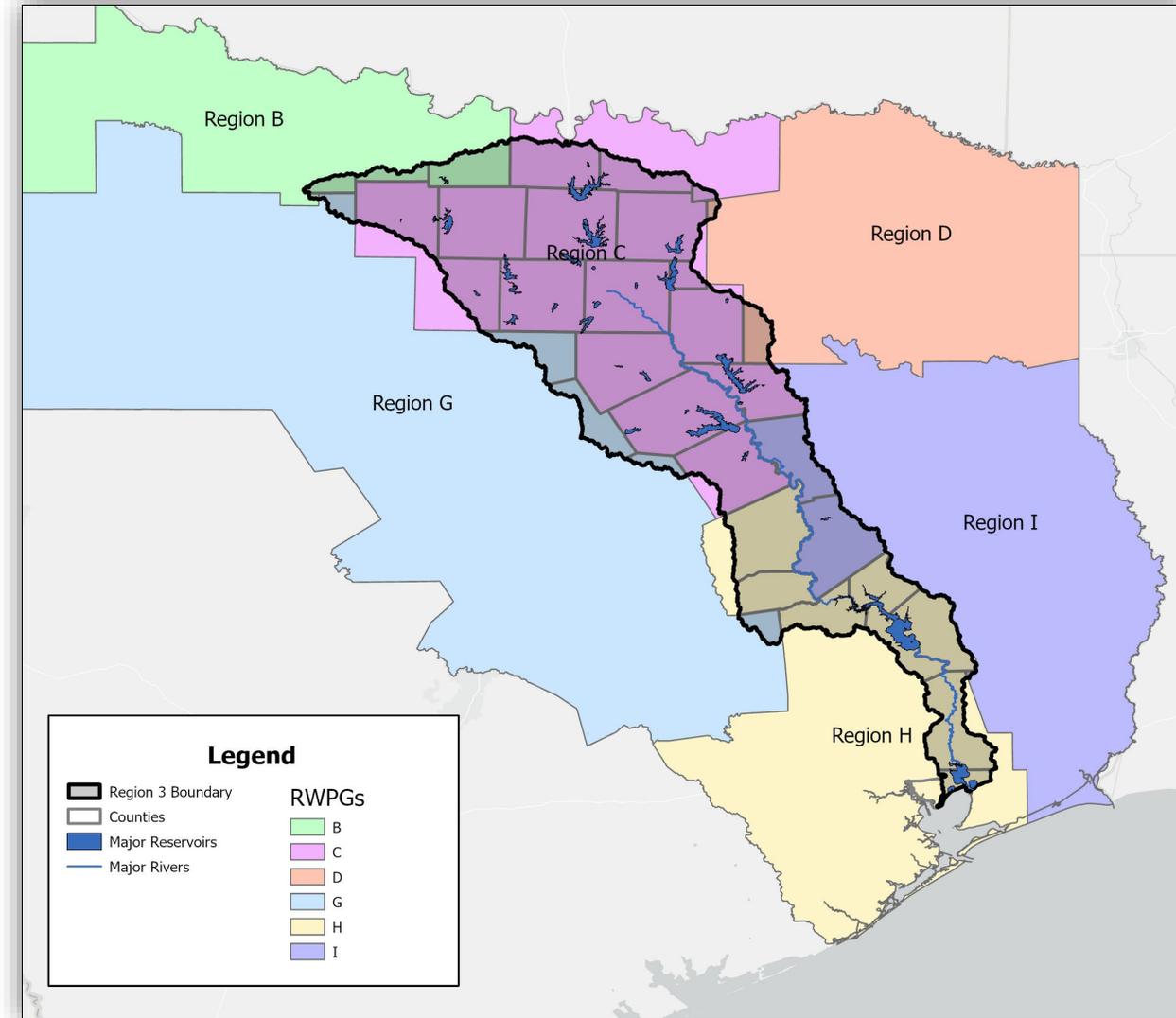
- Exposure reduction after FMP implementation
- More FMPs to be included in the Amended Plan

| Flood Exposure | Existing Conditions | After FMP Implementation | Exposure Reduction from FMPs |
|------------------------------------|---------------------|--------------------------|------------------------------|
| | 1% ACE | 1% ACE | 1% ACE |
| Exposed Structures | 1,500 | 1,108 | 392 |
| Exposed Population | 37,593 | 33,421 | 4,172 |
| Exposed Low Water Crossings | 9 | 2 | 7 |
| Number of Road Closure Occurrences | 253 | 192 | 61 |
| Road Length (Mi.) | 31 | 23 | 8 |

Contributions/Impacts on State Water Plan

Impacts of State Flood Plan on State Water Plan

- Recommended FMSs or FMPs will not have measurable contribution or have negative impact on water supply or water availability
- None of recommended FMSs or FMPs impact operation of existing water supply reservoirs
- Recommended FMSs and FMPs not anticipated to have measurable impact on water supply, water availability, or projects in State Water Plan



Financing Analysis – Who will pay?



Funding surveys sent to Sponsors on 6/7/2022 and 6/14/2022



14% Sponsor response rate (22 of 158) (as of 7/5/2022)



Overall, total cost of **\$1,076,686,000** needed to implement recommended FMEs, FMSs, and FMPs



From total cost, projected **\$961,274,000** of state and federal funding is needed

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Chapter 10

Public Participation

Public Participation

Numerous public meetings of RFPG and Technical Subcommittee, including hybrid meetings across region

Meeting notices and materials posted to website and Texas SOS, and sent via MailChimp to regional stakeholders / interested parties

Maintenance of stakeholders / interested parties database with nearly 850 unique email addresses and nearly 1,100 individual contacts

- City and county officials
- State, federal and other entities with flood planning responsibilities
- Public / interested party sign-ups from website

Development / use of award-winning website



TRINITY
REGIONAL FLOOD PLANNING GROUP

About Us Meetings Resources Public Comment Contact Us

Focused on managing flood risk to reduce loss of life and property from flooding

Upcoming Meeting Information

Trinity RFPG Technical Subcommittee Meeting
Wednesday, April 13, 2022, 1:00 pm
Tarrant Regional Water District - Richland Chambers Lake Office
140 FM 416
Streetman, TX 75859

Virtual Meeting Options
Videoconference: <https://bit.ly/3DvWfdU>
Teleconference: 408-418-9388, access code 2489 307 6398

[Meeting Agenda/Notifications](#)

Subscribe
Sign up to receive email notifications for upcoming Trinity Regional Flood Planning Group activities.

Name
Email

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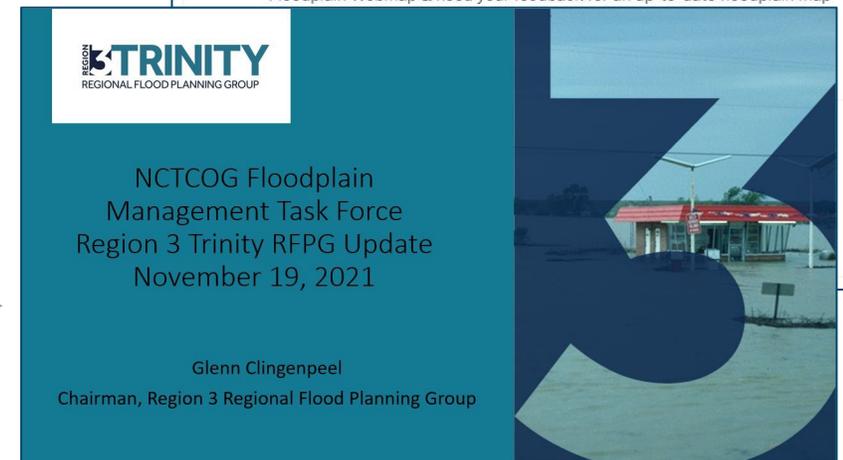
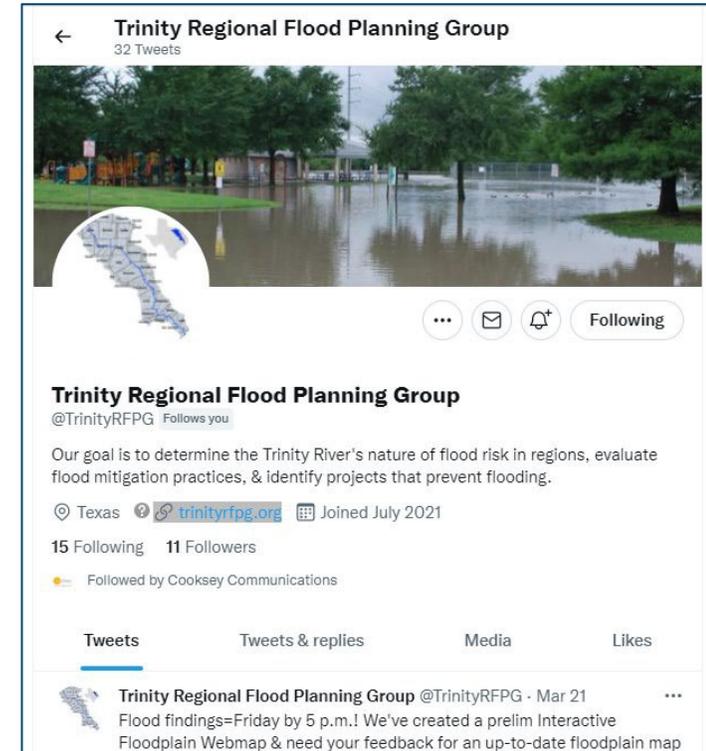
Public Participation

Social media (Twitter) content posted regularly

Press releases and regional media outreach

Development of PowerPoint overview presentation

Presentations to various regional organizations



Public Participation

Postcard mailers to augment email outreach

Follow-up phone calls to stakeholders

Online data gathering survey/tool with interactive webmaps to confirm current flood risk, identify gaps

Handout materials – flyers and one-pagers

Postcard Aug. 2022 encouraging review of Draft Plan, promoting upcoming events and public comments

In-person, open house "roadshow" to showcase Draft Plan, answer questions, at region-wide sites

Public meeting to take public input on Draft Plan

Subsequent public meetings to consider public and TWDB input, revise and finalize Regional Flood Plan



TRINITY
REGIONAL FLOOD PLANNING GROUP

The Trinity Regional Flood Planning Group (Trinity RFPG) needs you!

This newly formed group is responsible for developing the first-ever Regional Flood Plan for the Trinity River Basin and needs your help. We recently sent you an email with a link to our electronic data collection tool. We need your input and local flood-related data to develop a flood plan that accurately represents flood planning resources and flood-related risks in your area. We have also developed an interactive web map on which you can identify specific flood-prone areas.



TRINITY
REGIONAL FLOOD PLANNING GROUP

The Trinity Regional Flood Planning Group (Trinity RFPG) needs you!

This newly formed group is responsible for developing the first-ever Regional Flood Plan for the Trinity River Basin. We need your help! Ultimately, this planning effort is important and relevant for you because projects included in the Regional Flood Plan will be better able to access future State funding.

The Trinity RFPG (aka Region 3) is among 15 regional flood planning groups statewide designated by the Texas Water Development Board. Spanning a region from Cooke County in the north to Chambers County on the Gulf Coast, the Trinity RFPG is responsible for creating its first Regional Flood Plan by January 2023, which will become part of Texas' first-ever State Flood Plan in 2024. The Trinity Flood Plan will comprise local flood investigation studies and projects that represent the plans of the local jurisdictions.

We have prepared an **electronic data collection tool** that is available at <https://trinity.half.com/> and through the Public Comment page on our website, www.trinityrfgp.org. We need your input and local flood-related data to develop a flood plan that represents your floodplanning resources and flood-related risks in your area. We have also developed an **interactive web map** also available through the links above) on which you can identify specific flood-prone areas.

If you have any questions or concerns about the data collection tool and/or interactive webmap, please contact Project Manager **Stephanie Griffin with Half Associates, Inc.** at (817) 813-5704 or sgriffin@half.com, or you can also email us at info@trinityrfgp.org.

Also please feel free to share this information and future e-updates with others who may have an interest in Trinity Regional Flood Planning and encourage them to visit the website when it launches.

Thank you for your interest and participation in this critical regional planning effort.

In order to be ready to participate in the data collection effort, we encourage you to gather up the following information (if available):

- Floodplain ordinance
- Development regulations
- Land use plans
- Watershed studies or flood studies
- Hydraulics and hydrology models
- Flood maps
- Flood early warning system information
- Drainage criteria manual or Capital improvement projects (flood-related)
- Planned flood studies

To ensure you receive the survey and other future e-updates, we ask that you be sure to add info@trinityrfgp.org to your approved or recognized list of email addresses. As the Trinity RFPG begins its data collection effort, we encourage you to stay informed and participate.

Regional Flood Plan Adoption Timeline

September 8:
Public input
meeting

October 10:
Public
comments due

Nov/Dec 2022:
Plan revisions,
final approval

January 2023:
Regional Plan
due to TWDB

Public Participation Opportunities

Submit comments on Draft Regional Flood Plan by Oct. 10

Web: www.trinityrfpg.org

- Review Draft Plan on Planning Documents page (sort by "2022 Draft Plan")
- Submit comments via form on Public Comment page

Email: info@trinityrfpg.org

Mail:

Halff Associates, Inc.
Attn: Stephanie Griffin
4000 Fossil Creek Blvd.
Fort Worth, Texas 76137-1422



Categories: 2022 Draft Plan, Bylaws, Draft Appendices, Draft Chapter 1, Draft Chapter 2, Draft Chapter 3, Draft Chapter 4, Draft Chapter 5, Draft Chapter 6, Draft Chapter 7, Draft Chapter 8

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| Draft Trinity Regional Flood Plan – Cover and Table of Contents | 2022 Draft Plan | 1.53MB | - | 07/12/2022 |
| Draft Trinity Regional Flood Plan – Executive Summary | 2022 Draft Plan | 1.52MB | 07/21/2022 | 07/12/2022 |
| Draft Trinity Regional Flood Plan – Chapter 1 | 2022 Draft Plan | 8.25MB | 07/21/2022 | 07/12/2022 |
| Draft Trinity Regional Flood Plan – Chapter 2 | 2022 Draft Plan | 19.14MB | 07/21/2022 | 07/12/2022 |
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| Draft Trinity Regional Flood Plan – Chapter 8 | 2022 Draft Plan | 1.34MB | 07/21/2022 | 07/12/2022 |



Additional Resources

- Visit with consultant team and RFPG members, ask questions
- Review interactive floodplain webmap, mark local flooding issues
- Review maps / tables of recommended flooding solutions
- Review hard copy of Draft Regional Flood Plan
- Access RFPG website to view Draft Plan, sign up for e-updates, complete Public Comment form
- Submit written comment cards



AGENDA

- Call to Order / Purpose and Format of the Meeting
- Roll Call
- Approval of Minutes From Previous Meeting
- Texas Water Development Board Comments
- Overview of Regional Flood Planning Process
- Presentation on the Draft Region 3 Trinity Regional Flood Plan
- **Receive Public Comments (limit 3 minutes per person)**
- Adjourn

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Public Comments

3 minutes per speaker



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