REGION 3 TRINITY
REGIONAL FLOOD PLANNING GROUP

August 19, 2021

1. Call to order

2. Roll call

3. Approval of minutes

Region 3 Trinity Flood Planning Group Meeting
June 24, 2021
10:00AM to 12:00PM
William Hodges Education Building
Sam Houston Statue Visitor Center
7600 SH 75S
Huntsville, TX 77340

The Region 3 Trinity Flood Planning Group held a meeting, in person, on June 24, 2021, at 10:00 a.m. Acting Chairman Glenn Clingenpeel called the meeting to order at 10:00 AM.

Voting Members Present:

Lissa Shepard
Sano Blocker (absent)
Jordan Macha (absent)
Rachel Ickert – alternate Craig Ottman
Matt Robinson
Sarah Standifer
Andrew Isbell
Glenn Clingenpeel
Mike Rickman
Scott Harris
Melissa Bookhout

Nine voting members were present, constituting a quorum.

Ex Officio Members Present:

Adam Whisenant
Brian Hurtuk (absent)
Rob Barthen
Steve Bednarz
Brooke Bacuetes
Jonah Chen
Richard Bagans
Kevin McCalla –alternate Shawn Jurkins
Greg Waller (absent)
Todd Burrer (absent)
Jerry Cotter (absent)
Lisa McCracken (absent)
Diane Howe (absent)
Ellen Buchanan (absent)

Approval of the Minutes of the Last Meeting

One correction was suggested by Craig Ottman for the May 24 minutes to change the Technical Memo due date from 2020 to 2022. Motion: Andrew Isbell moved to approve the minutes as corrected; Second: Matt Robinson; Action: Minutes were unanimously approved.

Acknowledgement of written public comments received

None had been received since the prior meeting.

TWDB Update

Richard Bagans with TWDB gave an update on the Legislative session regarding Open Meeting bills. He stated that none of the bills that had been filed had passed, so the group would continue under the existing Open Meetings Act requirements once the Governor's emergency declaration expires. TWDB and TRA are working with Halff on the sub-contracts, and TWDB has approved the subcontract with Halff. TWDB no longer has to approve the sub subcontracts. Moving forward, TWDB will only require copies of those contracts. The technical guidelines have been posted for about 2 months, technical consultants have reviewed them and all work follows those guidelines. TWDB will have future meetings with the consultants to ensure that the guidelines are clear. In early June, TWDB had a meeting with technical consultants across the regions to gather information to create a good forum to be able to share different ideas. They are also working on getting everyone's websites up and running.

Glenn commented that there were different variations of similar bill that were filed but did not pass that would have allowed a continuation of complete or hybrid virtual meetings without the emergency declaration from the Governor. Without that legislation, he stated, the group would be required to meet in person in the future.

Regarding the ability of the group to convene in a hybrid virtual and in-person meeting, Mr. Bagans stated that the official guidance for Region 3 will come from TRA's legal counsel. He did however state that for entities or groups that cover more than three counties, hybrid options were available, but would require the presiding officer to be physically present in a physically-accessible location. Howard Slobodin, TRA's General Counsel, added that it was his understanding that the Governor's Disaster Proclamation remains in effect and until that proclamation expires the group can continue to meet in an entirely virtual fashion. In regards to hybrid meetings under the Open Meetings Act, Mr. Slobodin added that every official member of a group in a hybrid meeting must be clearly visible on a screen. This, he suggested, would be extremely challenging and awkward.

Sarah Standifer suggested that the TWDB coordinate with the Texas Municipal League in order to familiarize that organization and its members with the flood planning process. Ms. Standifer suggested this would help in getting important flood-planning data from cities and counties.

Mr. Bagans replied that the approach TWDB has taken to facilitate data collection is putting together a data hub for readily-available statewide data sets. These, along with the floodplain quilt, are accessible to the technical consultants to use as a starting point. Mr. Bagans stated that they are working with the TWDB's Flood and Community systems group on the science side to get contact information for floodplain managers across the state and to provide that to the technical consultants.

It was suggested that TWDB may want to reach out to get the resources TML may have to offer.

Andrew Isbell stated that the COG's would also be a good resource for vital information.

Report from Nominating Committee

Scott Harris gave an update on filling the vacant small business owner and three Counsels of Government seats. He stated that the nominating committee met on Wednesday, June 23rd at 2:00 p.m. Mr. Harris said that they had a great group of qualified candidates and that he was prepared to make a motion to fill the vacant positions on behalf of the nominating committee.

Filling of Small Business Seat

Mr. Harris gave a brief background on the nominee for the small business interest category. The nominee was Mr. Chad Ballard, who is the Flood and Stormwater Team Lead at Plummer Associates. Motion: Scott Harris moved to appoint Mr. Ballard to the small business position. Second: Andrew Isbell; Action: Motion passed unanimously.

Filling of Councils of Government seats

Scott Harris stated that they had received applications from three qualified candidates for the three open Councils of Government seats. The

committee discussed all of the candidates and were pleased with the applications they had received. The candidates were as follows:

- Edith Marvin, Director of Environmental Development with North Central Texas Council of Governments;
- Lonnie Hunt, Executive Director of the Deep East Texas Council of Governments; and
- Justin Bower, Principal Planner for Houston-Galveston Area Council.

Motion: Scott Harris made a motion to appoint the candidates into the Non-Voting positions for the COG seats; Second: Andrew Isbell; Action: Motion passed unanimously.

Update from Region 3 Technical Consultant

Stephanie Griffin led a discussion by the technical consultant team. Kimberly Miller provided an overview of Task 1 activities. This chapter involves developing an overview of the entire Trinity planning region including population demographics and economic activity. She stated that the Region 3 area includes all or parts of 38 counties and covers almost 18,000 square miles. She also stated that twenty percent of the land area in the basin is flood prone, and that there have been 40 disaster declarations in the region since 1953, with twenty-five percent of those occurring since 2008. Ms. Miller explained that there is expected to be a sixty-seven percent increase in the region's population over the next 30 years.

Sam Amoako-Atta provided an overview of chapters 2 and 3, which he stated covers flood risk assessment and floodplain management practices & flood protection goals. The following details were provided during his overview:

- Task 2A involves collecting data on existing flooding, such as types, events, information sources, impacts on buildings, populations, critical facilities, utilities and agriculture.
- Task 2B involves an assessment of future flood risks and will include collecting data from different sources such as FEMA, local communities, and the TWDB. This will help assess future flood risk.
- There were several questions and concerns regarding the ability to get adequate and complete data sets given the short timeframe for data collection. There was consensus

that this was a challenge, and Mr. Bagans added that the TWDB is aware of the issue. The group agreed that data would be accepted after the July 24 deadline, but that for practical purposes, and in the interest of getting a completed plan by the deadline, there could be no guarantees that information received after the deadline would be used in the 2023 regional plan.

- Mr. Amoako-Atta provided a preview of the Region 3 RFPG data collection website and its functionality. He noted that an email blast would be going out to everyone with login information to allow access to the data submittal pages.

- The consultant team provided an overview of chapter 3, stating that the chapter would consist of standards and goals. The chapter will provide a timeframe for floodplain management standards and goal setting process. Kimberly Miller led the group through an interactive polling exercise to identify the topics of interest that will be used in developing goals for the plan.

Colby Walton provided an update on public outreach activities. Mr. Walton discussed the launch of the Region 3 website and shared the URL and email address with the group: www.trinityrfpg.org and info@trinityrfpg.org. Mr. Walton also discussed the group's media presence including Twitter, periodic e-newsletter, and editorial meetings with key media regionwide.

There was a discussion on chapter 8, which involves administration, regulatory and legislative recommendations. This chapter gives the group an opportunity to provide recommendations for legislative and regulatory changes that could facilitate floodplain management and flood mitigation planning and implementation.

Update from Liaisons Region 5 and 6

Region 5 Neches RFPG – No updates at this time.
Region 6 San Jacinto RFPG – Scott Harris gave a brief update stating that Region 6 held an executive meeting on Wednesday, June 23, 2021 and had another scheduled for Friday, June 25, 2021. He stated that a technical committee meeting had been scheduled for Monday, June 28, 2021 with the group's next regular meeting set for July 8, 2021.

Update from Planning Group Sponsor

Howard Slobodin stated that there were no updates.

Receive general public comments

Mr. Clingenpeel opened the meeting to public comments. No members of the public indicated they wished to make comments, and the public comment period was closed.

Meeting date for August 2021 meeting

The time and date of the next meeting was set for Thursday, August 19, 2021. The group decided to hold the meeting in person, and to hold the second public pre-planning meeting at that time.

Agenda items for next meeting

- Preliminary Information from the surveys
- Go through some goal setting
- Updates on Chapters 1,2,3
- Intro to Chapter 7 or 9
- Discuss creating subcommittees
- TWDB Pre-Planning meeting
- USACE presentation

Other Business

N/A

Adjourn:

The meeting was adjourned at 1:20 p.m.

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 JUNE 24, 2021.

_____ _____

SCOTT HARRIS, Secretary Date
REGION 3 TRINITY FLOOD
PLANNING GROUP

_____ _____

GLENN CLINGENPEEL, Chair Date

REGION 3 TRINITY FLOOD
PLANNING GROUP

4. Acknowledgement of written comments received

REGION 3 TRINITY
REGIONAL FLOOD PLANNING GROUP

Written Comments Received
June 24, 2021 through August 4, 2021

1. Name: Bernice Farrow
   Company/Organization: Fig Ridge Farm
   Address: P O BOX 57 Stowell, Texas 77661
   Phone Number: 409-782-7363
   Email: befar@aol.com
   Category Interest: Public

   Public Comments Characteristic: Related to flood planning documents

   Comments: My home place floods deeply and I have to move my horses to higher ground. Which means I have to move them before it gets too deep. I am next door to Scot Kahala and his place floods also and mine does not begin to drain until his drains. So I stay under water a long time. My physical address is 3837 S. Hwy. 124 Stowell, Texas 77661 Thank you for trying to improve the drainage in Stowell but if the pipes are not cleaned out with the ditch it can not drain.

   My flood insurance has increased so much I may not be able to afford it next year.

   Bernice Farrow

   This e-mail was sent from a contact form on Region 3 Trinity (https://trinityrfpg.org)

2. To: Trinity RFPG <info@trinityrfpg.org>
   Subject: Trinity Flood Planning Process - Rockwall County

   My name is Jerry Wimpee. I am a retired 20 year Rockwall County Commissioner and currently serve as a Director on the Rockwall County Open Space Alliance Board.

   Rockwall County is the smallest county in Texas but is the 10th most densely populated of the 254 counties. We are located on high ground so all of the strom water runs down hill to others; the only water that enters Rockwall County is the East Fork of The Trinity, which is Lake Ray Hubbard.

   The County's Subdivision Regulations do not permit changing the natural valley storage based on the 100 year floodplain. We were surprised to learn that our 100 year floodplain was established in the 1940-1950s when we were mostly rural. Our rapid growth has caused all cities to annex and expand so the county no longer has limited subdivision developments.

   I'm concerned that our future could be mostly concrete and rooftops and thereby cause more stormwater.

   Thank you for this important planning work. My very best wishes to the Planning Group.

   Jerry M. Wimpee
   1801 E. FM 552
   Rockwall, TX 75087
   wimpee7@gmail.com

5. TWDB update

6. Pre-Planning Meeting #2

Regional Flood Planning Pre-Planning Public Meeting Requirements

Pre-Planning Meeting Background

- Provide background on formation of RFPGs and the Regional Flood Planning process.
- Gather suggestions and recommendations as to issues, provisions, projects, and strategies that should be considered in development of regional flood plan.

TWDB flood outreach meeting in Bastrop, TX.

Image: TWDB

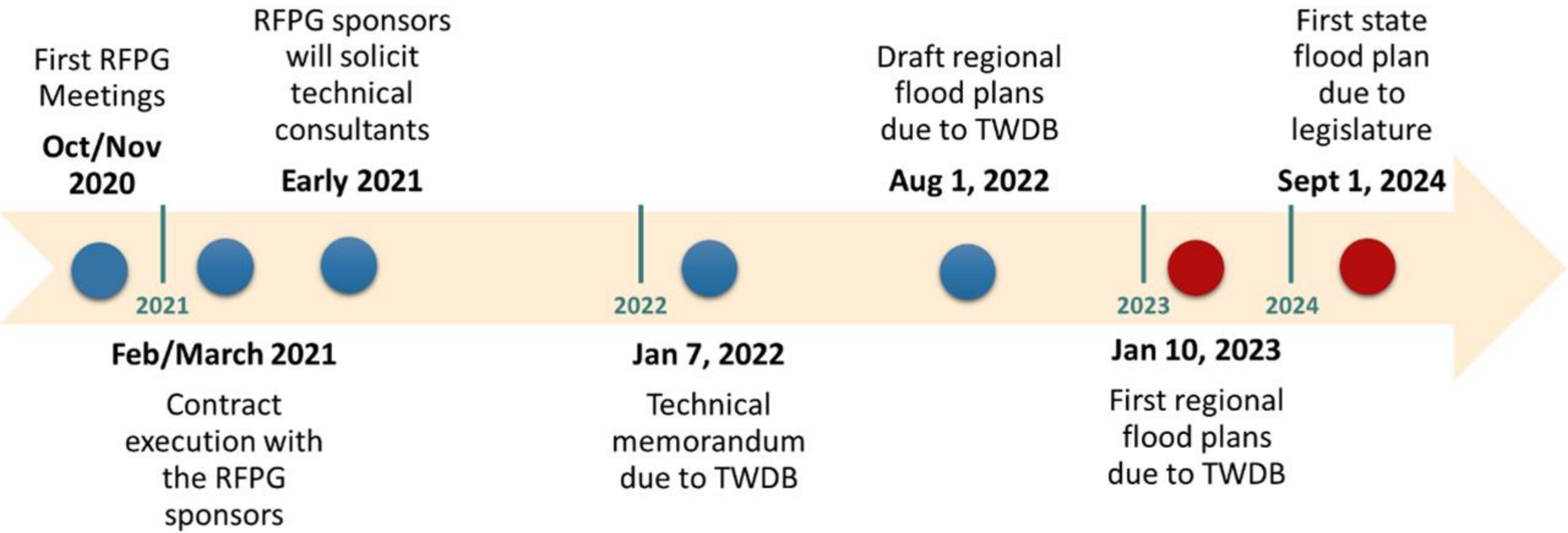
About Regional Flood Planning

- First-of-its-kind statewide flood plan
- Watershed-based planning regions
- Bottom-up approach to flood planning
- Transparent process with public input
- Volunteer members representing interest categories

Find your RFPG Information, Meeting Schedules & Important Documents here:
https://www.twdb.texas.gov/flood/planning/index.asp

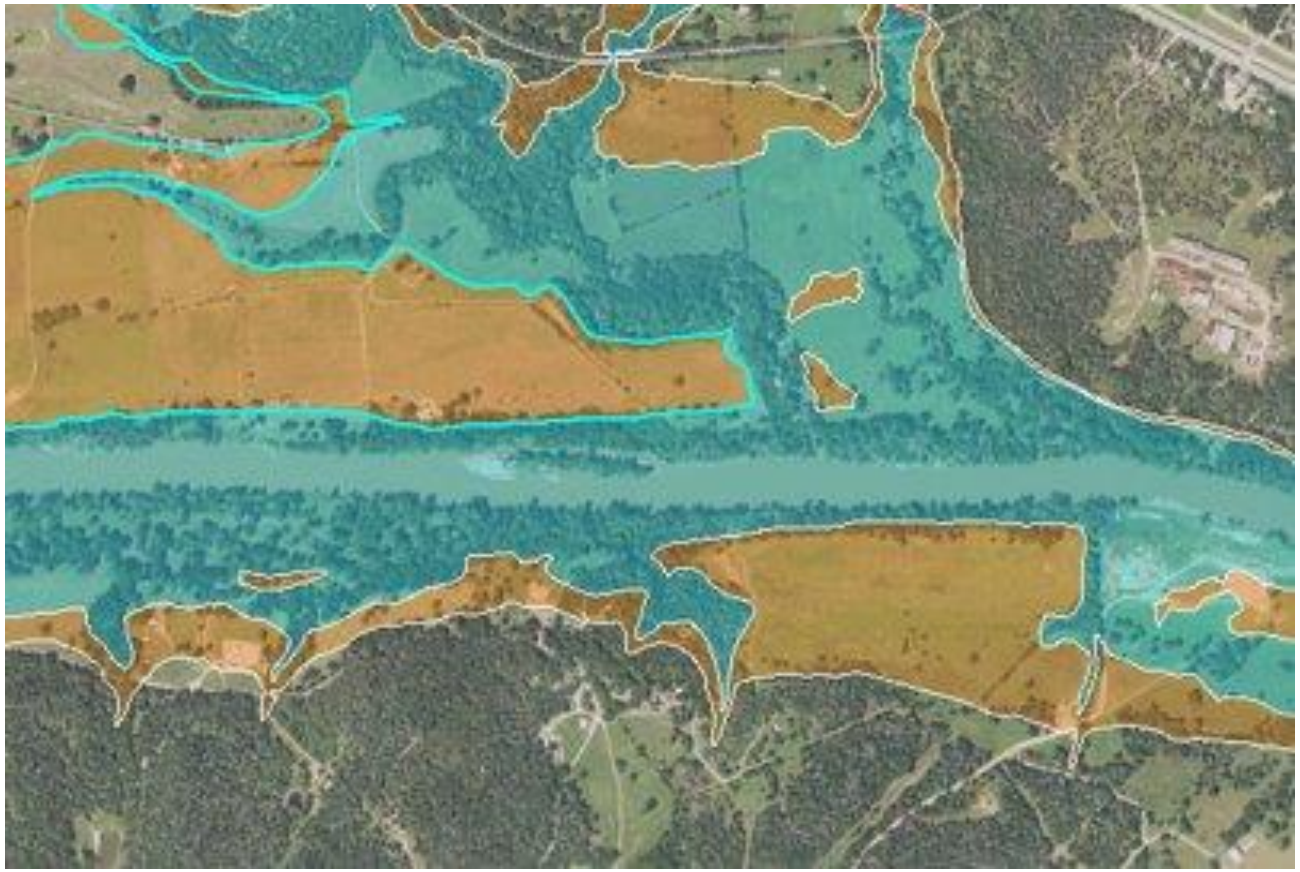
Flood Planning Timeline

SB 8 passed in 2019 requiring a statewide flood plan based on regional flood plans



Key Tasks of the RFPGs

- Gather & analyze data
- Identify existing and future flood risks
- Evaluate floodplain management practices
- Recommend evaluations, strategies, and projects to reduce flood risks
- Develop a regional flood plan



The 1% annual chance floodplain is shown in blue.
The 0.2% annual chance floodplain is shown in orange.
Image by FEMA

Flood Mitigation

The implementation of actions, including both **structural** and **non-structural solutions**, to reduce flood risk to protect against the loss of life and property.

Mangroves on the Texas Coast stabilize shorelines and help absorb storm surge; an example of a non-structural flood mitigation solution.

Photo by Univ. Of Texas Marine Science Institute

Galveston Seawall, a structural flood mitigation solution. Image by Yinan Chen CC-PD

Additional Opportunities for Public Input

There will be many opportunities public involvement:

- public comments are received at every RFPG meeting
- there will be at least one meeting for the public to comment on a flood risk summary map to identify any flood risk not captured
- there will be at least two public pre-planning meetings to receive feedback and gather general suggestions
- the public will get to comment on the draft regional flood plan, once developed

TWDB flood outreach meeting in Bastrop, TX. Image: TWDB

Find your RFPG Information, Meeting Schedules & Important Documents here:
https://www.twdb.texas.gov/flood/planning/index.asp

Image: Brent Hanson, U.S. Geological Survey. Public domain.

Questions? Comments?

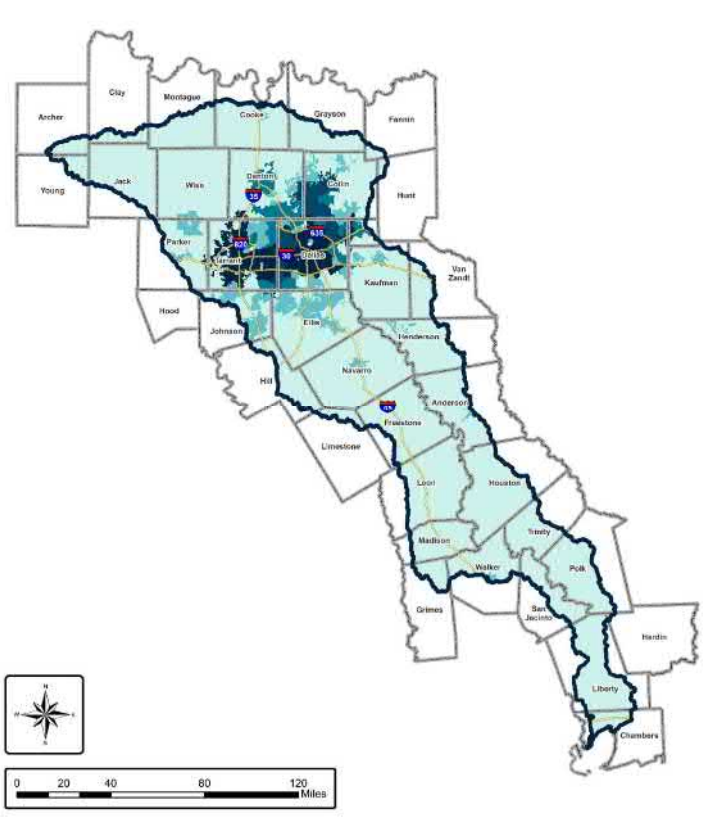
7. Consultant update

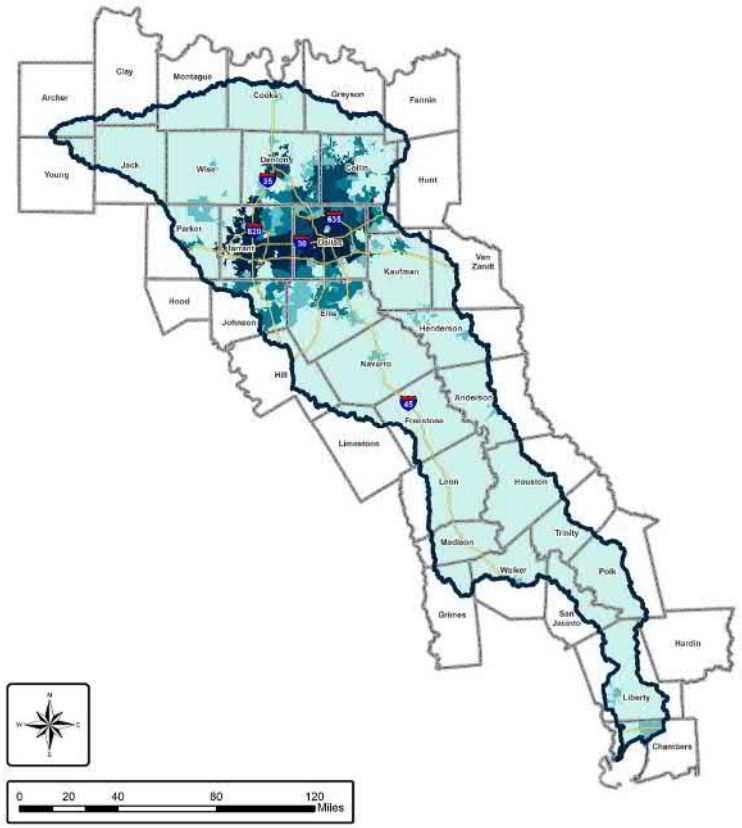
CONSULTANT UPDATE

- **Update on Chapter 1 Planning Area Description**
- **Update on Chapter 2 Flood Risk Analysis**
  - Preliminary Data Collection Results
- **Chapter 3 Goals Discussion/ Determination**
- **Overview and Approach to Ch. 4 Flood Mitigation Needs & Potentially Feasible Solutions**
- **Overview and Response to Ch. 7 Emergency Response Summary**
- **Discussion on Ch. 8 Admin, Regulatory and Legislative Recommendations**
- **Public Outreach Updates**

Ch. 1 Planning Area Description

Population – Current and Projected

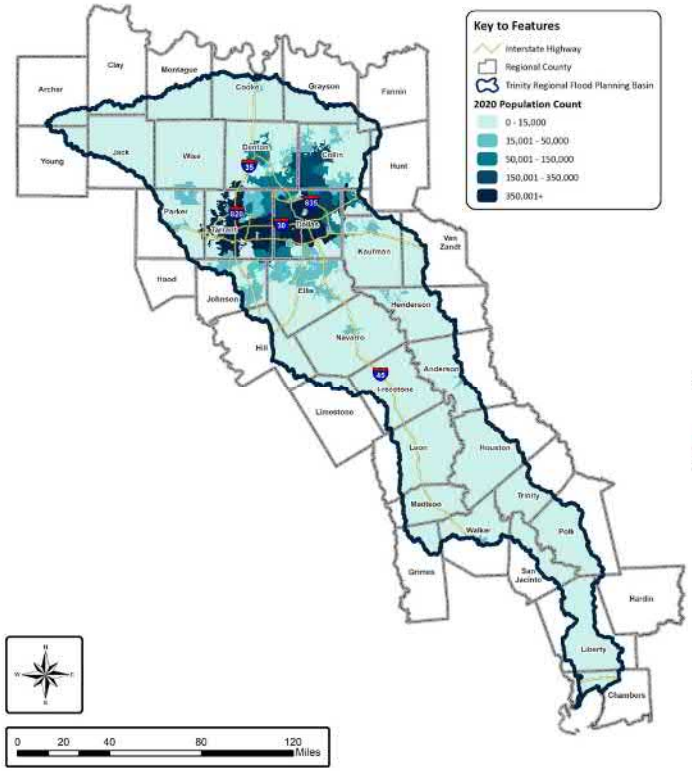


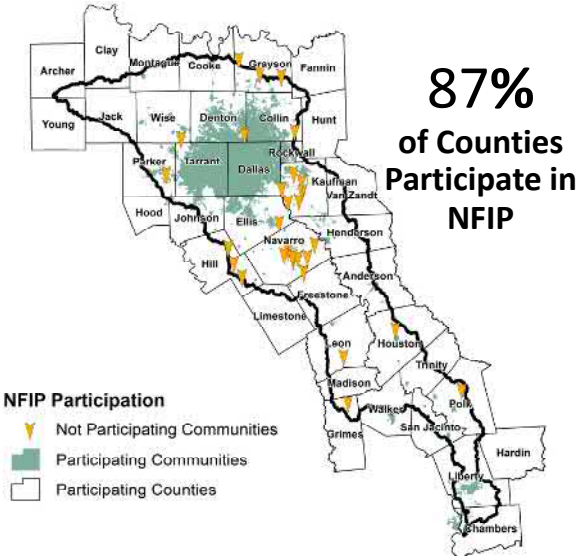


Population Centers by County

- Dallas
- Tarrant
- Collin
- Denton
- Ellis
- Navarro
- Walker
- Henderson
- Anderson
- Houston
- Liberty

Population Density & NFIP Participation

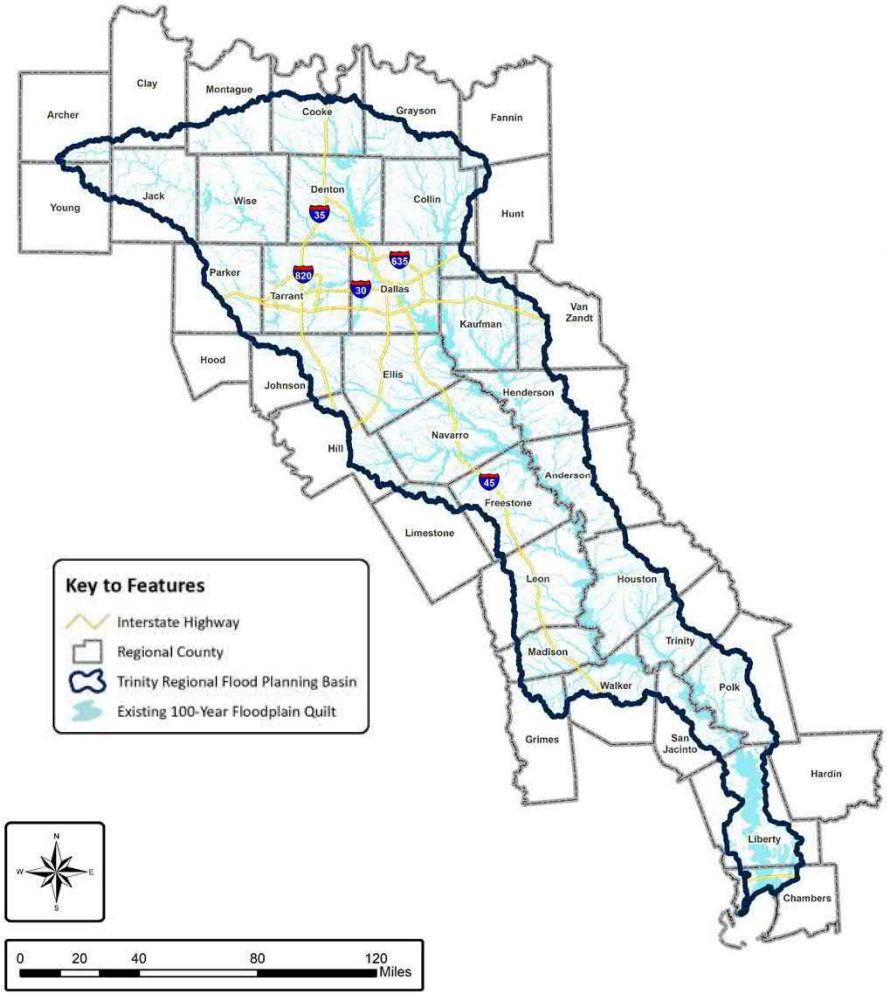




87%
of Counties Participate in NFIP

Population Centers by County

- Dallas
- Tarrant
- Collin
- Denton
- Ellis
- Navarro
- Walker
- Henderson
- Anderson
- Houston

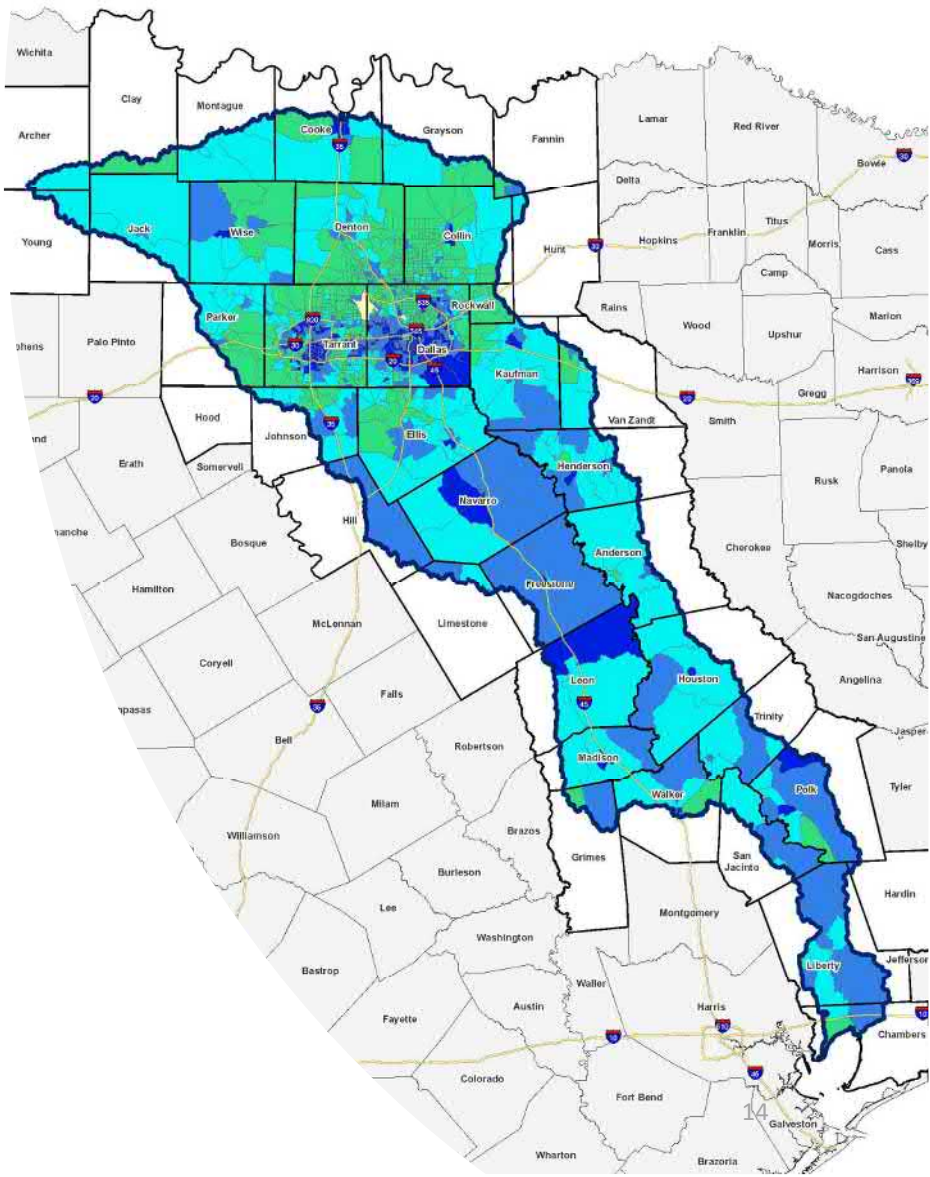


FLOOD PRONE AREAS

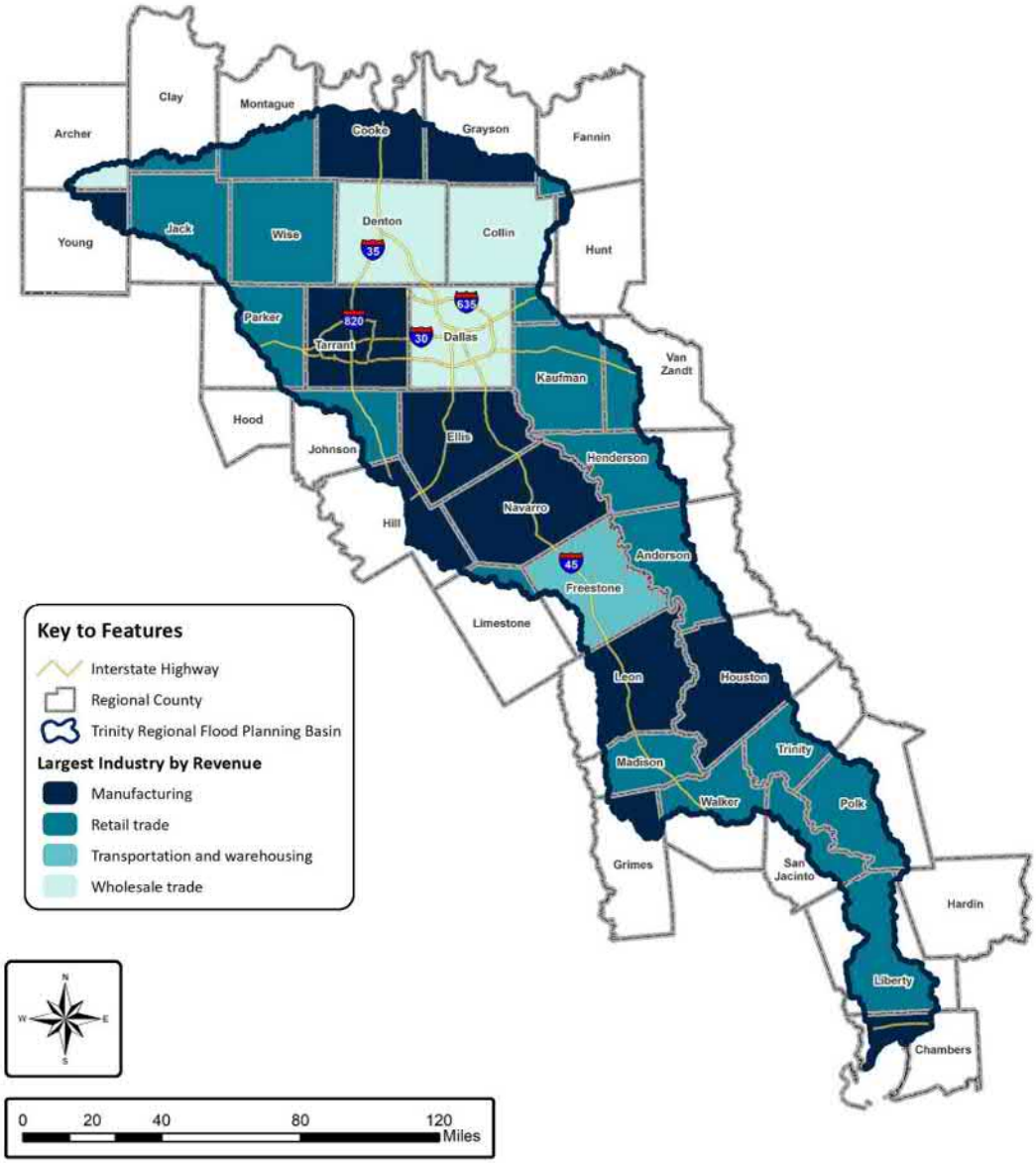
- **22% of Basin at Flood Risk**
- **Jurisdictions with over 20% of their land area in the 100 or 500 year Flood Plain**
  - 70 communities
  - 25 counties

Social Vulnerability Index (SVI)

- Economic Status
- Exposure to Flood Risk
- Age
- Racial & Ethnic Background
- Disability Status
- Access to Transportation
- Etc.

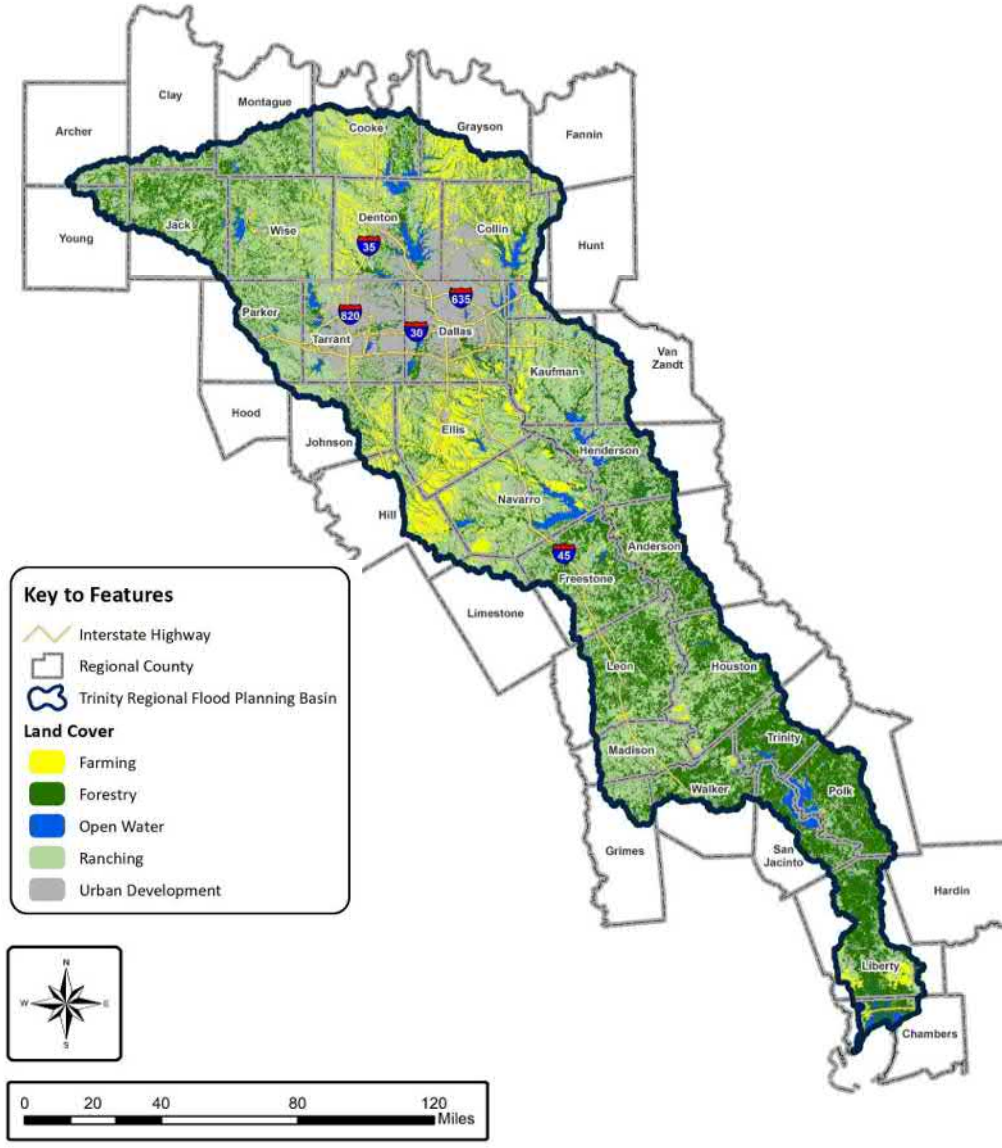


Largest Industry per County by Revenue



Texas Working Lands

- Farming/ Crop Production
  - Predominant in north and central regions
  - Concentrations of farming area in Liberty Co.
- Forestry
  - Predominant working land type in south region
  - Relationship to national forests and preserves
- Ranching
  - Prominent land use throughout the basin
  - Largest concentration of ranching areas to the NW of the metroplex and the central basin

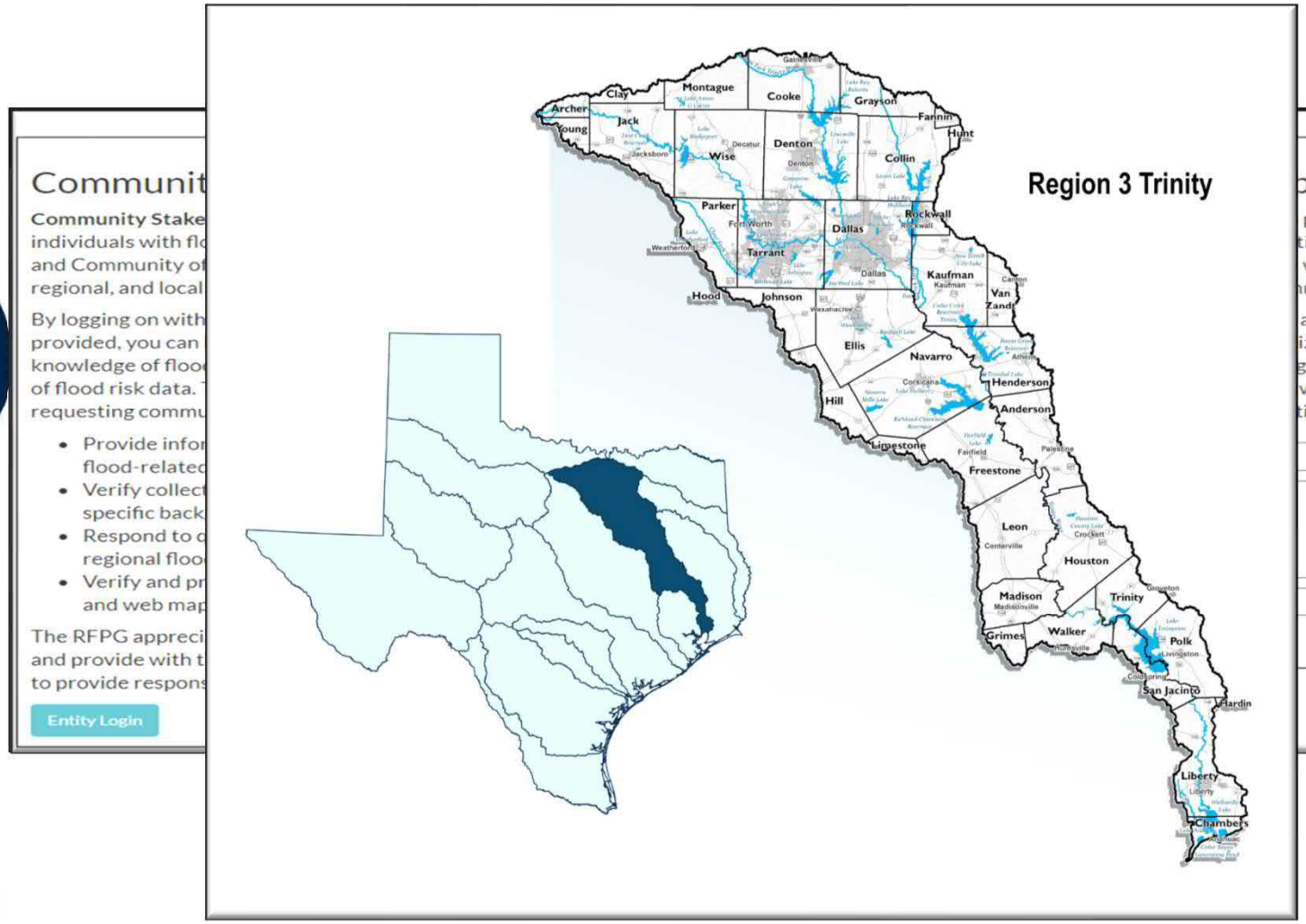


Ch. 2 Flood Risk Assessment

Preliminary Data Collection Results

Data Collection Website

Trinity.halff.com



Communit

Community Stake
individuals with flo
and Community of
regional, and local

By logging on with
provided, you can
knowledge of floo
of flood risk data.
requesting commu

- Provide infor flood-relatec
- Verify collect specific back
- Respond to c regional floo
- Verify and pr and web map

The RFPG appreci and provide with t to provide respons

Entity Login

olic?

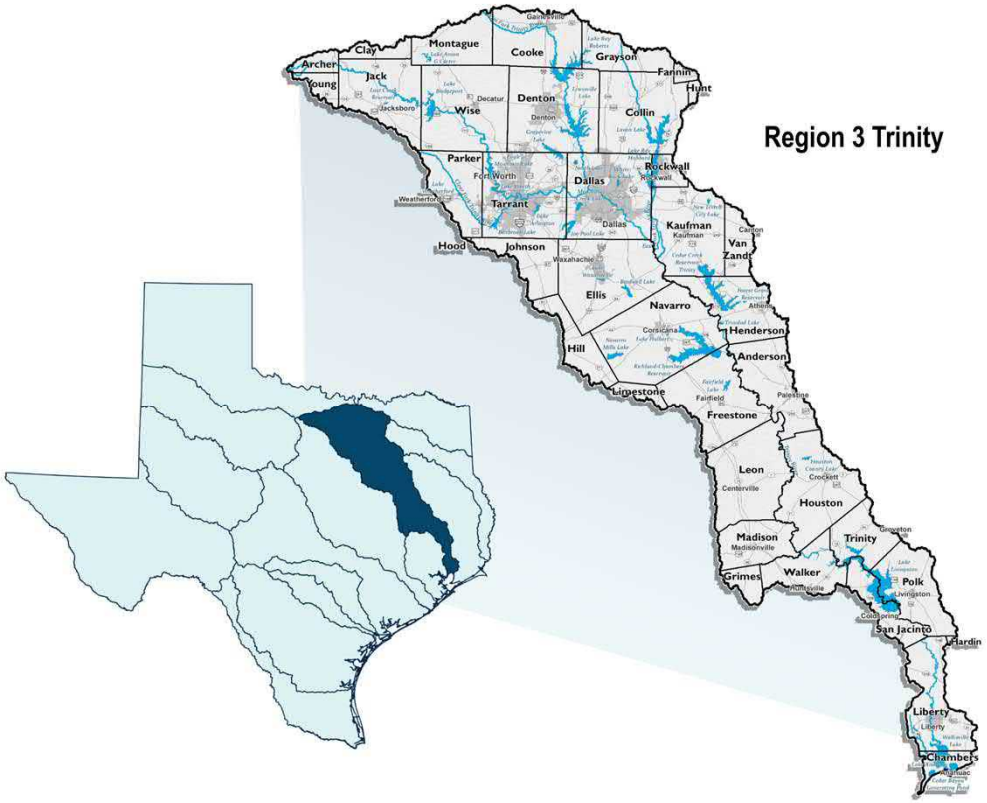
process include general public tions including non-profit and with an interest in providing nning efforts.

and email address, you can ized knowledge of flood prone gation is needed. Your contact who is providing information in tions.

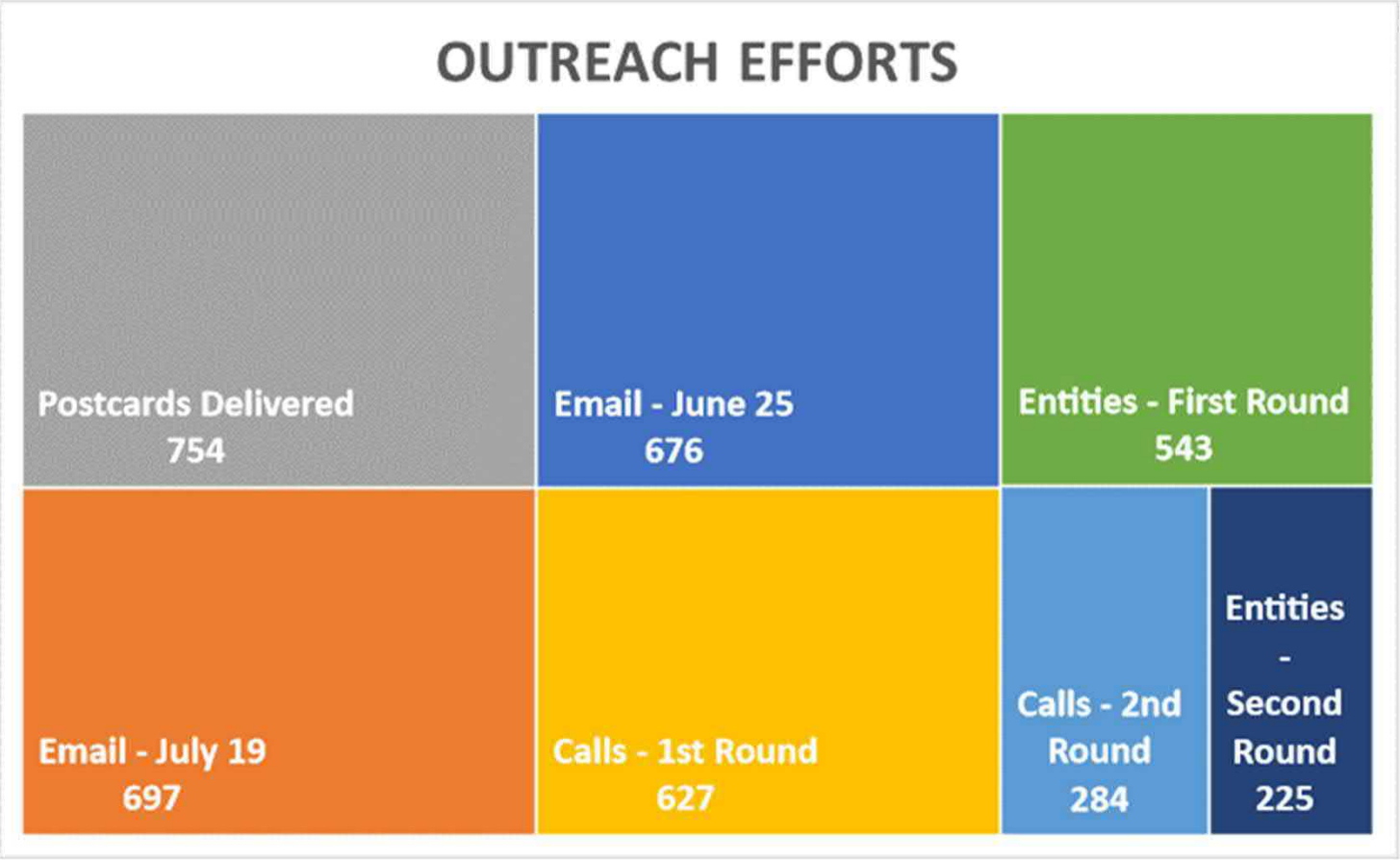
Data Collection and Discovery

Phase 1

- Emails
- Postcards
- Follow-up Calls



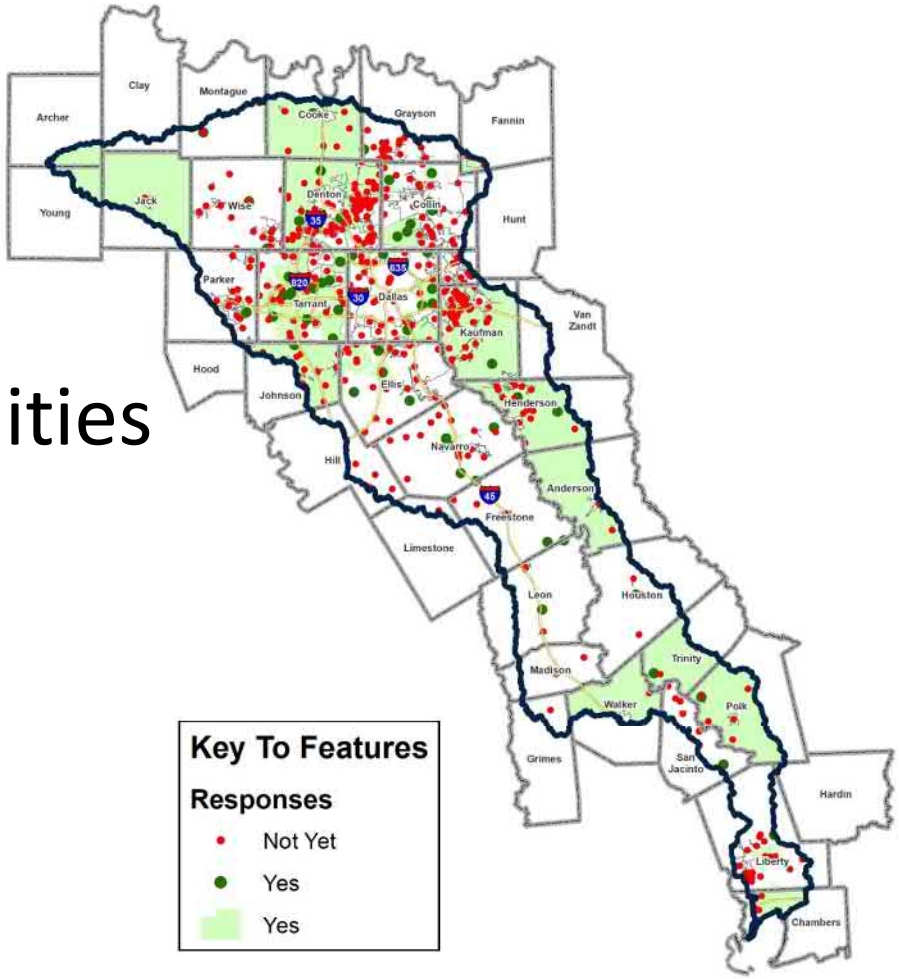
Survey Outreach



Survey Participation

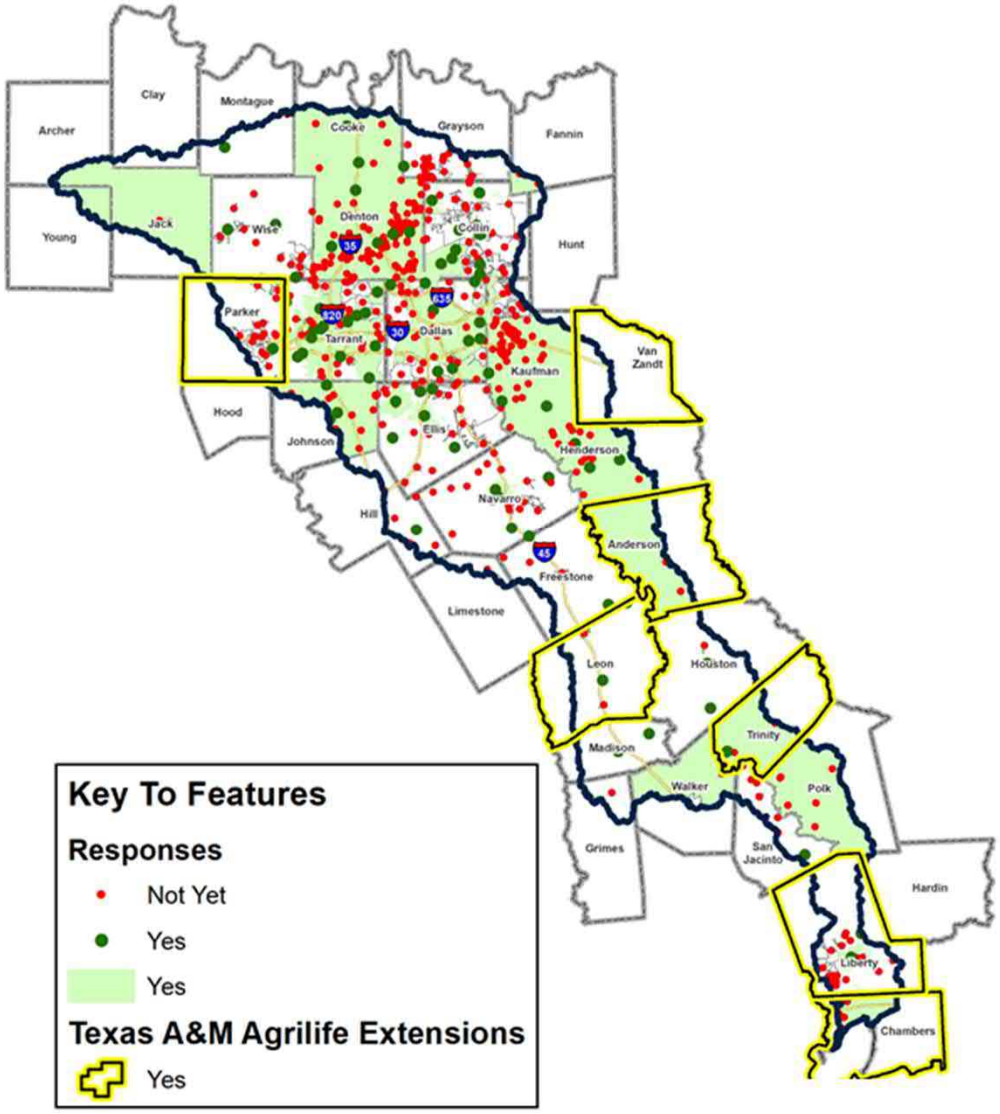
Phase 1

- Counties
- Incorporated Communities
- Regional Entities
- General Public



Survey Participation

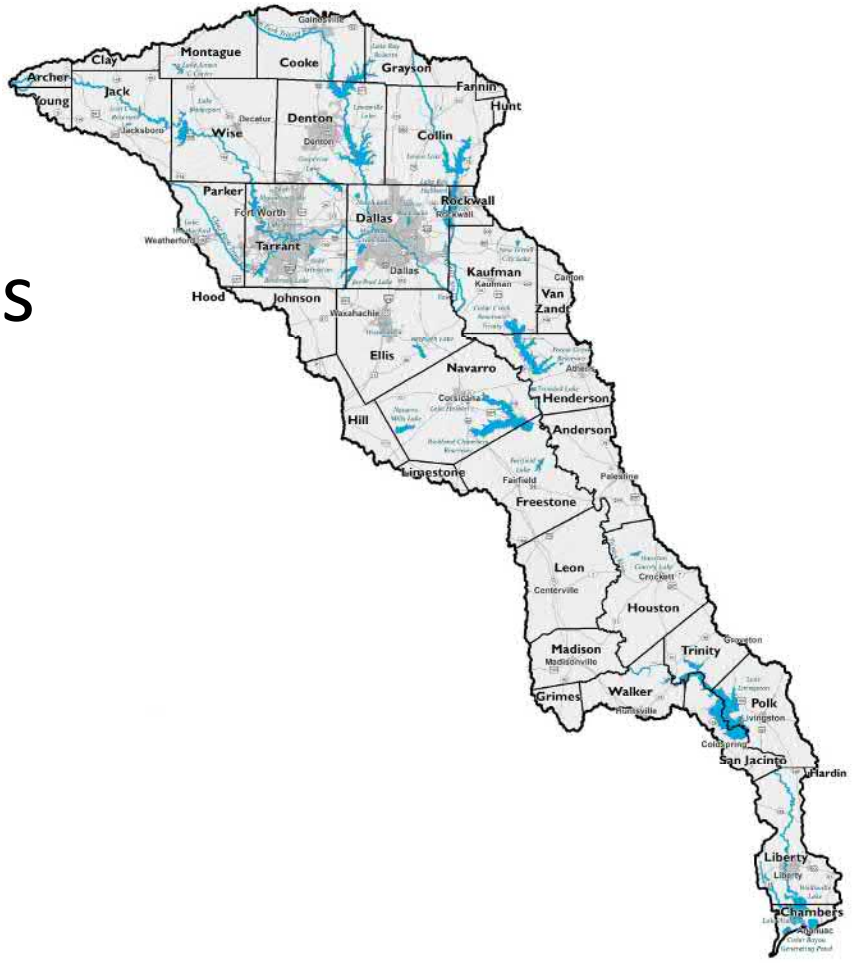
- River Authorities
- MUDs
- SUDs
- MWDs
- State Departments



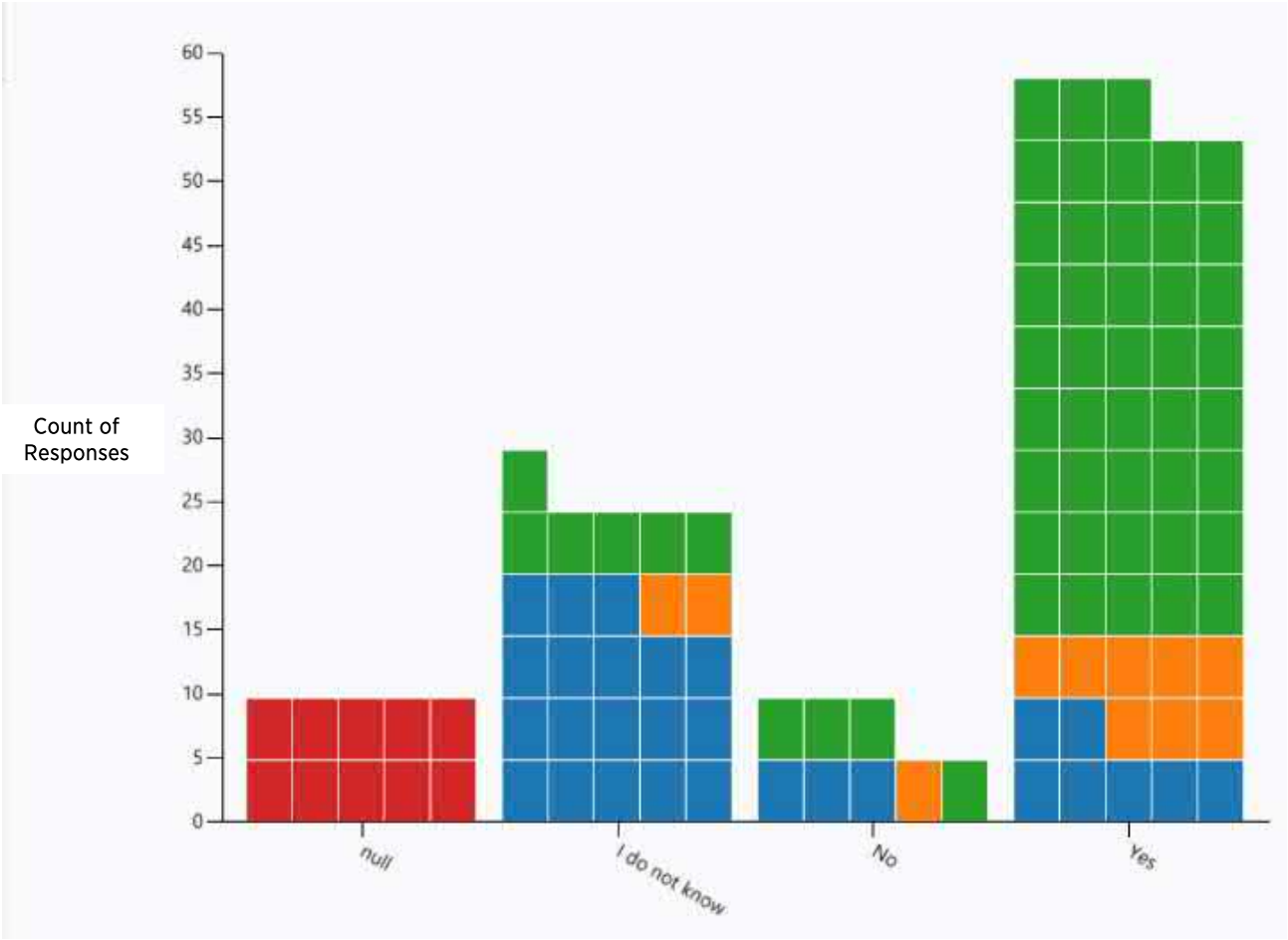
Survey Responses and Data Received

Phase 1

- Questionnaire Responses
- Data Submittal
  - Reports
  - GIS Data
  - Web Links



Data Mining and Discovery



Does your Entity Have Floodplain Management Regulations

Ch. 3 Goals Discussion/ Determination

Floodplain Management Practices & Flood Protection Goals

The following are suggested ideas for discussion on August 19th. Please come prepared to discuss.

Task 3-Goals

Purpose and Intent

The purpose of this task is to identify flood mitigation and floodplain management goals for the Trinity region. The overarching intent of the goals is "to protect against the loss of life and property" set out in Guidance Principles in 31 TAC §362.3 to 1) identify and reduce the risk and impact to life and property that already exists, and 2) avoid increasing or creating new flood risk by addressing future development within the areas known to have existing or future flood risk.

Overarching Goals

The overarching goals are intended to guide the development of the Flood Management Strategies (FMSs), Flood Management Evaluations (FMEs), and Flood Mitigation Projects (FMPs) for the Trinity Regional Flood Planning region. They build upon TWDB regional flood planning guidance and provide a comprehensive organization structure for future strategy development to adequately provide for the preservation of life and property, while not negatively affecting neighboring areas. These proposed six overarching goals include:

- Improving Flood Warning & Public Safety
- Improving Flood Analysis
- Reducing Property Damage & Loss
- Protecting the Floodplain
- Flood Infrastructure Improvement
- Expanding Flood Education & Outreach

The overarching goals are further detailed below and include specific goal statements which are measurable and achievable.

Benefits

Once the regional flood plan is complete, realization of the goals will occur through the implementation of the associated FMSs, FMEs, and FMPs established in this plan. Implementation of the goals will demonstrate progress towards the overall purpose and intent of this regional flood planning study and will provide a series of benefits to individuals, communities, and the overall flood planning region as a whole. The benefits are set in Table 3.X, below.

Table 3.X, Flood Planning Goals and Benefits

Example Goals							
Overarching Goal	Goal 1: Flood Warning & Public Safety	Goal 2: Improving Flood Analyses	Goal 3: Reducing Property Damage & Loss	Goal 4: Protecting the Floodplain	Goal 5: Flood Infrastructure Improvement	Goal 6: Flood Education & Outreach	Legend:
Protect against the loss of life	●	●	◑	◑	●	◑	
Protect against the loss of property	◑	●	●	◑	●	◑	◑ Potential benefit ● Benefit
Protect infrastructure	●	●	●		●		
Protect the environment	●	◑	●	●			* Single project with multiple benefits, i.e. improves floodplain protection and water supply, increases recreation opportunities, habitat preservation, etc.
Protect water supply			◑	●	◑		
Sustain the economy	●	◑	●		◑		
Design for co-benefits*			◑	●	●		
Increase public awareness	●	●				●	
Build community support	●	●				●	

Specific Goal Statements

Goal 1. Improving Flood Warning & Public Safety

Improve the dissemination of information regarding early flood recognition and danger, emergency response procedures, and post-flood recovery actions.

Goals	Specific Goal Statements	Short Term (2033)	Long Term (2053)
A	Increase the number of communities with warning and emergency response programs that can detect the flood threat and provide timely warning of impending flood danger.	Initiated	Maintained
B	Improve regional standards for data sharing and warning systems	TBD	TBD
C	Reduce the number of low-water crossings with no warning system by ----%	TBD	TBD
D	Reduce 5-year moving average of flood related fatalities in the flood planning region by __% by 2033	TBD%	TBD%

Goal 2. Improving Flood Analyses

Increase the number and extent of regional flood planning studies (FMEs) and analyses to better prepare communities for implementing flood mitigation projects.

Goals	Specific Goal Statements	Short Term (2033)	Long Term (2053)
A	Increase the number of entities which utilize/adopt Atlas 14 (Volume 11) revised rainfall amounts as part of revisions to design criteria and flood prevention regulations by X. (region specific)	TBD	TBD
B	Increase the coverage of flood hazard data in the FPR by reducing the current gaps in floodplain mapping by ____%.	TBD	TBD
C	Increase utilization of the new base level engineering (BLE) data (pending) by regional entities in the FPR by X.	TBD	TBD
D	Increase the number of communities that perform detailed studies of localized/urban flooding impacts by X%	TBD	TBD

Goal 3. Reducing Property Damage & Loss

Increase the number and extent of protective regulatory measures and programs to limit future risk and reduce flood damage in the flood planning region.

Goals	Specific Goal Statements	Short Term (2033)	Long Term (2053)
A	Increase the number of communities who adopt floodplain standards equal to or greater than the NFIP minimum by X%	TBD	TBD
B	Increase the number of participating Community Rating System (CRS) communities in the FPR by X.	TBD	TBD
C	Increase the number of entities that have a dedicated municipal drainage charge, drainage district fee, or other continuous funding mechanism by X, to implement future FMEs and FMPs.	TBD	TBD
D	Increase the number of communities at have adopted regulations to reduce the risk from localized flooding by X.	TBD	TBD
E	Reduce the number of counties that do not have floodplain standards that meet or exceed the NFIP-minimum standards by X.	TBD	TBD
F	Increase the number of communities which designate their level of enforcement of floodplain management as “high activity” by X percent per each cycle. (incremental increase in level of enforcement)	TBD	TBD
G	Increase the number of communities which regulate to one or more feet above the BFE for future 100-year conditions by X per each cycle.	TBD	TBD
H	Increase the number of communities in the Flood Plain Region that designate the 1% annual chance floodplain on the entity’s future land use plan by X.	TBD	TBD
I	Increase the number of communities in the FPR that provide regional detention as part of an overall floodplain management program by X.	TBD	TBD
J	Reduce exposure of existing structures in the current 1% annual chance floodplain by elevating or floodproofing X% of structures by X.	TBD%	TBD%

Goal 4. Protecting the Floodplain

Reduce the amount of existing and future vulnerable properties within the FPR.

Goals	Specific Goal Statements	Short Term (2033)	Long Term (2053)
A	Reduce the number of vulnerable properties (i.e. through property buyouts, acquisitions, and/or relocations) by X%.	TBD%	TBD%
B	Increase the acreage of publicly protected natural areas by X % as part of property buyouts and acquisitions to reduce future impacts of flooding.	TBD	TBD
C	Reduce the number of repetitive-loss properties in the FPR by X.	TBD	TBD
D	Avoid new exposure to flood hazards by adopting land use and subdivision regulations that direct development away from the floodplain in X communities.	TBD	TBD

Goal 5. Flood Infrastructure Improvement

Reduce future vulnerability to existing structures through improved elevation and other flood proofing programs and initiatives. Reduce flood risk and mitigate flood hazards to life and property through the implementation of flood infrastructure projects.

Goals	Specific Goal Statements	Short Term (2033)	Long Term (2053)
A	Reduce the number of vulnerable critical facilities located within the existing and future 1% annual chance floodplain by X.	TBD	TBD
B	Reduce the number of low water crossings located within the existing and future 1% annual chance floodplain by X%.	TBD	TBD
C	Increase the number of nature-based practices as part of flood risk reduction projects by X.	TBD%	TBD%

Goal 6. Expanding Flood Education & Outreach

Increase the amount of flood education and outreach opportunities to improve awareness of flood hazards and future participation throughout the flood planning region (FPR).

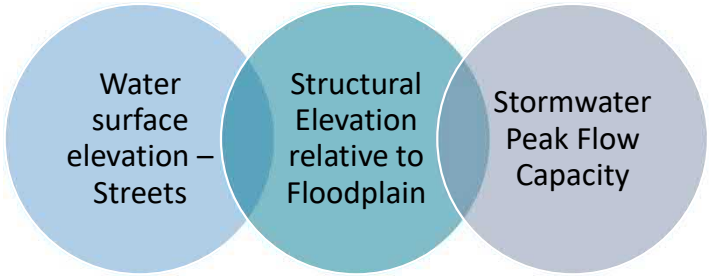
Goals	Specific Goal Statements	Short Term (2033)	Long Term (2053)
A	Increase the number of public stakeholder participants in the regional flood planning process by X percent per each flood planning cycle.	TBD%	TBD%
B	Increase the number of community stakeholder entities participating in the regional flood planning process by X percent per each cycle.	TBD%	TBD%
C	Increase the number of public outreach and education activities to improve awareness of flood hazards and benefits of flood planning in the FPR by X.	TBD	TBD

Standards vs. Goals

Standards

Establish consistent protocols for floodplain management that can be universally applied

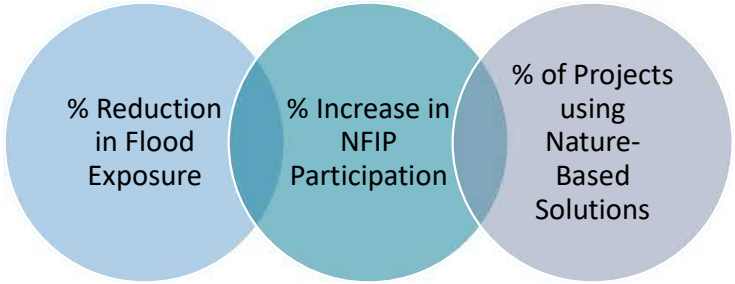
Examples:



Goals

Set specific timelines and goalposts to implement proven flood mitigation measures, reducing future risk for people and property.

Examples:

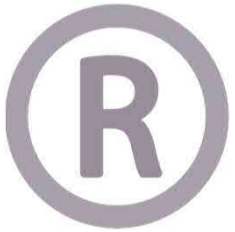


Must be measurable and have a timeframe!

Goals Must Be:

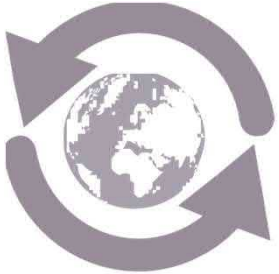
Specific &
Achievable

Reduce Residual
Risk



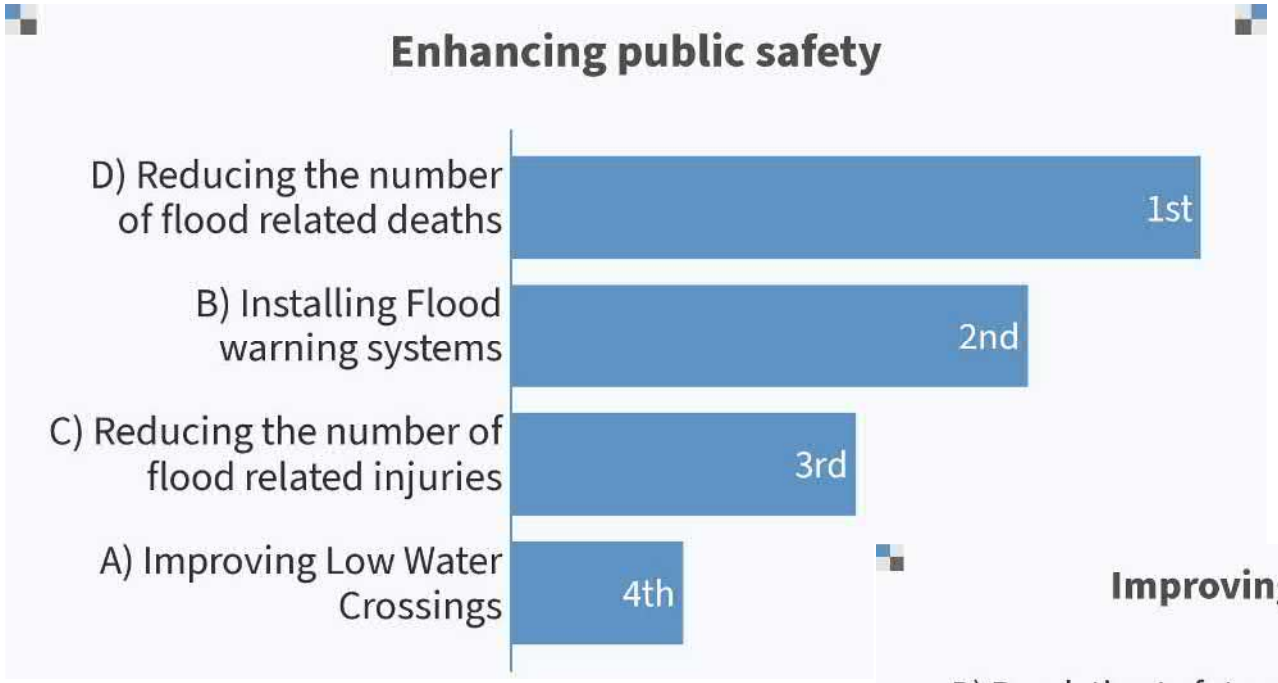
Recommended
or
Required

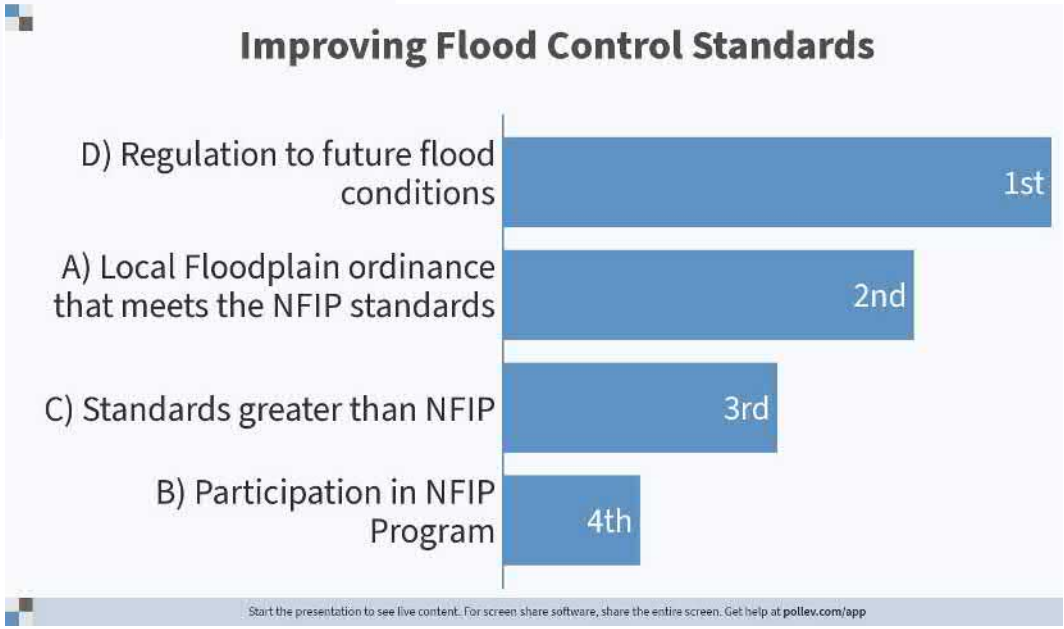
Short-term (10 years)
&/or
Long-Term (30 years)



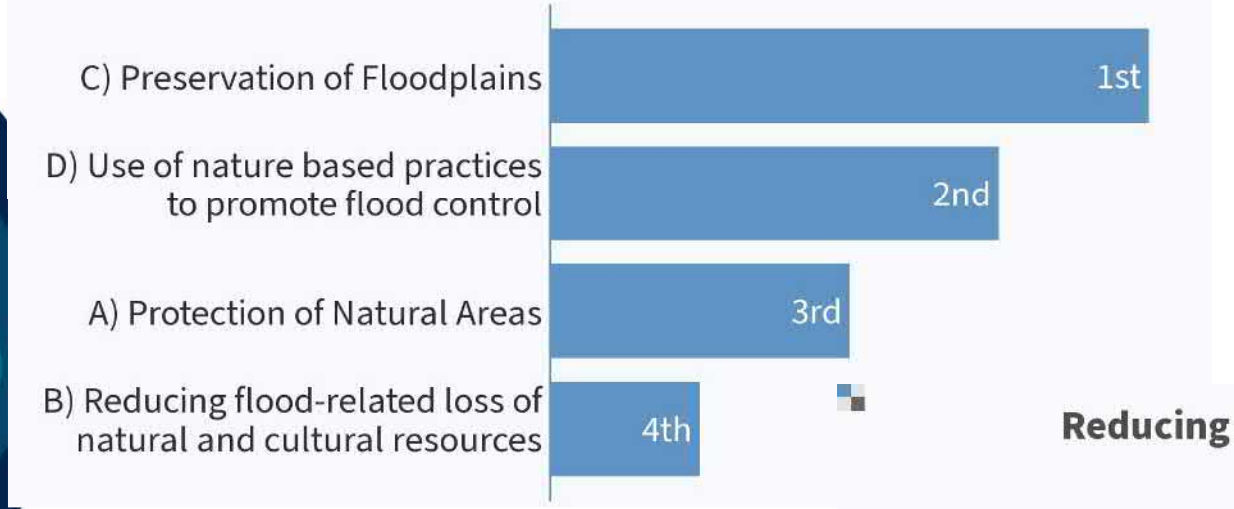
Regionwide
Or Subregional

Please choose one word that describes your top priority for the Regional Flood Planning Effort.

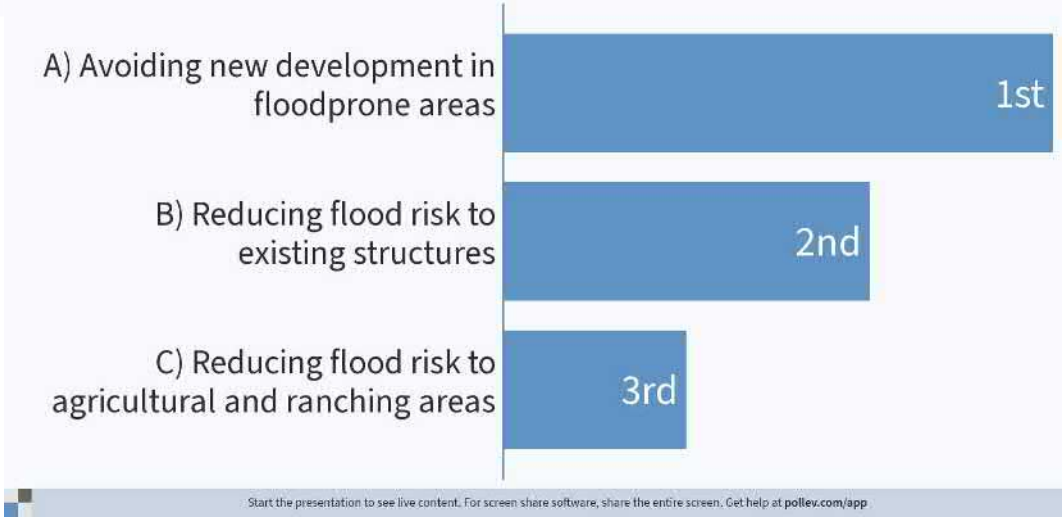

Enhancing public safety
D) Reducing the number of flood related deaths
1st
B) Installing Flood warning systems
2nd
C) Reducing the number of flood related injuries
3rd
A) Improving Low Water Crossings
4th


Improving Flood Control Standards
D) Regulation to future flood conditions
1st
A) Local Floodplain ordinance that meets the NFIP standards
2nd
C) Standards greater than NFIP
3rd
B) Participation in NFIP Program
4th
Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

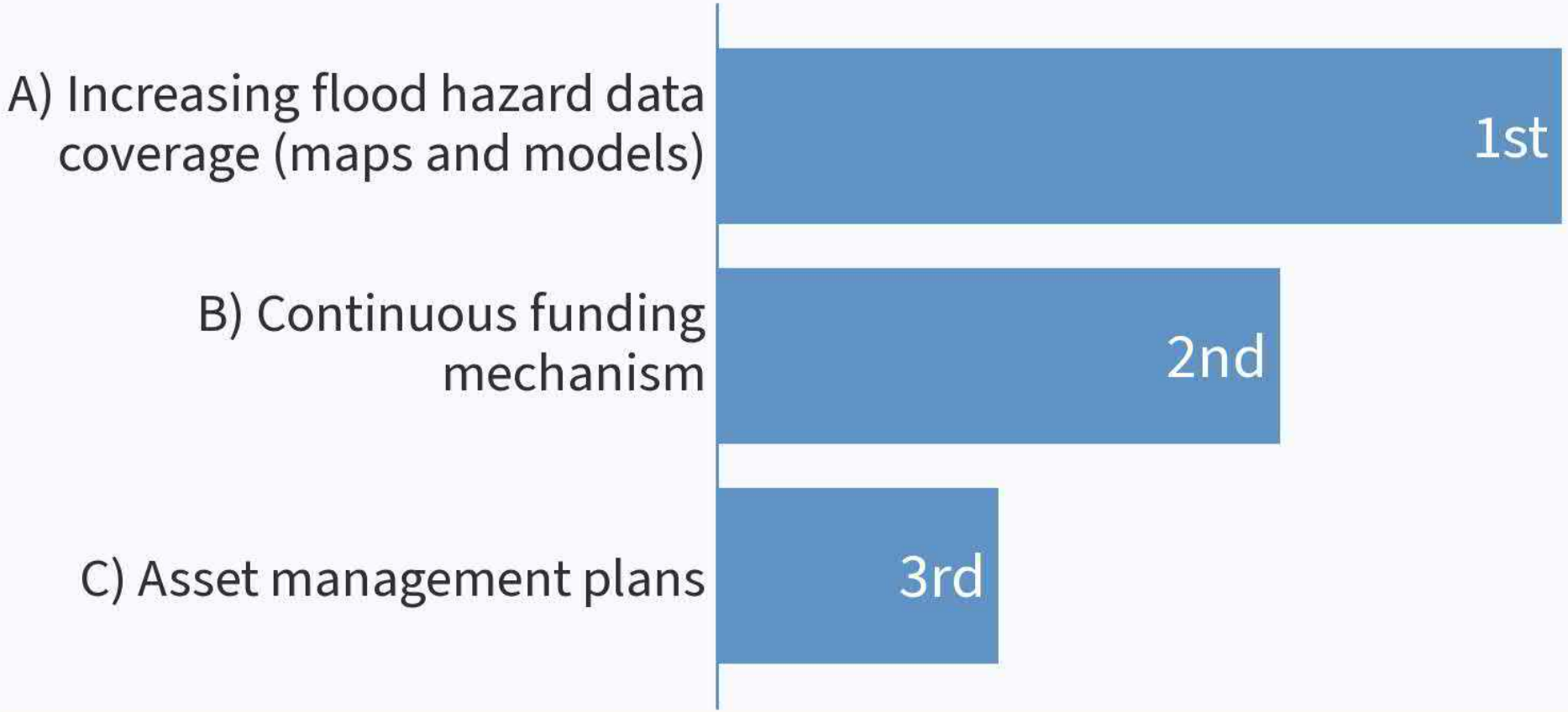
Land Protection



Reducing Property Damage and Loss



Flood Control Programs



Please share some of your thoughts and ideas!

“ Funding to undeveloped areas for data ”

“ Emphasis in reaching non public sector stakeholder throughout the process ”

From the goal categories discussed, please rank the categories you believe will yield the highest value for this planning effort

Here's What We Heard

Below are overarching goals based on your guidance in our last meeting. The table below helps describe how they will help communities achieve the plan's objectives.

Example Goals							
Overarching Goal	Goal 1: Flood Warning & Public Safety	Goal 2: Improving Flood Analyses	Goal 3: Reducing Property Damage & Loss	Goal 4: Protecting the Floodplain	Goal 5: Flood Infrastructure Improvement	Goal 6: Flood Education & Outreach	Legend:
Protect against the loss of life	●	●	◑	◑	●	◑	◑ Potential benefit ● Benefit * Single project with multiple benefits, i.e. improves floodplain protection and water supply, increases recreation opportunities, habitat preservation, etc.
Protect against the loss of property	◑	●	●	◑	●	◑	
Protect infrastructure	●	●	●		●		
Protect the environment	●	◑	●	●			
Protect water supply			◑	●	◑		
Sustain the economy	●	◑	●		◑		
Design for co-benefits*			◑	●	●		
Increase public awareness	●	●				●	
Build community support	●	●				●	

Goal 1. Improving Flood Warning and Public Safety

A Increase the number of communities with warning and emergency response programs that can detect the flood threat and provide timely warning of impending flood danger.

B Improve regional standards for data sharing and warning systems

C Reduce the number of low-water crossings with no warning system by ----%

Reduce 5-year moving average of flood related fatalities in the flood planning region by __% by 2033

Goal 2. Improving Flood Analysis

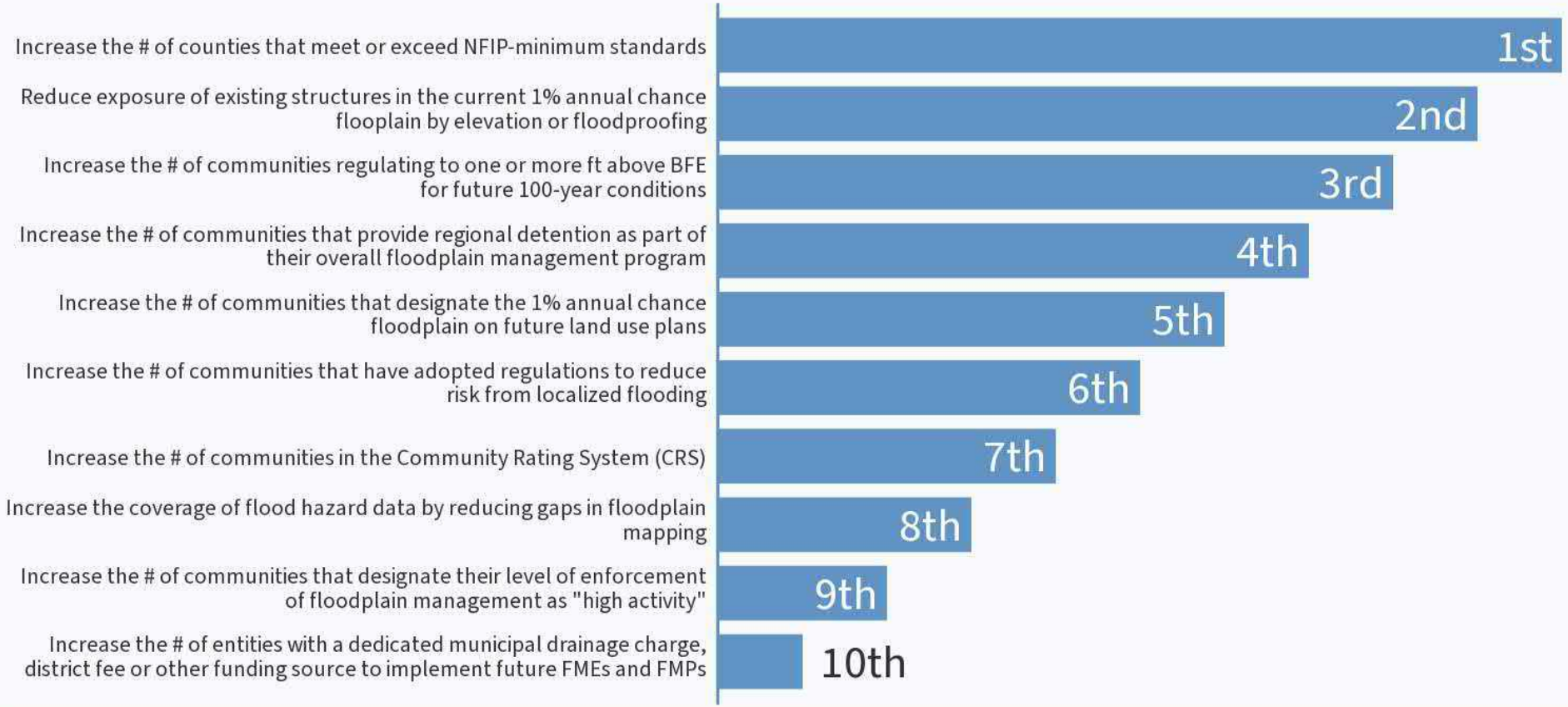
A Increase the number of entities which utilize/adopt Atlas 14 (Volume 11) revised rainfall amounts as part of revisions to design criteria and flood prevention regulations by X. (region specific)

B Increase the coverage of flood hazard data in the FPR by reducing the current gaps in floodplain mapping by ____%.

C Increase utilization of the new base level engineering (BLE) data (pending) by regional entities in the FPR by X.

D Increase the number of communities that perform detailed studies of localized/urban flooding impacts by X%

Goal 3: Reducing Property Damage and Loss



Goal 4. Protecting the Floodplain

A Reduce the number of vulnerable properties (i.e. through property buyouts, acquisitions, and/or relocations) by X%.

B Increase the acreage of publicly protected natural areas by X % as part of property buyouts and acquisitions to reduce future impacts of flooding.

C Reduce the number of repetitive-loss properties in the FPR by X.

D Increase the number of communities that perform detailed studies of localized/urban flooding impacts by X%

Goal 5. Flood Infrastructure Improvement

A Reduce the number of vulnerable critical facilities located within the existing and future 1% annual chance floodplain by X.

B Reduce the number of low water crossings located within the existing and future 1% annual chance floodplain by X%.

C Increase the number of nature- based practices as part of flood risk reduction projects by X.

Goal 6. Expanding Flood Education & Outreach

A Increase the number of public stakeholder participants in the regional flood planning process by X percent per each flood planning cycle.

B Increase the number of community stakeholder entities participating in the regional flood planning process by X percent per each cycle.

C Increase the number of public outreach and education activities to improve flood hazard awareness and benefits of flood planning by X percent.

Ch. 4 Flood Mitigation Needs & Potentially Feasible Solutions

Overview & Approach

Task 4 – Assessment and Identification of Flood Mitigation Needs

- Refresher – FME, FMS, and FMP
- How Task 4 Contributes to Outcomes
- Draft Process for Identification and Selection

FME - Flood Management Evaluations

Study of a specific, flood-prone area needed to assess risk and/or determine whether there are potentially feasible FMSs or FMPs

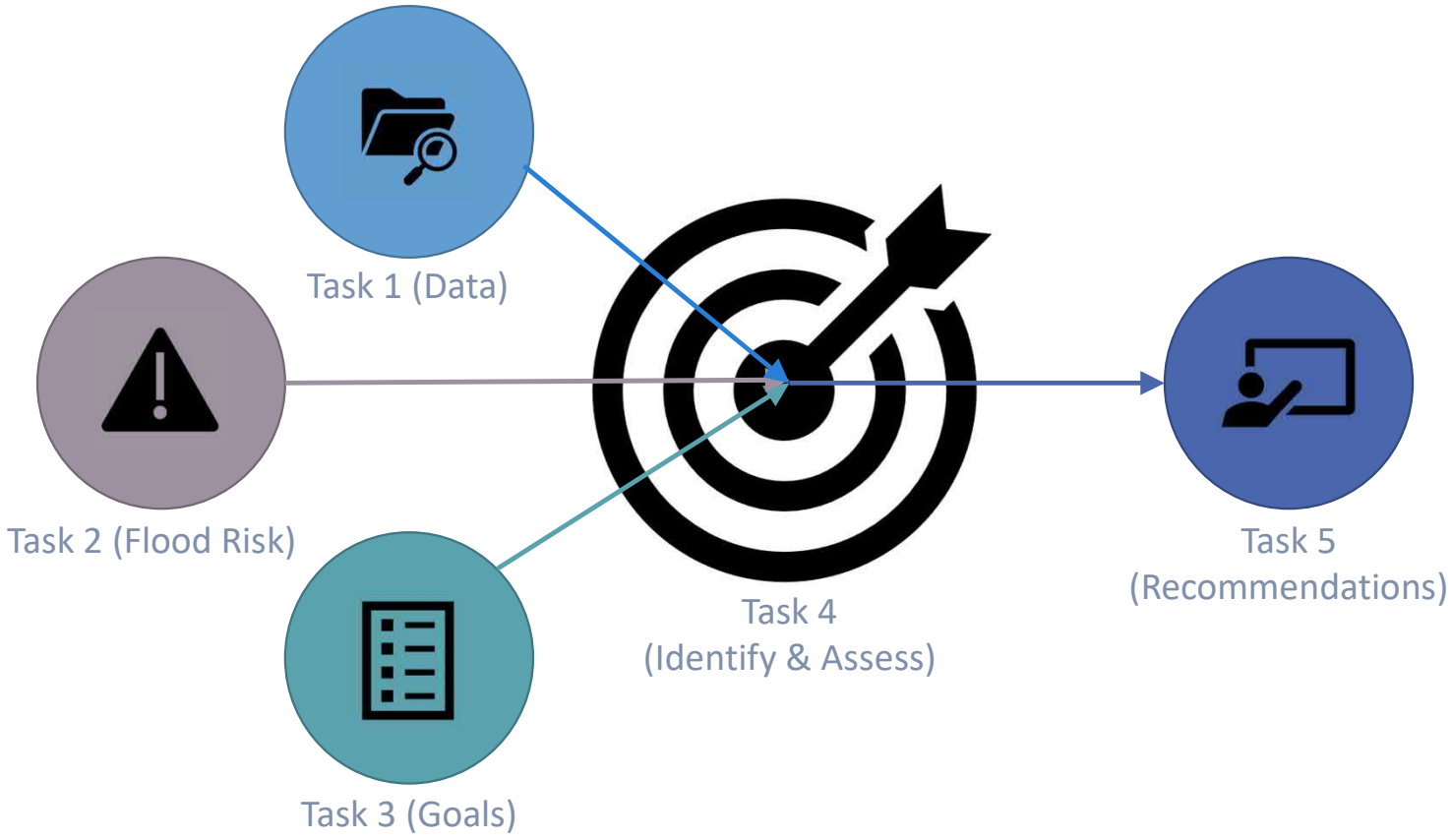
FMS - Flood Management Strategies

Plan to reduce flood risk or mitigate flood hazards to life or property; action group would like to identify, evaluate, and recommend that doesn't qualify as an FME or FMP

FMP - Flood Mitigation Projects

Project (structural or non-structural) that has non-zero capital costs or other non-recurring cost and will reduce flood risk, mitigate flood hazards to life or property

Task 4B: Identify FME, FMS, & FMP



Anticipated FMS, FMP, & FME Distribution

Task 4A: Process for Identifying Areas of Greatest Need

1. Most prone to flooding that threatens life & property
2. Locations, extent, & performance of infrastructure
3. Inadequate inundation maps
4. No H&H models
5. Emergency need
6. Existing models, analysis, & flood risk mitigation plans
7. Already identified flood mitigation projects
8. Historic flooding events
9. Already implemented flood mitigation projects
10. Additional other factors

Guidance	Application
1. Most prone to flooding that threatens life & property	• Area overlapped by inundation mapping and/or included in any historical flooding record
	• Building Footprints / Polygons
	• Fully Developed Flood Models

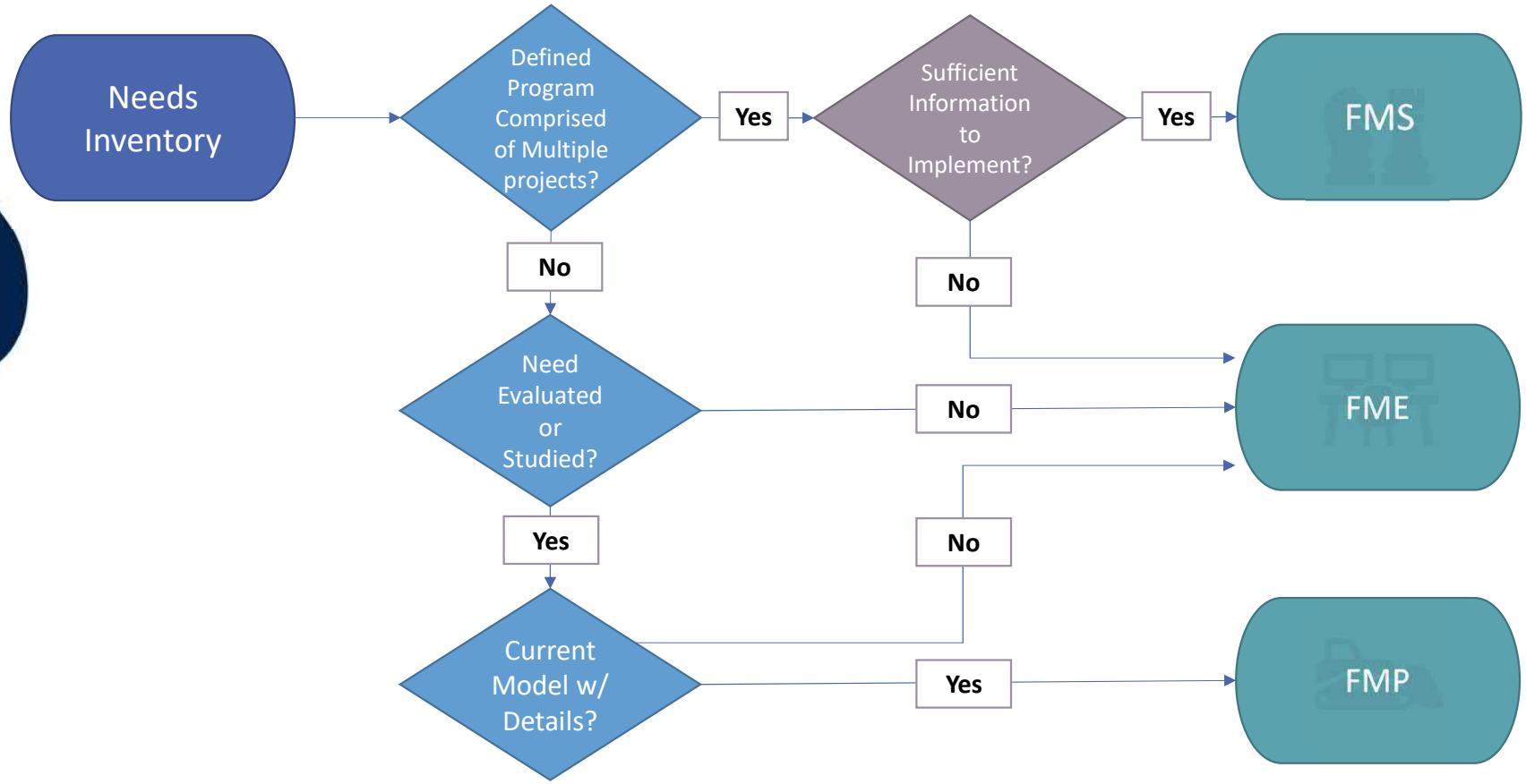
2. Locations, extent, & performance of infrastructure	• Communities not participating in NFIP unless we have information suggesting that have NFIP equivalent or higher standards
	• City / County Design Manuals
	• FEMA Claims Dataset
	• Community Rating Score (CRS)
	• Land Use
	• Floodplain Ordinance(s)

Guidance	Application
3. Inadequate inundation mapping	• No Mapping
	• Fathom / BLE / FEMA Zone A
	• Detailed FEMA Models Older than 10 years
4. Hydrology and Hydraulics (H&H) Models	• Communities with ZERO models
	• Communities with Limited Models
5. Emergency need	• TWDB / Legislative definition for "emergency need“
	• Damaged or Failing Infrastructure

Guidance	Application
6. Existing models, analysis, & flood risk mitigation plans	• Communities with none
	• Communities with some but not full coverage
7. Already identified flood mitigation projects	• Communities with none
	• Communities with some projects
8. Historic Flooding Events	• Hurricanes & Tropical Storms
	• Other significant local events

Guidance	Application
9. Already implemented flood mitigation projects	• Communities with ZERO mitigation projects underway
10. Additional other factors	• Incorporate RFPG / TWDB Goals

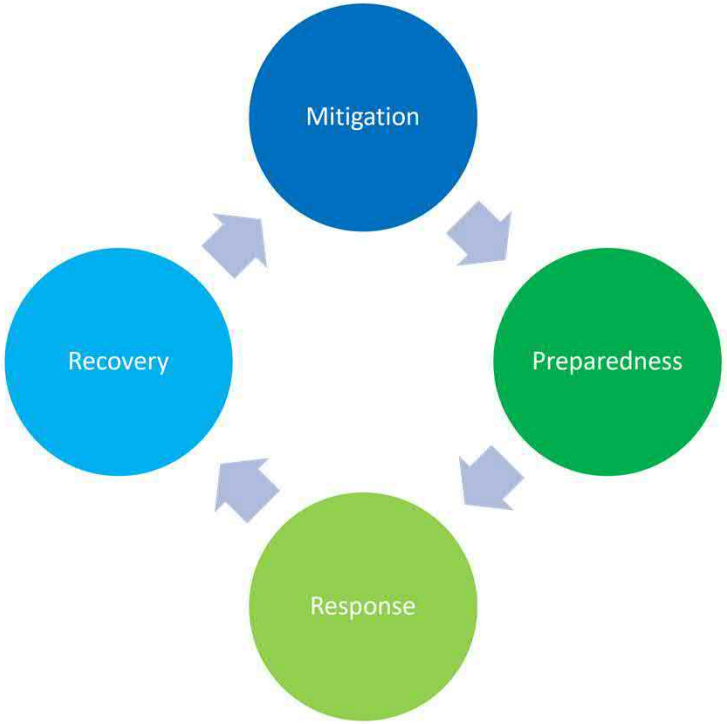
Process for Identifying FME, FMS, FMP



Ch. 7 Emergency Response Summary

Overview & Approach

THE FOUR PHASES OF EMERGENCY MANAGEMENT

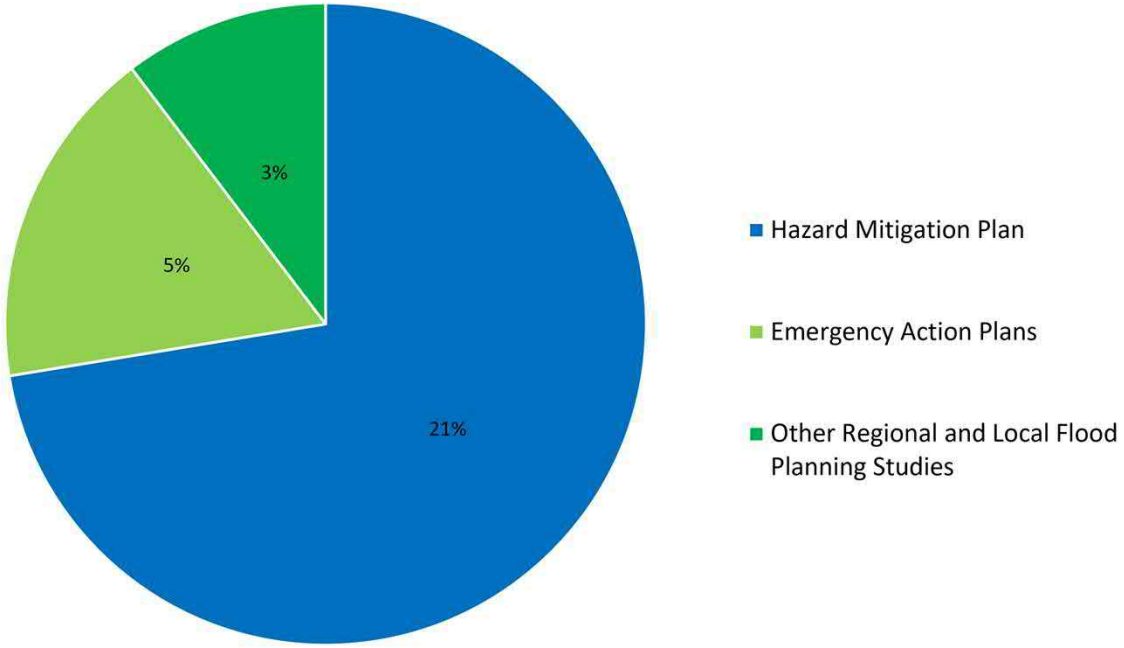


The Plan must contain a summary of the ***current*** state of flood preparedness in the region to respond to future floods, including:

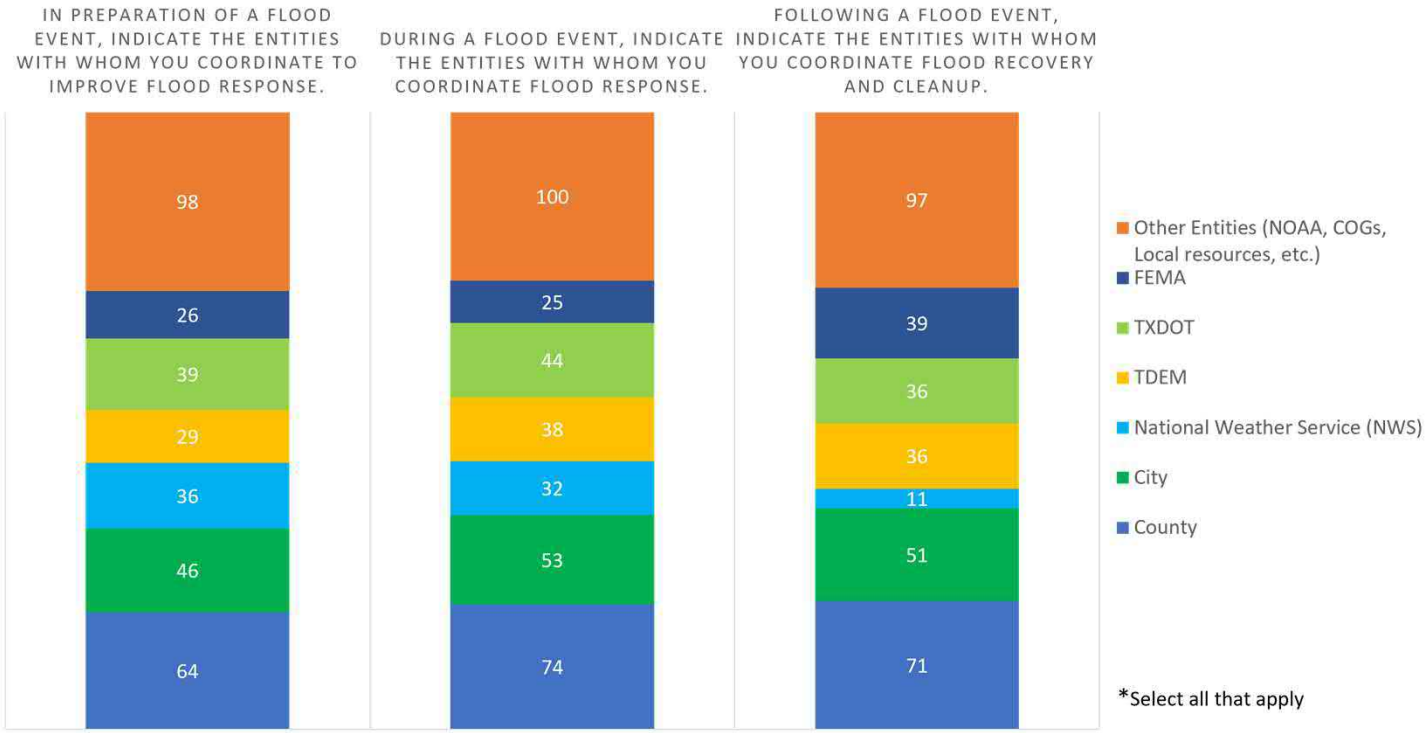
A list of entities involved	A summary of the roles and responsibilities of various entities	Actions taken or planned for recovery from past flood disasters in the region.

FLOOD PLANNING SURVEY RESULTS

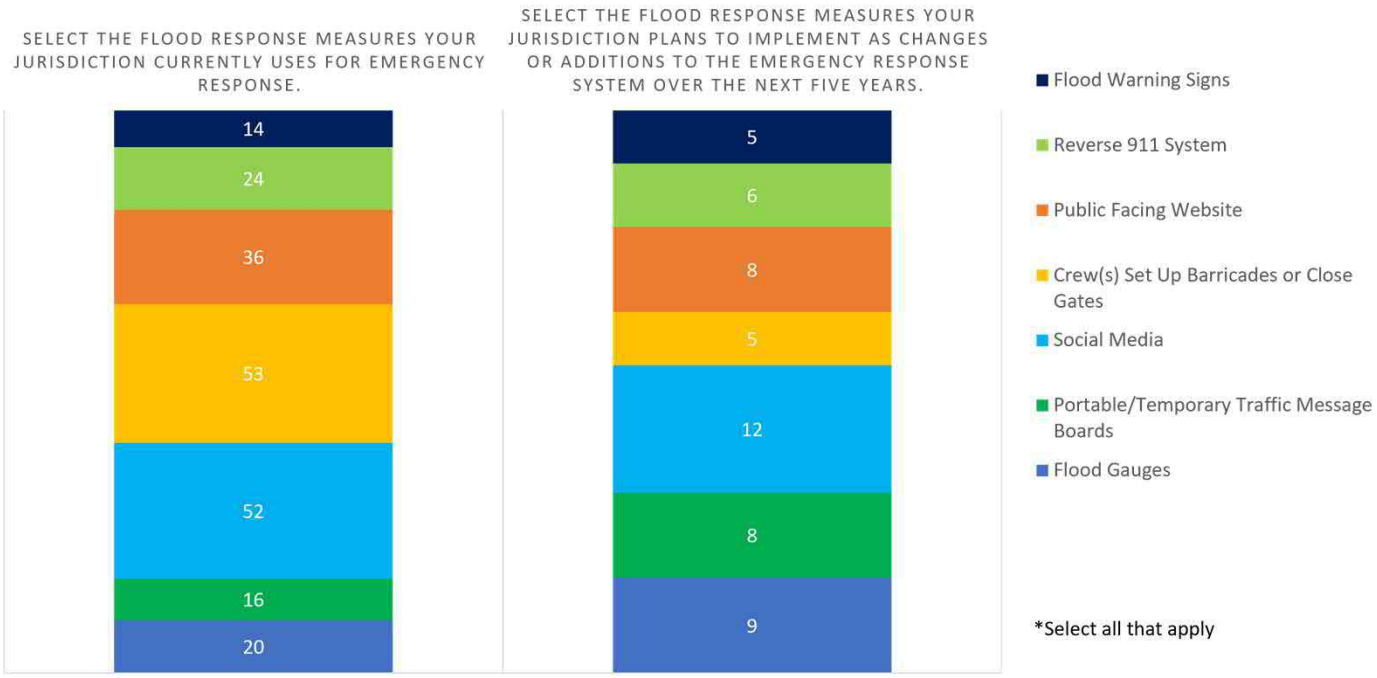
WHICH OF THE FOLLOWING PLANNING DOCUMENTS OR INFORMATION DOES YOUR JURISDICTION HAVE THAT YOU WOULD LIKE TO PROVIDE TO THE REGIONAL FLOOD PLANNING GROUP?



FLOOD EVENT ENTITIES SURVEY RESULTS BY PERCENTAGES



FLOOD RESPONSE SURVEY RESULTS BY PERCENTAGES



*Select all that apply

From the results of the survey, we have learned:

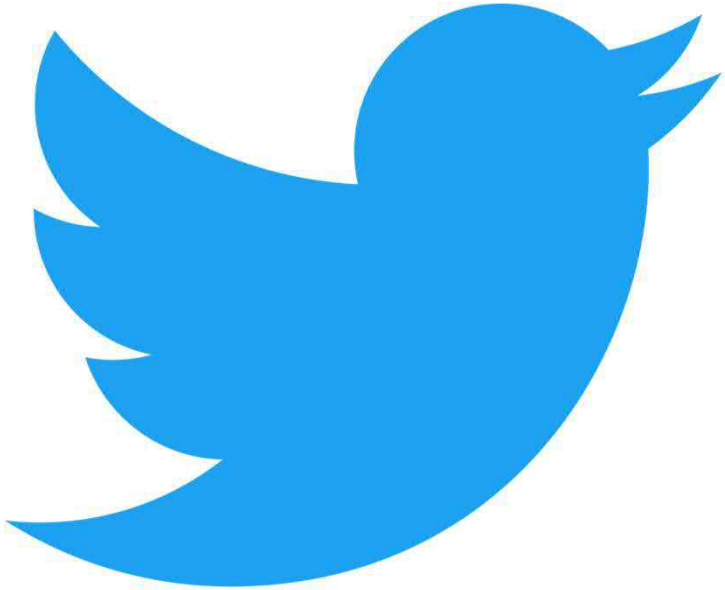
A comprehensive Flood Plan is not available for most participating jurisdictions	Coordination between City and County entities is critical in all stages of a flood event	Implementation of both online and on the ground response mitigation measures are needed

Ch. 8 Administrative, Regulatory & Legislative Discussion

Ch. 8 Discussion of Potential Recommendations

- Administrative
- Regulatory
- Legislative
- Other

Public Outreach Update



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General informational presentation available

LOOK-AHEAD

September
- Map & Chapters 1, 2 & 3 approvals
- Process to identify FMEs, FMSs & FMPs (Chapter 4)

October
- No meeting

November
- Chapter 4 & Tech Memo approvals

December
- No meeting (unless needed to approve Tech Memo)

8. Consider establishing Technical Subcommittees

9. U.S. Army Corps of Engineers presentation

USACE PLANNING PROCESS AND AUTHORITY OVERVIEW

Regional Flood Planning Group
Lisa Mairs, Project Manager
Carrie McCabe, Planner
USACE, Galveston District

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TOPICS

USACE Planning Process

- Plan Formulation
- Risk Informed Planning
- Comparison and Screening

Potential Authorities

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SIX STEP PLANNING PROCESS

USACE follows a six step planning process, measures performance against stated goals and objectives.

- Identification of problems and opportunities
- Inventory, forecast and analysis of water and related land resource conditions
- Formulation of alternative plans
- Evaluation of the effects of the alternative plans
- Comparison of alternative plans
- Selection of a recommended plan

Project Justification

Benefits are often measured as Damages Avoided.

These are measured in $ and can be reflected in a “BCR” Benefit Cost Ratio.

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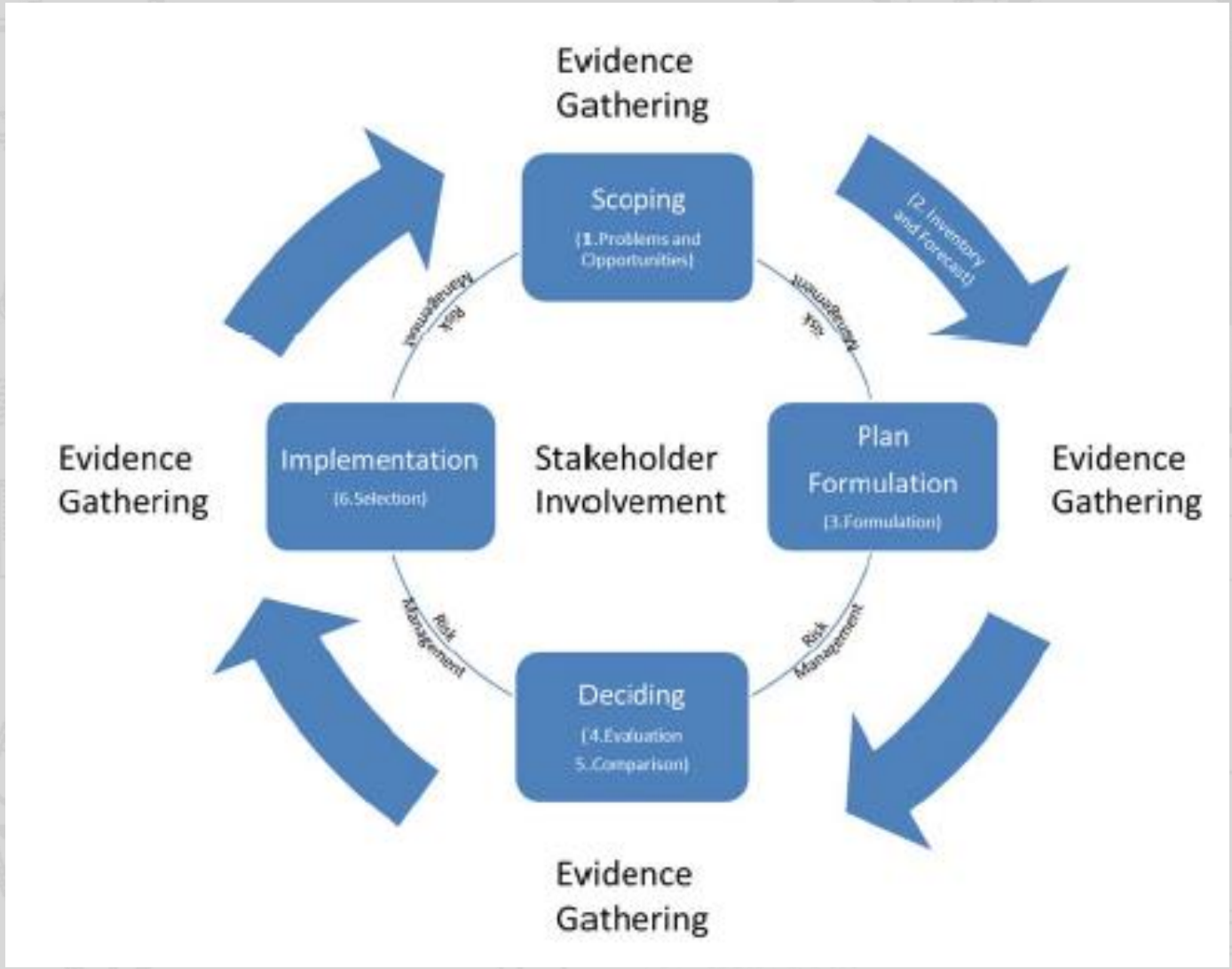
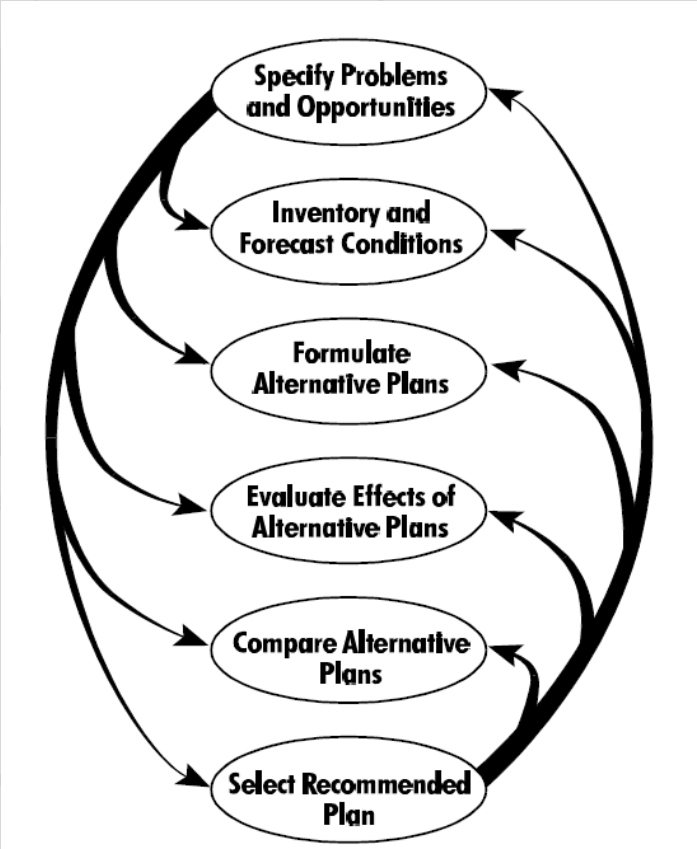
PLANNING PROCESS





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RISK INFORMED PLANNING

The planning steps can be repeated to screen alternatives

Alternatives Phase:

- Problem identification, baseline conditions, and develop and combine “measures”
- Metrics developed to measure effectiveness
- Viable alternatives carried forward

Tentatively Selected Plan Phase:

- Refine scale and combinations of measures
- Comparison of with and without project conditions

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TYPES OF MEASURES

Non-Structural

Give equal consideration

- Flood Risk Management (FRM) and Coastal Storm Risk Management (CSRM): Reduce flood damages without significantly altering the nature or extent of flooding.

- Need to formulate at least one Alternative but can use NS measures to add to primarily structural plans.

Structural Measures Reduce the Probability of Flooding

Examples:

- Dune/Beach Restoration
- Shoreline Stabilization
- Seawall/Levee/Floodwall

Nonstructural Measures Reduce the Consequences of Flooding

Examples:

- Flood warning/Evacuation
- Acquisition
- Elevation
- Relocation

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USACE PARTNERSHIP OPPORTUNITIES

- SILVER JACKETS
- FLOODPLAIN MANGEMENT SERVICES
- PLANNING ASSISTANCE TO STATES
- CONTINUING AUTHORITIES
- PL84-99
- SECTION 10/ 408
- DAM AND LEVEE
- SECTION 7001 OF WRRDA 2014
- CURRENT REGION 3 PROEJCTS

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SILVER JACKETS

- State-led Teams
- Primarily flood hazard focused
- Multi-agency coordination and collaboration
- Technical expertise, data, funding
- Strategic life-cycle risk management
- Shared problem solving
- Watershed perspective

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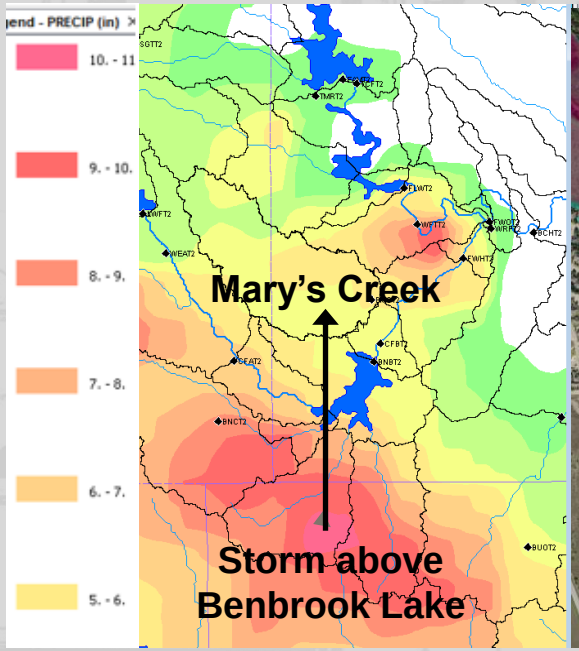
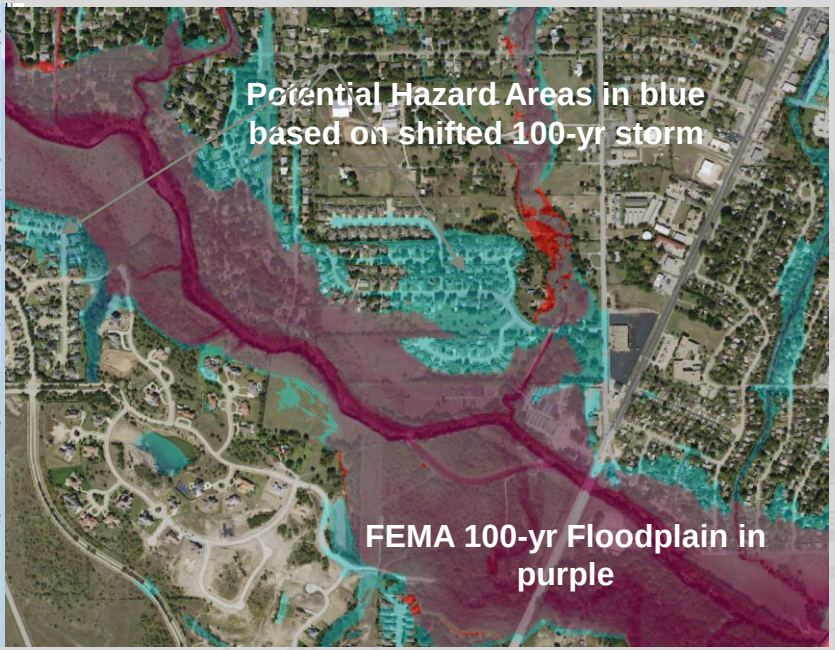
SILVER JACKETS PROGRAM

Mary's Creek, DFW, TX area Storm Shifting

- **Objective:** Address uncertainty associated with determination of flood potential
- Shifted 2000 100-year± storm 15 miles
- **Outcome:** Flood potential is greater than previously understood





City of Dallas, TX HEC-LifeSim

- **Objective:** Complete HEC-LifeSim analysis & simulation to assess impact of levee failure
- Simulated multiple breach scenarios of the East and West Levees
- **Outcome:** HEC-LifeSim results used to inform City of Dallas Emergency Action Plan (EAP) updates

Dallas County, TX Storm Shifting

- **Objective:** Assist with community desire for data-driven information to inform implementing higher standards in local floodplain management and emergency preparedness/response.
- Provides informative, relatable, and non-regulatory information to enable action ($100,000 USACE & $35,000 partner contributions)
- **Outcome:** Collaborative & compelling results for several storms and scenarios.

  Anticipate completing study in late 2021.

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FLOODPLAIN MANGEMENT SERVICES (FPMS)

- Authorization – Section 206, Flood Control Act of 1960, as amended
- Provide the full range of technical services and planning guidance that is needed to support effective flood plain management.
- Types of studies have been conducted under the FPMS program include:
  - flood plain delineation/hazard, dam failure analyses,
  - hurricane evacuation, flood warning,
  - floodway, flood damage reduction,
  - stormwater management, flood proofing,
  - and inventories of flood prone structures.
- Study only, does not lead to implementation or construction

Extended Services:

- Councils of Government, GLO, RFPG Assistance
  - Technical support, technical advisors, technical reviewers

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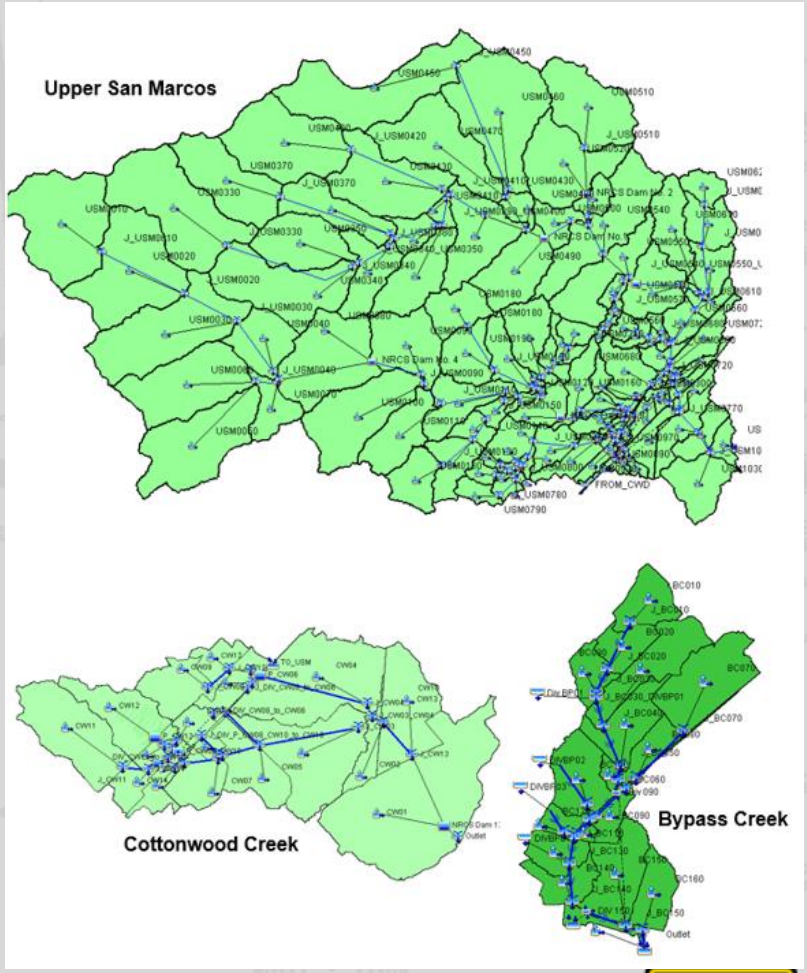
FLOODPLAIN MANAGEMENT SERVICES (FPMS)

City of San Marcos FPMS Project:

- Problem: Out of date floodplain mapping due to increases in precipitation frequencies (NOAA Atlas 14)
- Updated San Marcos estimates of 100-yr flood potential
- Flood potentials developed for existing & future land use conditions
- Consistency with InFRM WHA for Guadalupe
- Future work: Hydraulic modeling and mapping, storm shifts annually to completion
- Initial USACE contribution: $95k
- San Marcos contribution: models and data



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PLANNING ASSISTANCE TO STATES (PAS)

- Authorization - Section 22, Water Resources Development Act (WRDA) 1974, as amended
- Assistance to states, local governments, other non-Federal entities, and eligible Native American Indian tribes.
- Assistance in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources.
- Cost Sharing Requirements: 50%/ 50% (Fed/ non-Fed) with the option of providing in-kind services.
- Planning level of detail only

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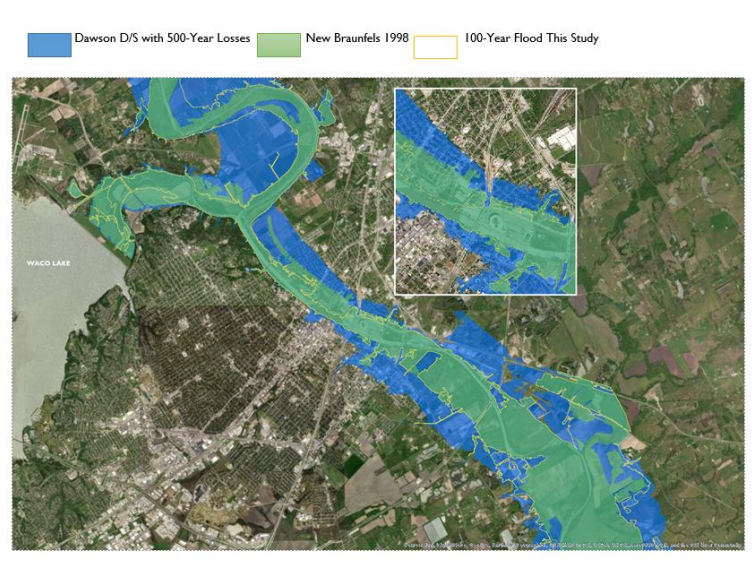
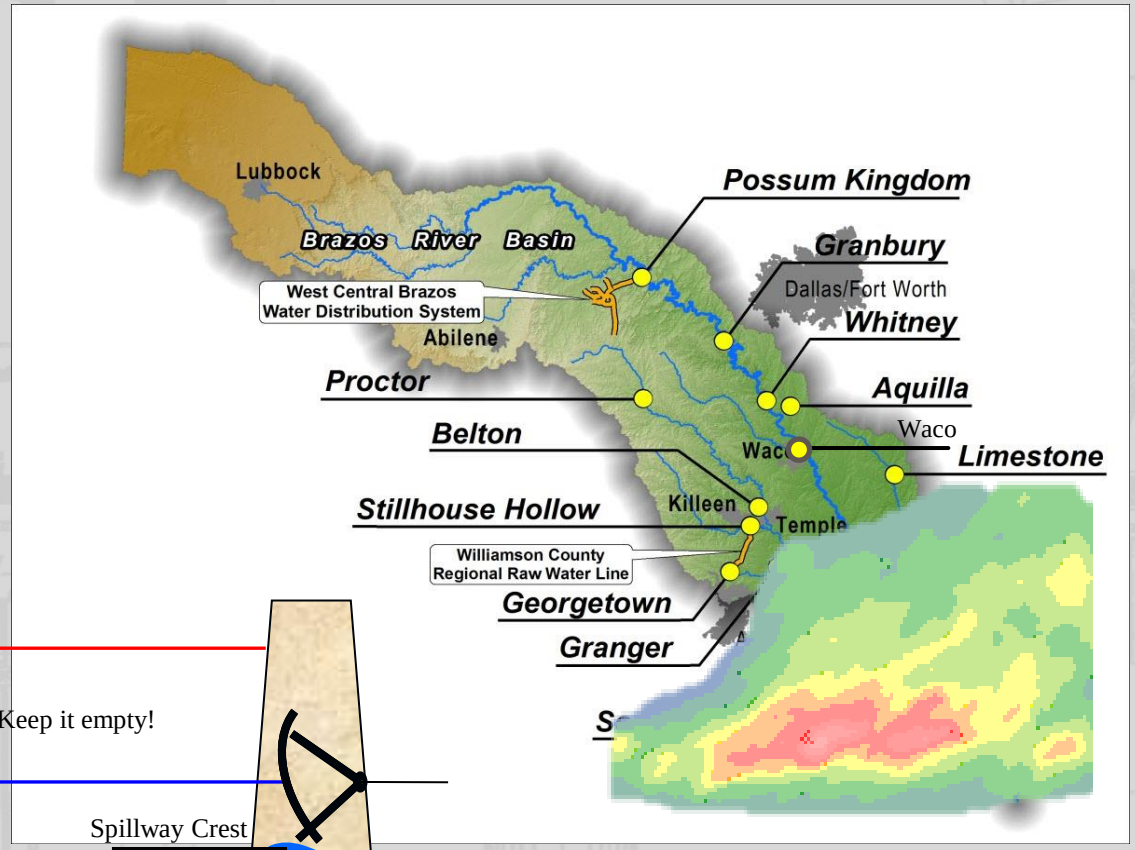
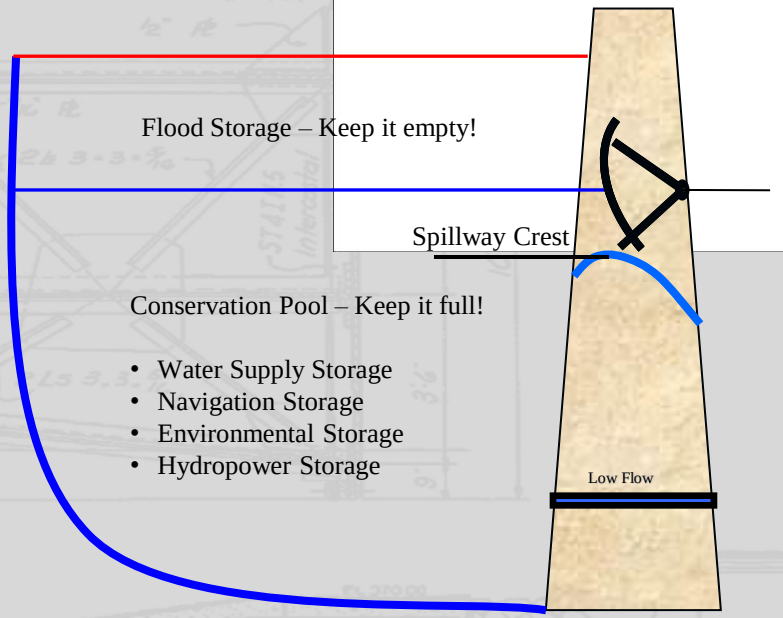
Planning Assistance to States (PAS)

Brazos River – Waco, TX

— Cost shared between USACE and City of Waco
— Objectives:
  — Shift nearby storms over Waco
  — Evaluate dam effectiveness for flood prevention
  — Update river modeling
— Outcome:
  — Updated floodplain mapping and emergency management planning
— $305k/$65k (Fed/Non-fed)







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CONTINUING AUTHORITIES PROGRAM (CAP)

- The Continuing Authorities Program establishes a process by which the Corps of Engineers can respond to a variety of water resource problems without specific Congressional authorization for each project. These Projects:
  - Have limited scope and complexity
  - Have established Federal Costs limits
  - Are implemented quickly
  - Do not compete with GI for prioritization
- Federal funding limits range from $500,000 to $10 million. Funds administered at USACE HQ.
- Projects are cost shared with the Non-federal Sponsor
- Feasibility Phase
  - Formulate alternatives
- Design and Implementation Phase.
  - Detailed design & construction
- Operations and Maintenance
  - 100% Non-federal (except section 107)

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CAP AUTHORITIES

Program Authority	Description	Federal Limit Per Project
Section 14	Emergency stream bank and shoreline protection for public facilities, such as roads, bridges, hospitals, schools, and water & sewage treatment plants, that are in imminent danger of failing.	$5M
Section 103	Protection of public and private properties and facilities against damages caused by storm driven waves and currents by the construction of revetments, groins, and jetties and may also include periodic sand replenishment.	$5M
Section 107	Improvements to navigation including dredging of channels and widening of turning basins.	$10M
Section 111	Prevention of mitigation of erosion damages to public or privately owned shores along the coastline when the damages are a result of a Federal navigation project.	$10M
Section 204	Regional Sediment Management and beneficial uses of dredged material from new or existing Federal projects for ecosystem restoration, FRM or HSDR purpose.	$10M
Section 205	Local protection form flooding by non-structural measures such as flood warning systems, or flood proofing; or by structural flood damage reduction features such as levees. Diversion channels, or impoundments.	$10M
Section 206	Aquatic ecosystem restoration.	$10M
Section 208	Local protection from flooding by channel clearing and excavation, with limited embankment construction by uses of materials from the clearing operation only.	$500K
Section 1135	Modification of USACE constructed water resources projects to improve the quality of the environment. Also, restoration projects at locations where an existing Corps project contributed to the degradation.	$10M

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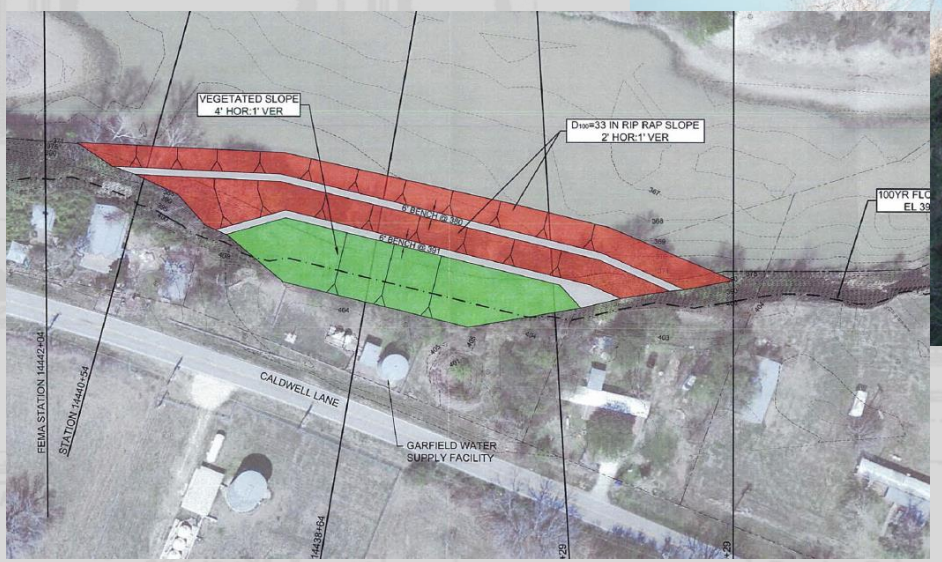
CONTINUING AUTHORITIES PROGRAM

SECTION 14 – EMERGENCY STREAMBANK AND SHORELINE PROTECTION

Nokomis Road, Ten Mile Creek - Lancaster, TX 2013

- Upstream and downstream erosion at bridge crossing
- 325-lf Bagged concrete riprap
- $1.0M Fed / $550k Non-fed



Caldwell Lane, Colorado River - Travis County, TX 2013

- Bank erosion encroaching on water storage facility
- Grading, Longitudinal stone toe riprap, surface drainage improvements
- $1.5M Fed / $780k Non-fed

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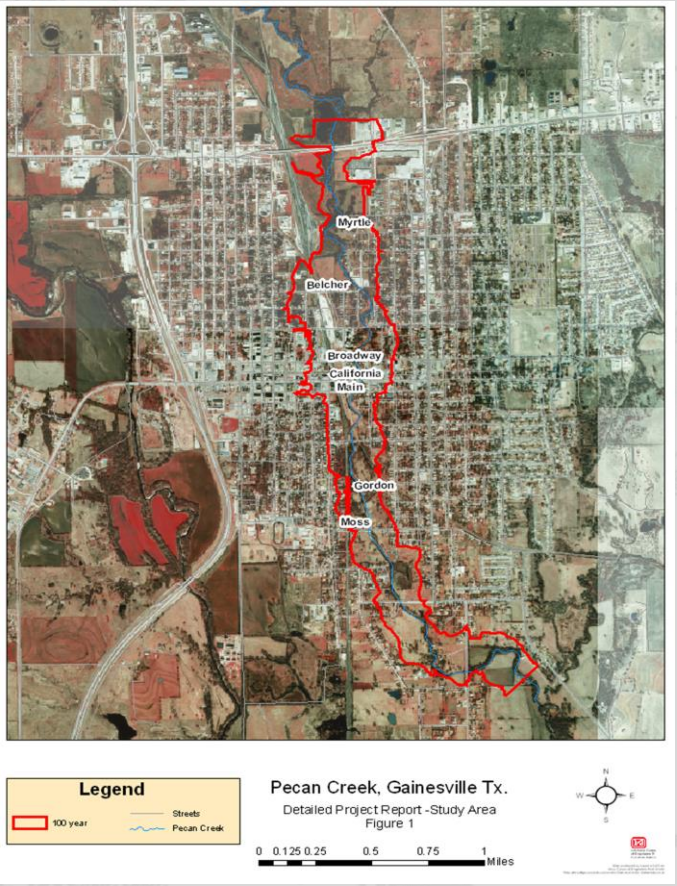
CONTINUING AUTHORITIES PROGRAM
SECTION 205 – FLOOD RISK MANAGEMENT

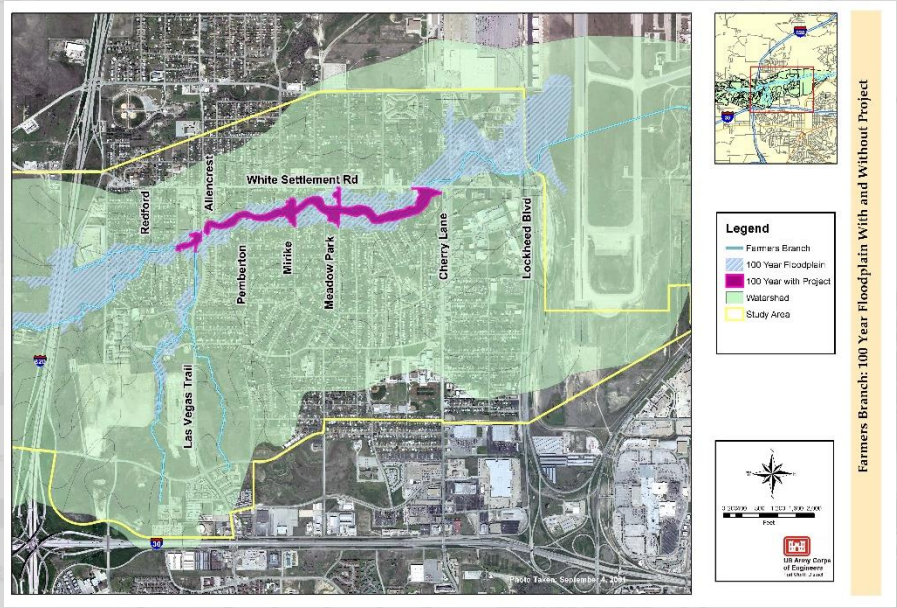


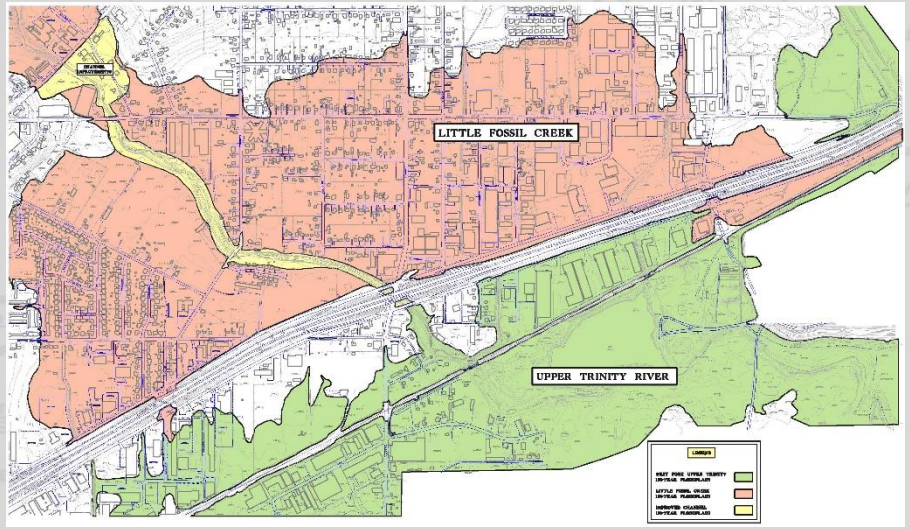
Pecan Creek – Gainesville, TX 2013

- Channel improvements, bridge replacement, mitigation area
- $6.9M Fed / $8.1M Non-fed
  - Non-fed higher due to bridge replacements
- $675k annual benefits

Farmers Branch Creek – White Settlement, TX 2014

- Channel improvements, retaining wall, bridge improvements
- $6.5M Fed / $5M Non-fed
- $1.3M annual benefits





Little Fossil Creek – Haltom City, TX 2014

- Channel improvements, earthen berm, mitigation area
- $7M Fed / $5M Non-fed
- $2.4M annual benefits
  - $600k recreation benefits

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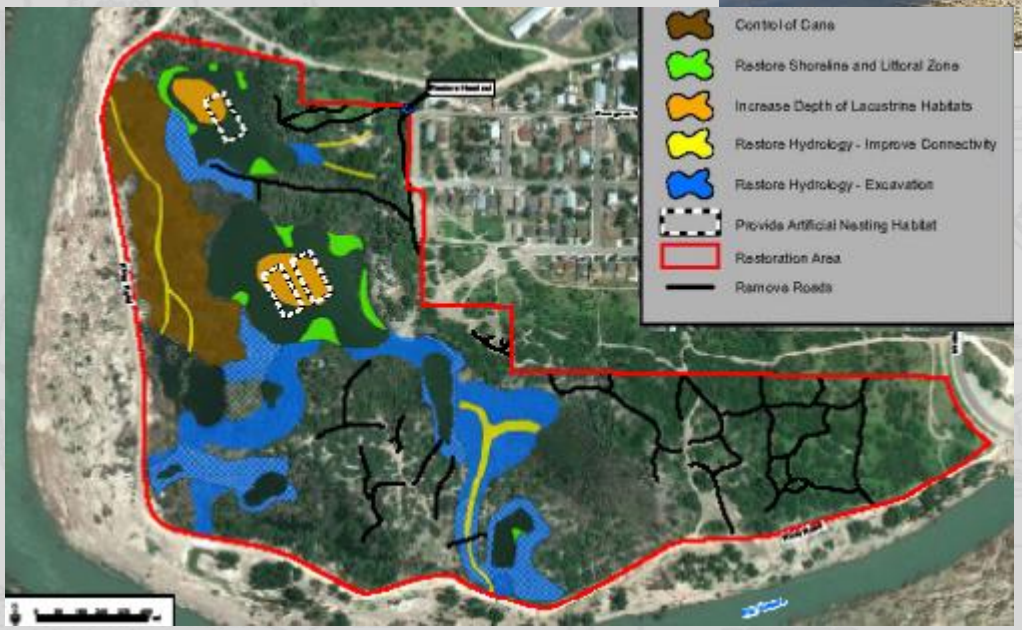
CONTINUING AUTHORITIES PROGRAM

SECTION 206 – AQUATIC ECOSYSTEM RESTORATION

Rio Grande – Laredo, TX 2019

- 78-acre Riparian area
- Aquatic, wetland, and riparian habitat improvement
- Removal of invasive Carrizo Cane
- $5.0M Fed / $2.4M Non-fed



Walnut Creek – Seguin, TX 2016

- Wetland creation, riffle-pool complex, bank stabilization and restoration
- Riparian forest corridor habitat creation
- $5.0M Fed / $2.7M Non-fed

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CONTINUING AUTHORITIES PROGRAM

SECTION 1135 – ENVIRONMENTAL RESTORATION

Lewisville Lake – Frisco, TX 2018

- 6 Wetland areas
- 3.1 miles of connecting trails
- $4.5M Fed / $1.4M Non-fed

Photo: Greg Reynolds

Big Cypress Bayou – Jefferson, TX 2013

- Fish and Wildlife Habitat Restoration
- 25 acres bottomland hardwood, 3 acres of bald cypress planting, 3 wetland cells
- $5.0M Fed / $1.7M Non-fed

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HOW TO GET STARTED

- Sponsor submits letters of intent
- Depending on Authority a scope of work is developed, reviewed, and agreed upon.
- If needed a cost share agreement* will be prepared, reviewed and executed.
- Once agreement is executed, subject to the availability funding, from both Federal and local funding, project will be begin*.

*Depends on Authority

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SECTION 7001 OF WRRDA 2014

- Requires the Secretary of the Army annually submit to congress a report that identifies:
  - Potential Congressional Authorizations
  - Completed Feasibility Reports
  - Proposed Feasibility studies
  - Proposed Modifications to authorized water resources development projects or feasibility studies

- Related to the Missions and Authorities of the Corps of Engineers
  - Primary Missions: Navigation, Flood Risk Management, and Aquatic Ecosystem Restoration
- Require specific Congressional Authorization
- Have not been previously Congressionally Authorized.
- Have not been included in a pervious annual report (prior request)
- If authorized could be carried out by the Corps of Engineers.

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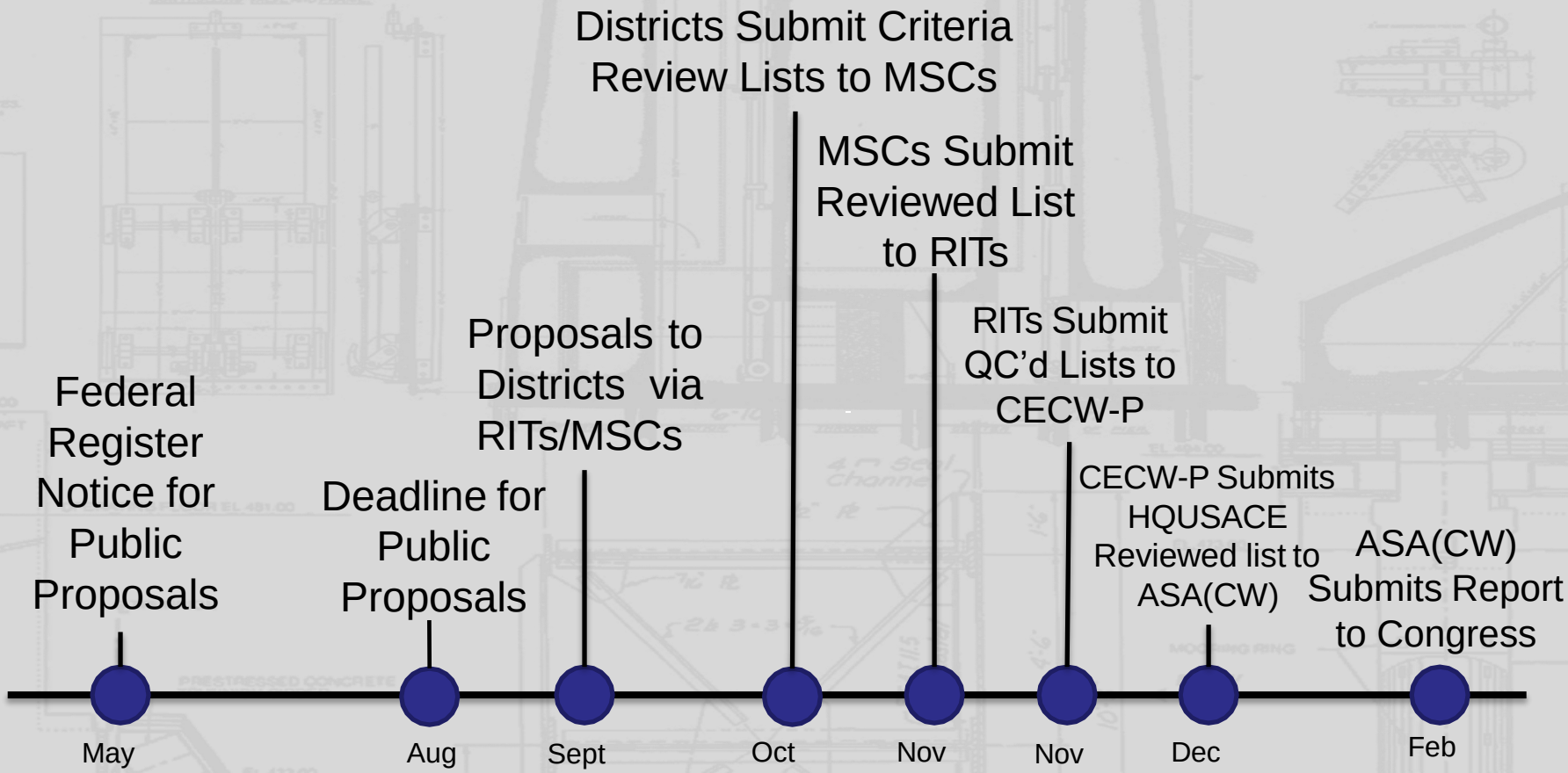
ANTICIPATED TIMELINE



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FROM 7001 PROPOSAL TO PROJECT INITIATION

- Submission of Proposal by August
- Included in the main report of the Annual Report on Future Water Resources Development
- ASA(CW) and Chief of USACE testify to Congress that each proposal in the main report satisfies all of the 5 criteria.
- Congress decides what to authorize in the next WRDA
- After receipt of a study authorization, an appropriation is needed to initiate Investigations
- After receipt of a construction authorization, and after a cleared decision document, an appropriation is needed to initiate Construction.

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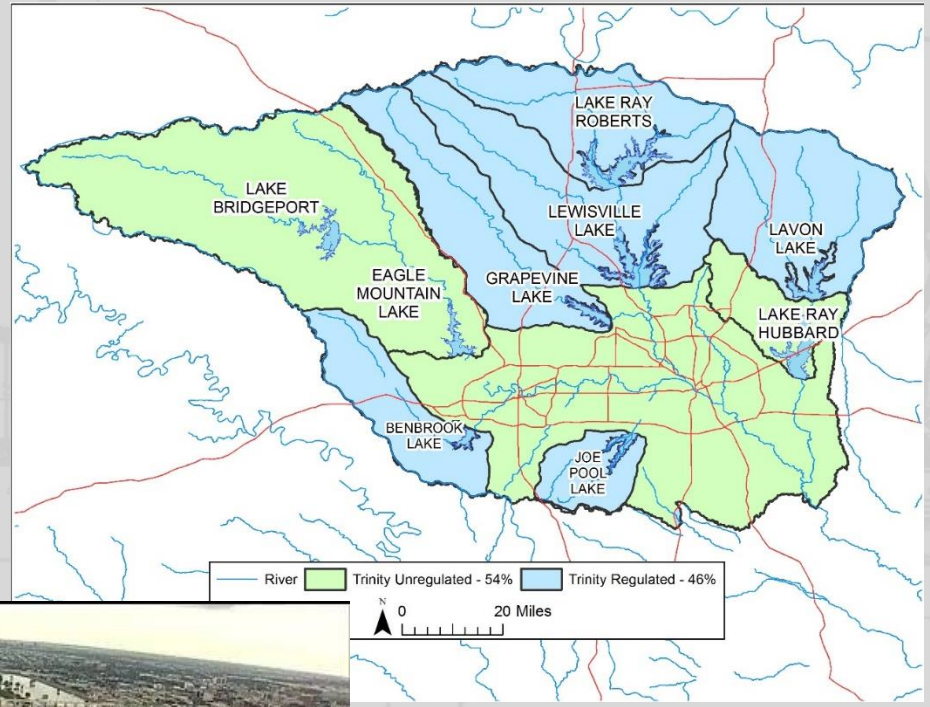
DALLAS-FORT WORTH FEDERAL FLOOD PROTECTION AND WATER SUPPLY SYSTEM

- Devastating floods, 1908, 1942, 1949
- Authorizing legislation
  - River and Harbor Act of March 1945 & 1965
  - Flood Control Acts of 1954, 1960, 1962
  - Public Law 86-339
- 6 multi-purpose reservoirs, USACE operated
- 2 federal levee systems, operated by sponsors
- DFW Flood Control System
  - 7.7 million people
  - $129 billion in damages prevented
  - $2 - $3 billion annually
- Water supply system
  - Serves 7.8 million people
  - 55% surface water storage for DFW
  - $1.8B annual benefits
- Total cost $2.5 billion
- ***Must be operated as a system***



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CONTACT INFORMATION

FOLLOW UP QUESTIONS?

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10. Updates from adjoining coastal regions

11. Updates from Planning Group Sponsor

12. Receive registered general public comments

Limit 3 minutes per person

13. Announcements

14. Consider meeting date for next meeting

15. Consider agenda items for next meeting

16. Adjourn