



Region 11: Guadalupe Regional Flood Planning Group Meeting

Wednesday, June 30, 2021
2:00pm

Agenda Item 1

Call to Order

1. Attendance

Agenda Item 2

Welcome

Agenda Item 3

Public General Comments

Public Comments limited to 3 minutes per speaker

Agenda Item 4

Approval of Meeting Minutes

1. Approval of meeting minutes from June 2, 2021 Region 11 RFPG Meeting

Meeting Minutes
Region 11 Guadalupe Regional Flood Planning Group Meeting
June 2, 2021
2:00 PM
Guadalupe-Blanco River Authority River Annex (905 Nolan Street, Seguin, TX 78155)
or
GoToWebinar Virtual Meeting

Roll Call:

<u>Voting Member</u>	<u>Interest Category</u>	<u>Present (x) / Absent () / Alternate Present (*)</u>
Doug Miller Melissa Reynolds*	<i>Agricultural interests</i>	X
John Johnston	<i>Counties</i>	X
Lon Shell	<i>Counties</i>	X
Bobby Christmas	<i>Electric Generating Utilities</i>	
Annalisa Peace Vanessa Puig-Williams*	<i>Environmental interests</i>	X
Beth Parker Doug Sethness*	<i>Flood districts</i>	
Kevin Stone	<i>Industries</i>	X
Joseph Pantalion Laurie Moyer*	<i>Municipalities</i>	X
Ken Gill	<i>Municipalities</i>	X
Kimberly Meitzen	<i>Public</i>	X
R. Brian Perkins Charlie Hickman*	<i>River authorities</i>	X
Ray Buck Jonathan Letz*	<i>River authorities</i>	*
Gian Villarreal Tami Norton*	<i>Small business</i>	X
Ronald (Ron) Fieseler	<i>Water districts</i>	X
Joseph McDaniel	<i>Water utilities</i>	X

<u>Non-voting Member</u>	<u>Agency</u>	<u>Present(x)/Absent () / Alternate Present (*)</u>
Sue Reilly Beth Bendik*	Texas Parks and Wildlife Department	*
Natalie Johnson	Texas Division of Emergency Management	X
Jami McCool	Texas Department of Agriculture	X
Allen Nash	Texas State Soil and Water Conservation Board	X
Kris Robles	General Land Office	X
Morgan White	Texas Water Development Board (TWDB)	X
Joel Klumpp Brittney Wortham-Teakell*	Texas Commission on Environmental Quality	X

Don Durden	Public	X
Suzanne Scott	Region 12 Liaison	X
Patrick Brzozowski	Region 10 Liaison	X

Quorum:

Quorum: **Yes**

Number of voting members or alternates representing voting members present: **14**

Number required for quorum per current voting positions of 15: **8**

Other Meeting Attendees:

Lauren Willis, GBRA (Facilitator)

Ramiro Mendoza, GBRA (IT)

Alicia Reinmund-Martinez, Blanton & Associates, Inc.

Jay Scanlon, Freese & Nichols, Inc.

Adam Conner, Freese & Nichols, Inc.

Other Meeting Attendees: **

Duke Altman

Laura Atlas

Isabella Baker

Beth Bendik

Weldon Dietze

Tom Hegemier

Thomas Hill

Natalie Johnson

Dan Laroe

Elizabeth Levitz

Lisa Mairs

Laurie Moyer

Tami Norton

Vanessa Puig

Pratibha Sapkota

Stephen Tolbert

Melissa Reynolds

**Meeting attendee names were gathered from those who entered information for joining the GoToWebinar meeting.

All meeting materials are available for the public at: <http://www.quadalupеRFPG.org>

AGENDA ITEM NO. 1: Call to Order

Doug Miller called the meeting to order at 2:02 PM. Lauren Willis called roll of the planning group members to record attendance and a quorum was established.

AGENDA ITEM NO. 2: Welcome

Doug Miller welcomed members to the meeting.

AGENDA ITEM NO. 3: Public General comments (Public comments limited to 3 minutes per speaker)

Doug Miller provided instructions for public comments. No public comments were given.

AGENDA ITEM NO. 4: Approval of Minutes from the May 5, 2021 Region 11 RFPG Meeting

Doug Miller opened discussion on approving the minutes from the May 5, 2021 Region 11 RFPG Meeting.

A motion was made by Brian Perkins to approve the May 5, 2021 Region 11 RFPG Meeting. Ron Fieseler seconded the motion. The meeting minutes were approved by consensus.

AGENDA ITEM NO. 5: Region 11 Guadalupe RFPG Chair Updates

Chairman Doug Miller reviewed the Technical Guidelines Webinar on June 1, 2021 hosted by TWDB for Technical Consultants, Sponsors and Chairs.

AGENDA ITEM NO. 6: TWDB Update/Presentation

Morgan White provided updates regarding the TWDB and the RFPG sponsor, GBRA. The subcontract between the technical consultant, FNI and GBRA was submitted to the TWDB.

AGENDA ITEM NO. 7: Other Presentations

Texas General Land Office: River Basin Flood Study, Western Region
Elizabeth Levitz, Senior Water Resources Engineer, West Region, AECOM

AGENDA ITEM NO. 8: Discussion and potential action regarding Region 11 RFPG Technical Consultants work and schedule.

Jay Scanlon presented a monthly break down of the project schedule and reviewed expectations of the first planning cycle.

AGENDA ITEM NO. 9: Discussion of second Pre-Planning Public Input Meeting to solicit public input (as required per Texas Water Code §16.062(d) and 31 Texas Administrative Code §361.12(a)(4))

The second pre-planning public input meeting will be at the August 4, 2021 meeting, begin at 4pm with public comment after 5pm, be in-person and be located at either Wimberley community center, Comfort Library or Victoria depending on available meeting space.

AGENDA ITEM NO. 10: Update from Region 10 (Lower Colorado-Lavaca) and Region 12 (San Antonio) Liaisons

Ron Fieseler (Region 10 Lower Colorado-Lavaca Liaison) stated that Region 10 is working on the same timeline as Region 11, technical consultant chosen (Halff & Associates), presentation from GLO, meetings online at this time. Kimberly Meitzen asked about public participation within Region 10. Patrick Brzozowski mentioned that Region 10's public participation is the same as across the state. Morgan White stated that LCRA has had both public input meetings; public comment has been minimal

across the state. Annalisa Peace (Region 12 San Antonio Liaison) stated that Region 12 discussed and approved the technical consultant, presentations on flood control infrastructure, USGS and Texas Living Waters on Green Infrastructure. Suzanne Scott added the technical consultant chosen was HDR/Halff, the pre-planning public input meeting had minimal public participation, next meeting is June 15th in person at SARA headquarters in San Antonio.

AGENDA ITEM NO. 11: Update from RFPG Sponsor Guadalupe-Blanco River Authority (GBRA)

Lauren Willis reiterated that the technical consultant contract between FNI and GBRA was submitted to the TWDB.

AGENDA ITEM NO. 12: Public General comments (Public comments limited to 3 minutes per speaker)

Doug Miller provided instructions for public comments. No public comments were given.

AGENDA ITEM NO. 13: Consider date and agenda items for next meeting

Doug Miller opened discussion to consider the date and agenda items for the next meeting.

The RFPG discussed moving the July meeting to June 30, 2021 at 2pm; this meeting will be in-person only. The TWDB to provide a presentation on NFIP.

Joe Pantalione asked to reconsider Agenda Item No. 4 as his alternate was marked present not himself. The change was made to the meeting minutes.

AGENDA ITEM NO. 14: Adjourn

Ron Fieseler made a motion to adjourn. The motion was seconded by Brian Perkins. The motion passed by unanimous consent.

The meeting adjourned at 4:00 PM by Doug Miller.

Approved by the Region 11 Guadalupe RFPG at a meeting held on 06/30/2021.

Brian Perkins, SECRETARY

Doug Miller, CHAIR

Region 11 Guadalupe RFPG Chair Updates

Agenda Item 5

Texas Water Development Board Update

Agenda Item 6

Agenda Item 7

Discussion and potential action regarding Region 11
RFPG Technical Consultants work and schedule



Region 11 Guadalupe

Regional Flood Planning Group Meeting

June 30, 2021



Agenda

- Data Collection, Survey & Stakeholder Outreach
- Existing Flood Risk Data (Preliminary Map)
- Flood Management/Mitigation Practices & Goals
- Look Ahead
 - August RFPG Meeting
 - Preplanning Meeting



Data Collection, Survey, and
Stakeholder Outreach



Source: Victoria Advocate (2019)

Data to Collect

- Public Input
- Historic flooding
 - Flood photos
 - News articles
- Past drainage/flood studies
- Existing drainage infrastructure
- Low water crossing locations
- Proposed/ongoing flood mitigation projects
- Floodplain management practices
- Future growth plans

Home Map Take the Survey Upload Data



Guadalupe Regional Flood Plan

In the wake of historic flooding in Texas, the 2019 Texas Legislature passed legislation to create Texas' first-ever regional and state flood planning process. The Region 11 Guadalupe Regional Flood Planning Group (RFPG) was established by the Texas Water Development Board (TWDB) on October 1, 2020. The RFPG is responsible for developing the first regional flood plan by January 2023, which will culminate in the first-ever state flood plan for Texas.

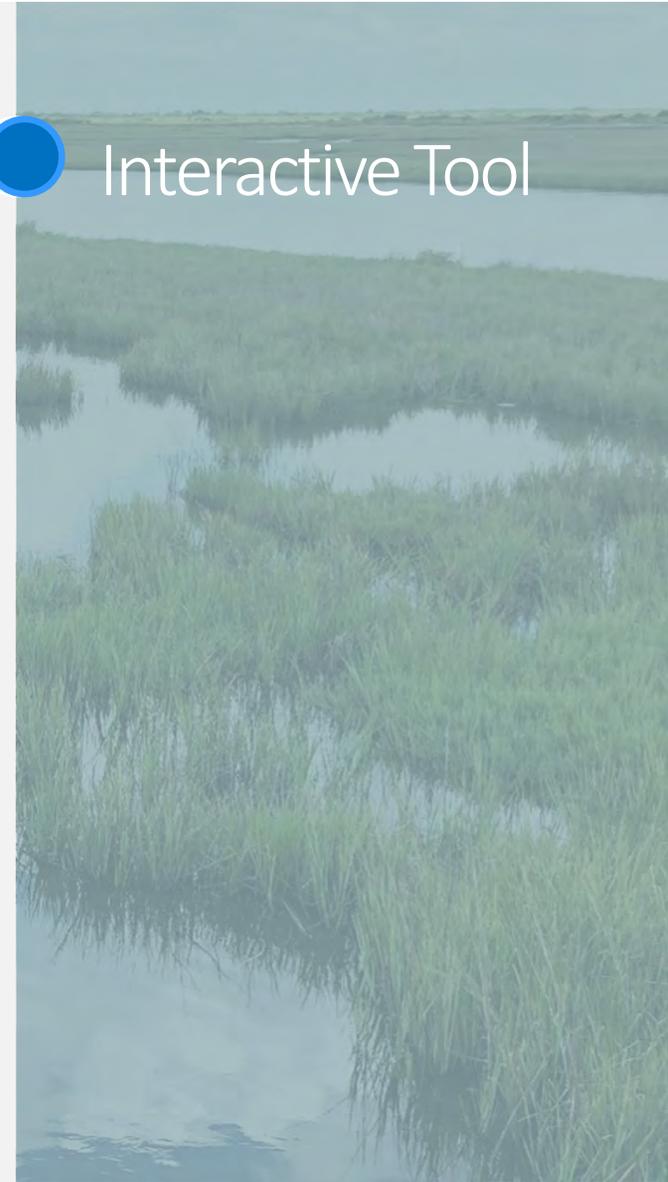
Get Involved!

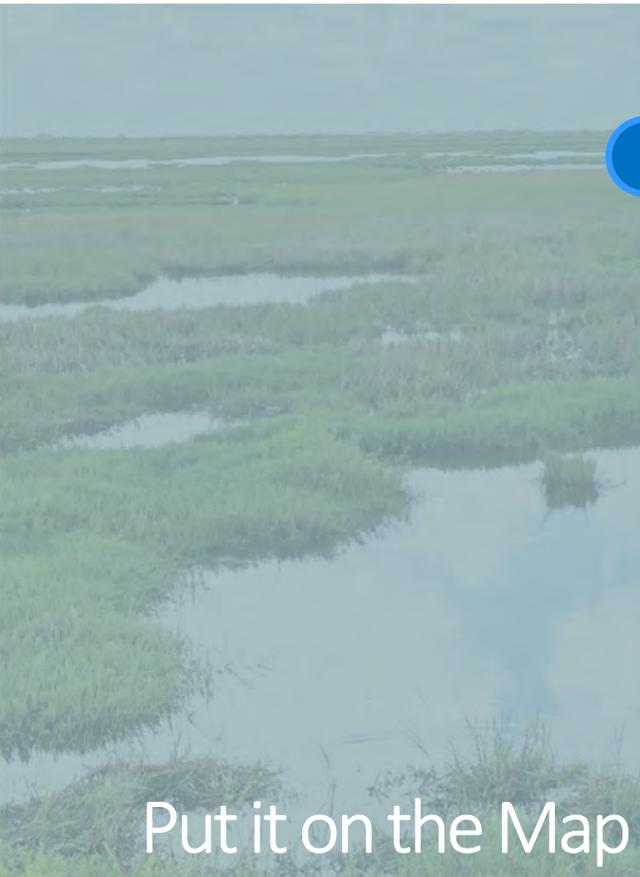
We are looking for your help to develop the first-ever flood plan for the Upper Brazos Region. Please use the links below to provide your input.

		
<h4>Put it on the Map</h4> <p>Use the interactive map to help us identify areas of flood risk in your region.</p> <p>See the interactive map</p>	<h4>Take the Survey</h4> <p>Take the survey to provide input on flooding issues and floodplain management goals specific to your region.</p> <p>Take the Survey</p>	<h4>Upload Data</h4> <p>Help us collect data to strengthen this plan.</p> <p>Upload Data</p>

[Web Map Tutorial Video](#)

Interactive Tool

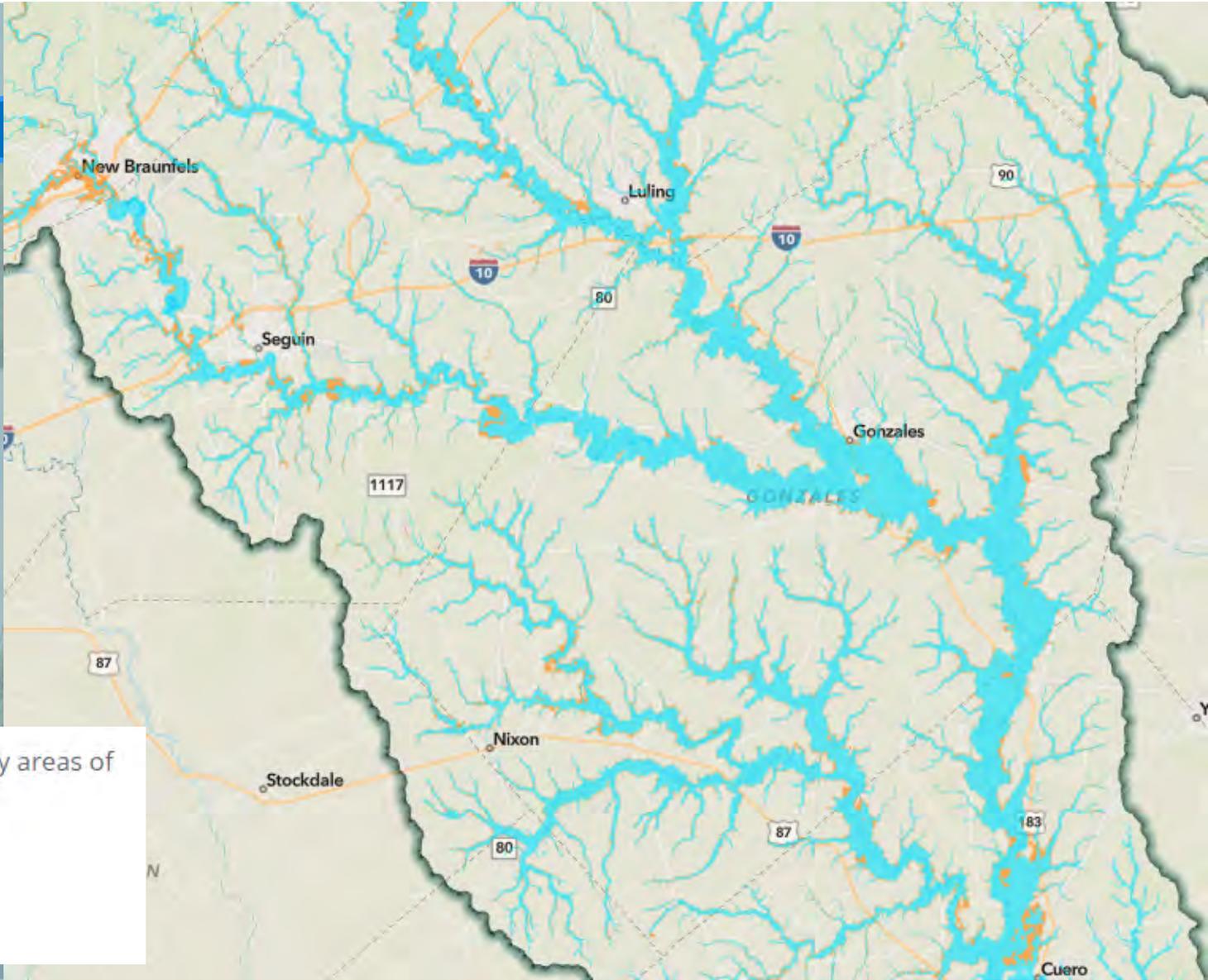




Put it on the Map

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

[See the interactive map](#)





Take the Survey

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

[Take the Survey](#)



Survey



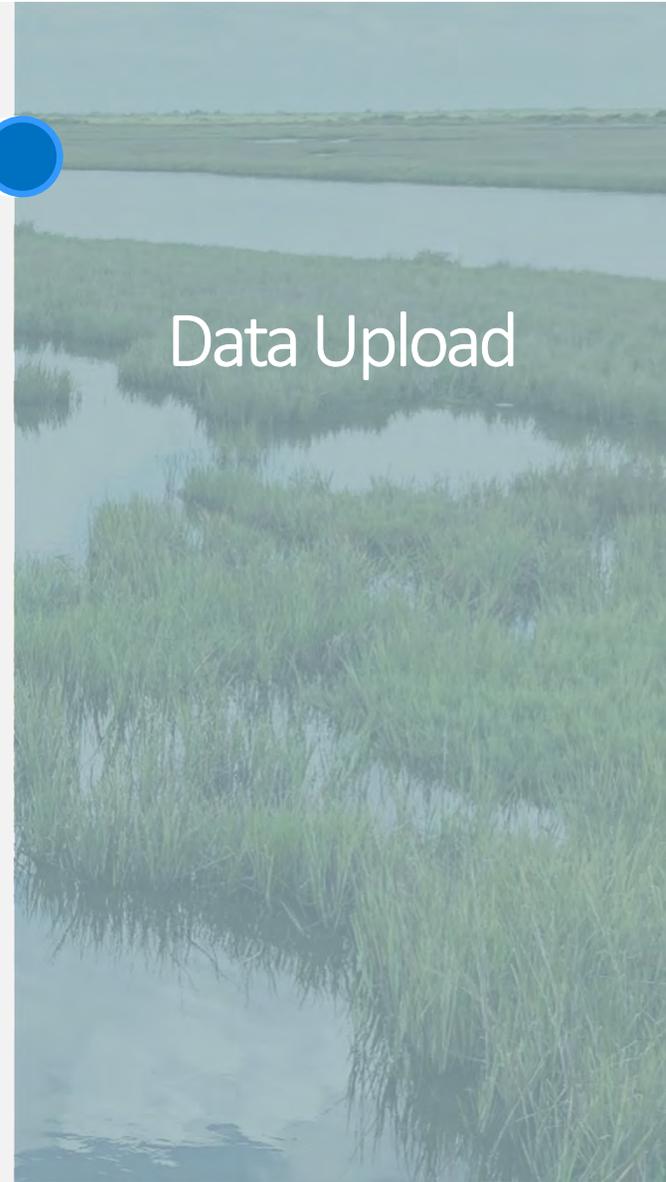
Upload Data

Help us collect data to strengthen this plan.

Upload Data



Data Upload





Stakeholder Outreach

- Final Contact list
- Introductory letter
- Interactive website
 - Initial Flood Risk Map
 - Survey
 - Comments
- Follow up w/key Stakeholders
- GLO Coordination

Contact Information

Project Email

FloodRegion11@freese.com



Planning Group Contact

Lauren Willis

Director of Regulatory and Customer Affairs

830-379-5822 | lwillis@gbra.org

TWDB Project Manager

Morgan White – Regional Flood Planner

512-475-3754 | morgan.white@twdb.texas.gov

Technical Consultant

Jay Scanlon, PE, CFM – FNI Project Manager

512-617-3115 | jay.scanlon@freese.com

Adam Conner, CFM – FNI Assistant Project Manager

512-617-3173 | adam.conner@freese.com

Velma Danielson – Outreach Lead

210-598-0165 | velma.Danielson@blantonassociates.com



Stakeholder Outreach

- Information Needed for Potential Flood Mitigation Projects (FMPs)
 - H&H Modeling
 - Prior evaluations/studies
- Initial identification of potential projects
 - Survey/Outreach effort this summer (August 31 Deadline)
- Opportunities to receive updated information later in planning process
 - Deadline for including updated information (TBD)

Site Demonstration

Guadalupe Regional Flood Plan

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Get Involved!

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

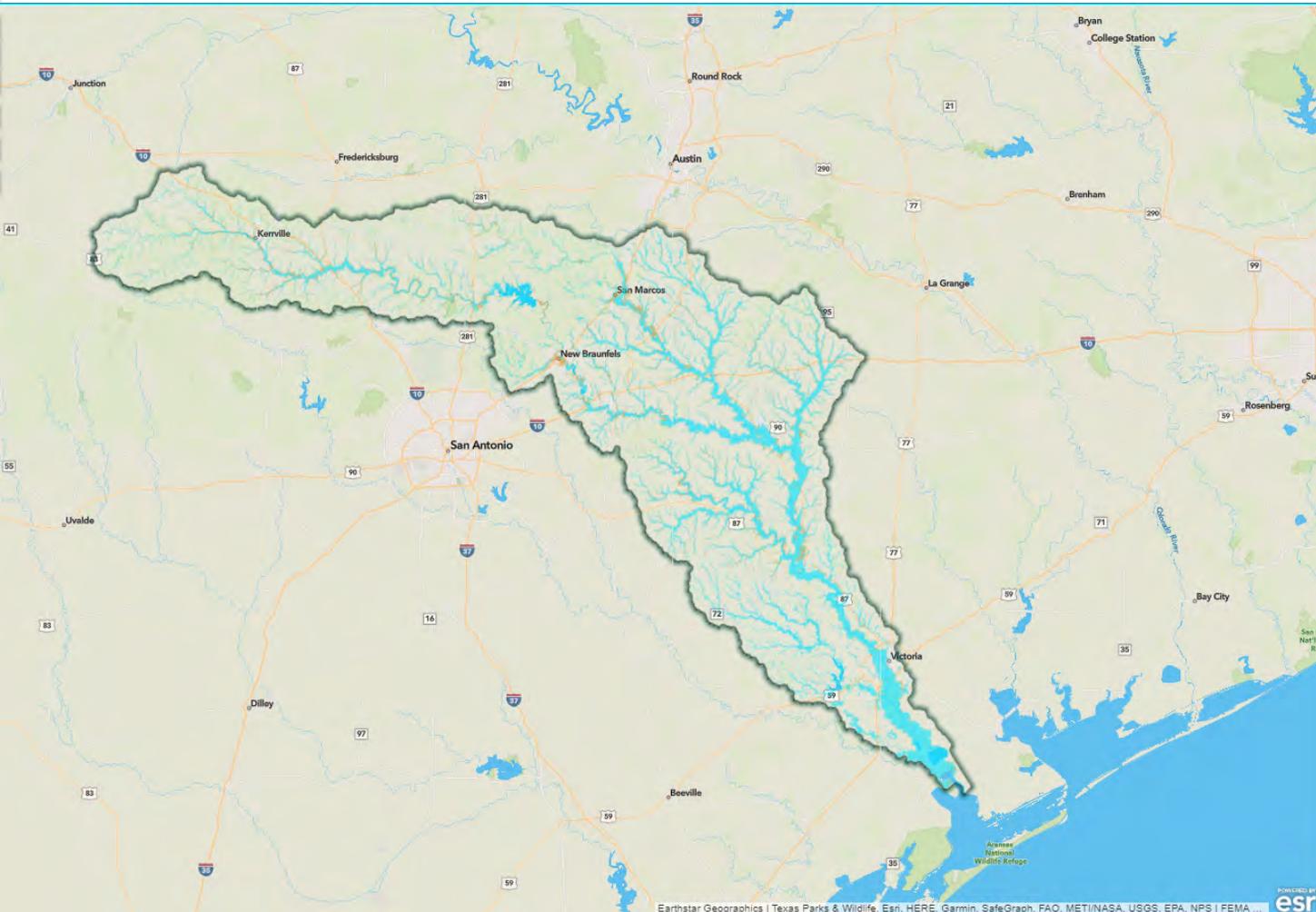
 <p>Put it on the Map</p> <p>Use the interactive map to help us identify areas of flood risk in your region.</p> <p>See the interactive map</p>	 <p>Take the Survey</p> <p>Take the survey to provide input on flooding issues and floodplain management goals specific to your region.</p> <p>Take the Survey</p>	 <p>Upload Data</p> <p>Help us collect data to strengthen this plan.</p> <p>Upload Data</p>
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[Web Map Tutorial Video](#)

Site Demonstration

Guadalupe Regional Flood Plan Comment Survey

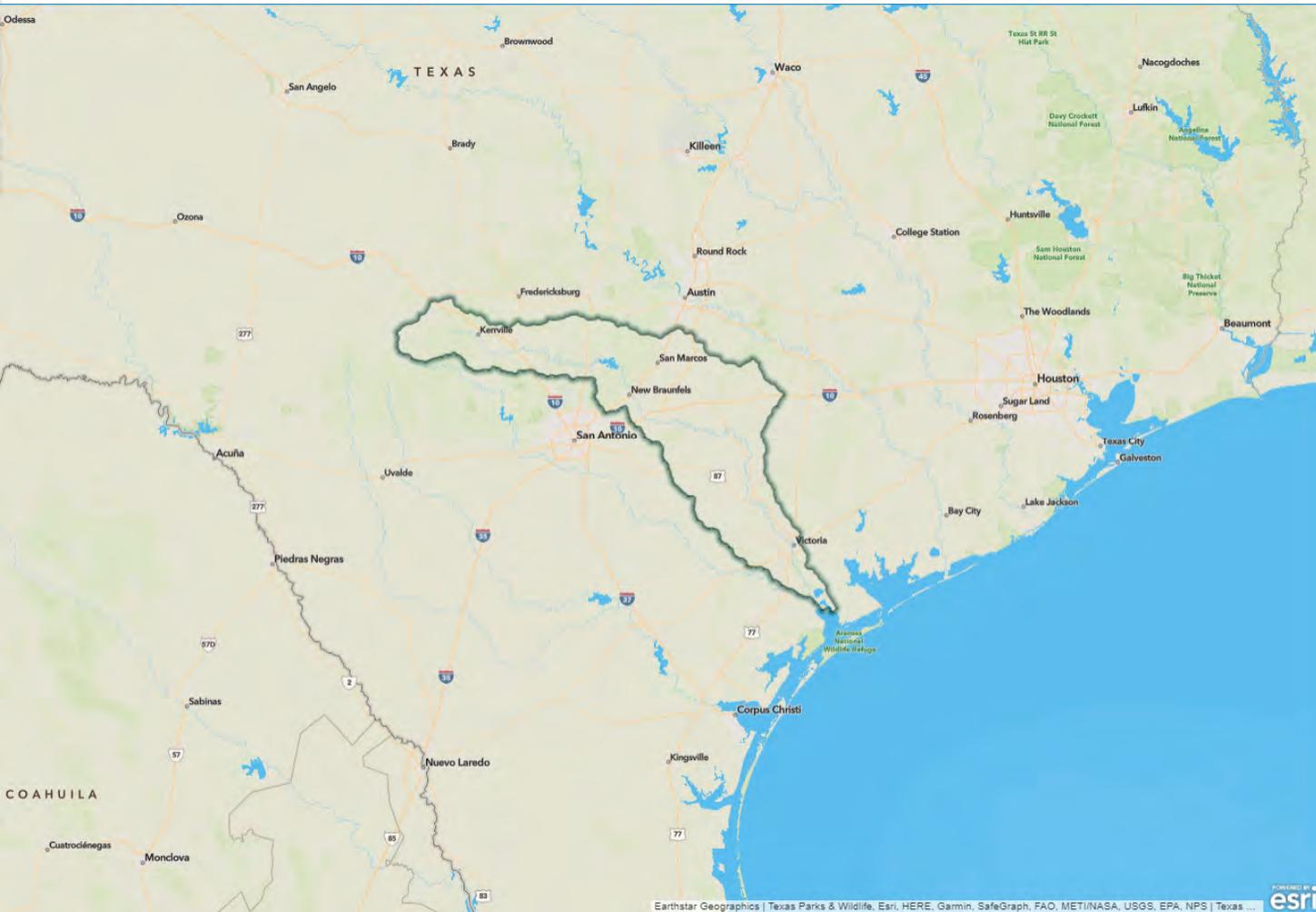
Sign In  



Region 11 Flood Plan Comment Map - Public

- Flood Prone Areas >
- Flood Projects in Progress >

Site Demonstration

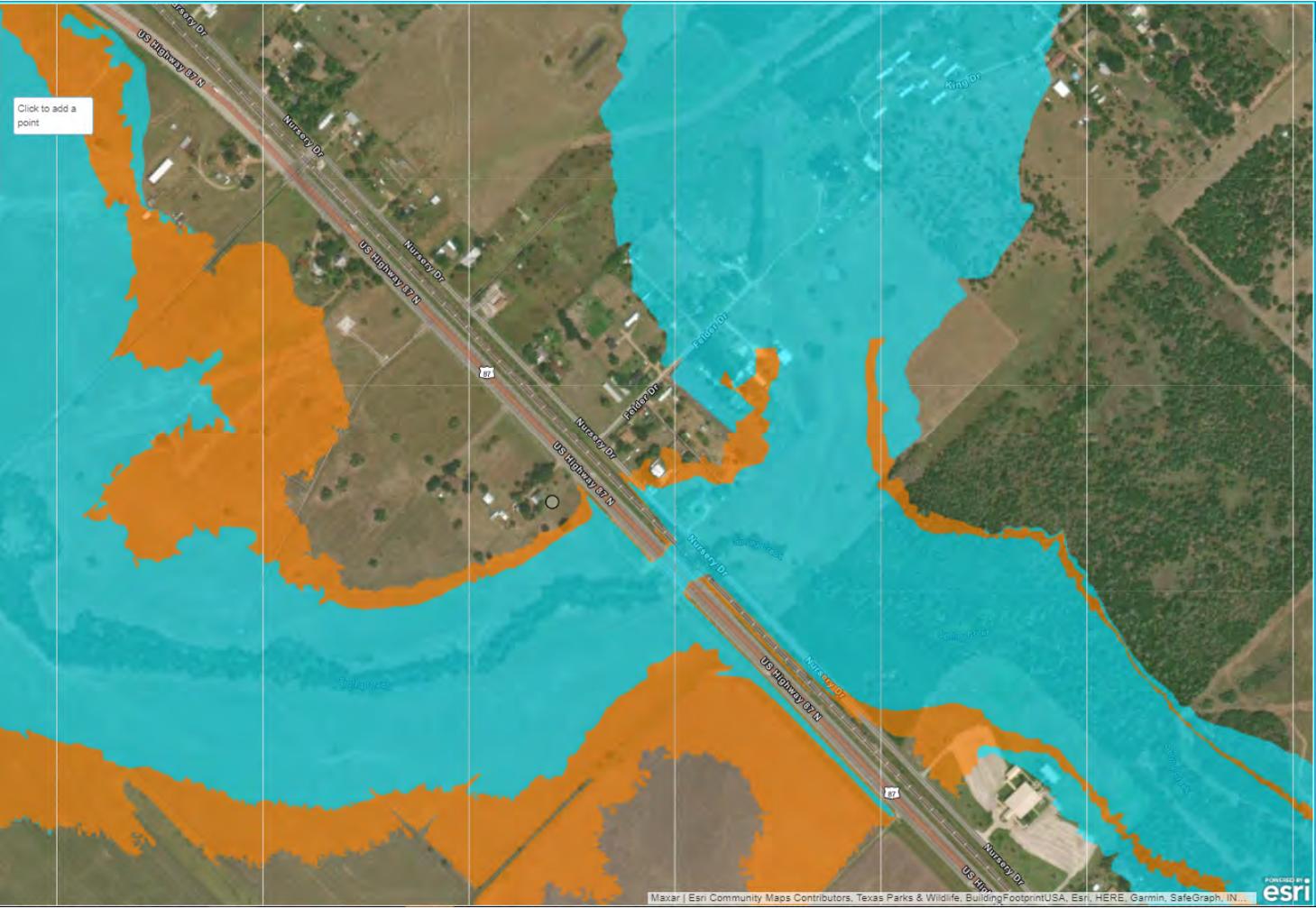


< Flood Prone Areas

+ Submit a New Comment

No features found

Site Demonstration



Flood Prone Areas

Location

Click the map to draw the location.

Details

What is impacted by the flooding? (required)

How often does the location flood? (required)

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

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

Comments

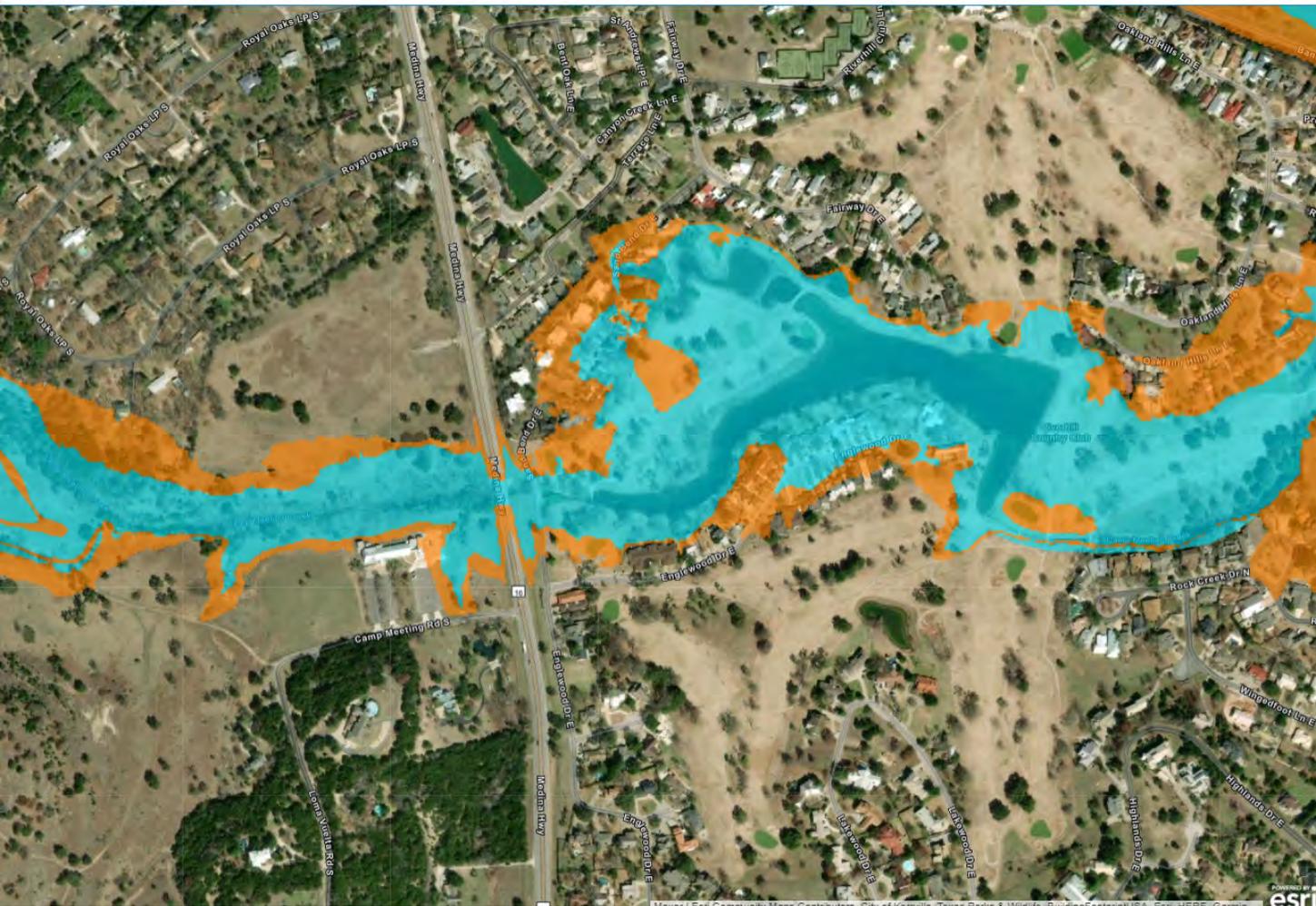
Name

Email (required)

Phone Number

Attachments

Site Demonstration



< Flood Projects in Progress

Location

Click the map to draw the location.

Enter an address to search

Details

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

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

Comments

Name

Email

Phone Number

Attachments

Site Demonstration

[Home](#) [Map](#) [Take the Survey](#) [Upload Data](#)

Take the Survey

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

Give us your input!

Guadalupe Regional Flood Plan

In the wake of historic flooding in Texas, the 2019 Texas Legislature passed legislation to create Texas' first-ever regional and state flood planning process. The Region 11 Guadalupe Regional Flood Planning Group (RFPG) was established by the Texas Water Development Board (TWDB) on October 1, 2020. The RFPG is responsible for developing the first regional flood plan by January 2023, which will culminate in the first-ever state flood plan for Texas.

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

Introduction

Tell us about yourself and your community.

Phone number

Email

1. Which of the following best describes you?

Select only one.

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

2. What type of entity do you represent?

Select only one.

Site Demonstration

Inventory

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

9. Does your entity maintain an inventory of natural features and major flood infrastructure within the region?

Select all that apply.

- Rivers, creeks, tributaries
- Wetlands
- Playa lakes
- Sink holes
- Alluvial fans
- No digital inventory of natural features
- Other (please specify)

If so, please provide this information:

10. Does your entity maintain an inventory of flood infrastructure within the region?

Select all that apply.

- Levees
- Stormwater tunnels
- Stormwater canals
- Flood protection dams
- Detention/retention ponds
- Weirs
- Storm drain systems
- No digital inventory of flood infrastructure
- Other (please specify)

Flood Prone Areas

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

16. Are you aware of flooding that has caused water rescues, injuries, and/or property damage in your community?

You may provide written feedback:

Please Describe

Floodplain Management

The Regional Flood Plan will coordinate with local and regional agencies to develop floodplain management strategies and projects.

17. Does your community participate in floodplain management activities?

Select all that apply.

- National Flood Insurance Program
- Community Rating System (CRA)
- Do not participate but interested
- Do not participate but interested
- I don't know

Flood Planning

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

33. What types of local and regional flood management strategies and projects are currently in place?

Check all that apply.

- Hazard Mitigation Plan
- Master Drainage Plans/Stormwater Management Plans
- Flood Protection Plans
- Flood Studies/Flood Risk Assessments
- Watershed Plans
- CRS Plan
- Floodplain Management Plan
- Flood risk screening tools
- Models, including hydrology, hydraulic, and other
- None of the above

Please utilize the [Upload Data](#) engine to upload your data.

Funding

Flood studies (evaluations), management strategies, and projects identified in the Regional Flood Plan will be eligible for TWDB funding.

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

Select all that apply.

- General Fund
- Bond Program
- Stormwater utility or Drainage fee
- Special Tax Districts
- Impact Fees
- Permitting Fees
- Ad Valorem Tax
- I don't know
- No current dedicated funding but interested

Site Demonstration

[Home](#) [Map](#) [Take the Survey](#) [Upload Data](#)

Upload Data

Help us collect data to strengthen the plan.

We are collecting data from public servants, entities, and citizens across the region. This data will help us develop a comprehensive understanding of flood risk and identify solutions that address flooding issues.

Below you'll find the space to upload your data up to 100MB. To request a unique secure link to send additional files, email us at FloodRegion7@freese.com with the subject line: "Data Upload Request [Community Name Here]". Thanks for contributing to this planning effort.

Help Us Gather Data

We are looking for the following types of data:

- GIS data of natural and constructed drainage infrastructure
- records of historical flooding
- regulatory floodplains
- Land Use and development plans
- Flooding related plans and studies
- Ordinances and policies related to flooding

We need your help collecting data. Please upload your GIS files and flood data (under 100 MB) by clicking below.

[Choose file](#) No file chosen

Email

Agree to terms and conditions

Submit



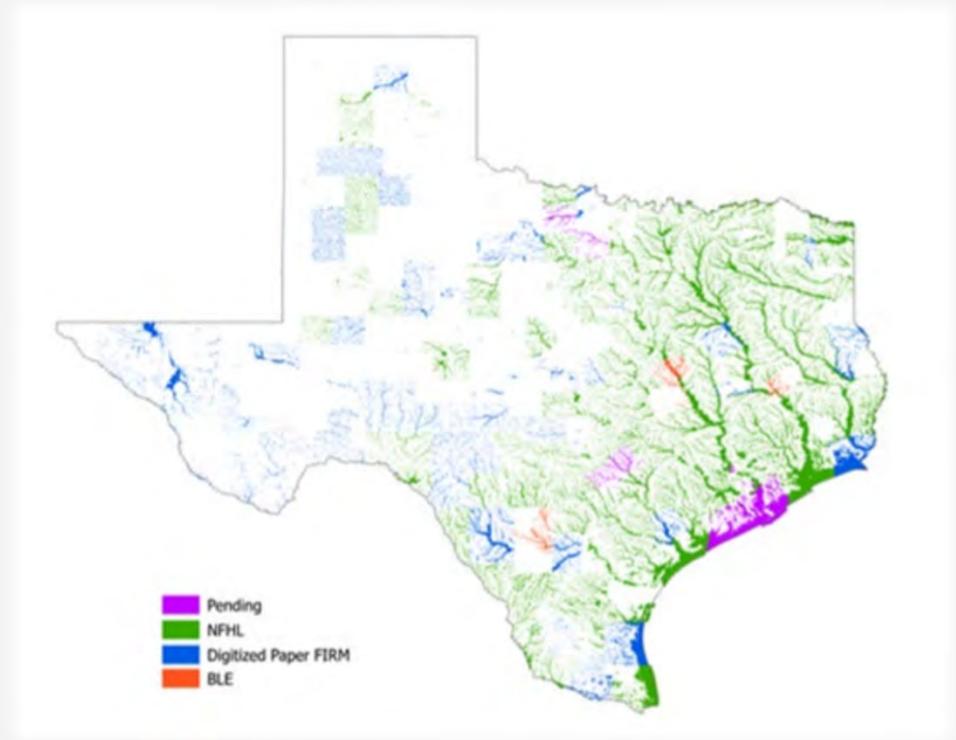
Planning Group Discussion
Data Collection, Survey, and Stakeholder Outreach

An aerial photograph of a wetland landscape. The scene is dominated by a network of water channels and small ponds interspersed with dense green vegetation, likely marsh grasses. The water is a light blue-grey color, reflecting the sky. The vegetation is a vibrant green, and the overall terrain appears flat. In the center of the image, there is a semi-transparent blue rounded rectangle containing white text.

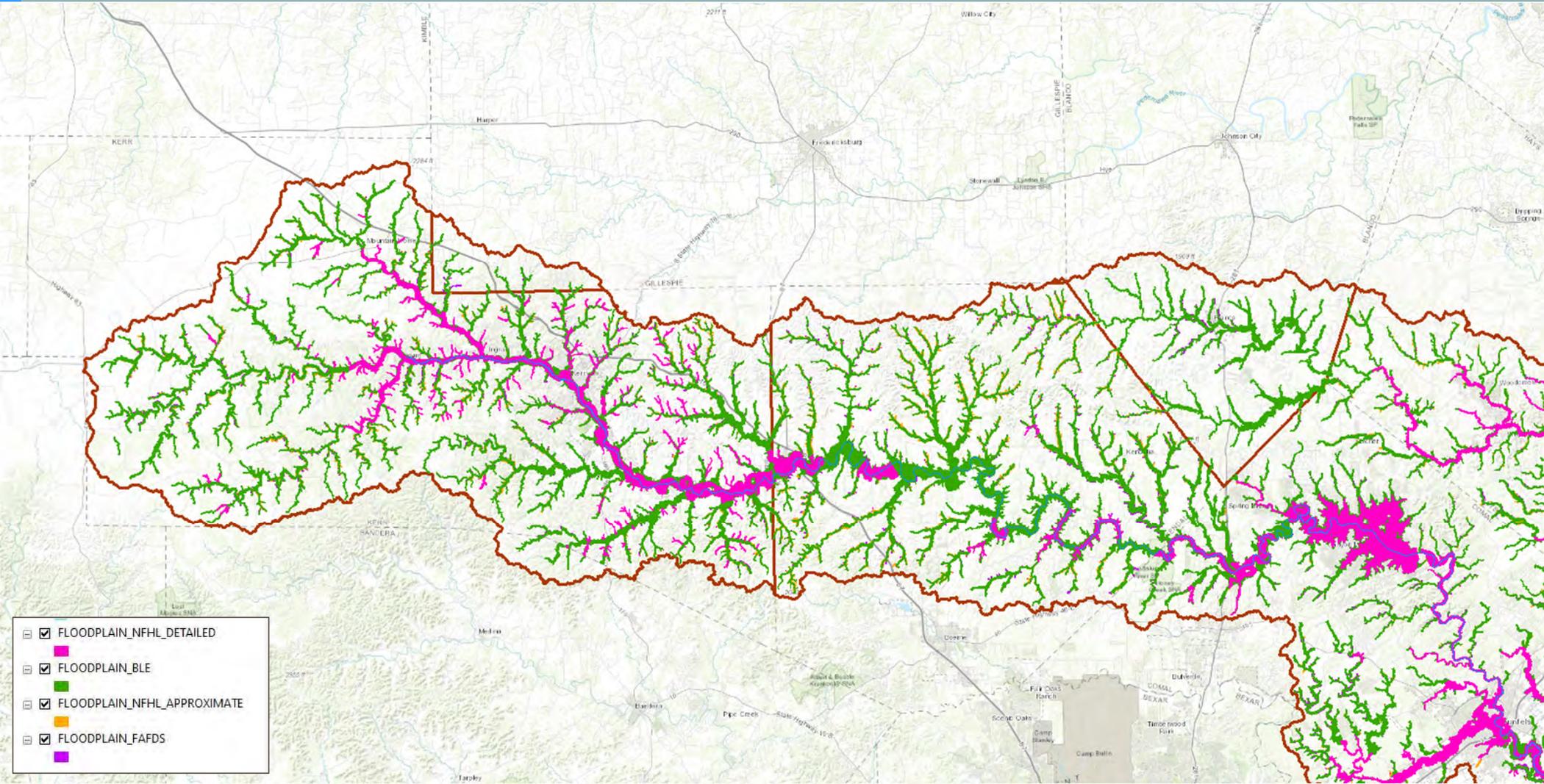
Existing Flood Risk Map
(Preliminary)

Data Availability

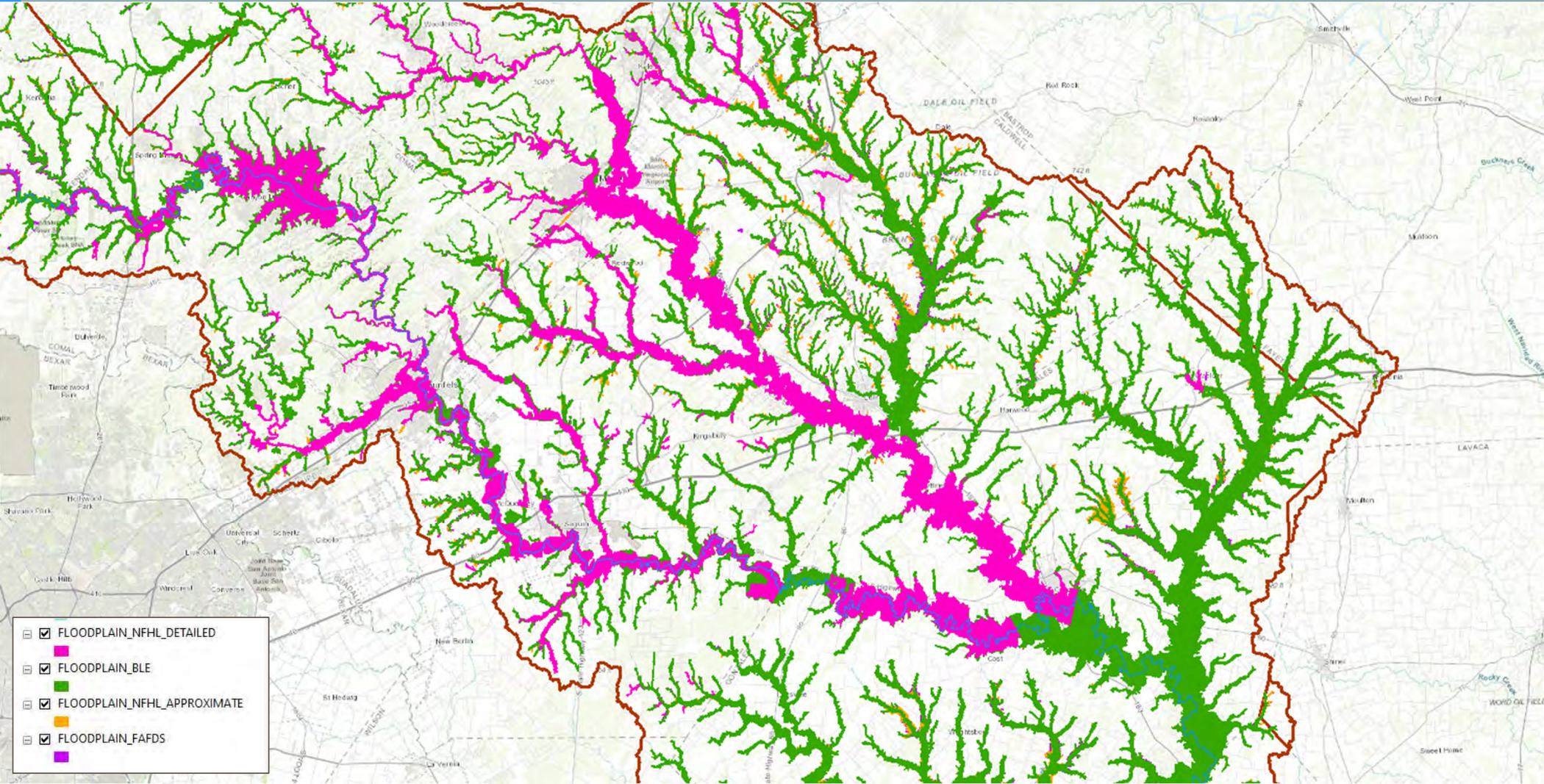
- “Quilt” data in Region 11
- Local data (if better)
- Supplement data
 - Community input (through survey)
 - Fathom data (from TWDB)
- Present revised maps at future meeting



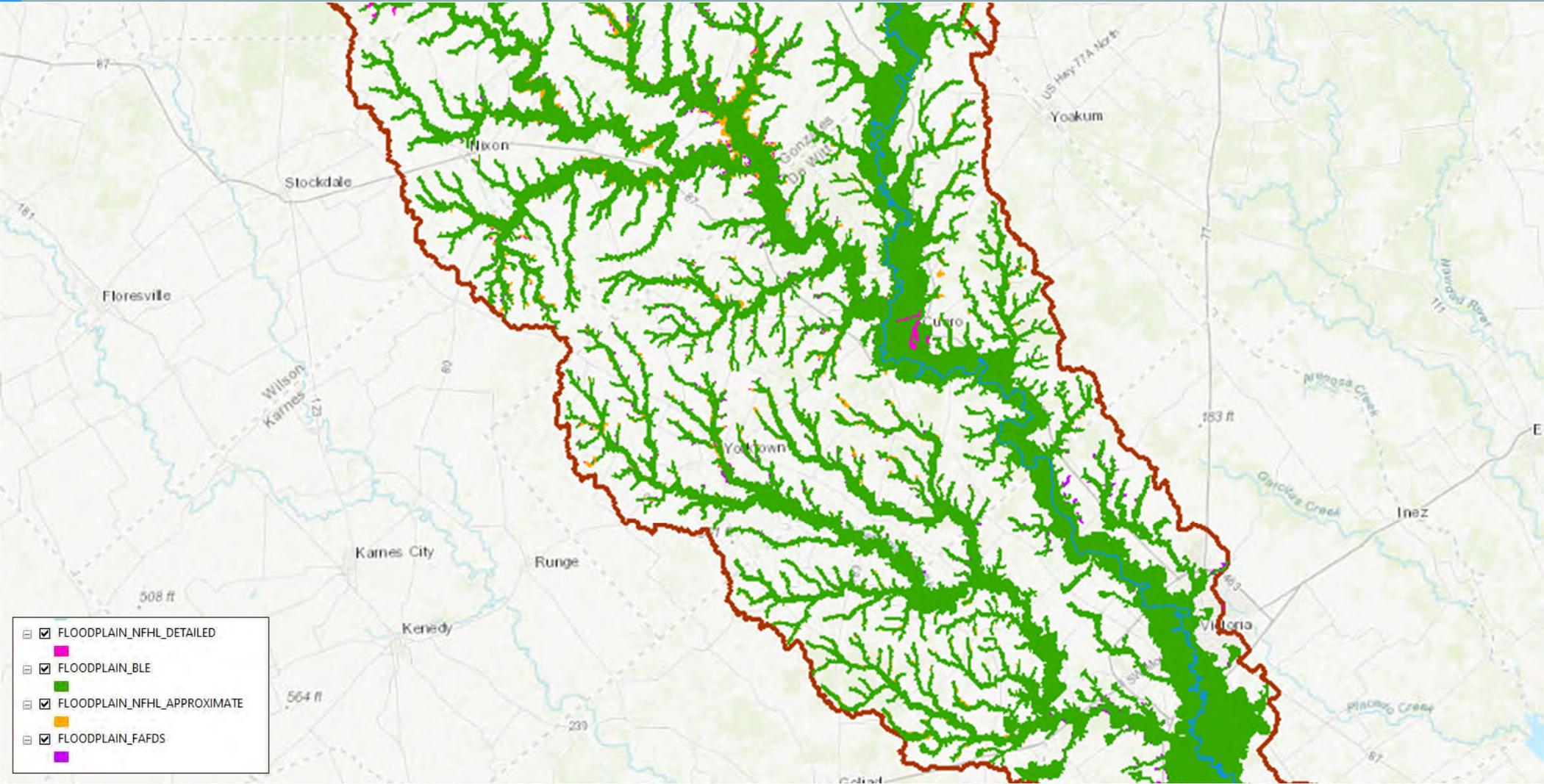
Upper Basin



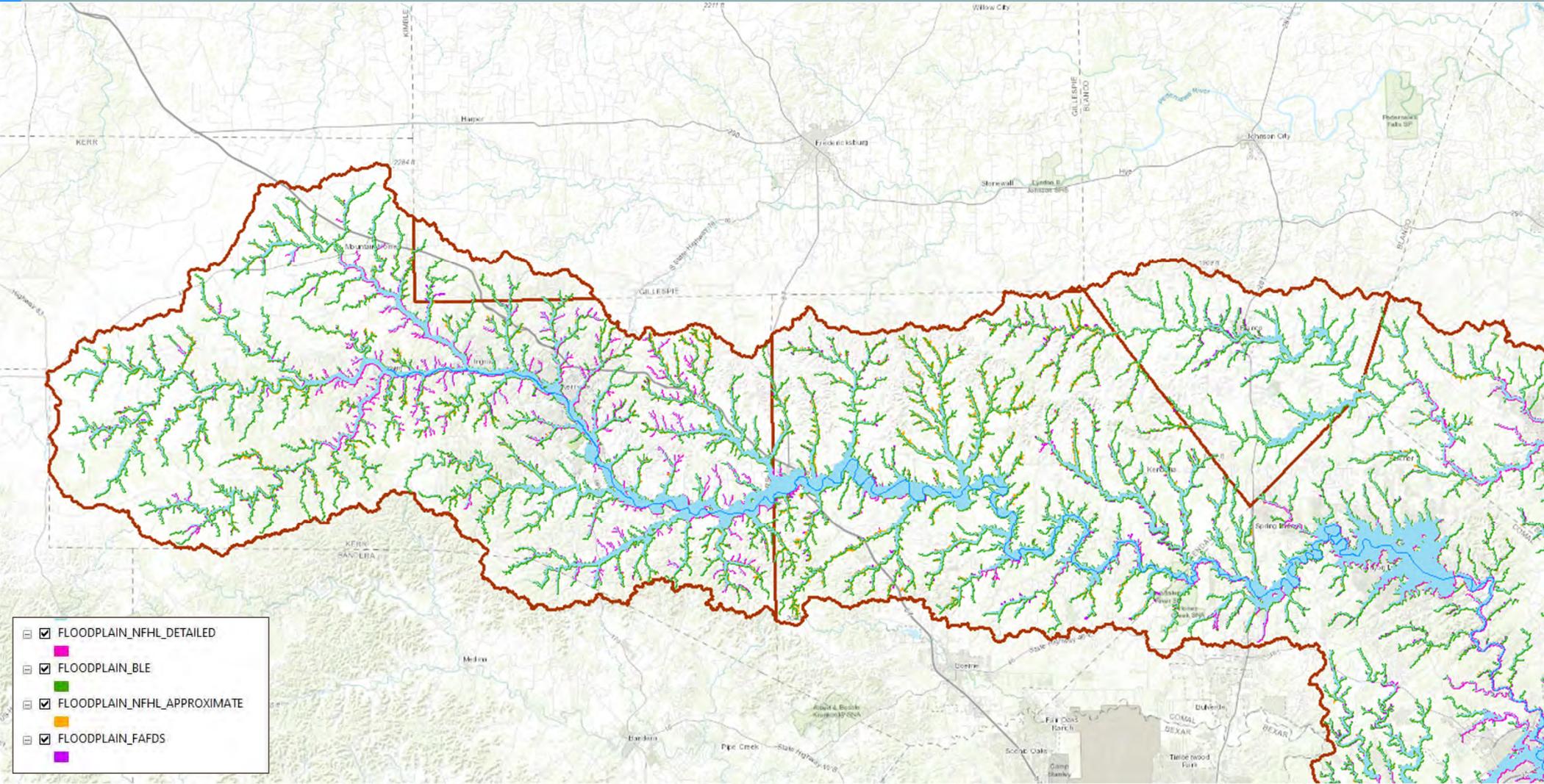
Middle Basin



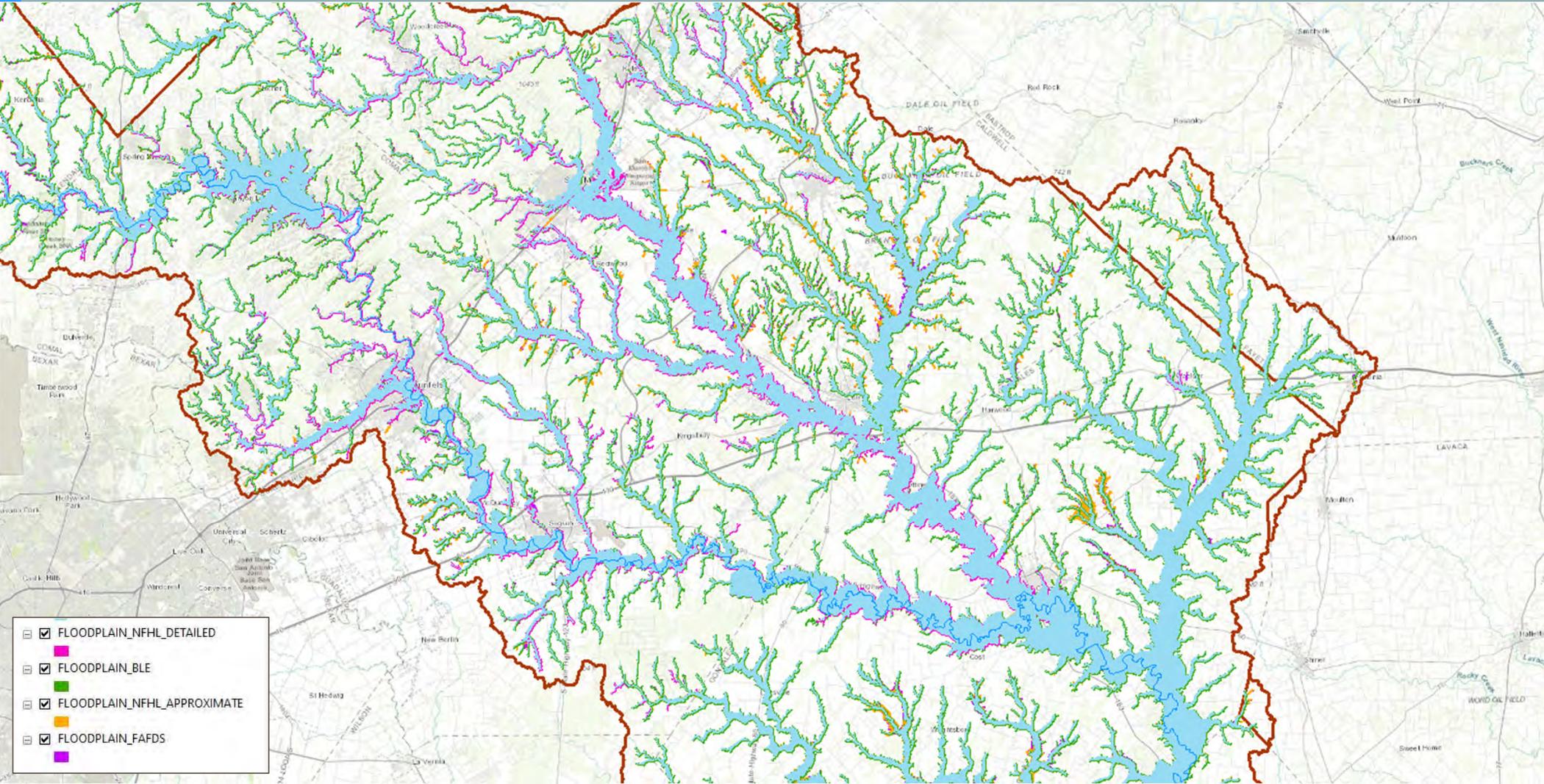
Lower Basin



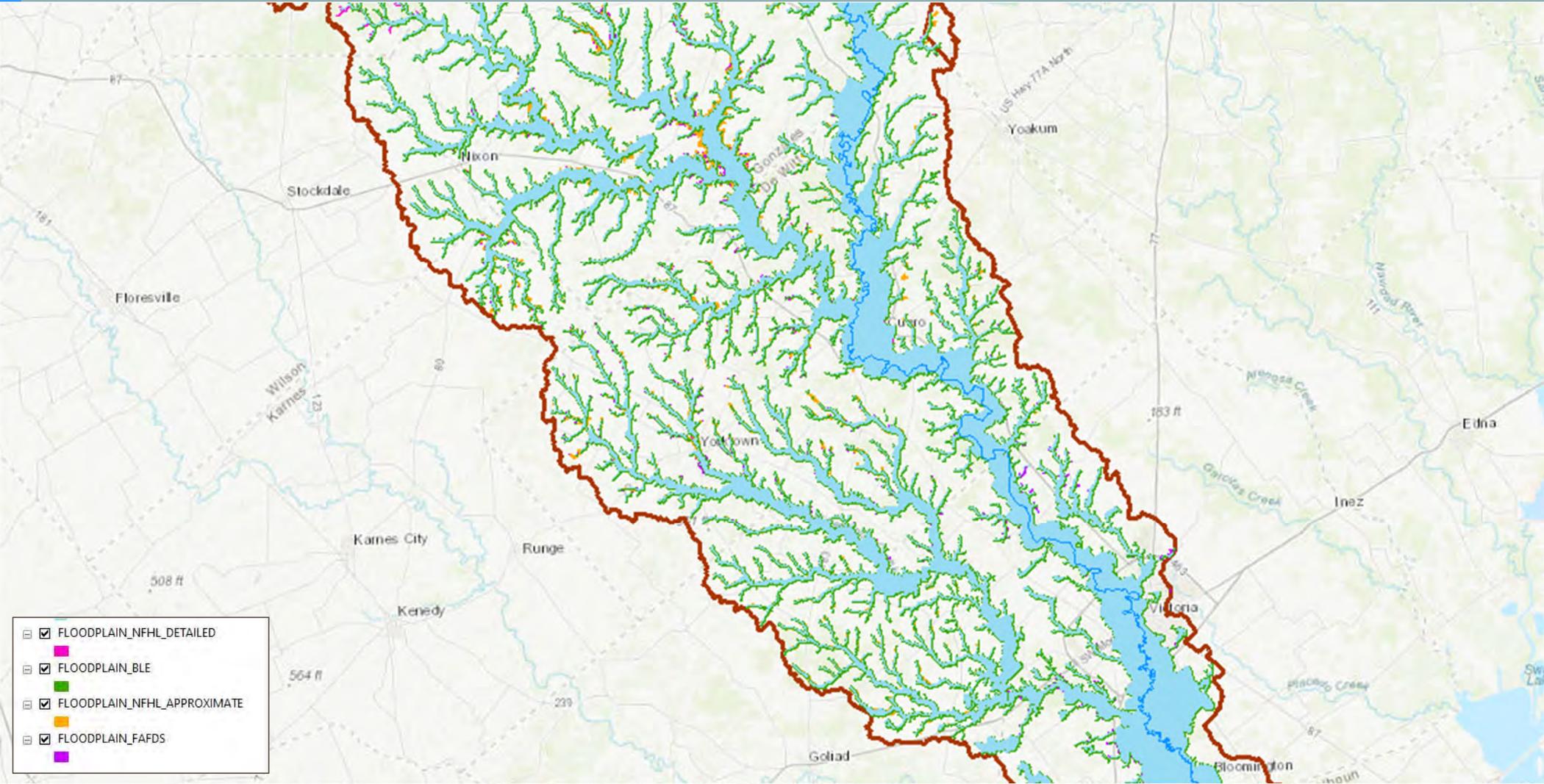
Upper Basin



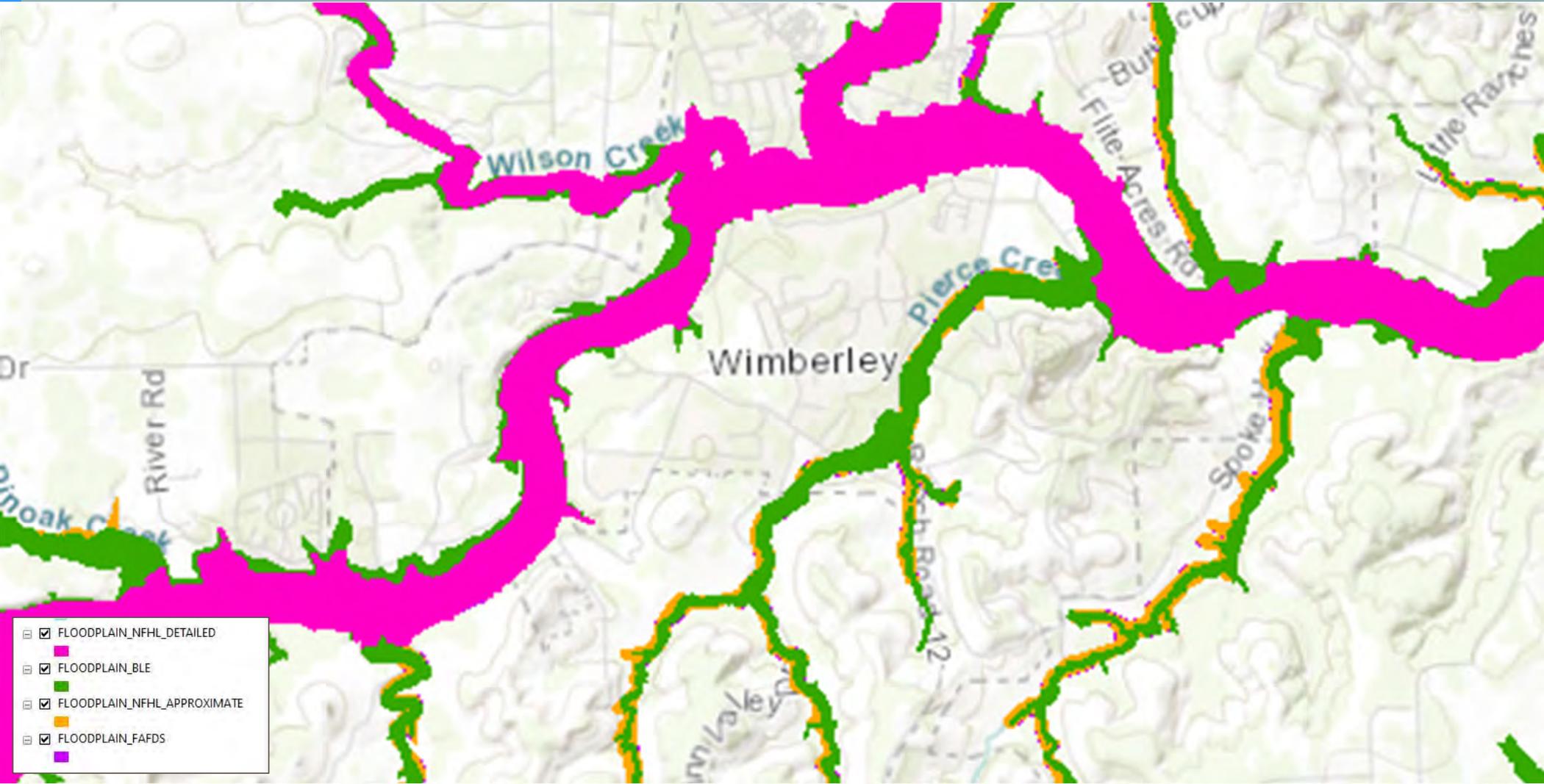
Middle Basin



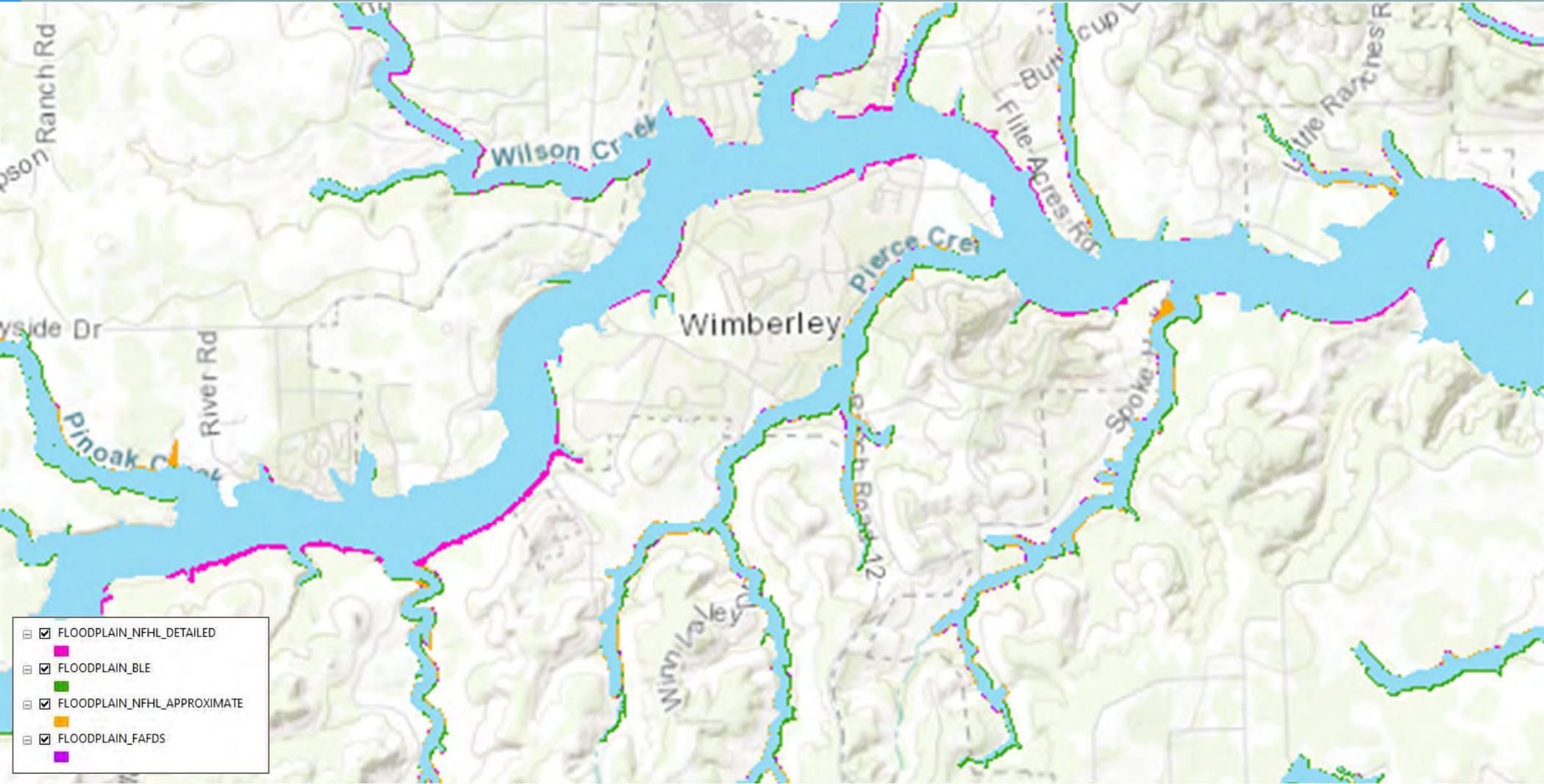
Lower Basin



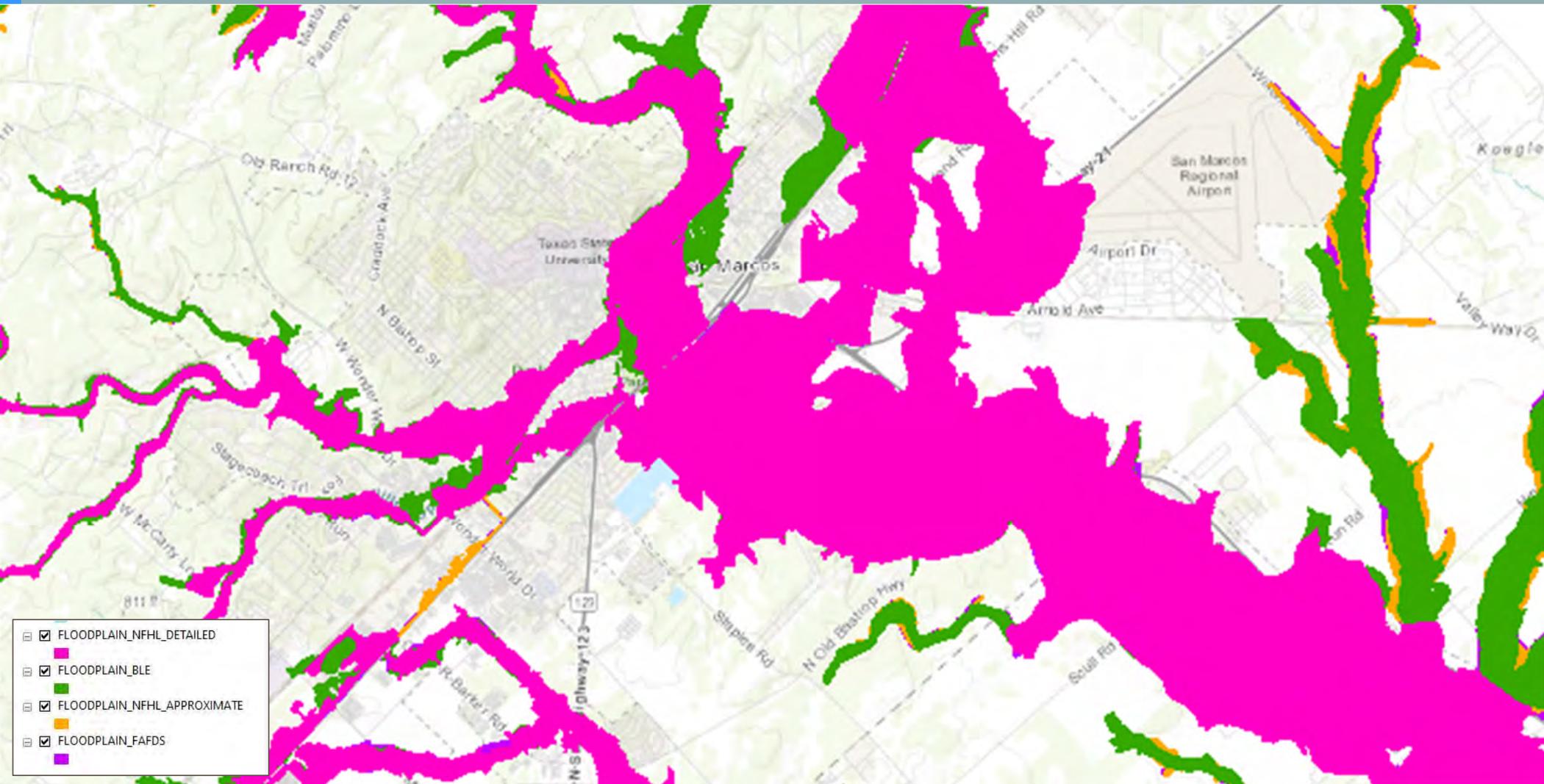
Wimberley



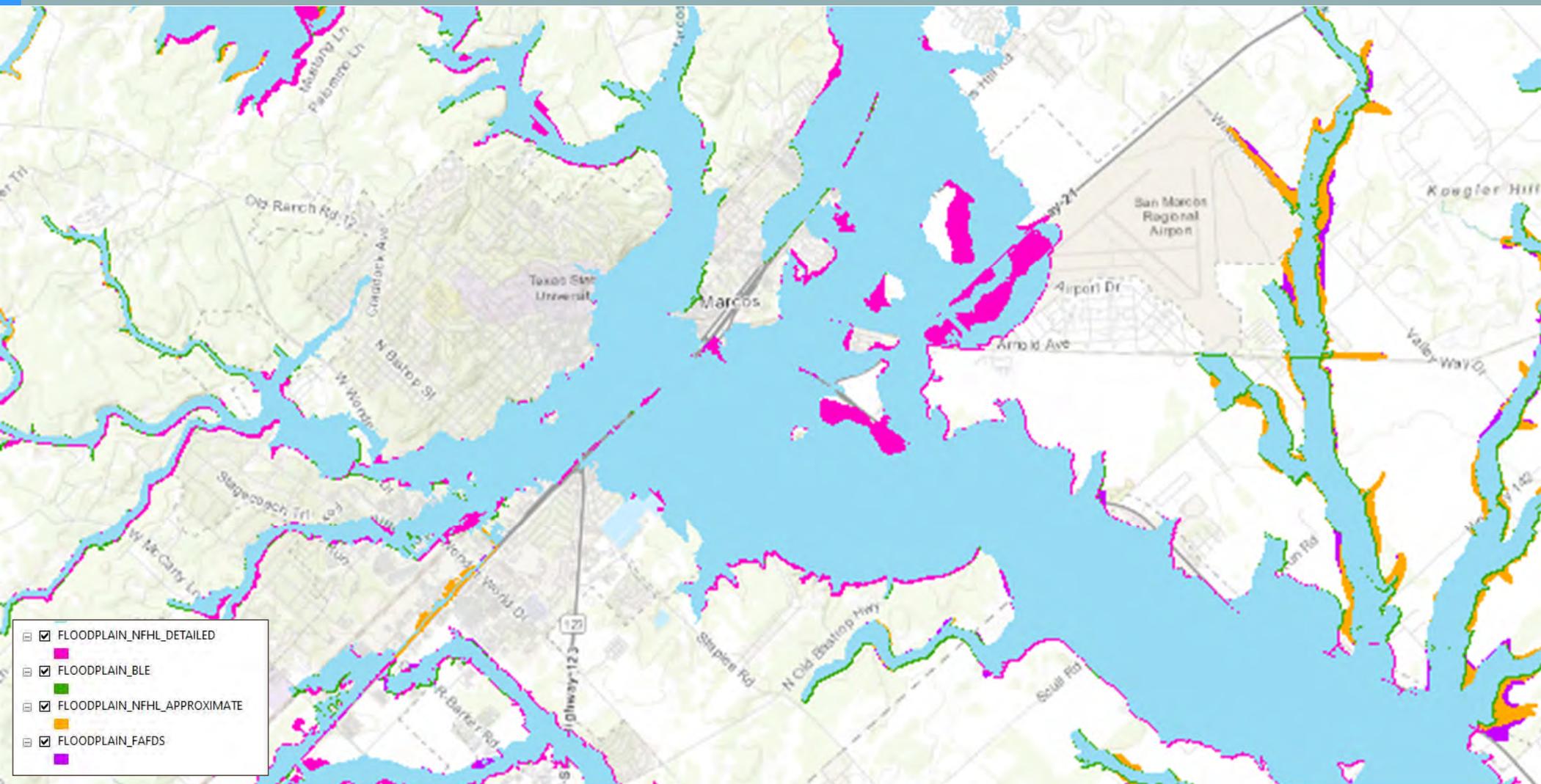
Wimberley



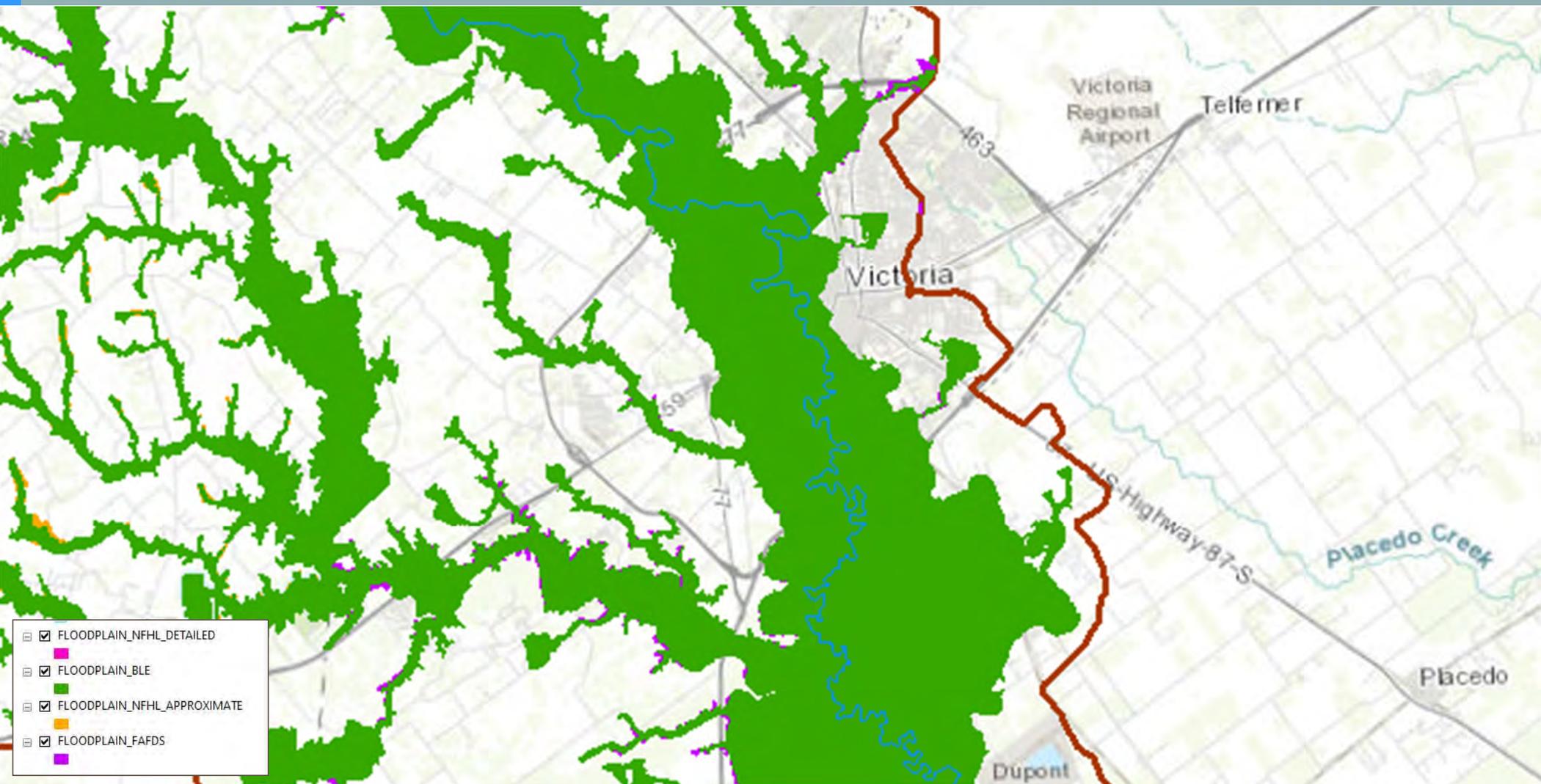
San Marcos



San Marcos



Victoria



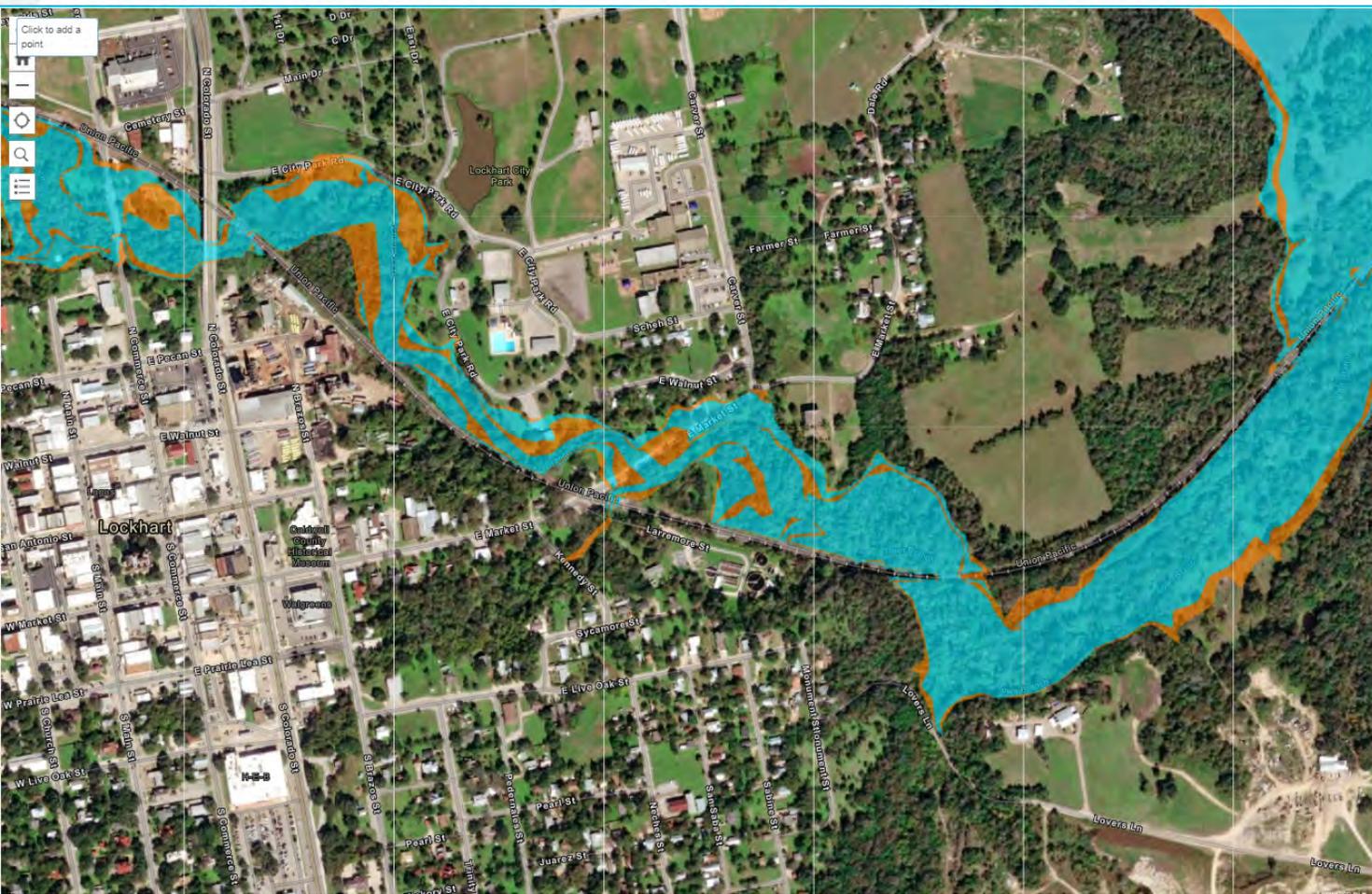
Victoria



Simplified Flood Risk

Guadalupe Regional Flood Plan Comment Survey

Sign In  



Flood Prone Areas

Location
Click the map to draw the location.
Dunbar Park

Details
What is impacted by the flooding? (required)

How often does the location flood? (required)

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

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

Comments

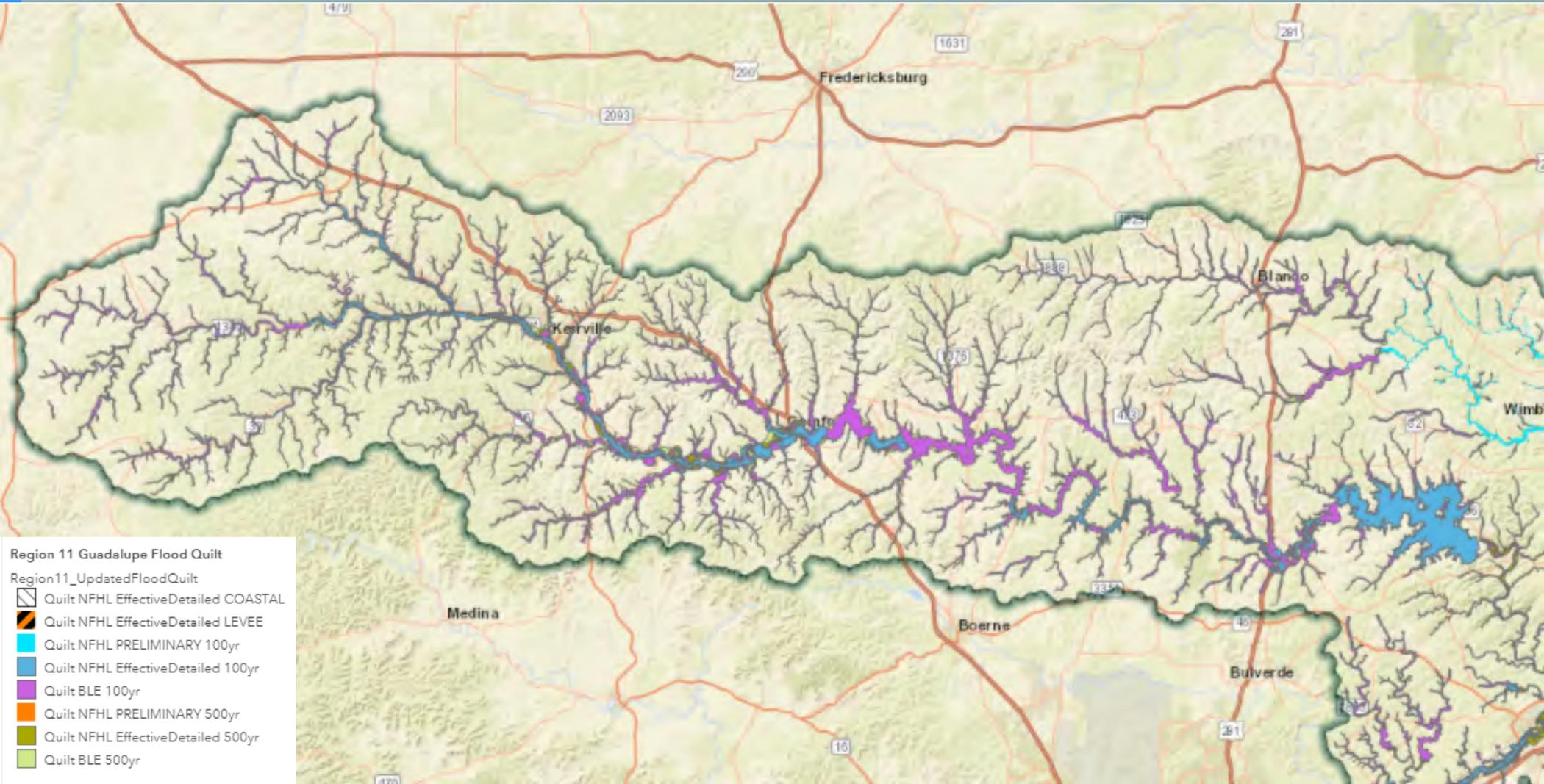
Name

Email (required)

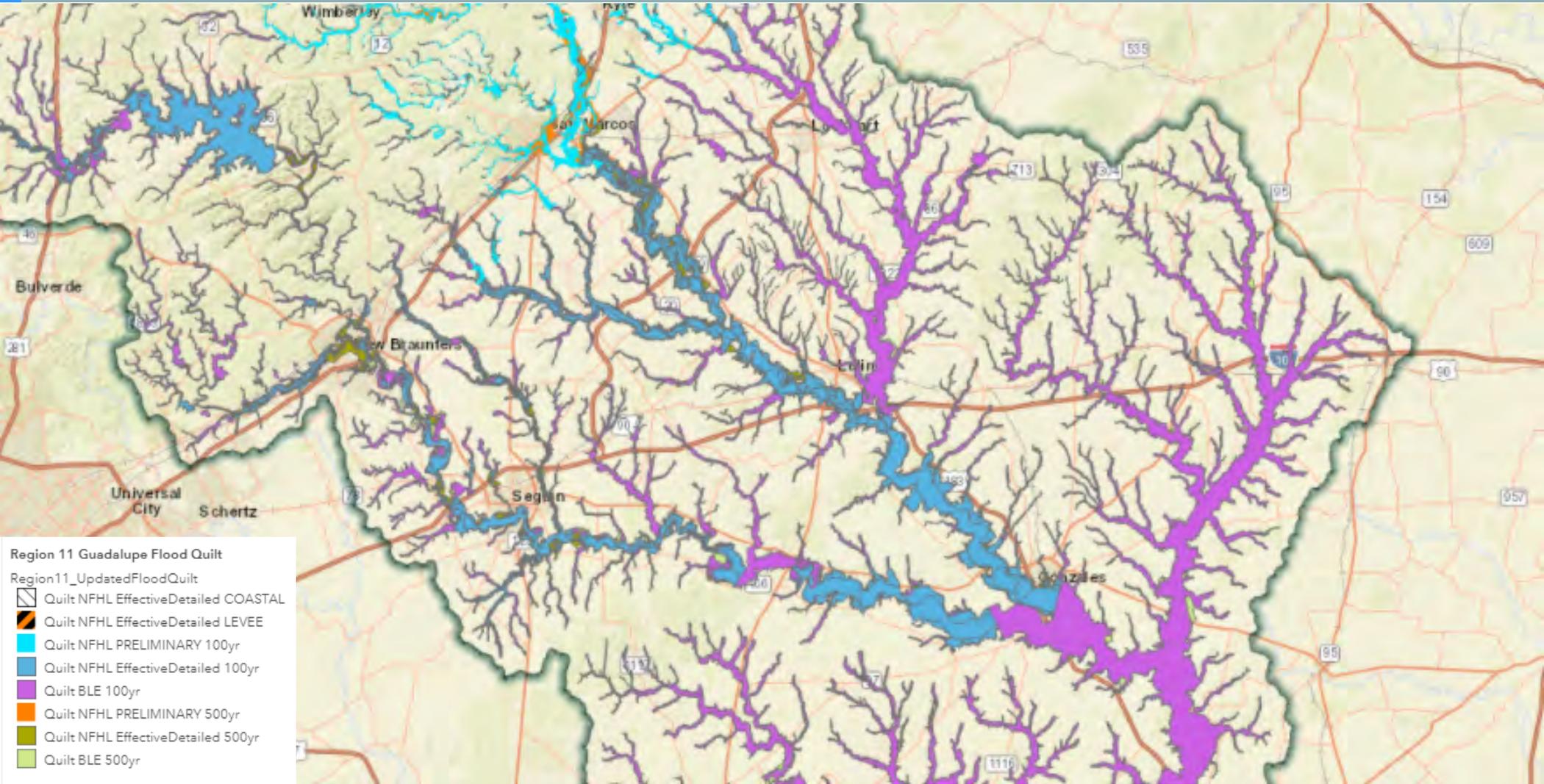
Phone Number

Attachments

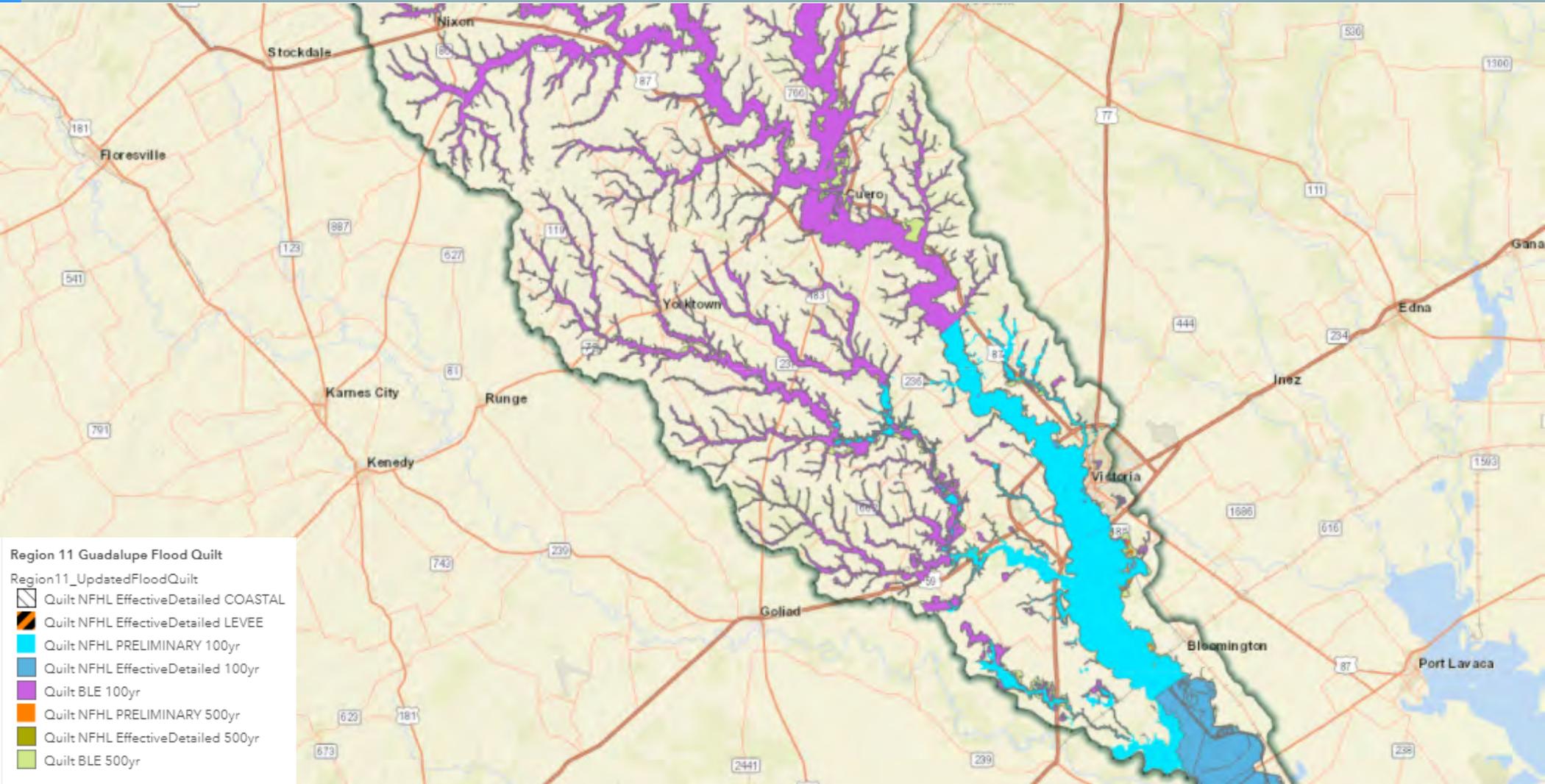
Upper Basin



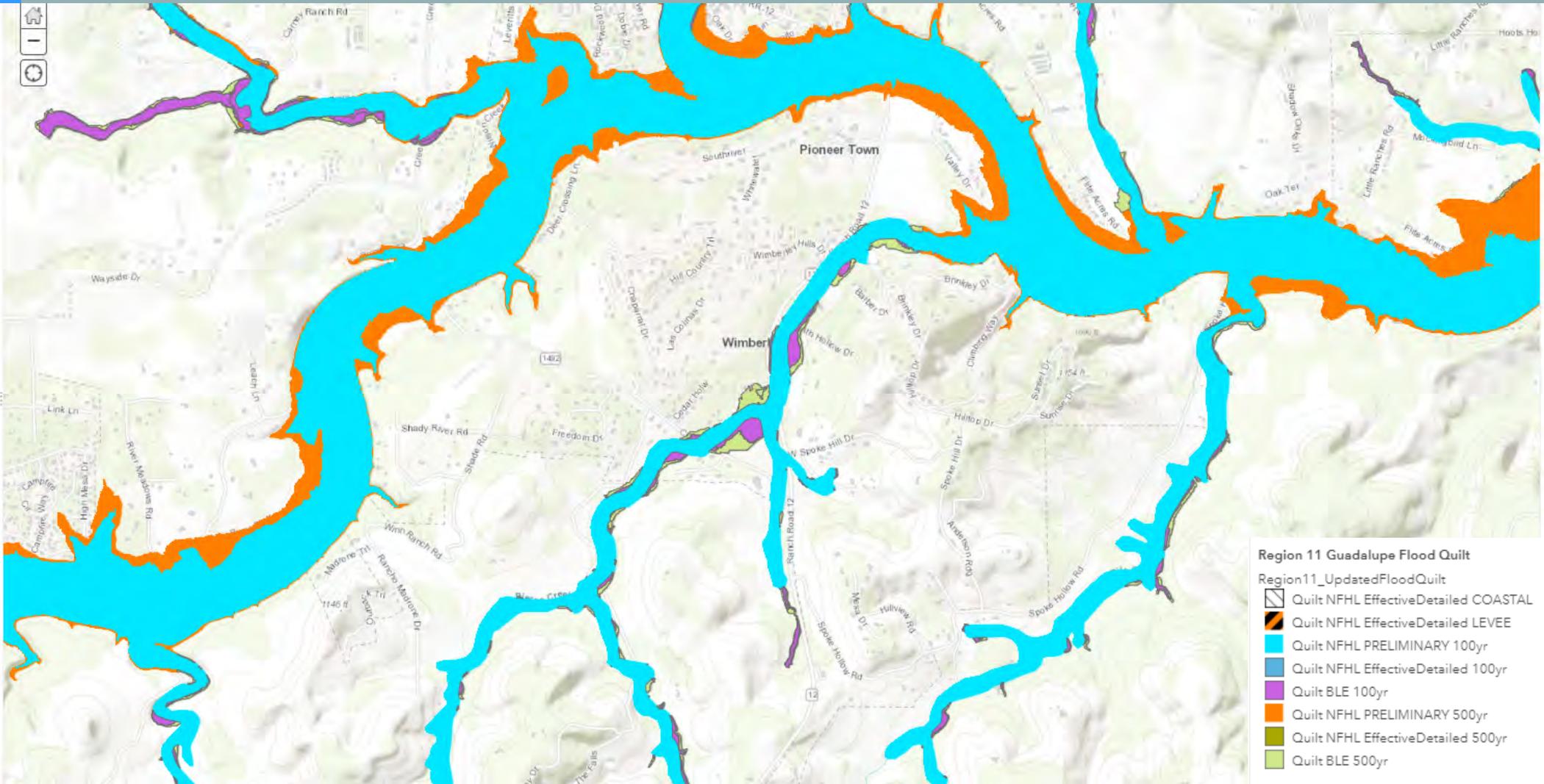
Middle Basin



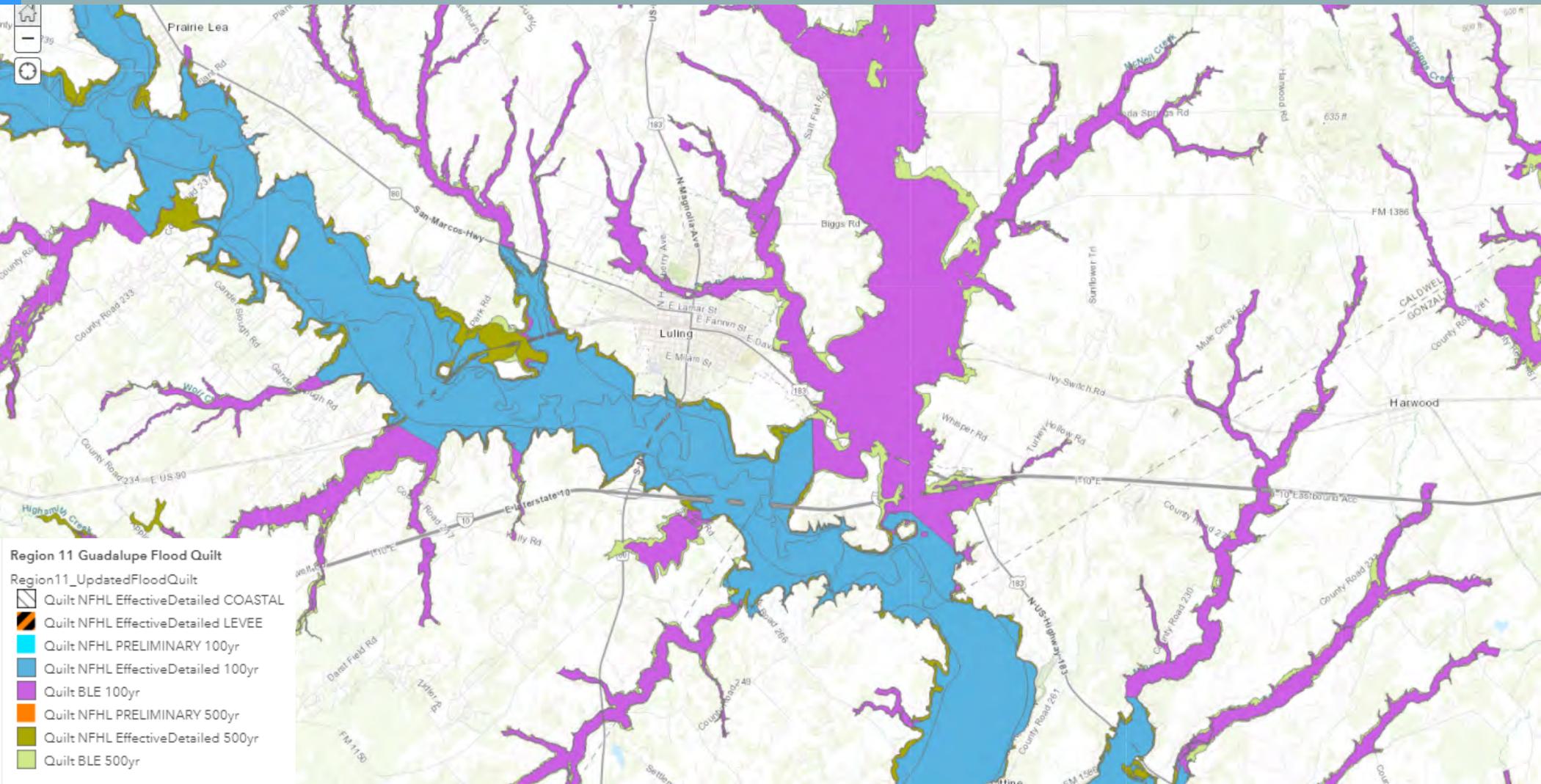
Lower Basin



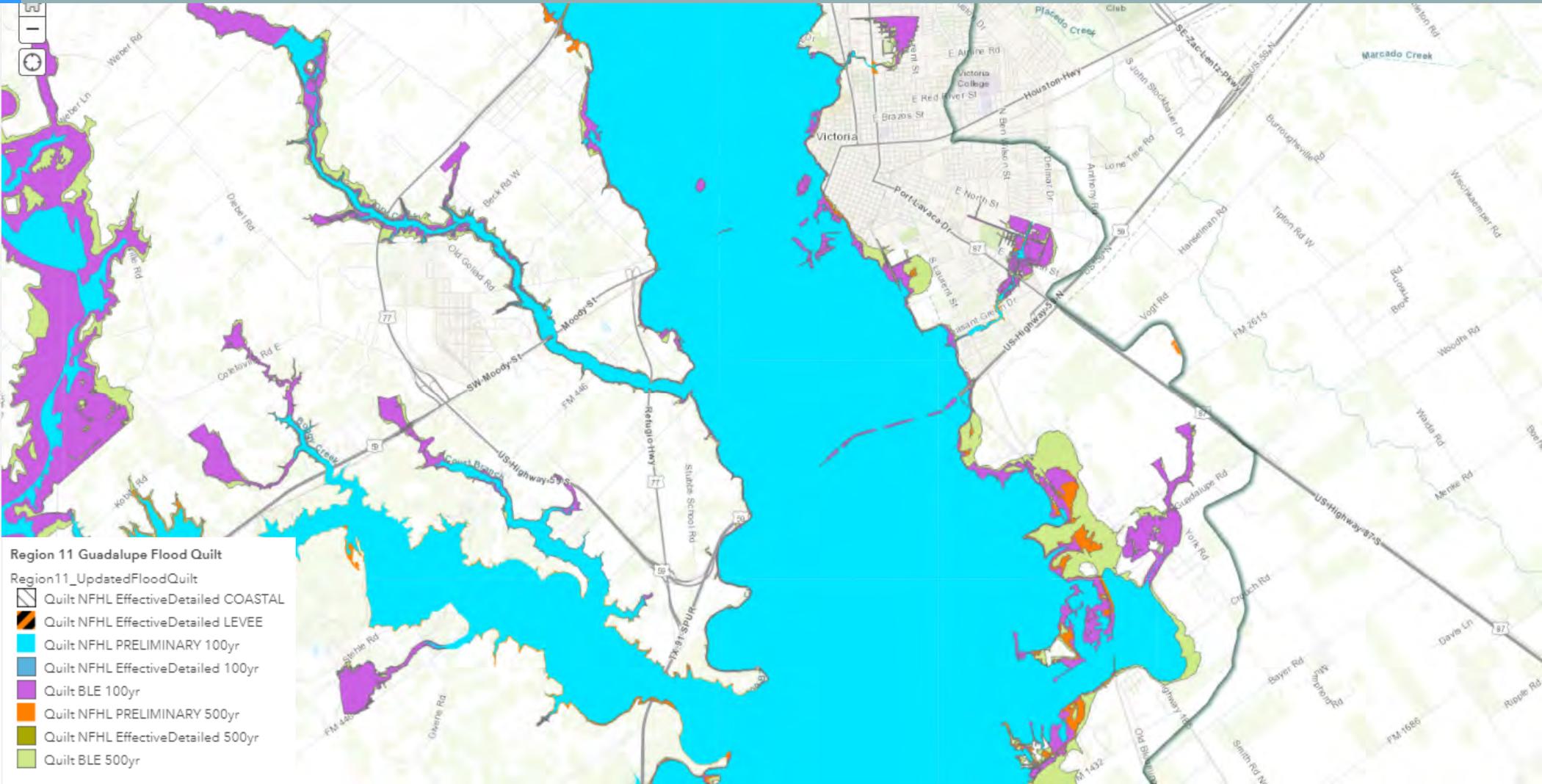
Wimberley



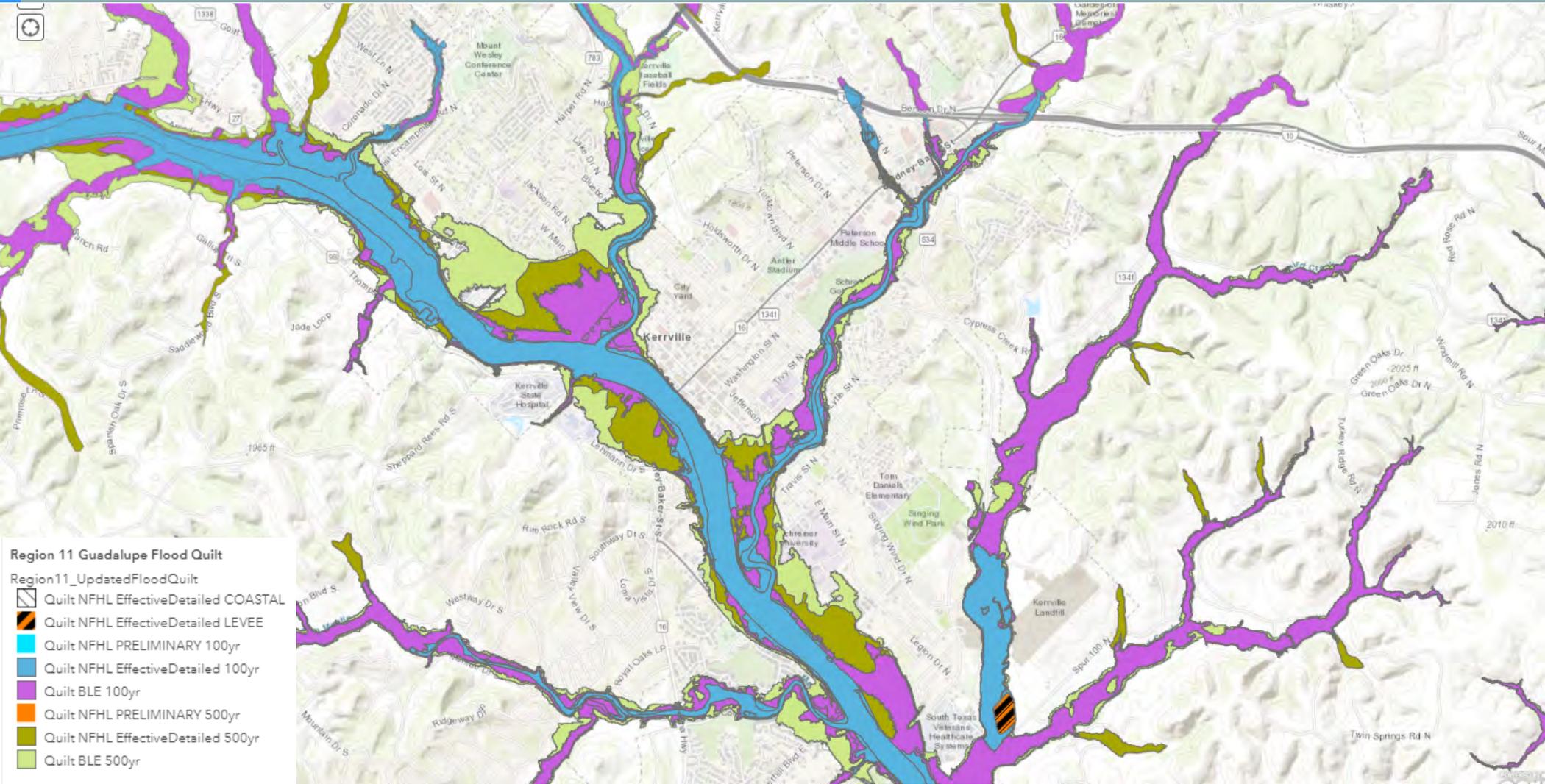
Luling



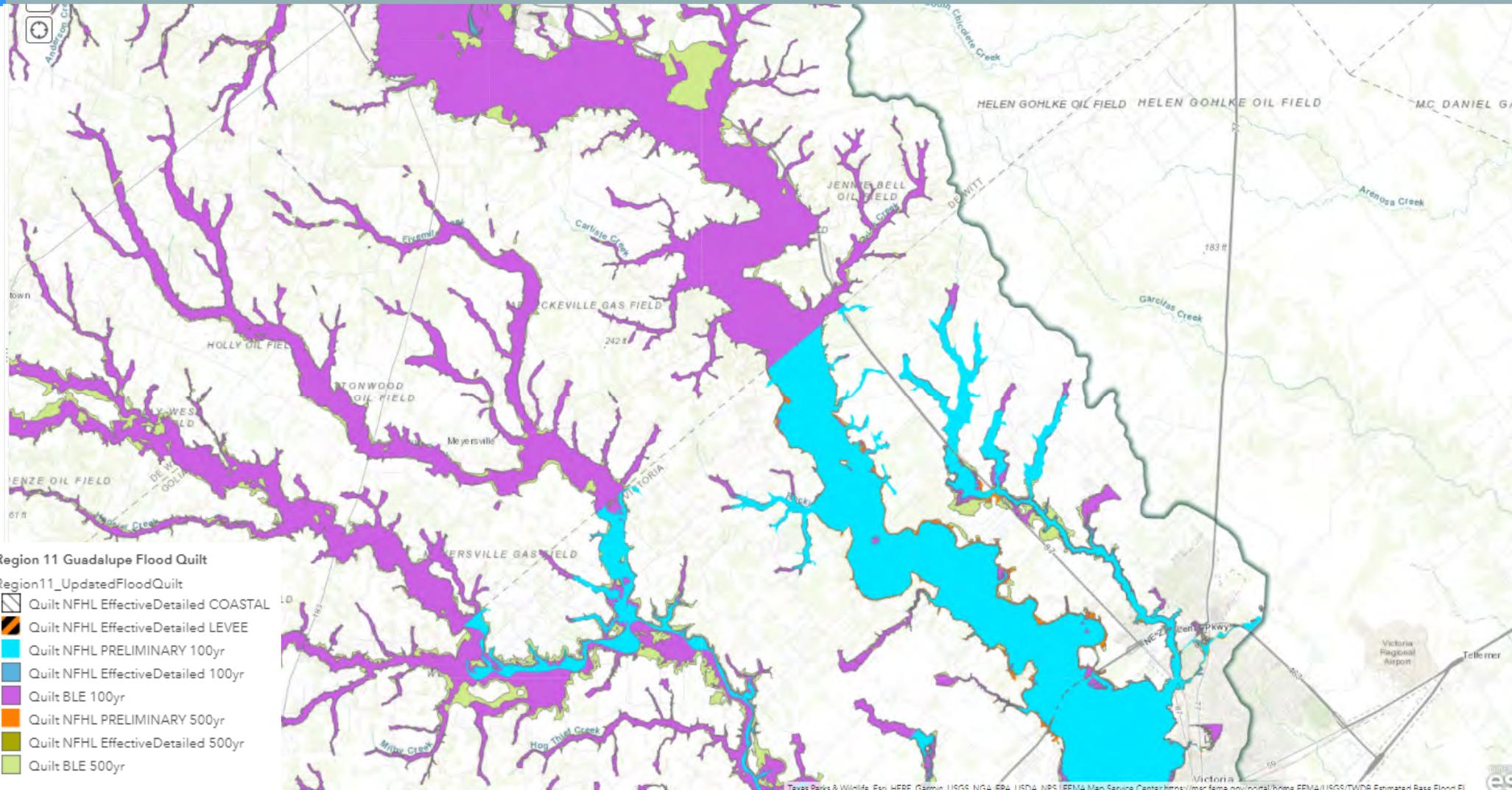
Victoria



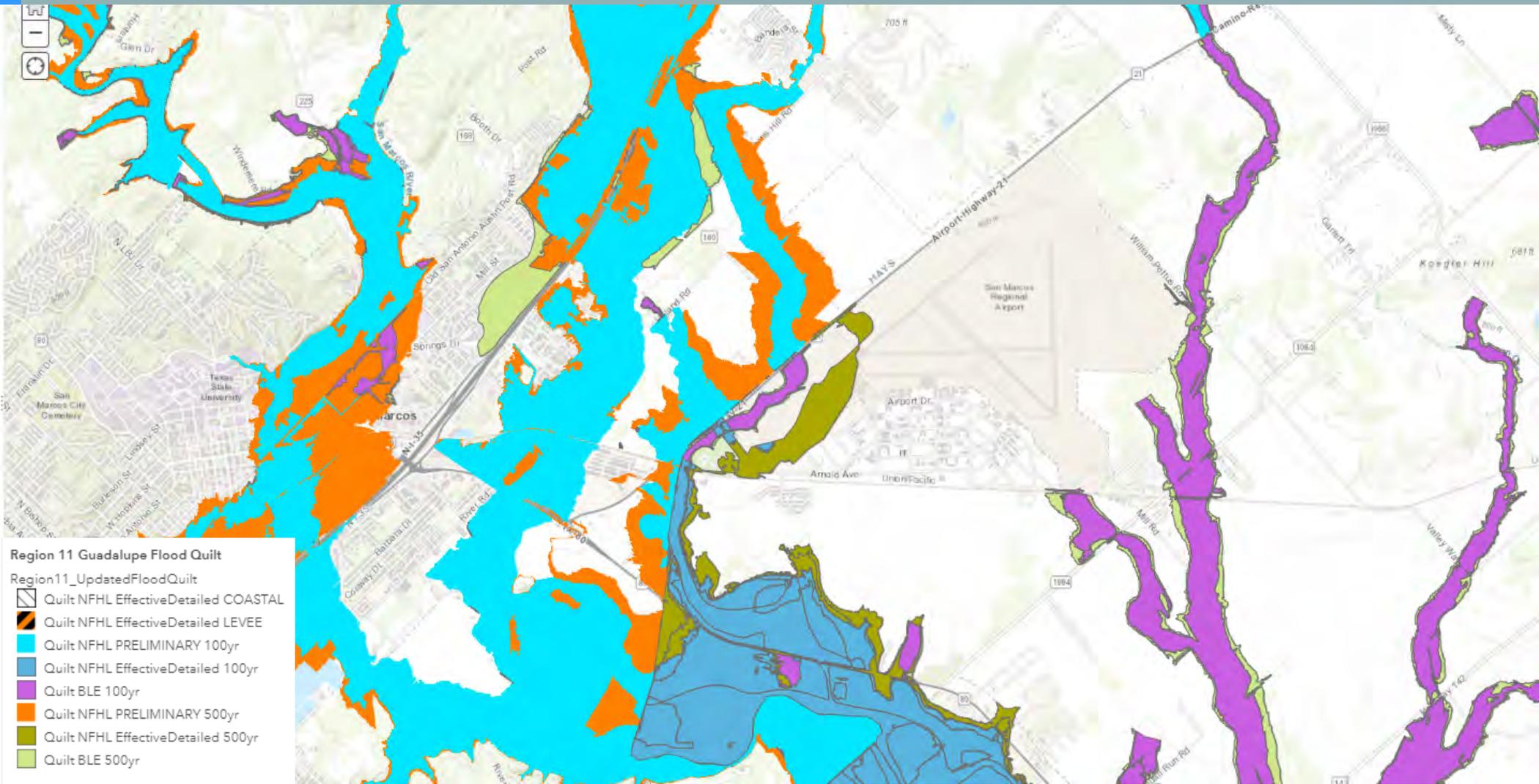
Kerrville



DeWitt – Victoria Counties



San Marcos

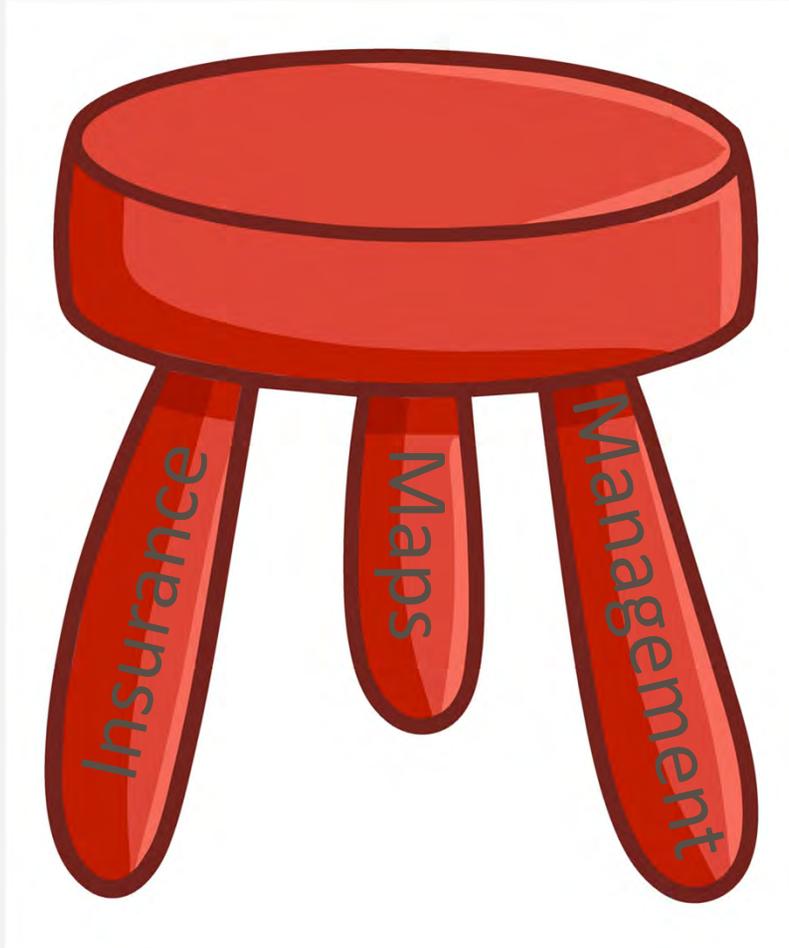




Planning Group Discussion
Preliminary Existing Flood Risk Map



NFIP Summary,
Flood Management Practices and Goals



Floodplain
Management
101



- **Why do communities experience flood damages/loss of life?**

- Past development decisions were made without a complete awareness / knowledge of flood risk
- Prior to 1970, there were no floodplain maps

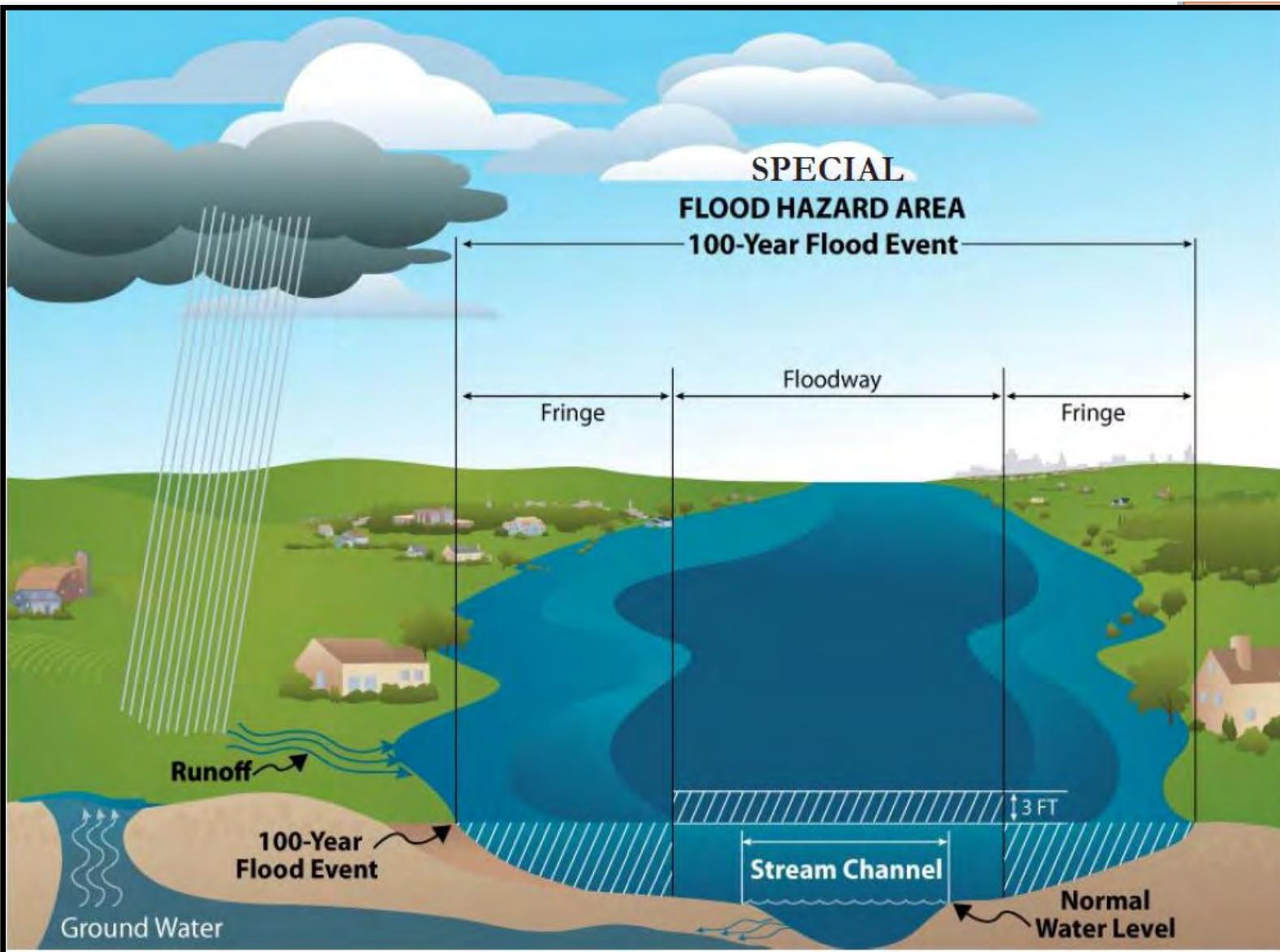
- **To prevent increased flood risk, future development must consider mitigation options**

- Flood risk areas must be accurately known
 - Floodplain mapping is key
 - Identification of low water crossings
 - Consider on-site detention to manage runoff



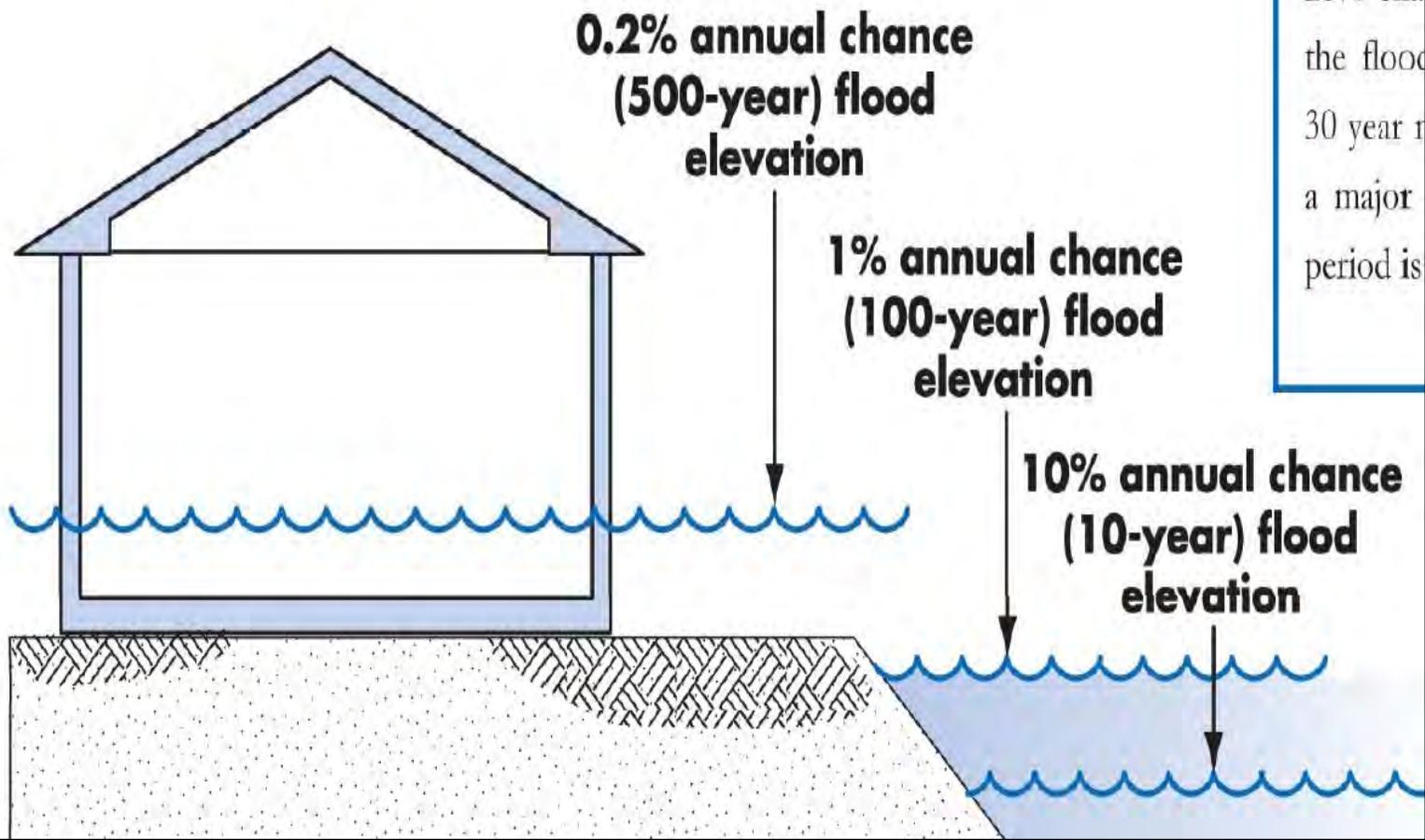
Floodplain Management 101

“Floods are acts of nature, but flood damages are the results of man.”
Gilbert White



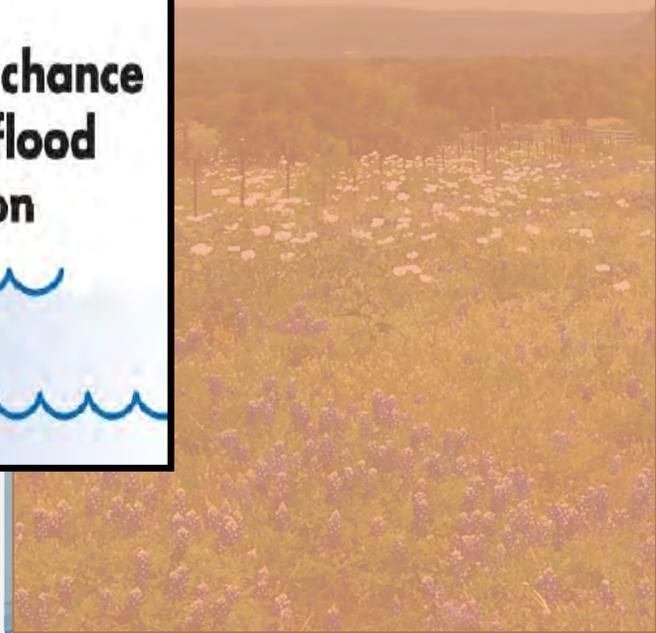
Floodplain Management 101





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Floodplain Management 101



- **National Flood Insurance Program (NFIP)**

- In return for federally subsidized flood insurance (benefit), communities adopt and enforce minimum development standards (cost)

6:1 community benefit for building codes

Additional benefit of 5:1 of higher building standards

- **To participate in NFIP:**

- Adopt a model floodplain ordinance
- Conduct development reviews

- **Residents in Special Flood Hazard Areas (SFHA) with federally backed mortgages are required to purchase flood insurance.**



Floodplain Management 101



Since 1968, the National Flood Insurance Program (NFIP) has used flood insurance to empower Americans to protect the lives they've built.

1968

The National Flood Insurance Act of 1968 launches the NFIP with two primary goals: reducing future flood damage and protecting property owners.

1973

The Flood Insurance Protection Act of 1973 requires the purchase of flood insurance for some homeowners in high-risk flood zones.

1979

Executive Order 12127 officially makes the NFIP part of the Federal Emergency Management Agency (FEMA).

Community Rating System Implementation

Local programs to reduce risk, improve safety, reduce flood insurance costs

Table 110-1. CRS classes, credit points, and premium discounts.

CRS Class	Credit Points (cT)	Premium Reduction	
		In SFHA	Outside SFHA
1	4,500+	45%	10%
2	4,000–4,499	40%	10%
3	3,500–3,999	35%	10%
4	3,000–3,499	30%	10%
5	2,500–2,999	25%	10%
6	2,000–2,499	20%	10%
7	1,500–1,999	15%	5%
8	1,000–1,499	10%	5%
9	500–999	5%	5%
10	0–499	0	0

SFHA: Zones A, AE, A1–A30, V, V1–V30, AO, and AH

Outside the SFHA: Zones X, B, C, A99, AR, and D

Preferred Risk Policies are not eligible for CRS premium discounts because they already have premiums lower than other policies. Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage.

Some minus-rated policies may not be eligible for CRS premium discounts.

Premium discounts are subject to change.

Community Rating System Implementation (continued)

Table 110-2. Credit points awarded for CRS activities.*

Activity	Maximum Possible Points	Maximum Points Earned	Average Points Earned	Percentage of Communities Credited
300 Public Information Activities				
310 Elevation Certificates	116	116	38	96%
320 Map Information Service	90	90	73	85%
330 Outreach Projects	350	350	87	93%
340 Hazard Disclosure	80	62	14	84%
350 Flood Protection Information	125	125	38	87%
360 Flood Protection Assistance	110	100	55	41%
370 Flood Insurance Promotion ⁵	110	110	39	4%
400 Mapping and Regulations				
410 Flood Hazard Mapping	802	576	60	55%
420 Open Space Preservation	2,020	1,603	509	89%
430 Higher Regulatory Standards	2,042	1,335	270	100%
440 Flood Data Maintenance	222	249	115	95%
450 Stormwater Management	755	605	132	87%
500 Flood Damage Reduction Activities				
510 Floodplain Mgmt. Planning	622	514	175	64%
520 Acquisition and Relocation	2,250	1,999	195	28%
530 Flood Protection	1,600	541	73	13%
540 Drainage System Maintenance	570	454	218	43%
600 Warning and Response				
610 Flood Warning and Response	395	365	254	20%
620 Levees	235	207	157	0.5%
630 Dams	160	99	35	35%

* Figures are based on communities that have received verified credit under the 2013 *CRS Coordinator's Manual* (about 43% of CRS communities), as of October 2016. The maximum possible points are based on the 2013 *Coordinator's Manual*. Growth adjustments are not included.

- **NFIP participation**

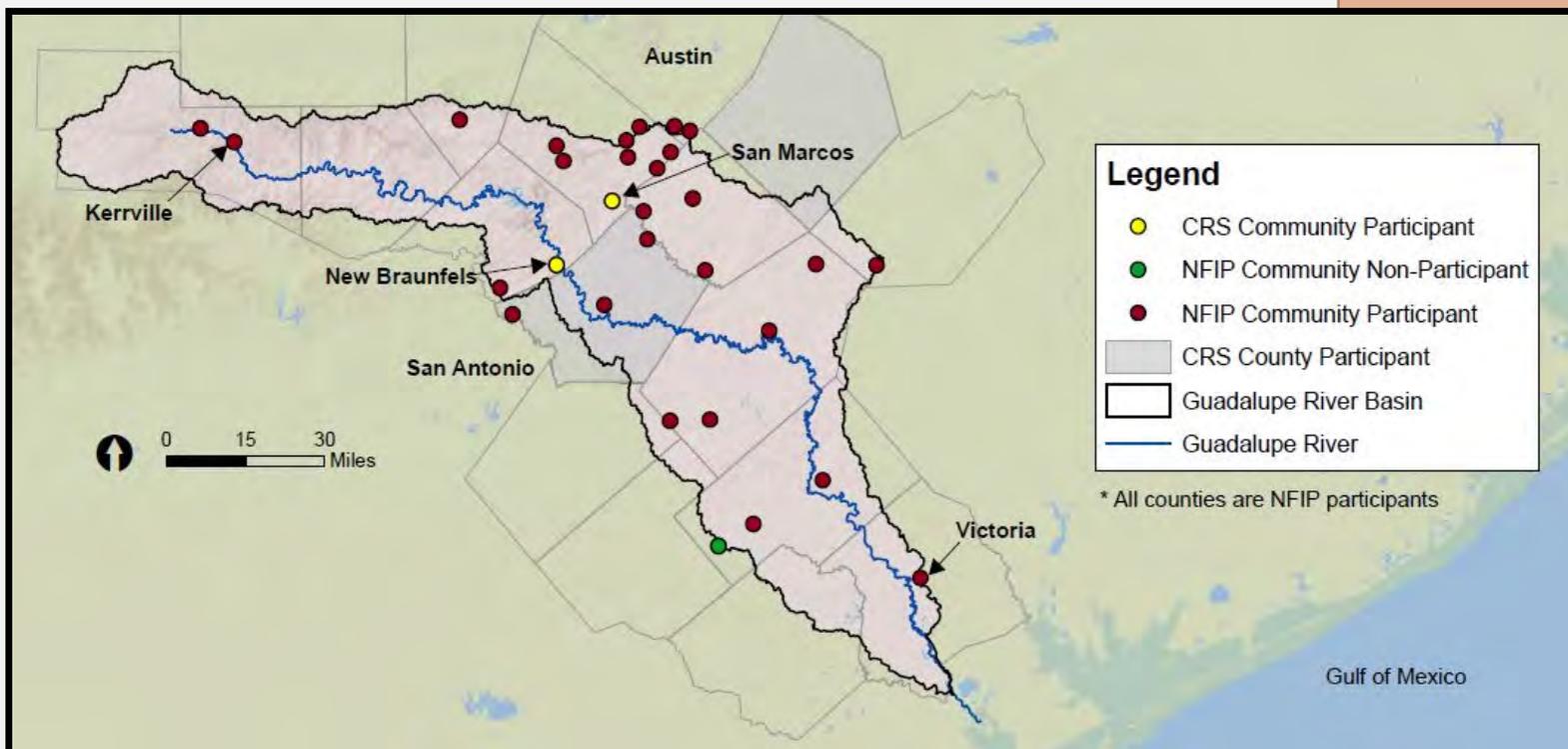
- **16** “Primary” counties and **16** are participants
- **30** communities and **29** are participants

- **CRS participation**

- **New Braunfels (class 8) San Marcos (7)**



Current
Participants in
National
Programs



Projected Population Growth (Basin Counties)

Texas Water Development Board
2021 Regional Water Plan
Population Projections

Basin	2020	2050	2070
Guadalupe River Basin Counties	876,391	1,469,797	1,945,901

~122%

Source: Texas Water Development Board

Possible 400,00 to 500,000 new buildings

Consider management strategies and projects that contribute to increasing water supply, for example:

- Flood flow scalping and groundwater recharge
- Detention and stormwater reuse
- Rainwater harvesting requirement to enhance detention and help meet water supply needs

Projected Population Growth by County

County	2020	2050	2070	
Kerr	52,644	58,665	60,725	
Kendall	42,185	73,308	94,549	
Hays	238,862	474,801	728,344	~ 200%
Comal	152,499	276,239	357,464	~130%
Caldwell	47,008	78,243	98,754	
Guadalupe	182,693	315,934	396,261	~115%
Gonzales	21,751	28,330	33,256	
DeWitt	20,855	22,216	22,572	
Victoria	93,857	109,785	116,522	
Calhoun	24,037	32,276	37,454	

Source: Texas Water Development Board

Prioritize strategies and practices in high growth counties?

Floodplain Management Practices and Goals



- **RFPGs must evaluate and make recommendations on floodplain management practices and goals:**
 1. Identify and reduce the risk and impact to life from existing flooding and, importantly,
 2. Avoid increasing or creating new flood risk by addressing future development
- **RFPG can:**
 1. Recommend regional practices
 2. Adopt minimum standards as requirement for participating in plan

Flood Protection Practices

- Differ by:
 - Structure type
 - New or retrofit
 - Flooding hazard
- TWDB Technical Guidelines for Regional Flood Planning (Includes examples)



Example Protection Practices

Freeboard or structural elevation practices

Infrastructure	Type / Condition	Example Flood Protection Standard
Residential and Commercial Buildings	New Construction	Finished floor elevations 1 foot above 100-year Water Surface Elevation (WSE)
	Pre-Existing (Retrofit)	
	Coastal New Construction	Finished floor elevations 1 foot above the highest elevation of either the riverine or coastal BFE including the combined riverine and coastal effects
	Coastal Pre-Existing (Retrofit)	
Critical Facilities	New Construction	Finished floor elevations above the 500-year WSE
	Pre-Existing (Retrofit)	
	Coastal New Construction	Finished floor elevations 1 foot above the highest elevation of either the riverine 500-year or coastal 100-year WSE including the combined riverine coastal effects
	Coastal Pre-Existing (Retrofit)	
Roadways	New Construction	5-year below top of curb and 100-year no more than 1 foot above the top of curb and contained within the right-of-way
	Pre-Existing (Retrofit)	
	Coastal New Construction	
	Coastal Pre-Existing (Retrofit)	
Culverts / Bridges	New Construction	Minor Roadways: Pass the 25-year and 100-year with no more than 1 foot of overtopping Major Roadways: Pass 100-year
	Pre-Existing (Retrofit)	
	Coastal New Construction	
	Coastal Pre-Existing (Retrofit)	
Storm Drainage Systems	New Construction	Convey 25-year flow underground and 100-year in the right-of-way
	Pre-Existing (Retrofit)	
	Coastal New Construction	
	Coastal Pre-Existing (Retrofit)	
Detention Facilities	New Construction	Detain proposed condition peak discharge for the 25-year and 100-year below or equal to the existing condition peak discharge
	Pre-Existing (Retrofit)	
	Coastal New Construction	
	Coastal Pre-Existing (Retrofit)	
Dams	Greater than 6 feet in height as well as other requirements based on hazard and size	TCEQ requirements
Levees / Floodwalls	Earthen embankments and floodwalls compliant with FEMA 44 CFR 65.10	TCEQ requirements
Property acquisition		Property acquisition considered in the flood planning will conform to property acquisition and relocation for open space (44 C.F.R. Part 80) requirements.

Critical facilities = Hospitals, fire stations schools, assisted living, treatment plants, etc.

Example Protection Practices



- **Regulatory?**

- Floodplain/buffer zones (no build?)
- Stormwater detention
- Roadway overtopping (design storm and depth)
- Finished floor elevation and freeboard
- Impervious cover management

- **Criteria?**

- Dam/embankment safety
- Channel design
- Storm drain
- Low impact development incentives
- Green Infrastructure

- **Land Conservation?**

- Conservation development incentives



Floodplain Management Goals

Establish Preliminary Goals that:

- Make sense for the region
- Specific and achievable
- Short term (10 years) and long term (30 years)
- Consider connection between goals and practices
- Consider minimum recommended flood protection goals provided by TWDB

Flood Mitigation Goals

FM Evaluations

FM Projects

FM Strategies

Floodplain Management Goal Categories



Loss of Life

- Reduce / eliminate flood related fatalities
- Reduce / eliminate flood related injuries
- Reduce / eliminate Low Water Crossings
- Percent of Low Water Crossings with warning systems

Property Damage (Existing Structures)

- Remove from 1% ACE (100-year) floodplain
- Remove Critical Structures from 0.2% ACE (500-year) floodplain
- Increase coverage of detailed flood hazard data
- Number of mitigated structures (acquired, elevated, flood proofed)

Floodplain Management

- Percent participating in NFIP
- Percent adopted higher standards
- Number participating in Community Rating System
- Percent regulating future conditions floodplains

Funding

- Percent of region's population with a dedicated storm water utility fee or drainage district
- Percent with a documented, operational, and fully funded stormwater asset management plan and system

Example Regional Goals

(from TWDB Guidance)

Potential regional Flood plan goals and means of presenting them

Short term (10 year)	Long term (30 year)
Reduce 5-year moving average of flood-related fatalities in the flood planning region by 50% by 2033.	Eliminate the occurrence of all flood-related fatalities in the flood planning region by 2053.
Reduce 5-year moving average of flood-related injuries in the flood planning region by 75% by 2033.	Eliminate the occurrence of flood-related injuries in the flood planning region by 2053.
Reduce exposure of existing structures in the current 1% annual chance floodplain by elevating, acquiring, relocating, or otherwise providing flood protection to 1,000 structures by 2033.	Reduce exposure of existing structures in the current 1% annual chance floodplain by elevating, acquiring, relocating, or otherwise providing flood protection to 10,000 structures by 2053.
Remove 50% of the existing structures from 1% annual chance floodplain in the region by 2033.	Remove 95% of the existing structures from 1% annual chance floodplain in the region by 2053.
Remove 50% of the low water crossings from 10% annual chance flood risk in the region by 2033.	Remove 90% of the low water crossings from 10% annual chance flood risk in the region by 2053.
By 2033, increase the coverage of flood hazard data across the region by completing studies in 50% of the areas identified as having current gaps in flood mapping.	By 2053, have complete coverage of flood hazard data across the region by completing studies in 100% of the areas identified as having current gaps in flood mapping and have an ongoing, funded maintenance plan for updates.
By 2033, enroll all current non-participating communities into the National Flood Insurance Program.	Maintain 100% community enrollment with no suspensions or sanctions.
By 2033, 25% of all communities have adopted higher than NFIP-minimum standards.	By 2053, 50% of all communities have adopted higher than NFIP-minimum standards.
By 2033, RFPGs will consider and incorporate nature-based practices in their flood risk reduction projects.	
By 2033, RFPG adopts minimum stormwater infrastructure design standards applicable across the region.	
By 2033, 50% of the region's population is part of a municipality that has a dedicated municipal drainage charge, drainage district fee, or other continuous funding mechanism.	By 2033, 90% of the region's population is part of a municipality that has a dedicated municipal drainage charge, drainage district fee, or other continuous funding mechanism.
By 2033, 50% of the communities have a documented, operational, and fully funded stormwater asset management plan and system.	By 2033, 75% of the communities have a documented, operational, and fully funded stormwater asset management plan and system.
Reduce flood-related loss of natural and cultural resources within the FPR by 2033.	Maximize safe economic development within flood prone areas.
Reduce any increases in future flood risk to life and property from development by regulating development in future conditions floodplains.	Eliminate any increases in future flood risk to life and property from development by regulating development in future conditions floodplains.

This table contains examples of regional flood mitigation and floodplain management goals for consideration only and does not reflect any TWDB-recommended goals. The RFPGs are expected to deliberate and gather data necessary to establish their own goals for their region.

Floodplain Management Goals



- **Vary by region?**
 - Hill Country
 - Flash floods
 - Short duration/high energy
 - Coastal Plain
 - Slow rise
 - Longer duration
- **Vary by city/county size and projected growth rates?**
 - Prioritize

Example Regional Flood Management Goals

Floodplain Management Goals

Regional flood plan mitigation and management goals

Goal ID	Goal	Term of Goal	Target Year	Applicable To	Residual Risk	How will the Goal be Measured	Overarching Goal(s)	Associated Goal IDs
01000001	Remove 50% of the low water crossings from 1% annual chance flood risk in the region by 2033	Short Term (10 year)	2033	HUC 8 Watershed #			Protect against the loss of life	01000002
01000002	Remove 90% of the low water crossings from 1% annual chance flood risk in the region by 2053	Long Term (30 year)	2053	Entire RFPG			Protect against the loss of life	01000001
01000003	All communities in the CRS	Long Term	2043	All cities and counties, 75% by 2033			Improve flood management, reduce flood insurance costs	
01000004	50% of local governments require stormwater detention	Short Term	2033	Cities and counties			Maintain existing flood levels in high growth regions	
01000005	90% of local governments require stormwater detention	Long Term	2043	Cities and counties			Maintain existing flood levels throughout the river basin	
01000006	50% of communities have a dedicated stormwater drainage charge, fee, etc.	Short Term	2033	Cities and counties			Fund stormwater system enhancement construction, operations, maintenance	

Task 3A / 3B Workplan



3A	Floodplain Management 101	Draft Policy Recommendations	Refined Policies	Policy Requirements
3B		Draft Goals Categories	Refine Goals	Complete Goals

An aerial photograph of a vast wetland landscape. The terrain is a mosaic of green marshland and blue water channels. The water reflects the sky, which is filled with soft, grey clouds. The vegetation appears to be a mix of grasses and sedges, typical of a coastal or estuarine environment. The overall scene is serene and expansive.

Planning Group Discussion

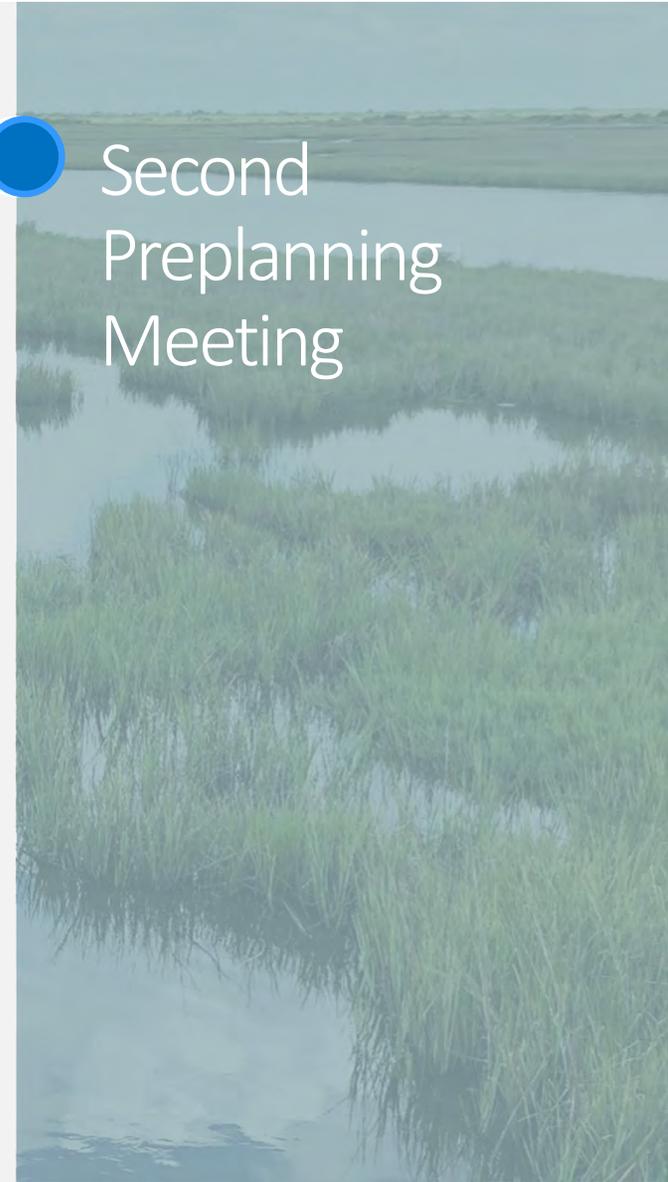


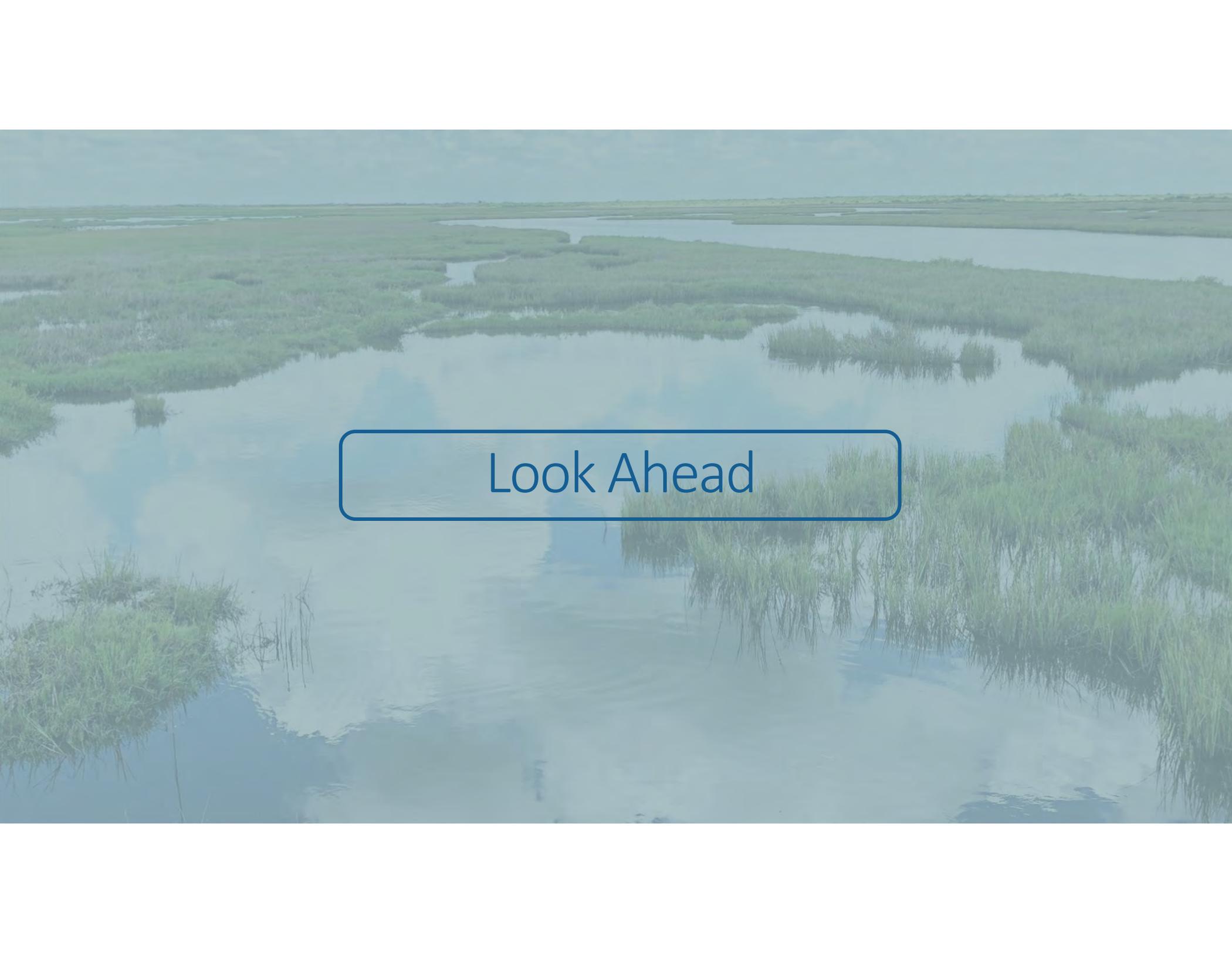
Preplanning Meeting

- August 4th
 - Wimberley Activity Center
 - 6:00 P.M. (following RFPG meeting)
- Proposed Outline
 - Introduction/Background
 - Timeline and Public Input Opportunities
 - Request for Initial Input
 - Recommendations as to issues, provisions, projects, and strategies to be considered
 - Virtual Meeting Demo
 - Interactive Tool Demo
 - Public Comments
- Consultant and GRFPG Coordination



Second Preplanning Meeting



A wide-angle photograph of a coastal or estuarine landscape. The foreground is dominated by a large, calm body of water that reflects the overcast, grey sky. The water is surrounded by dense, green vegetation, likely marsh grasses or reeds, which are scattered across the flat terrain. The horizon is low and distant, showing a line of more vegetation under a heavy, overcast sky. The overall mood is serene and somewhat somber due to the grey tones of the sky and water.

Look Ahead



Schedule

Meeting	Milestone Goals
May	Contracting & Introductions
June 2	Kickoff and Preplanning Meeting
June 30	Task 1 Data Collection; Task 2 Floodplain Map Review, Task 3 Flood Policy/Goals Kickoff
August	Task 1 Update; Task 2 Update; Task 3 Discussion; Task 10 Outreach Plan; Preplanning Meeting
September	Task 1 Prelim List; Task 2 Update; Task 3 Draft Goals
October	Task 3 Complete Goals (if needed); Task 4A Needs Analysis
November	Task 4B FMP, FMS, FME Identification; Task 4C Preliminary Memo
December	Task 4C Draft Technical Memo
January	January 7, 2022 Tech Memo to TWDB Task 5 Recommendation process begins

Agenda Item 8

Update from RFPG
Sponsor (GBRA)

Update from GBRA

Agenda Item 9

Public General Comments

Public Comments limited to 3 minutes per speaker

Agenda Item 10

Consider date and agenda items for next meeting

Agenda Item 11

Adjourn