



# 2021 TWDB Flood Infrastructure Fund (FIF) Bastrop County Watershed Studies

[Virtual Public Meeting 1A](#)

Big Sandy Creek, Piney Creek & Yegua Creek

June 14 & 15, 2022



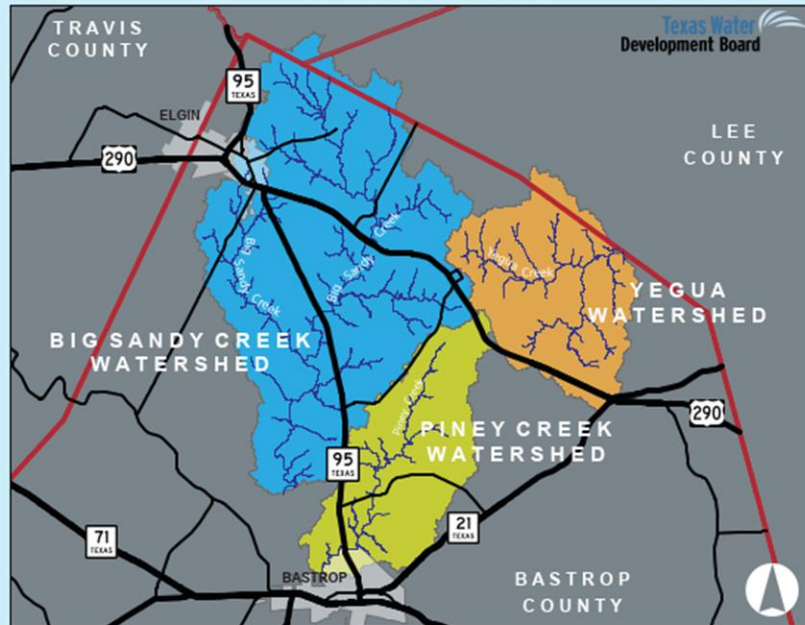
## Bastrop County - Flood Infrastructure Fund Studies Public Meeting 1a (Big Sandy, Piney, Yegua)

Tuesday, June 14, 2022  
6:30 pm – 7:30 pm  
Virtual  
<https://bit.ly/3x5XJZV>

Wednesday, June 15, 2022  
10:00 am – 11:00 am  
Virtual  
<https://bit.ly/3LloKHY>



Bastrop County has been awarded a Texas Water Development Board Flood Infrastructure Fund Grant to conduct a floodplain study of the **Big Sandy Creek, Piney Creek, and Yegua Creek** watersheds shown below.



The study will determine floodplain extents and investigate structural and nonstructural flood damage mitigation projects which will be used to develop a comprehensive Flood Protection Plan for **Big Sandy Creek, Piney Creek, and Yegua Creeks**. Public input is being solicited to help identify and quantify areas of concern and discuss possible solutions. An online resident questionnaire is available to provide input and can be found at the weblink or QR code below.



Questions about the study can be directed to Carolyn Dill, P.E., Consultant Bastrop County Engineer, at (512) 581-7180 or by email at [carolyn.dill@co.bastrop.tx.us](mailto:carolyn.dill@co.bastrop.tx.us)



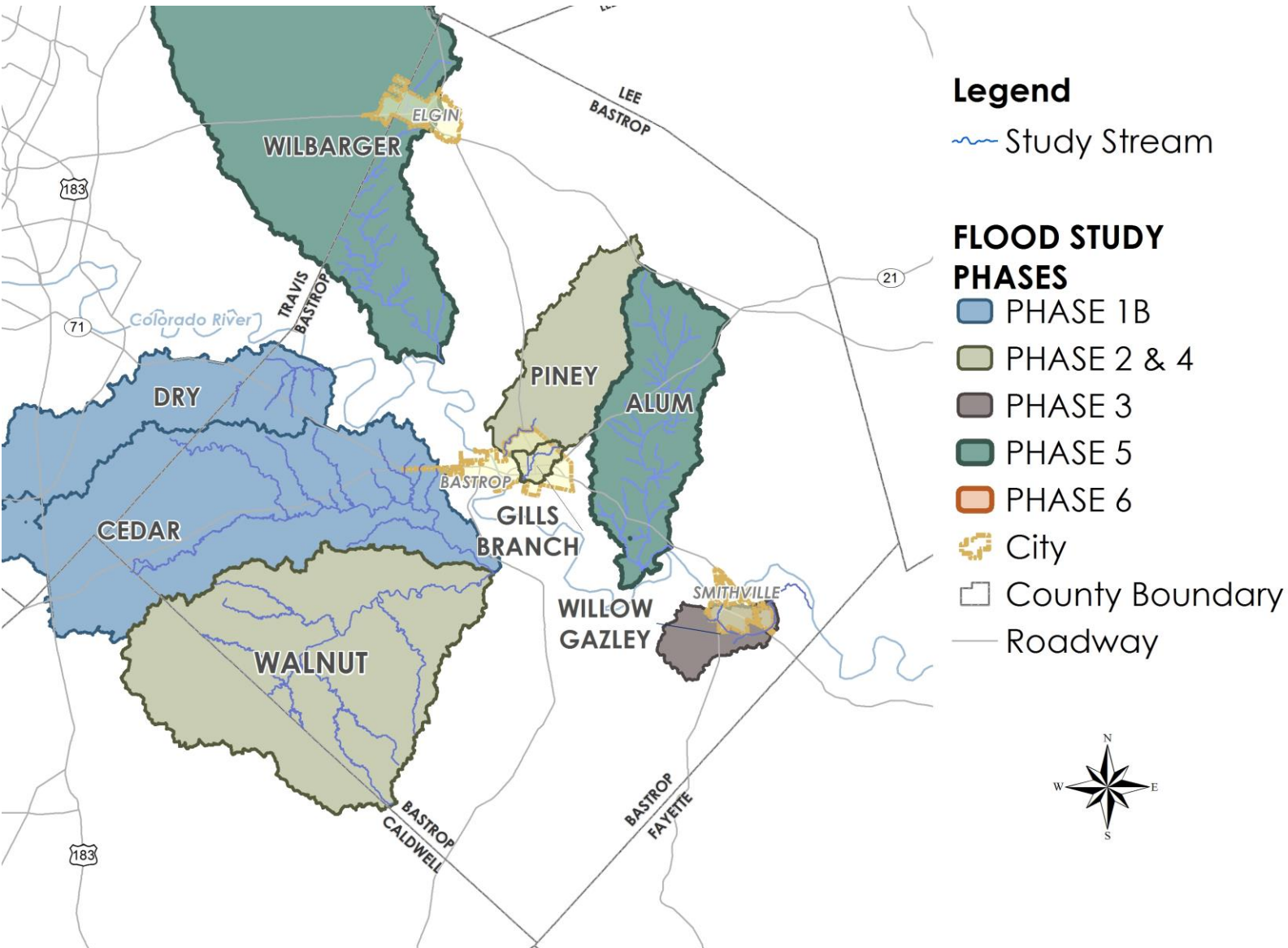
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# Outline

- Partnerships
- Project Area (Watershed)
- Project Tasks
- Public Questionnaire
- Project Schedule



# Previous Flood Protection Planning (FPP) Studies



- Phase 1B (2008 – 2012)
  - Cedar and Dry Creek
- Phase 2 (2010 – 2013)
  - Walnut Creek (initial)
- Phase 3 (2014 – 2018)
  - Willow and Gazley Creeks
- Phase 4 (2016 – 2018)
  - Gills Branch, Piney and Walnut Creek
- Phase 5 (2018 – 2021)
  - Alum and Wilbarger Creek





# Current Flood Infrastructure Fund (FIF) Study

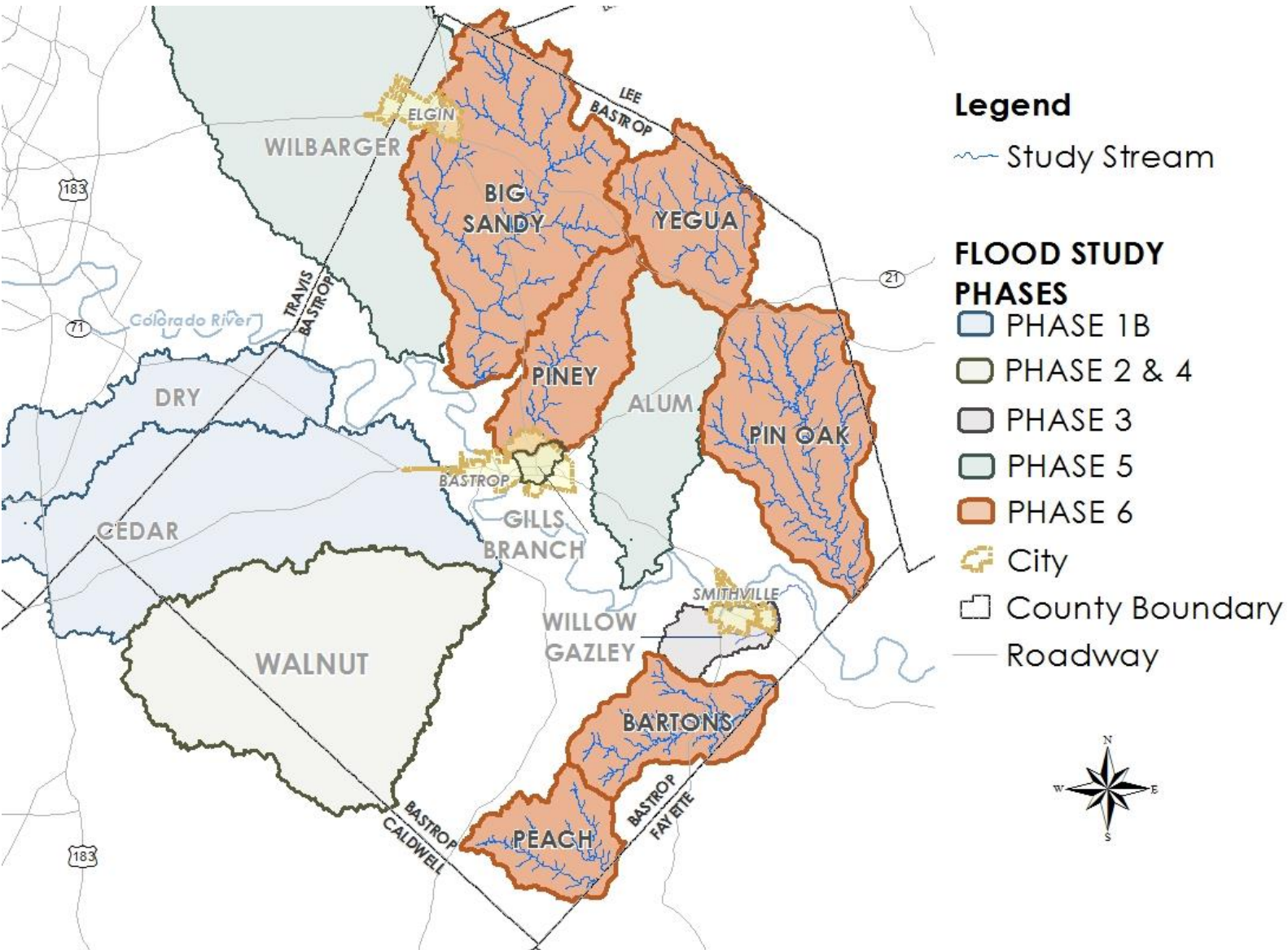
- Phase 6 (2021 – 2024)

- Big Sandy Creek
- Piney Creek
- Yegua Creek

- Pin Oak Creek
- Bartons Creek
- Peach Creek

- Funding

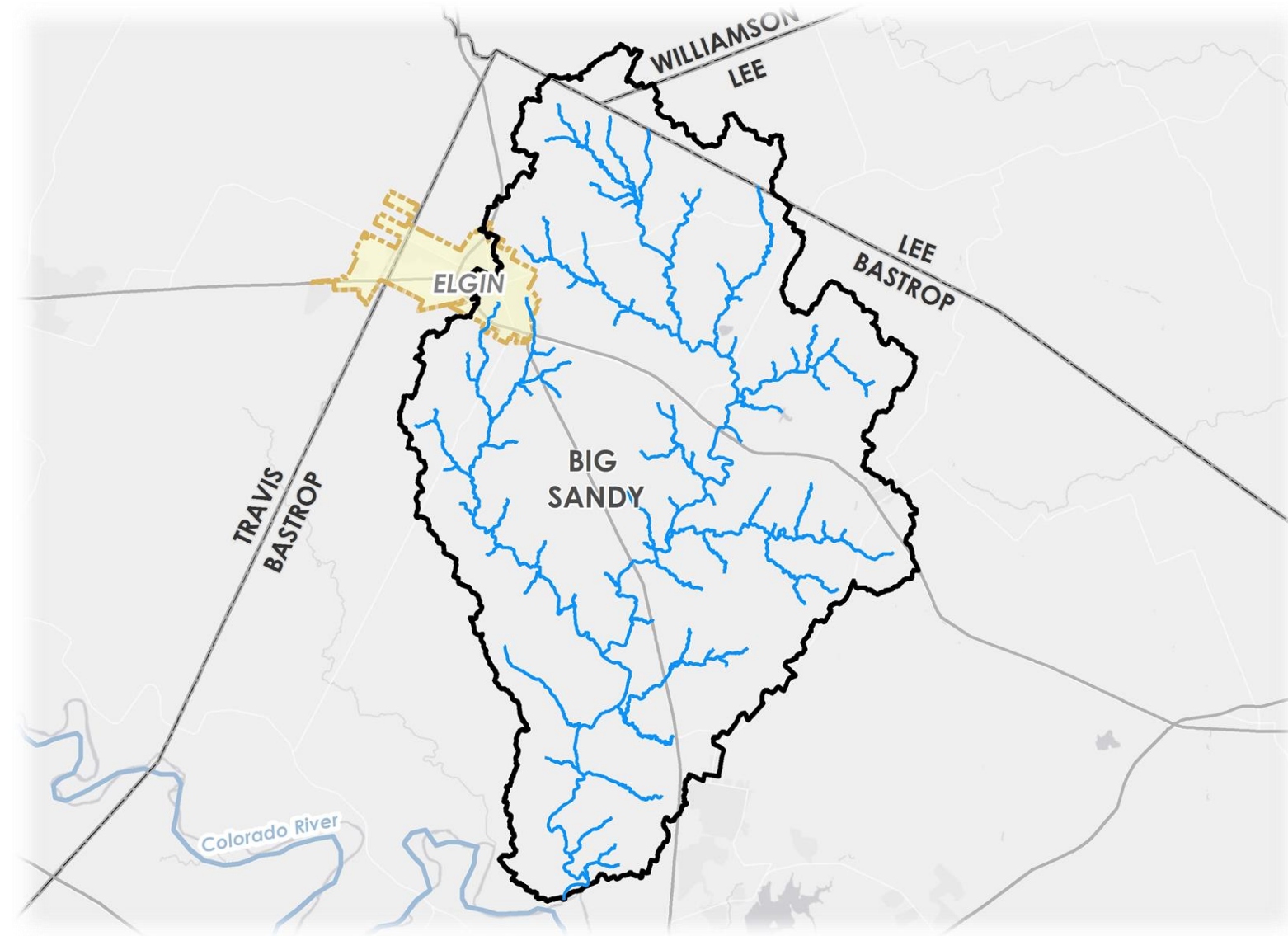
Texas Water Development Board	75%
Bastrop County	25%
Total	100%





# Big Sandy Creek Overview

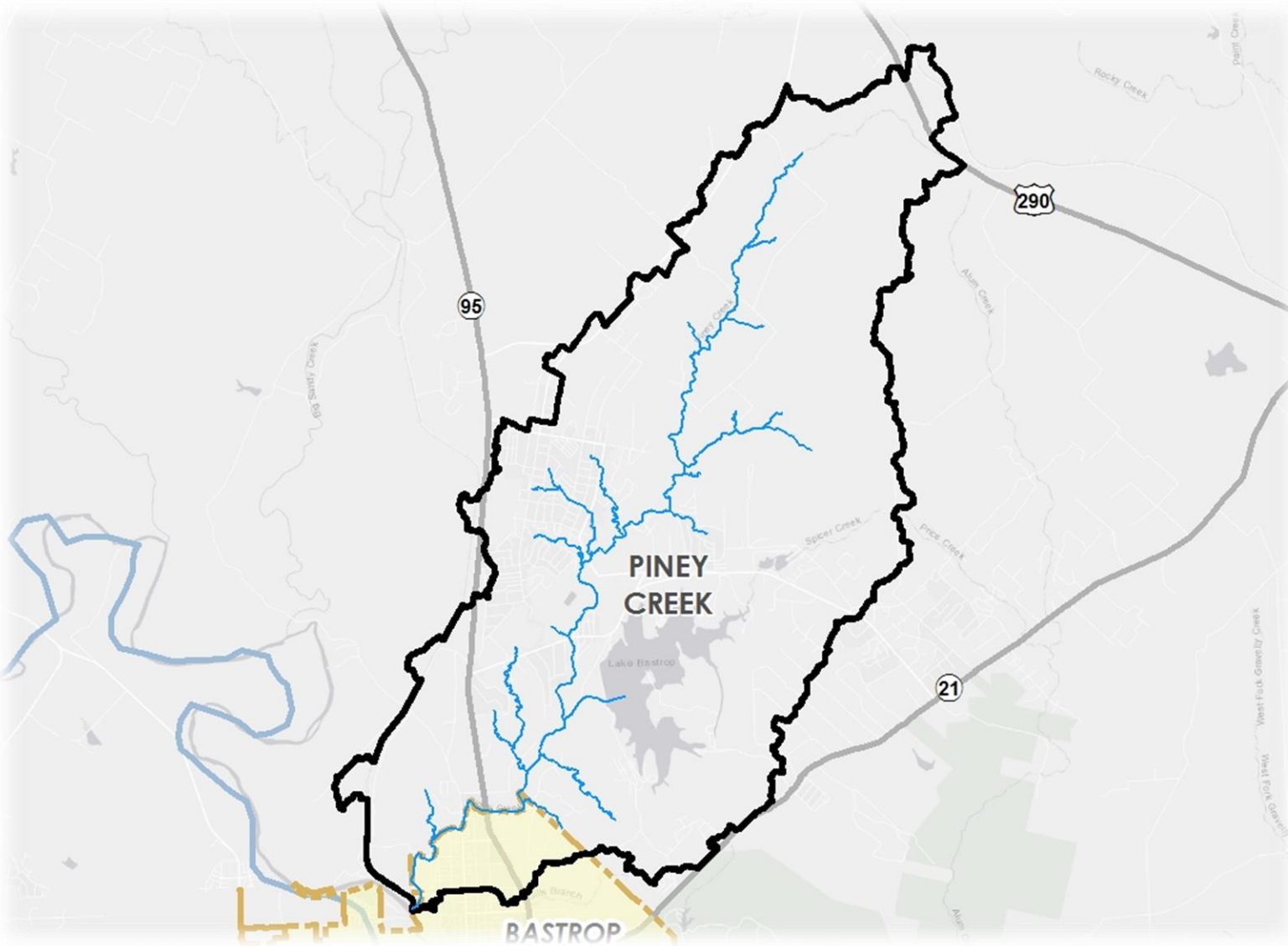
- Watershed
  - 110 sq. miles of Drainage Area
- 131.2 Stream Miles:
  - 131.2 miles - Limited Detail
- Data Collection
  - Field Recon
    - 75 Road Crossings





# Piney Creek Overview

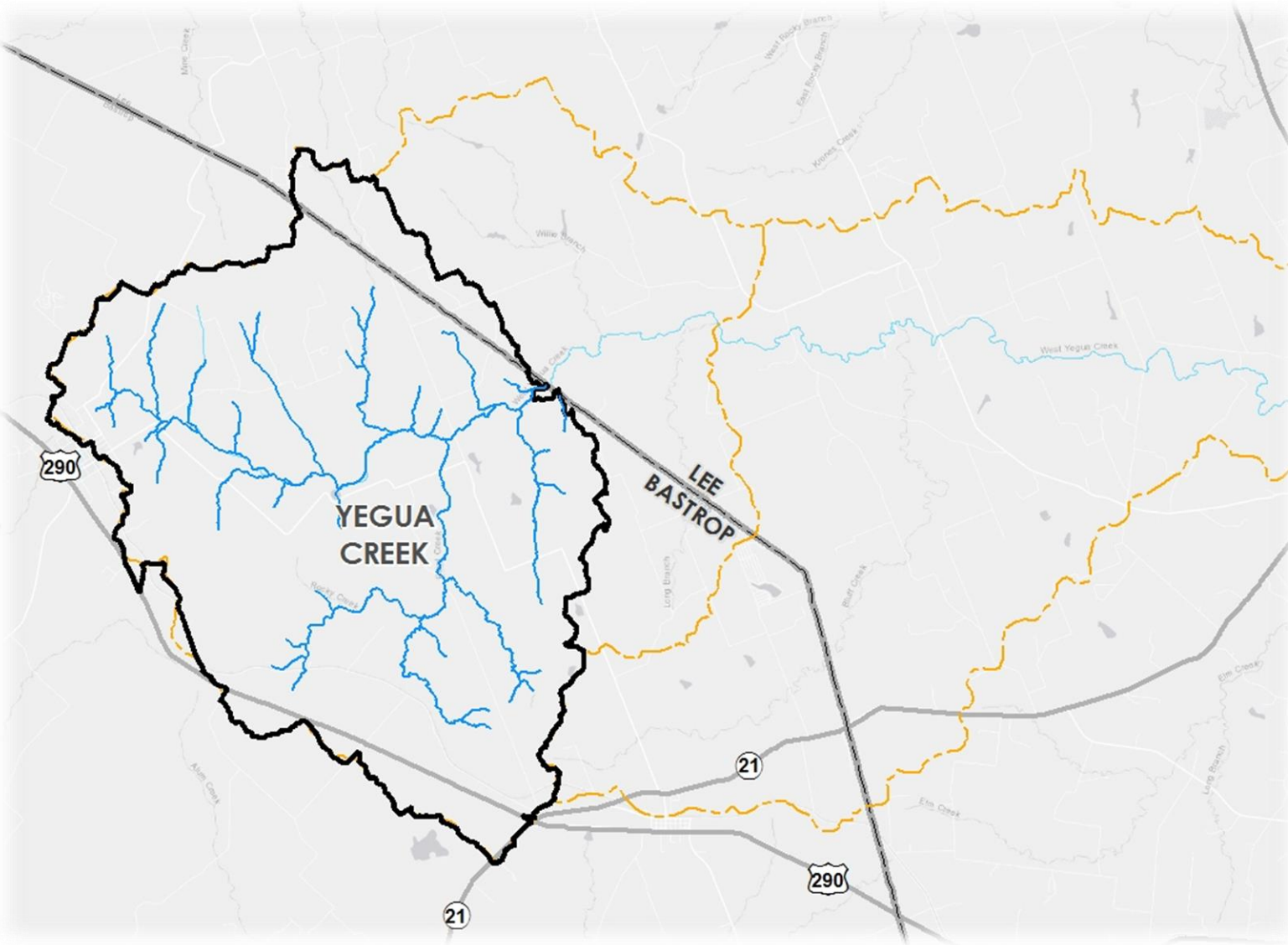
- Watershed
  - 38 sq miles of Drainage Area
- 49.6 Stream Miles
  - 0.8 mi. – Detailed; No Floodway
  - 48.8 mi. - Limited Detail
- Data Collection
  - Survey
    - 3 Channel Cross Sections
  - Field Recon
    - 18 Road Crossings





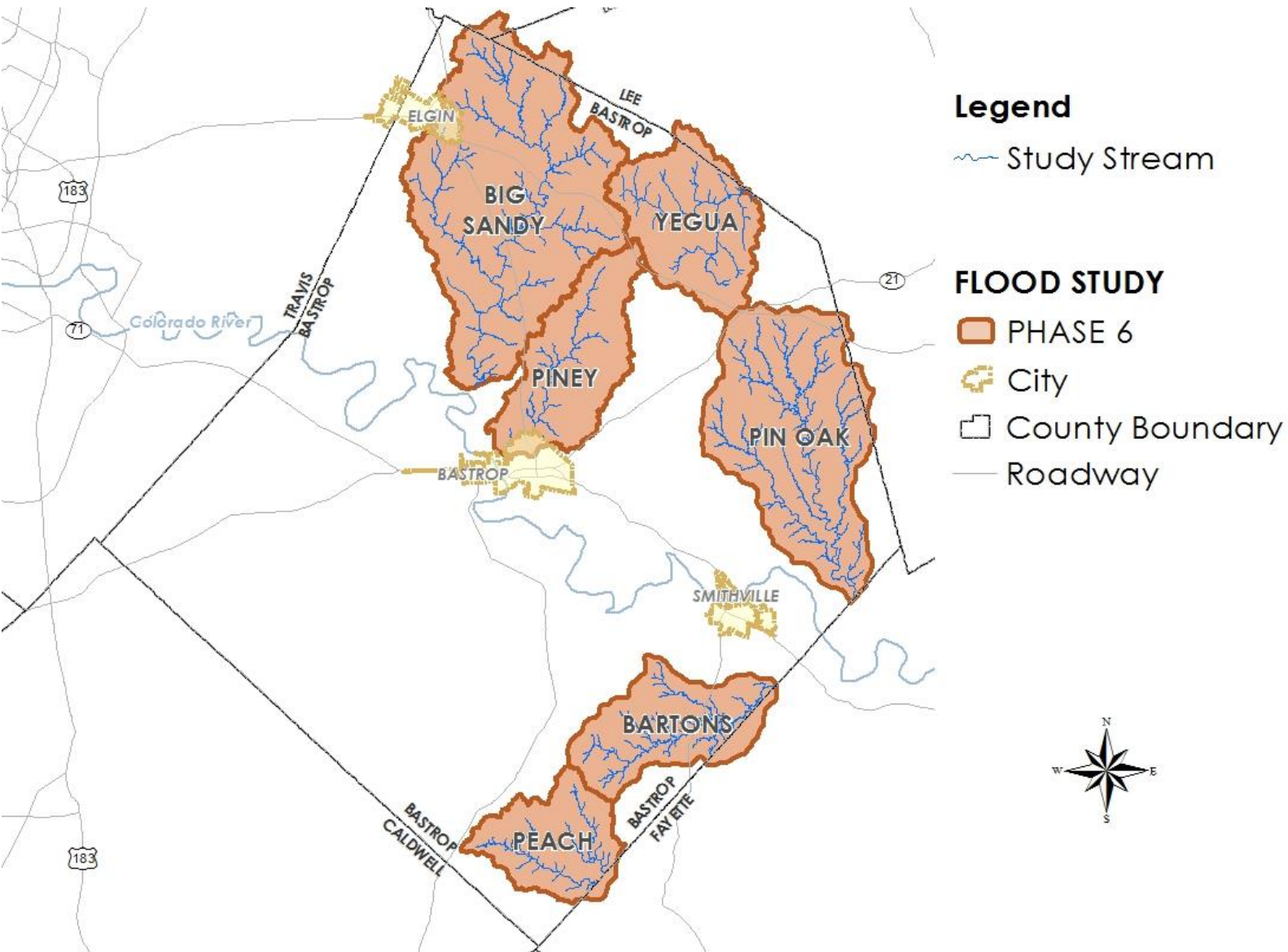
# Yegua Creek Overview

- Watershed
  - 40 sq miles of Drainage Area
- 42.6 Stream Miles
  - 42.6 mi. - Limited Detail
- Data Collection
  - Field Recon
    - 16 Road Crossings





# Task 1 – Project Management & Reporting

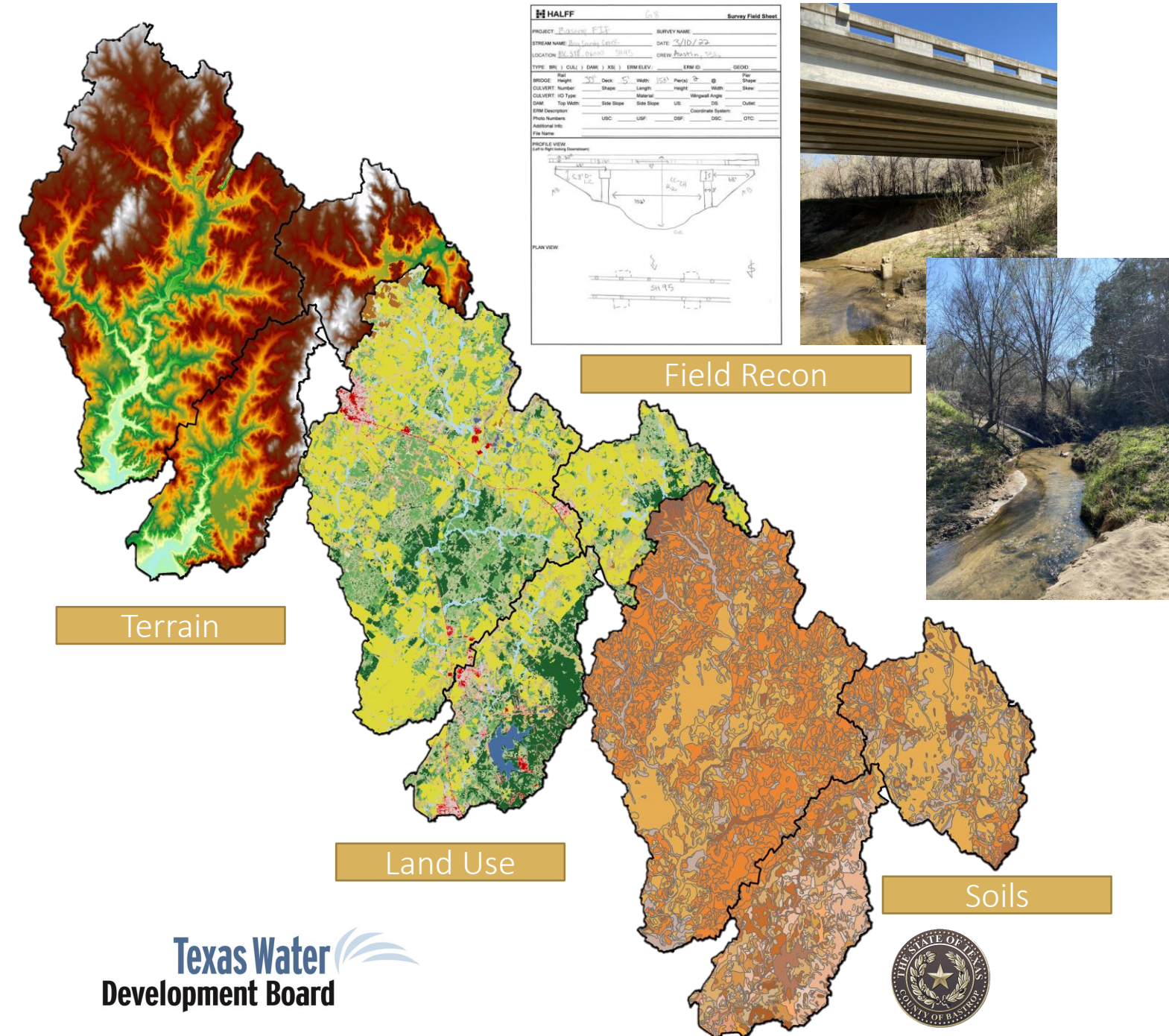


- Coordination with County
- Three public meetings
- Study report documentation

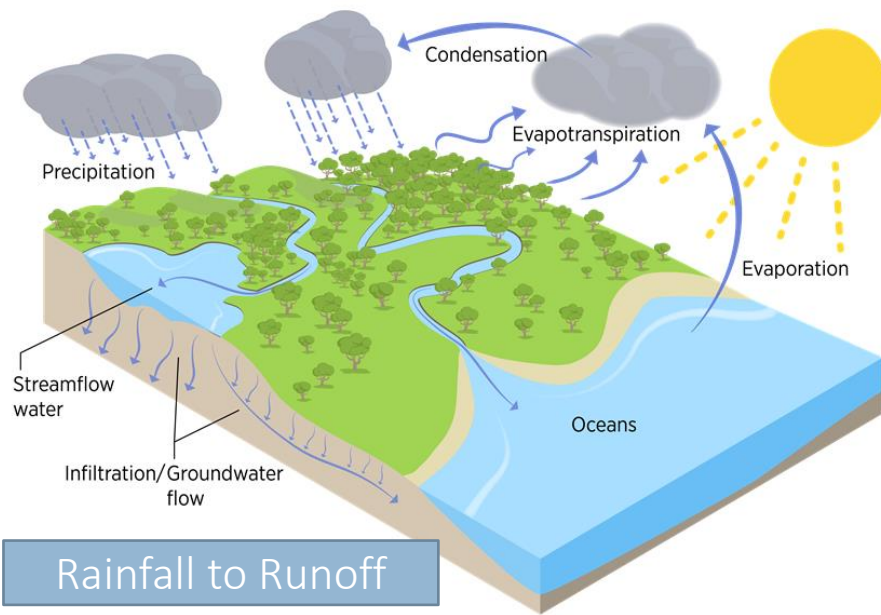


# Task 2 – Data Collection

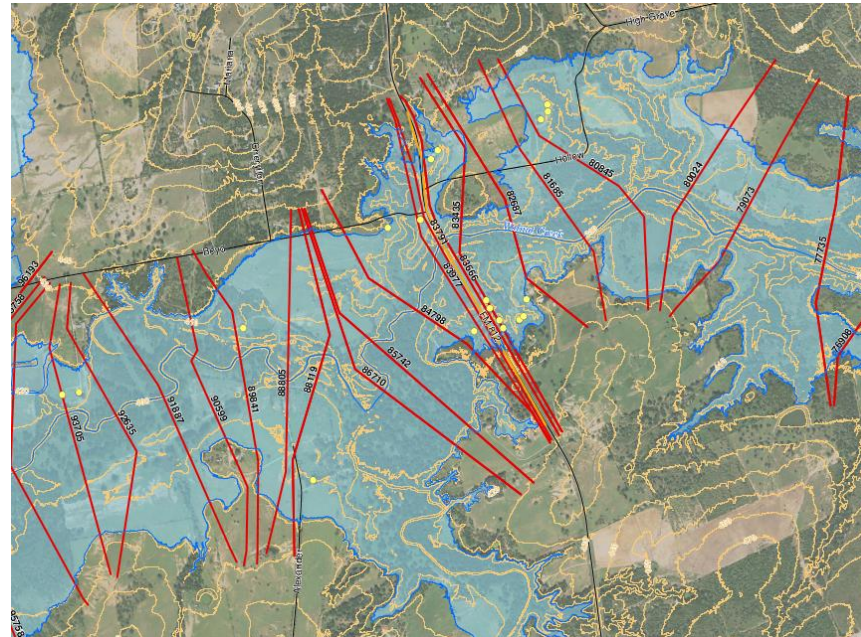
- 2017 Terrain
- Ground Survey
  - Structures
  - Stream Crossings
- Field Reconnaissance
  - Field measurements
  - Sketches/Photos
- Soil Data
- Existing Land Use
- Record/As-Builts Plans
  - Road Crossings
  - Sub-divisions
- Public Flooding Observations







Runoff to Floodplain



## Task 3 – Hydrologic Analysis

### • Hydrology -Rainfall to Runoff

- Hydrologic Watershed Model
- Verified outer basin boundary
- NOAA Atlas 14 rainfall data
  - 2-, 5-, 10-, 25-, 50-, 100-, and 500-yr storm events

## Task 4 – Hydraulic Analysis & Mapping

### • Hydraulics (Creek Flooding)

- Creek Flood Model
- Channel cross section every 500 ft
- Detailed Analysis
  - *Incorporate channel and road crossing survey*
- Limited Detailed
  - *Incorporate field recon*
- Mapping 100- and 500-yr floodplain



# Task 5 – Flood Mitigation Solutions

- Flood Protection Measures

- Bridge/Culvert improvements
- Channel improvements
- Detention/retention ponds
- Floodwalls and dams
- Buyouts

- Probable Project Cost Estimate

- Benefit – Cost Analysis
  - Preferred mitigation solutions

- Potential Environment  
Constraints

Channel Improvements

EXISTING HOMES

SLOPED AREA

EXISTING GROUND

BENCHED AREA

ONION CREEK

Detention Pond

Crossing Improvements





# Resident Flooding Questionnaire

## Big Sandy Creek, Piney Creek, & Yegua Creek

- Public input is being solicited to help identify flooding areas
- Obtain flooding photos and videos to help with modeling
- Define flooding area hot spots to develop mitigation solutions
- Questionnaire open till end of July 2022

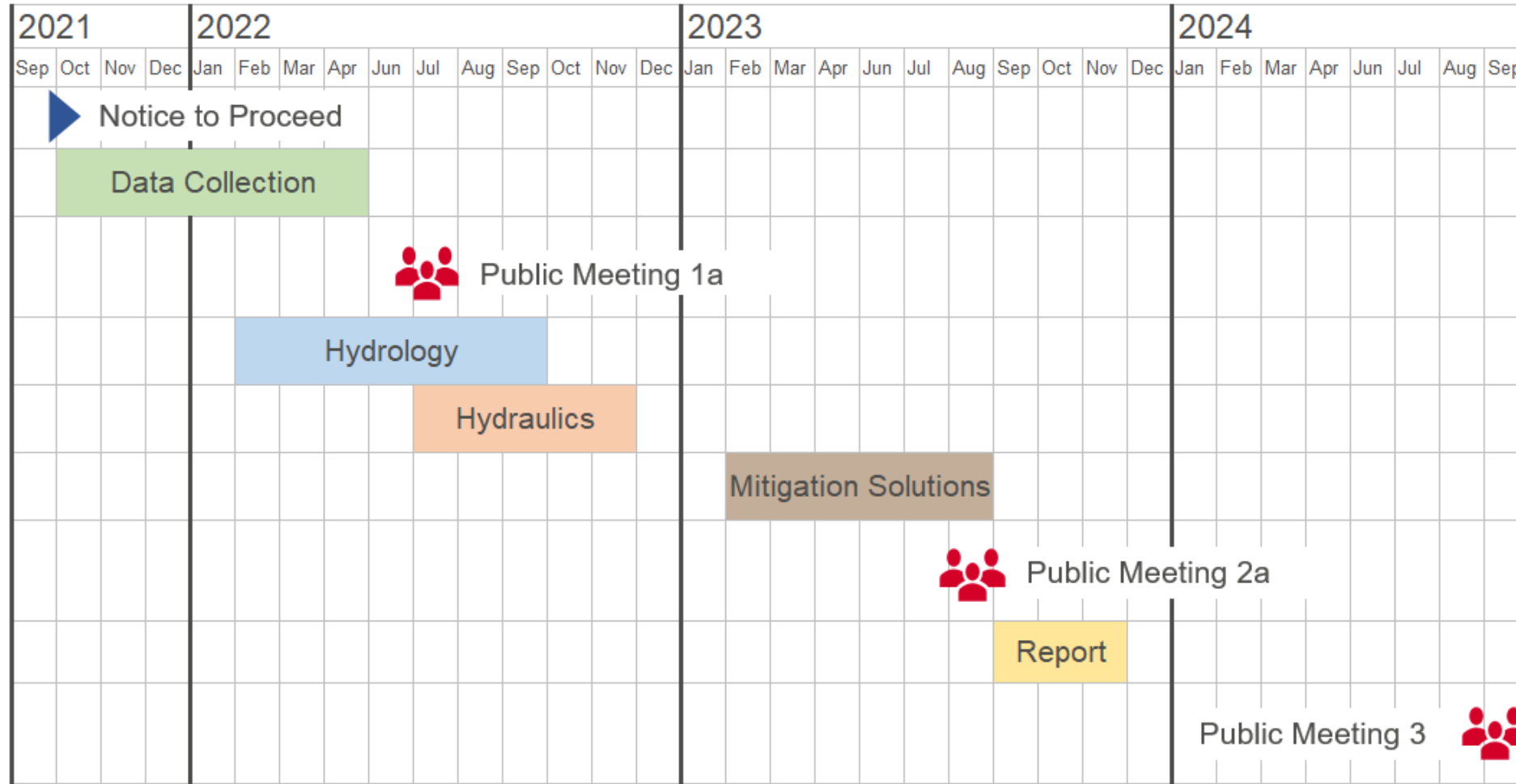


<https://bit.ly/3LCE2Oo>



# Project Schedule

Big Sandy Creek, Piney Creek, & Yegua Creek







## Bastrop County

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## Contact Information

