



# Elected Officials Floodplain Seminar

Glenn Clingenpeel

Chairman, Region 3 Regional Flood Planning Group



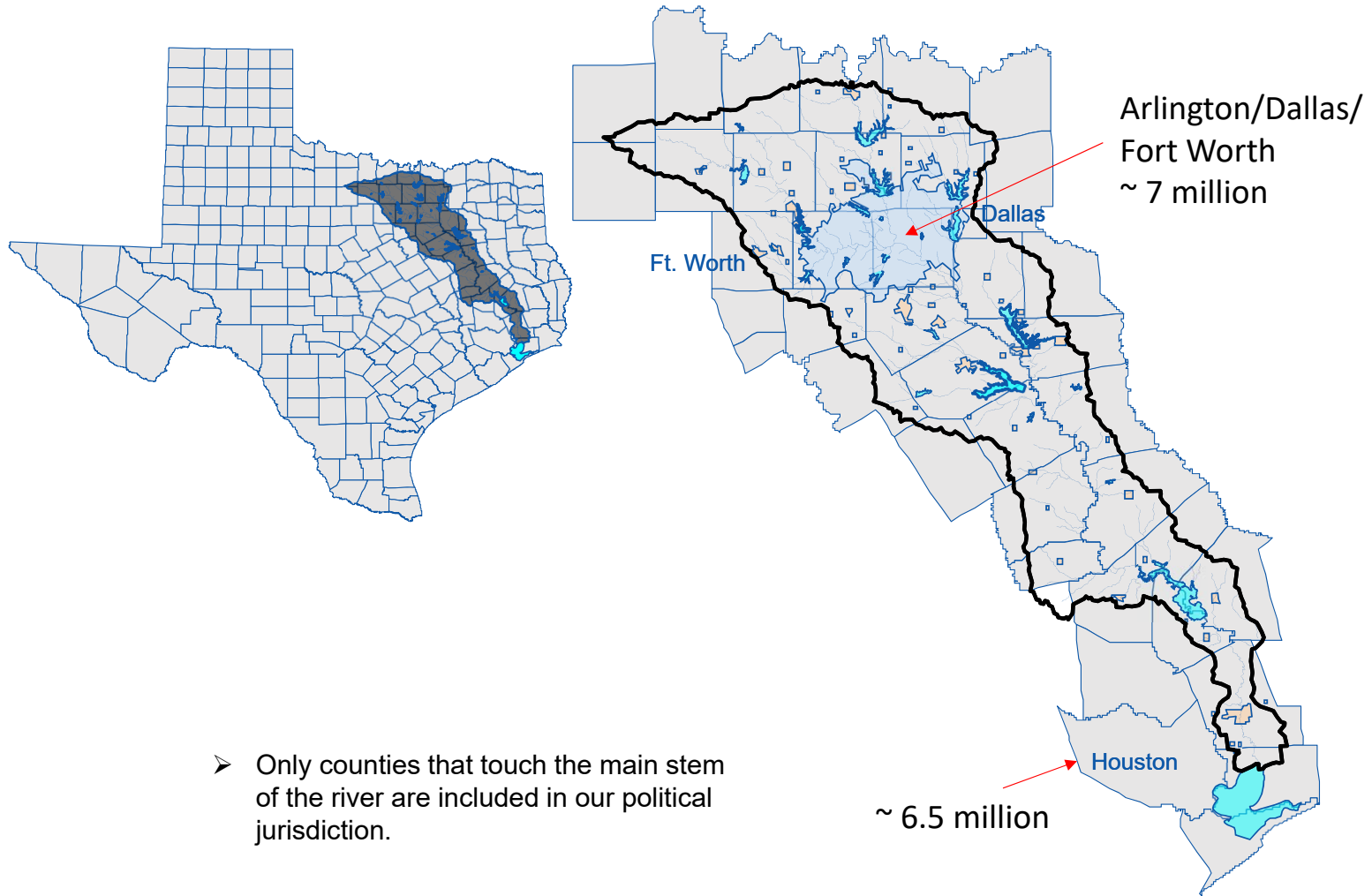
# TRINITY

## Regional Flood Planning

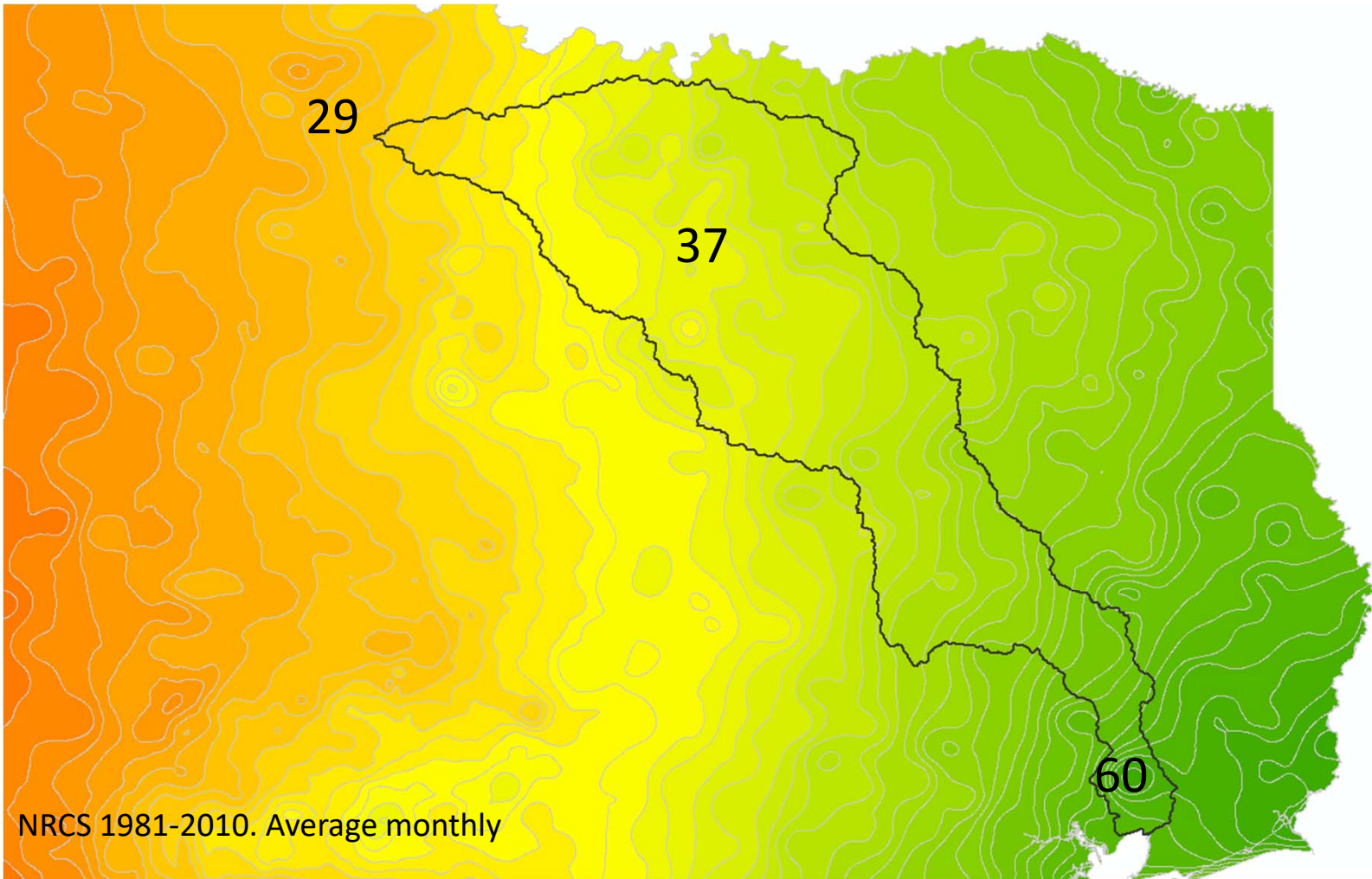
- **Trinity Basin Weather**
- **Water Planning**
- **Flood Planning**

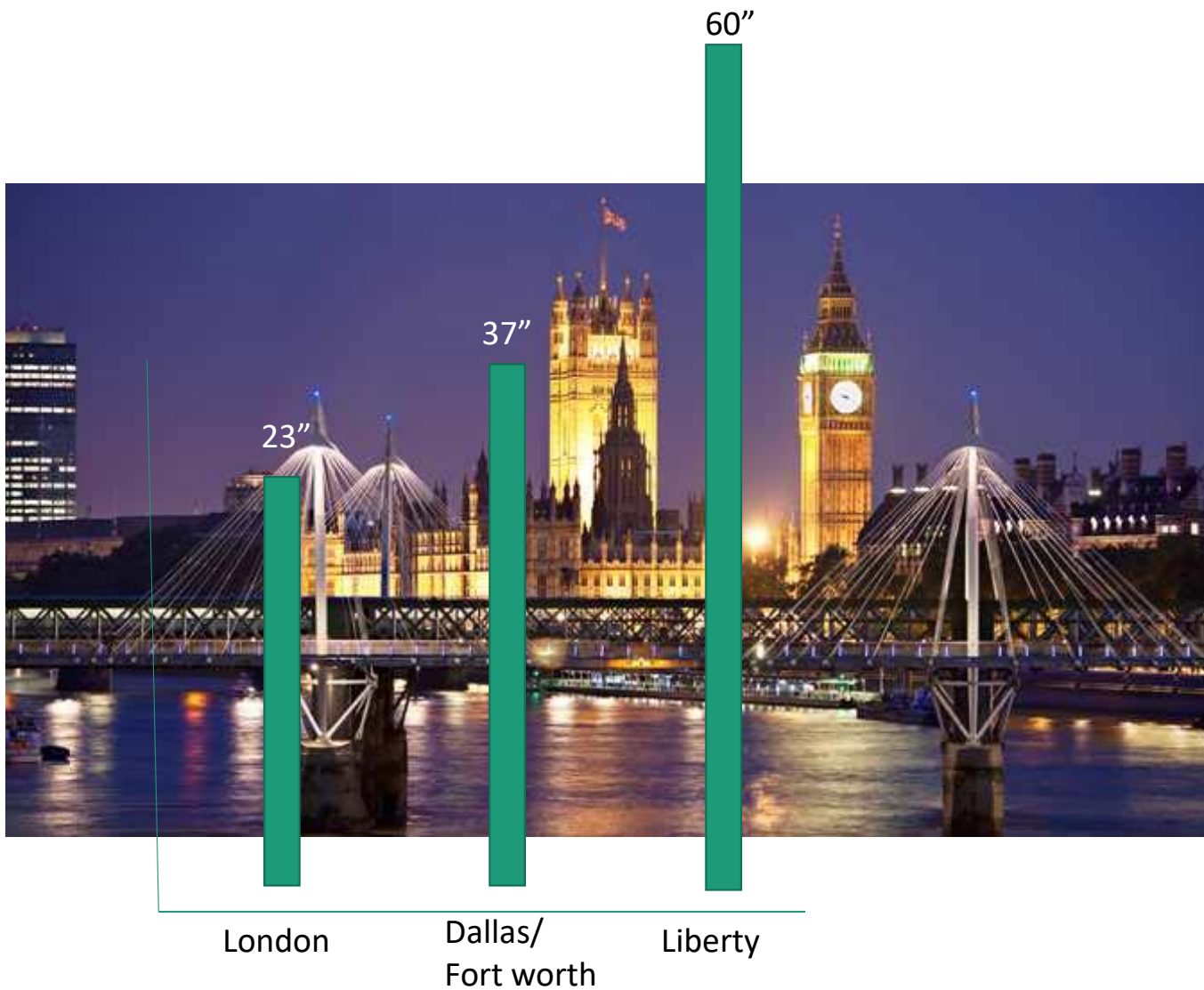


# Trinity River Basin and TRA

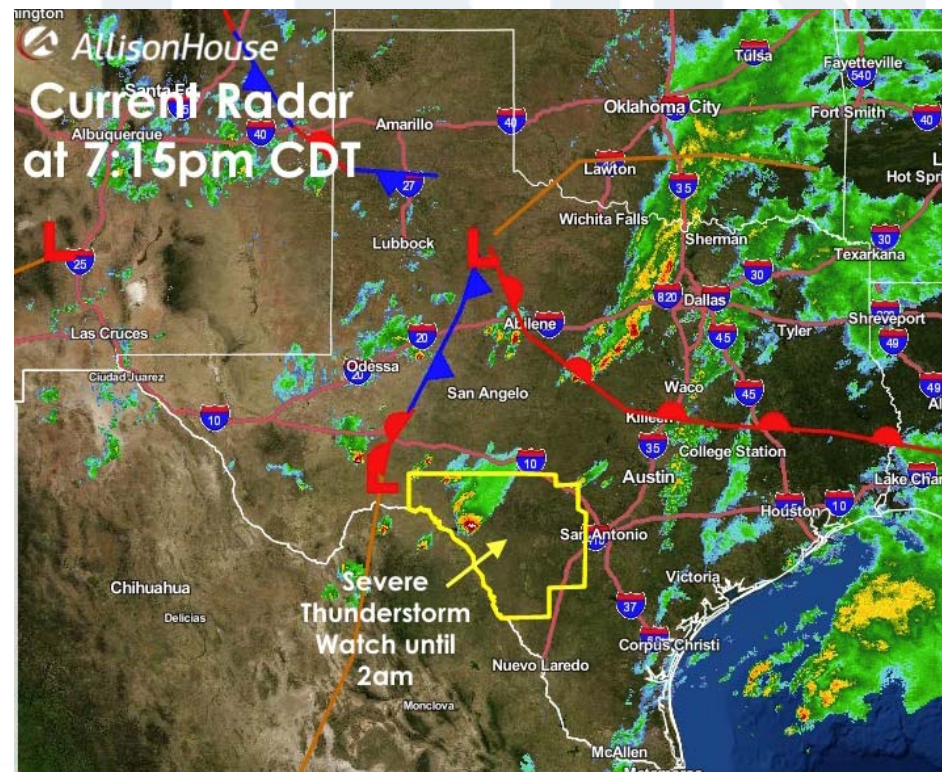


# Rainfall Across the Trinity Basin

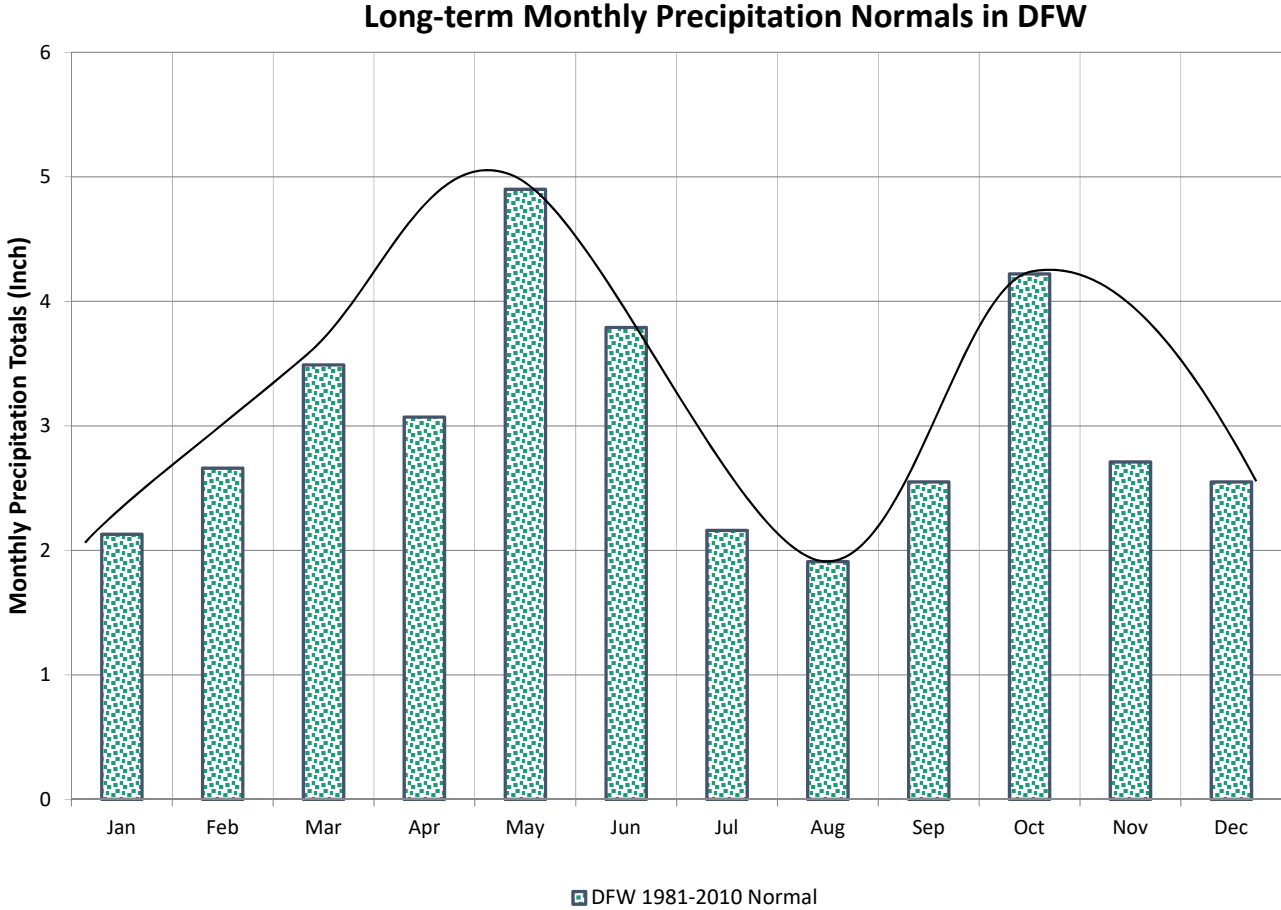




# Precipitation in North Texas

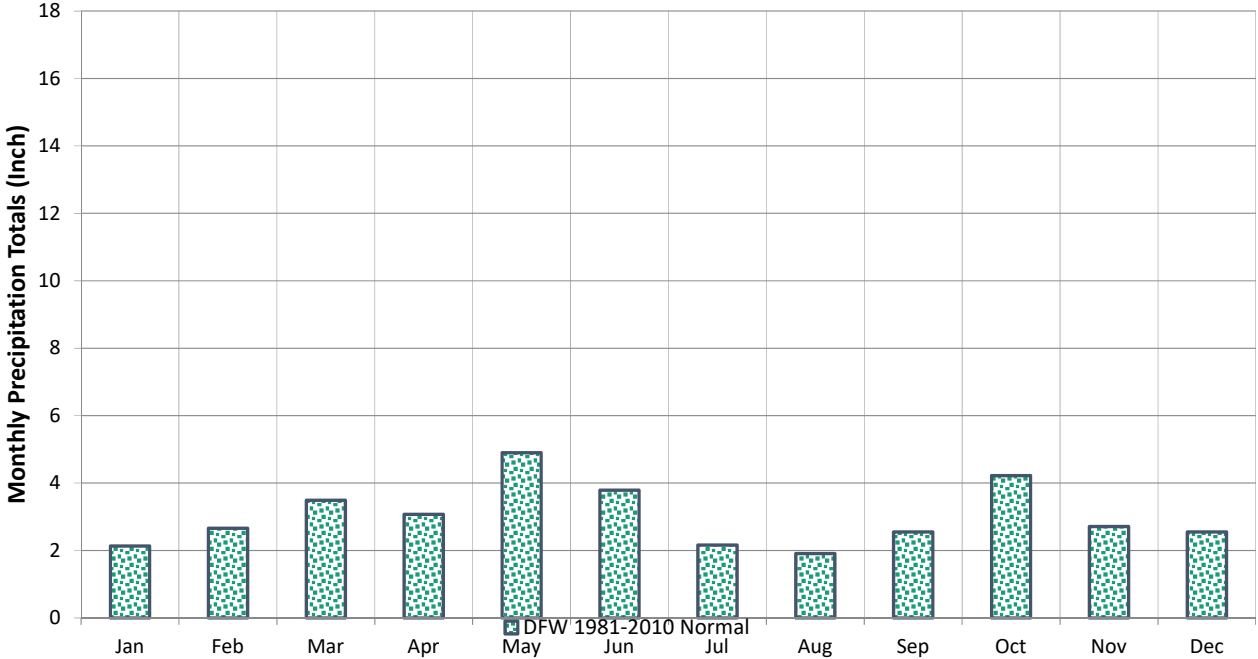


# Precipitation Patterns



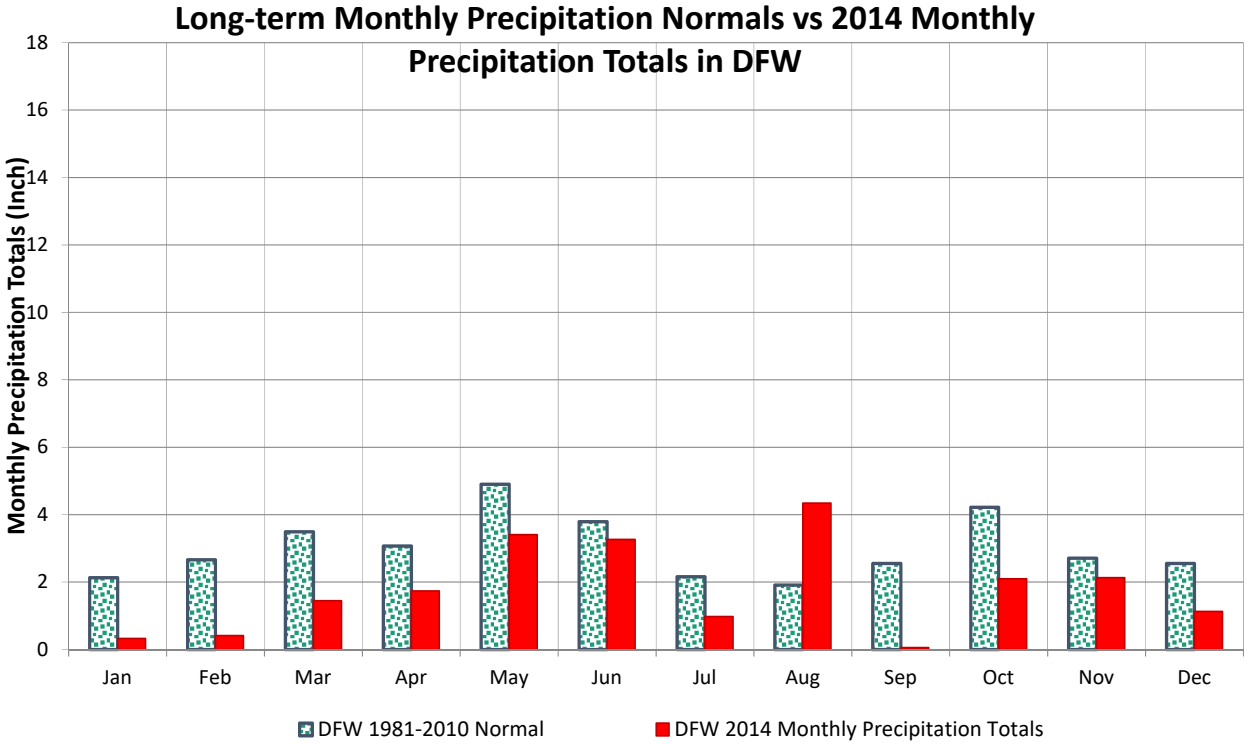
# Precipitation Patterns

Long-term Monthly Precipitation Normals in DFW

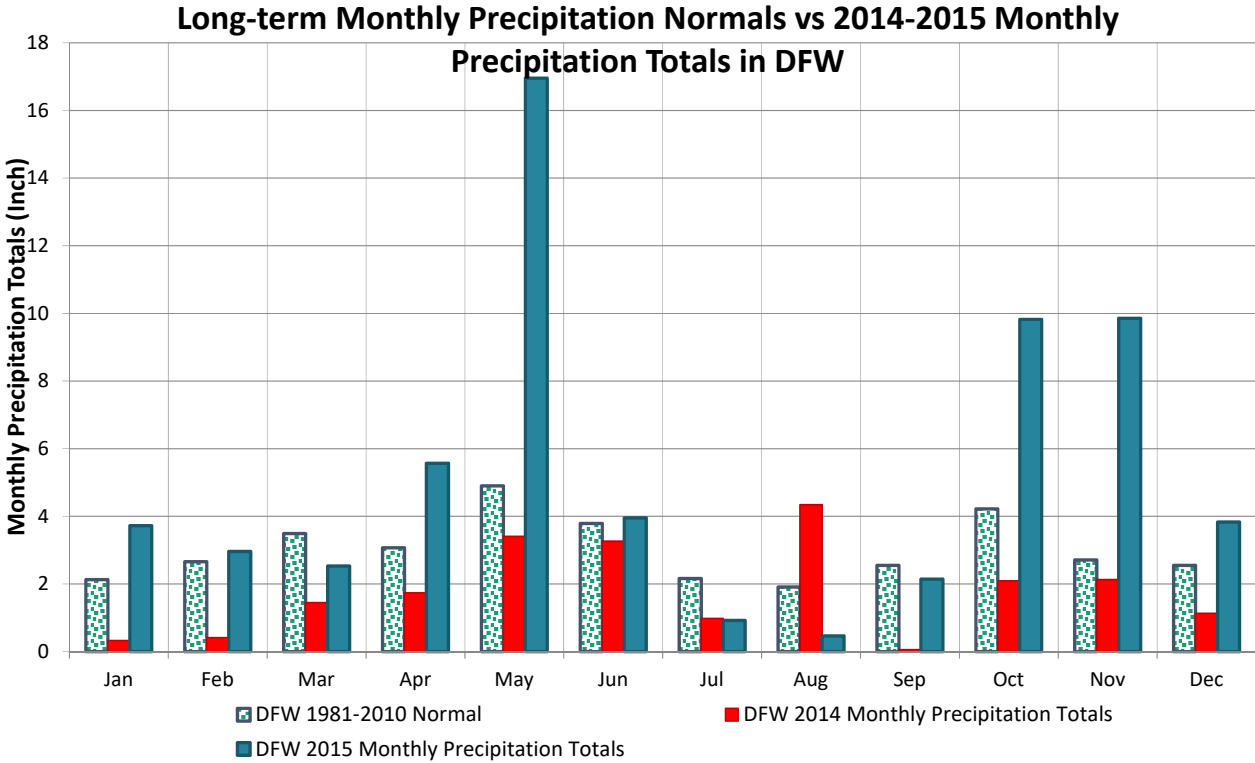




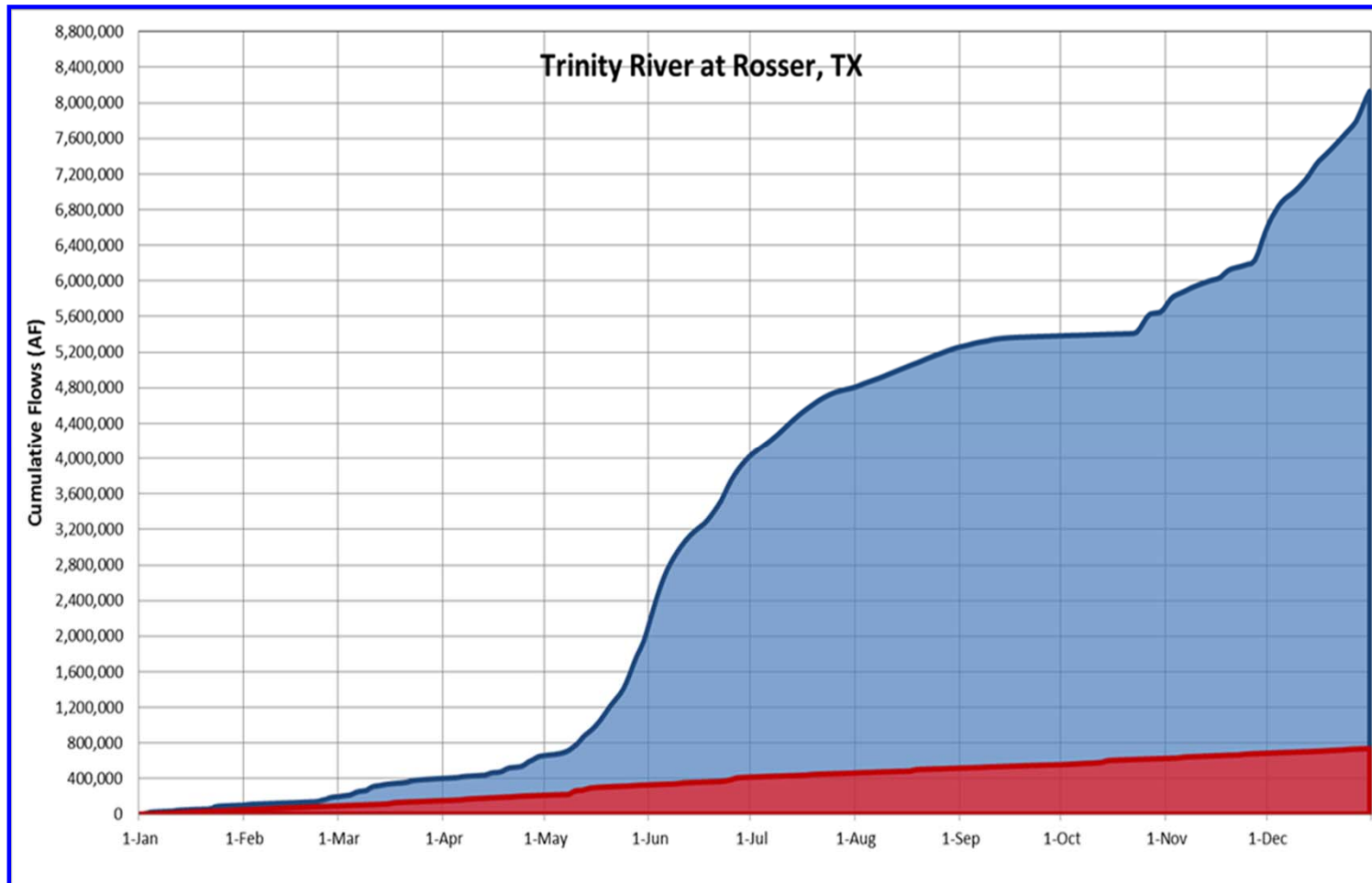
# Precipitation Patterns



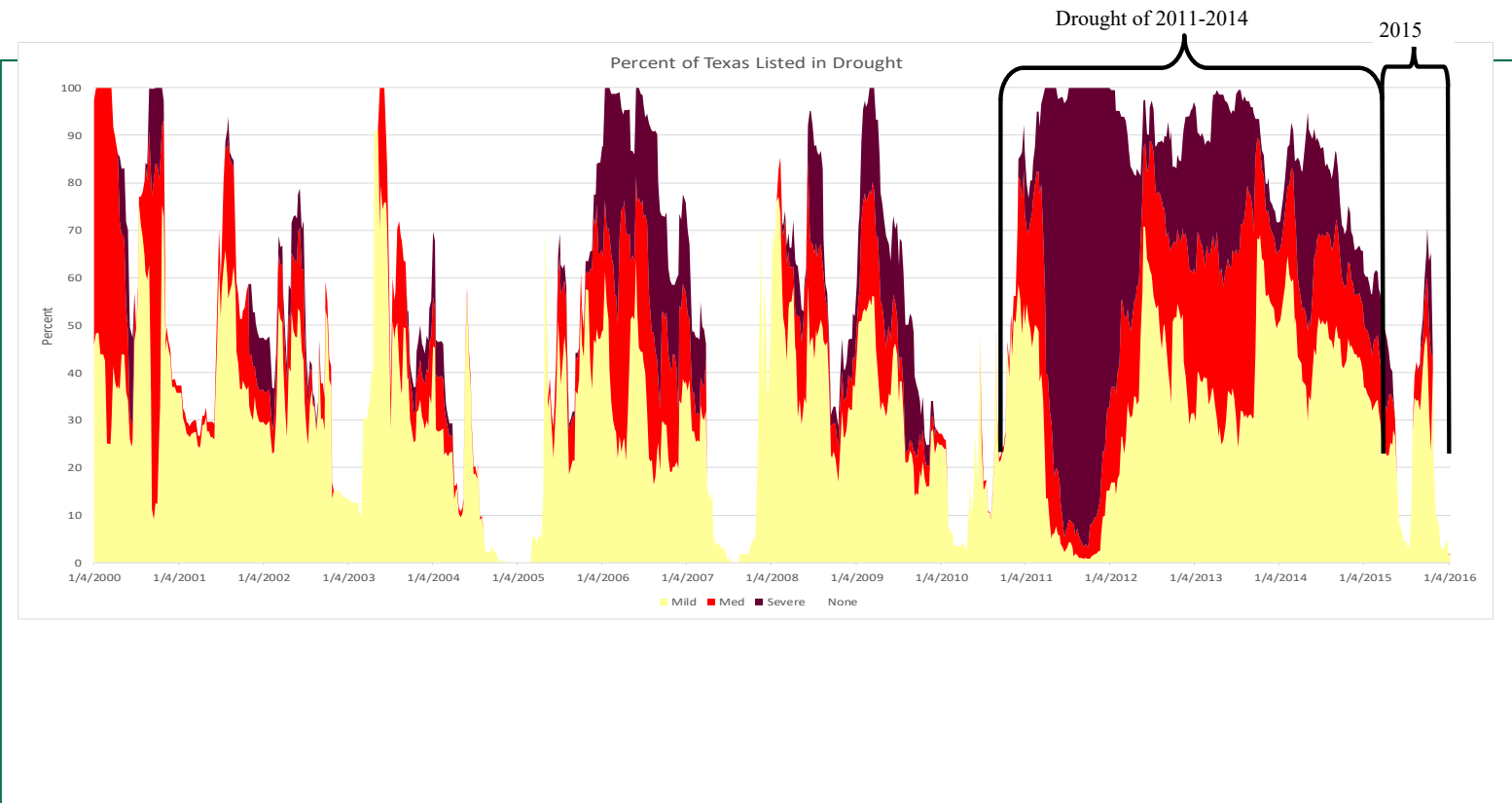
# Precipitation Patterns



# Total Cumulative Flow in Trinity, 2014 v. 2015

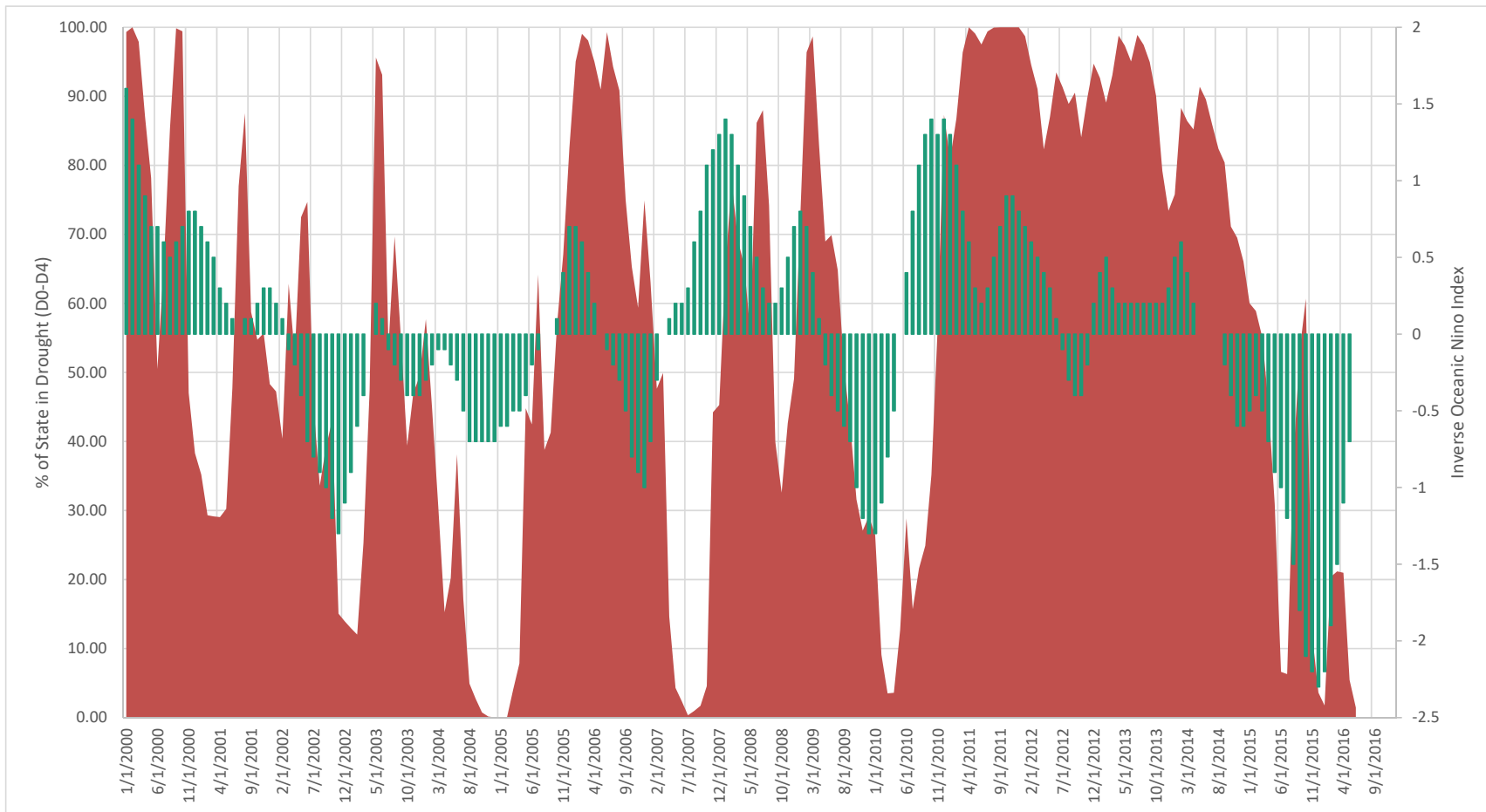


# The Drought and Flooding in Texas is Cyclical

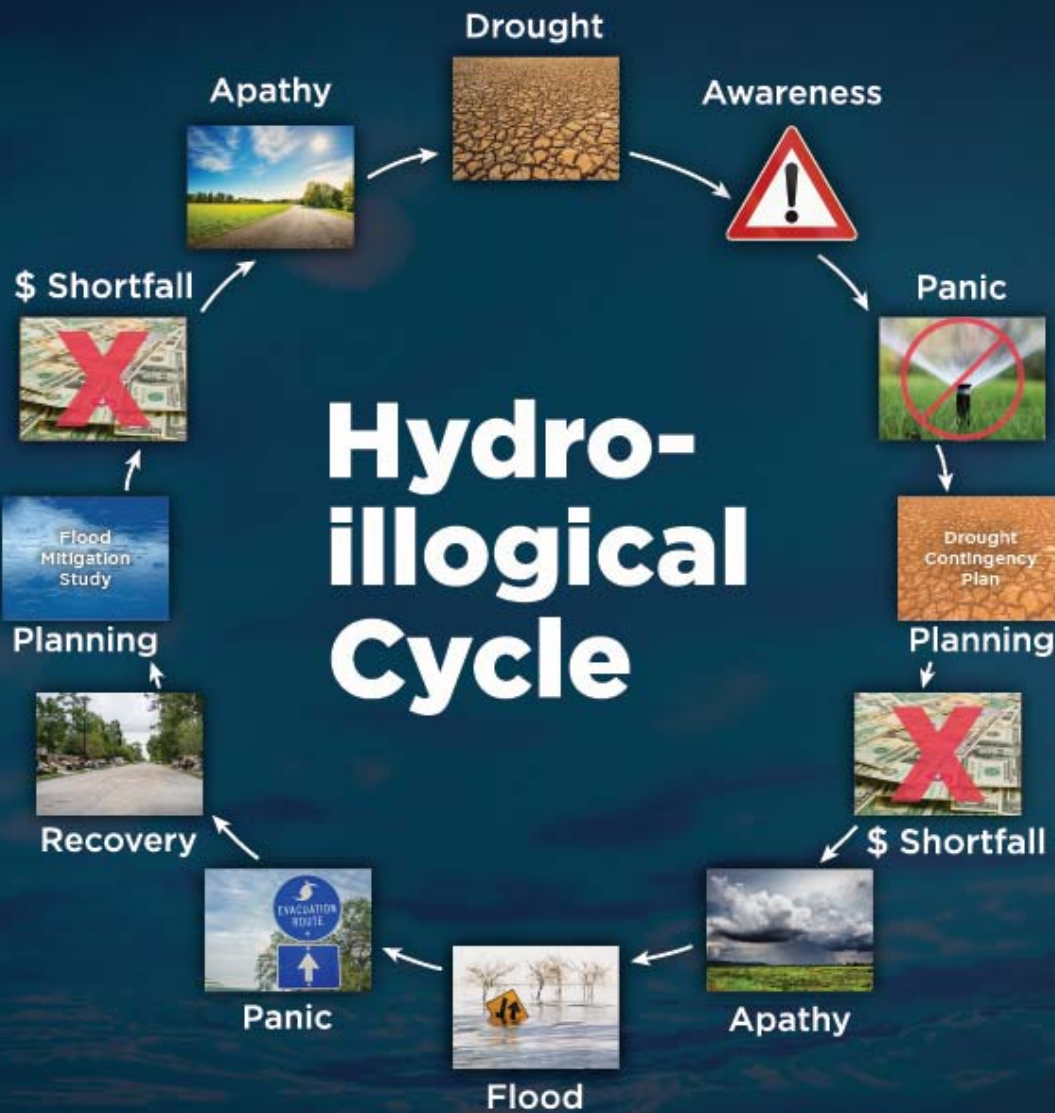


**“Texan’s have seen drought alternate with flood in a disheartening pattern of extremes. In many cases the same areas suffering from acute water shortages are later ravaged by floods...”**  
***1961 State Water Plan***

# Role of ENSO Cycle in Texas' Climate



# Hydro- illogical Cycle



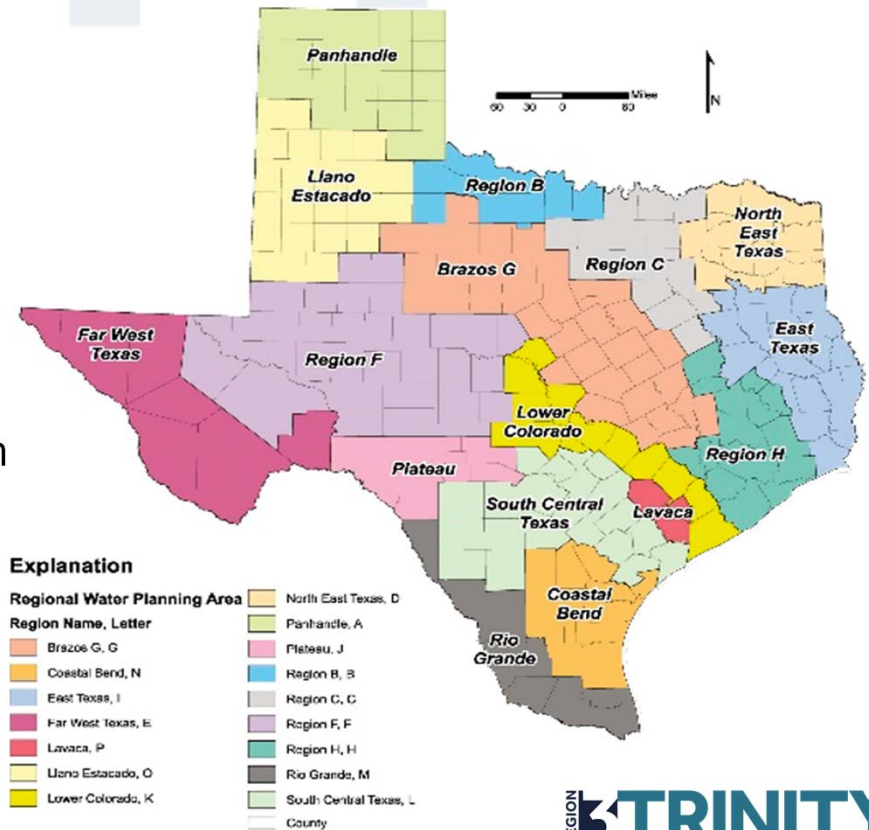
# A brief history of water planning in Texas

- 1961 – first state water plan
  - Top down, 20-yr plan
- In 1997, Legislature passed SB1 overhauled statewide water planning
  - Bottom up, 50-yr plan
- Texas Water Development Board (TWDB) was charged with implementing SB1
- The plans are updated every five years



# TWDB's 16 Regional Water Planning areas

- Each group is tasked with developing regional water plans for their areas
  - Current Demand v. Supply
  - Projected Demand v. Supply
  - Develop strategies to overcome deficits
- The plans cover a rolling 50-year planning horizon





# Regional Water Planning Groups and the Texas Water Development Board

## **RWPG**

- Represent 11 interest categories
- Establish bylaws
- Hold Public Meetings
- Prepare Regional Water Plans every five years

## **TWDB**

- Provide guidance documents
- Develop plan requirements
- Approve Regional Water Plans and incorporate them into a State Water Plan
- Allocate funding

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## State Flood Planning Coordination

- After repeated record-breaking floods, the Texas Legislature established a process to develop the first-ever State Flood Plan in the 2019 Legislative session
- SB 8 charged the TWDB with implementation
- The regional flood planning process is similar in many ways to the regional water planning process



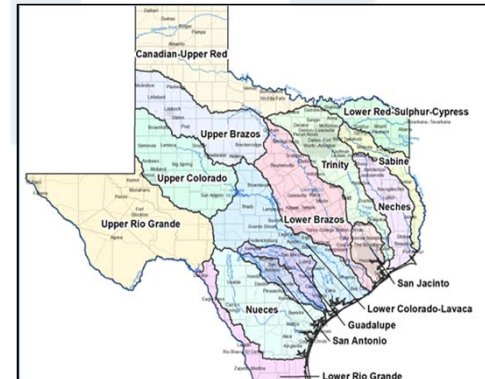
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## First-ever Regional Flood Plan for Texas' Trinity River Basin underway

- The Trinity RFPG is among 15 regional flood planning groups designated in April 2020 to undertake a new regional flood planning process in Texas
- This group's plan will then become part of Texas' first-ever State Flood Plan



## Difference Between RWPG and RFPG:



### Water Planning

- Water supply in 16 regions
  - 50-year planning period
- Restrictive – *must be consistent with the plan to obtain water rights*
- Water projects generate revenue stream

### Flood Planning

- Flood risk in 15 regions
  - 30-year planning period
- Permissive – *being in plan provides access to resources and funding*
- Flood control avoids costs but does not generate revenue

# Regional Flood Planning Groups

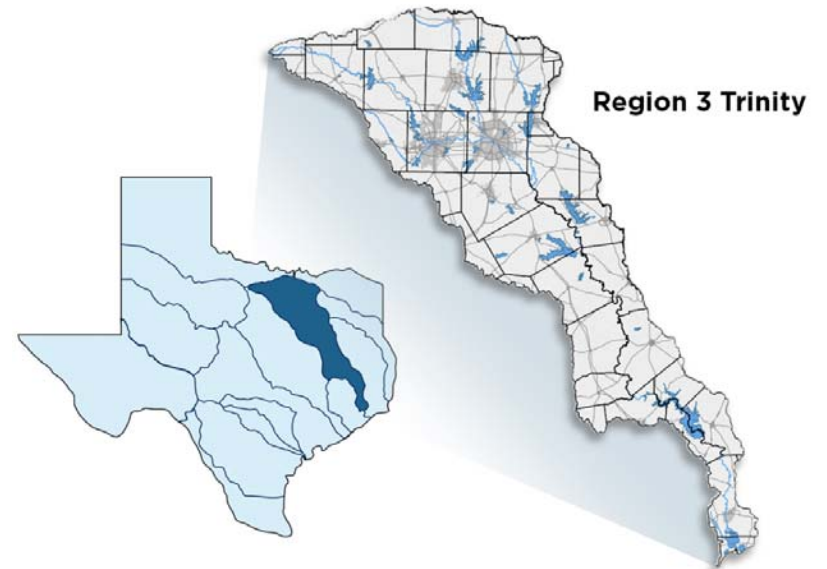
- 15 regions
- 12 interest groups for each region
  - Variety of interest categories
  - Appointments considered geographic representation
- The group selects contract administrators & consultants
- Prepare and submit Regional Flood Plans



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## Region Three, the Trinity River Basin

- The region spans from Cooke County in the north to Chambers County on the Gulf Coast
- 38 counties in the region (some counties are also represented by at least one other RFPG)
- Area covers 17,919 square miles and approximately 15,855 stream miles
- More than 30 major lakes & reservoirs



# The Trinity Regional Flood Planning Group

## Voting members:

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

## Interest group represented:

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



# The Trinity Regional Flood Planning Group



## Non-voting members:

- Brooke Bacuetes
- Richard Bagans
- Rob Barthen
- Steve Bednarz
- Justin Bower
- Ellen Buchanan
- Todd Burrer
- Jerry Cotter
- Diane Howe
- Lonnie Hunt
- Brian Hurtuk
- Edith Marvin
- Kevin McCalla
- Lisa McCracken
- Greg Waller
- Adam Whisenant

## Organization represented:

- General Land Office
- Texas Water Development Board
- Texas Department of Agriculture
- Texas State Soil and Water Conservation Board
- Houston-Galveston Area Council
- Neches Flood Planning Group (liaison)
- Region 6 San Jacinto Flood Planning Group (liaison)
- U.S. Army Corps of Engineers, Fort Worth Rep.
- Federal Emergency Management Agency
- Deep East Texas Council of Governments
- Texas Division of Emergency Management
- North Central Texas Council of Governments
- Texas Commission on Environmental Quality
- U.S. Army Corps of Engineers, Galveston Rep.
- Natl Weather Service / West Gulf River Forecast Center
- Texas Parks and Wildlife Department



## Major Components – Flood Plan

- Current and future flood risks
- Current and future flood infrastructure
- Flood mitigation needs analyses
- Development and selection of flood management evaluations, flood management strategies and flood mitigation projects



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## Major Components – Flood Plan

- Contributions to water supply and impacts on State Water Plan
- Funding recommendations for projects
- Public participation and plan approval



# Data Collection

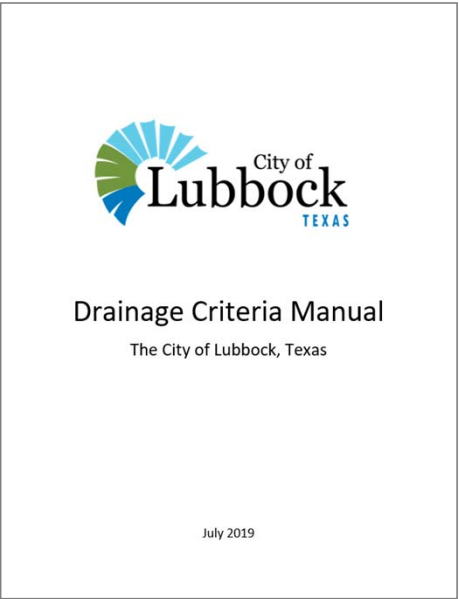
Reported Flooding Incidents



Physical Infrastructure



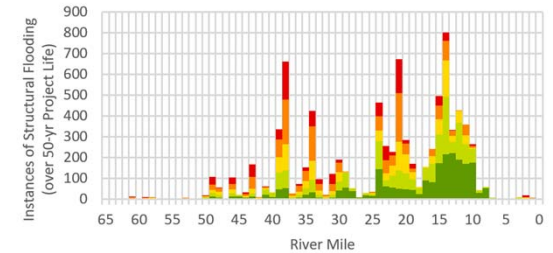
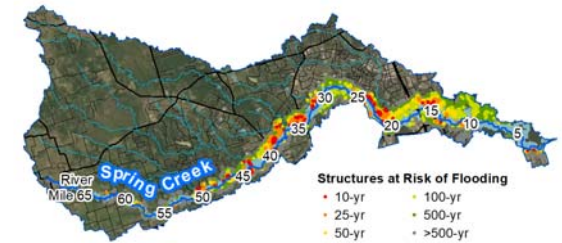
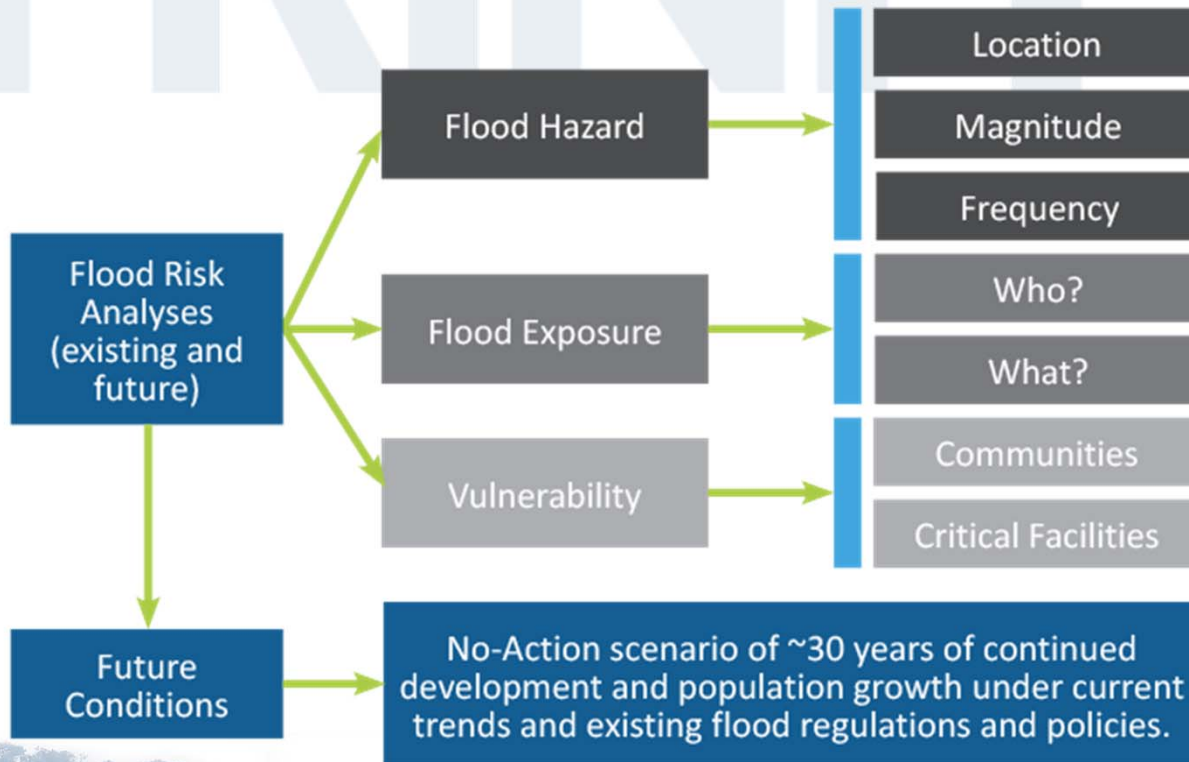
Policy



H&H Models



# Flood Risk Analysis



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## Floodplain Management Practices

- Are current practices increasing flooding risks?
- Recommend region specific floodplain and land use management strategies



# Flood Mitigation and Management Goals

Identify specific goals addressing risk to life and property

Short-term goals  
(10-years)

Long-term goals  
(30-years)

Determine levels of residual risk



# Identification, Assessment and Recommendation of FMEs, FMSs, and FMPs,

## Flood Management Evaluation (FME)

- A proposed flood study of a specific, flood-prone area that is needed in order to assess flood risk and/or determine whether there are potentially feasible FMSs or FMPs.



## Flood Management Strategy (FMS)

- A proposed plan to reduce flood risk or mitigate flood hazards to life or property (may or may not require associated FMPs to be implemented).



## Flood Mitigation Project (FMP)

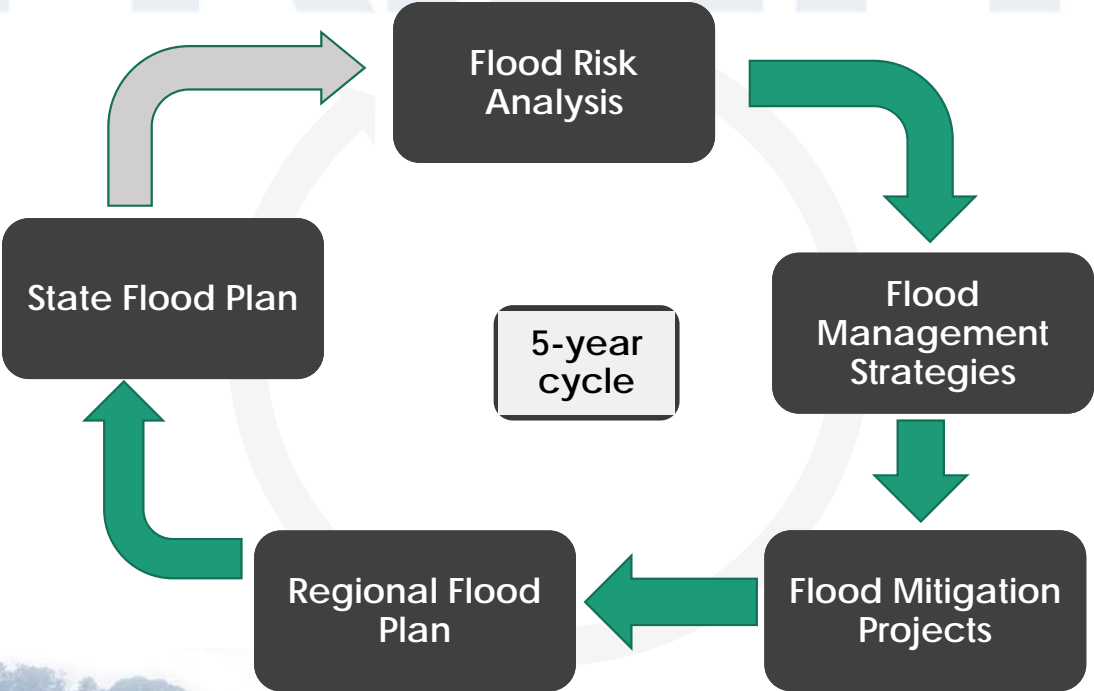
- A proposed project (structural and non-structural) that when implemented will reduce flood risk, mitigate flood hazards to life or property.



Costs Benefit Analyses and Project Prioritization  
Funding Analysis



# Regional Flood Plan Adoption and Approval Process



The initial RFPs shall be delivered on or before January 10, 2023

The initial SFP shall be delivered on or before September 1, 2024





# Next steps and planning milestones

- Aug. 19, 2021, 2 p.m. TRFPG Meeting, Arlington, North Central Texas Council of Governments office, Transportation Room
  - Regular meetings throughout the process
- Jan. 2022, Technical Memo submitted to the TWDB
- Aug. 2022, draft Regional Flood Plan(s) due
  - Includes public and TWDB review/comment
- January 2023, final Regional Flood Plan(s) due to TWDB
- September 2024, final State Flood Plan due to Legislature

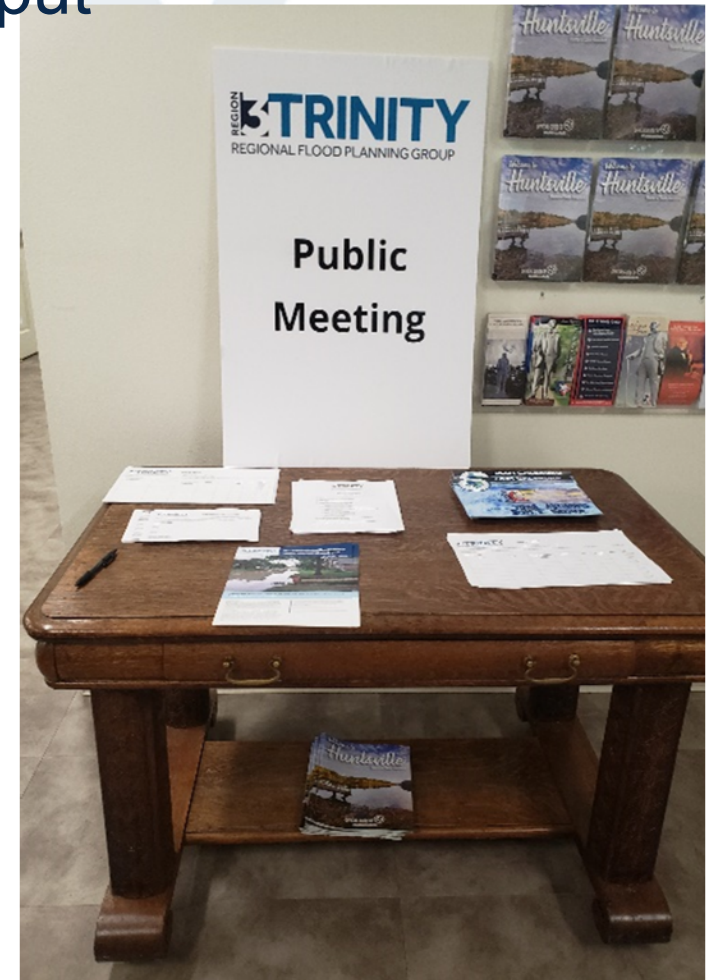


The plan will only be as good as the input provided

## TRFPG public engagement

Public participation opportunities include:

- Submission of public comments via the Trinity RFPG website, [www.trinityrfpg.org](http://www.trinityrfpg.org)
- Comments or questions can also be sent to the Trinity RFPG email address, [info@trinityrfpg.org](mailto:info@trinityrfpg.org)
- Subscription to the Planning Group's future e-updates through the "Subscribe" form on the website
- Participation in Planning Group Public Meetings, info on the website
- Identify flood-prone areas on the interactive map available via the button at the top of the website's Public Comment page



# TRINITY

## What Flood Planning Can Learn from Water Planning

Cooperation  
is Crucial



# TRINITY

## What Flood Planning Can Learn from Water Planning

Embrace  
Adaptive  
Management

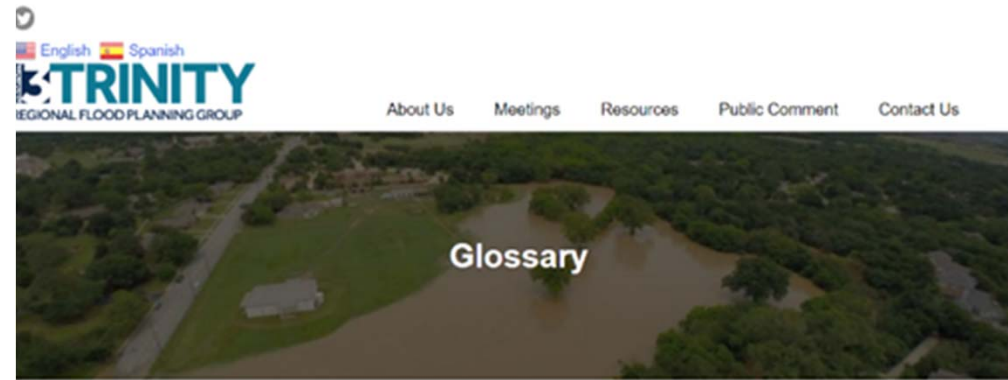


# TRINITY

trinityrfpg.org

The website has valuable resources, including:

- Meeting notifications, agendas, agenda packets/presentations and minutes
- Glossary and acronym decoder
- Planning documents such as the group's bylaws and, when available, draft and final chapters (and ultimately the draft and final plan)
- Spanish translation
- A link to the group's Twitter handle: @TrinityTRFPG
- Other resources



Glossary of Regional Flood Planning Terms and Acronyms

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# Questions?

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