



North Central Texas  
Council of Governments

# Transportation & Stormwater Infrastructure

Technical Advisory Group Meeting

March 6, 2023

# Welcome and Introductions

- Thanks for attending!
- Please introduce yourself in the chat box.
- Please mute your line and unmute your line when you would like to speak.
- We will also watch the [chat](#) box for questions

# Agenda

- I. Introductions
- I. Introduction to the Integrated Transportation and Stormwater Infrastructure Initiative
  - a. Overview and history
  - b. Goals and deliverables
  - c. Update on current progress
- I. Goals of Technical Group
  - a. Data needs for the Project Area communities
  - b. Policy needs related to accomplishing mitigation goals
  - c. Resource challenges associated with mitigation planning
  - d. Discuss and formalize draft goals
- II. Next Steps
  - a. Set recurring meetings
  - b. Form subcommittees

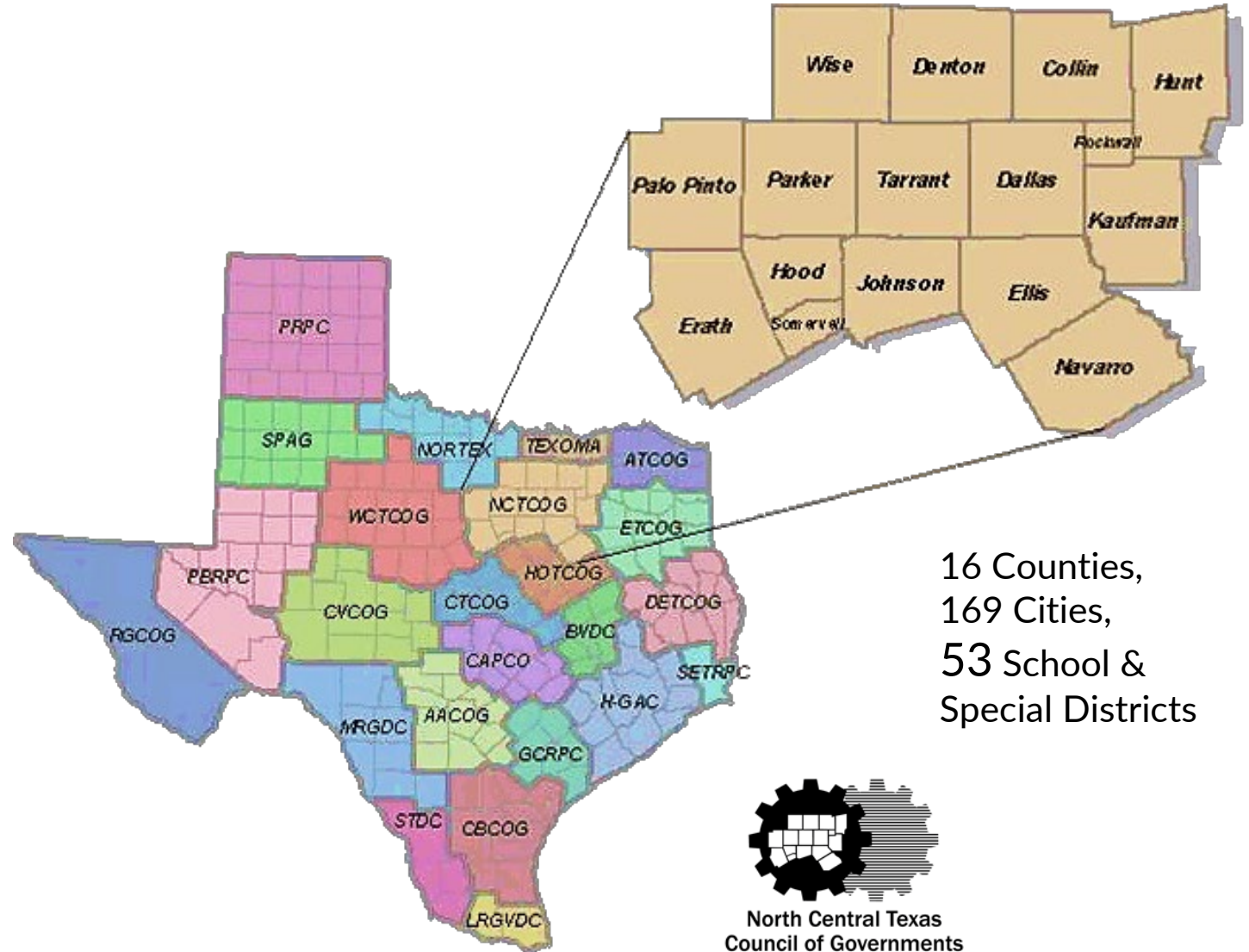
# About NCTCOG

Voluntary association of member governments

A political subdivision of the state  
- non taxing entity

Assist member governments in:

- Planning for common needs
- Cooperating for mutual benefit
- Strengthen their individual and collective power
- Coordinating for sound regional development



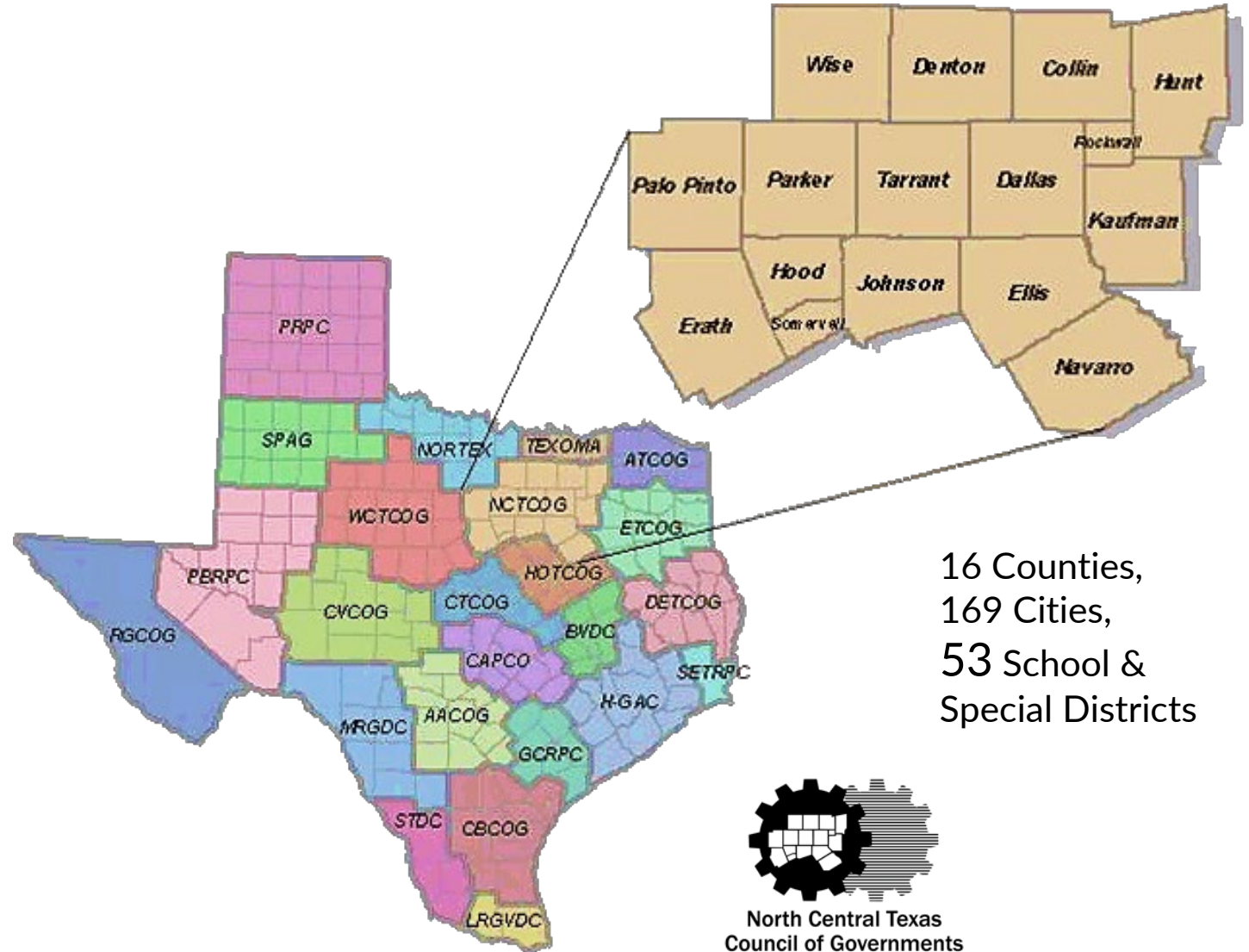
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# Project Team Members

## Funding Partners

- Federal Emergency Management Agency
- Texas Water Development Board
- Texas Department of Transportation
- Federal Highway Administration
- Texas General Land Office



**US Army Corps  
of Engineers®**

TEXAS A&M  
AGRI LIFE

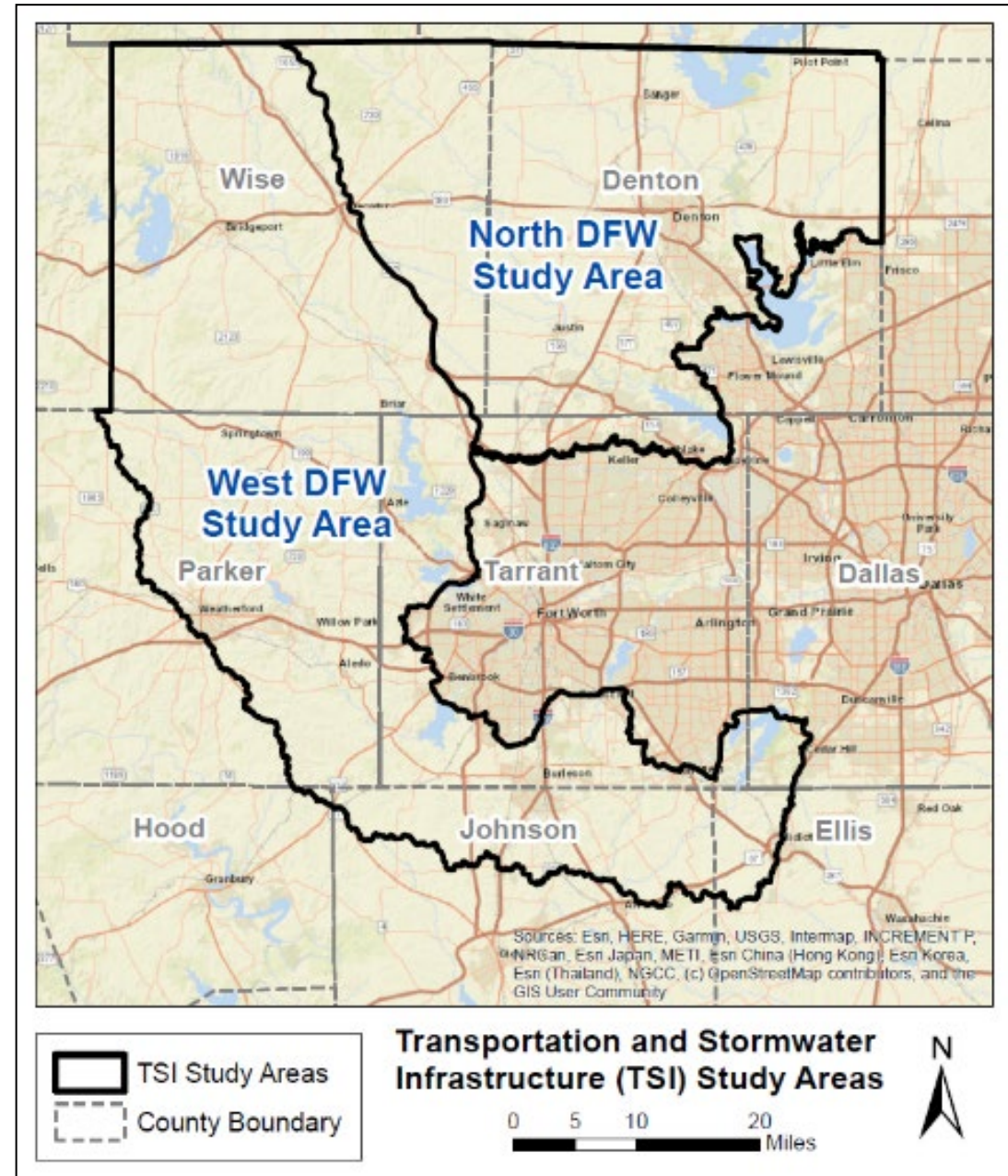


# Why the Region Must Plan for Flooding



# Integrated Transportation and Stormwater Infrastructure (TSI) Initiative

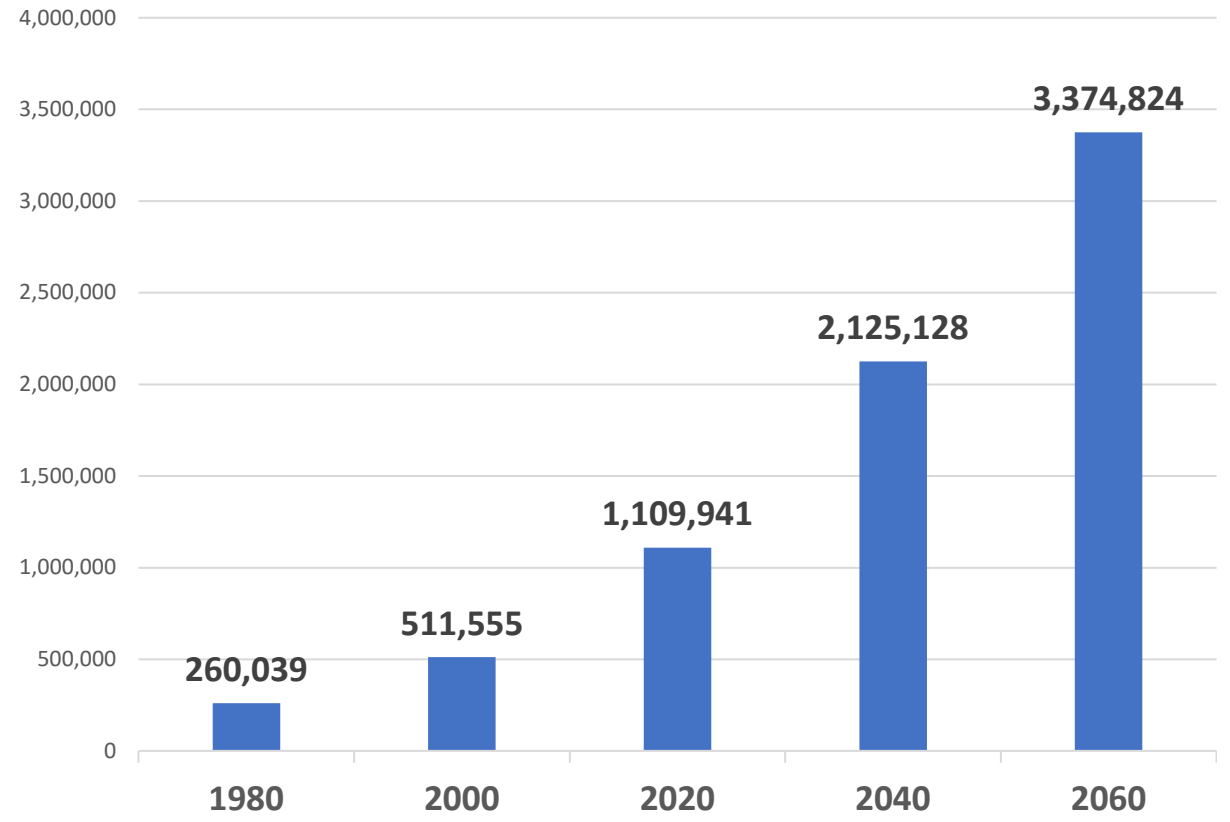
- **Purpose:** Integration of regional planning for transportation, stormwater management, urban development, and environmental features in order to decrease flood risk, minimize overall life cycle costs of infrastructure, and reduce impacts to the natural environment in the rapidly developing study area.
- **Timeline & Budget:** 3 years and \$10 Million
- **Benefits:** Study Area as well as downstream
  - Promotes sound flood risk management decisions
  - Enables actionable local flood risk awareness and resiliency opportunities
  - Attempts to change perceptions of mitigation methods





- 85 cities and portions of 8 counties
- Expected to grow to 2,000,000 residents by 2045 (126% increase from 2020)
- 19% growth in impervious surface from 2006 – 2016
- 60% undeveloped (2015)
- The DFW area can experience extreme precipitation events
- The region transitions from periods of drought to wet periods
- These events exceed infrastructure and neighborhood design levels

### Study Area Household Population Increase



Sources:

- 2000 & 2020 - NCTCOG using US Census data normalized to 2010 geographies
  - 2040 & 2060 - NCTCOG with 2040 controlled to Perryman county control totals and 2060 using a regional control total without feedback loops
- \*Excludes group quarters (dormitories, senior living facilities, prisons, and other non-household institutional living facilities)



# City of Newark

- County: Wise County
- Land Area (mi<sup>2</sup>): 0.9 sq mi
- Density (mi<sup>2</sup>): 1,255.20/sq mi
- Population: 1,123

(Source:  
<https://worldpopulationreview.com/us-cities/newark-tx-population>)



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# Goals and Outcomes

1. Proactive Planning
2. Reduce Flooding
3. Tools and Resources
4. Local-Scale Innovation
5. Community Roadmap

# Goals and Outcomes

Proactive  
Planning

Reduce  
Flooding

Tools/  
Resources

Local-Scale  
Innovation

Community  
Roadmap

- Reimagine transportation design to integrate stormwater, environmental, and flood reduction benefits
- Protect current and future infrastructure
- Develop model for replication

# Goals and Outcomes

Proactive  
Planning

Reduce  
Flooding

Tools/  
Resources

Local-Scale  
Innovation

Community  
Roadmap

- Reduce flooding downstream of growing upstream communities
- Increase resiliency to flooding disasters
- Inform decision-making
- Integrate stormwater infrastructure with transportation infrastructure

# Goals and Outcomes

Proactive  
Planning

Reduce  
Flooding

Tools/  
Resources

Local-Scale  
Innovation

Community  
Roadmap

- Empower communities to adopt higher floodplain management standards
- Develop GIS-based tools and resources

# Goals and Outcomes

Proactive  
Planning

Reduce  
Flooding

Tools/  
Resources

Local-Scale  
Innovation

Community  
Roadmap

- Enhance Trinity River Watershed Hydrology Assessment
- Enhance existing hydraulic models such as BLE
- Emergency management modeling tool
- Optimization study for drainage/flood control structures



# Goals and Outcomes

Proactive  
Planning

Reduce  
Flooding

Tools/  
Resources

Local-Scale  
Innovation

Community  
Roadmap

- Produce planning-level design for transportation, stormwater detention, and environmental benefits
- Integrate these layers to identify what needs to be built and achieved
- Establish ways to fund planned infrastructure

# Goals of the TSI Technical Advisory Group

- Use technical and local knowledge to provide policy guidance and recommendations that should be developed or updated to the project team.
- Provide technical input to identify gaps in the existing future planning landscape and share ideas of innovation.
- Give feedback on data and modeling needs for the study area.
- Provide guidance that helps project team produce products that benefit the intended communities and stakeholders.
- Act as a link between project team and community leadership.
- Support and represent the interests of stakeholders within a larger context of flood mitigation.
- Advocate for TSI support in local communities and increase the projects visibility, both internally and externally.
- Provide advice on overall approach best practices, lessons learned that will reduce the impact of flooding.

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# Contacts

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