



integrating **Transportation & Stormwater Infrastructure**



CONTEXT

Recent flood events in Texas have highlighted the need for more comprehensive stormwater planning. This is important in the upstream portions of the Trinity watershed, where the population is expected to grow significantly.

PROJECT PURPOSE

Proactively integrate regional stormwater management, urban development, transportation, and environmental planning in the face of rapid development, resulting in a transferable 'roadmap' for addressing risk awareness and resiliency.

IMPORTANCE

To learn from past mistakes that have resulted in flooded roadways, neighborhoods, and critical infrastructure, and to assist communities with an improved approach to efficiently minimize these impacts before they occur.

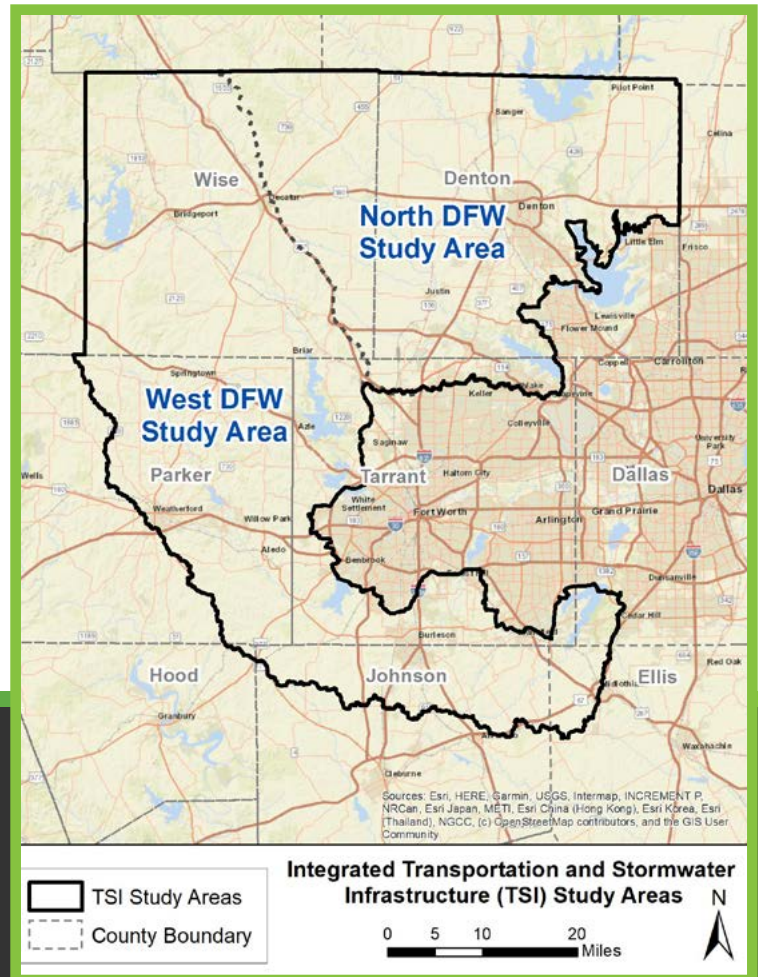
About the Project

The North Central Texas Council of Governments (NCTCOG) and the United States Army Corps of Engineers (USACE), along with several other key partners, are collaborating on the Upper Trinity River Basin Integrated Transportation and Stormwater Infrastructure (TSI) project to address the long-term planning needs of communities in North Central Texas. This multi-year effort in these North and West DFW study areas will include transferable TSI plans to aid communities in identifying projects and policies that:

- Address vulnerable and critical infrastructure assets.
- Reduce flood risk.
- Minimize overall lifecycle costs.
- Provide environmental and ecosystem benefits to accommodate future population growth.
- Respond to changing storm frequency, duration, and intensity.

Project Area Facts

- 85 cities and portions of 8 counties
- 60% undeveloped (2015)
- 19% growth in impervious surface from 2006 – 2016
- Expected to grow to 2,000,000 residents by 2045 (126% increase from 2020)



LEARN MORE AT WWW.NCTCOG.ORG/TSI

How Will We Accomplish This?

RESEARCH, IDENTIFY, AND ANALYZE CRITICAL INFORMATION

- Identify any completed similar studies to document best practices and lessons learned from those efforts
- Create an inventory of existing data gathered for the entire project area



ENGAGE AND PARTNER WITH KEY STAKEHOLDERS

- Establish a Technical Advisory Group
- Host workshops including CHARM (Community Health And Resource Management) workshops, training workshops, and Regional Project Update Workshops with associated processes and documentation
- Provide public information including web site, fact sheets, FAQ's, etc.

RECOMMEND POLICIES

- Develop a GSI and NBS suitability index using geological, social, and environmental parameters
- Prepare reports of land use tools, sustainable development best practices and potential benefits of green infrastructure strategies
- Identify scenario options, strategies, and predictable return on investment (ROI) parameters to adopt for higher protection levels for existing and proposed transportation projects
- List performance measures, evaluation criteria, and benefit-cost ratio methodologies to inform transportation project selection process for future regional transportation plans

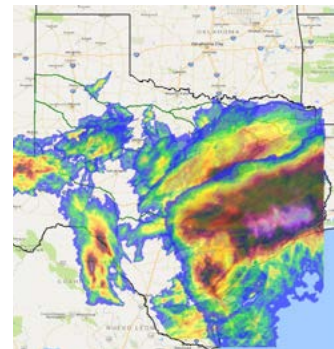
- Report on delivery, management, and maintenance strategies aimed at improving operational capabilities and reducing risk from flooding
- Explore methodologies for addressing future flood risks, mitigation, and equity issues

CREATE MAPPING AND MODELING TOOLS

- Develop a web-based map that identifies both flood prone areas and ideal locations for GSI and NBS applications
- Gather transportation/stormwater infrastructure data sets from existing maps and future plans
- Map future vulnerable areas for design mitigation and develop planning tools for design criteria for existing and future infrastructure investments
- Produce model recommendations for transportation and stormwater integration
- Investigate and add detail to the Trinity River Watershed Hydrology Assessment (WHA) hydrologic model
- Investigate and update FEMA generated BLE hydraulic models

MORE STUDY OUTPUTS

- Investigate real-time flood warning system alternatives, including organizational requirements
- Manage land through strategic planning and development regulations at the city level
- Catalog community floodplain regulations, develop a consistent set of floodplain management regulations, and encourage community adoption
- Document all processes, methods, tools, outreach, and analyses



PARTNER ORGANIZATIONS:



LEARN MORE AT WWW.NCTCOG.ORG/TSI