

LOCAL GOVERNMENT FAQ

What is the integrated Transportation and Stormwater Infrastructure (TSI) study?

This planning study coordinates transportation planning, stormwater management, and environmental planning to mitigate flooding risks and optimize infrastructure while supporting sustainable development. The study will recommend tools and best practices to address community health, safety, and growth. The study is led by the North Central Texas Council of Governments with support from local, state, and federal partner agencies.

How will the study help protect the safety of people and property in my community?

The TSI study will provide models of current and future flood risks and maps of potential locations for stormwater detention and green stormwater infrastructure. Additionally, the study will recommend strategies to improve the resiliency and siting of current and future transportation infrastructure. This will be accomplished using advanced hydrology and hydraulics modeling and future growth scenarios. Additionally, the study will recommend improvements to real-time flood warning systems to ensure communities stay informed during emergencies.

What regulatory tools or guidance will the TSI study produce?

The study will recommend model regulatory tools, including example development code and floodplain management ordinances. In some communities, data produced by the study may be the best available flood hazard information for mitigation and recovery decisions. The study will identify ways local governments can utilize green infrastructure and nature-based solutions in development and planning processes. The study will provide guidance on integrating transportation and stormwater infrastructure considering lifecycle costs. Benefit-cost analyses will document the benefits of green stormwater infrastructure and nature-based solutions.

What recommendations from the study will benefit my community?

Communities can utilize TSI maps and models and adopt example development code and example floodplain management ordinances. They can consider future flood risk and lifecycle costs when siting new transportation infrastructure or reconstructing existing infrastructure. Benefit-cost analyses can be used when considering green stormwater infrastructure and nature-based solutions. Communities can implement recommended strategies to improve real-time flood warning systems.

KEY TERMS

Community:

A local government or political entity that adopts and enforces ordinances, orders, or regulations applicable to the area under its jurisdiction.

Flood Warning Systems:

Systems that provide real-time data and alerts regarding flood risks. They are designed to monitor flood events, enabling communities to take timely actions to protect lives and property.

Green Stormwater Infrastructure:

Vegetation and soil systems that have been engineered to improve urban flood management and water quality by mimicking natural hydrological processes.

Hydrology:

The study of water in the environment, focusing on its distribution, movement, and properties. It involves understanding how water interacts with the land, atmosphere, and ecosystems, as well as its role in natural processes like precipitation, runoff, infiltration, and groundwater flow.

Hydraulics:

The study of the behavior and movement of water through various systems, focusing on its flow, pressure, and interaction with structures like pipes, channels, and reservoirs. In the TSI study, hydraulics will assess the design and effectiveness of stormwater management systems, flood control measures, and transportation infrastructure, such that they can handle water flow efficiently to mitigate the risk of flooding.

How can my community fund the TSI study's recommendations?

The study will provide a funding strategy toolbox for local governments to access state and federal funding to implement TSI recommendations. Data produced during the study – including flood risk data and economic data such as analyses on cost-benefit, return-on-investment, and lifecycle cost – could be incorporated into funding applications.

How can my community participate in the study?

Your community can schedule a site visit for TSI project partners to discuss your flooding challenges, development, and how the two intersect. To schedule a site visit, email tsi@nctcog.org. Your community also can attend virtual Technical Advisory Group meetings and engage in training workshops on topics such as floodplain management, green infrastructure, and dialogue between upstream and downstream neighbors. View past Technical Advisory Group presentations and training workshops at www.nctcog.org/tsi. Annual project update workshops provide another opportunity to stay up-to-date with progress on the study.

Why should my community participate in the TSI study?

Participating in the study will allow your community to help shape study outcomes. Your community's participation is vital to the success of the study because it ensures that local data, priorities, and needs are integrated into the planning process. This local knowledge will lead to effective strategies, tools, and recommendations tailored to communities' specific circumstances. Your participation can benefit all TSI communities' efforts to secure funding, improve resilience, and ensure long-term success in addressing flooding and development challenges.

Low-Impact Development:

A set of sustainable land development practices that minimize the impact of development by promoting infiltration, evapotranspiration, and the use of vegetation to manage stormwater runoff, reduce pollution, and improve water quality.

Nature-Based Solutions:

Strategies that use natural systems or processes, such as restored wetlands or enhanced riparian buffers, to address environmental challenges that are broader than those addressed by green stormwater infrastructure.

Stormwater Management:

The use of green infrastructure, detention ponds, permeable surfaces, and drainage systems to manage the runoff of rainwater or melted snow to prevent flooding, water pollution, and erosion.

Stormwater Detention:

The temporary storage of stormwater to control the flow rate and reduce flooding risks. It involves capturing runoff during rainfall events and releasing it gradually.



FUNDING PARTNERS

Texas General Land Office/U.S. Department of Housing and Urban Development

Texas Water Development Board

Texas Department of Transportation/Federal Highway Administration

Federal Emergency Management Agency