

Research Project Title

SPR2013-15 Integration of Resilience into TDOT Agency Practices: Phase III

Purpose of the Project

TDOT is in the process of completing an extreme weather vulnerability assessment that includes consideration of all major transportation infrastructure located within the state. This study has enabled the agency to gain considerable knowledge regarding the resilience of the state's overall transportation system to current and anticipated extreme weather events. Having recognized the effect of extreme weather on transportation resilience within the state, an important next step is for TDOT to institutionalize this knowledge and experience by facilitating the integration of resilience into agency decision-making processes and operating procedures.

Scope and Significance

Three specific activities are proposed: 1} formation of an Extreme Weather Resilience Task Force, 2} organization of a series of transportation resilience webinars, and 3} development and operation of a Resilience website to act as a clearinghouse that TDOT and its stakeholders can access to learn more including links to other information sources (e.g., FHWA, TRB, AASHTO).

The process of integration can be impactful on several levels within the TDOT organization. Of particular interest are opportunities to bring extreme weather resilience into agency decision-making involving:

- Selection of capital and operating transportation investments
- Development of the State Transportation Improvement Program (STIP)
- Implementation of maintenance plans and procedures
- Design, construction and repair of roads and bridges
- Selection of materials for use in building roads and bridges
- Hazard mitigation planning and emergency management
- Informing the environmental review process
- Data collection activities to characterize and monitor the condition of vulnerable assets
- Collaboration with MPOs in updates to their Long Range Transportation Plans

Expected Outcomes

The proposed effort is also closely aligned with two recent federal directives: 1) Risk-based Transportation Asset Management Plan (TAMP), and 2) FHWA Order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events).

Through the task work, outcomes from the project will include the task force's role in identifying resilience opportunities and interdependencies, meeting quarterly and developing future actions. The webinars (at least 4 will be held) will assist in the sharing of knowledge among internal and external stakeholders to TDOT as it relates to integrating extreme weather resilience into agency practices. The clearinghouse will be a web page providing updated content on the subject matter both for TDOT and public use. Additionally, a final report will document the integration process for future learning.

Time Period

June 2019 to November 2022



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