

Hillsborough County Transportation Vulnerability Assessment and Adaptation Pilot

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Hillsborough County MPO and its partners are leading a climate change vulnerability assessment and adaptation pilot, focused on the transportation sector. This project is sponsored by the Federal Highway Administration (FHWA).

Purpose

Hillsborough County transportation infrastructure and operations have been severely impacted by extreme weather events in recent years, causing damage, deterioration, and significant disruptions to the movement of people and goods. In the future, many of these risks are projected to increase in severity and/or frequency. It is crucial to factor potential future climate conditions into today's management and investment decisions to help cost-effectively manage these risks over the long-term.

Approach

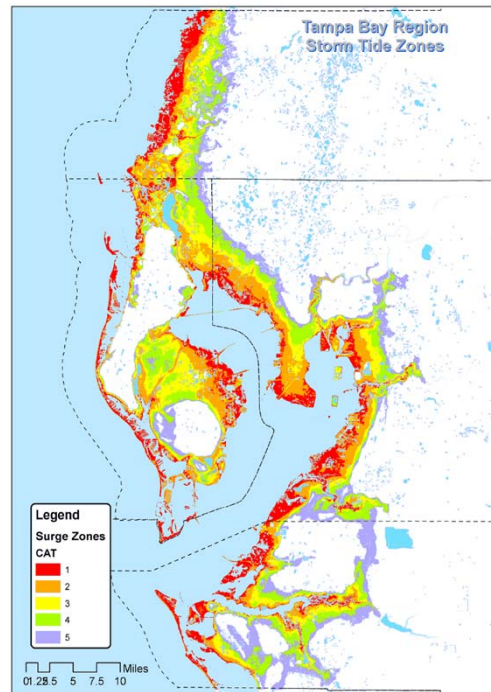
This project will support the incorporation of climate risk and resiliency information into existing transportation planning and investment processes. Specifically, this project will identify potentially vulnerable transportation infrastructure and develop adaptation strategies for a selection of critical assets. These strategies will be incorporated into the MPO's 2040 Long Range Transportation Plan (LRTP).

- **Phase 1:** Collect data, identify potential extreme weather vulnerabilities
- **Phase 2:** Identify critical, vulnerable infrastructure (5-10 high-risk assets) for adaptation
- **Phase 3:** Develop adaptation (risk mitigation) strategies for a selection of high-risk assets
- **Phase 4:** Document findings, recommendations
- **Knowledge Exchange:** Partners and stakeholder involvement is crucial to each phase

Sea Level Rise and Storm Surge

Modeling current and estimated future climate stressors is a key part of the transportation vulnerability assessment. The assessment team will consider scenarios of potential sea level rise, storm surge, and inland flooding, focusing on current conditions and projections for analysis periods of 2040 and 2060.

Sea level rise scenarios will be sourced from existing national and regional data (e.g., NOAA, FDOT), to which storm surge projections from models (e.g., SLOSH) and observations (e.g., HOWL) will be added. The potential role of groundwater will also be considered, a technique pioneered by Florida Atlantic University. The potential exposure of critical transportation infrastructure to SLR, storm surge, and groundwater will be evaluated using a Geographic Information System (GIS)



Source: TBRPC Storm Surge Atlas (Vol 7-8, 2010)
www.tbrpc.org/storm/2012/Evac_Guides/Official/Map_section/hi_Guide_2012_FINAL.pdf

Project Partners

Lead Agency:

- Hillsborough County MPO/Planning Commission



Project Sponsor:

- Federal Highway Administration



Project Partners:

- Tampa Bay Regional Planning Commission
- University of South Florida
- Hillsborough County Public Works



Contractors:

- Cambridge Systematics (Lead)
- Florida Atlantic University
- Jacobs Engineering



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Start date: August 2013
Expected completion: Summer 2014