Hillsborough County
Transportation Vulnerability Assessment and Adaptation Pilot

presented to
Local Mitigation Strategy_Worlding Group

presented by
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Today’s Agenda

- Project Overview
- Illustrative Results of the Criticality Screening Process
- Preliminary Vulnerability Assessment
- Selection of Critical/Vulnerable Transportation Assets for Study
Project recap

- Climate change vulnerability assessment and adaptation pilot, focused on the transportation sector.
  - Sponsored by the Federal Highway Administration (competitive grant)

- Led by Hillsborough County MPO/Planning Commission, with:
  - Tampa Bay Regional Planning Commission
  - University of South Florida
  - Hillsborough County Public Works

- Expected completion: Summer 2014
  - Started in August 2013
Scope/Assessment Process

- **Phase 1**: Collect data, identify potential extreme weather vulnerabilities [nearing completion]

- **Phase 2**: Identify critical, vulnerable infrastructure (5-10 high-risk assets) for adaptation [starting today]

- **Phase 3**: Develop adaptation (risk mitigation) strategies for a selection of high-risk assets

- **Phase 4**: Document findings, recommendations, feedback to FHWA
ILLUSTRATIVE RESULTS OF CRITICALITY SCREENING PROCESS
What do we mean by “criticality”

- Facilitates the access of people and goods to significant origins and destinations in your region, community, State, or beyond

- Representative of a common category of transportation facilities in your region
Recap of the Criticality Approach

- **Step 1:** Establish a data-driven foundation for stakeholder decision-making
  » *Especially useful for future scenarios*

- **Step 2:** Using the products of Step 1, facilitate a dialogue among stakeholders (e.g., the LMS_WG) to select critical assets for assessment
  » *Using quantitative and qualitative information*
Step 1: Criticality Screening

- A tool for making more informed decisions
  » *NOT a tool that makes decisions*

- Employs the regional travel demand model to calculate the relative criticality of each link in the roadway network

- Based on the principle that the most important transportation assets connect the most important origins and destinations (O-Ds)
CRITICALITY SCREENING
2040 Critical Facilities

Jurisdiction (Unincorporated Hillsborough County, Tampa, Plant City, Temple Terrace)

HILLSBOROUGH COUNTY CRITICALITY ANALYSIS

HILLSBOROUGH COUNTY CRITICAL TAZS

Legend

2040 Critical TAZs
- Low-Medium
- High
- Very High

DATA SOURCES: Hillsborough County MPO, Cambridge Systematics, Hillsborough County GIS and Florida Geographic Data Library

MAJOR ROADS: See Adopted MPO Long Range Transportation Plan for specific improvements.

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ACCURACY: It is intended that the accuracy of the base map comply with U.S. national map accuracy standards. However, such accuracy is not guaranteed by the Hillsborough County City-County Planning Commission.

This map is for illustrative purposes only for the cities of Tampa, Temple Terrace and Plant City.

Author: Hillsborough County Metropolitan Planning Organization
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PRELIMINARY VULNERABILITY ASSESSMENT (EXPOSURE ANALYSIS)
2040 Sea Level Rise (Low, MHHW)
2040 Sea Level Rise (High, MHHW)
2040 Cat 1 Surge + SLR (High, MHHW)
2060 Cat 1 Surge + SLR (High, MHHW)
2040 Cat 3 Surge + SLR (Low, MHHW)
2040 Cat 3 Surge + SLR (High, MHHW)
2060 Cat 3 surge + SLR (High, MHHW)
Flood Hazard Zones (FHZs)
2040: Cat 1, Low SLR, FHZs
2040: Cat 1, High SLR, FHZs
2040: Cat 3, Low SLR, FHZs
2040: Cat 3, High SLR, FHZs
SELECTION OF CRITICAL/VULNERABLE ASSETS TO STUDY
Vote!

4 Posters (corresponding to previous slides)

1. 2040: Cat 1, Low SLR, FHZs
2. 2040: Cat 1, High SLR, FHZs
3. 2040: Cat 3, Low SLR, FHZs
4. 2040: Cat 3, High SLR, FHZs
NEXT STEPS
Next Steps

- Technical report for Phase 1
- Detailed assessment of critical/vulnerable transportation assets
- Development of risk management strategies (adaptation)
Thank you!

• Questions