

Gulf Coast Study, Phase 2

Impacts of Climate Change and Variability on Transportation Systems & Infrastructure



**FHWA Office of Planning
Environment and Realty**

**SARPC Climate Change Work Group Meeting
August 9, 2011**

Meeting Overview



- **GC2 Project Recap**
 - Gulf Coast Study: Project Purpose and GC2 Team
 - Task-Specific Objectives
 - Project Status, Next Steps
- **Task 2 – Climate Information**
 - Purpose
 - Overview of Subtasks
 - Temperature and Precipitation – Approach, Results
 - Sea-level Rise and Storm Surge – Approach, Results
- **Task 3 – Vulnerability Assessment**
 - Purpose
 - Overview of Proposed Approach
- **Next Steps**



Project Recap

Gulf Coast Study: Purpose



- **Comprehensive assessment of how climate change will affect transportation in the Gulf Coast area**
- **Phase 1 (complete)**
 - Overview of climate change impacts on transportation infrastructure, and general options for addressing these challenges
 - Mobile to Houston, completed 2008
- **Phase 2 (underway)**
 - Seeks to develop:
 - More definitive information about multimodal impacts at the local level in a single MPO
 - Precise tools and guides on how to adapt to climate impacts; determine vulnerability for key links for each mode; assess risk
 - Test in Mobile area, with emphasis on “replicability” in other MPOs

Gulf Coast Study: DOT Partners



- **ICF International**

- Anne Choate, Project manager
- Rawlings Miller, Atmospheric scientist
- Beth Moore, Vulnerability assessment and team coordination
- Harrison Rue, Inter-agency coordination and outreach
- Peter Schultz, Climate scientist

- **Subcontractors**

- Parsons Brinkerhoff
 - Mike Meyer, Deputy project manager
 - Mike Flood, Coordination of engineering experts
- Scott Douglass, et al, South Coast Engineers, ADCIRC modeling
- Arnie Vedlitz, et al, contractors from Texas A&M University
- Mike MacCracken, Climate scientist

- **Interagency Partnership**

- Virginia Burkett, Van Wilson, et al, United States Geological Survey (USGS)

Gulf Coast Study: Task Objectives



- **Task 1: Identify critical transportation assets in Mobile**
- **Task 2: Climate impacts**
 - Develop climate information
 - Assess sensitivity of assets to climate stressors
- **Task 3: Determine vulnerability of critical assets**
 - Perform a qualitative assessment of vulnerability
 - Perform an engineering assessment of the most vulnerable assets
- **Task 4: Develop risk management tool(s)**
- **Task 5: Coordination with planning authorities and the public**
 - Ongoing task throughout project
- **Task 6: Information dissemination and publication**

Project Status



- **Task 1 Criticality Assessment**
 - Complete
 - Final report soon to be posted:
http://www.fhwa.dot.gov/hep/climate/gcs_overview.htm
- **Task 2 Climate Information**
 - Historical/observed climate data
 - Projected temperature, precipitation, runoff—to be completed Sept
 - Projected storm surge and sea-level rise—to be completed Sept
 - Infrastructure Sensitivity Matrix—was completed in May
 - Comprehensive Task 2 report—draft anticipated in Sept
- **Task 3 Vulnerability Assessment**
 - Finalizing approach and conducting initial steps