FEMA R-2
Coastal Flood Study
April 5, 2011 Technical Briefing

Study Overview

A JV of Dewberry, URS, and ESP
RAMPP
Risk Assessment, Mapping, and Planning Partners

New Jersey/New York City Coastal Storm Surge Analysis

- The RAMPP Team
  - Dewberry
  - URS (Gaithersburg & Tallahassee)
  - Ocean Weather
  - Fugro, Wm. Lettis & Assoc, Risk Engineering
  - BAE
  - Drs. R. Dean, D. Slinn

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Fishers Island
Block Island
Gardiners Island
New York
New Jersey
Philadelphia
Hudson Shelf Valley
Toms Canyon
Delaware
Atlantic City Expy
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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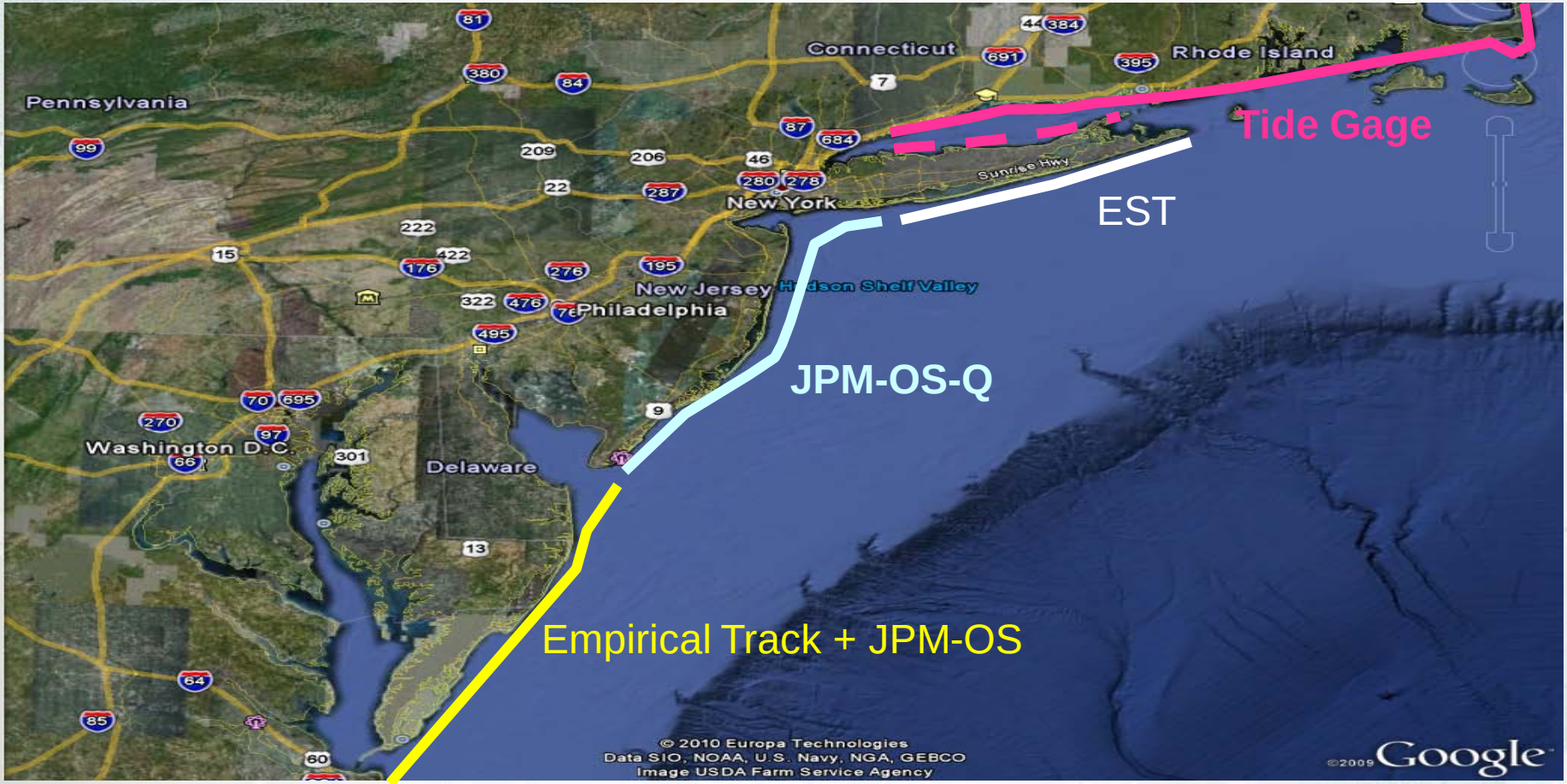
DRAFT – Subject of Change & Revision



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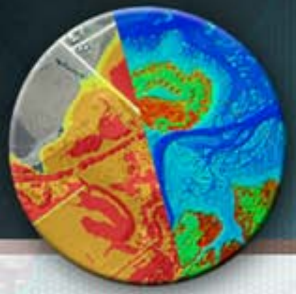
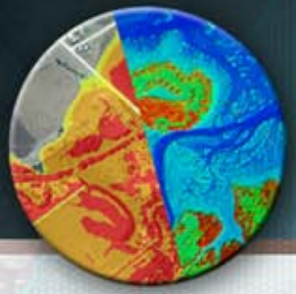


Coastal Surge Analysis Components

- Acquire map data and field reconnaissance
- Develop model inputs for topo/bathy grid, land use, etc.
- Characterize the local storm climate (tropicals & extra-tropicals)
- Develop method of forward projection
- Create surge heights with numerical models
- Analyze recurrence statistics
- Develop 0.2%,1.0%,2.0% & 10.0% surge heights with wave set-up
- WHAFIS overland wave conditions & BFEs

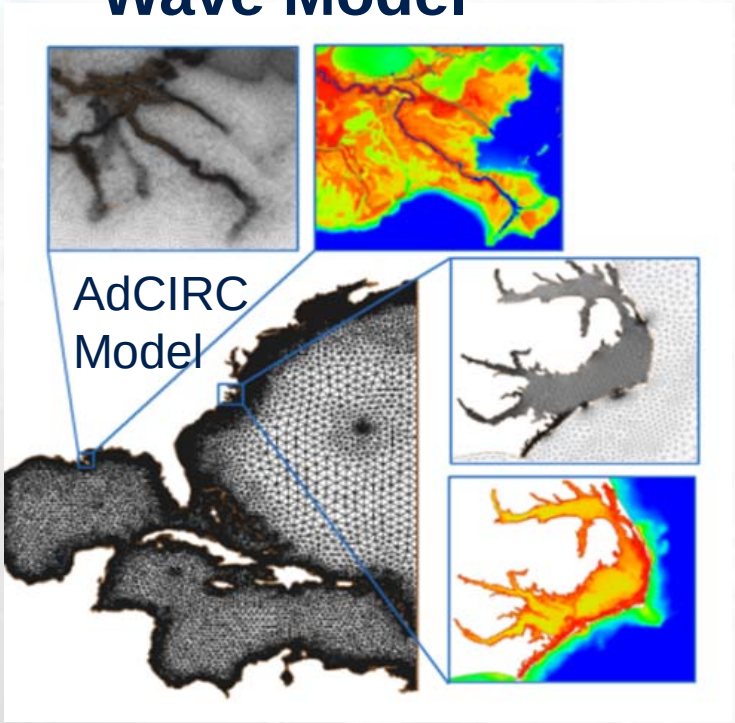


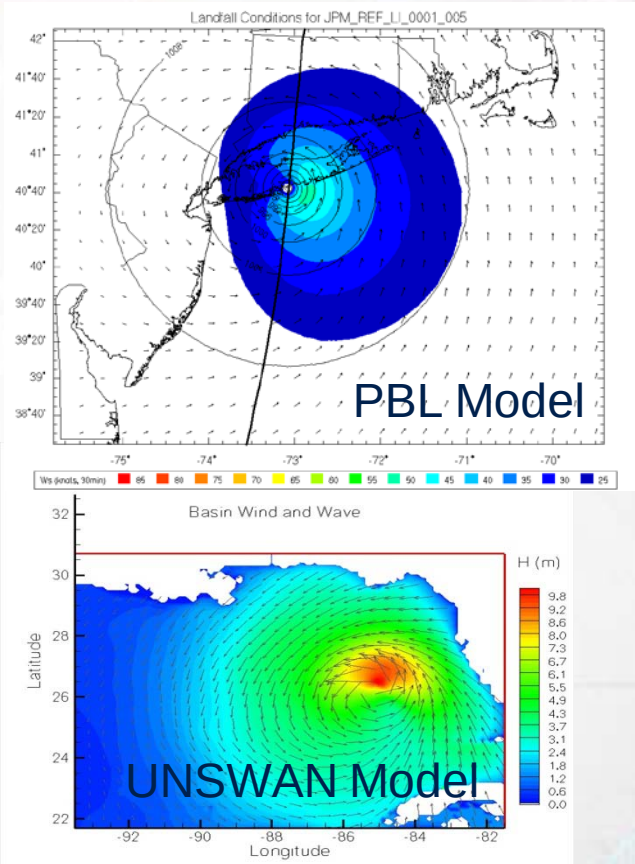
Why Numerical Models ?

- Hurricane surge dimensions not sufficient given long-term tide locations
- Hurricanes & tropical storms are relative infrequent so the record is short
- Flood elevations change with inland propagation
- Coastal sections have different exposures

Numerical Models

OWI PBL Hurricane Model
AdCIRC-UNSWAN Surge & Wave Model





Significant Wave Heights and wind vectors predicted during Hurricane Dennis on the Basin Scale grid at 50 hours into the simulation.

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Questions
&
Discussion