COASTAL HAZARD MODELING

Modeling the Combined Coastal and Inland Hazards from High-Impact Hurricanes

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This project advances modeling capabilities that assess the potential impacts of landfalling hurricanes on critical infrastructure and communities. The primary focus is on hurricanes in the Northeastern United States, combining multiple hazard impacts, including coastal flooding due to storm surge and inland flooding due to rainfall.

The goal is to advance coupled hurricane, coastal ocean circulation/storm surge, wave, and hydrological models in the New England region and transition the new modeling capabilities to the ADCIRC Prediction System[™] (APS[™]).

The projects expands outreach to the Northeast, a region that includes major riverine inflows in addition to coastal flooding. Results from the APS™ will be integrated with information on disaster consequence thresholds for critical facilities such as waste water treatment facilities, seaports, substations, roads and communication facilities. This will allow cognizant agencies to better understand the consequences of coastal and inland flood hazards. ▲



FAST FACTS

- The project will contribute to improving the real-time ADCIRC Prediction System[™] (APS[™]) through transition of the URI hazard impact modeling methodology for critical infrastructure and facilities, and advanced 3D visualization capabilities.
- Main users of the improved model are federal agencies, including the Federal Emergency Management Agency (FEMA) Region I, the US Army Corps of Engineers (USACE), and the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS).
- Additional users include decision-makers at state and municipal levels in New England.

