North Atlantic Coast Comprehensive Study

Study Synopsis
January 2015

U.S. Army Corps of Engineers, National Planning Center for Coastal Storm Risk Management

Schedule Highlights

Feb-March 2013 - Development of scope of analyses

April 2013 - Interagency collaboration on scope of analyses

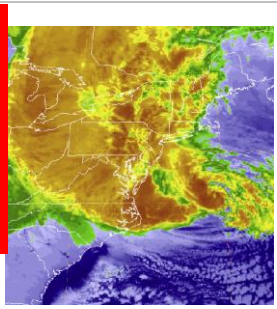
July 2013 – January 2014 – Webinar Collaboration Series (topics include natural & nature based features, modeling, ecosystem goods and services, adaptive management and policy challenges)

Winter/Spring 2014 - Interagency & international validation & collaboration; refinement of draft analyses

January 2015 - Final Report delivered to Congress

February 2015 –Final Webinar Rollout

Final Report
Available January 28, 2015
1pm
www.nad.usace.army.mil/CompStudy



Overview

The goals of the North Atlantic Coast Comprehensive Study authorized under the Disaster Relief Appropriations Act, Public Law 113-2 were to (1) reduce flood risk to vulnerable coastal populations, and (2) promote resilient coastal communities to ensure a sustainable and robust coastal landscape system, considering future sea level rise and climate change scenarios.

The Congressional response to the devastation in the wake of Hurricane Sandy included a mandate to collaborate with federal, state, tribal and local government agencies to regionally address the vulnerability of coastal populations at risk in the U.S. Army Corps of Engineers (USACE) North Atlantic Division (CENAD). The Act provided USACE up to $20 Million ($19 Million after sequestration) to conduct the study. A final report of the study team's analyses was due to Congress in January 2015.

The study identified areas warranting more detailed analysis; however, USACE is not authorized to develop designs or implement such projects at this time. No National Environmental Policy Act documentation was produced as part of this effort.

Interested parties can access the report and additional products related to this effort at http://www.nad.usace.army.mil/CompStudy.

Study Area

Hurricane Sandy caused water levels to rise along the entire east coast of the United States from Florida northward to Maine. The highest storm surges and greatest inundation on land occurred in the states of New Jersey, New York, and Connecticut, especially in and around the New York City metropolitan area. In many of these locations, especially along the coast of central and northern New Jersey, Staten Island, and southward-facing shores of Long Island, New York, the surge was accompanied by powerful, damaging waves.

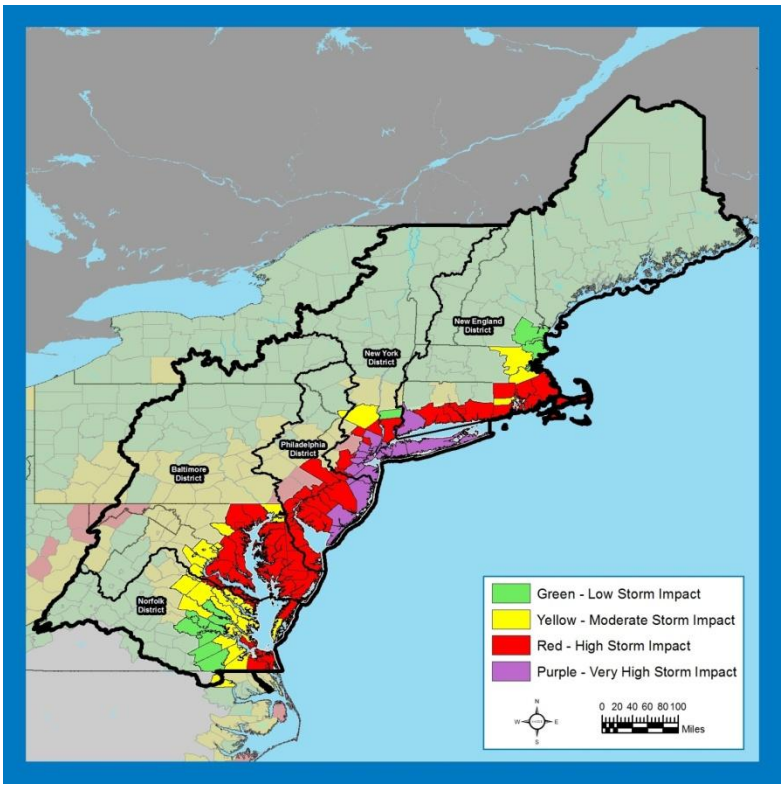
The study area, encompassing approximately 31,200 miles of coastline, included areas:

(1) Within the Civil Works boundary of CENAD,
(2) With vulnerable coastal populations,
(3) Affected by Hurricane Sandy during the October 27-31, 2012 period. "Affected" may include, but is not limited to, areas which received damage or effects of Hurricane Sandy (such as increased flooding, sand deposition, wind damage, erosion, surge, etc.), received Federal disaster declarations, had flood insurance claims, exercised emergency actions, received damage to existing hurricane and storm damage reduction projects, etc.

Products

- Coastal Storm Risk Management Framework with State and District of Columbia Analyses Appendix
- Environmental and Cultural Conditions Report
- Extreme Water Levels Report
- Agency Communications and Collaboration Report
- Conceptual Regional Sediment Budget
- Coastal Program Guide
- Natural and Nature-Based Features Report and Brochures
- GIS Geodatabase
- Institutional & Other Barriers Report
- Storm Surge Modeling Database
- Enhanced Depth-Damage Functions for Coastal Storms
- Measures Inforgraphics
- USFWS Planning Aid Report
- Barrier Island Sea Level Rise Inundation Assessment Report

Study Area Map



Key Analyses and Assumptions

Existing and Post-Sandy Future Conditions were characterized as current risk management projects and features, and socio-economic, environmental, cultural and related conditions. This created the baseline from which future measures were evaluated with regard to managing coastal flood risk and promoting resiliency.

Sea Level Change - The team developed the USACE Low, Intermediate, and High scenarios and NOAA High scenario for the 26 NOAA gage locations across the study area that had measurement records equal to or greater than 40 years. The future relative mean sea level was computed for three time horizons: 2018, 2068, and 2100.

Climate Change - Sea level change was considered as described above; however, the state of the science precluded detailed evaluations of climatology, storm frequency and severity and landfall trends at this time.

Coastal Flood Risk - Risk areas were depicted as areas with significant exposure within FEMA's special flood hazard area 100-year floodplain, the 100-year floodplain +3 feet to account for sea level change, and the worst case, SLOSH model Category 4 maximum of maximums storm event to illustrate residual risk.

Natural & Nature Based Features, Ecosystem Services and Regional Sediment Management – In addition to structural, non-structural, and programmatic measures, the study incorporated the consideration of natural and nature-based features (e.g., barrier islands, wetlands, oyster beds, riparian corridors) that may provide additional services (e.g., erosion control, reduced flooding, surge absorption) to the landscape.