U.S. Army Corps of Engineers

North Atlantic Coast Comprehensive Study

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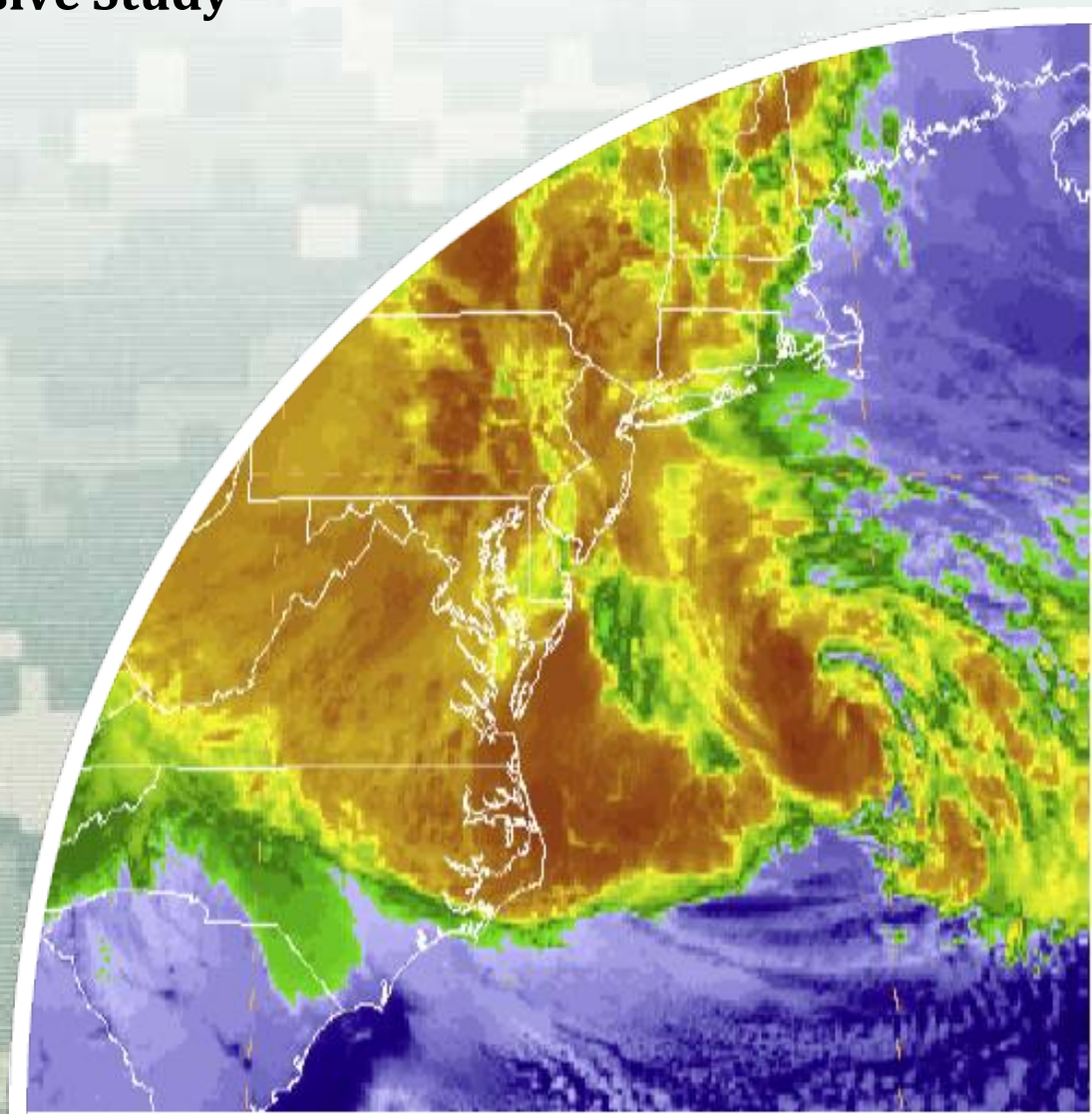
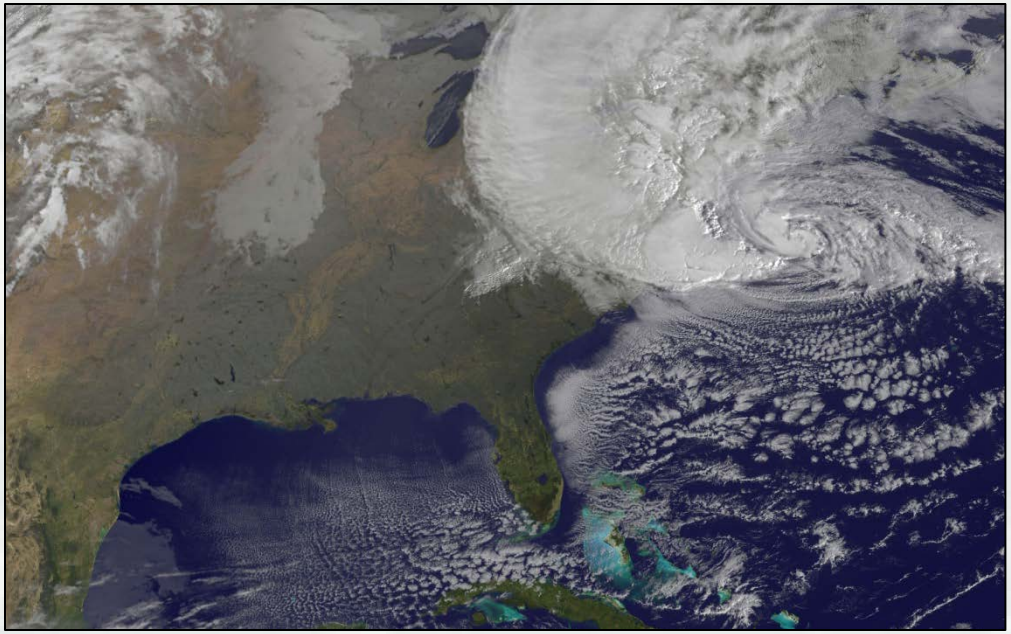
USACE North Atlantic Division
25 February 2014



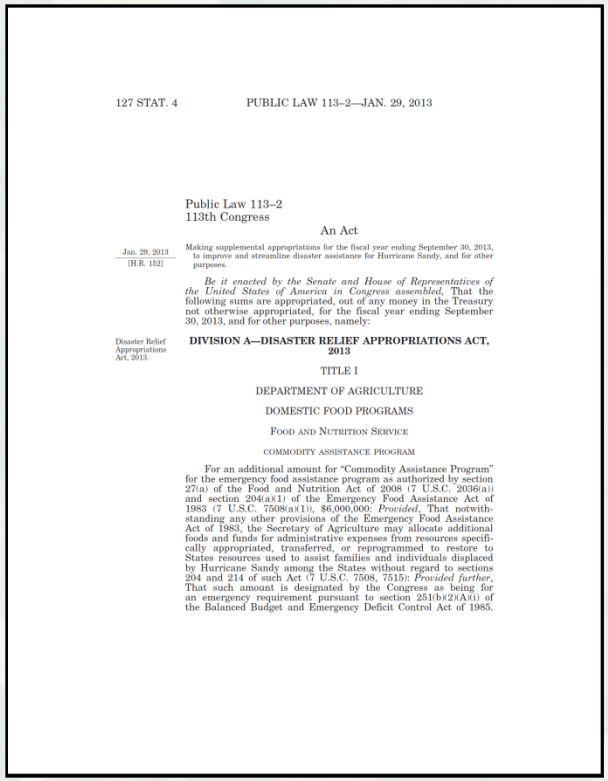
Outline

- Overview: North Atlantic Coast Comprehensive Study (NACCS)
  - Scope and Schedule
  - Technical Teams and Products
  - Study Process
- Use of NOAA products/services in NACCS
- Collaboration with NOAA
- Recommendations

Bottom Line Up Front



Hurricane Sandy Oct. 29, 2012



127 STAT. 4 PUBLIC LAW 113–2—JAN. 29, 2013

Public Law 113–2
113th Congress

An Act

Jan. 29, 2013
[H.R. 152]

Making supplemental appropriations for the fiscal year ending September 30, 2013, to improve and streamline disaster assistance for Hurricane Sandy, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending September 30, 2013, and for other purposes, namely:

Disaster Relief Appropriations Act, 2013.

DIVISION A—DISASTER RELIEF APPROPRIATIONS ACT, 2013

TITLE I

DEPARTMENT OF AGRICULTURE

DOMESTIC FOOD PROGRAMS

FOOD AND NUTRITION SERVICE

COMMODITY ASSISTANCE PROGRAM

For an additional amount for "Commodity Assistance Program" for the emergency food assistance program as authorized by section 27(a) of the Food and Nutrition Act of 2008 (7 U.S.C. 2036(a)) and section 204(a)(1) of the Emergency Food Assistance Act of 1983 (7 U.S.C. 7508(a)(1)), $6,000,000: *Provided*, That notwithstanding any other provisions of the Emergency Food Assistance Act of 1983, the Secretary of Agriculture may allocate additional foods and funds for administrative expenses from resources specifically appropriated, transferred, or reprogrammed to restore to States resources used to assist families and individuals displaced by Hurricane Sandy among the States without regard to sections 204 and 214 of such Act (7 U.S.C. 7508, 7515): *Provided further*, That such amount is designated by the Congress as being for an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985.

Public Law 113-2, Disaster Relief Appropriations Act, 2013

Overview of Sandy Recovery Mission

1 Responsibilities

- Flood and storm damage risk reduction
- Maintenance of federal navigation channels, harbors and waterways

2 Results

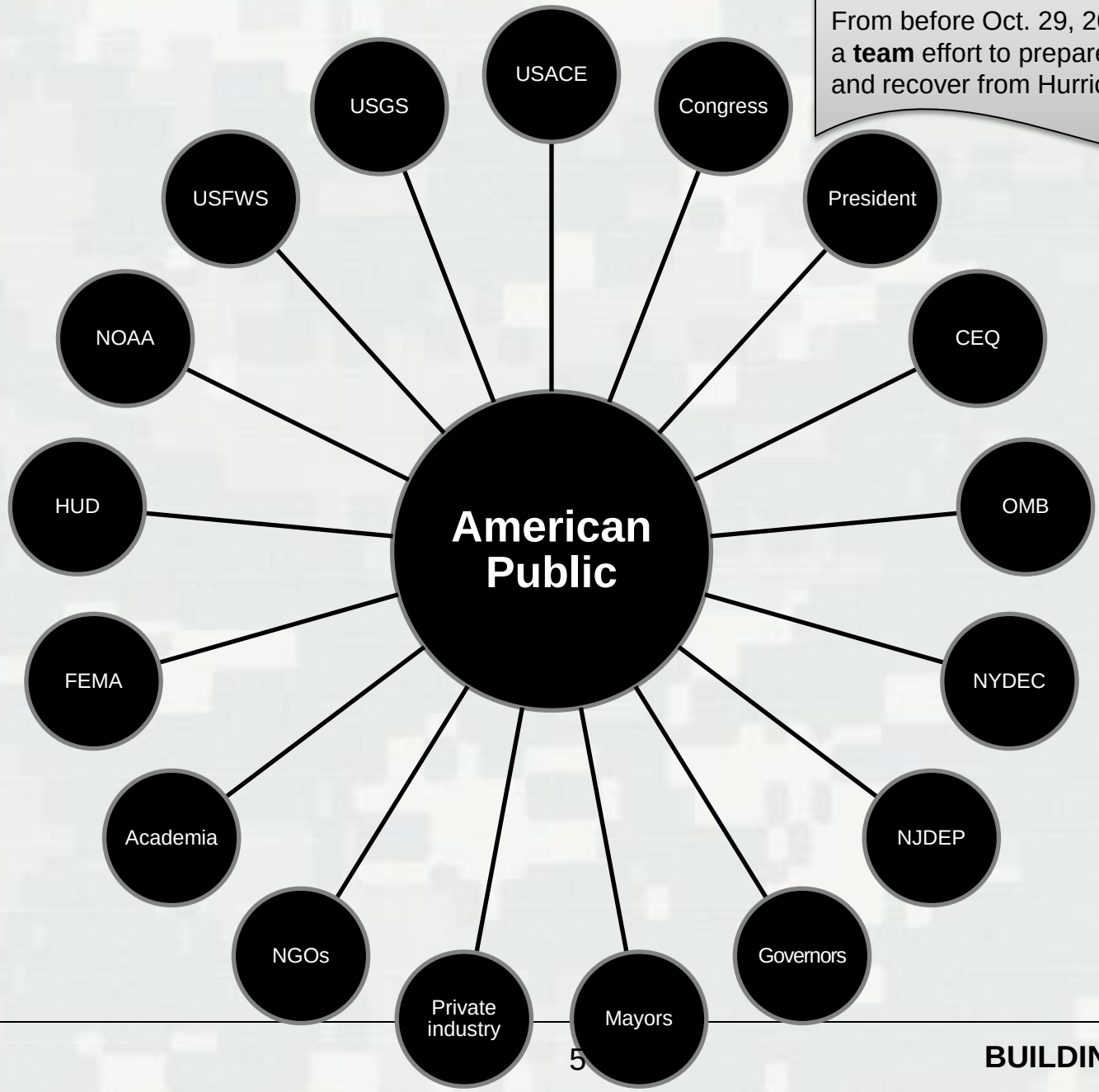
- Preserve coastal populations, property and infrastructure
- Contribute to safe, reliable, efficient, and environmentally sustainable waterways for movement of commerce, national security needs, and recreation

3 Research

- Anticipate future scenarios
- Identify solution sets
- Contribute to knowledge sharing for a comprehensive, collaborative, synchronized approach to increased resilience to future extreme weather

Who's Involved

From before Oct. 29, 2012, this has been a **team** effort to prepare for, respond to, and recover from Hurricane Sandy.

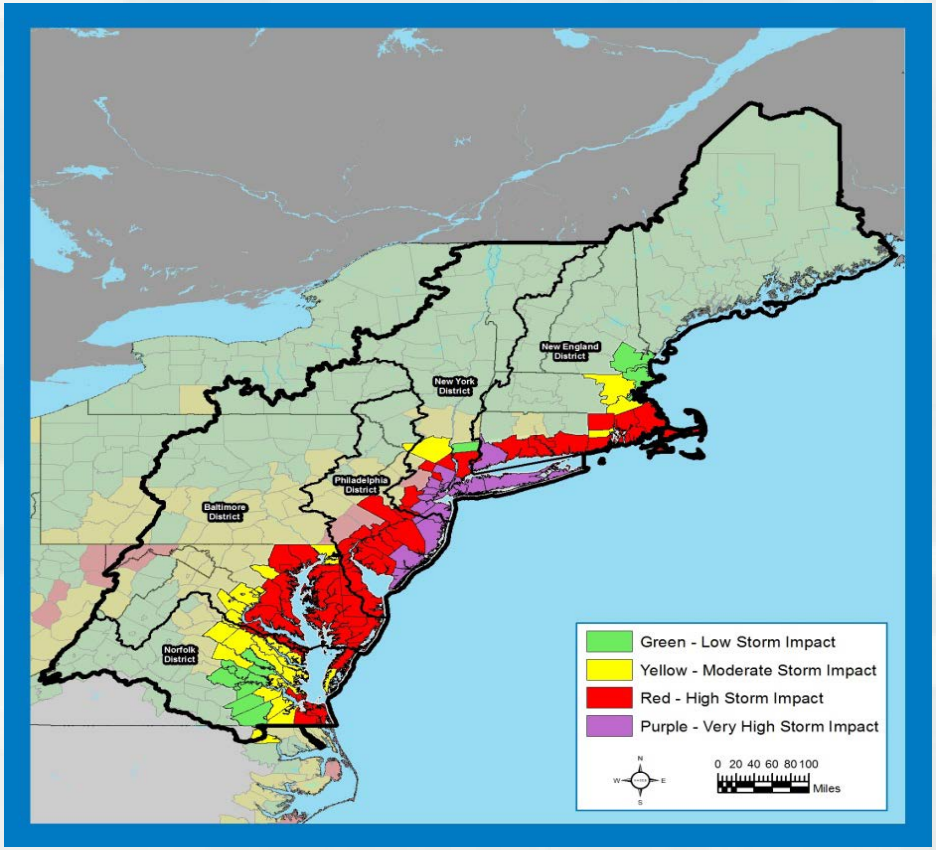


BUILDING STRONG®

North Atlantic Coast Comprehensive Study

"That using up to $20,000,000* of the funds provided herein, the Secretary shall conduct **comprehensive study** to address the flood risks of **vulnerable coastal populations** in areas that were affected by Hurricane Sandy within the boundaries of the **North Atlantic Division** of the Corps…" (*$19M after sequestration)

- ❑ Comprehensive Study to be complete **by Jan 2015**



- ❑ Focus - areas affected by erosion, precipitation, winds, surge, etc. (FEMA's H. Sandy storm surge data)

Goals:

- ❑ Provide a **Risk Reduction Framework** **Consistent with USACE-NOAA Infrastructure Systems Rebuilding Principles 28 Feb 2013*

- ❑ Support **Coastal Resilient Communities and sustainable coastal landscape systems,** considering future sea level rise and climate change scenarios, to reduce risk to vulnerable population, property, ecosystems, and infrastructure.

Schedule

Jan 29 2013
Enactment of Supplemental Legislation PL 113-2

Develop draft PMP and SOW (NLT 15 Mar; approved 27 Mar √)

Phase 1
Develop NACCS

Phase 2
Validate NACCS

Phase 3
Finalize NACCS

Jan 2013 | May 2013 | Winter-Spring 2014 | Jul 2014 | Jan 28, 2015

Public Web Site

Further Opportunities for Input

Draft Final to HQUSACE

FEMA-NDRF Ongoing Plans & Initiatives by Others

PHASE 1

Interagency, tribal & NGO coordination to assemble existing/future conditions, and assessment and formulation of measures

COMPLETE

PHASE 2

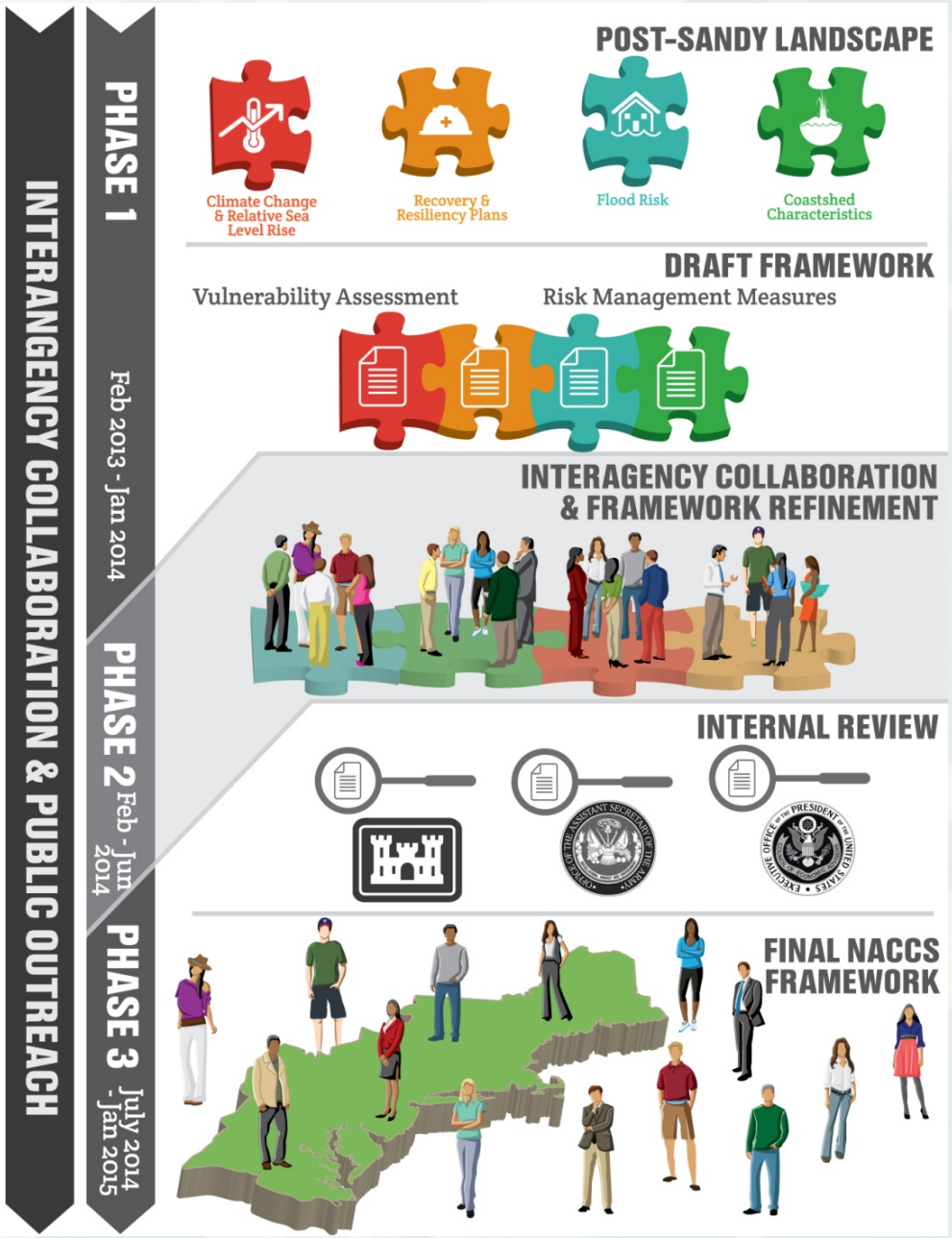
Interagency, tribal & international validation & collaboration

PHASE 3

Finalize comprehensive report & submit to Congress (January 2015)

Identify institutional barriers, close data gaps and utilize NACCS information in ongoing USACE & interagency efforts

Study Process



Technical Teams

- **USACE Enterprise**
- **Agency Subject Matter Experts**
  - Engineering
  - Economics
  - Environmental, Cultural, & Social
  - Sea Level Rise & Climate Change
  - Plan Formulation
  - Coastal GIS Analysis

Products

- **Coastal Framework**
  - Regional scale
  - Collaborative
  - Opportunities by region/state
  - Identify range of potential solutions and parametric costs by region/state
  - Identify activities warranting additional analysis and social/institutional barriers
- **Not a Decision Document**
  - No NEPA
  - No Recommendations

Coastal Risk Management and Resilience Measures

Measure	Definition	Effect	Examples
Natural	Created through action of physical, biological, geologic, & chemical processes operating in nature	Shoreline erosion control, wave and surge attenuation, especially in low-energy environments; additional resilience benefits; dynamic behavior and response affect performance	**Barrier islands, dunes, reefs, wetlands, marsh islands and riparian corridors**  
Nature-Based	Products of planning, engineering design, and construction incorporating natural processes that contribute to coastal risk reduction	Shoreline erosion control, wave and surge attenuation, especially in low-energy environments; dynamic behavior and response affect performance with respect to obj.	
Non-Structural	Products of public policy, management and regulatory practices; may include pricing schemes, planning, engineering design, & construction	Modify or avoid the impacts of the hazard (vs. modifying the hazard); relatively predictable level of performance with respect to obj.	**Structure acquisitions, relocations, flood proofing, land use regulations, development restrictions within the greatest flood hazard areas** 
Structural	Products of planning, engineering design, and construction	Shoreline erosion control, wave and surge attenuation, reduced flooding; relatively predictable level of performance with respect to objectives	Levees, storm surge barrier seawalls, groins, revetments, and near-shore breakwaters 

Use of NOAA products/services in NACCS

- What: NACCS used NOAA Environmental Sensitivity Index shoreline files in GIS analysis.
- How: The study aggregates the shorelines files into 9 shoreline types. A matrix was then developed to identify which measures are most appropriate for each of the shoreline types. The files were also used to create mapping and to calculate lengths of particular shoreline types.
- Result: Great. The files refined the applicability of particular measures to shoreline types.

Use of NOAA products/services in NACCS

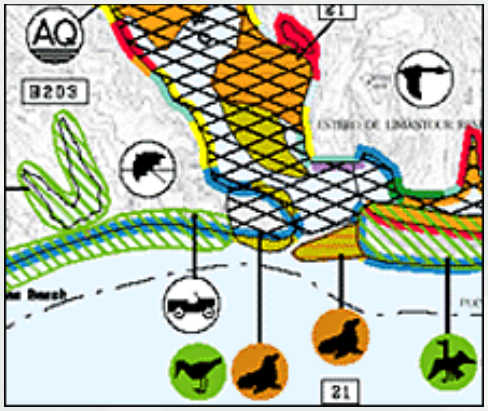
- What: NACCS used NOAA tidal influence extent.
- How: Dataset was used to determine which areas are tidally influenced and experience impacts from surge.
- Result: Great. This information was then used (in combination with FEMA MOTFs county impact analysis) to determine our study area.

Use of NOAA products/services in NACCS

- What: NACCS used NOAA Sea Grant Program Coastal Community Resilience Index in the main NACCS report. A link was provided to readers.
- Why: Although the NACCS is a regional study, we sought to offer tools for local agencies and communities to use to determine a finer scaled analysis of their coastal storm risk and resilience.
- Result: Great tool is targeted to the community level.

Use of NOAA products/services in NACCS

- What: NACCS created a Geodatabase that includes all the layers created/used in study. This product will be provided to all interested stakeholders
- How: The two key datasets included are the Environmental Sensitivity Index shoreline files and the NOAA tidal influence extent.
- Result: Great. Looking forward to the release!



Use of NOAA products/services in NACCS

- What: USACE uses NOAA's Tides and Currents services for Historical Relative Sea Level Rise data; tidal and extreme water level data; and harmonic constituents and datums for use in numerical models. USACE also uses the bathymetric/topographic data sets NOS, (http://oceanservice.noaa.gov/).
- Result: Great, particularly the map-search engine in NOS. Please keep archiving older data in both Tides and Currents and NOS, which are so valuable in our forensic studies.

Collaboration with NOAA

- What: NACCS embedded NOAA member on Communications and Community Visioning Sessions. NOAA also participated in working meetings and collaboration webinars.
- Result: Great. Collaboration has been effective and beneficial throughout the study. Continued participation will ensure NOAA insights are captured in our analyses and final report.

Recommendations/Suggested Improvements

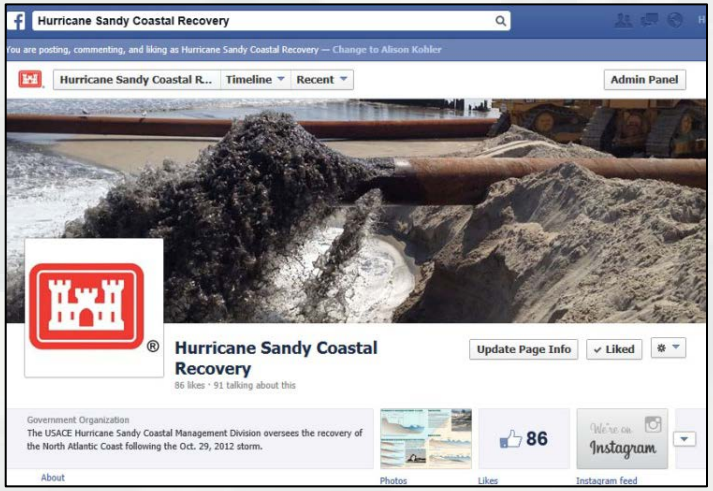
- What: More frequent navigation services data collection will assist ERDC's NACCS Regional Sediment Budget
- Why: The development of a more comprehensive bathymetric dataset thru NOAA surveys helps to identify bathymetric changes over time, and thus shoaling rates which can be used to identify sediment transport patterns and rates.

Recommendations/Suggested Improvements

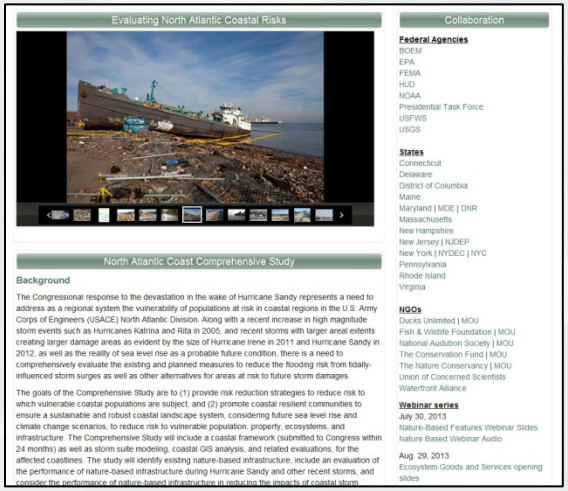
- What: NOAA should continue to compile navigation services data sets at the NOAA digital coast website/server.

- Why: By providing the data via the Digital Coast server, it is easily accessible to all (http://www.csc.noaa.gov/digitalcoast/)

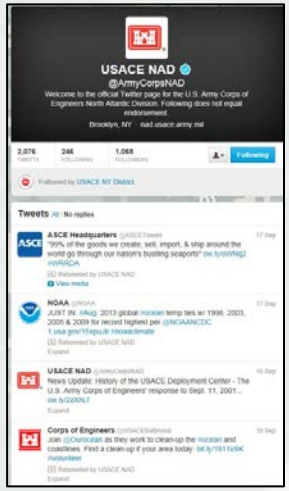
Resources for Further Information



www.facebook.com/HurricaneSandyCoastalRecovery

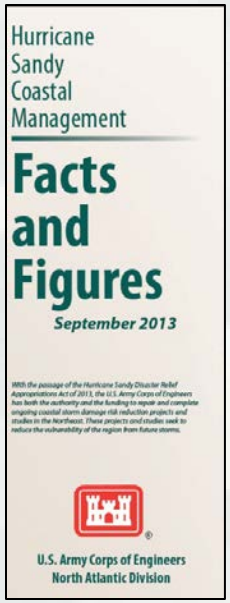


www.nad.usace.army.mil/CompStudy

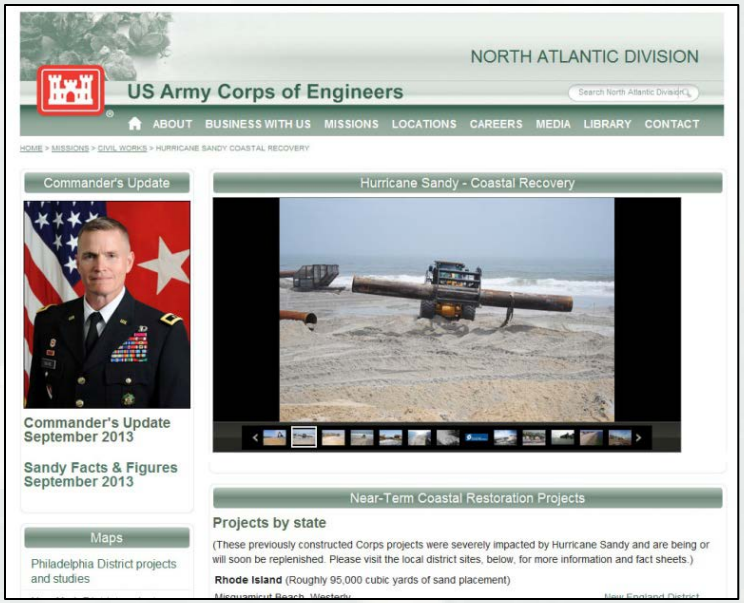


www.twitter.com/ArmyCorpsNAD

Monthly commander's update



Monthly facts and figures



www.nad.usace.army.mil/Sandy

Questions?