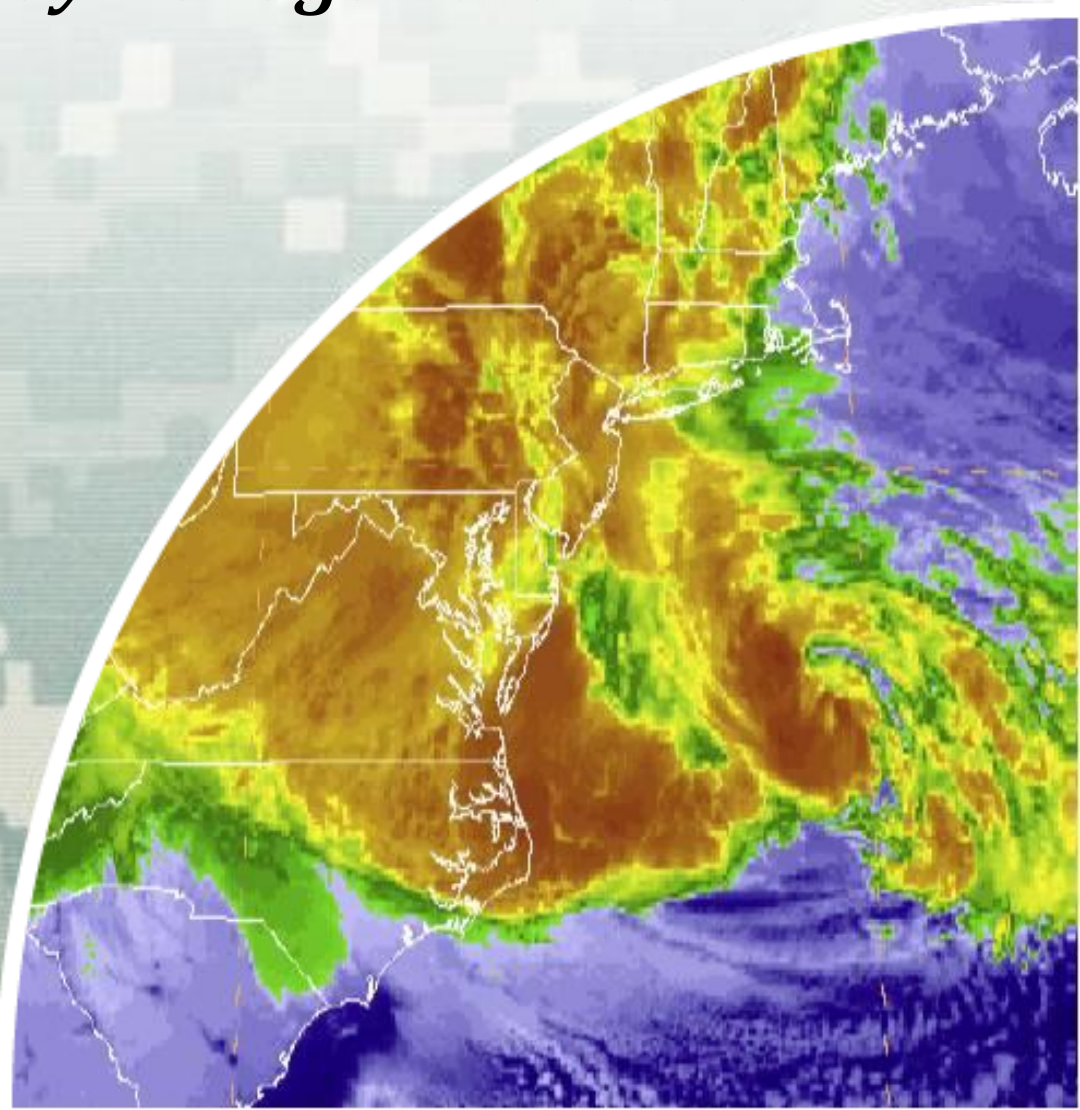


North Atlantic Coast Comprehensive Study (NACCS)

Update to Chesapeake Bay Management Board

Ms. Amy M. Guise
Chief, Planning Division
U.S. Army Corps of Engineers
Coastal Storm Risk Management
Planning Center of Expertise
8 August 2013



Agenda

- Authority, Vision & Goals
- Study Area & Scope
- Formulation and GIS Process
- Early Products, Spin Offs, & Collaborative Efforts
- Communication & Outreach
- Upcoming Activities



Authority

- “That using **up to \$20,000,000*** of the funds provided herein, the Secretary shall conduct a 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
- Up to \$20M for **Comprehensive Study by Jan. 2015**; unused funds available for future USACE studies
 - ▶ Unused funds will be returned to \$50M pot allocated for “Investigations” for necessary expenses related to the consequences of Hurricane Sandy
 - **"Address flood risks of vulnerable coastal populations** affected by Hurricane Sandy within NAD...”
 - ▶ Coastline as defined by FEMA’s Hurricane Sandy storm surge data
 - ✓ Deliver **interim reports**
 - ✓ Ensure study is consistent with **interagency** efforts
 - **Identify institutional barriers** and develop strategies
 - **Identify activities and actions warranting additional analysis**



Vision – End Point

Provide a roadmap (for all) to make informed coastal risk management decisions, using best available technology and interagency collaboration.



Goals

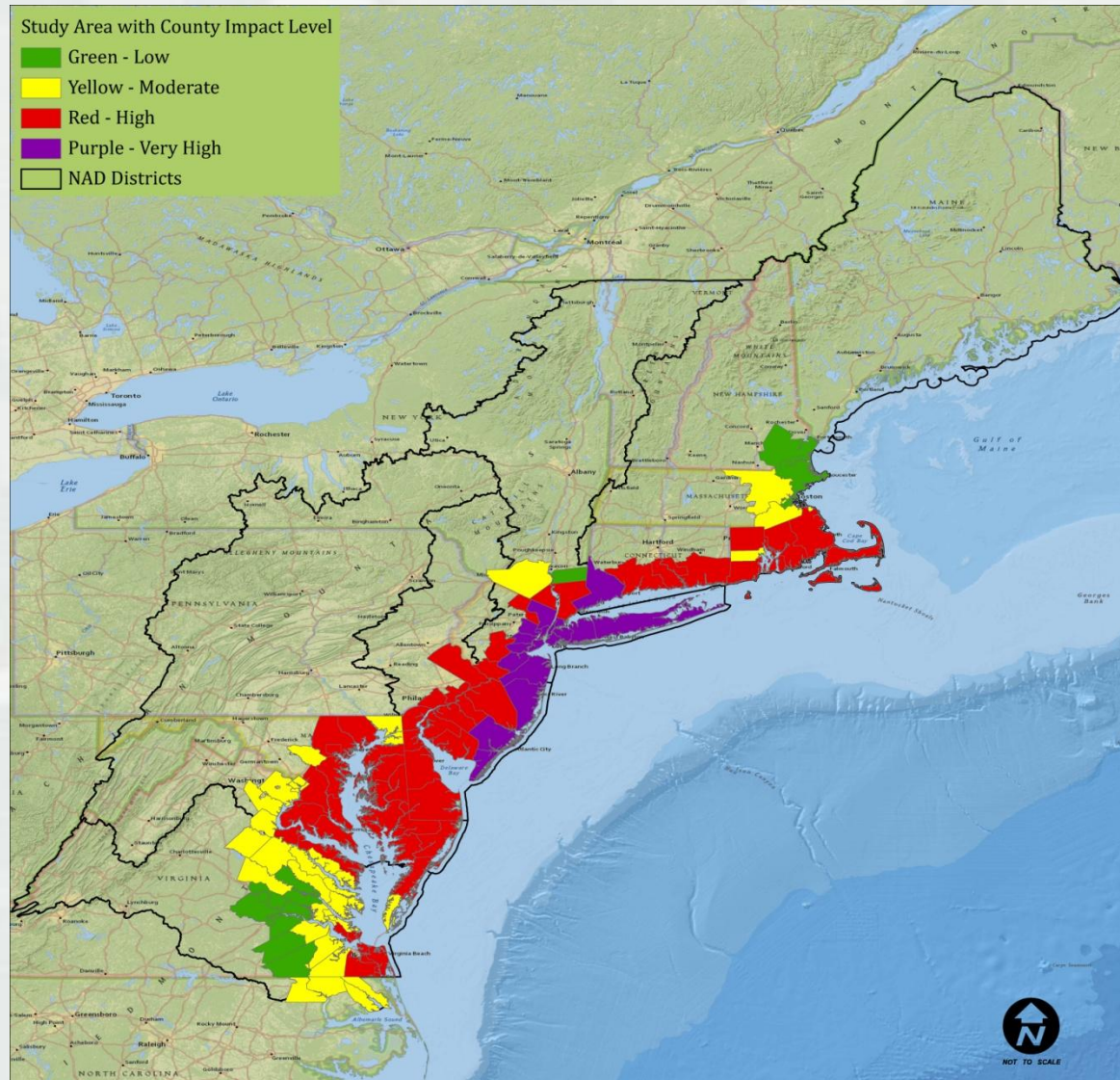
1. Provide Risk Reduction Framework– Reduce risk to which *vulnerable coastal populations* are subject.
2. Promote Coastal Resilient Communities – Support a *sustainable* and robust coastal landscape *system*, considering *future sea level rise and climate change* scenarios, to reduce risk to vulnerable population, property, ecosystems, and infrastructure.



**Consistent with USACE-NOAA Infrastructure Rebuilding Principles 28 February*



Study Area



Scope – Finalized (June)

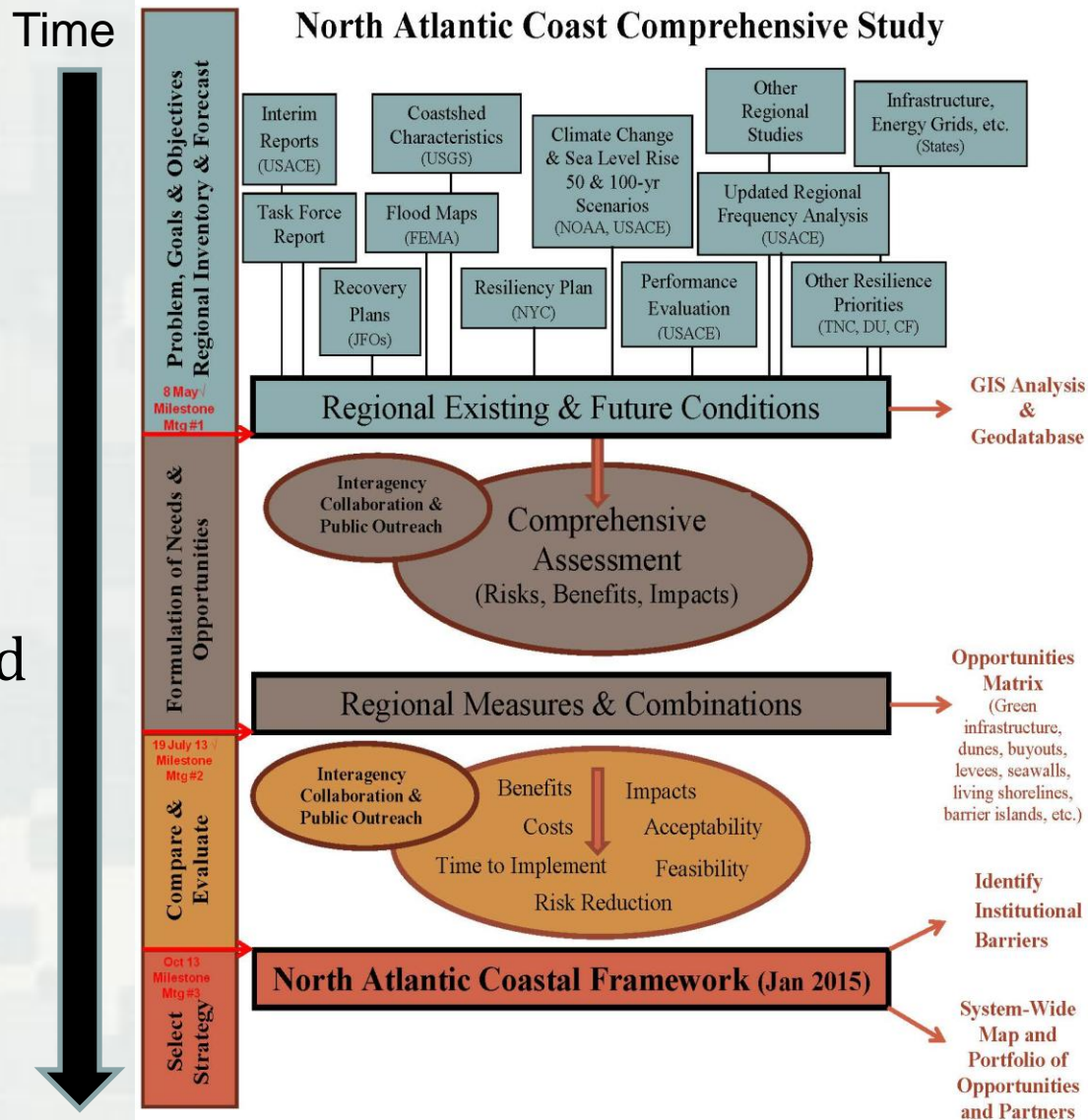
- Final Scope (28 June 2013)
 - ▶ Federal Register Notice (19 June 2013)
 - ▶ Study initiation letters to Feds, states, NYC, DC, tribes, NGOs
 - ▶ Response to 267 comments issued to agencies (28 June 2013)
 - ▶ Includes:
 - Nature-based and regional sediment management
 - Social vulnerability
 - USFWS Planning Aid Report
 - Storm suite modeling and sea level rise analyses
 - Economic depth-damage curves with secondary and tertiary effects
- Executive Level PPT w/voice over and Synopsis of scope on website
- www.nad.usace.army.mil/CompStudy



Scope - Process

Coastal Framework

- ❑ Regional scale
- ❑ Interagency collaboration
- ❑ Opportunities by reach/state
- ❑ Identify range of potential solutions and parametric costs by reach/state
- ❑ Identify activities warranting additional analysis



Scope - Deliverables

- No NEPA
- No site-specific recommendations
- No designs or construction
- Interim Report #1 (March 2013)
- Interim Report #2 (May 2013)
- Performance Evaluation & Institutional Barriers (under review with OMB)



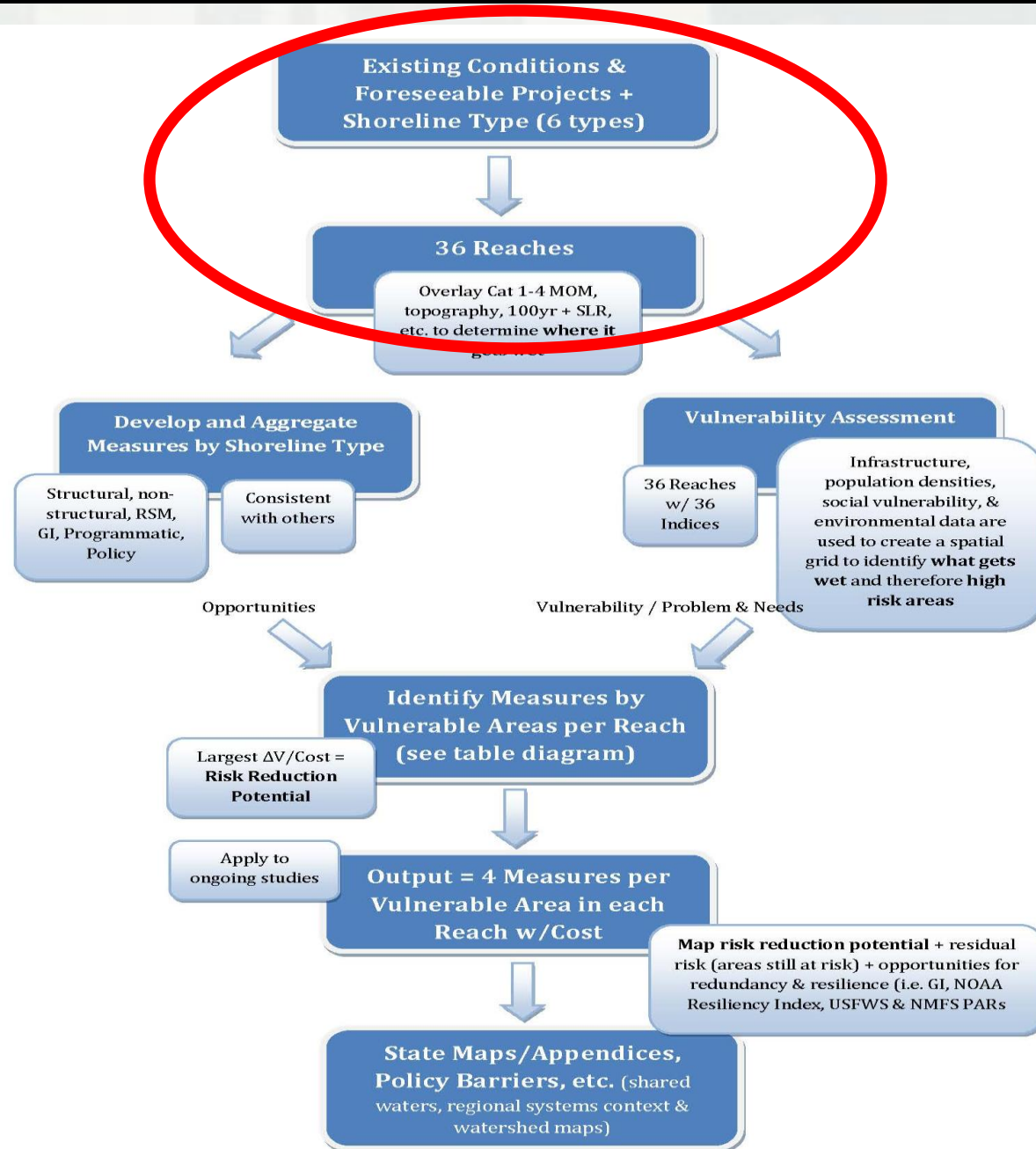
Scope - Deliverables

- Comprehensive Study (28 Jan 2015)
 - ▶ Hurricane Sandy Assessment of Impacts & Effects
 - ▶ Storm Suite Modeling
 - ▶ Coastal Geographic Information System Geodatabase & Analysis
 - ▶ Economic Depth-Damage Estimation Tool
 - ▶ Sea Level Rise and Vulnerability Assessment & Maps
 - ▶ Barriers to Implementation
 - ▶ Areas Warranting further Analysis
 - ▶ Nature-Based Evaluation Framework
 - ▶ USFWS Planning Aid Report
 - ▶ NOAA Community Resiliency Survey Tool
 - ▶ Conceptual Regional Sediment Budget for the North Atlantic
 - ▶ State by State Appendices with evaluation of risk and risk reduction opportunities and Shared Waters Analysis

Provide a roadmap (for all) to make informed coastal risk management decisions, using best available technology and interagency collaboration.

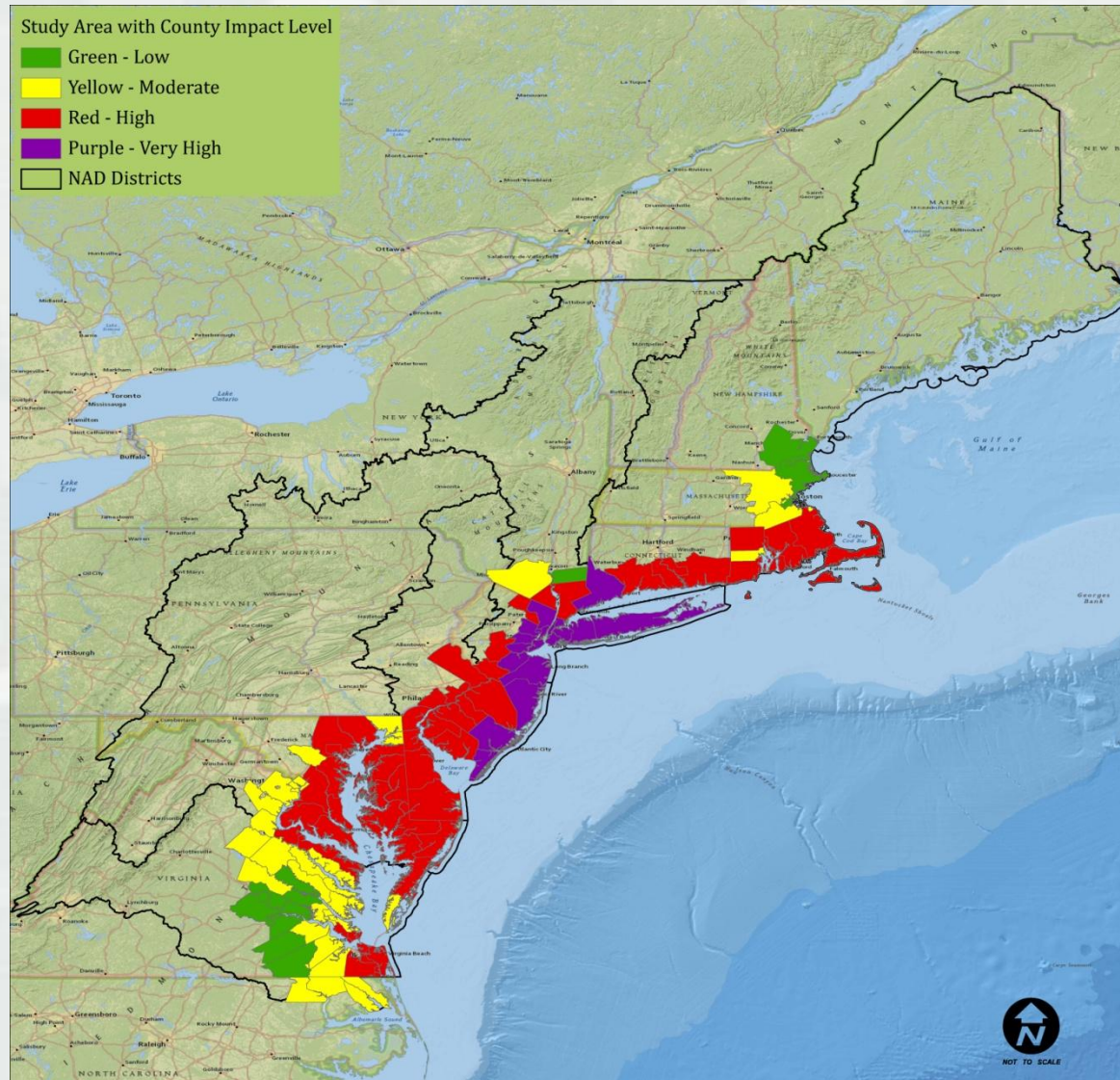


Formulation and GIS Process



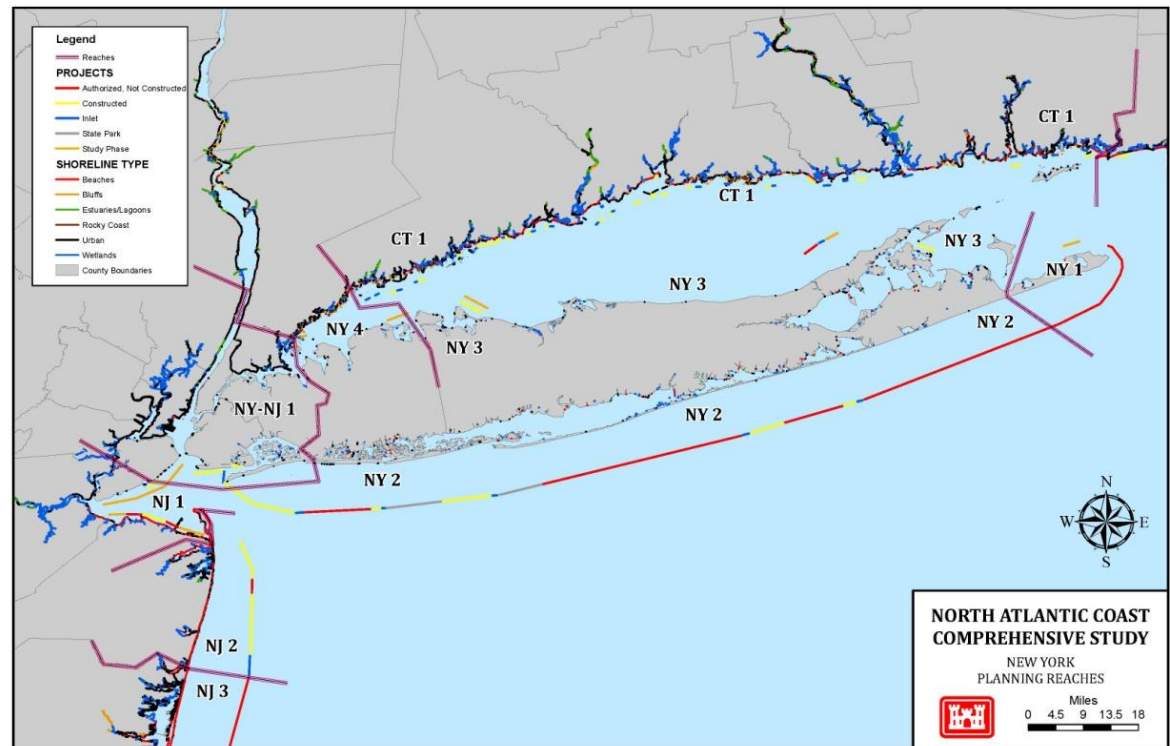
ING STRONG®

Study Area

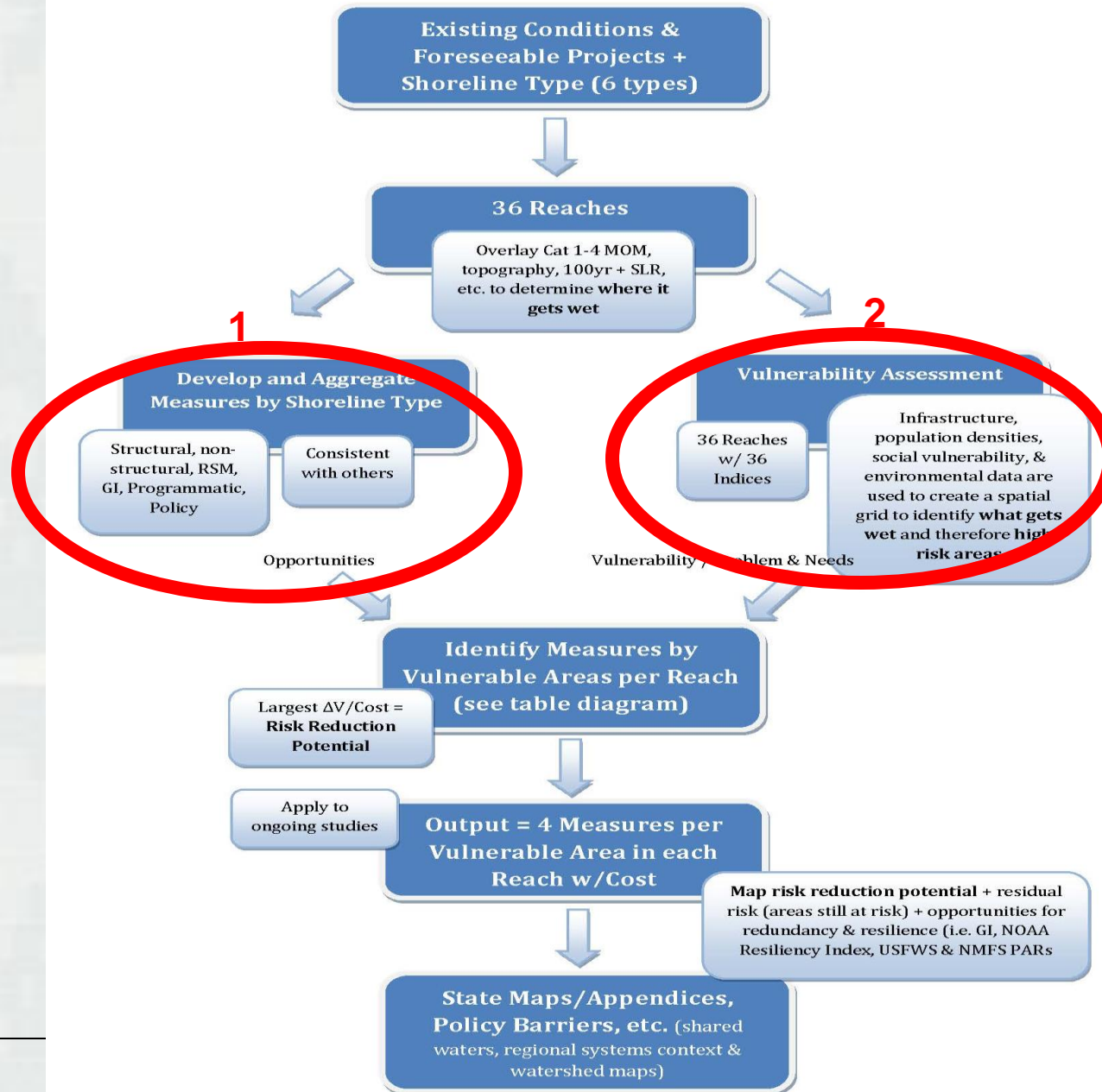


Formulation and GIS Process - Reaches

- 36 Reaches defined by:
 - Physiographic/geographic characteristics (shoreline type)
 - USACE & other projects
 - Land use
 - Jurisdictions



Formulation and GIS Process



Formulation and GIS Process - 1

- Develop comprehensive measures list (outreach, plans, working meetings, etc)
 - ▶ Structural – sacrificial
 - ▶ Structural – non-sacrificial
 - ▶ Nature-based infrastructure
 - ▶ Upland Storage/Stormwater Management (includes green infrastructure)
 - ▶ Floodplain Restoration/Storage
 - ▶ Non-structural
 - ▶ Policy/Programmatic
- Assess appropriateness of measures by shoreline type (ie, bluff, sandy, back bay, barrier island, etc)



Formulation and GIS Process - 2

Vulnerability Assessment

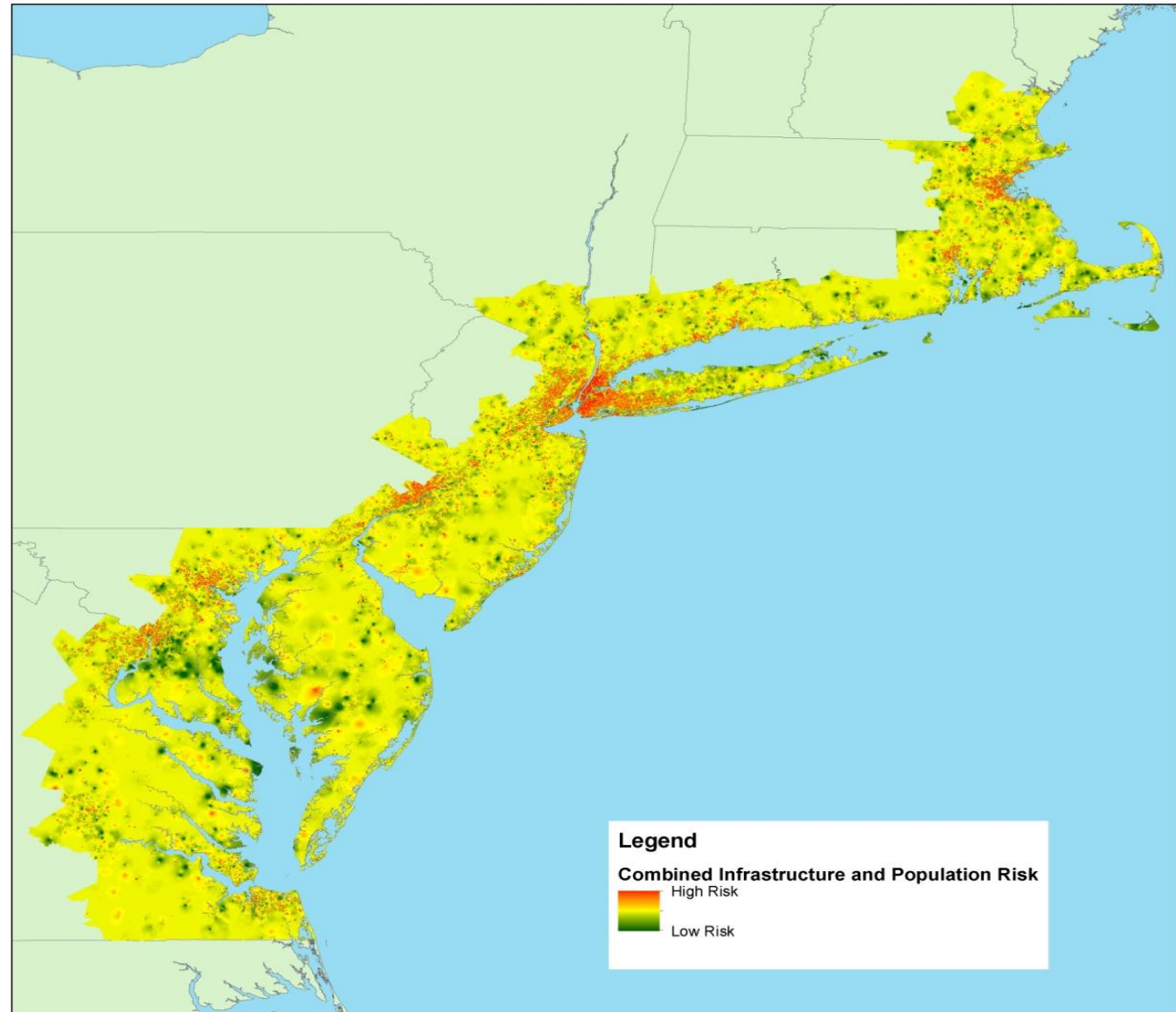
***Infrastructure + Population**

***Social**

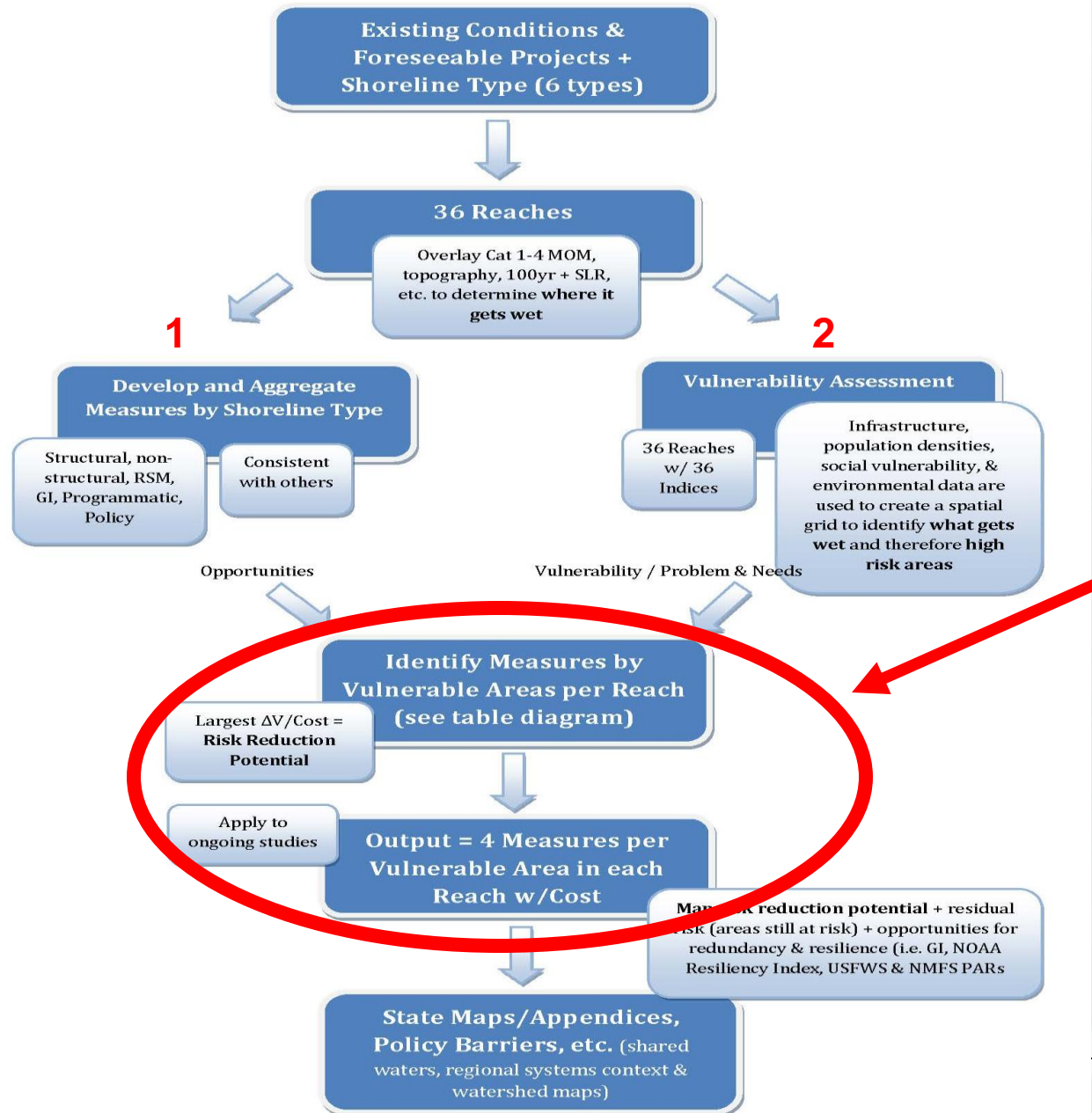
- 2010 Census (tract level)
- % Population 65 and over
- % Population under 5
- % Population w/income below poverty
- % Population non-proficient English speakers
- Index of income inequality

***Environmental and Cultural**

***Combined**



Formulation and GIS Process



We are here



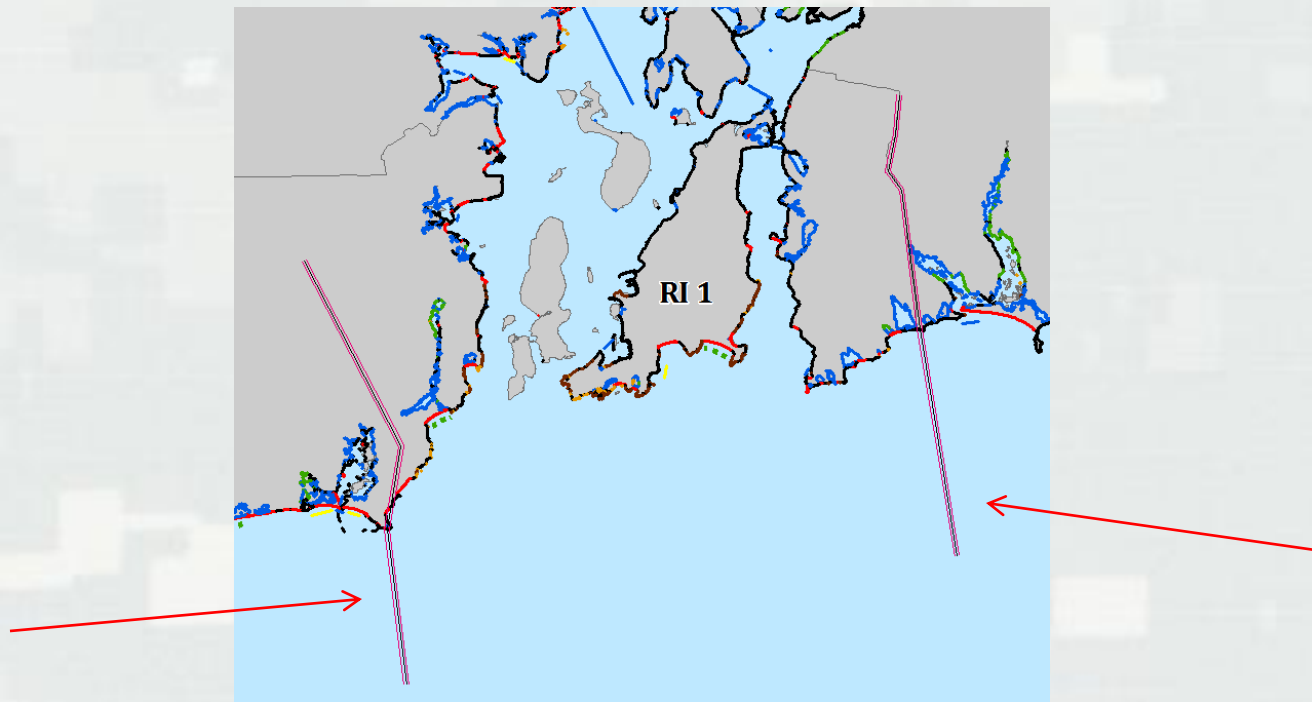
ING STRONG®

Formulation and GIS Process

- Assess:
 - ▶ Existing/future conditions and projects
 - ▶ Sea level rise and inundation mapping
 - ▶ Existing and ongoing plans by others
 - ▶ Vulnerabilities
- Identify length/size of EACH vulnerable area per reach
- Identify measures for EACH vulnerable area per reach
 - ▶ 100-year for structural measures
 - ▶ 25-year or less for nature-based infrastructure
- Identify parametric costs per measure



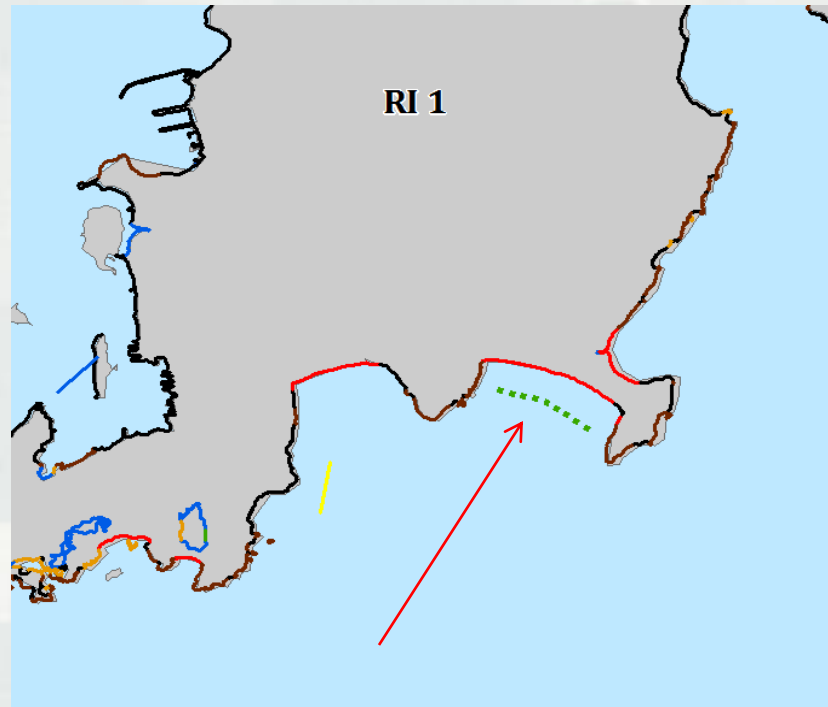
Reach



The *reaches* are identified as a stretch of distance with two boundary lines. The identifier for the end of the reaches are the *red and black lines*, which cross both the ocean and land, *perpendicular* to the coastline.



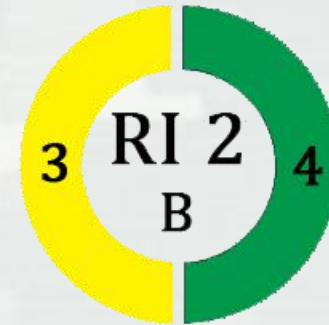
Length – (TBD)



The *lengths* are identified as a stretch of distance, which run *parallel* to the coastline. The identifier is a *dashed green line*.



Strategy



We are identifying the *strategies* with an outer circle. The outer circle will contain a series of *numbers* and *colors*. The *numbers* and *colors* correspond to one another exclusively.

There are 5 strategies we are trying to identify.

1: Structural – Sacrificial

2: Structural – Non Sacrificial

3: Structural – Nature-Based Infrastructure

4: Non Structural

5: Policy / Programmatic



Strategies

- 1 - Structural - Sacrificial (R)
- 2 - Structural - Non-sacrificial (O)
- 3 - Structural - Green Infrastructure (Y)
- 4 - Non-Structural (G)
- 5 - Policy / Programmatic (B)

Measures

RI 1

Length A

- 2 - Locks / Gates
- 5 - Building Codes

Length B

- 1 - Dune
- 2 - Seawall
- 4 - Acquisition
- 5 - Landuse Zoning

RI 2

Length A

- 2 - Jetty
- 5 - SWM

Length B

- 3 - Artificial Reef
- 4 - Raising

Length C

- 1 - Dune
- 3 - Living Shoreline
- 4 - Flood Insurance
- 5 - Housing Codes

Measures

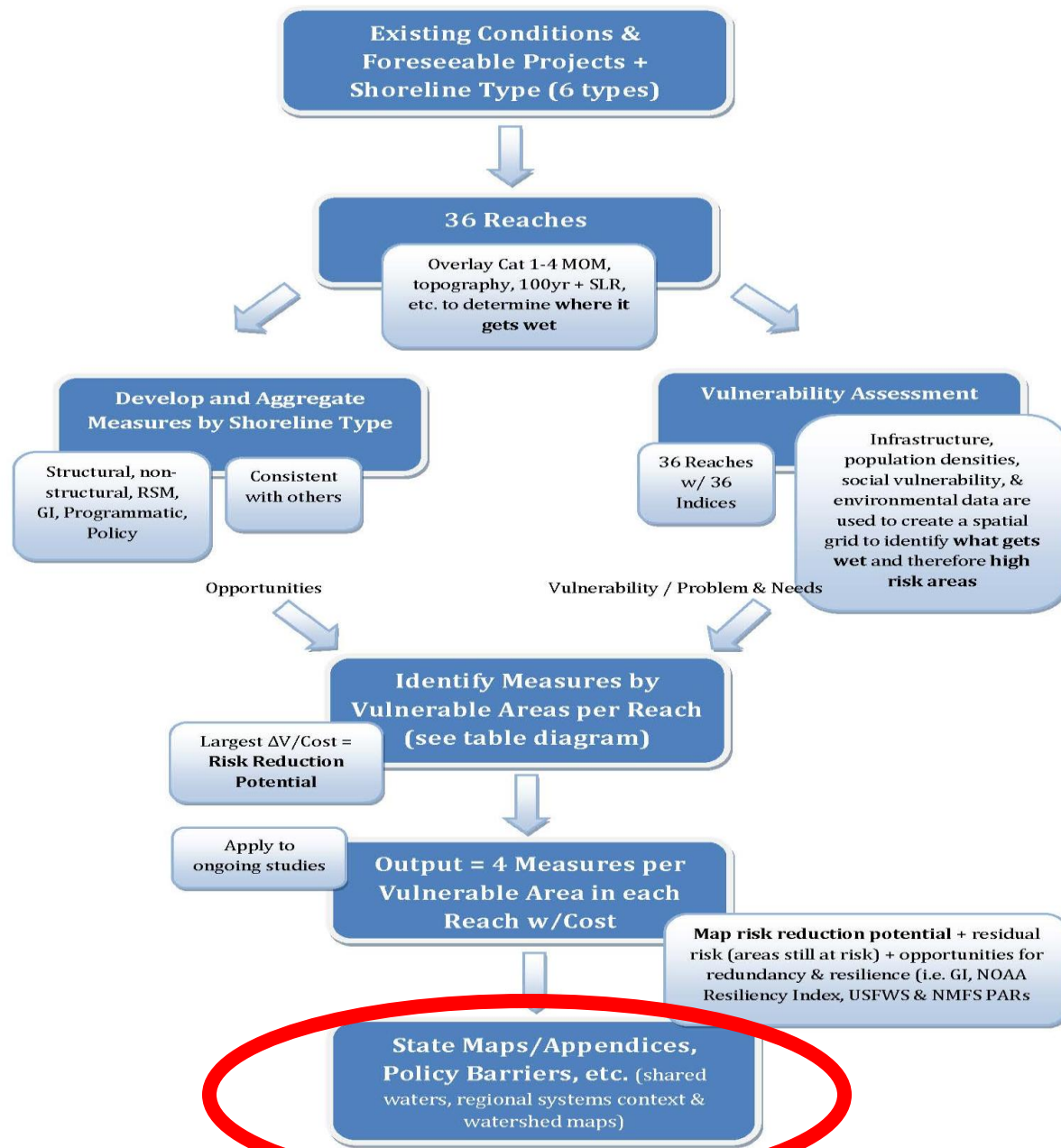
The *measures* will have a *number* to their left. This *number* corresponds to their associated *strategy*.

Conversely this could be done in *color* without numbers.

Within each *strategy* are a subset of specific *measures*.
These specific *measures* are not illustrated in the icon.
The *measures* will be illustrated in a table on an individual
reach(s) map, in text.



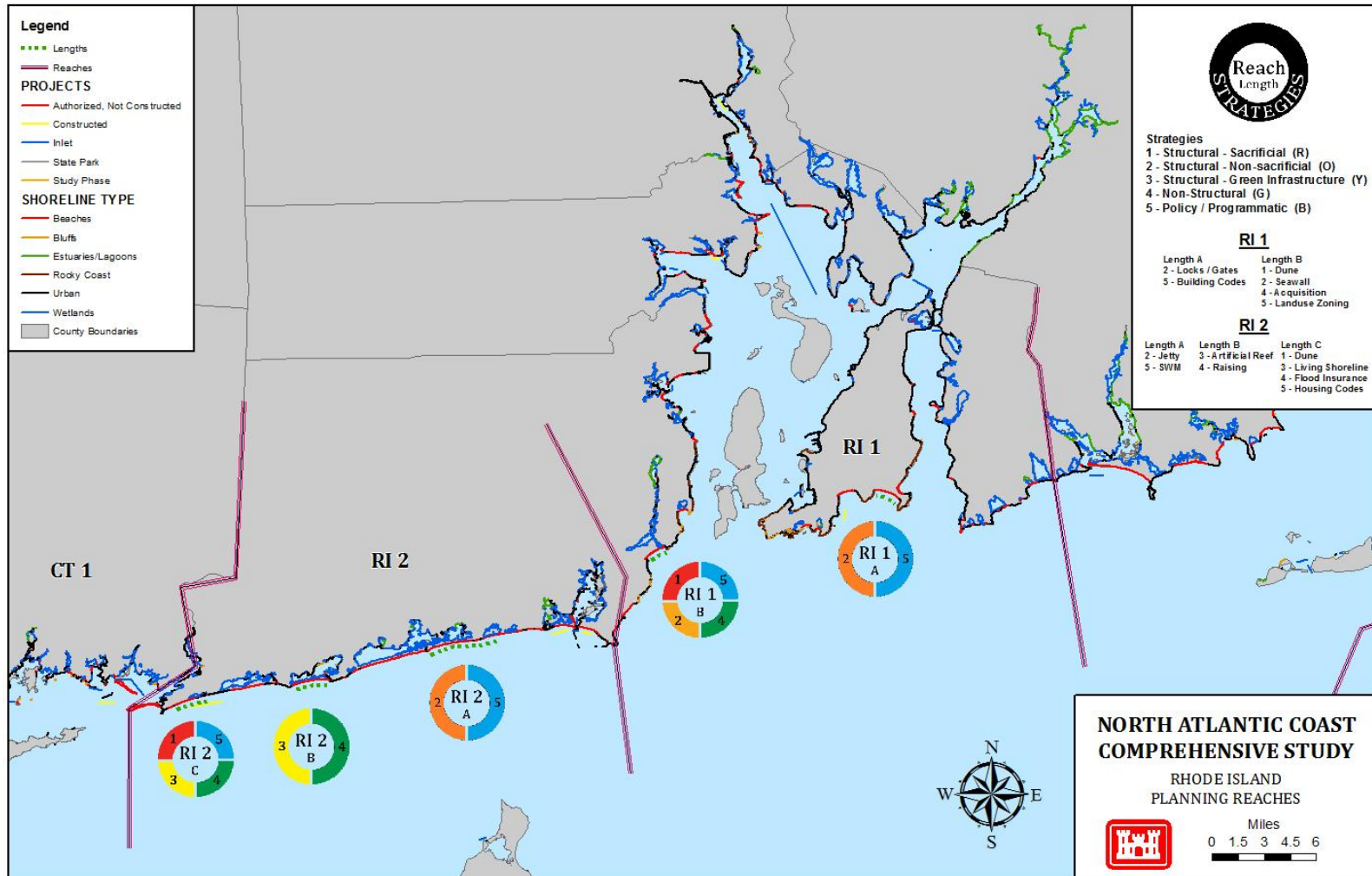
Formulation and GIS Process



ING STRONG®

Map Example

(and will have more detailed tables to accompany them with the more detailed measures information)



Early Products, Spin Offs & Collaborative Efforts

- 2 Technical Working Meetings & Webinars
 - ▶ Numerical Modeling
 - ▶ Resiliency Measures
- Interagency Collaboration Webinar Series (July-December)
- Planning Aid Report underway with USFWS
- Development of vulnerability maps
- Social Vulnerability Analyses included in NACCS & piloted/used in studies from NACCS interim reports and ongoing feasibility studies
- Sea Level Rise Tool – interagency release and used in NACCS (20 June 2013 release)



Communication & Outreach

- ▶ Engagement Strategy and Communication Plan
 - Scope development, data sharing, and collaboration with SMEs
 - Routine updates to website and emails to subscribers
 - Data/reports/calls coming from agencies and tribes

- ▶ Interagency Collaboration Webinar Series
 - July – Nature-Based Measures
 - Aug – Ecosystem Goods and Services; Sea Level Rise & Numerical Modeling
 - Sep – Identification of Vulnerable Communities
 - Oct - Adaptive Management
 - Nov – Nature-Based Measures (risk reduction applications) and/or Policy Barriers
 - Dec – TBD

- ▶ NY/NJ Harbor Coordination Meeting (fall 2013)



Communication & Outreach

► Targeted Stakeholder Coordination

- ~Jan-Mar 2014
- 6 webinars: Federal, State (NYC and DC), NGO, Tribal, academia, 1 TBD
- Describe NACCS and process
- Guide the use of on-line poll for input



Upcoming Activities

- Refined iterations of the formulation process **with State-by-State collaboration**
- Development of engineering, economic and community tools
- Shared Waters Analysis
- Integrate Regional Plans
 - ✓ NYS 2100 Commission Report: Building Resilience in New York
 - ✓ NYC Mayor's Plan: A Stronger, More Resilient New York
 - Joint Field Offices State Recovery Support Strategies (tbd July 2013)
 - Task Force (August 2013)
- Future OMB/CEQ Integration Meetings



Questions

