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SAVING THE LAST GREAT PLACES ON EARTH

"Nature always wears the colors of the spirit" – EMERSON

The Nature Conservancy and The USACE NAD: Partnering For Coastal Resources

Terry Sullivan

Director of Government Relations

Eastern US Conservation Region

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Conservancy's Mission

To preserve the plants, animals and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive.

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Conservation by Design

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Marine and Coastal

Our vision includes a series of seascape-scale conservation projects that encompass the full range of coastal conservation targets in order to sustain the diversity of marine life and ensure the continued productivity upon which human communities depend.

An ecological assessment of the bays, estuaries, coastal waters, and continental shelf of the Northwest Atlantic will help further define this vision.

Update of the NW Atlantic Marine Ecoregional Assessment

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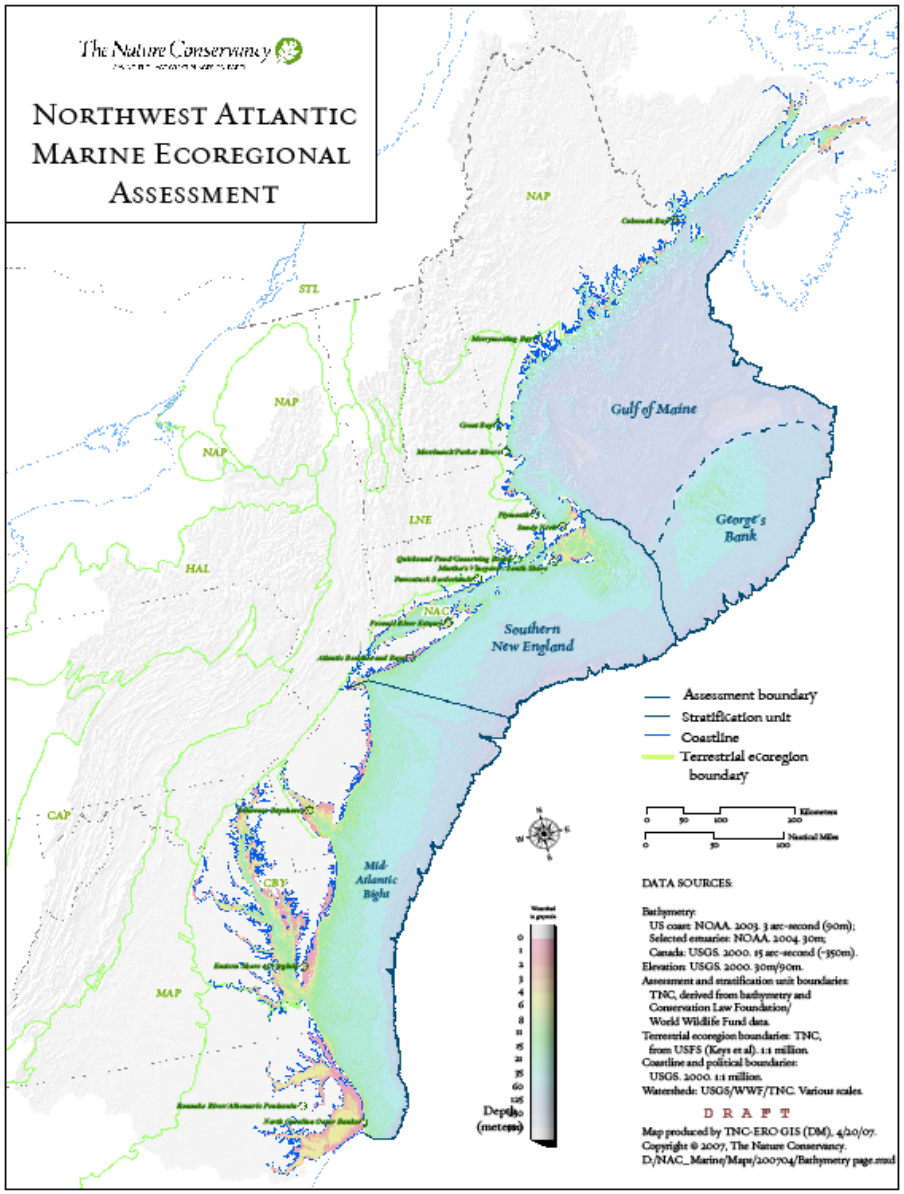
Northwest Atlantic Marine Ecoregional Assessment (NAM ERA)



Planning Area Boundaries:

Bay of Fundy to Cape Hatteras NC

High inertial to 2500 m.

3 subregions

- **GOM/GB**
- **SNE**
- **MAB**

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NAM ERA:

Ecosystem Based Management Approach

- **Efficiently consider multiple species and their habitats, human uses and socio-economics**
- **Baseline for partners, or individual agencies to develop an EBM framework**
- **Integrating information at a regional level to inform decisions and strategies**

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Purposes and Desired Outcomes of NAM ERA

Phase 1

- **A robust, transparent, distributable data baseline, to serve as an information resource to marine decision makers and managers with a wide range of interests**

Phase 2

- **Assess information and identify areas, species and ecological processes of biological significance that if conserved will protect biological diversity of the NW Atlantic**

- **Begin to develop specific marine conservation strategies**

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Partner Engagement

11 Technical Science Teams

Coastlines & Estuaries
Benthic Habitats
Diadromous fish
Demersal fish (ground fish)
Pelagic fish (billfish)
Forage fish (herring)
Nearshore shellfish
Shorebirds and sea birds
Marine mammals
Sea turtles
Oceanographic processes

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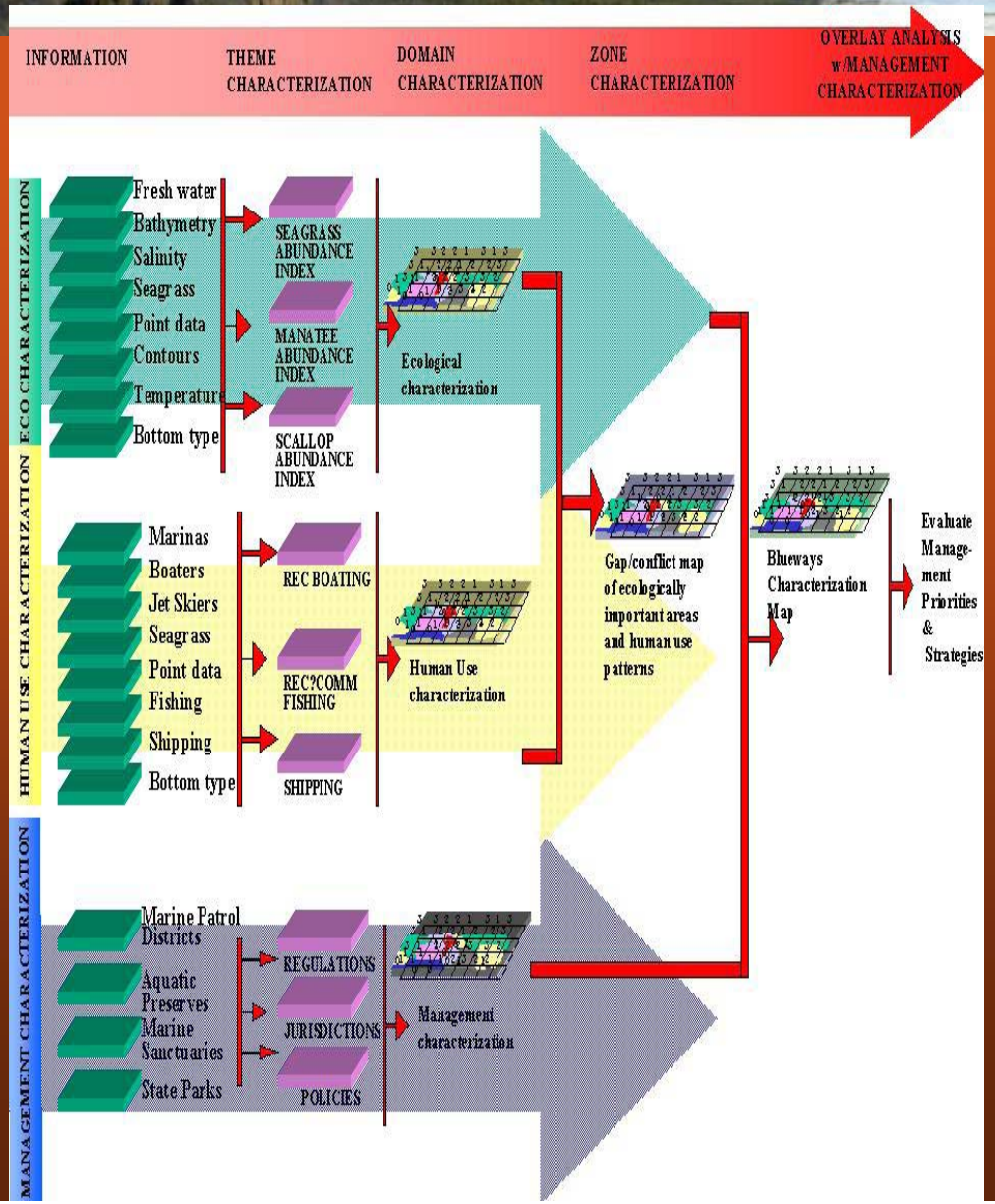
Data Rich

Benthic habitats (infauna)
Shoreline habitats (beaches, dunes, salt ponds etc.)
Estuarine habitats (wetlands, sea grasses, marshes etc.)
Seabirds & Shorebirds
Marine mammals
Turtles
Fish (demersal, forage, pelagic, diadromous)
Deepwater corals
Oceanographic data
Shellfish



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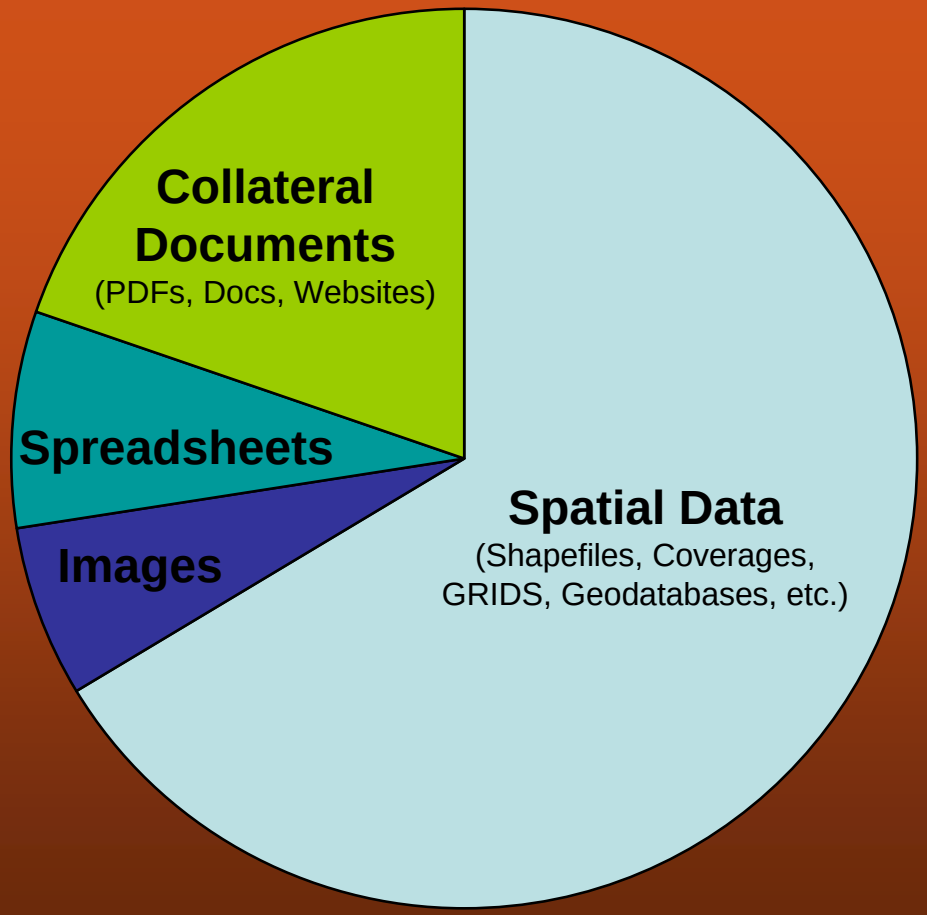
Data Collected



File Type	
Spatial Data	834
Images	78
Spreadsheet data	99
Collateral Documents	247
TOTAL	1258

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Conservation Targets

COARSE FILTER APPROACH:

Assumes that protecting ecological systems and biologically significant areas will capture the majority of species

COARSE FILTER TARGETS:

- **Shoreline types**
- **Benthic habitats**
- **Pelagic processes**
- **Biologically significant areas (e.g. nursery, breeding areas)**

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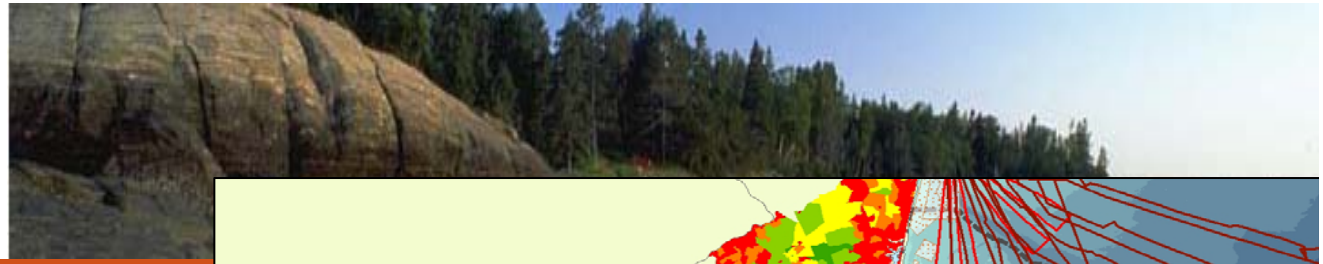
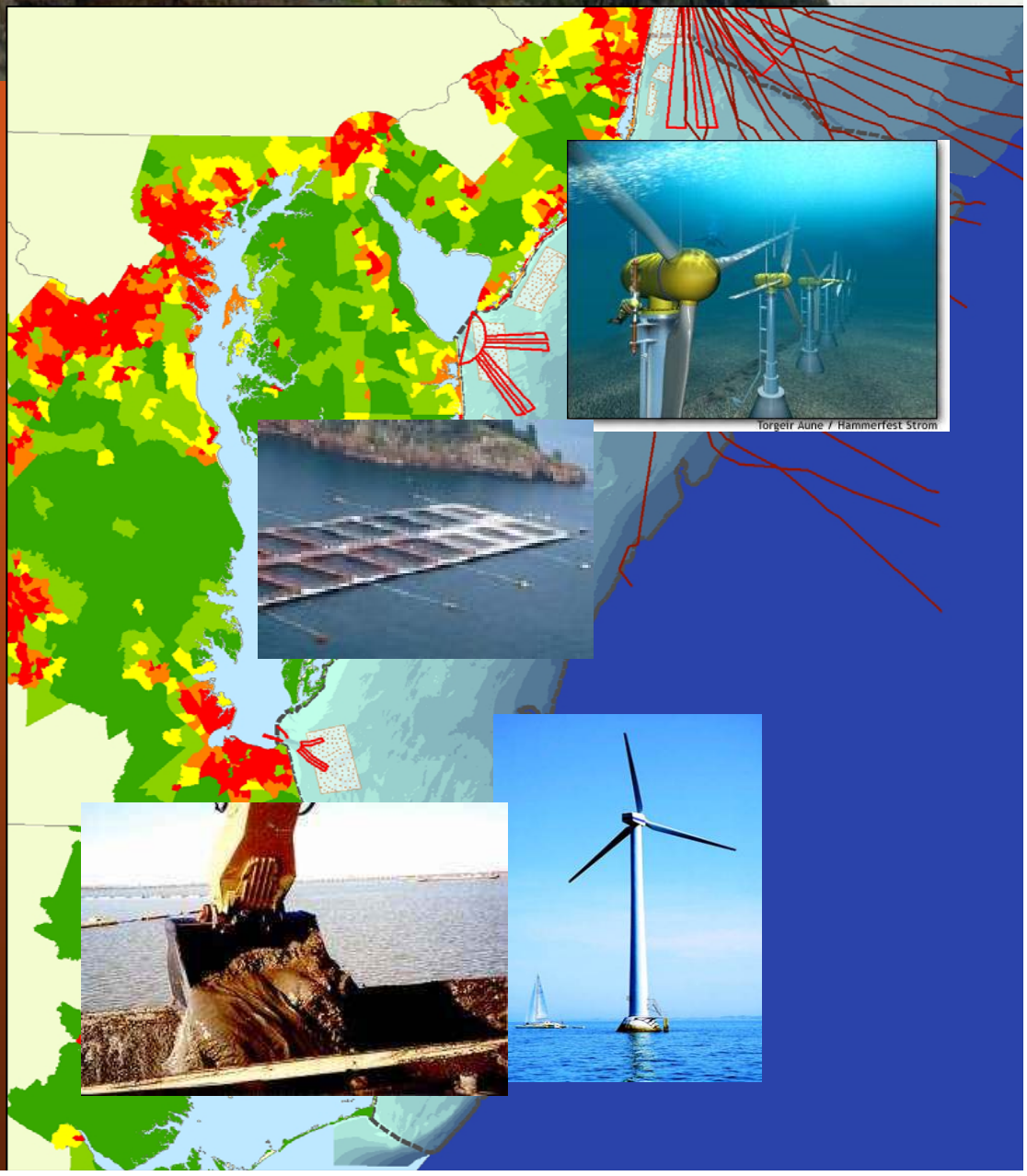


Human Uses:

(examples)

- Energy siting
- Shipping Lanes
- Telecom Cables
- Sand mining
- Aquaculture
- Fishing
- Dredging
- Population density





Utility of Ecoregional Assessment:

- Take Strategies to Scale, Regional “coast-shed approach”
- More efficient and effective resource allocation by NGOs and Gov’t Agencies
- Blueprint of biodiversity for Ecosystem Based Mgt
- Decision support for marine and coastal planning
- Resource to i.d. priorities for adaptation to Sea Level Rise
- Biological info to craft market based solutions
- Understand species migration for land use decisions (eg. Diadromous fish)

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Information to identify priority adaptation strategies for sea level rise

A Nexus for TNC and USACE:

- Protection of natural living shorelines
- Resilience and hazard mitigation
- Improve Sea Level Rise Modeling

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Challenges

- Coastal Population Growth
- Sea Level Rise
- Increase intensity and occurrences of storm events

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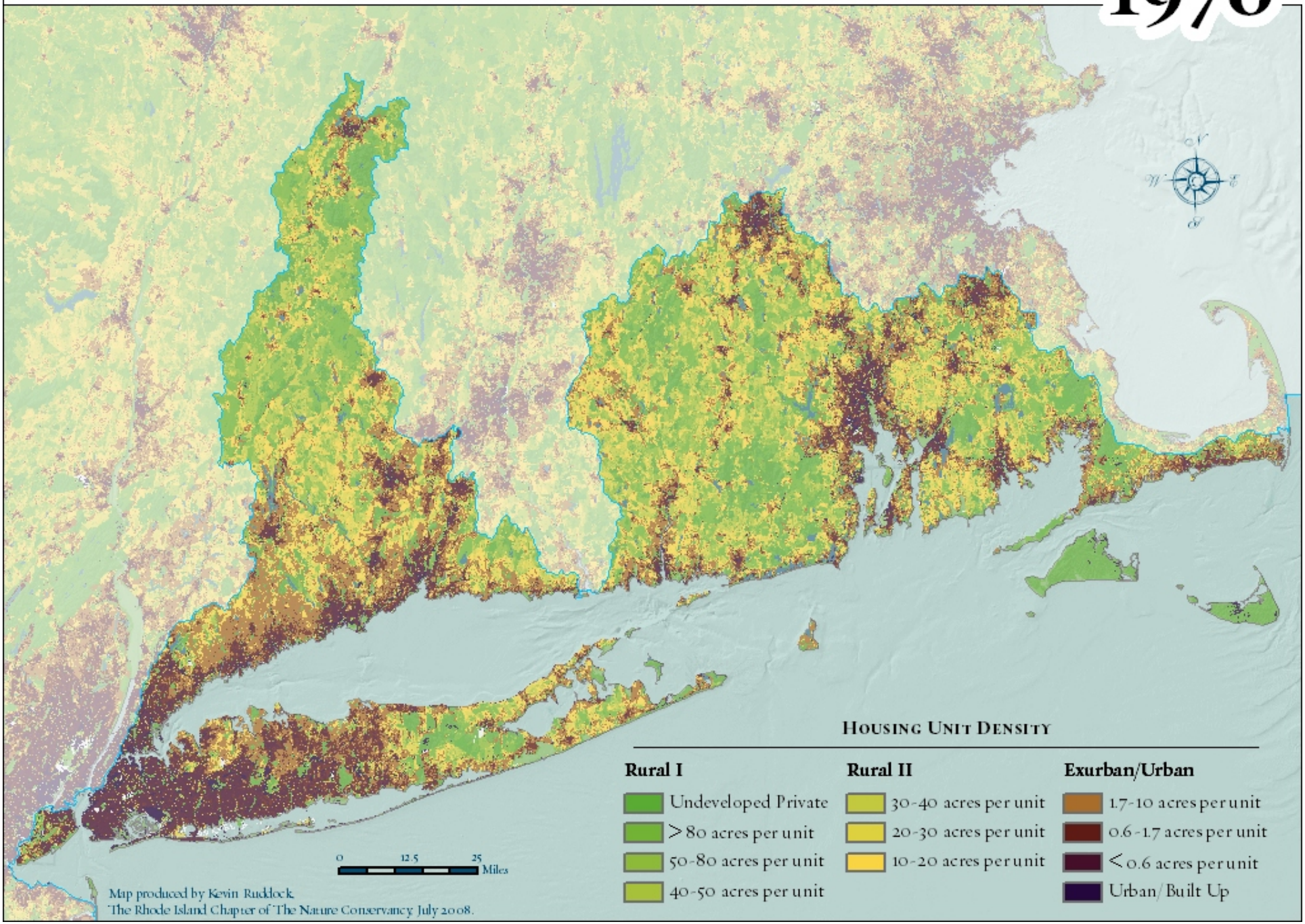
SNE/Edge of Ice Integrated Landscape

1970



Map produced by Kevin Ruddock
The Rhode Island Chapter of The Nature Conservancy July 2008.

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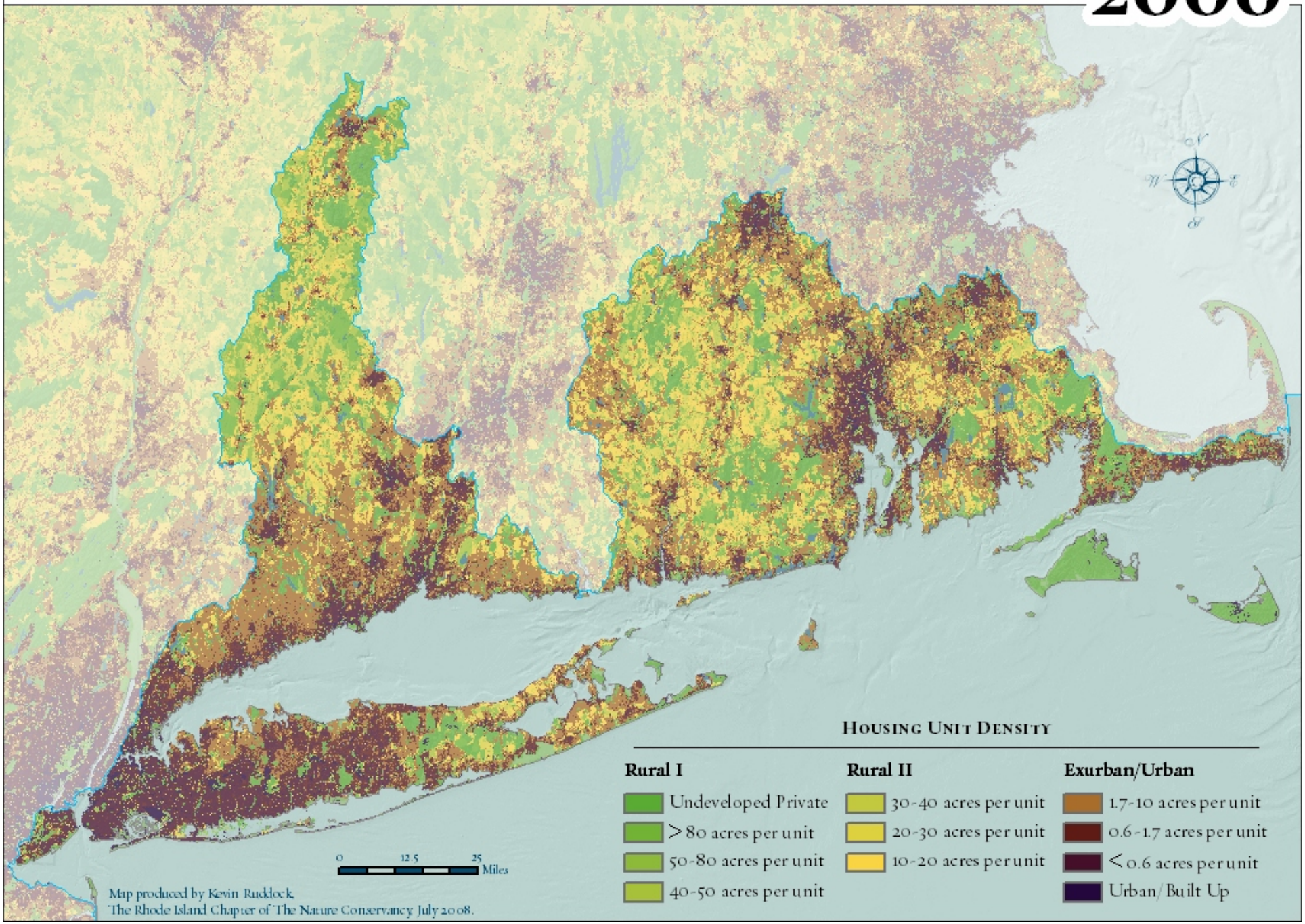
SNE/Edge of Ice Integrated Landscape

2000



Map produced by Kevin Ruddock
The Rhode Island Chapter of The Nature Conservancy July 2008.

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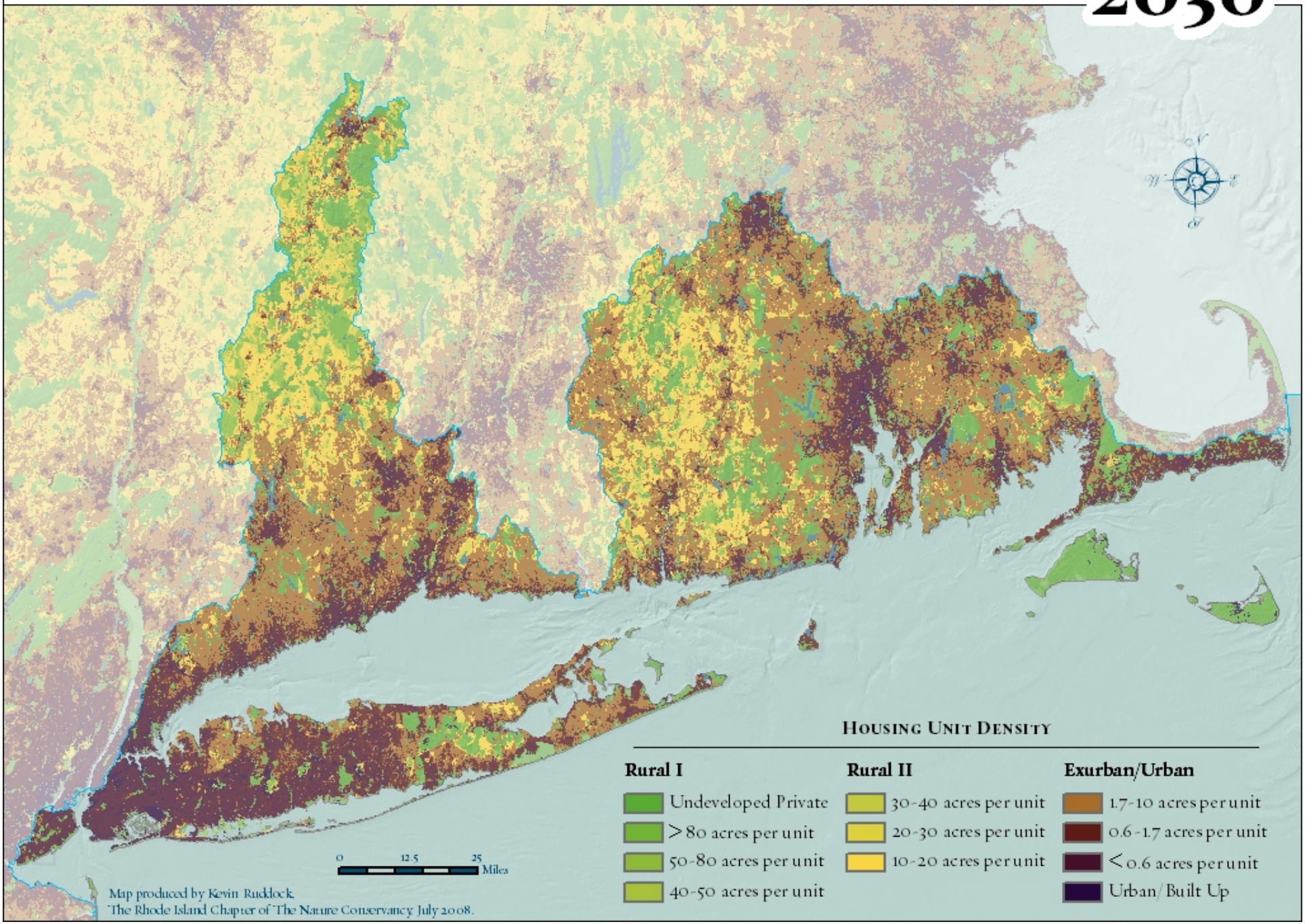
SNE/Edge of Ice Integrated Landscape

2030



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Sea Level Rise

- Modeling Clearly shows current and future sea level rise

TNC is developing “Climate Wizard”

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Increased Storm Intensity

Edgewood Yacht Club, Hurricane Carol, Rhode Island, 1954

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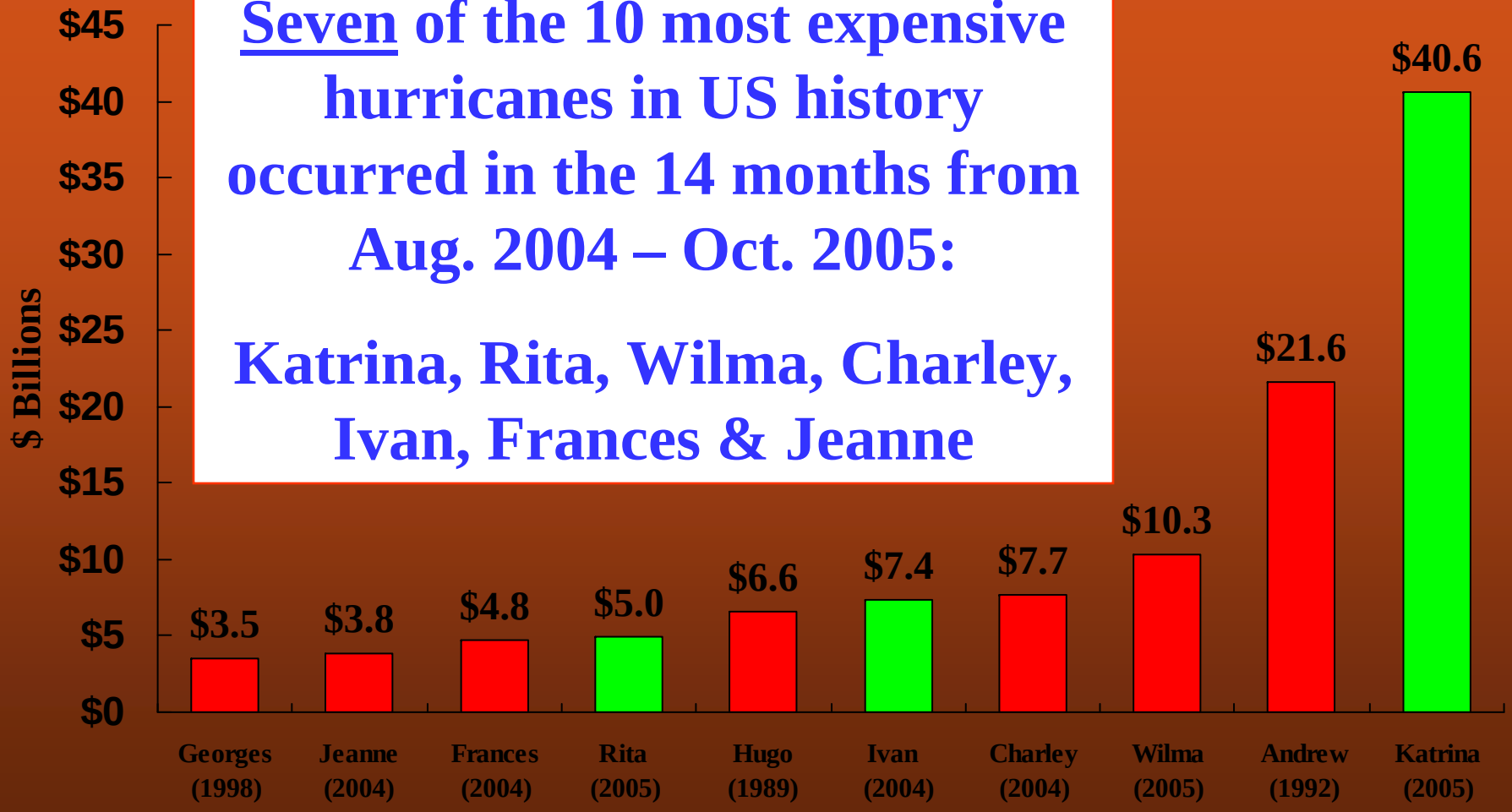
Top 10 Most Costly Hurricanes in US History, (Insured Losses, $2005)

Seven of the 10 most expensive hurricanes in US history occurred in the 14 months from Aug. 2004 – Oct. 2005:

Katrina, Rita, Wilma, Charley, Ivan, Frances & Jeanne



Sources: ISO/PCS; Insurance Information Institute.

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Example from Katrina

Islands and wetlands protect coast against storm surges

However, islands and wetlands are also vulnerable to more intense hurricanes resulting from warmer oceans.

Vulnerability to storms is exacerbated by sea level rise.

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Challenge:

Increasing Coastal Populations

Sea Level Rise

Increased Number and Intensity of Storm Events

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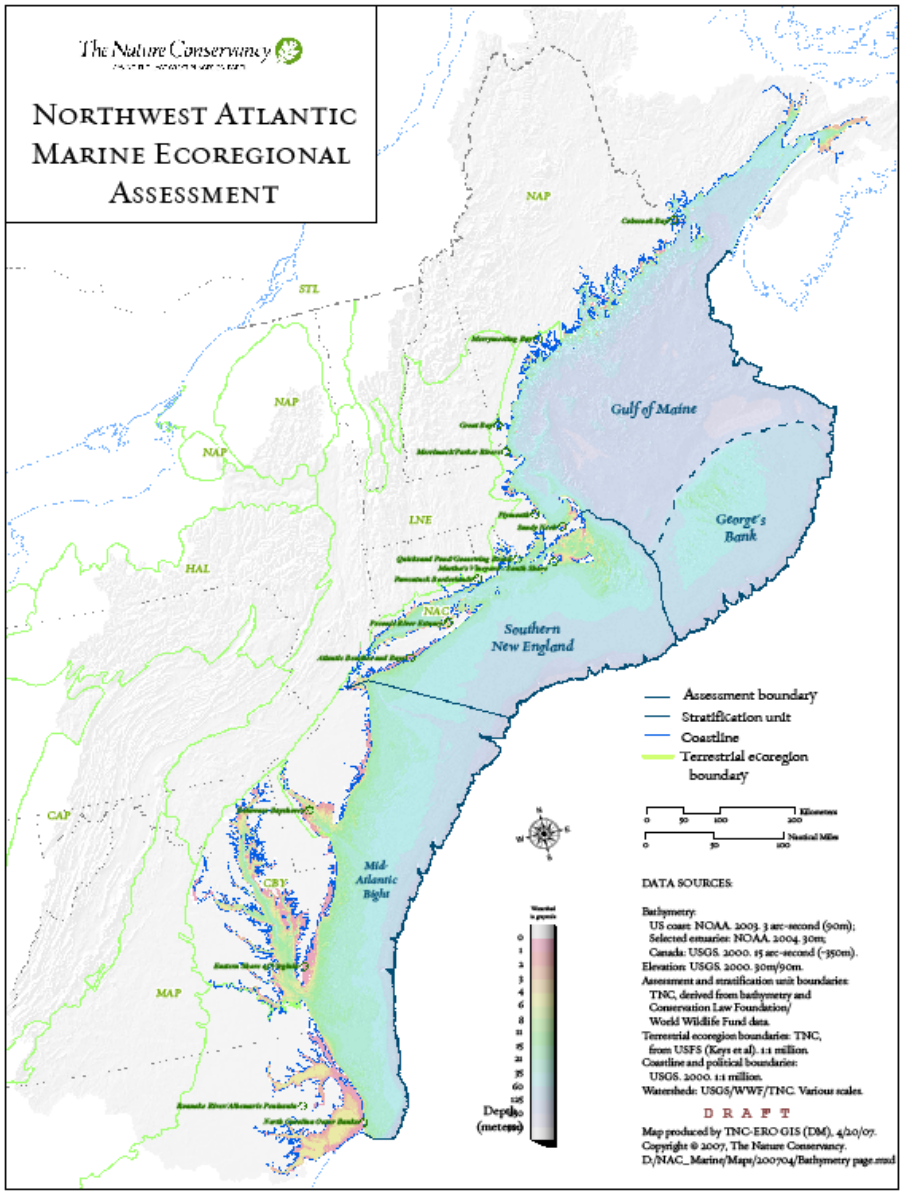

By partnering with USACE and many others, we believe this Marine and Coastal Assessment will provide a data rich regional context to utilize for:

- Establishing regional priorities
- Enhancing better resource decision making
- Justifying investments

The Nature Conservancy and US Army Corps of Engineers Partnership Sites

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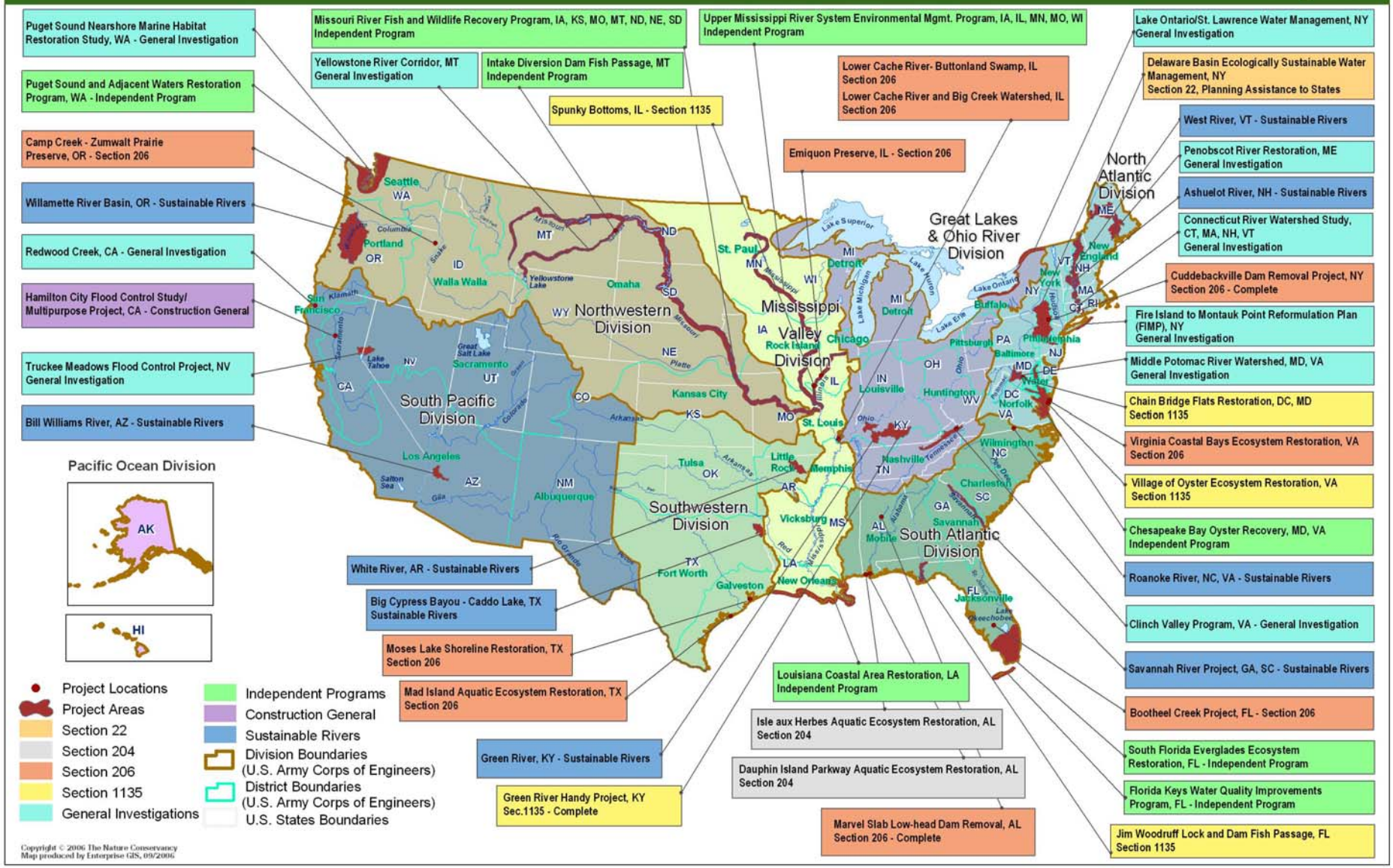
US Army Corps of Engineers



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Map produced by Enterprise GIS, 09/2006

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Enhancing Collaboration

This Slide is from Last Time I spoke to CERB in NJ, Here's our progress:

- ✓ Current law does not allow non-profits as cost share partners in feasibility studies—we support amendment to change this in pending WRDA Reauthorization Bill.
- ✓ Partner EUSCR on Marine Ecoregional Assessment
- ✓ More joint efforts to find overlap of Corps and TNC priorities (NAC Plan & NE District)
- ➢ Valuation of "Ecosystem Services"

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Enhancing Collaboration

- Continue to seek joint projects that restore coastal resources, especially those that will help build resiliency into systems in the face of climate change

- TNC is seeking new authority through WRDA for USACE NAD to utilize data from NAM ERA and to prioritize restoration through *regional* Coastal and Marine Management Plan

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THANK YOU!