ACFHP Project:

Scoy and Staudinger's Pond Fish Passage & Habitat Enhancement

PROJECT MANAGER:

Laura Stephenson, NYSDEC/Peconic Estuary Program

TODAY'S PRESENTER:

Dawn McReynolds, NYSDEC

Atlantic Coastal Fish Habitat Partnership

Annual Meeting

Charleston, SC

November 10, 2010

George Schuler, Chair

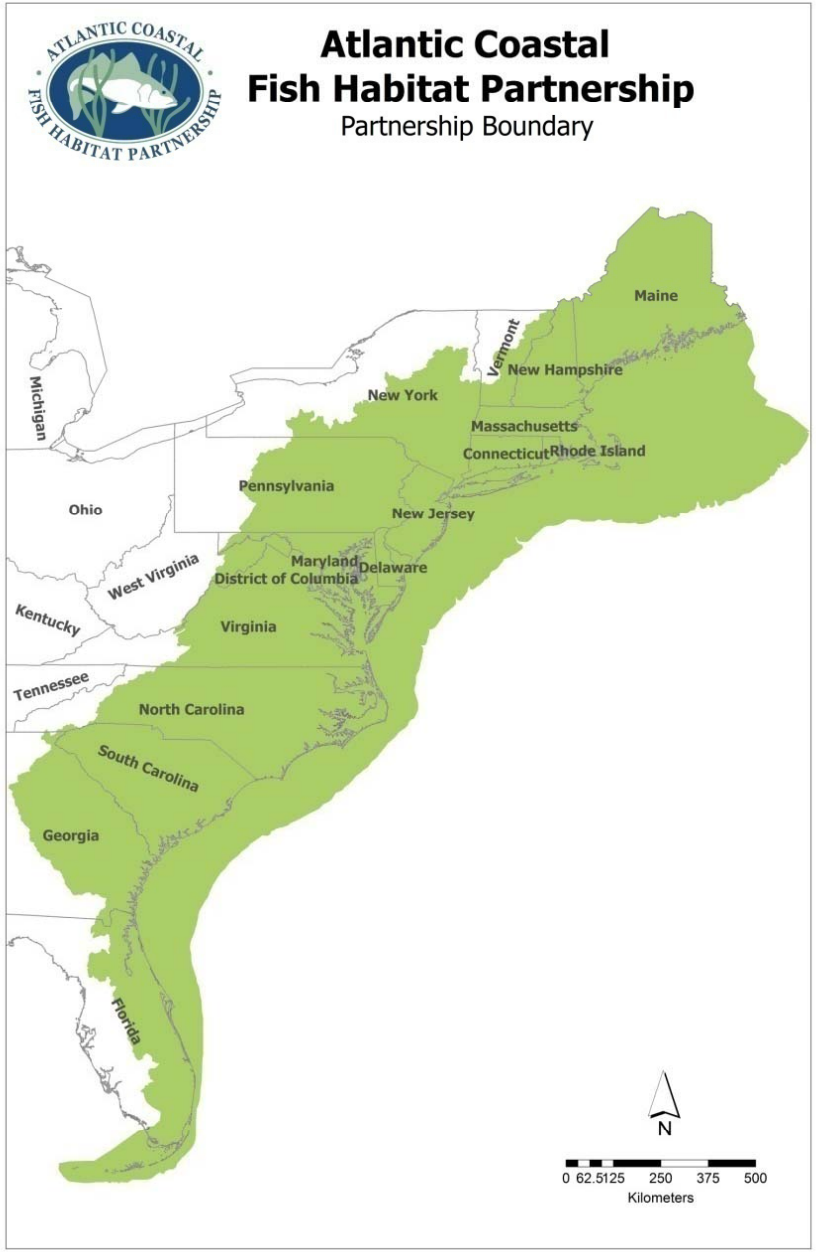
- What is the Atlantic Coastal Fish Habitat Partnership (ACFHP)?
- Science Project Development
  - Species-Habitat Matrix
  - Assessment of Existing Habitat Information
- Strategic Planning
- FY10 Funded Projects
- 2010 Endorsed Project
- FY11 Project Applications
- Website

What is ACFHP: Mission

To accelerate the conservation, protection, restoration, and enhancement of habitat for native Atlantic coastal, estuarine-dependent, and diadromous fishes through partnerships between federal, tribal, state, local, and other entities.

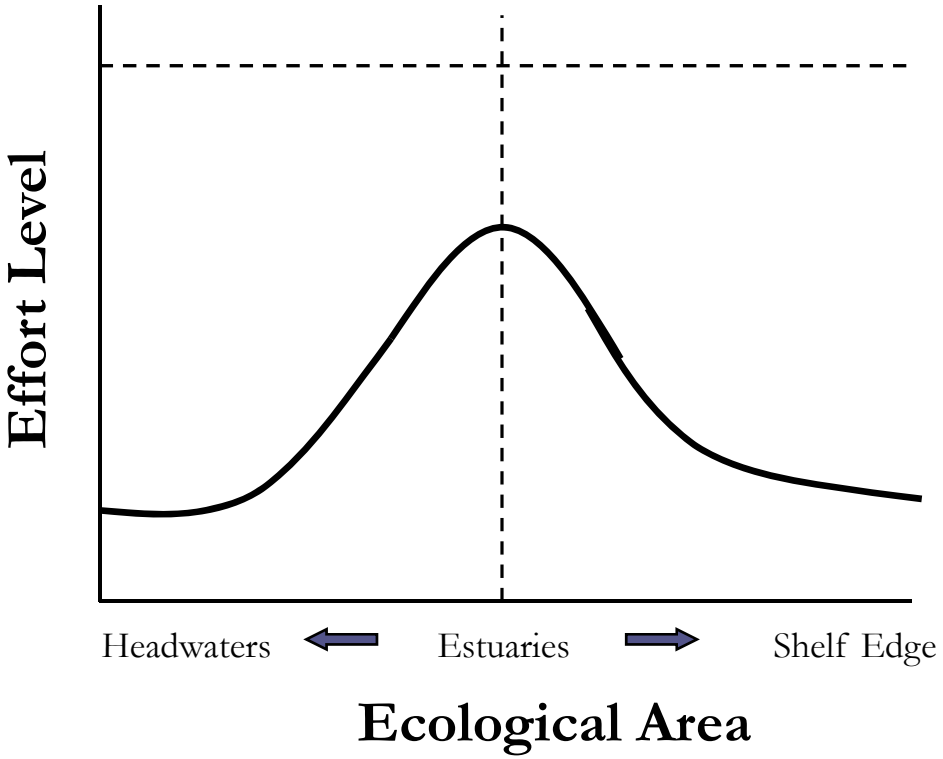
What is ACFHP: Partners

- American Littoral Society
- American Rivers
- ASMFC
- Chesapeake Bay Foundation
- Connecticut DEP
- Delaware DNREC
- Environmental Defense Fund
- Florida FWCC
- Georgia DNR
- Houlton Band of Maliseet Indians
- Maine DMR
- Maryland DNR
- Massachusetts DMF
- NOAA
- New Hampshire FGD
- New Jersey DFW
- New York DEC
- North Carolina DENR
- Oyster Recovery Partnership
- Partnership for the Delaware Estuary
- Pennsylvania FBC
- Rhode Island DFW
- South Carolina DNR
- The Nature Conservancy
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- Vermont FWD
- Virginia Marine Resources Commission
- Wells National Estuarine Research Reserve



What is ACFHP:

Partnership Geographic Extent



Science Projects

- **Species-Habitat Matrix**
- Assessment of Existing Habitat Information (AEHI)

Species-Habitat Matrix: Overview

- **Species-Habitat Matrix is:**

  An assessment of the importance of coastal & inland habitats for selected fish species, in terms of:
  - Shelter
  - Direct trophic links
  - Spawning
  - Nurseries

Mid-Atlantic	Highest Score	2nd Highest Score	3rd Highest Score	4th Highest Score	5th Highest Score
Habitat Category with Highest Overall Score	Coastal Inert substrate (647)	Riverine (575)	Submerged Aquatic Vegetation (265.5)	Marine & Estuarine Shellfish beds (219)	Tidal Vegetation (179)
Habitat Type with Highest Overall Score [Habitat Category]	Loose fine bottom (260) [Coastal Inert Substrate]	Mesohaline-Polyhaline spp. (175.5) [Submerged Aquatic Vegetation]	Lower Gradient Large Mainstem River (147) [Riverine]	Loose coarse bottom (134.5) [Coastal Inert Substrate]	Structured sand habitat (124.5) [Coastal Inert Substrate]

S-H Matrix: Species Included

- 131 different species across four regions
  - All ASMFC-managed species
  - All Council-managed species
  - All other native diadromous species
  - Select state-managed species and unmanaged species

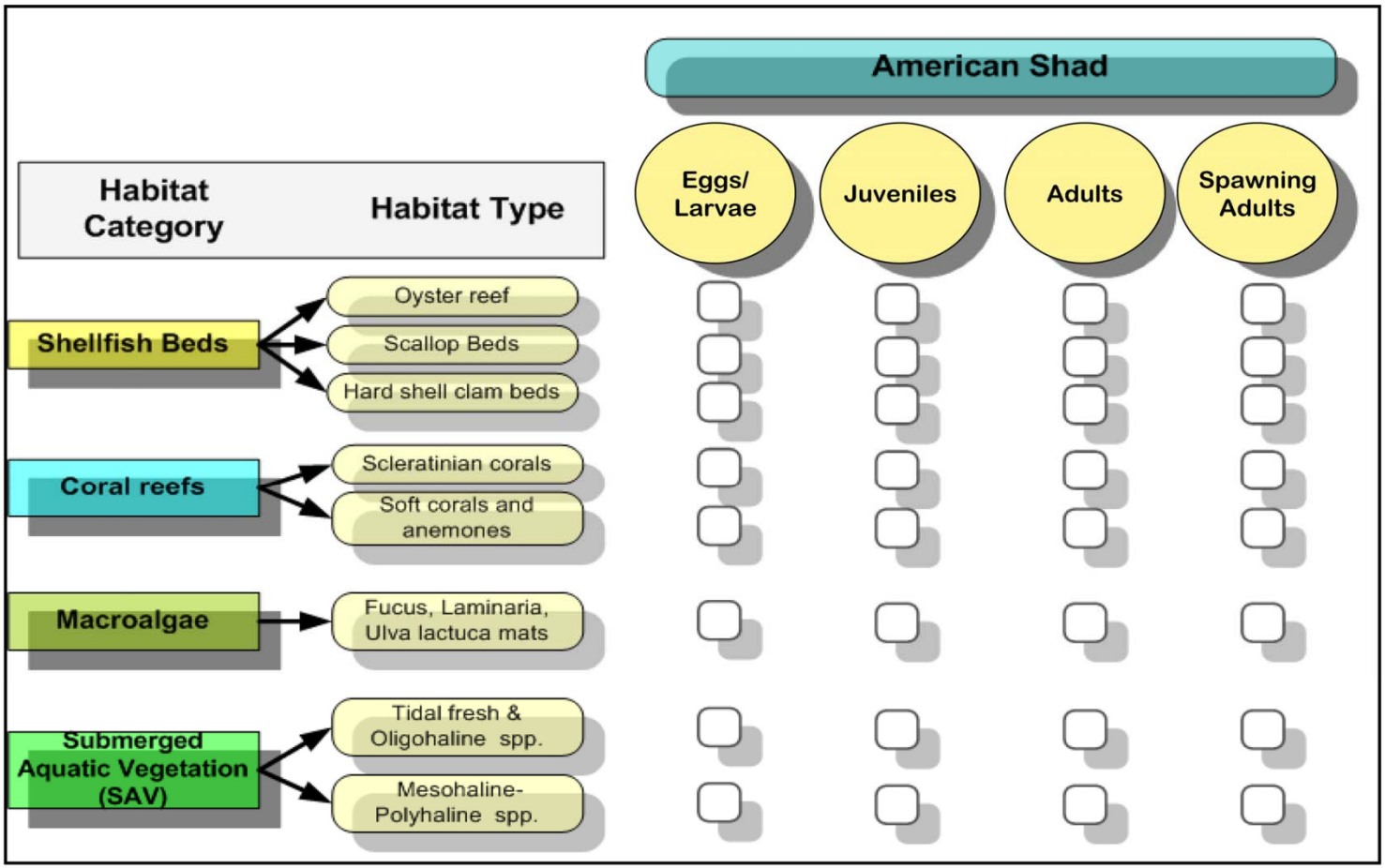
Images by Diane Peebles

S-H Matrix: Getting Started

Matrices Completed Regionally:

- *North Atlantic* (Canadian border to Cape Cod)
- *Mid-Atlantic* (Cape Cod to Cape Hatteras)
- *South Atlantic* (Cape Hatteras to Cape Canaveral)
- *South Florida* (Cape Canaveral south through Florida Keys)

Species-Habitat Matrix: Snapshot



S-H Matrix: Products

- *Now Available:* Summary Report
- *Next Steps:*
  - Develop a manuscript for publication in a peer-reviewed journal and
  - identify format for distributing data.

Science Projects

- Species-Habitat Matrix
- **Assessment of Existing Habitat Information (AEHI)**

Award Winning!

Assessment of Existing Habitat Information: Overview

Database of documents, data sets, and information portals on Atlantic coastal fish species and habitats.

- Bibliographic and Assessment Databases
- GIS Framework
- *Now Available:* Project Report, NOAA Tech Memo, and Web-based Query Tools

AEHI: Bibliographic Database

- Over 500 entries
- Synoptic assessments
- Local and regional assessments and management plans

AEHI: Assessment Database

- Over **200** entries yielding *indicator*, *threat*, or *action* information
- Parameter and value recorded in separate table by waterbody and reference
- Habitat Assessments and Conservation Plan documents provide the richest sources of "policy-relevant" information

AEHI: Web-Based Query Tools

Habitat Type	Region	State	Zone	Waterbody	Information Type
All Types Coastal Inert Substrate Estuarine Waters Macroalgae	All Regions Mid-Atlantic North Atlantic South Atlantic	All States CT DC DE	All Zones CDA EDA Estuarine	All Waterbodies Barnegat Bay Barnegat Bay EDA Buzzards Bay	All Items Conservation Plan Habitat Assessment Habitat Characterization

Grid Output Excel Download

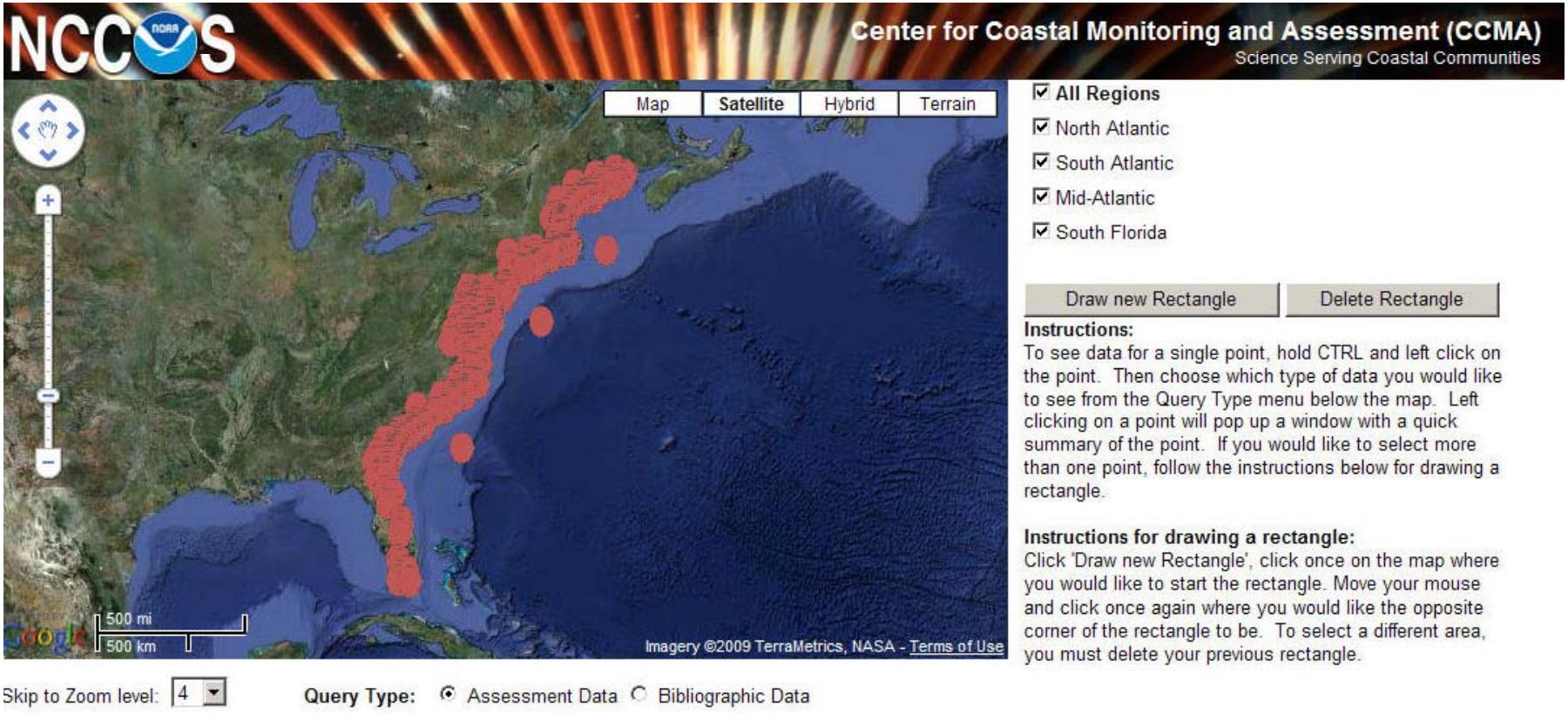
Query

Because any document may refer to multiple habitat types, these documents can appear in the output multiple times. Additionally, numerous habitat types occur in documents referencing a specific waterbody or waterbodies. However, in actuality, these habitat types are not necessarily found in these waterbodies.

Title	Year	Authors	Organization	Publication Info	Species	Habitat Type	Information Type	Web Location
Atlantic coast diadromous fish habitat: A review of utilization, threats, recommendations for conservation, and research needs	2009	Greene, K.E., J.L. Zimmerman, R.W. Laney, and J.C. Thomas-Blate	Atlantic States Marine Fisheries Commission, Washington DC	ASMFC Habitat Management Series No. 9	Alewife, American eel, American shad, Atlantic sturgeon, Hickory shad, Striped bass, Blueback herring	Estuarine Waters	Conservation Plan	Click Here
Atlantic coast diadromous fish habitat: A review of utilization, threats, recommendations for conservation	2009	Greene, K.E., J.L. Zimmerman, R.W. Laney, and J.C. Thomas-Blate	Atlantic States Marine Fisheries Commission, Washington DC	ASMFC Habitat Management Series No. 9	Alewife, American eel, American shad, Atlantic sturgeon, Hickory shad, Striped	Riverine	Conservation Plan	Click Here

http://www8.nos.noaa.gov/bhv/spatbibQuery.aspx

AEHI: Web-Based Query Tools



http://www8.nos.noaa.gov/bhv/spatbibMap.aspx

Conservation Strategic Planning

Recognizing limited resources, the real trick is the balance of focusing time, effort, and money, while at the same time keeping our tent as wide as possible.

Conservation Strategic Planning

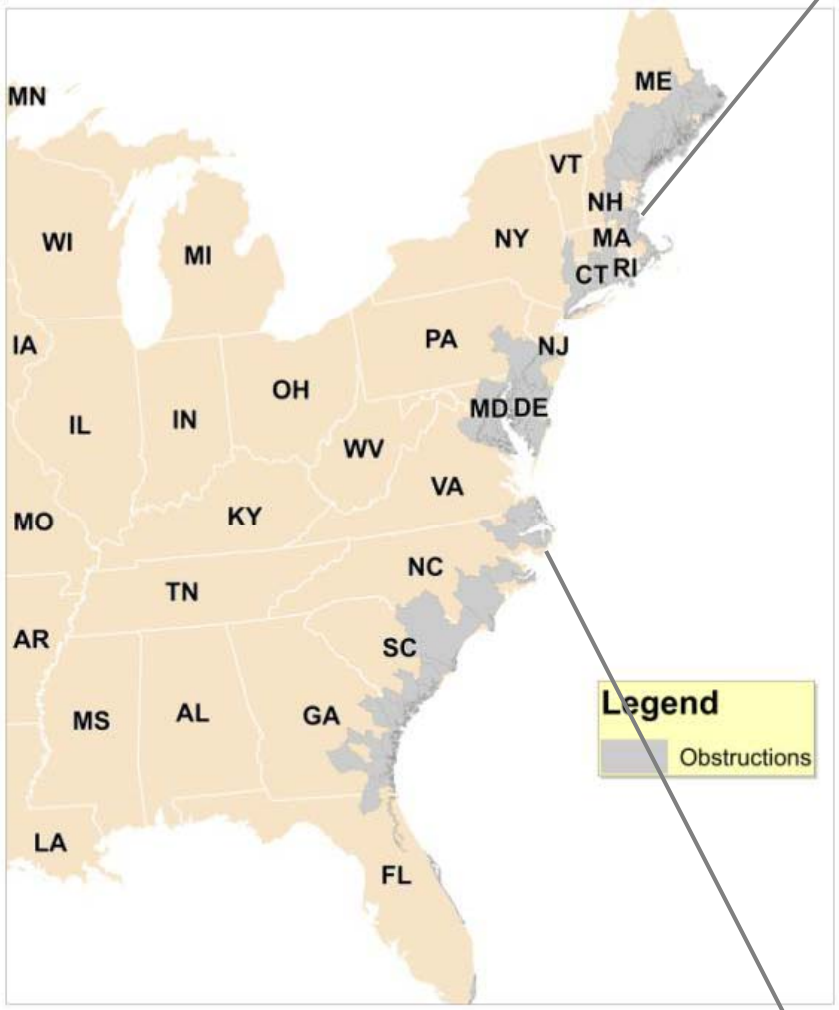
- 5-Year Conservation Strategic Plan
  - NFHAP Goals →ACFHP Goals
  - Priority Threats →Objectives and Strategic Actions
- 2-Year Implementation Plan
  - Objectives and actions to address priority habitats
  - Programmatic objectives
- Regional Specific Action Plans (*upcoming*)
  - Time-bound and Quantifiable
  - Specific Action Items
  - Measures & Reporting Mechanism

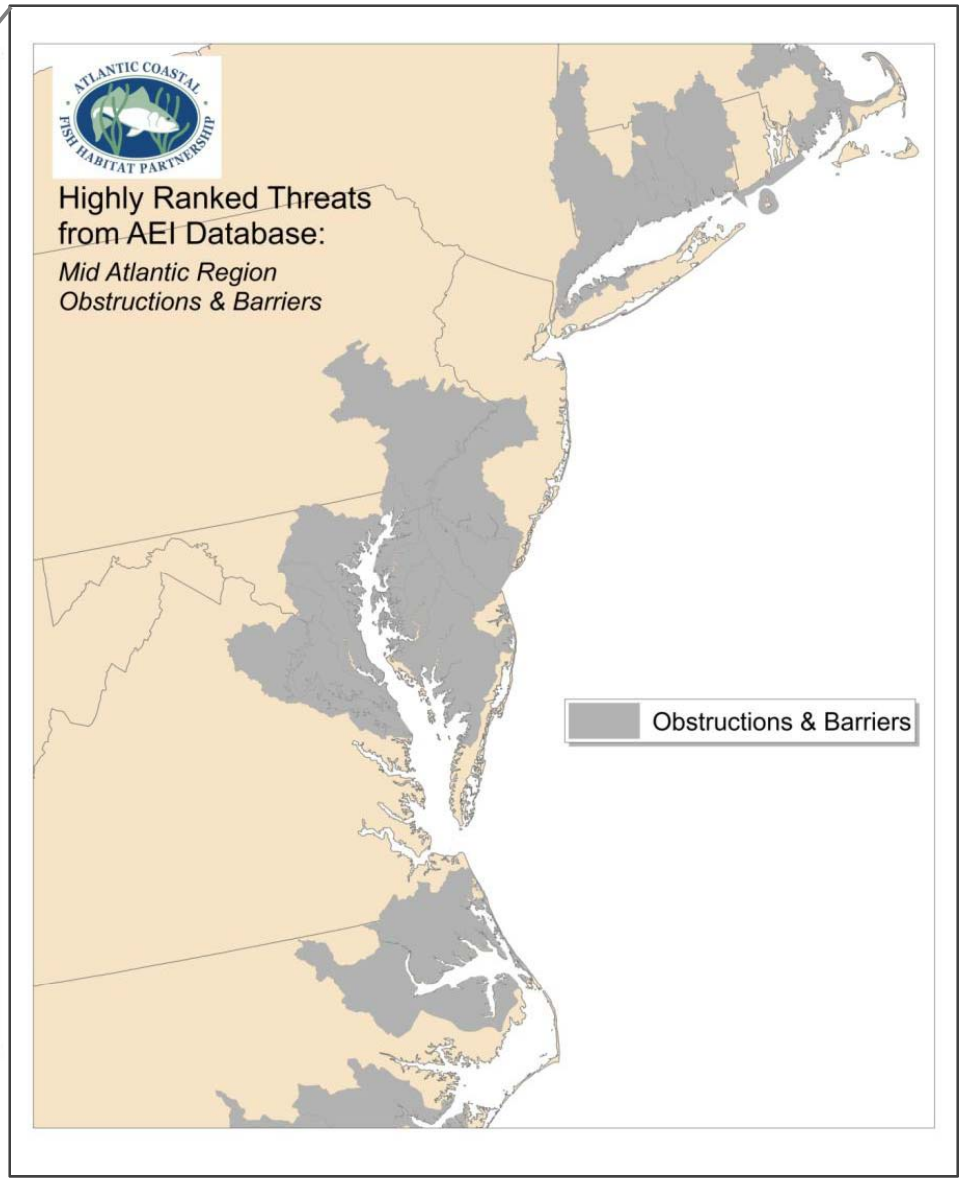
Snapshot of the S-H Results

New England	Highest Score	2nd Highest Score	3rd Highest Score	4th Highest Score	5th Highest Score
Habitat Category with Highest Overall Score	Coastal Inert Substrate (491)	Riverine (372)	Submerged Aquatic Vegetation (155)	Marine & Estuarine Shellfishbeds (133)	Tidal Vegetation (109)
Habitat Type with Highest Overall Score [Habitat Category]	Loose Fine Bottom (154.5) [Coastal Inert Substrate]	Loose Coarse Bottom (123) [Coastal Inert Substrate]	Structured Sand (108.5) [Coastal Inert Substrate]	Firm Hard Bottom AND Mesohaline-Polyhaline spp. (105) [Coastal Inert Substrate and Submerged Aquatic Vegetation]	

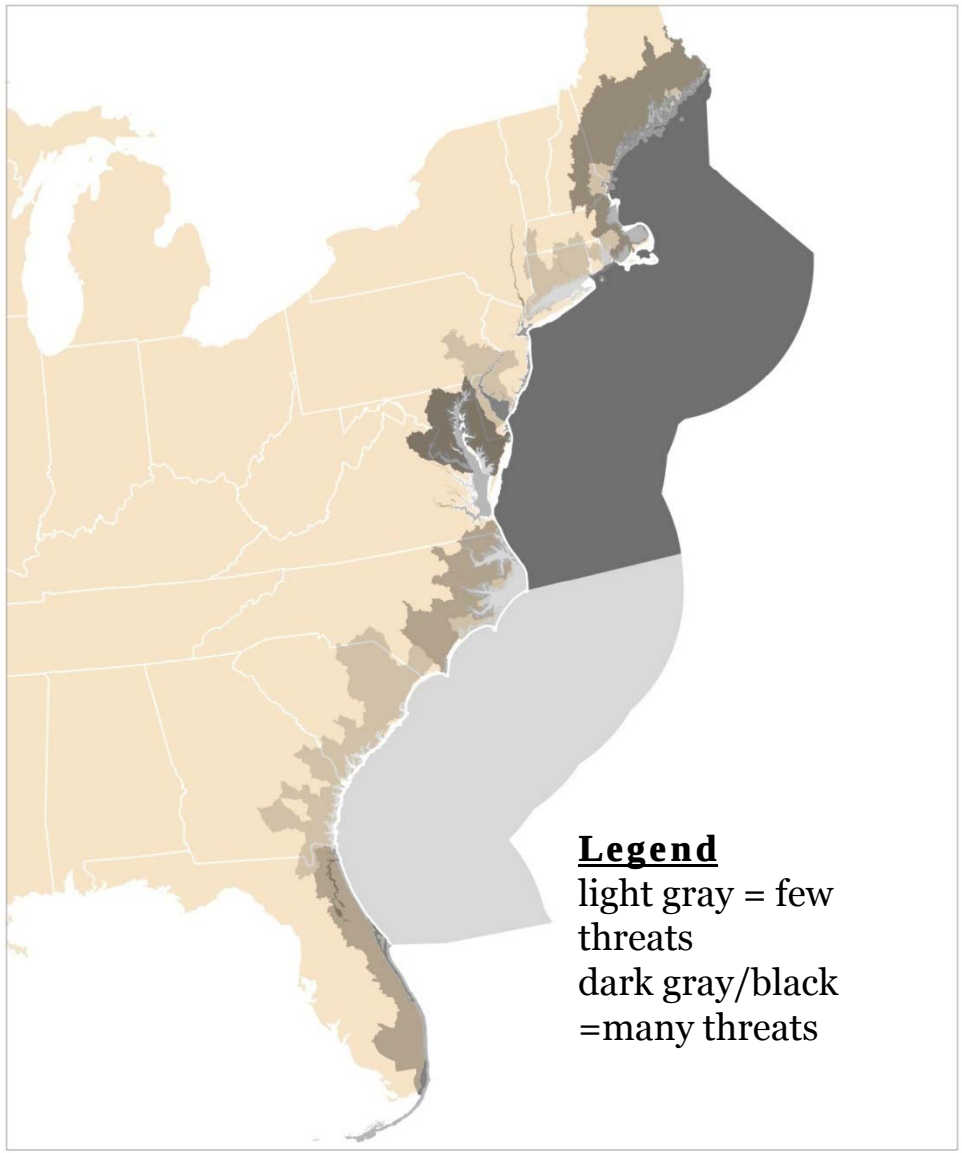
Mid-Atlantic	Highest Score	2nd Highest Score	3rd Highest Score	4th Highest Score	5th Highest Score
Habitat Category with Highest Overall Score	Coastal Inert substrate (647)	Riverine (575)	Submerged Aquatic Vegetation (265.5)	Marine & Estuarine Shellfish beds (219)	Tidal Vegetation (179)
Habitat Type with Highest Overall Score [Habitat Category]	Loose fine bottom (260) [Coastal Inert Substrate]	Mesohaline-Polyhaline spp. (175.5) [Submerged Aquatic Vegetation]	Lower Gradient Large Mainstem River (147) [Riverine]	Loose coarse bottom (134.5) [Coastal Inert Substrate]	Structured sand habitat (124.5) [Coastal Inert Substrate]

ACFHP Threats mapped from AEHI



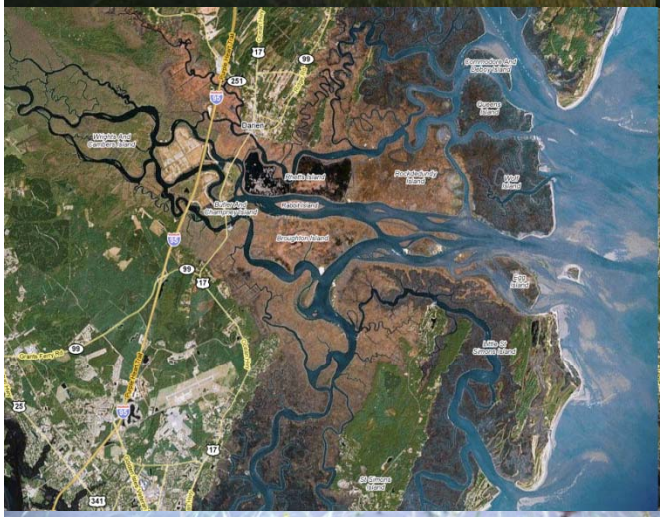


Composite threats from AEHI



Note: this map attempts to illustrate the cumulative occurrence of threats for water bodies across ACFHP.

Each threat layer from the map is weighted equally. The sum of these layers is represented in this map



FY2010: First Round of Project Funding

- Recognition qualified ACFHP for $90,000 in NFHAP funds from USFWS
  - $70,000 available for funding projects
- Solicited projects through Steering Committee members and other partners.
- Six eligible project applications were received for funding and one for endorsement.
- 2 projects funded
- 1 project endorsed

FY2010 Funded Projects

Alewife Brook/Scoy Pond and Staudinger's Pond Alewife Access and Habitat Enhancement will restore 18 acres of historic alewife habitat in the Peconics (3% of the estuary wide goal of 527 acres)

Photo: NYSDEC/PEP

Goose Creek Dam Eel Passage Restoration will restore eel passage to the entire Goose Creek watershed (40 stream miles and adjacent freshwater wetlands)

Photo: SCDNR

Protecting eelgrass habitat through the use of conservation moorings

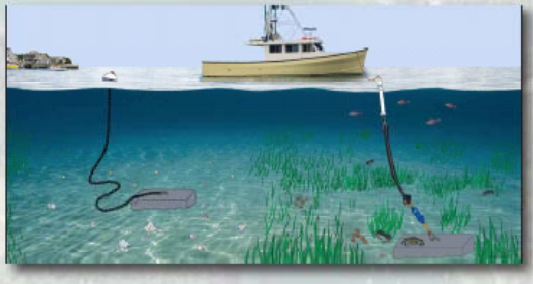
The National Oceanic and Atmospheric Administration (NOAA) has partnered with the Town of Tisbury, the Massachusetts Division of Marine Fisheries, the US Environmental Protection Agency, and the Nature Conservancy to protect fish habitat within the Town of Tisbury. Through this partnership, the Town of Tisbury is in the process of replacing traditional boat moorings with alternative moorings in order minimize adverse impacts to important eelgrass habitat.

Importance of eelgrass habitat

Eelgrass serves as an extremely valuable spawning and nursery habitat for a variety of fish and shellfish species, including winter flounder, summer flounder and bay scallop. It also is an important primary producer supporting the base of the food chain. Throughout Massachusetts and the Northeast, eelgrass meadows have been declining over the past 20 years. The decline is primarily from deteriorating water quality, but also as a result of a wide range of physical alterations such as dredging and filling, as well as boating related impacts.

Impacts to eelgrass habitat from moorings

Eelgrass habitat is vulnerable from a number of boating related activities, including the use of traditional chain moorings. Traditional chain moorings, when placed within or adjacent to eelgrass beds, can severely damage habitat through scour. Furthermore, the disturbance to the seafloor by mooring chains can suspends sediment and decrease water clarity, which diminishes the level of light penetration critically important to eelgrass growth and survival.

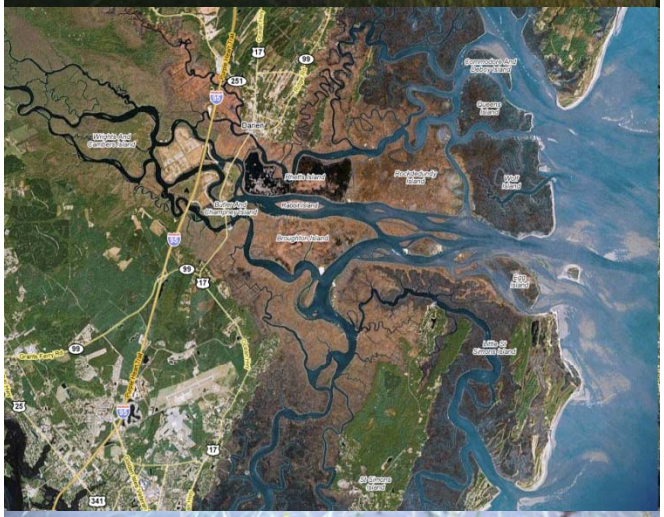


What are conservation moorings?

A conservation mooring system can be described as any mooring system that is designed to avoid contact with the seafloor, generally through the use of flexible, floatable lines. Depending on the substrate, helical anchors may be used in place of traditional concrete mooring block in order to reduce the footprint within eelgrass or shellfish habitat.

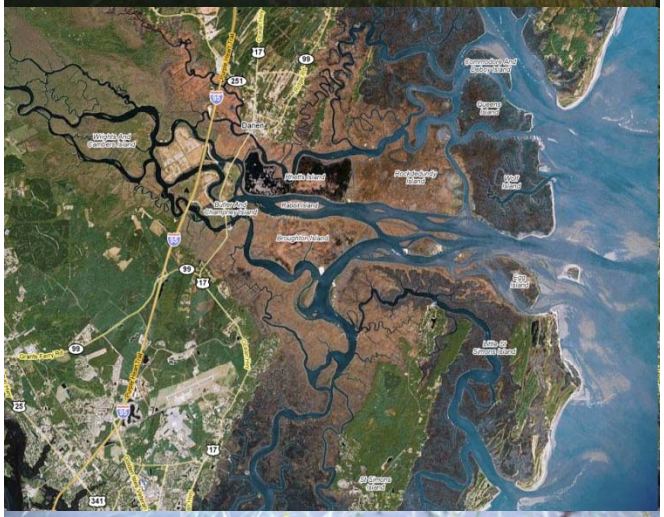
Monitoring to assess eelgrass habitat recovery

In order determine the level of eelgrass recovery once conservation moorings have been deployed, researchers from NOAA, the Massachusetts Division of Marine Fisheries and the US Environmental Protection Agency, long-term monitoring is ongoing. This monitoring effort will allow researchers to develop an understanding of the effectiveness of this technology as a coastal resource management tool.



FY2011 Project Applications

- Solicited projects through Steering Committee members and other partners via the website breaking news.
- Eight eligible project applications were received
- Project applications were evaluated by Steering Committee members and other partners
- Rankings approved by the Steering Committee

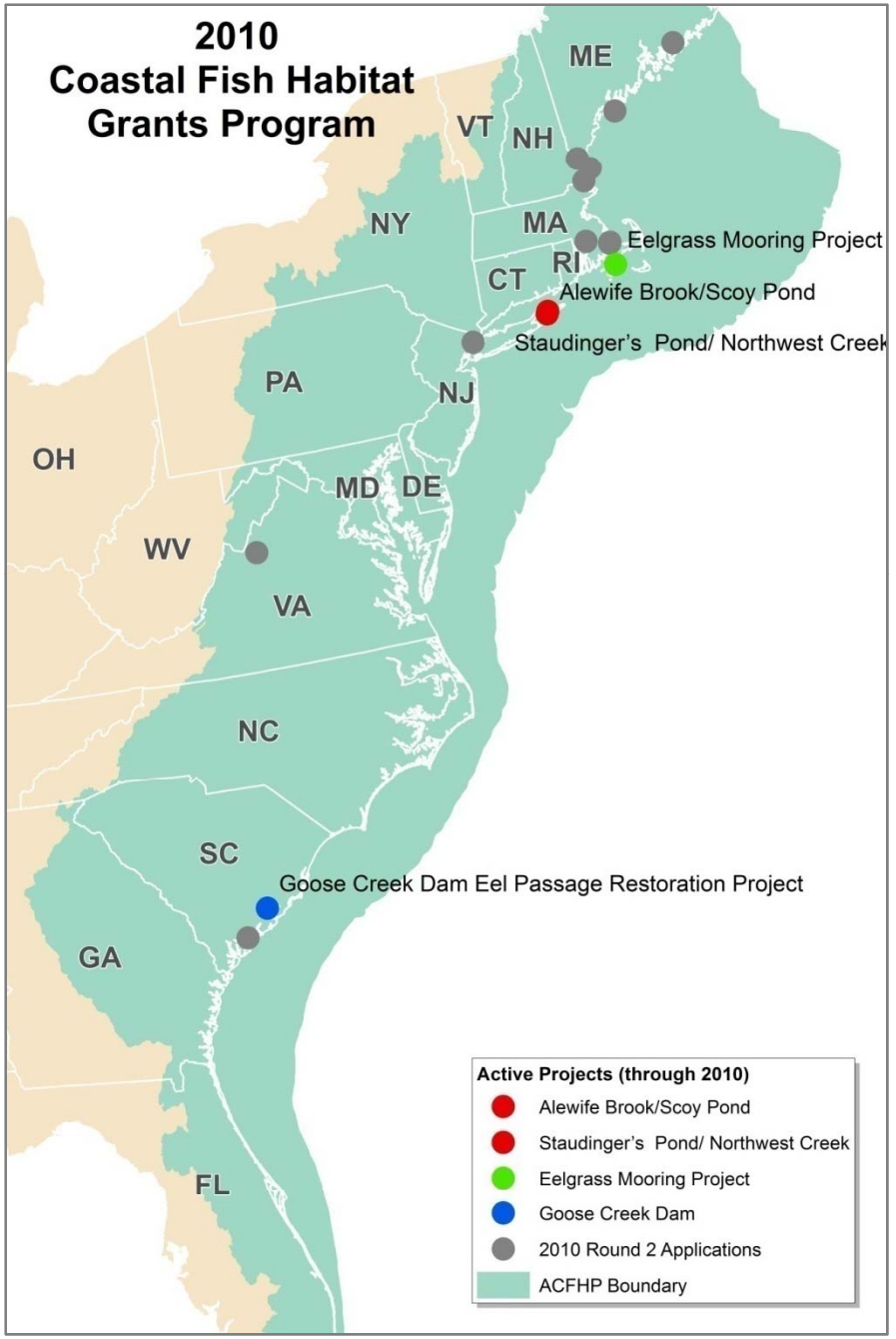


FY2011 Eligible Project Applications

Project Name	State
Restoring fish passage and stream function in Meadow Brook and Barrows Stream Tributary, ME: NFHAP/ACFHP	Maine
Restoring Diadromous Fish Passage and Habitat to Shoreys Brook, ME NFHAP/ACFHP	Maine
Flanders Stream Connectivitiy Restoration Project-NFHAP/ACFHP	Maine
Mill River Restoration (Morey's Bridge/Dam Fishway), MA NFHAP/ACFHP	Massachusetts
Red Brook Headwaters and Century Bog Restoration Project, MA NFHAP/ACFHP	Massachusetts
Bronx River-Installation of denile steepass on 182nd St. Dam, NY NFHAP ACFHP	New York
Dam Removal and Stream Restoration: Mossy Creek, Augusta County, VA NFHAP/ACFHP	Virginia
Shoreline and Spartina Marsh stabilization along the Atlantic Intracoastal Waterway in SC, NFHAP/ACFHP	South Carolina

ACFHP Projects

- FY10 FWS-NFHAP Funded projects
- ACFHP Endorsed Project
- FY11 FWS-NFHAP Eligible project applications



Atlantic Coastal Fish Habitat Partnership

Working together to conserve coastal, estuarine-dependent, and diadromous fish habitat

HOME | ABOUT US | PROJECTS | PLANNING RESOURCES | UPCOMING OPPORTUNITIES | COMMUNICATIONS

BREAKING NEWS

ACFHP Project Endorsement: Eelgrass Conservation Moorings Demonstration Project

September 2010 READ MORE ▶

ACFHP Opportunity for Project Applications

August 2010 READ MORE ▶

SEND US YOUR BREAKING NEWS ▶

Winter Flounder, Photo Credit : C. LoBue

Who We Are

The Atlantic Coastal Fish Habitat Partnership is a coast-wide collaborative effort to accelerate the conservation of habitat for native Atlantic coastal, estuarine-dependent, and diadromous fishes. We are a Partnership consisting of resource managers, scientists and professionals representing 30 different state, federal, tribal, non-governmental and other entities. We work in areas stretching from Maine to the Florida Keys, and from the headwaters of coastally draining rivers to the edge of the continental shelf, with a focus in estuarine environments

VIEW MAP ▶

What We Do

Develop goals, objectives, action strategies and priorities to guide conservation efforts directed towards fish habitat conservation on the Atlantic coast.

Secure, leverage, and distribute resources for on-the-ground fish habitat conservation projects.

Coordinate the implementation of fish habitat conservation projects on a coast-wide, regional, and local scale.

Develop coast-wide scientific projects whose outcomes serve as decision support tools for our partners and other entities working to conserve aquatic habitat.

ABOUT US ▶

Links To ...

- Species-Habitat Matrix Summary Report
- The Assessment of Existing Information Tools

Learn More About ...

NATIONAL FISH HABITAT ACTION PLAN

Search the site...

www.atlanticfishhabitat.org

Acknowledgements

- Jake Kritzer, EDF
- Moe Nelson, NOAA-NOS
- Lou Chiarella and Chris Boelke, NOAA-NMFS
- Laura Stephenson, NY DEC
- Bill Post, SC DNR

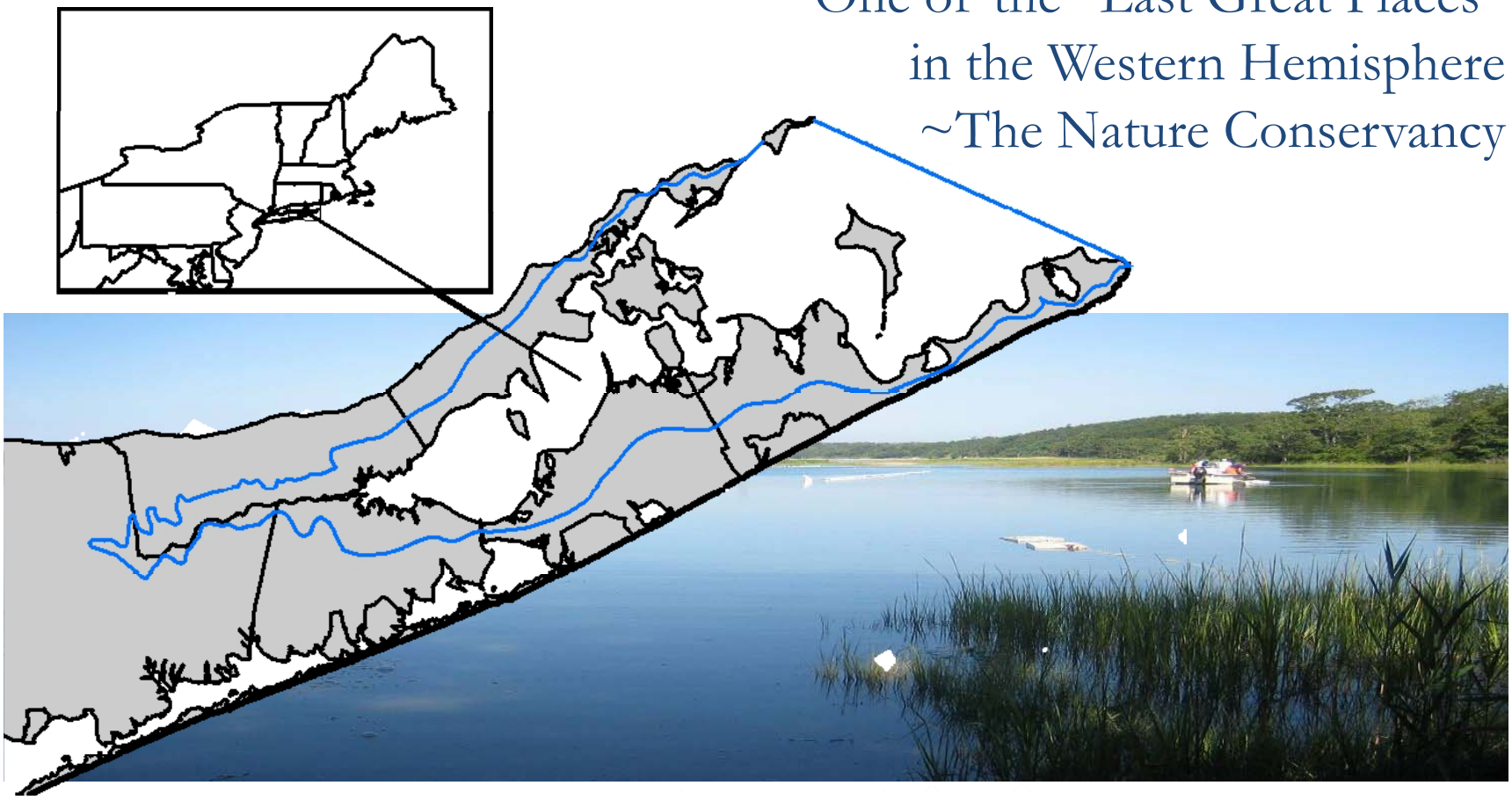
Emily Greene
ACFHP Coordinator
(703) 842-0740
EGreene@asmfc.org

For information on ACFHP go to:
www.atlanticfishhabitat.org

For information on NFHAP go to:
www.fishhabitat.org

Peconic Estuary, NY

One of the "Last Great Places"
in the Western Hemisphere
~The Nature Conservancy



ACFHP Project Locations:
East Hampton, NY

Staudinger's Pond, Northwest Creek

Scoy Pond

Will restore 18 acres of historic alewife habitat in the Peconics: 3% of the estuary wide goal of 527 acres.

Scoy Pond

Methodology:

-Replace dilapidated culvert under Alewife Brook Rd.

- Remove stream debris obstructing flow/access

- Remove invasives and enhance habitat

Habitat Restored:

- Remove 1 barrier

- Re-open 15 acres to fish passage

- Enhance 310 acres of coastal plain pond & kettle wetland habitat

Staudinger's Pond

Methodology:

- Remove undersized 8 inch pipe
- Excavate open channel
- Install rock weir/ramp

Habitat Restored:

- Remove 1 barrier
- Re-open 3 acres to fish passage
- Enhance 715 acres of tidal wetland and open water habitat

Project Partners

- Peconic Estuary Program
- Town of East Hampton, NY *(implementation lead)*
- New York State Department of Environmental Conservation
- Suffolk County Vector Control
- Atlantic Coastal Fish Habitat Partnership

Atlantic Coastal Fish Habitat Partnership

Life's Better Outdoors

Goose Creek Dam Eel Passage Restoration

Bill Post
Allan Hazel*

Diadromous Fish

- Migration between freshwater and saltwater
- Anadromous - migration from ocean waters to freshwater to spawn.

  -American Shad, Atlantic Sturgeon, Shortnose Sturgeon (semi-anadromous) Blueback herring, Stripped Bass

- Catadromous- migration from freshwater to ocean waters to spawn.

  - American Eel

Life Cycle

Silver Eel

Ethan Nedeau

Metamorphosis

Migration to Sargasso Sea

Spawning

Egg

Ocean Research Institute, The University Of Tokyo

Drift

Uwe Kils, ICES

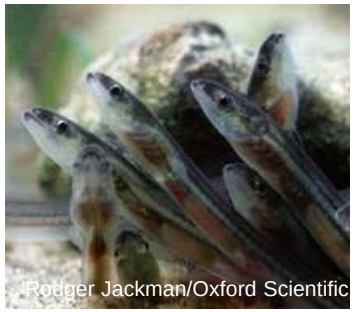
Leptocephalus Larvae

Metamorphosis

FWC

Glass Eel

Elvers



Rodger Jackman/Oxford Scientific

Migration upriver

Yellow Eel

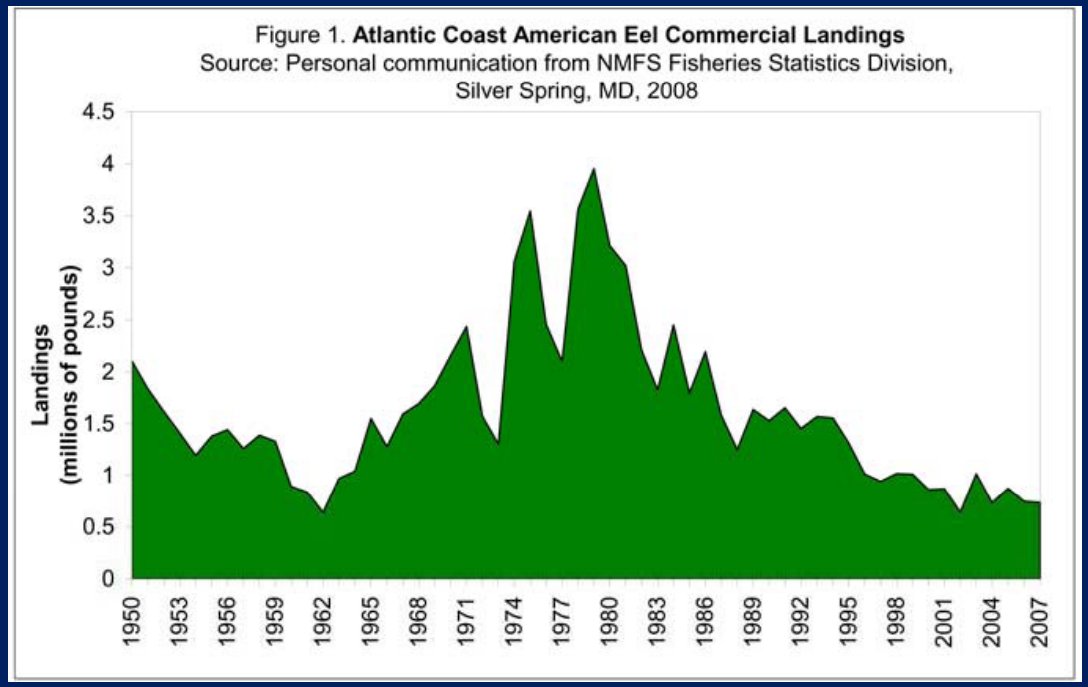
Tesch, 2003

American Eel stock status

• 2005 benchmark stock assessment

- Insufficient data to develop reference points or quantify stock status.

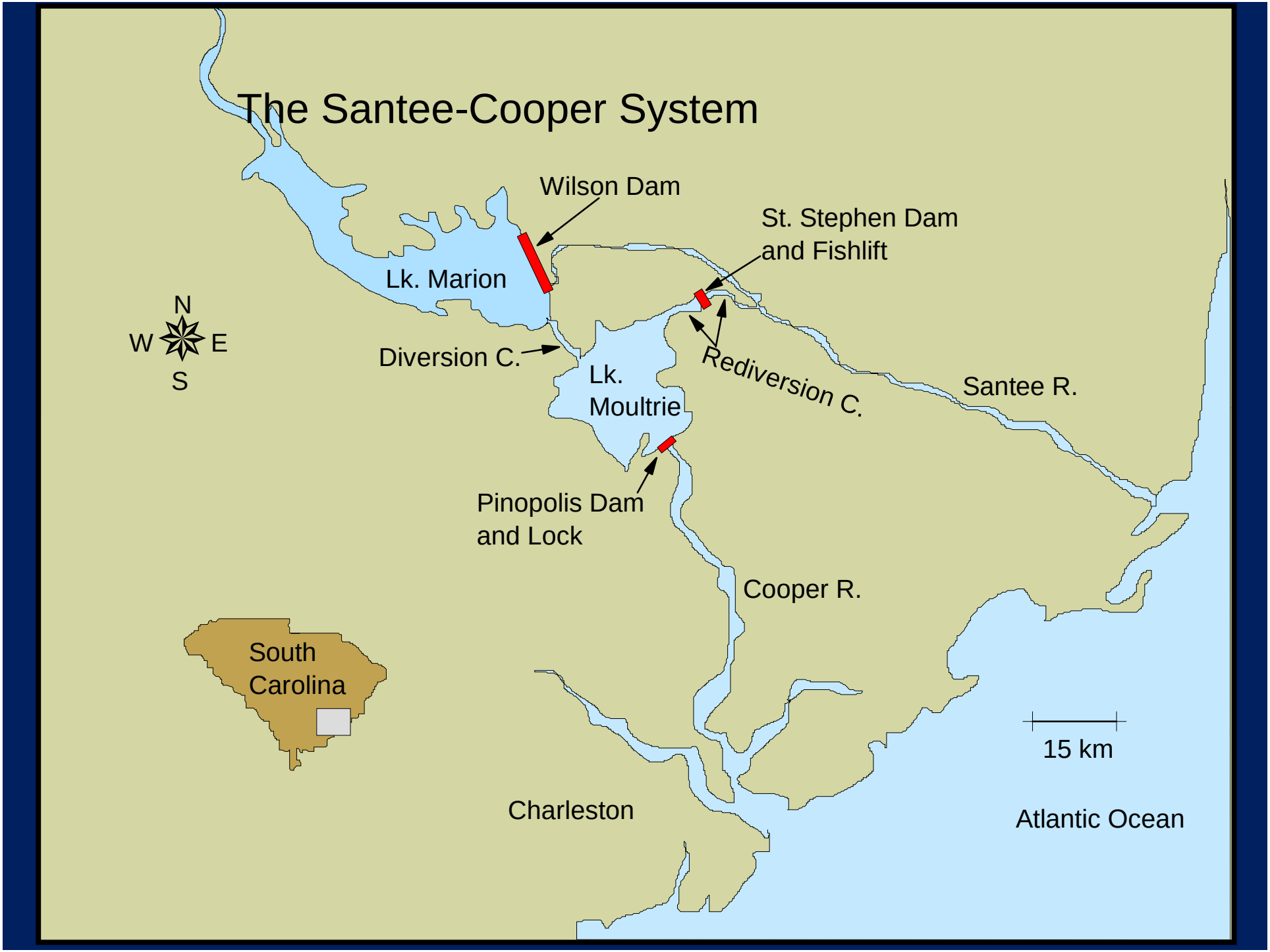
-Peer review panel concurred with overall finding that yellow eel abundance is at or near historic low levels coastwide.



Atlantic Coastal Management

1990's development of Interstate Fishery Management Plan for American Eel

- The plan's primary focus on data collection to better understand American eel biology, habitat requirements, and the fisheries.
- required states to provide an annual estimate of annual young-of-the-year (YOY) abundance survey.
- regulate commercial fisheries.
- 2008 Addendum II placed increased emphasis on improving the upstream and downstream passage of American Eels.


The Santee-Cooper System
Wilson Dam
St. Stephen Dam
and Fishlift
Lk. Marion
N
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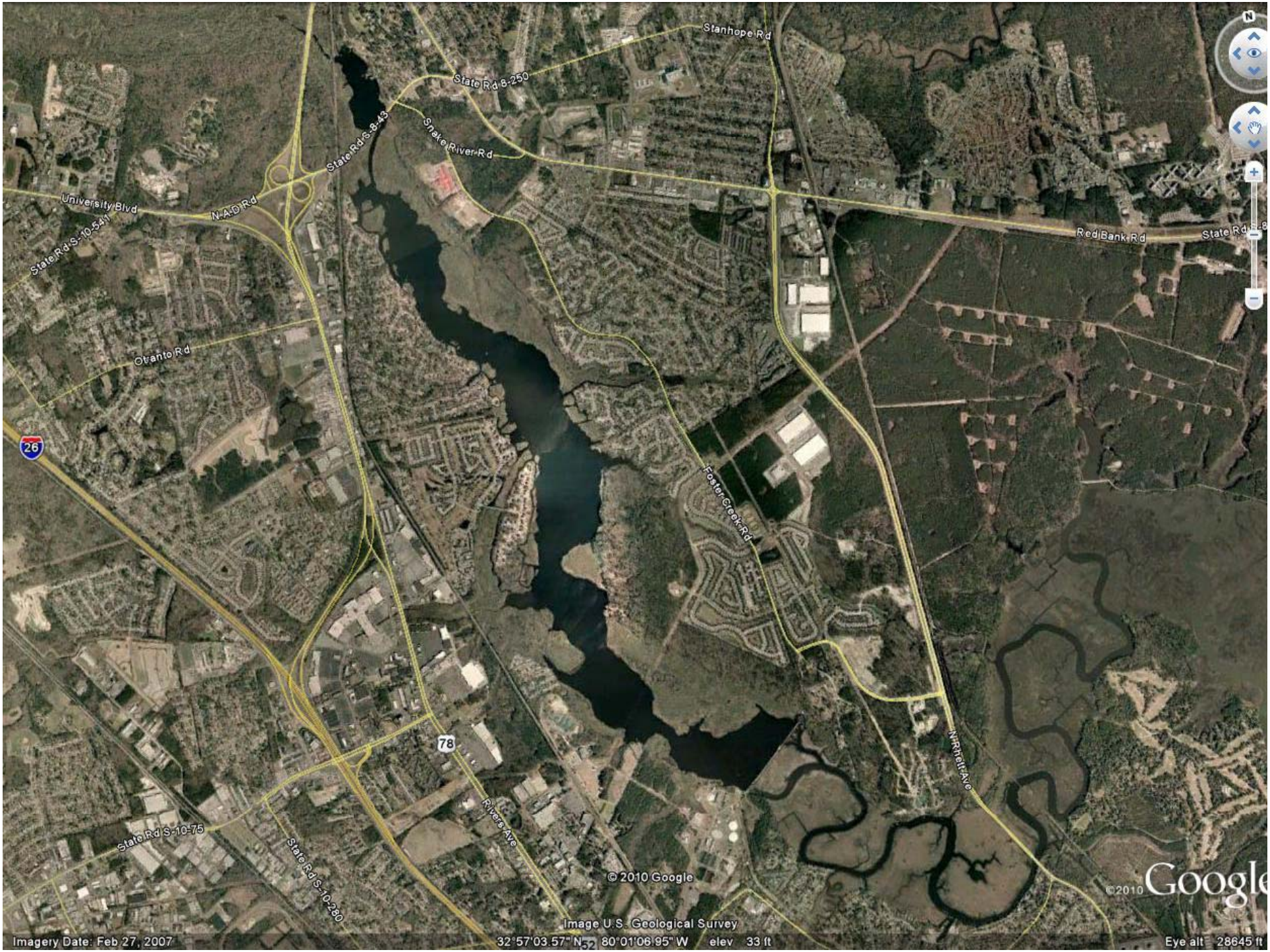
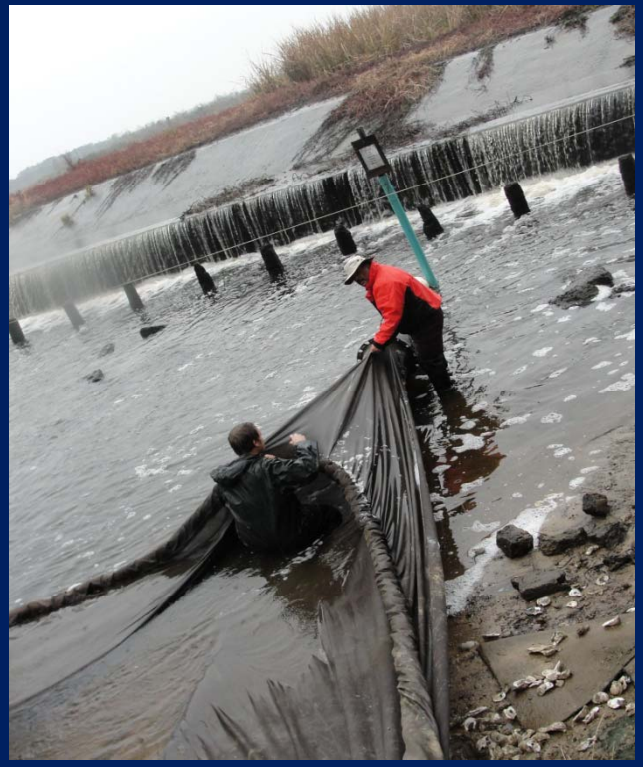
S
Diversion C.
Lk.
Moultrie
Rediversion C.
Santee R.
Pinopolis Dam
and Lock
Cooper R.
South
Carolina
15 km
Charleston
Atlantic Ocean


Stanhope Rd
State Rd S-8-250
State Rd S-8-43
Snake River Rd
University Blvd
State Rd S-10-541
N A D Rd
Red Bank Rd
Otranto Rd
26
Foster Creek Rd
78
N Rhett Ave
State Rd S-10-75
State Rd S-10-280
Rivers Ave
© 2010 Google
Image U.S. Geological Survey
Imagery Date: Feb 27, 2007
32°57'03.57" N 80°01'06.95" W elev 33 ft
Eye alt 28645 ft


Hanahan Rd
© 2010 Google
Image U.S. Geological Survey
Imagery Date: Feb 27, 2007
32°55'49.59" N 80°00'42.16" W elev 6 ft
Eye alt




WILD
HEERBRUGG

Project Status

- Account setup
- NMFS Engineers working on design
- Charleston Water System working on access road
- Locating fabricators
- Locating materials

Project Partners

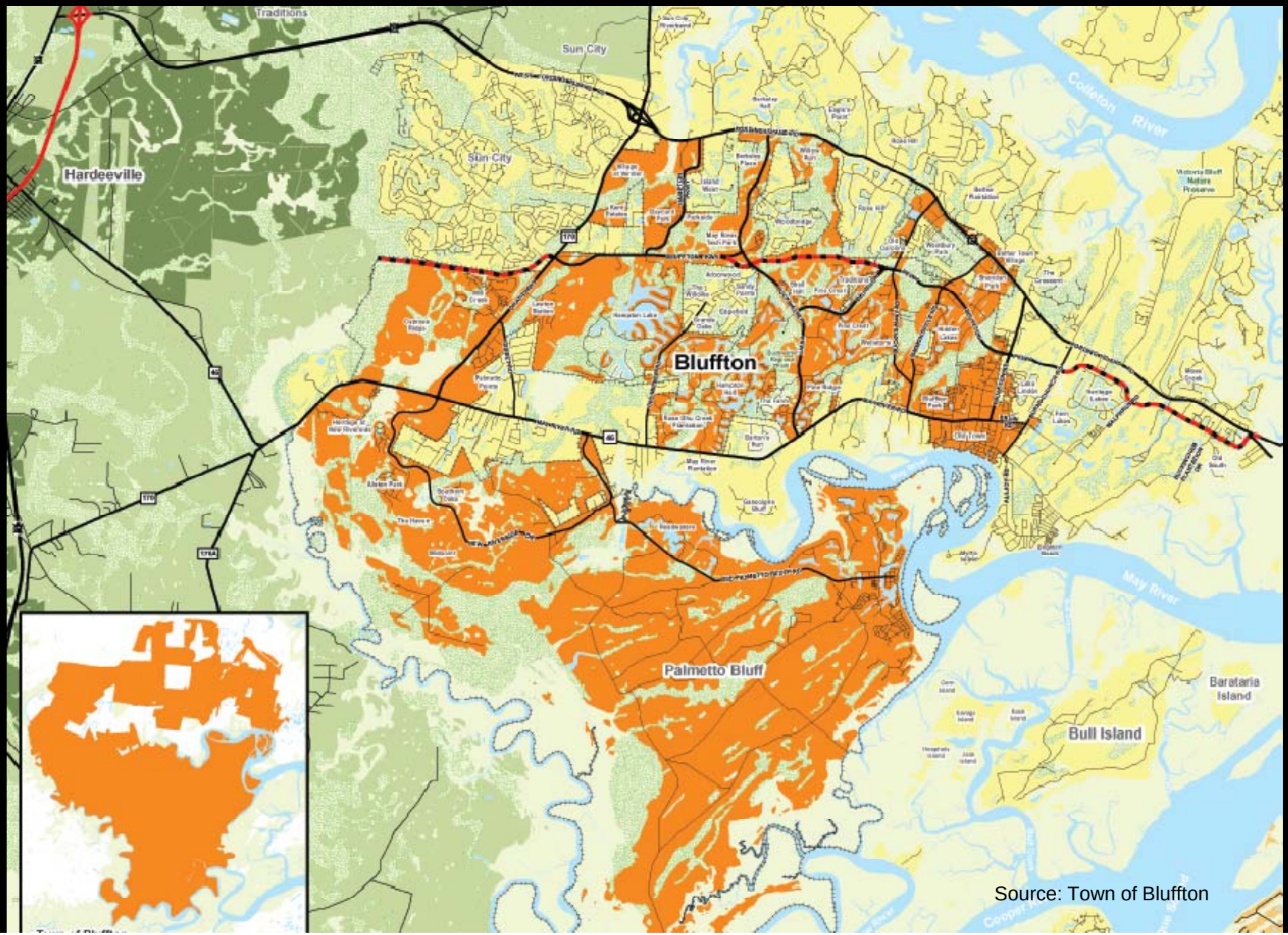
- South Carolina Department of Natural Resources
- Charleston Water Systems
- US Fish & Wildlife
- National Marine Fisheries Service
- Atlantic Coastal Fish Habitat Partnership

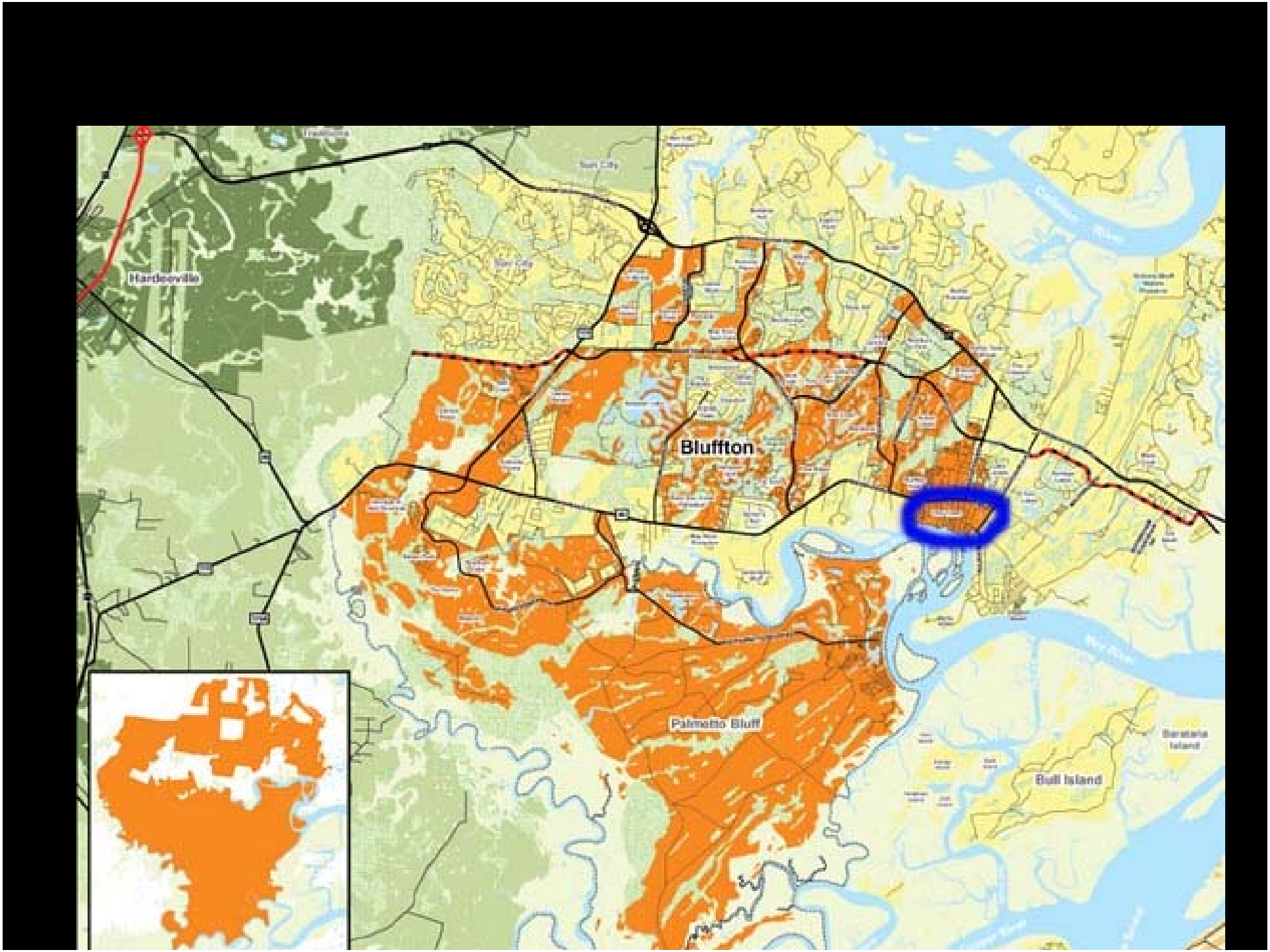

Coastal Conservation League

Source: Dover, Kohl and Partners

Source: Dover, Kohl & Partners

Bluffton


Traditions
Sun City
Hardeeville
Colleton River
Bluffton
Palmetto Bluff
May River
Bull Island
Source: Town of Bluffton

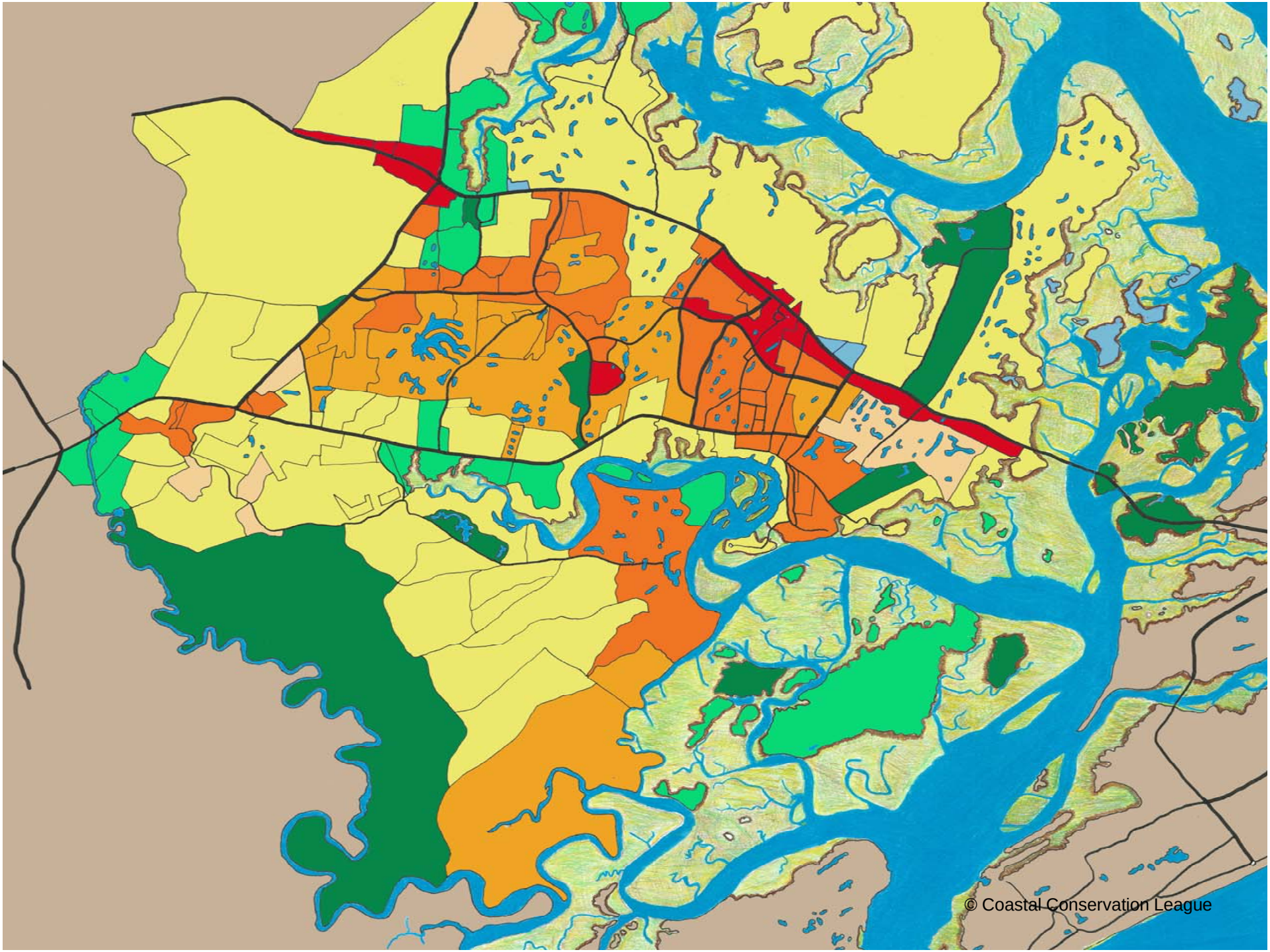

Hardeeville
Bluffton
Palmetto Bluff
Bull Island

existing settlement pattern

existing settlement pattern

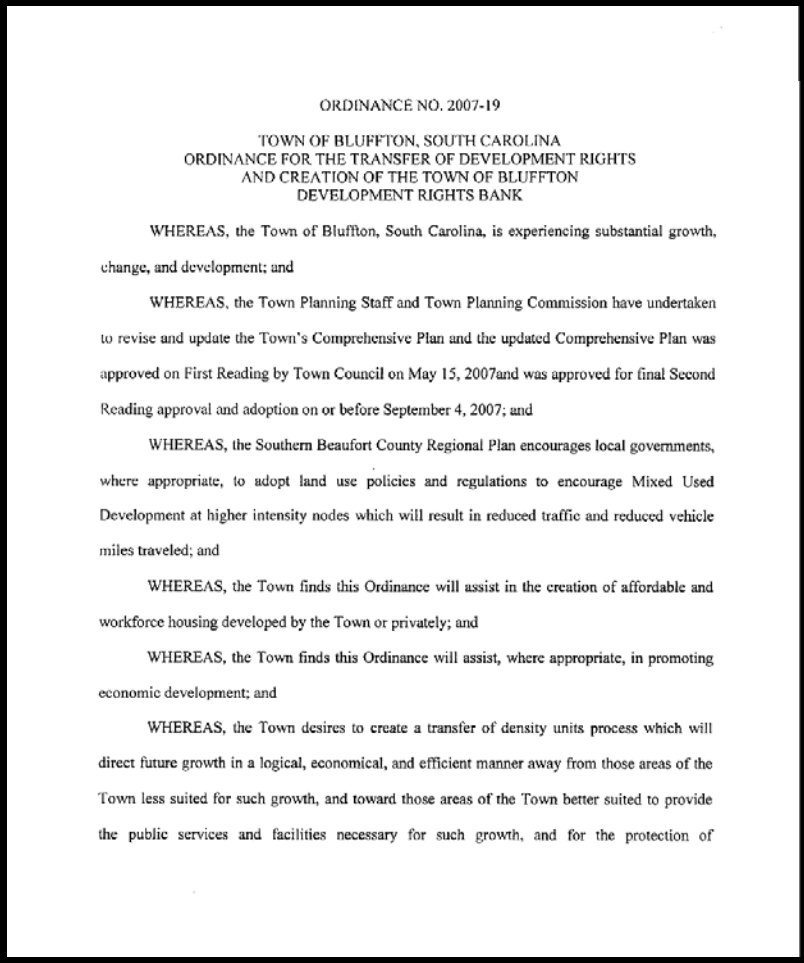
solution: plan, plan, plan

- develop a regional watershed based plan
- minimize impervious surface through compact development
- protect as much open space and undisturbed land as possible


© Coastal Conservation League

transfer of development rights

- town of bluffton tdr ordinance (2007)
- allows for transfer, purchase and/or sale of residential and non-residential properties
- tdr bank established and funded



ORDINANCE NO. 2007-19

TOWN OF BLUFFTON, SOUTH CAROLINA
ORDINANCE FOR THE TRANSFER OF DEVELOPMENT RIGHTS
AND CREATION OF THE TOWN OF BLUFFTON
DEVELOPMENT RIGHTS BANK

WHEREAS, the Town of Bluffton, South Carolina, is experiencing substantial growth, change, and development; and

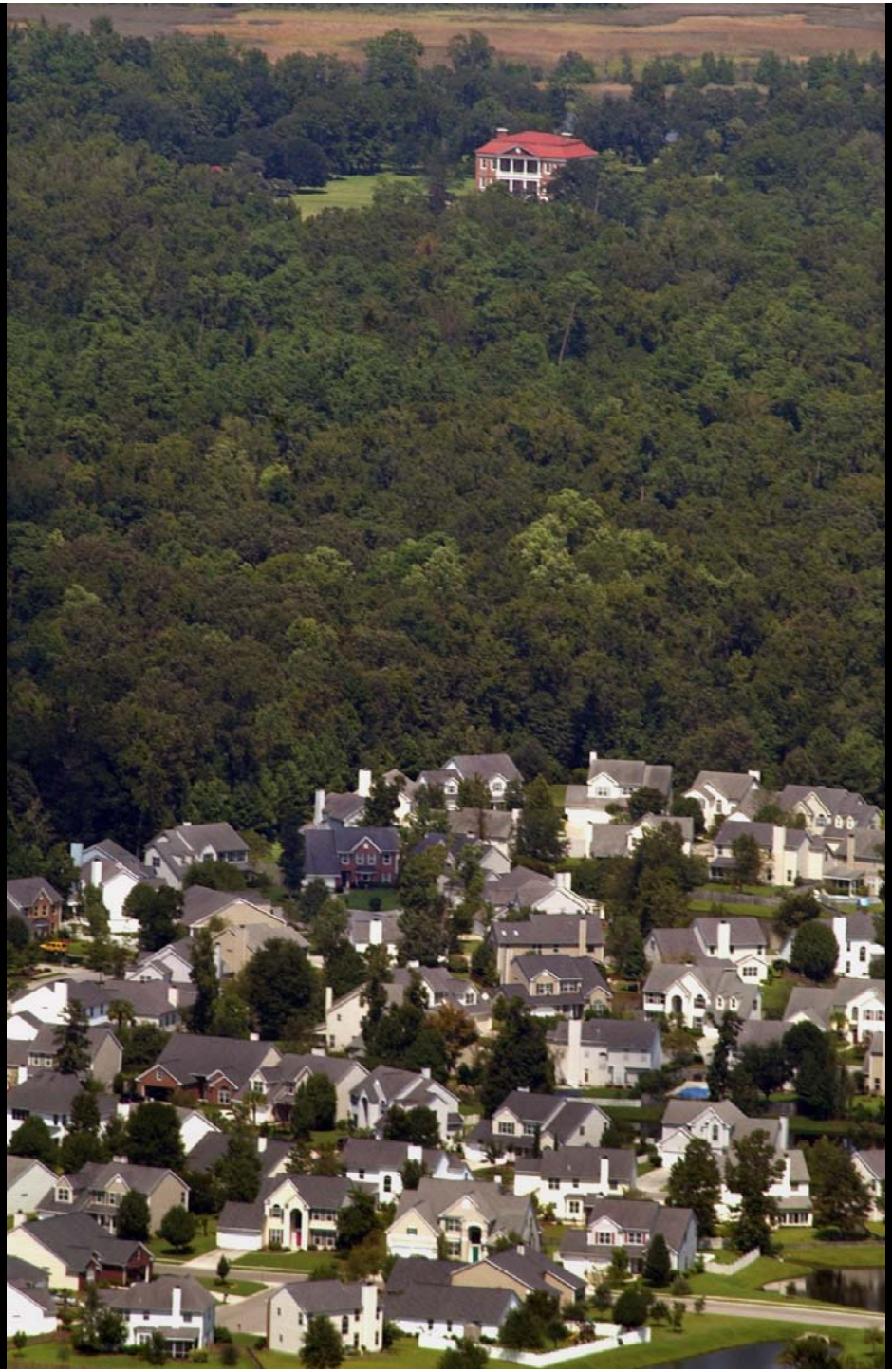
WHEREAS, the Town Planning Staff and Town Planning Commission have undertaken to revise and update the Town's Comprehensive Plan and the updated Comprehensive Plan was approved on First Reading by Town Council on May 15, 2007and was approved for final Second Reading approval and adoption on or before September 4, 2007; and

WHEREAS, the Southern Beaufort County Regional Plan encourages local governments, where appropriate, to adopt land use policies and regulations to encourage Mixed Used Development at higher intensity nodes which will result in reduced traffic and reduced vehicle miles traveled; and

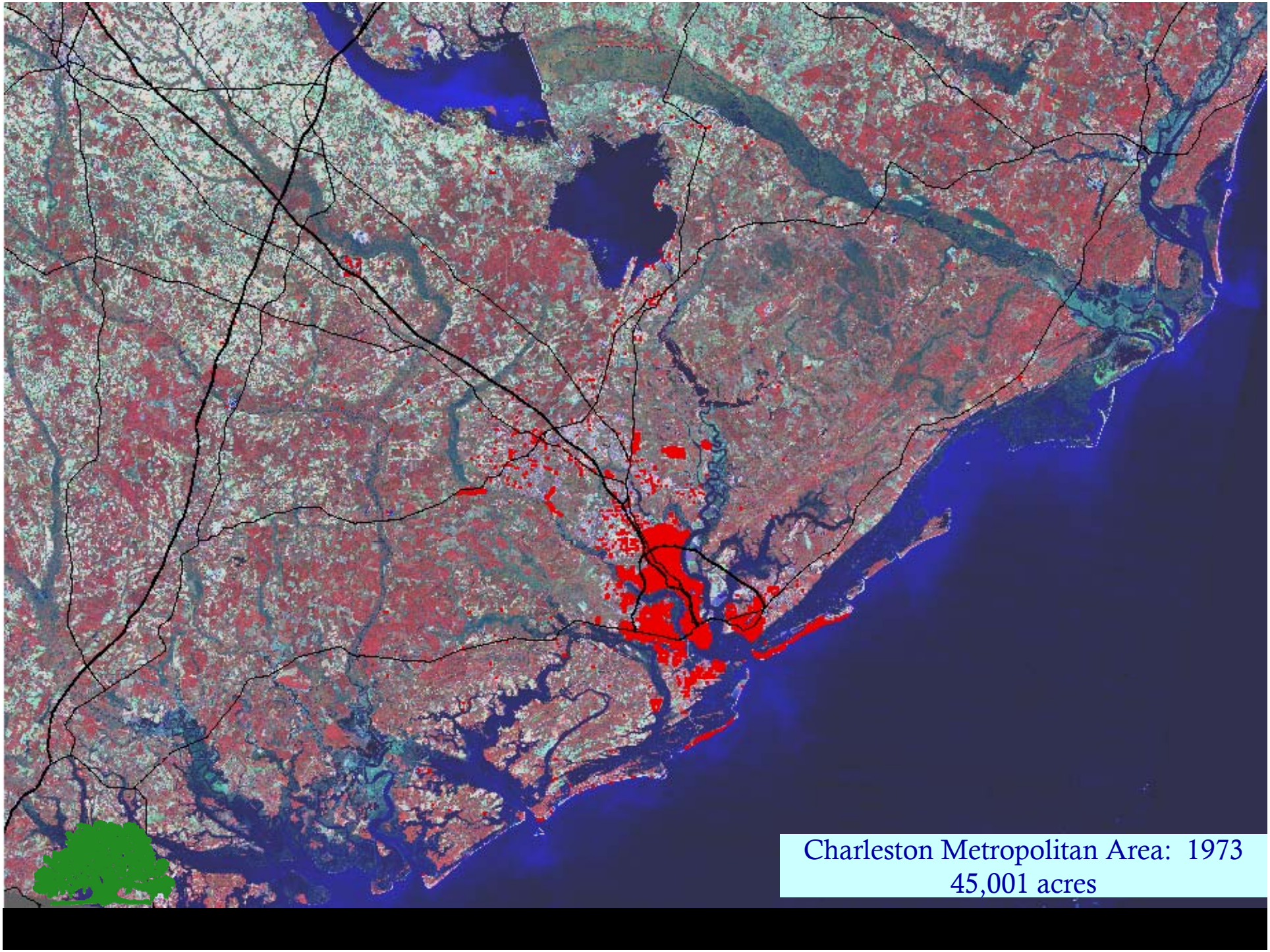
WHEREAS, the Town finds this Ordinance will assist in the creation of affordable and workforce housing developed by the Town or privately; and

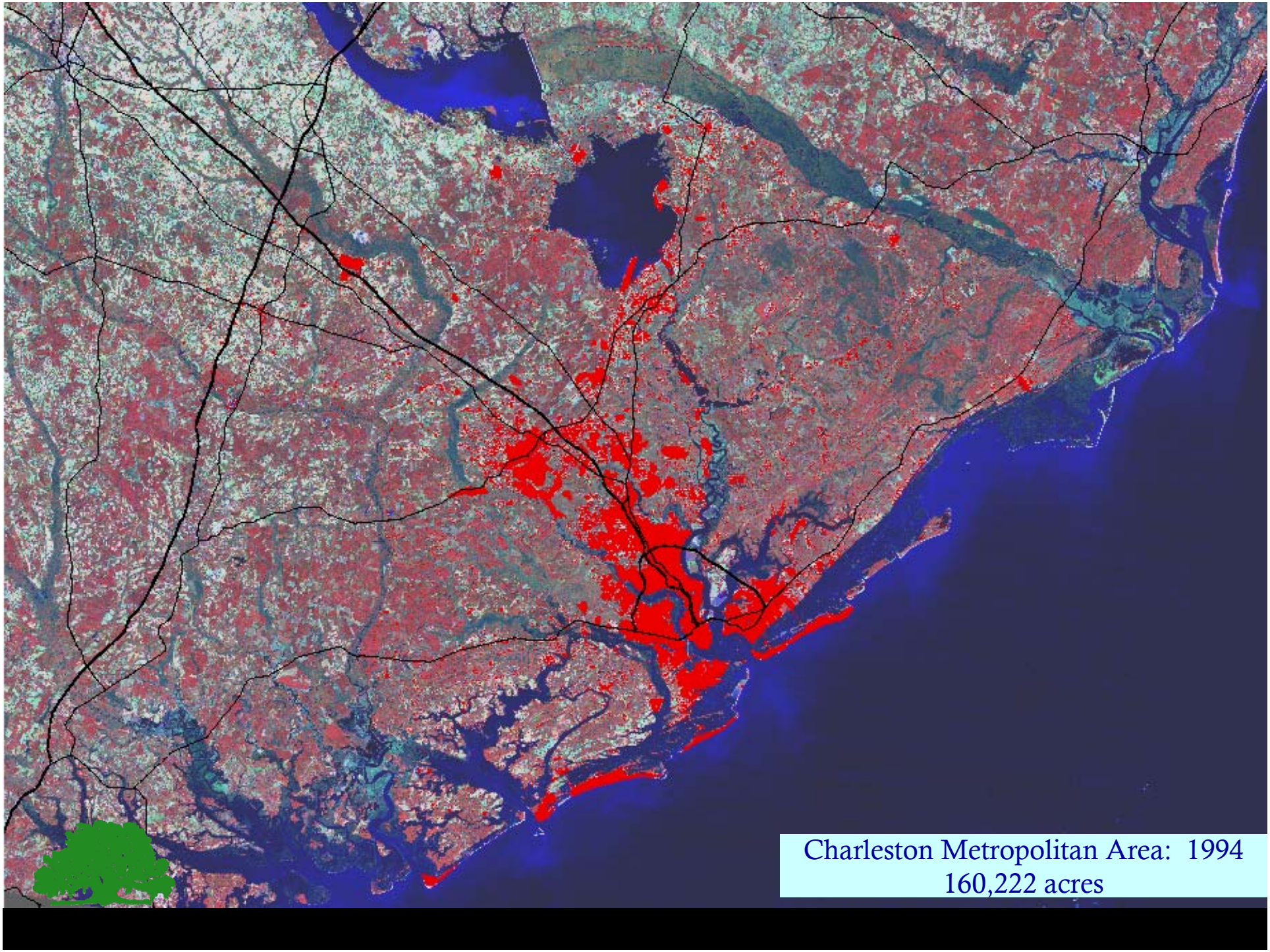
WHEREAS, the Town finds this Ordinance will assist, where appropriate, in promoting economic development; and

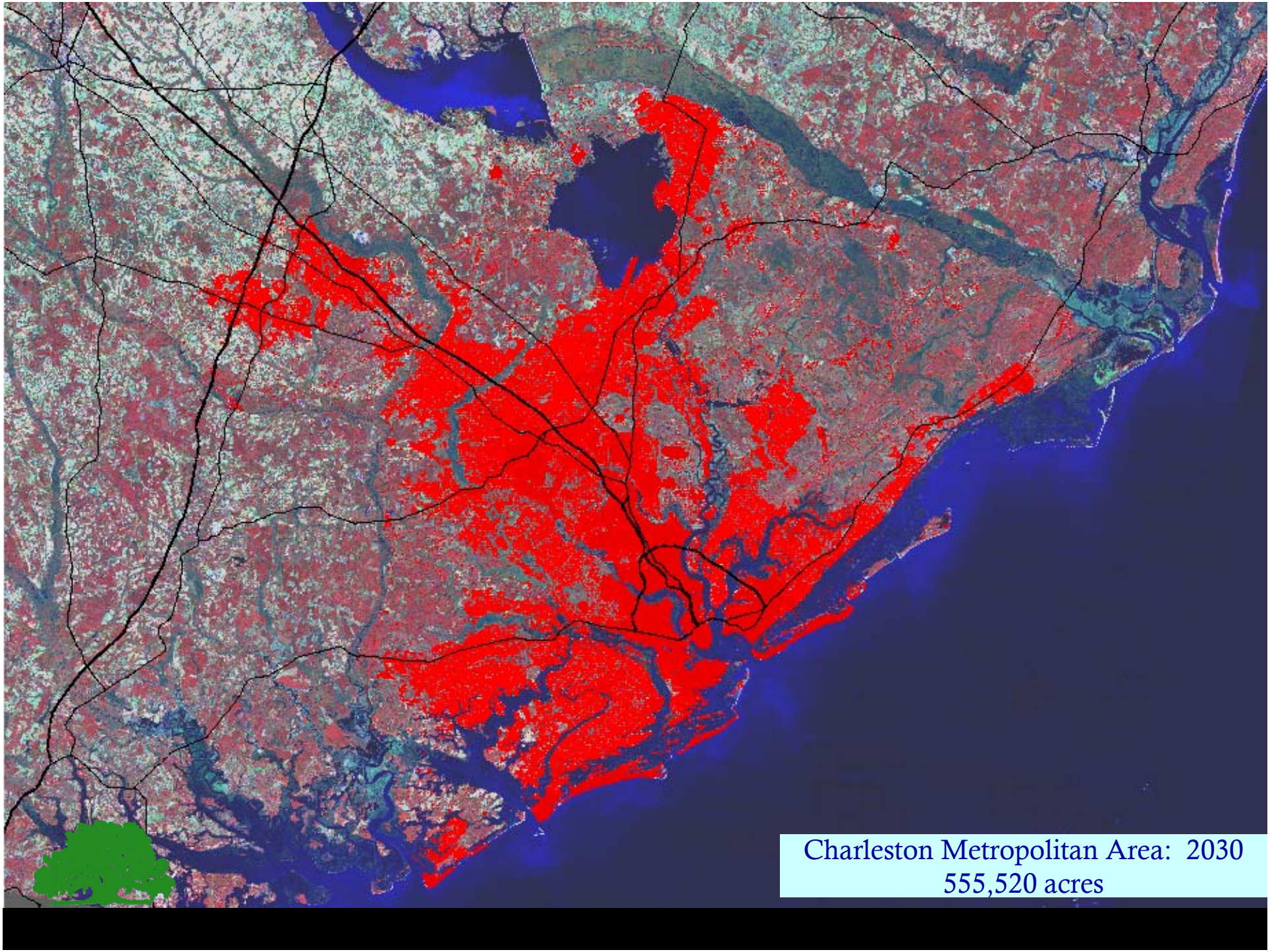
WHEREAS, the Town desires to create a transfer of density units process which will direct future growth in a logical, economical, and efficient manner away from those areas of the Town less suited for such growth, and toward those areas of the Town better suited to provide the public services and facilities necessary for such growth, and for the protection of



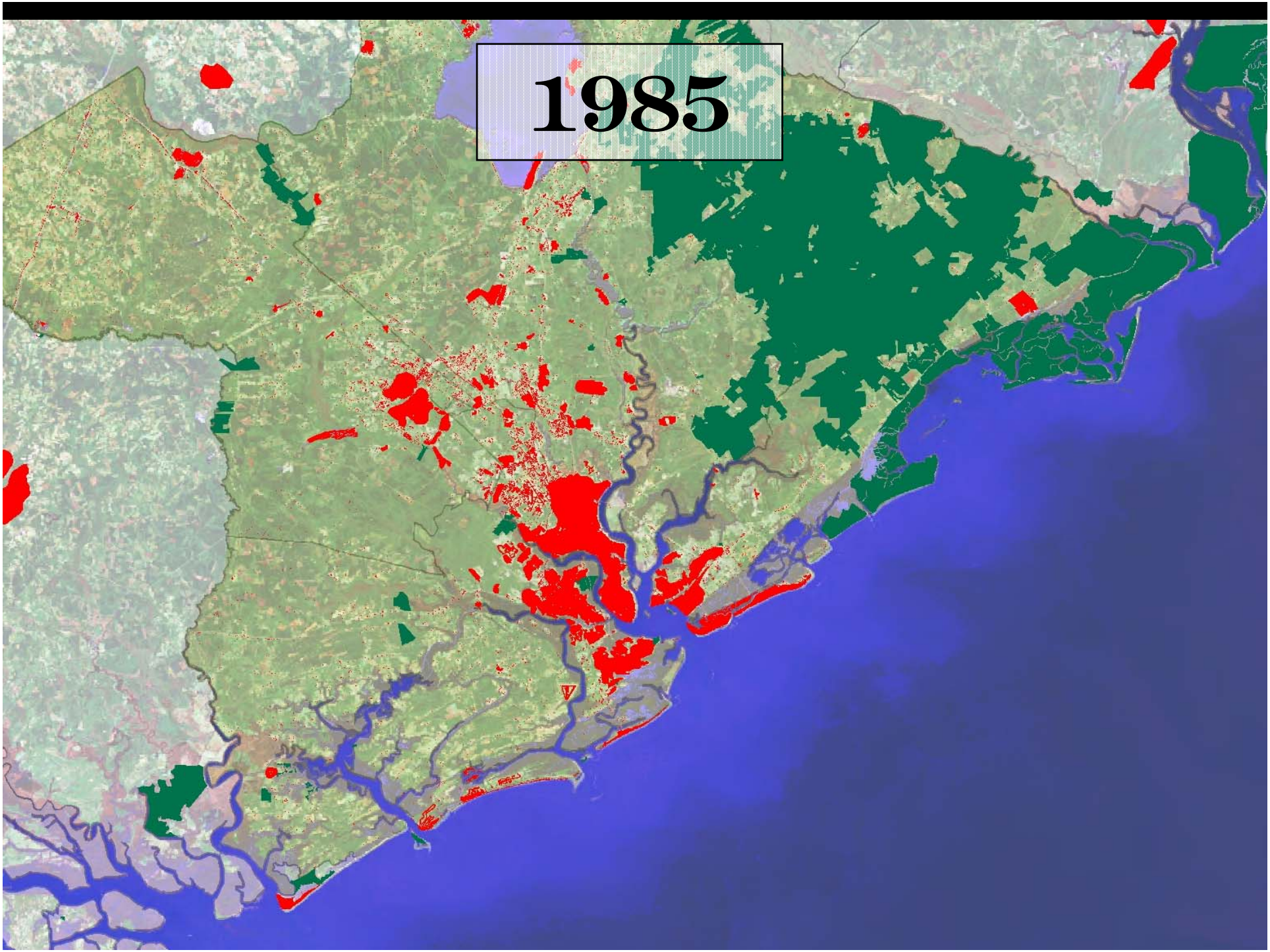
The Wake-up Call…


Charleston Metropolitan Area: 1973
45,001 acres


Charleston Metropolitan Area: 1994
160,222 acres


Charleston Metropolitan Area: 2030
555,520 acres

The Response…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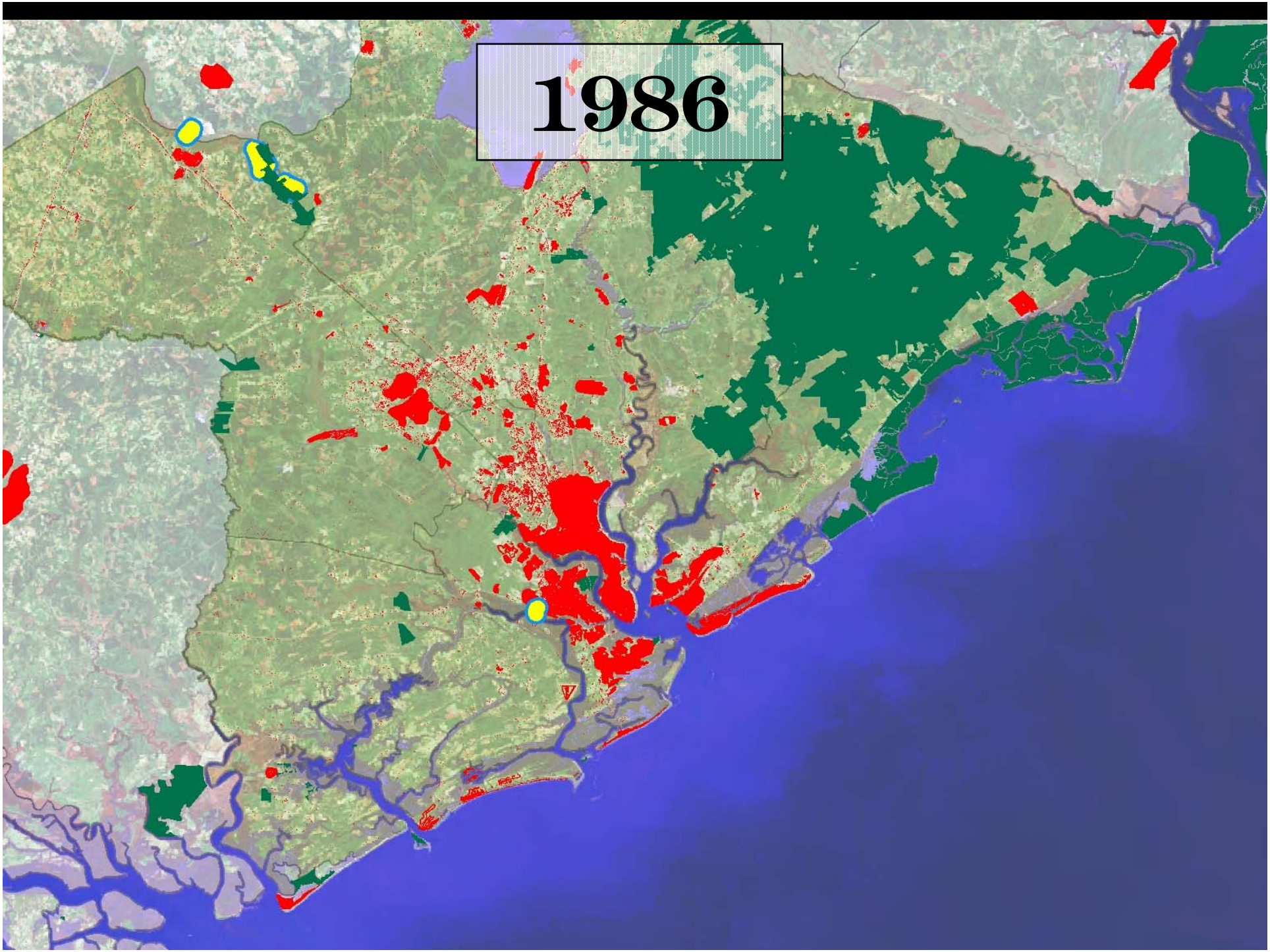
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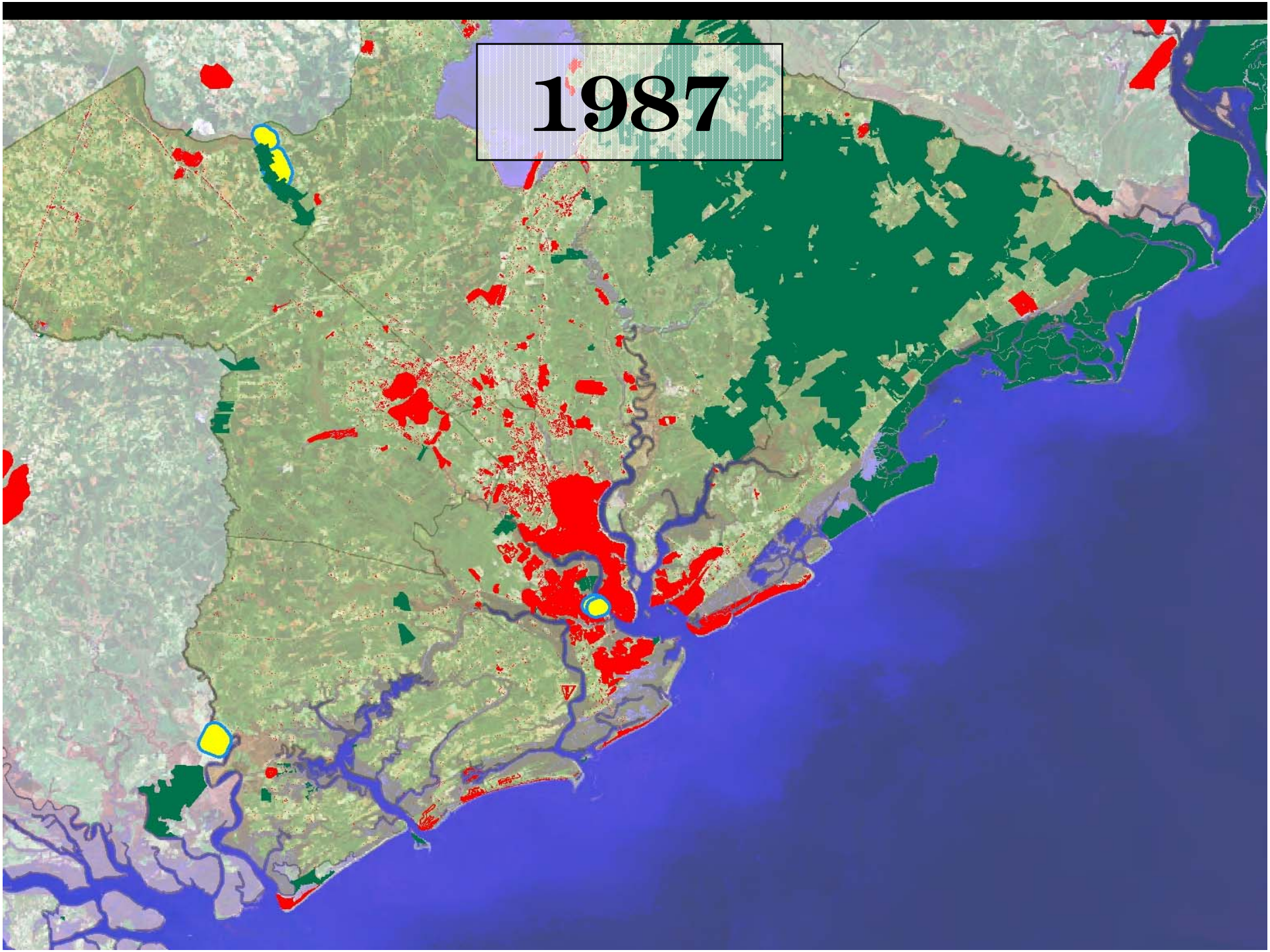
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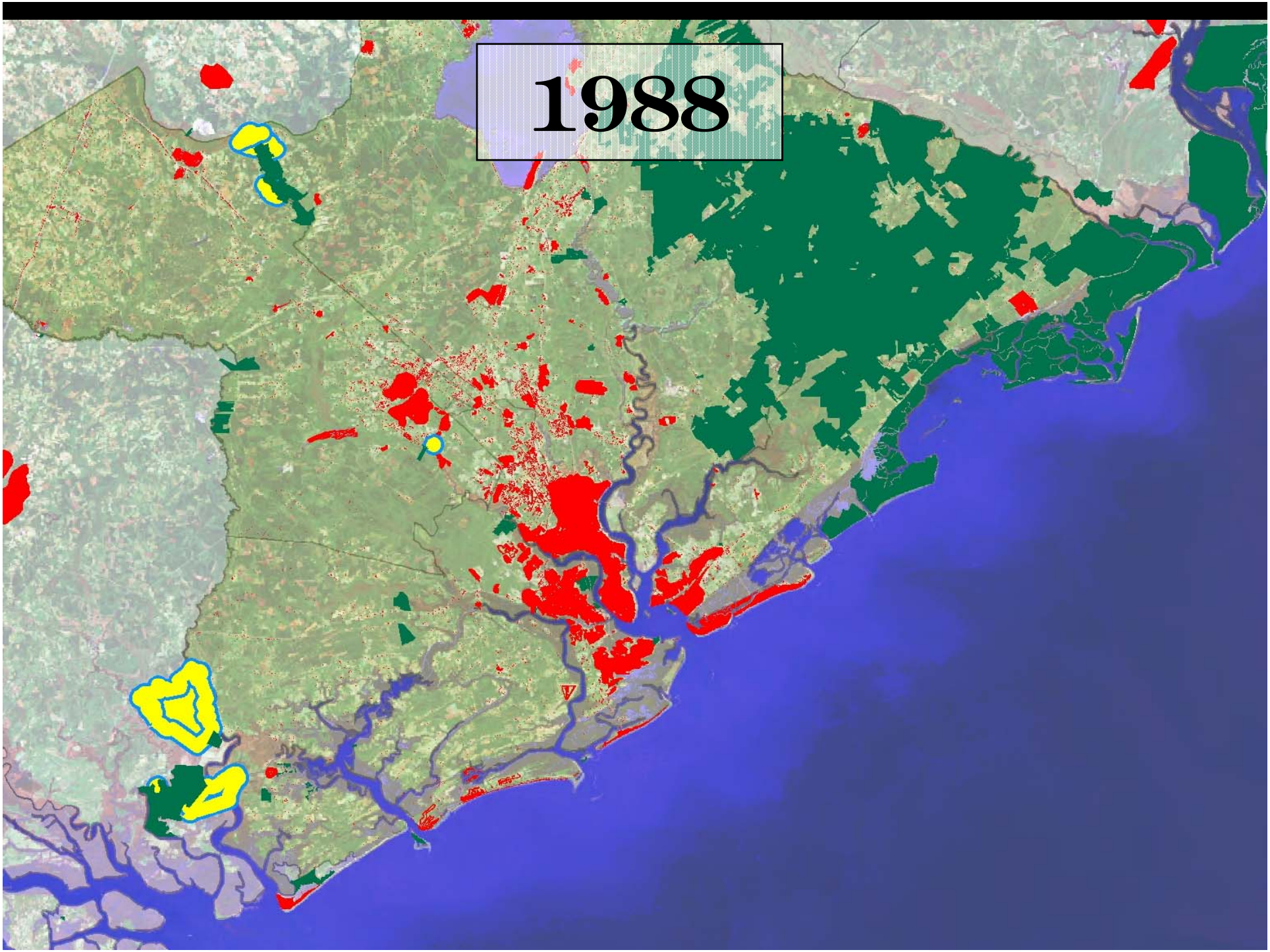
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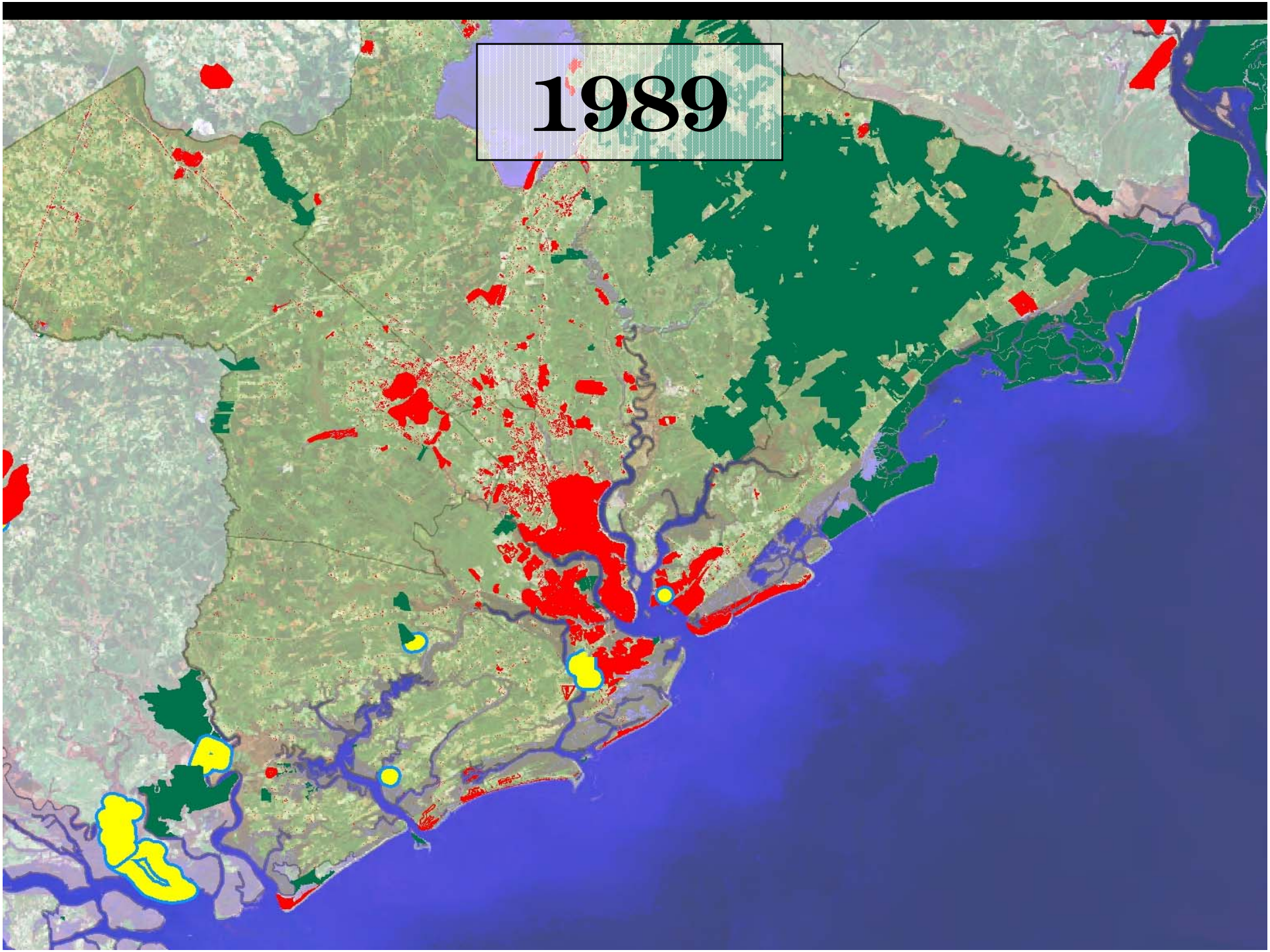
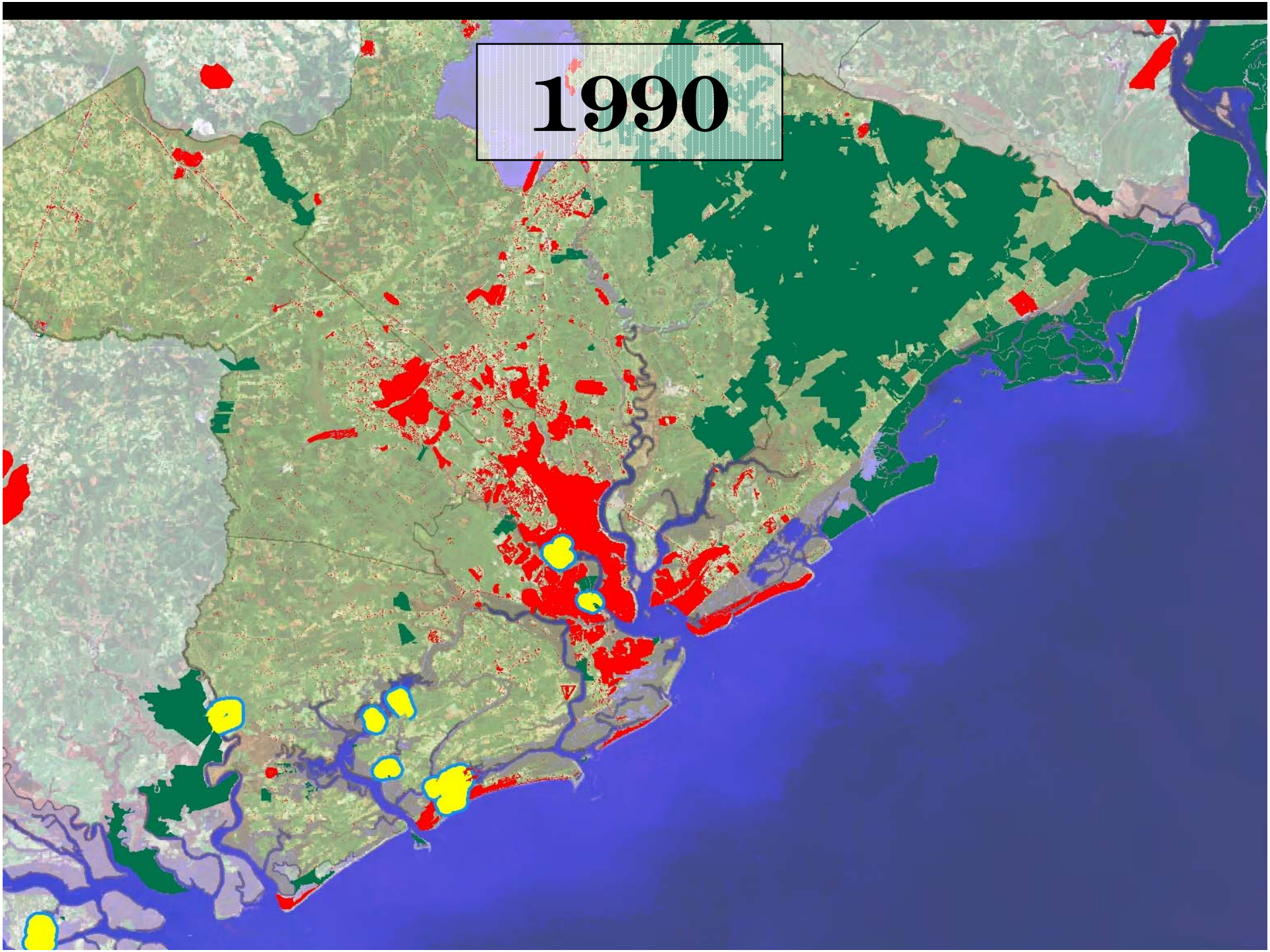
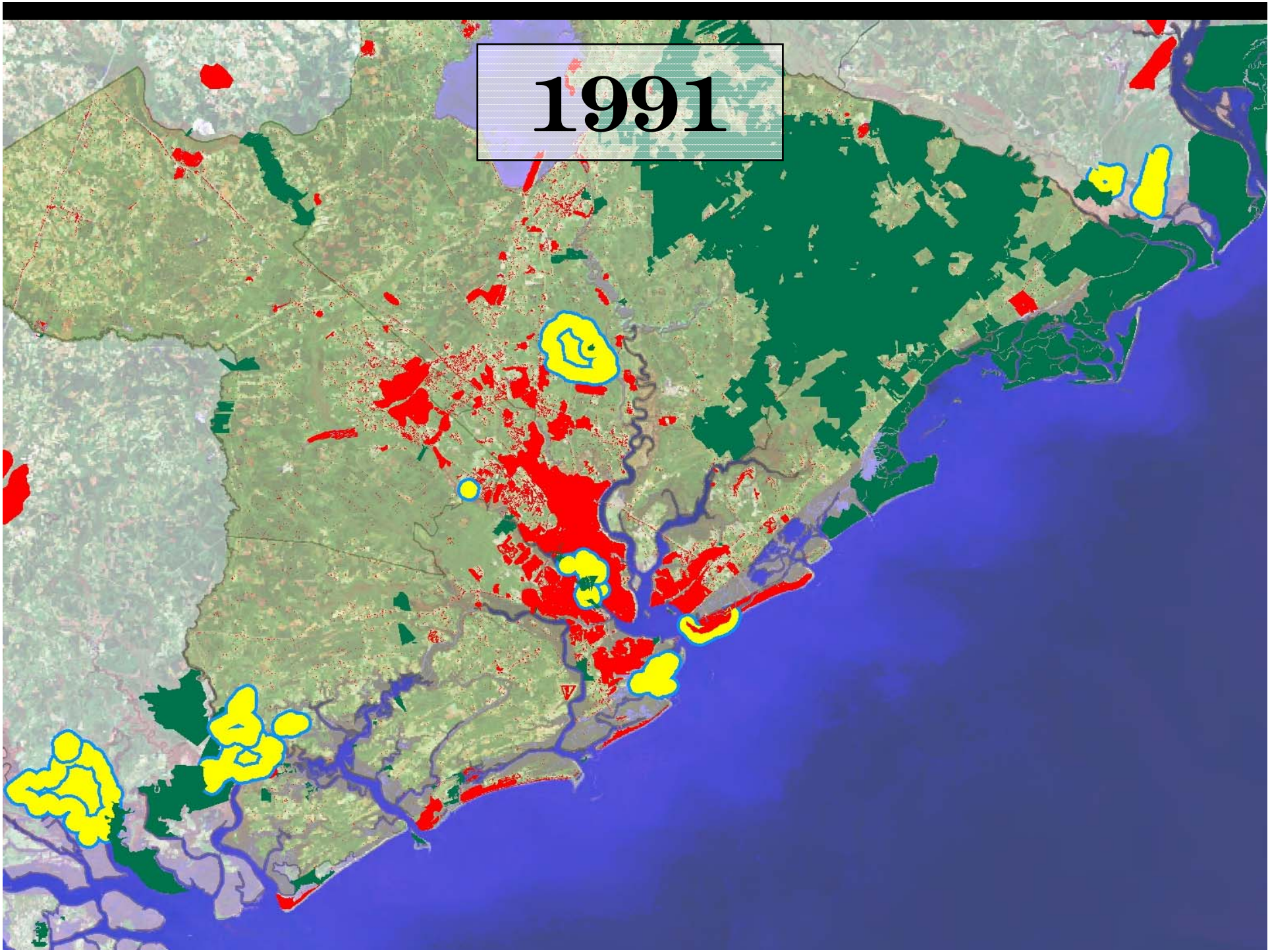

1989


1990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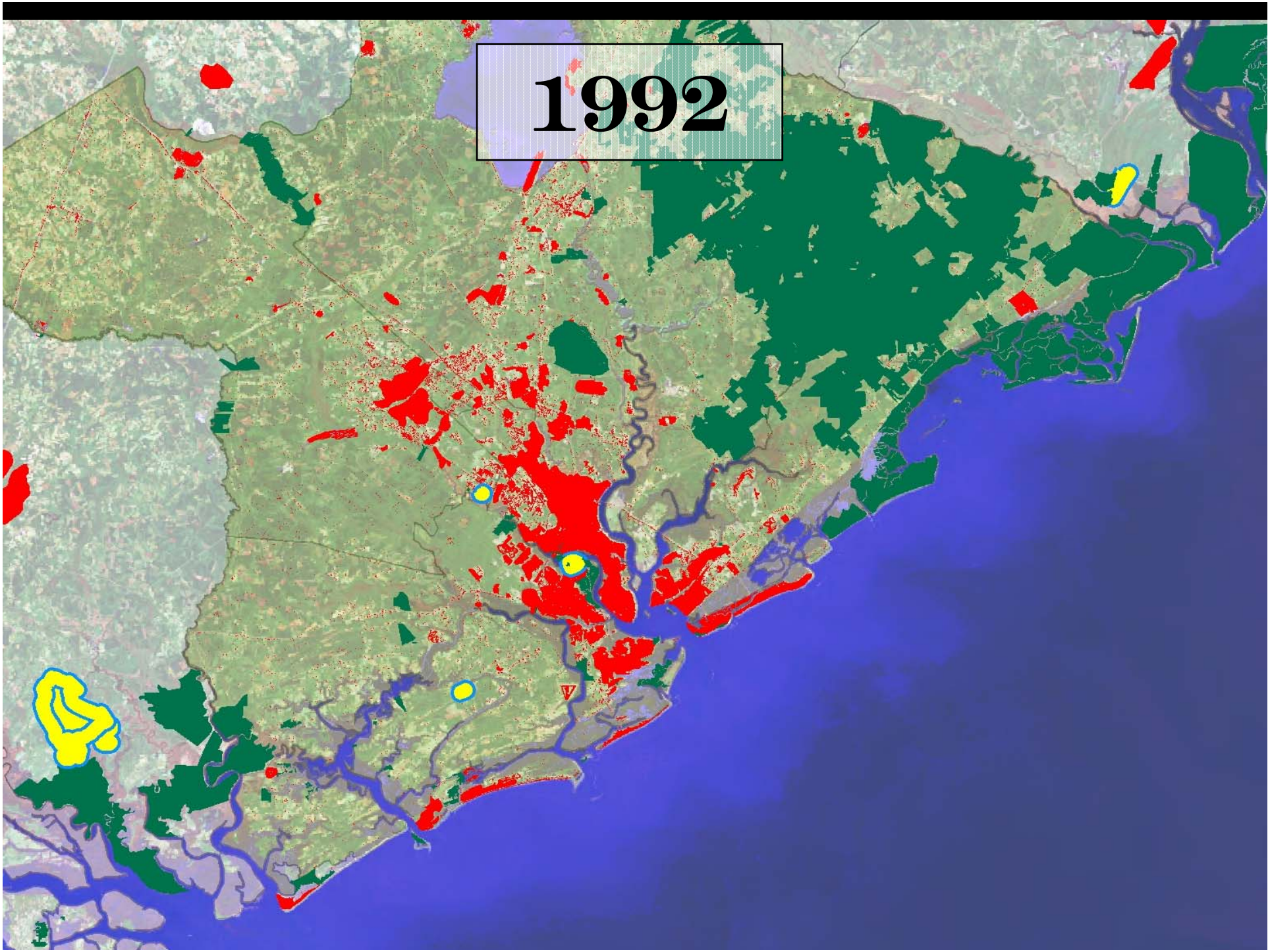
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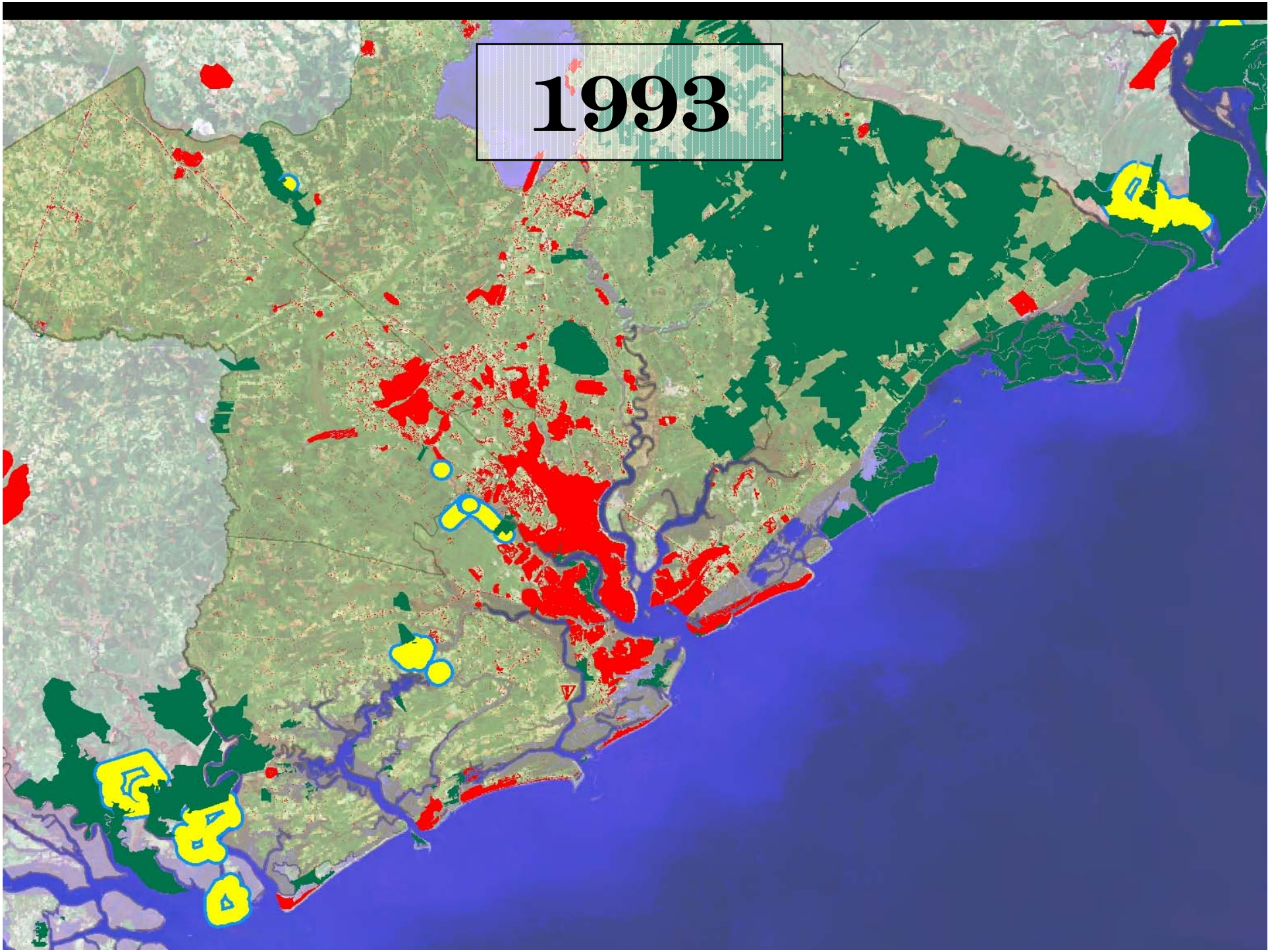
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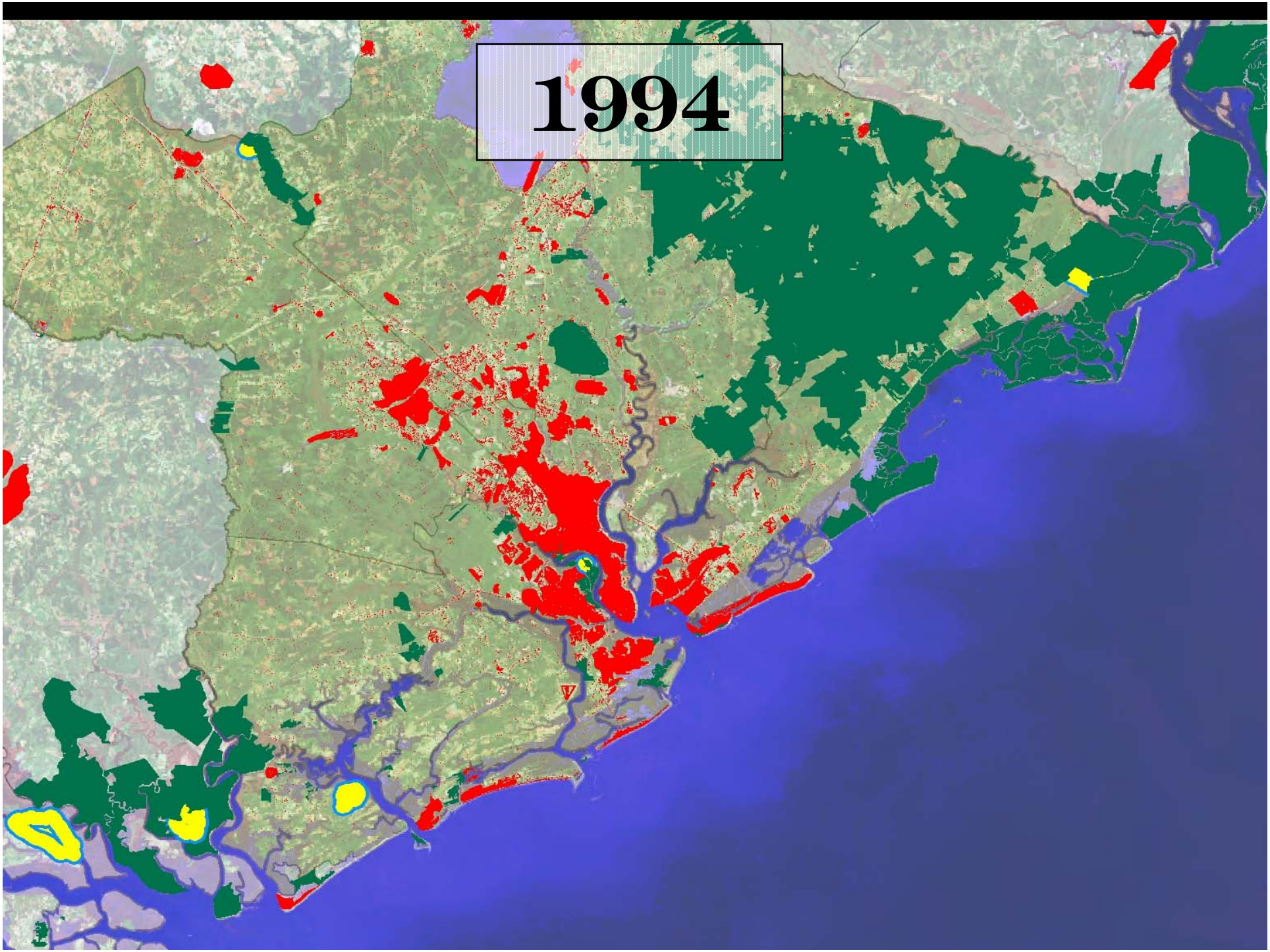
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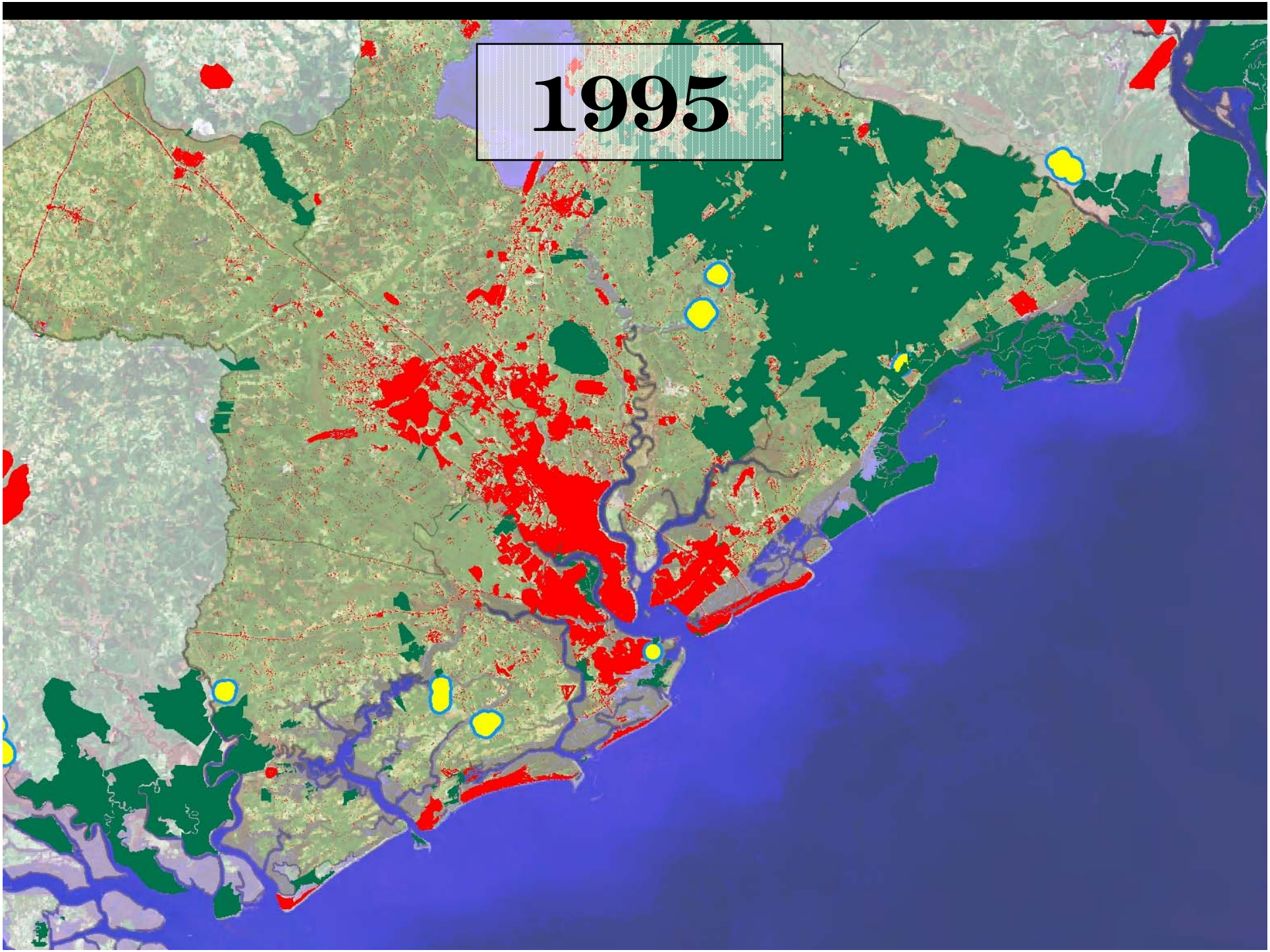
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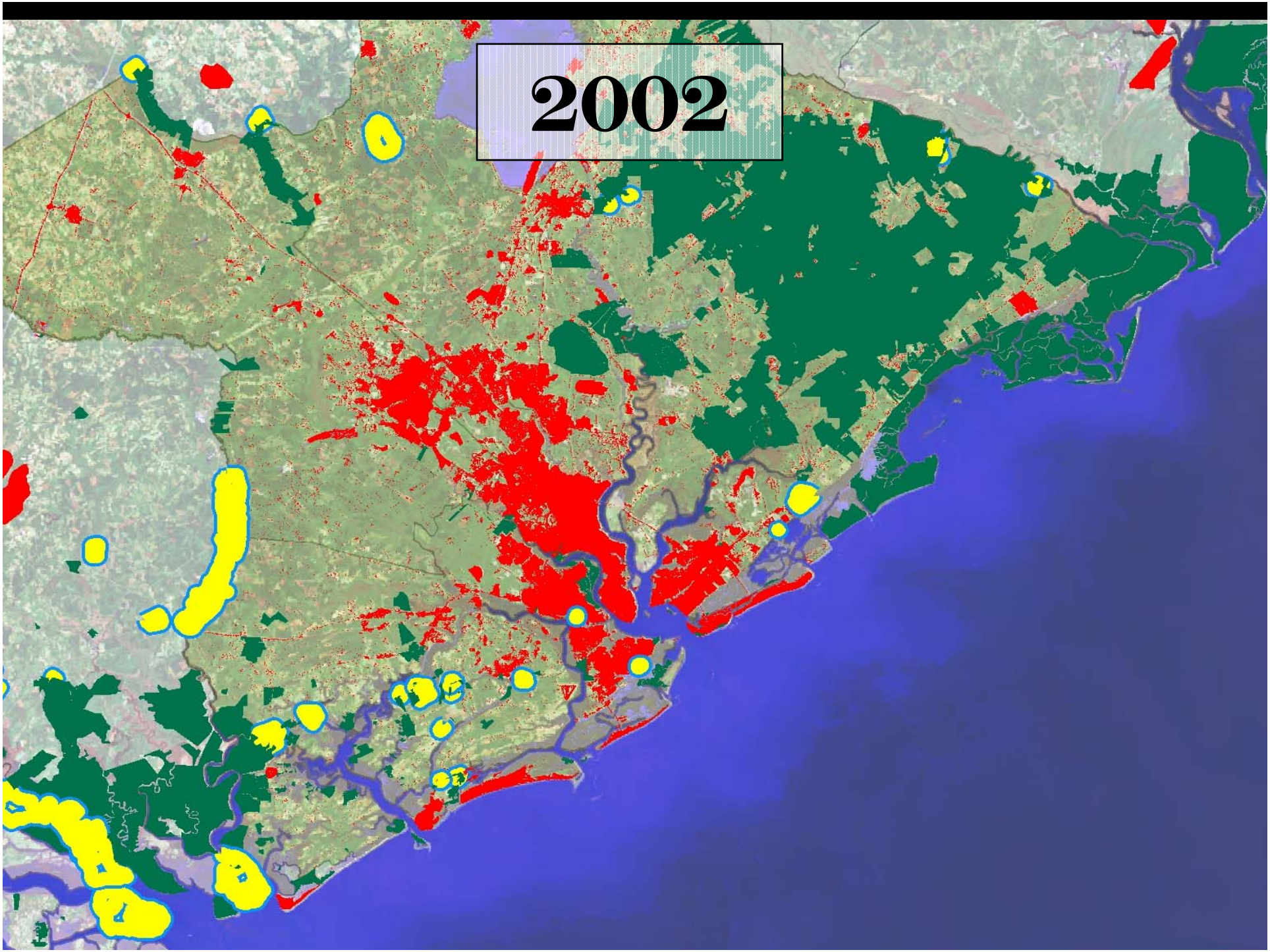
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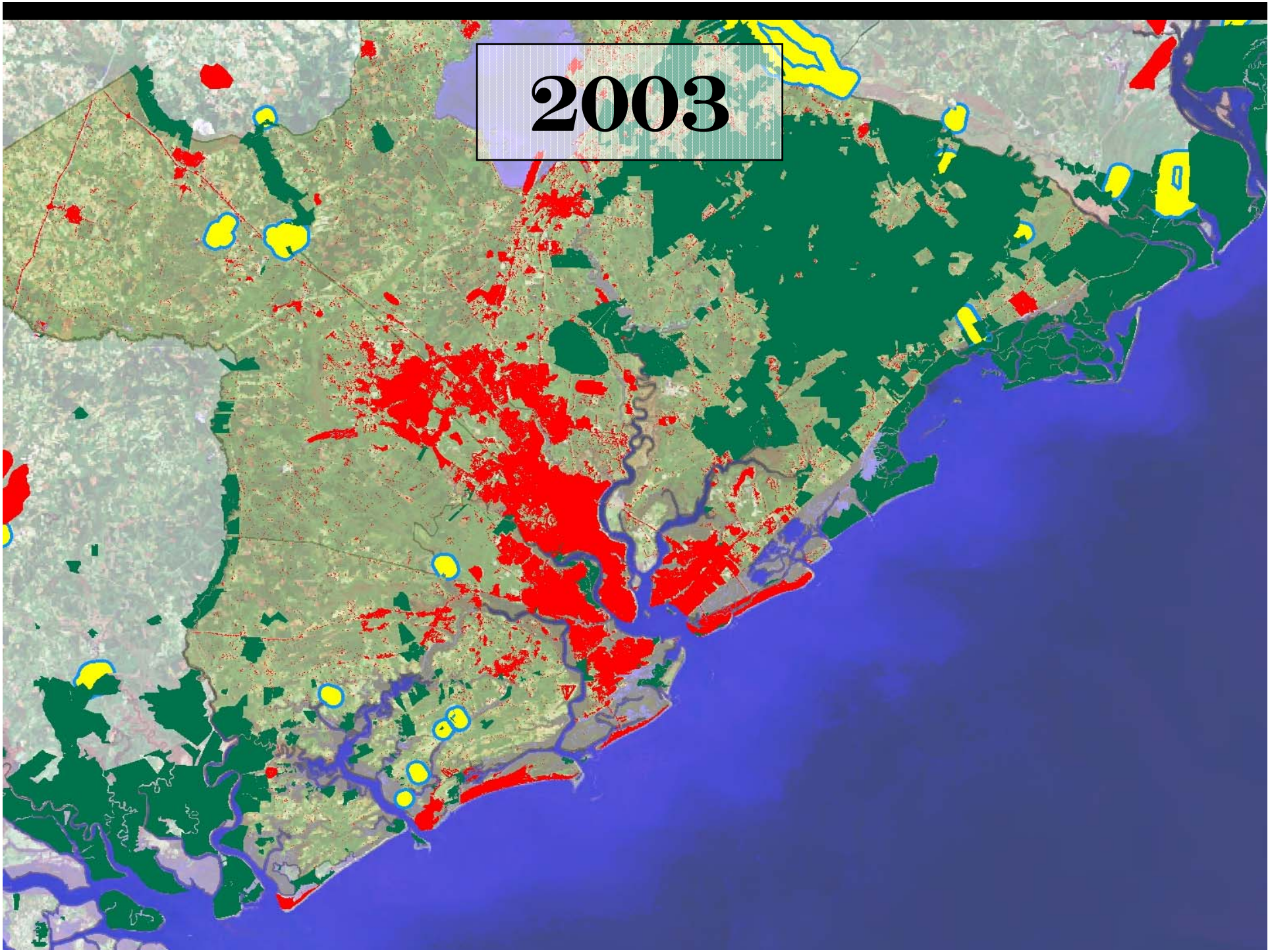
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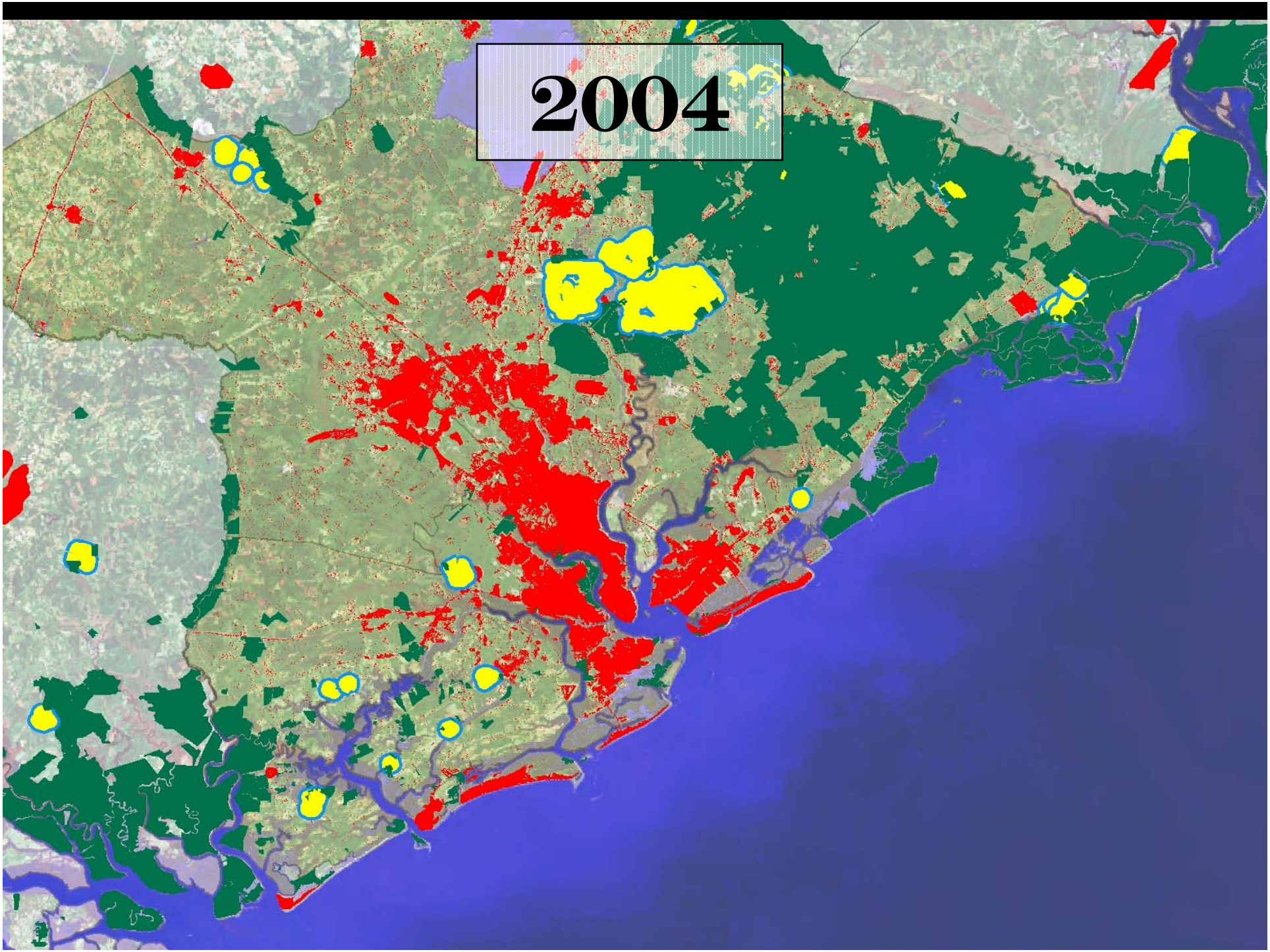
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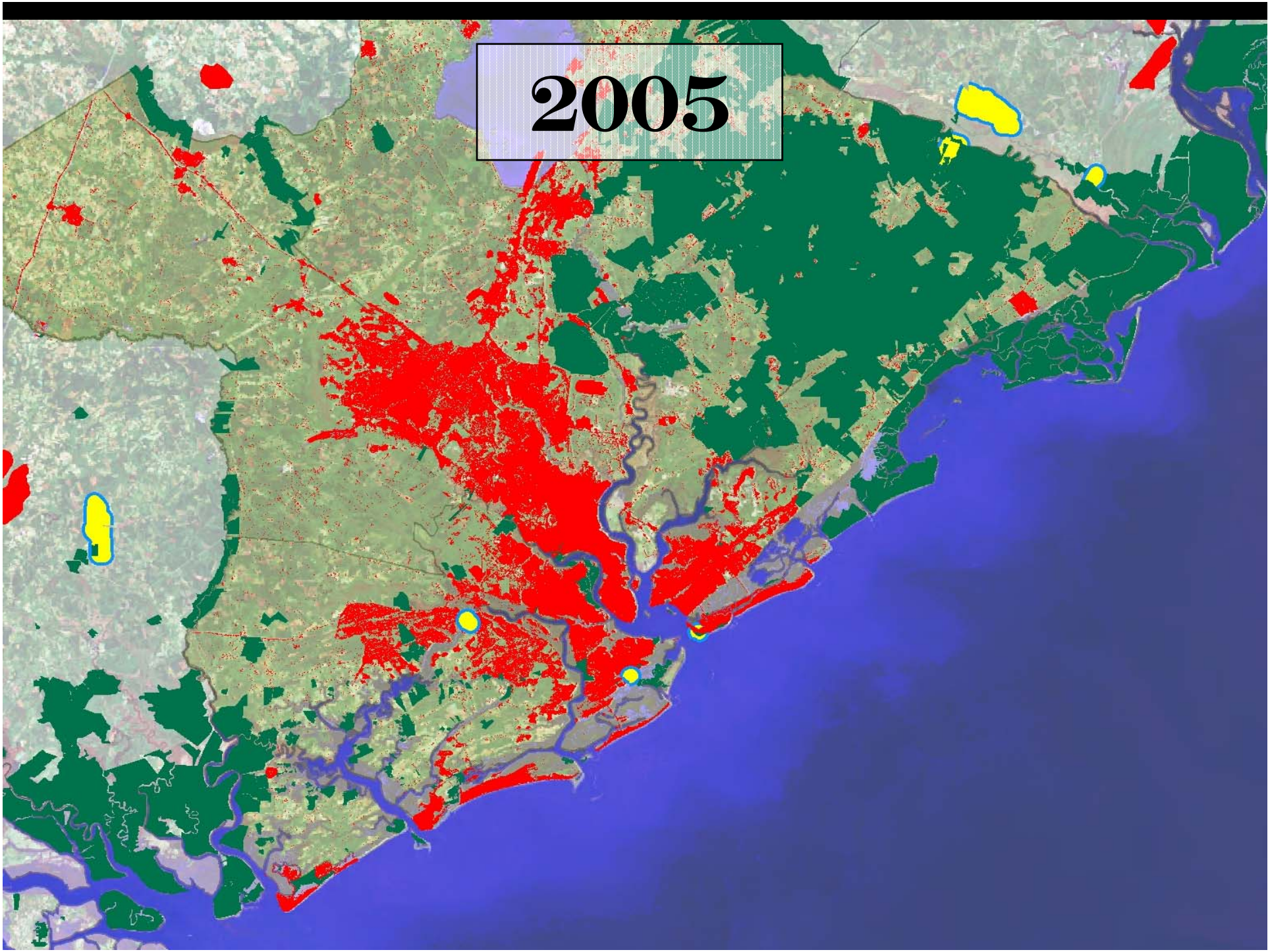
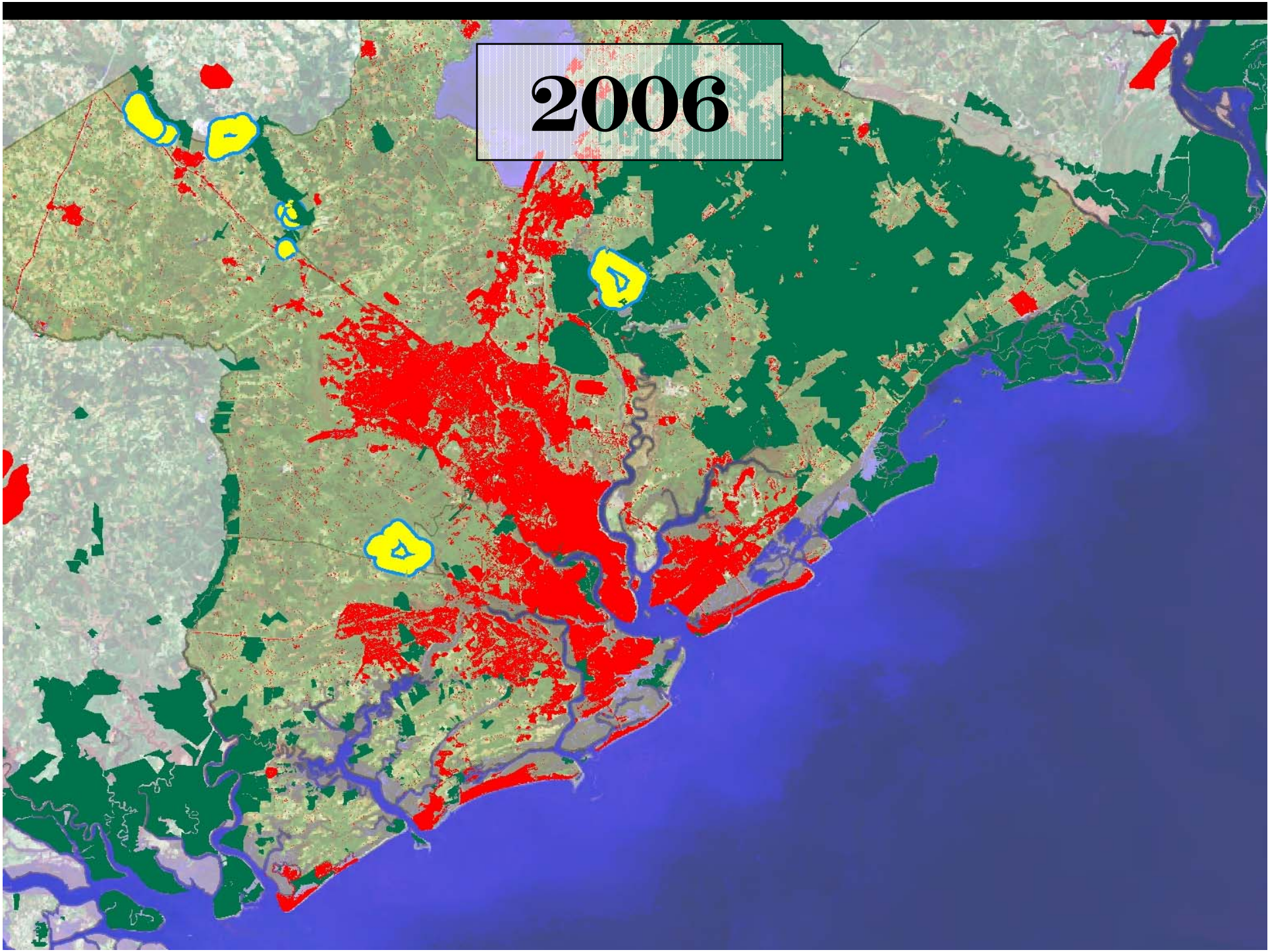

2005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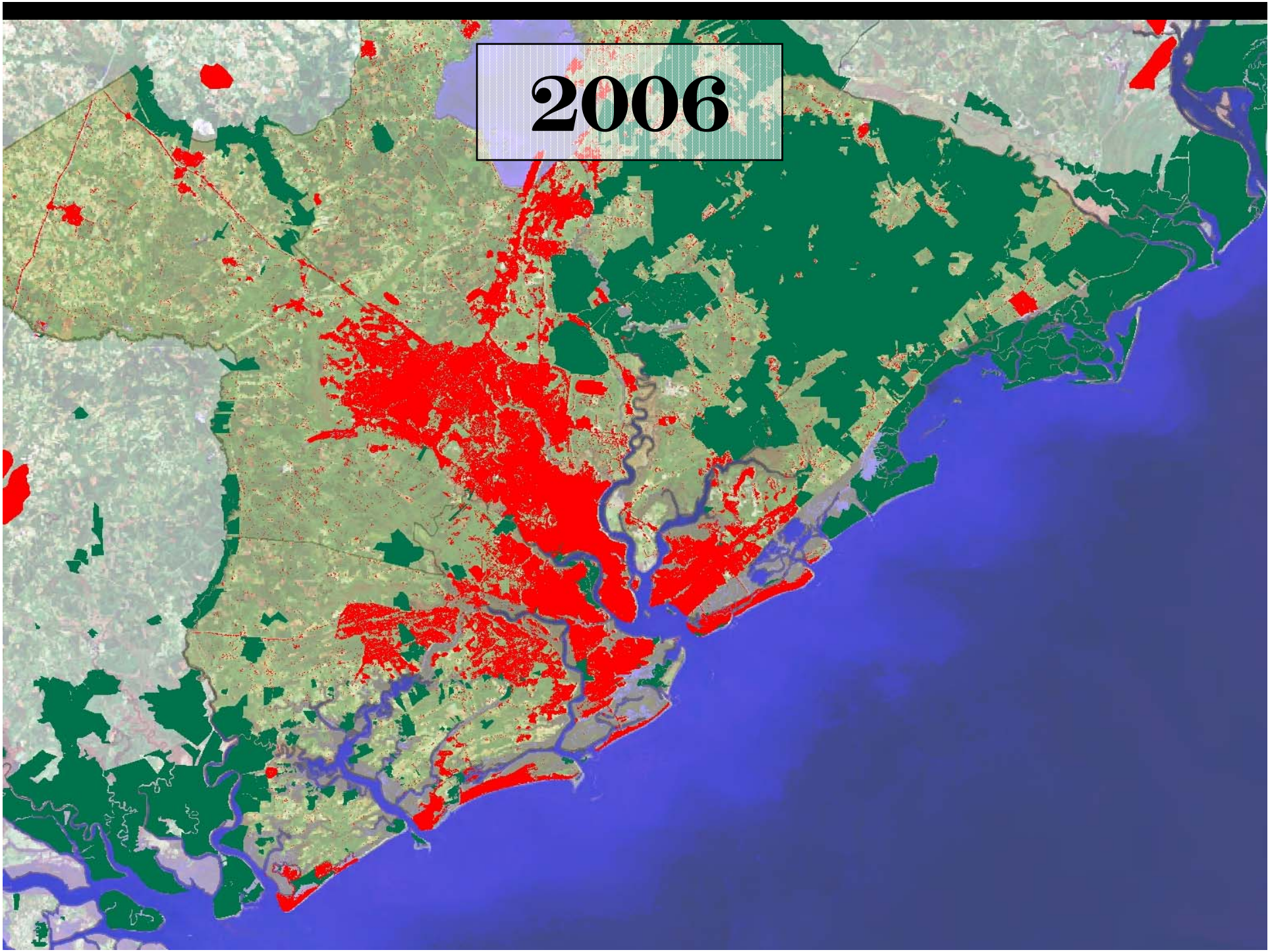
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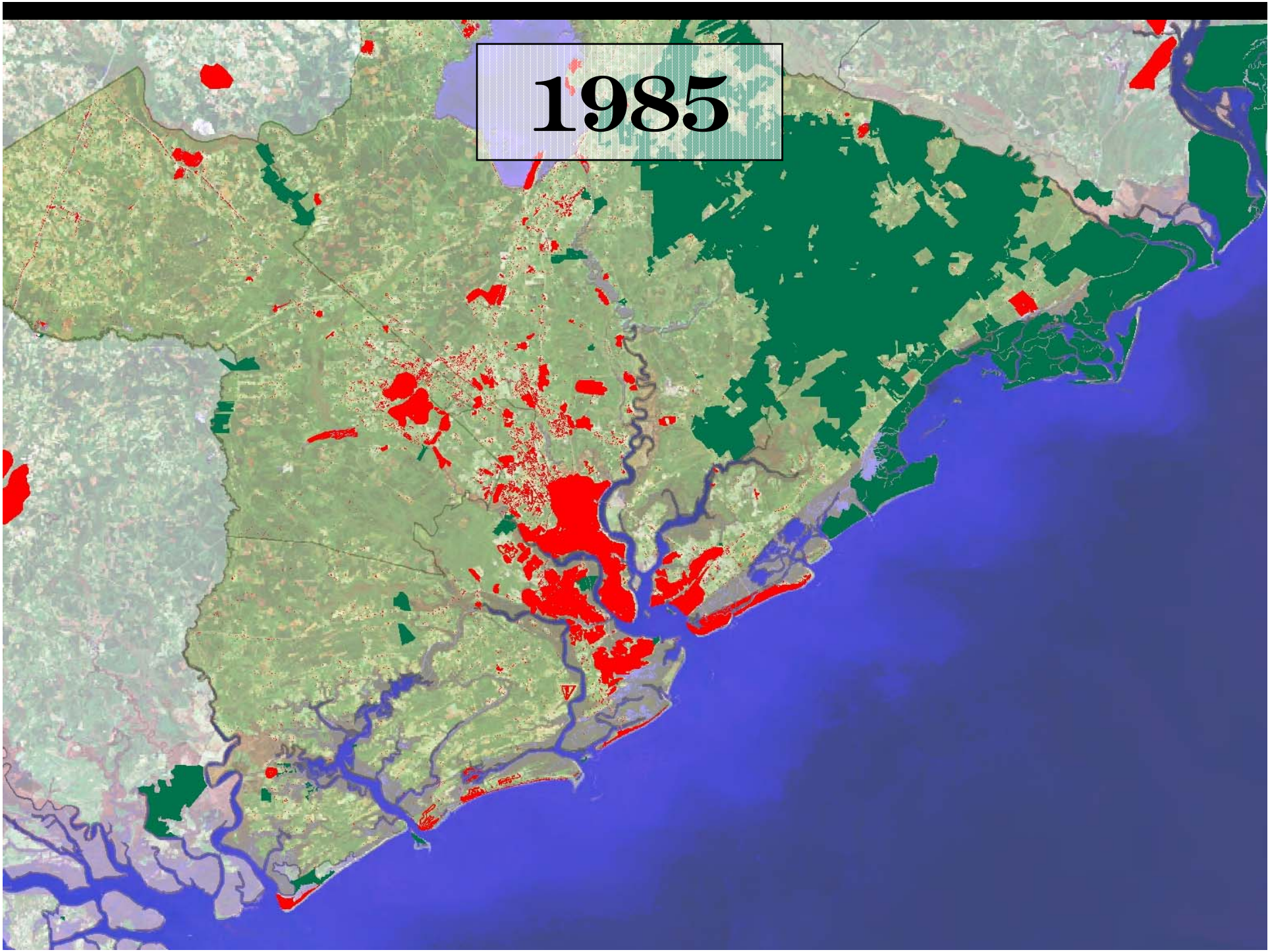
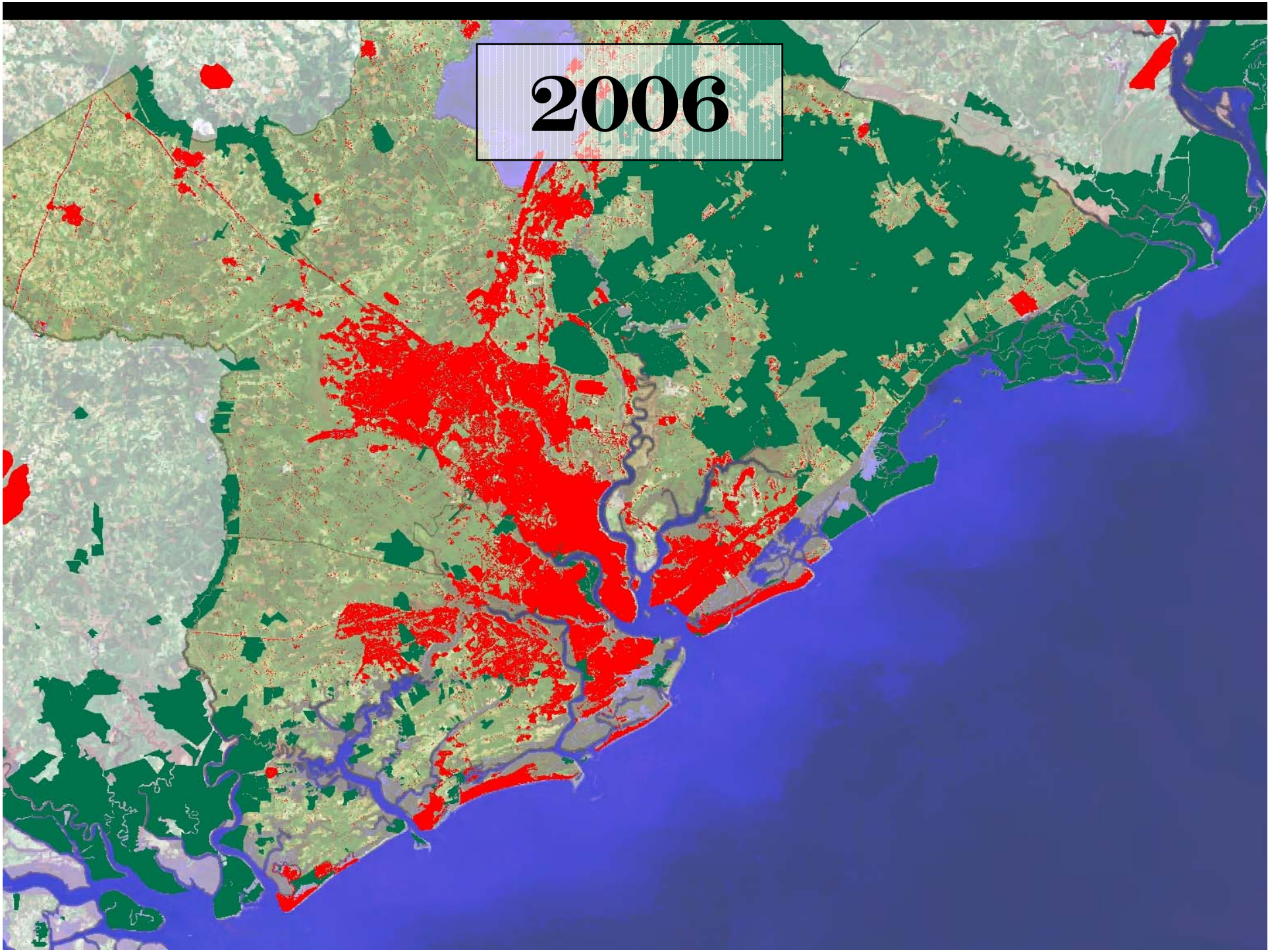
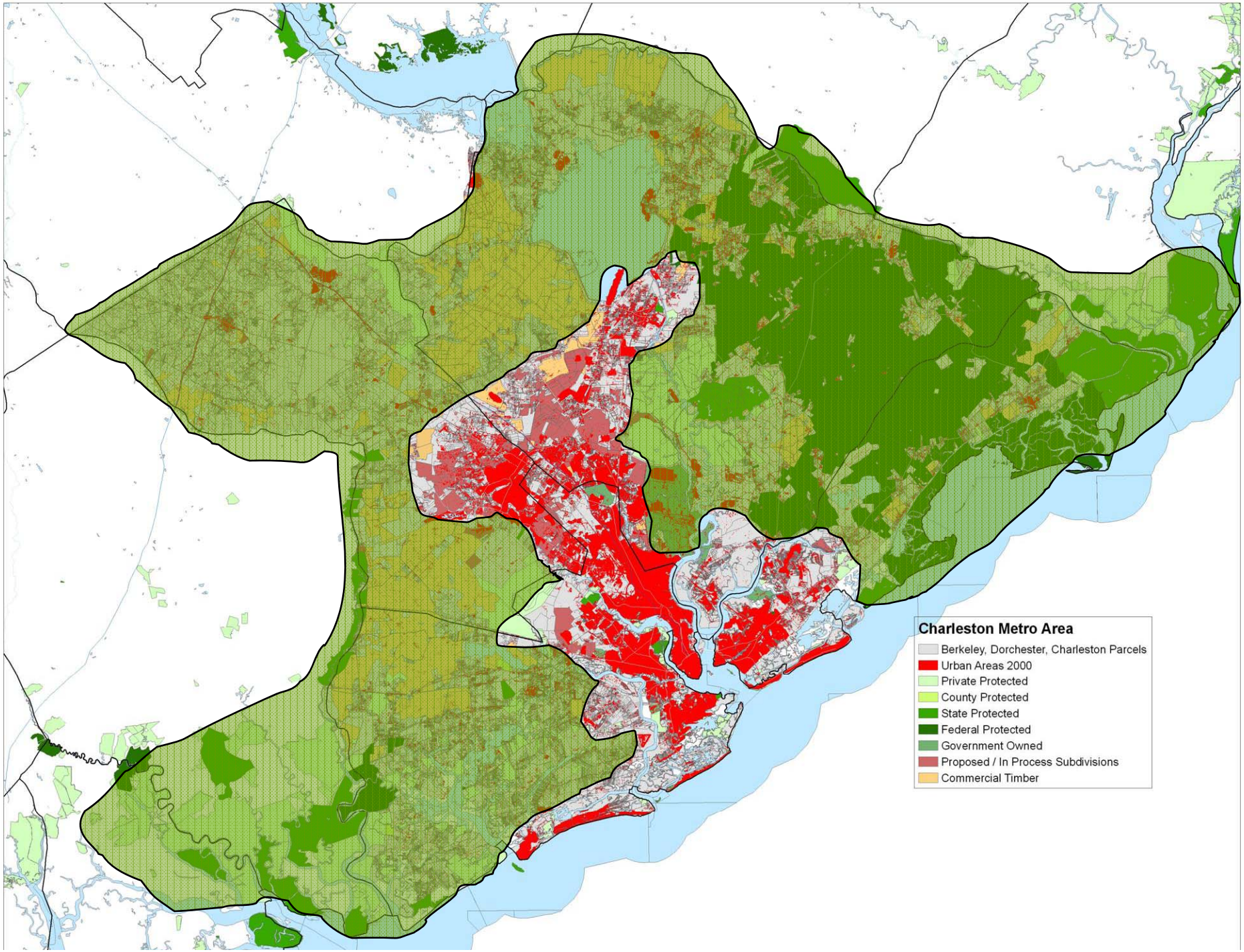
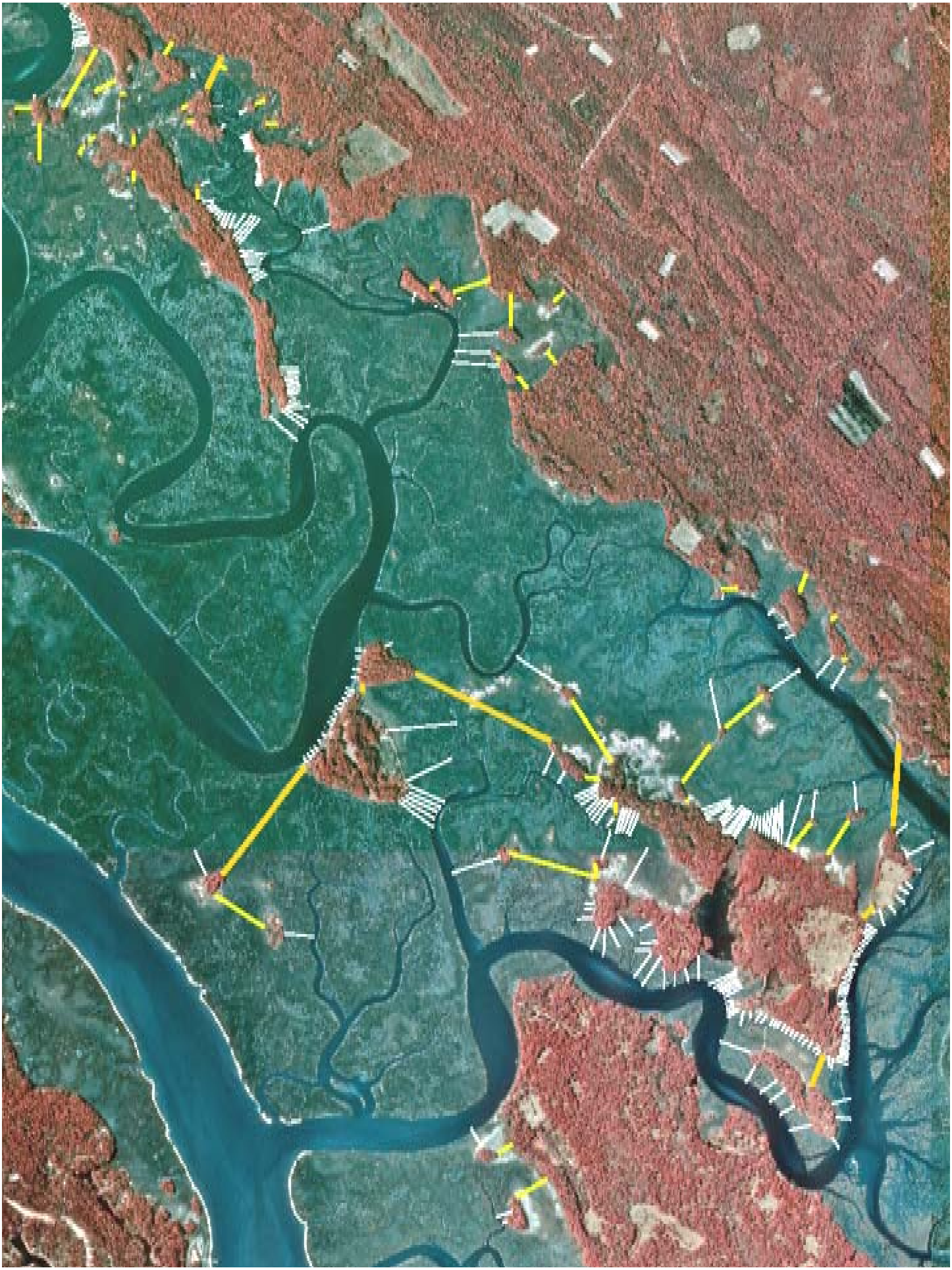

1985


2006

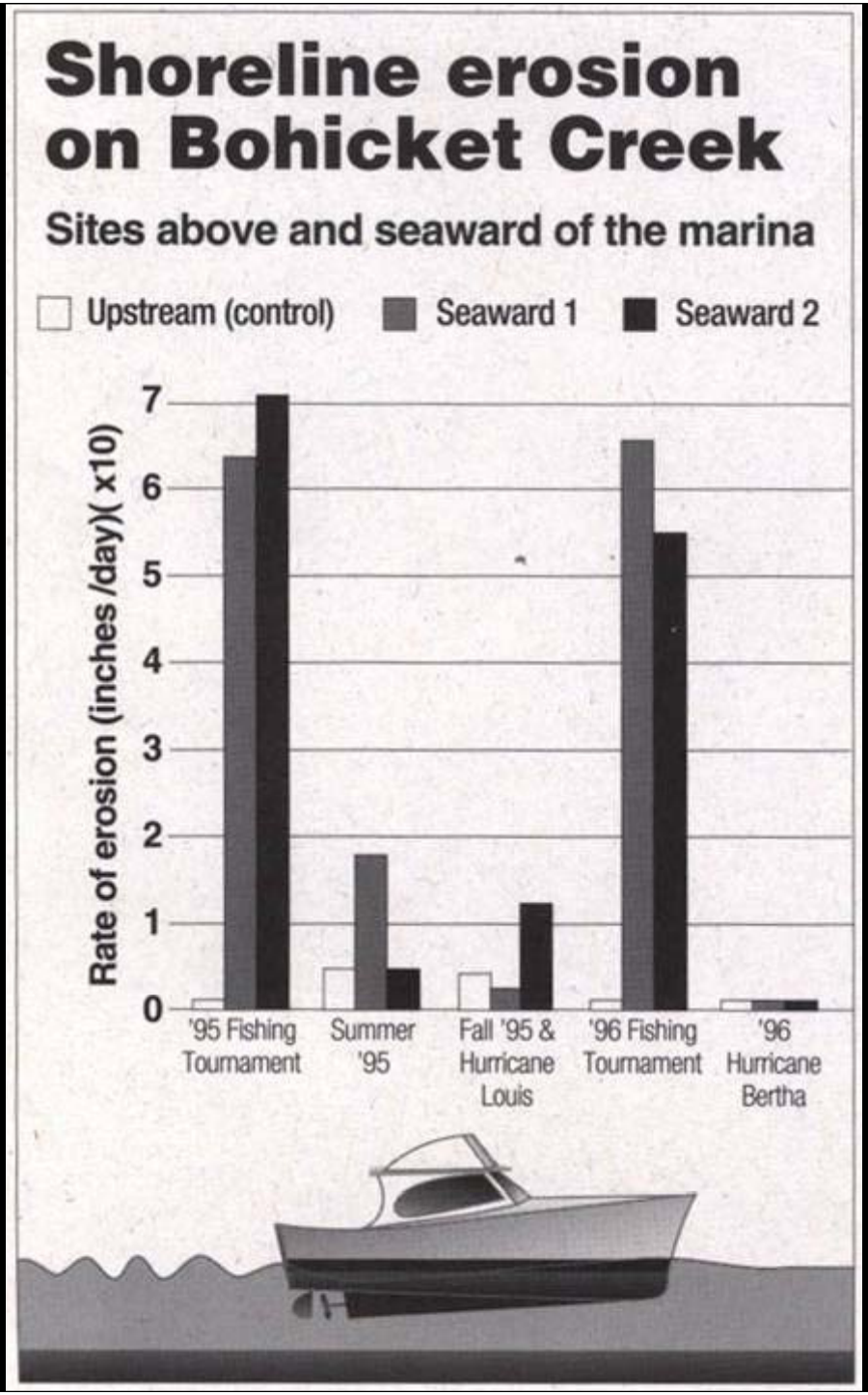

Charleston Metro Area
Berkeley, Dorchester, Charleston Parcels
Urban Areas 2000
Private Protected
County Protected
State Protected
Federal Protected
Government Owned
Proposed / In Process Subdivisions
Commercial Timber




Betsy Kerrison Pkwy
Seabrook Island Rd
Andell Bluff Blvd
Marsh Oak Ln

Shoreline erosion on Bohicket Creek

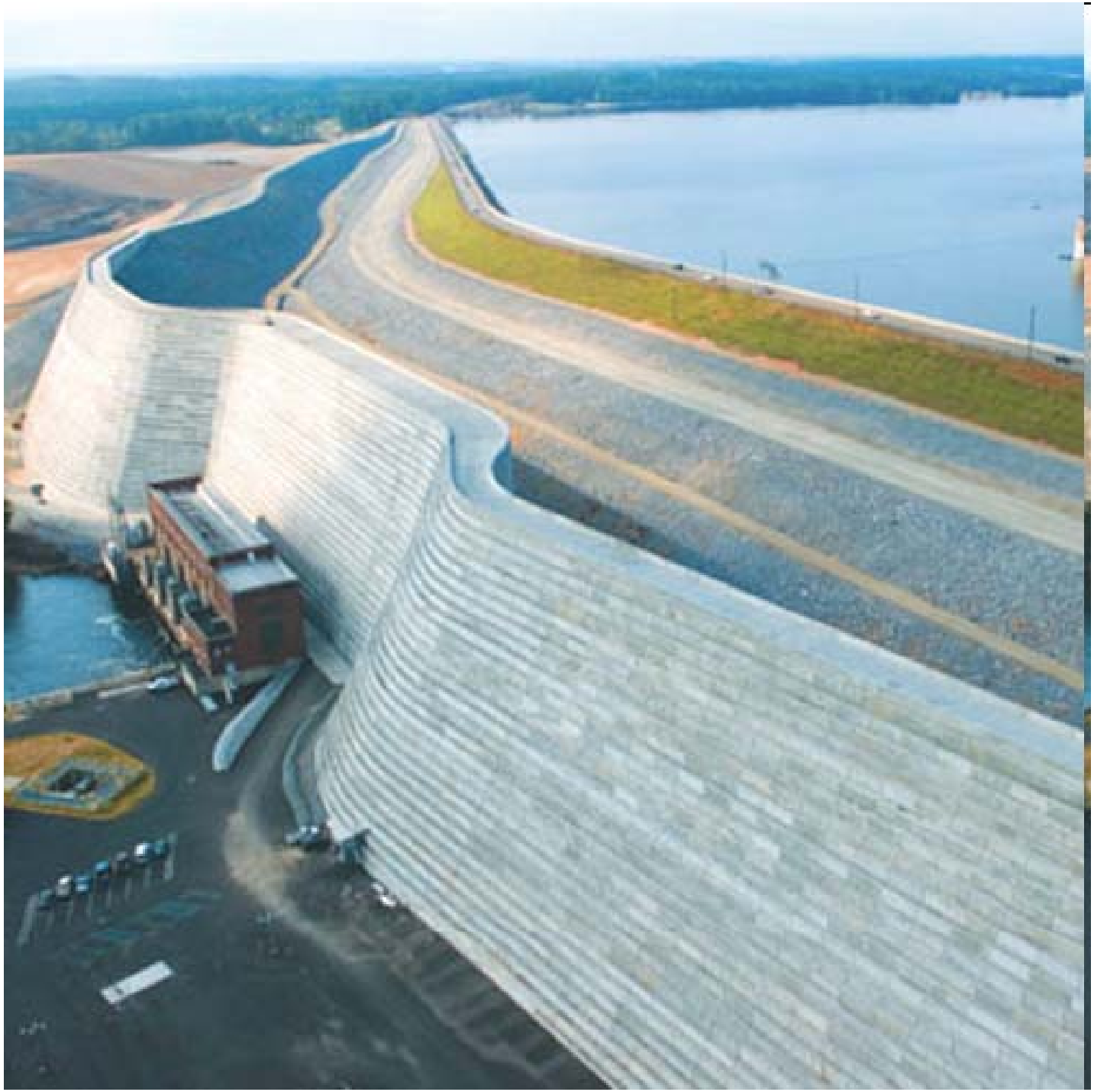
Sites above and seaward of the marina

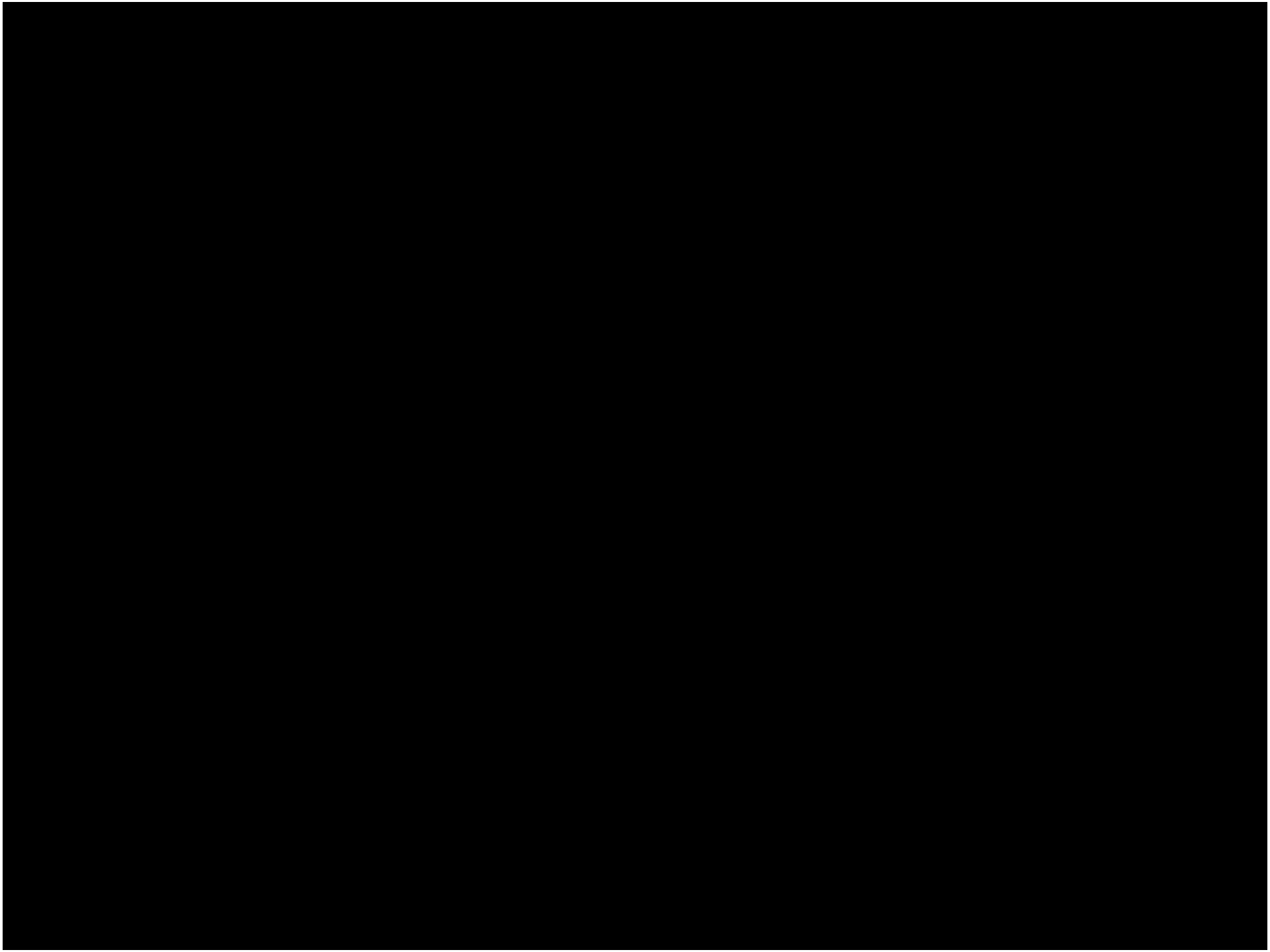


SCORE volunteers fill shell in mesh bags along intertidal shorelines to construct reefs.

Surface Water Withdrawal Law

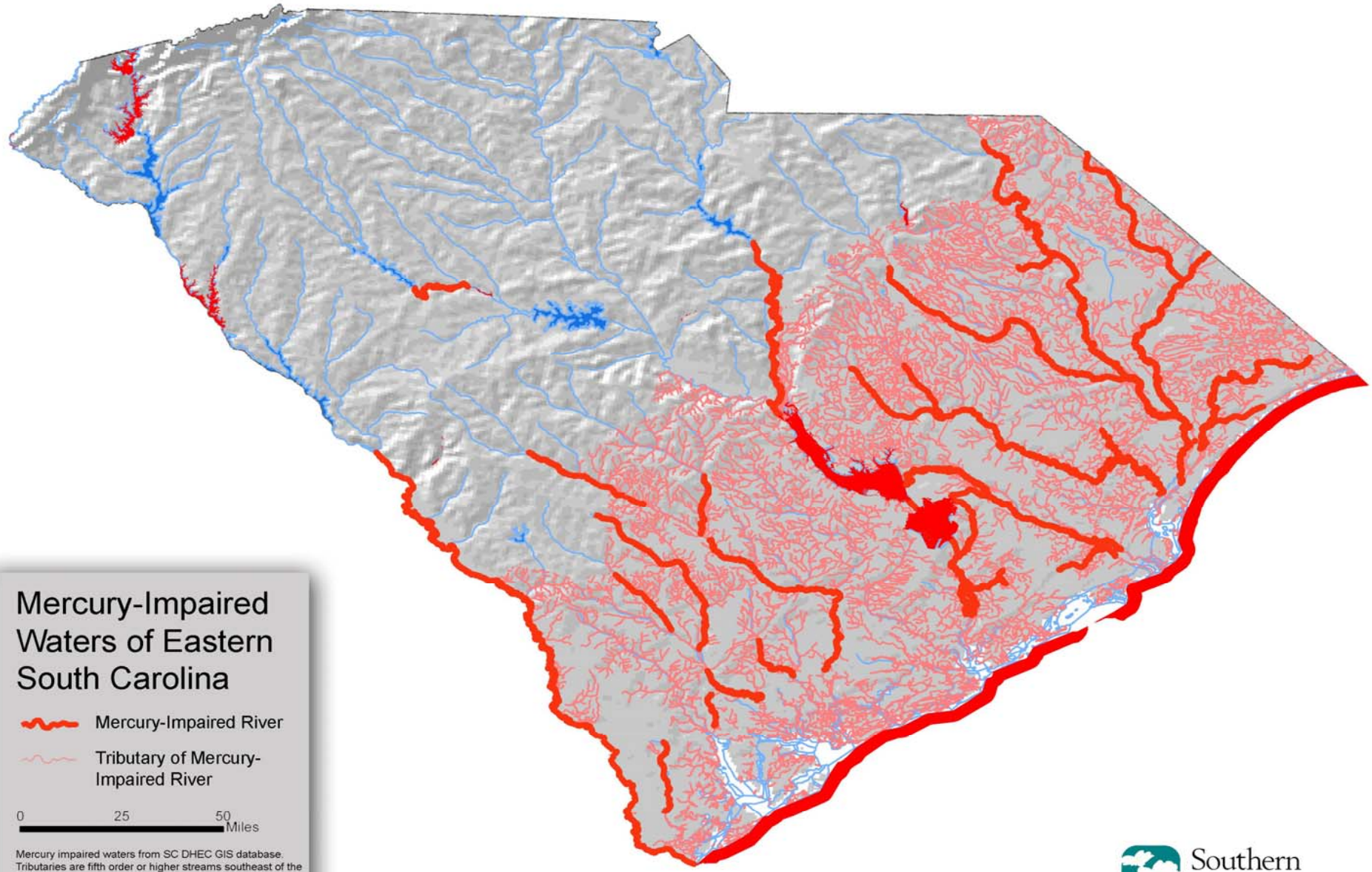
- Requires a permit for water withdrawals for the first time ever in SC
- Sets minimum river flows to protect fish
- Requires contingency plans for low flows






Little Pee Dee
River and
Russ Lake


LPD Shack #14
Russ Lake
33° 43.149N, 079° 12.033W


Mercury-Impaired Waters of Eastern South Carolina
Mercury-Impaired River
Tributary of Mercury-Impaired River
0
25
50
Miles
Mercury impaired waters from SC DHEC GIS database. Tributaries are fifth order or higher streams southeast of the fall line.
Southern Environmental Law Center




Landscape Conservation Cooperatives along the Atlantic Coast

Opportunities for Conservation Science Collaborations

Andrew Milliken, North Atlantic LCC

Atlantic Coastal Fish Habitat Partnership Annual Meeting
Charleston, South Carolina, November 10, 2010

Atlantic Coast
Collaborative Landscape Conservation

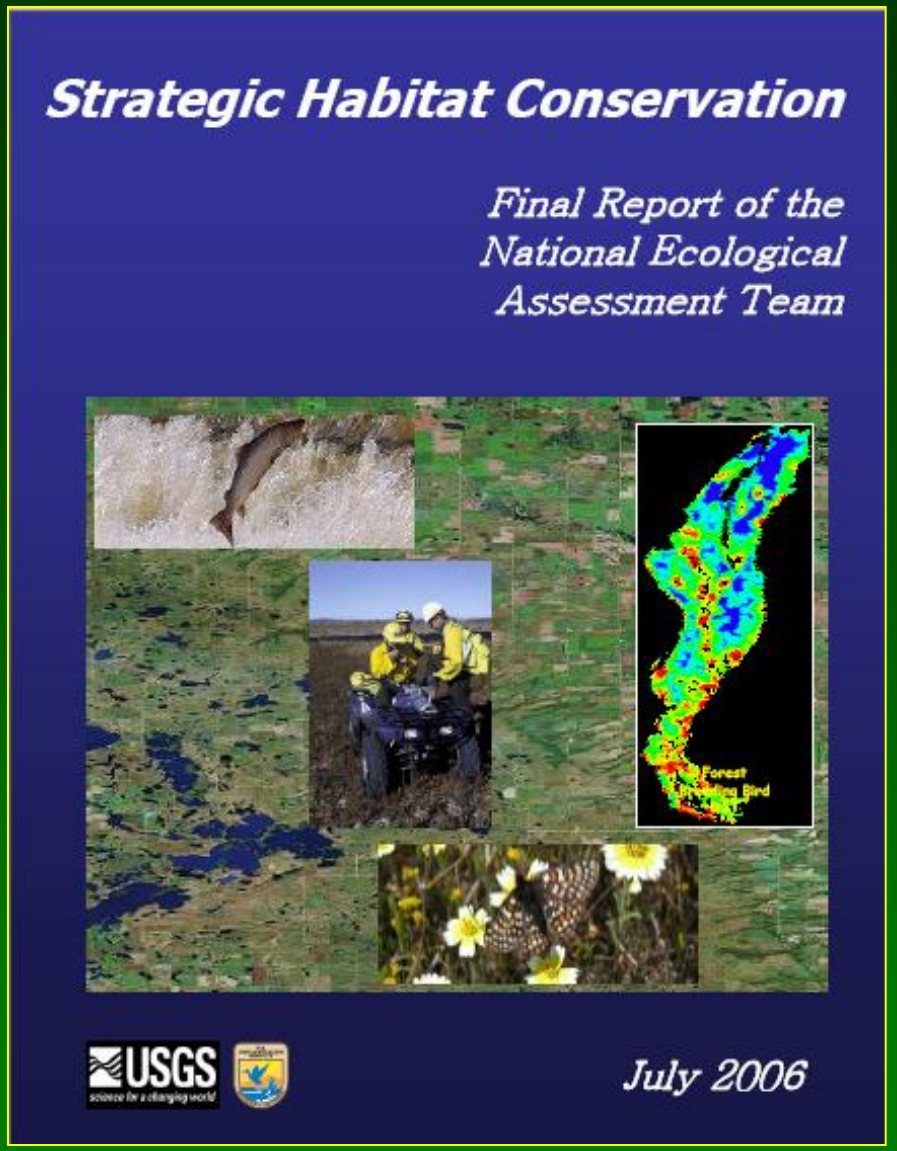
- Landscape Conservation
  - History and definitions
- Landscape Conservation Cooperatives
- Status of LCCs along the Atlantic Coast
  - North Atlantic
  - South Atlantic
  - Peninsular Florida
- Opportunities for Collaboration

Landscape Conservation (Strategic Habitat Conservation)

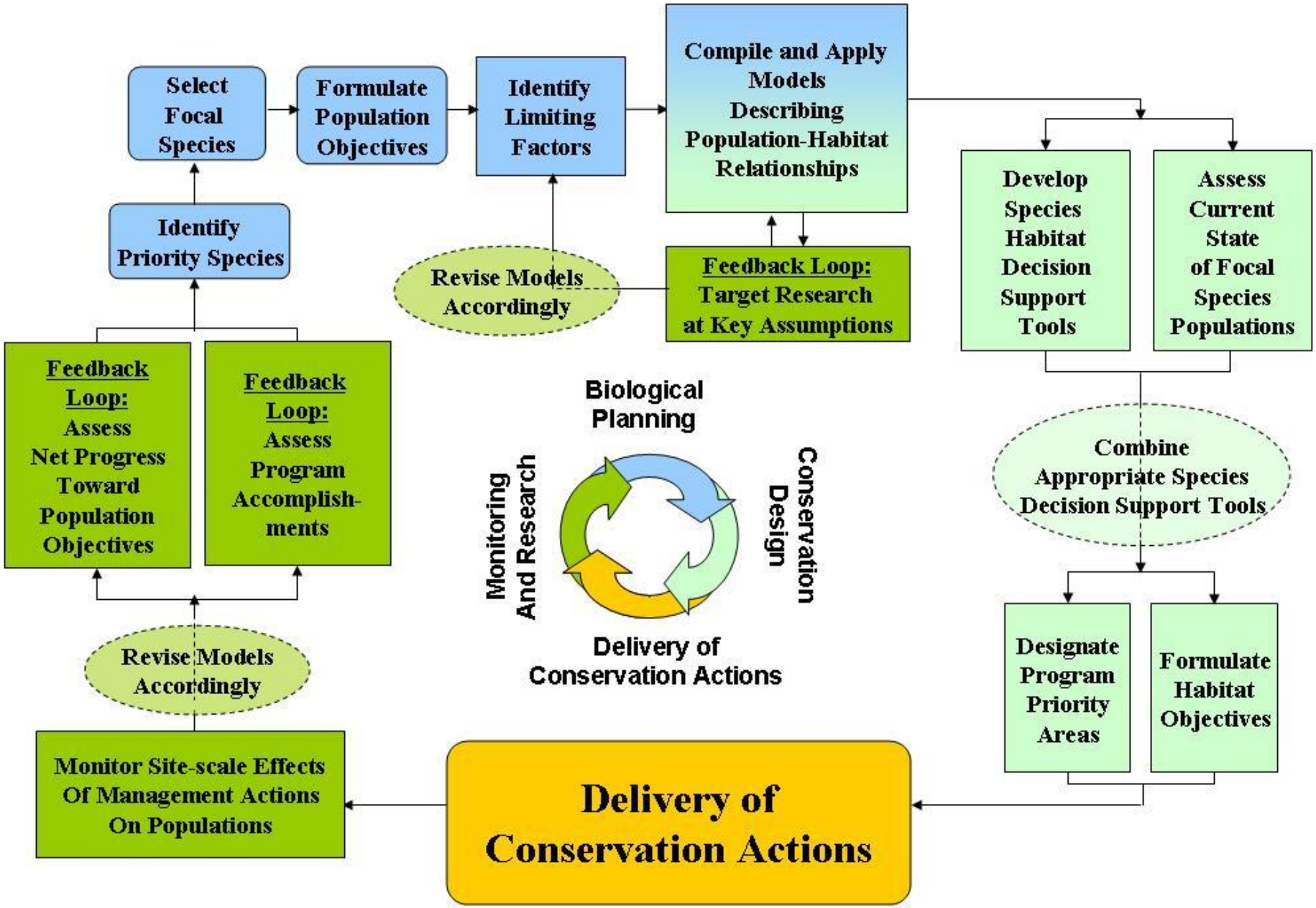
- **Science-based approach** to conservation focused on providing landscapes capable of sustaining trust species populations at objective levels.

- Programs and partners work together towards **common resource outcomes** for fish and wildlife and habitats

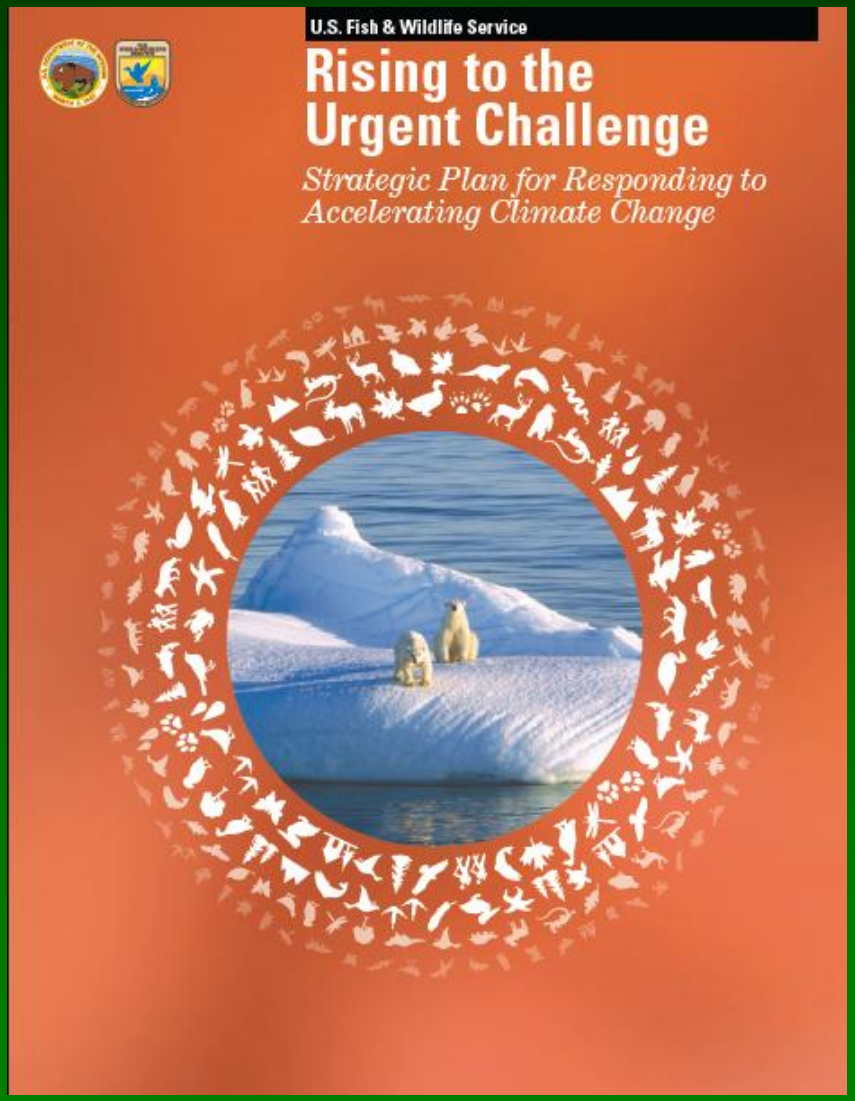
- Founded on an **adaptive, iterative process** of biological planning, conservation design, conservation delivery, monitoring and research.



Landscape Conservation Framework



USFWS Climate Change Strategic Plan



http://www.fws.gov/home/climatechange/

USFWS Climate Change Strategic Plan

"Establish *landscape conservation cooperatives* that enable members of the conservation community to plan, design and deliver conservation in ways that integrate local, state, tribal, regional, national and international efforts and resources…."

DOI Secretarial Order on Climate Change

"A network of *Landscape Conservation Cooperatives* will engage DOI and federal agencies, states, tribal and local governments and the public to craft practical, landscape-level strategies for managing climate change impacts…"

Landscape Conservation Cooperatives

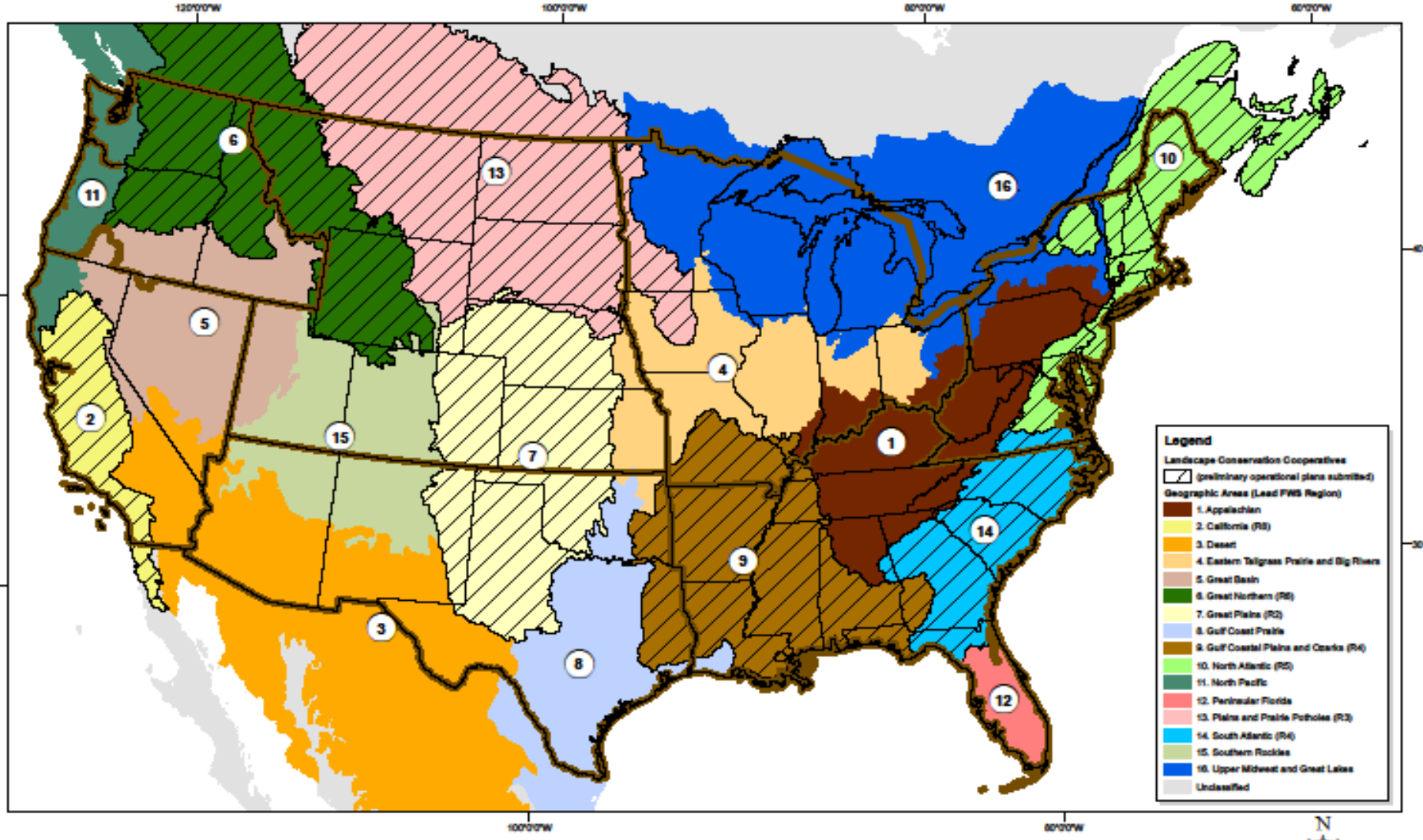
- **With a vision of sustainable landscapes for fish and wildlife, LCC's will:**
  - facilitate partnerships for strategic conservation at landscape scales
  - identify shared conservation goals and science needs
  - provide scientific and technical expertise to support landscape scale conservation efforts
  - provide decision support tools for managers
  - be effective in informing conservation delivery actions and relating to larger scales

Landscape Conservation Cooperatives

- LCC's will
  - provide science support for conservation activities that will address major threats and uncertainties (including climate change) to conservation of species and habitats
  - maximize the use and efficiency of resources
  - draw upon, and augment, the existing science capacities of partners and partnerships
  - be part of a seamless national network

U.S. Department of the Interior

Landscape Conservation Cooperatives - Interim Geographic Framework



Produced by FWS, IRTM, Denver, CO
Map Date: 01222010

0 175 350 700 1,050 1,400 Miles

0 400 800 1,600 2,400 3,200 Kilometers

N W E S

Albers Equal Area Conic
NAD83

Department of the Interior Support

Nationally - $20M available to establish 8 LCCs

Regionally - $2.2M for North Atlantic LCC

$1.1M planning, $920k science, $133k admn.

Nationally - $5M to support 8 LCCs

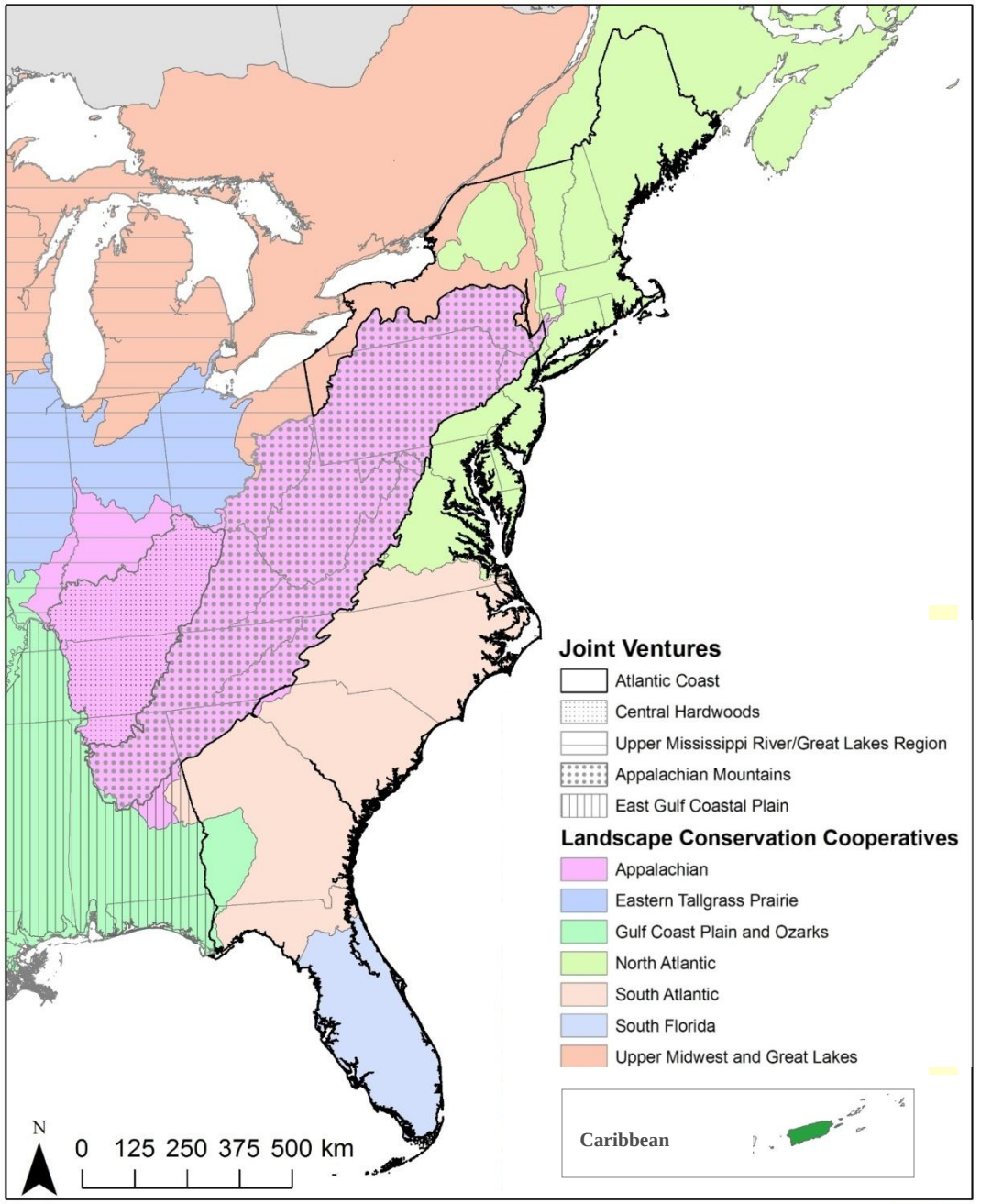
Regionally - $385k, 2 positions for NA & SA LCCs

National Climate Change and Wildlife Science Center and 8 Regional Climate Science Centers

- Southeast Regional Climate Science Center in FY 2010
- Northeast Regional Climate Science Center in FY 2012

Liaison position to North Atlantic LCC & National Urban Position in D.C.

LCCs (and JVs) in the Eastern U.S.



Landscape Conservation Cooperatives (LCC) in the Atlantic Coast Joint Venture

Atlantic Coast Joint Venture
Laurel, MD 20708
October 2009

North Atlantic LCCs FY 10 Actions

- Partner meetings and calls starting in November, 2009
- North Atlantic LCC Plan - Dec. 11, 2009
- North Atlantic LCC Structure & Governance
- Staff hired
  - North Atlantic LCC Coord. – *Andrew Milliken*
  - ARD Science Applications – *Ken Elowe*
  - Public Affairs Specialist – *Megan Nagel*
- Initial conservation science projects selected supporting partner-identified priority science needs

North Atlantic LCCs FY 10 Actions

- Partner meetings and calls starting in November, 2009
- North Atlantic LCC Plan - Dec. 11, 2009
- North Atlantic LCC Structure & Governance

  –South Atlantic LCC Coord. – *Ken McDermond*

  –ARD Science Applications – *Bill Uihlien*

  –South Atlantic Science Coordinator– *Rua Mordecai*

  supporting partner-identified priority science needs

North Atlantic LCC Next Steps:

1. Implement FY 2010 projects
2. Establish steering committee (next NA meeting at NEAFWA State Directors meeting November 17)
3. **Assess science needs and existing capacity of partners and partnerships to guide decisions on future staff, technical teams and projects**
4. Based on this input, support priority projects, hire staff and develop technical teams to address greatest needs

North Atlantic LCC Governance

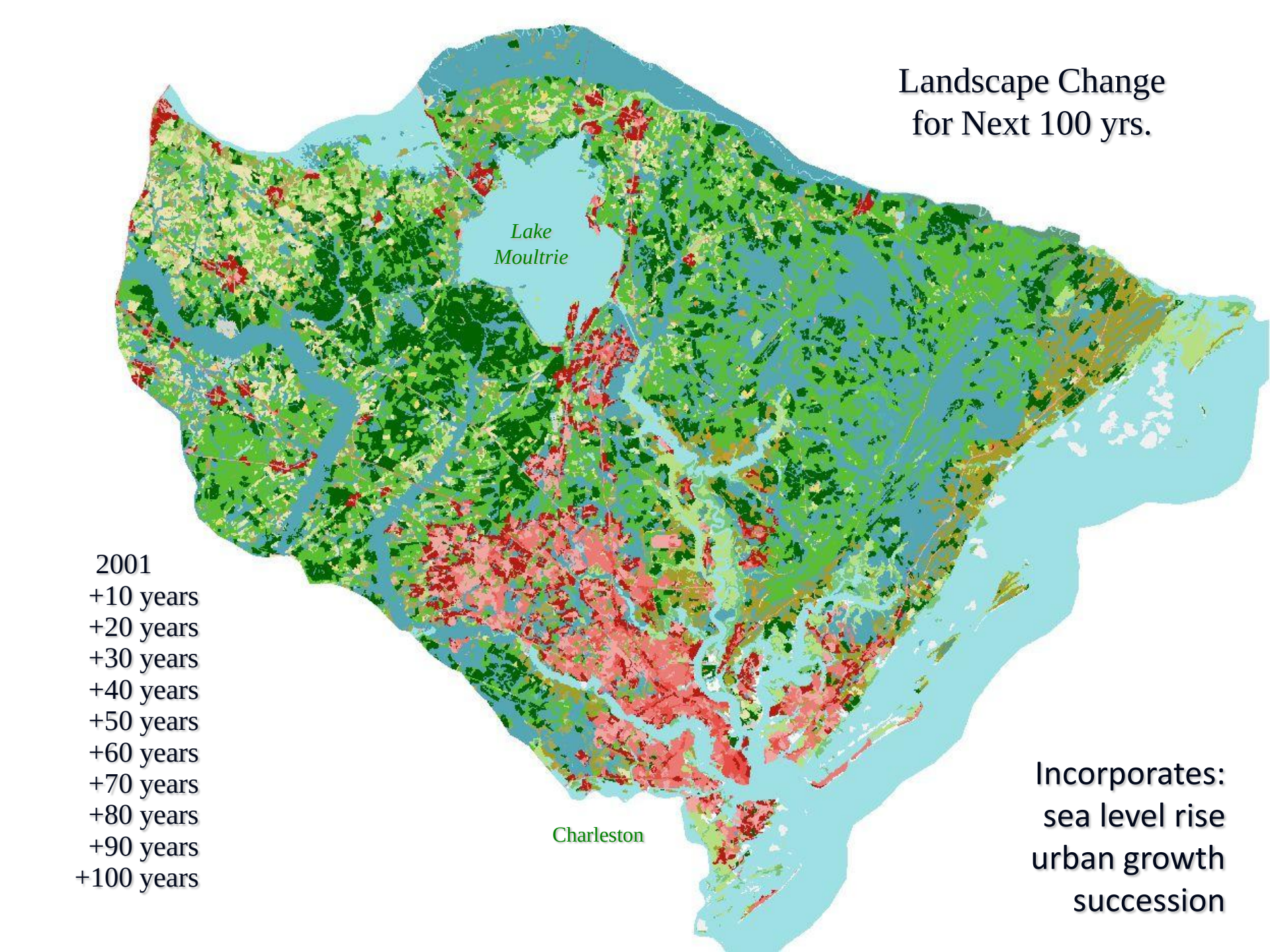
- Steering Committee
  - 12 States + D.C
  - Federal Agencies (USFWS, USGS, NPS, USFS, NOAA, EPA, BOEMRE)
  - Tribes (USET)
  - NGOs (Manomet, TNC, NWF, NFWF, TPL, WMI)
  - Canadian Partners
  - DOI Climate Science Center
  - Neighboring LCCs
- Work Groups
- Staff

NALCC FY 2010 Adaptive Science Projects

Project		**Funding**
Regional species & habitat vulnerability assessments		**$100k**
Designing sustainable landscapes for wildlife		**$400k**
Forecast effects of sea level rise on habitat of piping plovers & identify responsive conservation strategies		**$204k**
Evaluating the representative species approach		**$120k**
Forecasting changes in stream flow, temp., and brook trout populations as a result of climate change		**$420k**
Using dynamic linear modeling to characterize hydrologic regimes and detect flow modifications at multiple temporal scales (national LCC funds)		**$200k**
TOTAL		**$1.44M**

http://www.fws.gov/northeast/science/nalcc.html

Landscape Change for Next 100 yrs.



Incorporates:
sea level rise
urban growth
succession

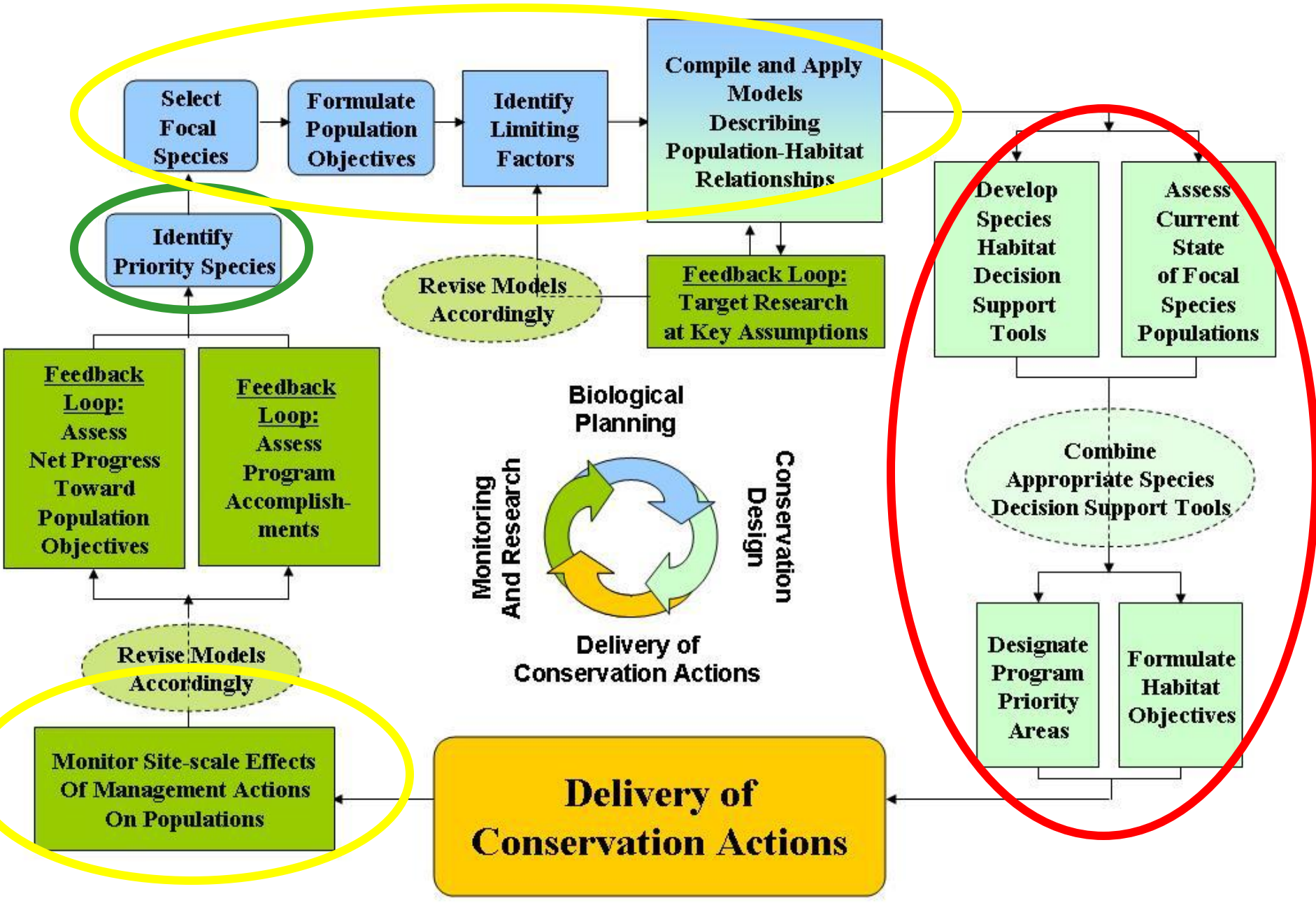
Fish Habitat Partnerships and LCCs in the Eastern U.S.

- Fish habitat partnerships play a leadership role in fisheries science and delivery
- ACFHP ties together coastal fish conservation efforts at the regional and coast-wide scale in multiple LCCs
- LCC will build off of existing fish habitat (and other) partnerships
- As part of LCCs, fish conservation partners can help address unmet priority science needs
- Develop functional and science relationships

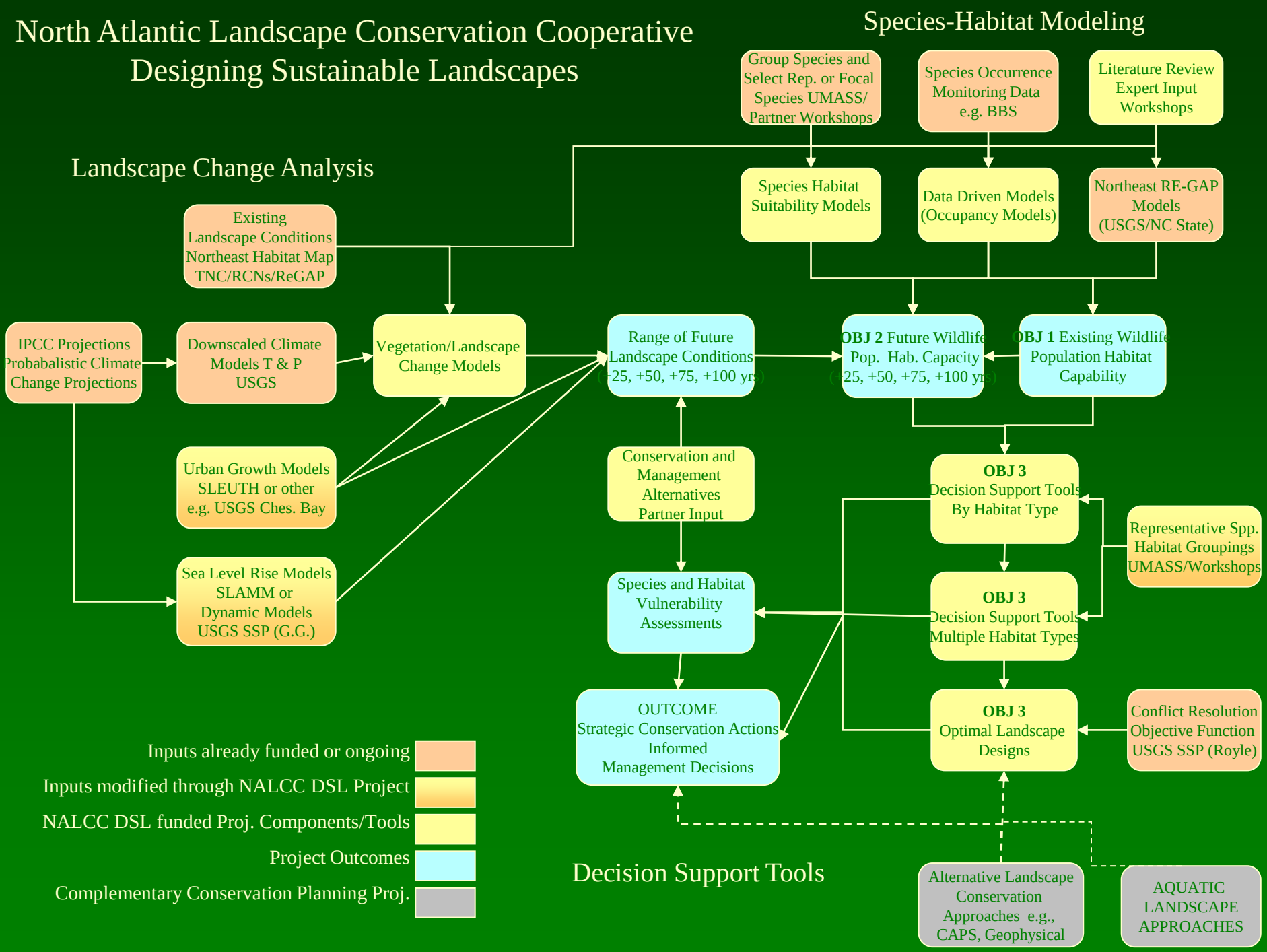
What Can LCC Provide?

- Integration of conservation science needs and projects with other taxonomic groups and partnerships
- Increased resources and coordination for funding large, complex science projects (including climate change adaptation planning)
  - Landscape change predictions
  - Integrated landscape designs for all fish & wildlife
  - Coarse-filter approaches for guiding decisions
  - Regional climate change vulnerability assessments and resiliency analyses

Landscape Conservation Framework



North Atlantic Landscape Conservation Cooperative
Designing Sustainable Landscapes




North Atlantic Landscape Conservation Cooperative
Designing Sustainable Landscapes
Species-Habitat Modeling
Group Species and Select Rep. or Focal Species UMASS/ Partner Workshops
Species Occurrence Monitoring Data e.g. BBS
Literature Review Expert Input Workshops
Landscape Change Analysis
Northeast RE-GAP Models (USGS/NC State)
IPCC Projections Probabalistic Climate Change Projections
Existing Wildlife Habitat Capability
OUTCOME
Strategic Conservation Actions
Informed
Management Decisions
Representative Spp. Habitat Groupings UMASS/Workshops
Assessments
Multiple Habitat Types
OUTCOME
Strategic Conservation Actions
Informed
Management Decisions
OBJ 3
Optimal Landscape Designs
Conflict Resolution Objective Function USGS SSP (Royle)
Inputs already funded or ongoing
Inputs modified through NALCC DSL Project
NALCC DSL funded Proj. Components/Tools
Project Outcomes
Complementary Conservation Planning Proj.
Decision Support Tools
Alternative Landscape Conservation Approaches e.g., CAPS, Geophysical
AQUATIC LANDSCAPE APPROACHES




Andrew Milliken, North Atlantic LCC
andrew_milliken@fws.gov (413) 253-8269

Ken McDermond, South Atlantic LCC
ken_mcdermond@fws.gov (919) 707-0121

Dawn Jennings, Peninsular Florida LCC
dawn_jennings@fws.gov (904) 731-3336

http://www.fws.gov/northeast/science/nalcc.html
http://southatlanticlcc.ning.com/

Climate Change and Our Nation's Natural and Cultural Resources:

Interior Department Innovations in Conservation Delivery

Rachel Muir
Science Advisor, Northeast Region
U.S Geological Survey
ACFHP Partnership Meeting
Charleston, SC 11-10-10

U.S. Department of the Interior
U.S. Geological Survey

Objectives

- Why Climate Change Science Centers
- Recent Department of Interior Actions
- Climate Science Centers
  - Mission -- What will they do?
  - Relationship to LCCS
  - Interactions with Partners
  - Governance
  - What next?

Assumptions….

1. Climate change is occurring;
2. Current policy actions are inadequate (and too late) to avoid continuing change over decades to centuries;
3. Thus, human and natural systems must adapt;
4. Effective adaptation will require science, observations, and tools that do not presently exist
5. Effective adaptation will be enabled by landscape and regional level partnership action on both science and management

For Aquatic Resources in Particular…

- **The impacts of climate change in human and natural systems will be most evident and require the most rapid adaption in regard to water resources;**
- **Changes in sea level rise --**
- **Changes in precipitation and hydrology and geo-hydrology –**
- **Growing pressure on freshwater and coastal resources will increase as well.**

Secretarial Order 3289

Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources *(9/14/09)*

- **Department-wide Climate Change Response Council;**
- **Landscape Conservation Cooperatives (LCCs);**
- **Regional Climate Science Centers (CSCs).**

USGS
science for a changing world

DOI Climate Science Centers

Mission

Provide **natural resource managers** with the **tools and information** they need to **develop and execute management strategies** that address the impacts of **climate change on fish, wildlife, and their habitats**

Goals

– Partnerships with natural resource managers to address their highest priority science needs
– Partnerships with the scientific community to develop needed information and tools
– Delivery of robust tools and information at applicable scales directly to resource managers

Focus on climate change adaptation
Focus on climate change in context of other actions/stresses, etc.

USGS
science for a changing world

DOI Climate Science Centers -- Activities

Priority Science Activities:

- Integrate physical climate models with ecological, habitat, and population response models
- Develop models and forecast fish and wildlife population and habitat changes
- Develop methods and assess vulnerability of species and habitats
- Develop standardized approaches to modeling and monitoring

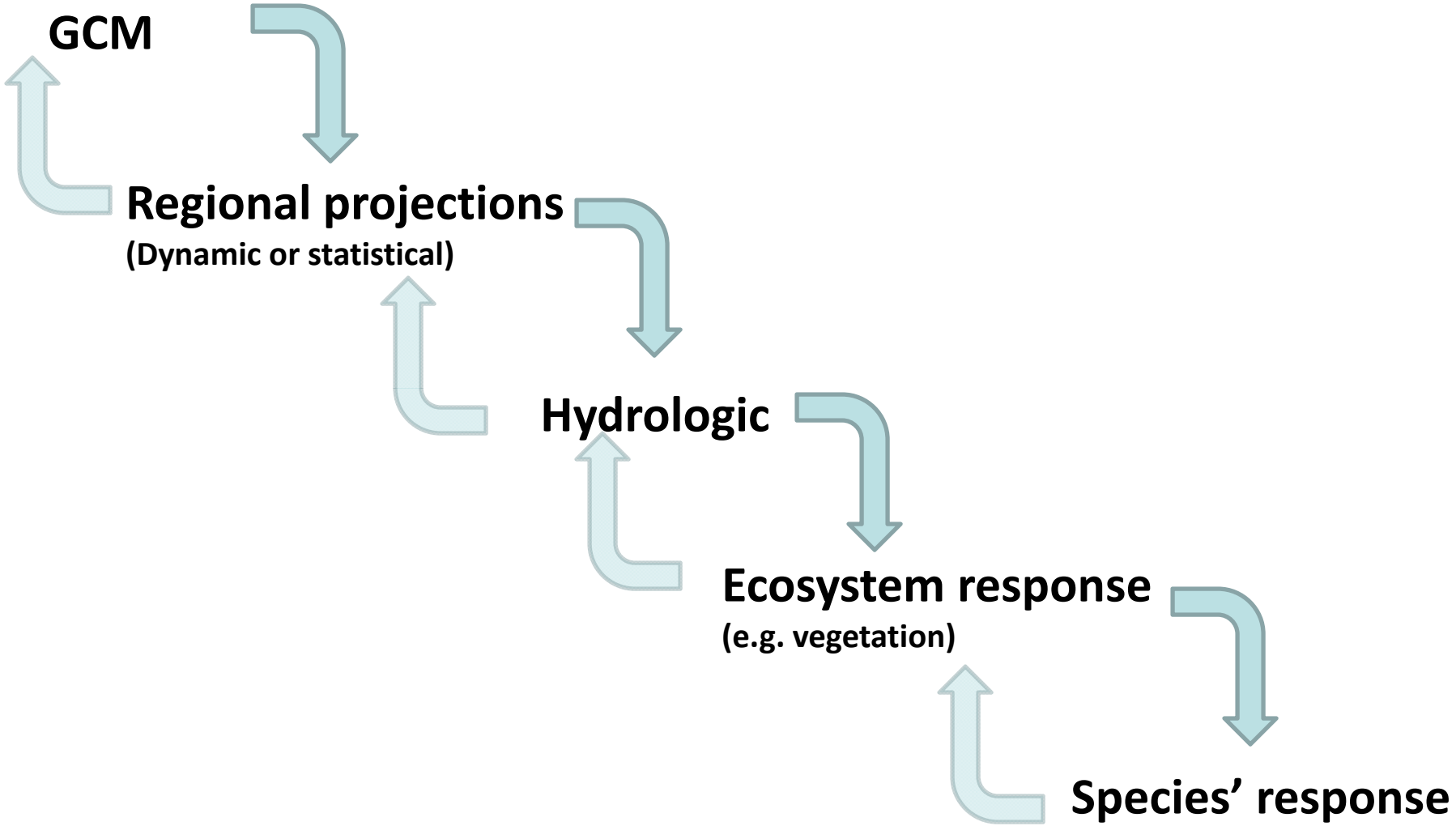
USGS
science for a changing world

“Big Science” or “Pure Science”
atmospheric, ecological, geologic, hydrologic

Translation, Integration, Assessment

Application to Management Concerns

USGS
science for a changing world



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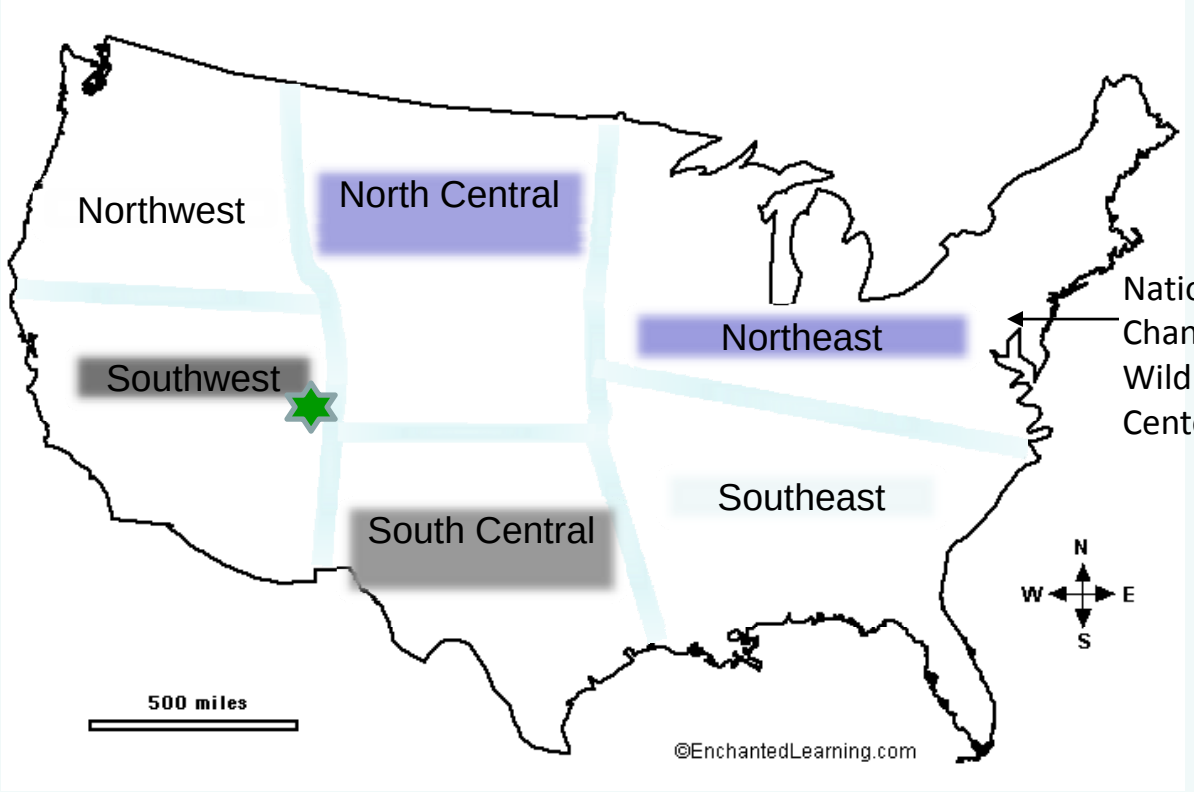
Climate Science Centers--Regions



"Fuzzy Boundaries"

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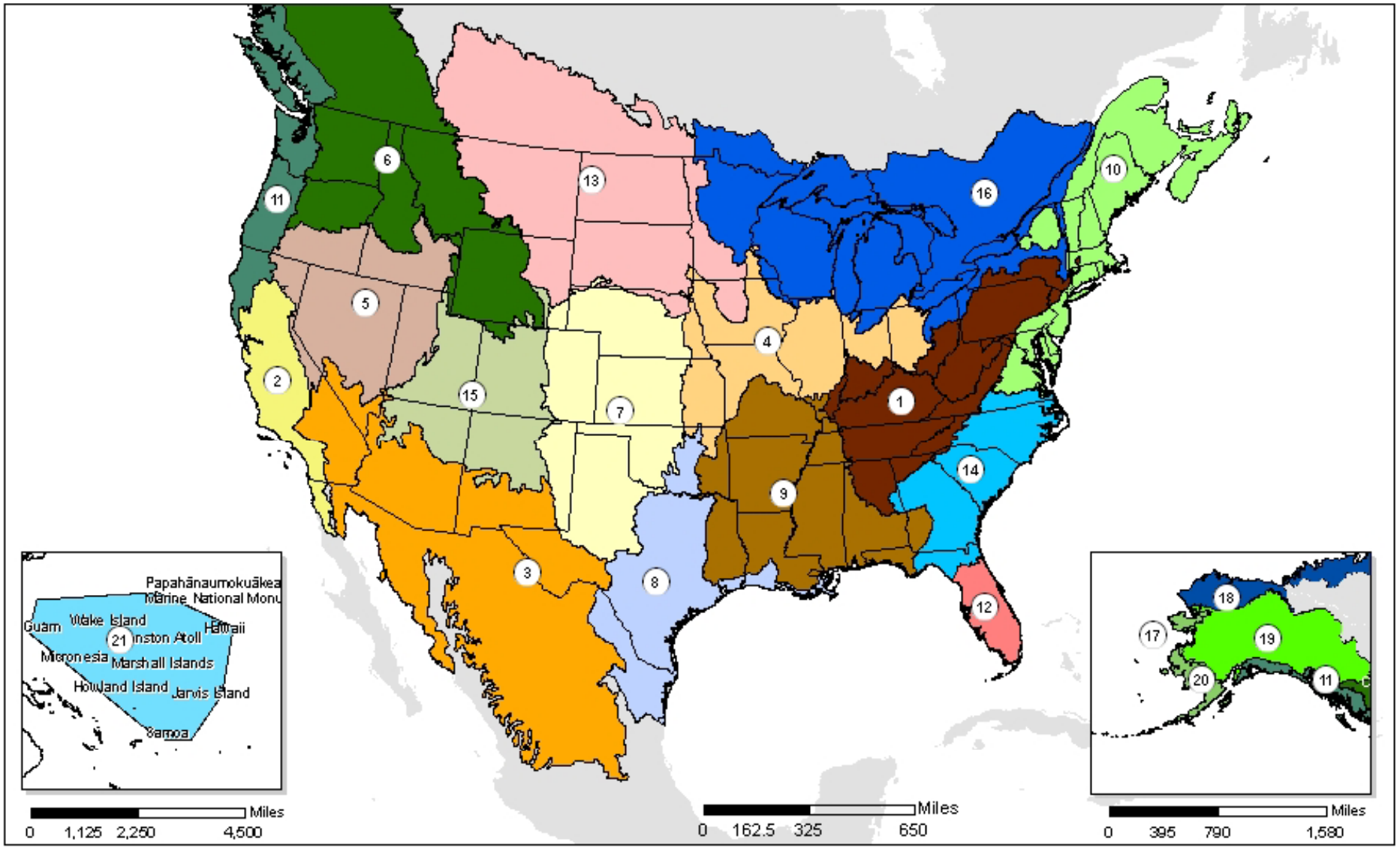
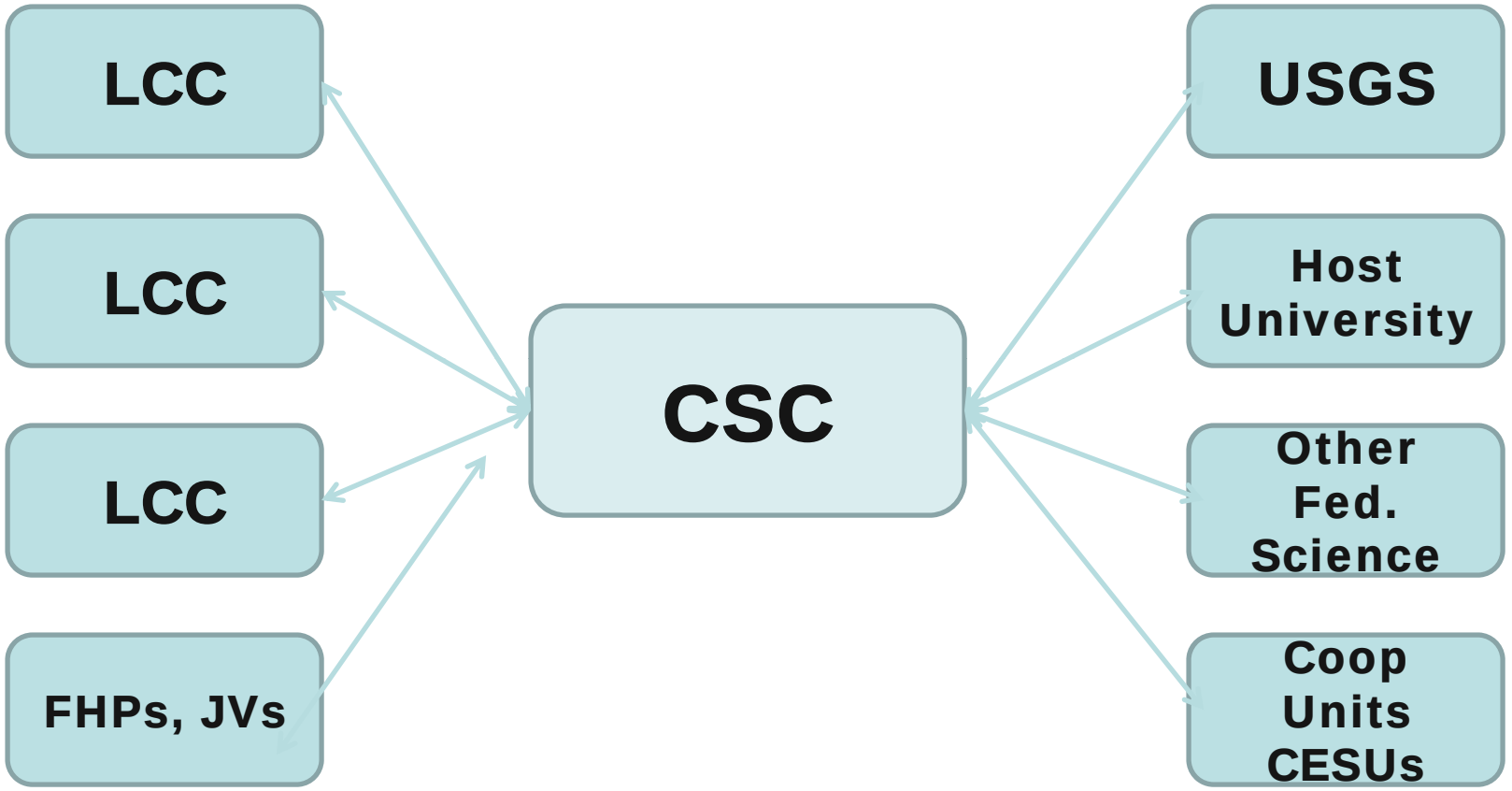
science for a changing world



1. Appalachian
2. California
3. Desert
4. Eastern Tallgrass Prairie and Big Rivers
5. Great Basin
6. Great Northern
7. Great Plains
8. Gulf Coast Prairie
9. Gulf Coastal Plains and Ozarks
10. North Atlantic
11. North Pacific
12. Peninsular Florida
13. Plains and Prairie Potholes
14. South Atlantic
15. Southern Rockies
16. Upper Midwest and Great Lakes
17. Aleutian and Bering Sea Islands
18. Arctic
19. Northwestern Interior Forest
20. Western Alaska
21. Pacific Islands
Unclassified



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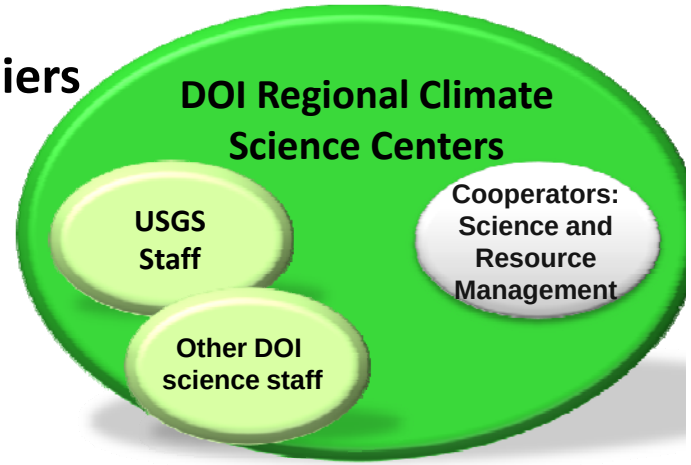
USGS Component of DOI Regional CSCs

- Initial / Core Federal Staffing (USGS NCCWSC) – Director/Coordinator, Ecologists, Modelers, Climate Scientists, Population Biologists, etc.
- Annual DOI/USGS funding ~$3-4 million
  - Not more than $1.5 M = DOI staff and operations (space/facilities, etc.)
  - Remainder = science funding through university, USGS, other partners
  - Partnerships – in-kind and monetary multipliers



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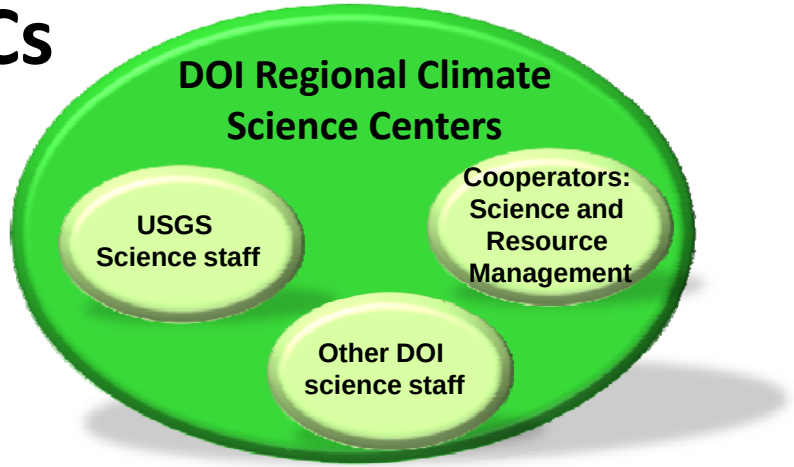
Establishing DOI Regional CSCs



- University / Nonfederal Based
- Competitive Process
- FY 2010 – Northwest – OSU/UW/UI
  Southeast – NC State
  Alaska – UAF (at UAA)
- FY 2011 – Southwest, North Central
- FY 2012 – Northeast, South Central, Pacific

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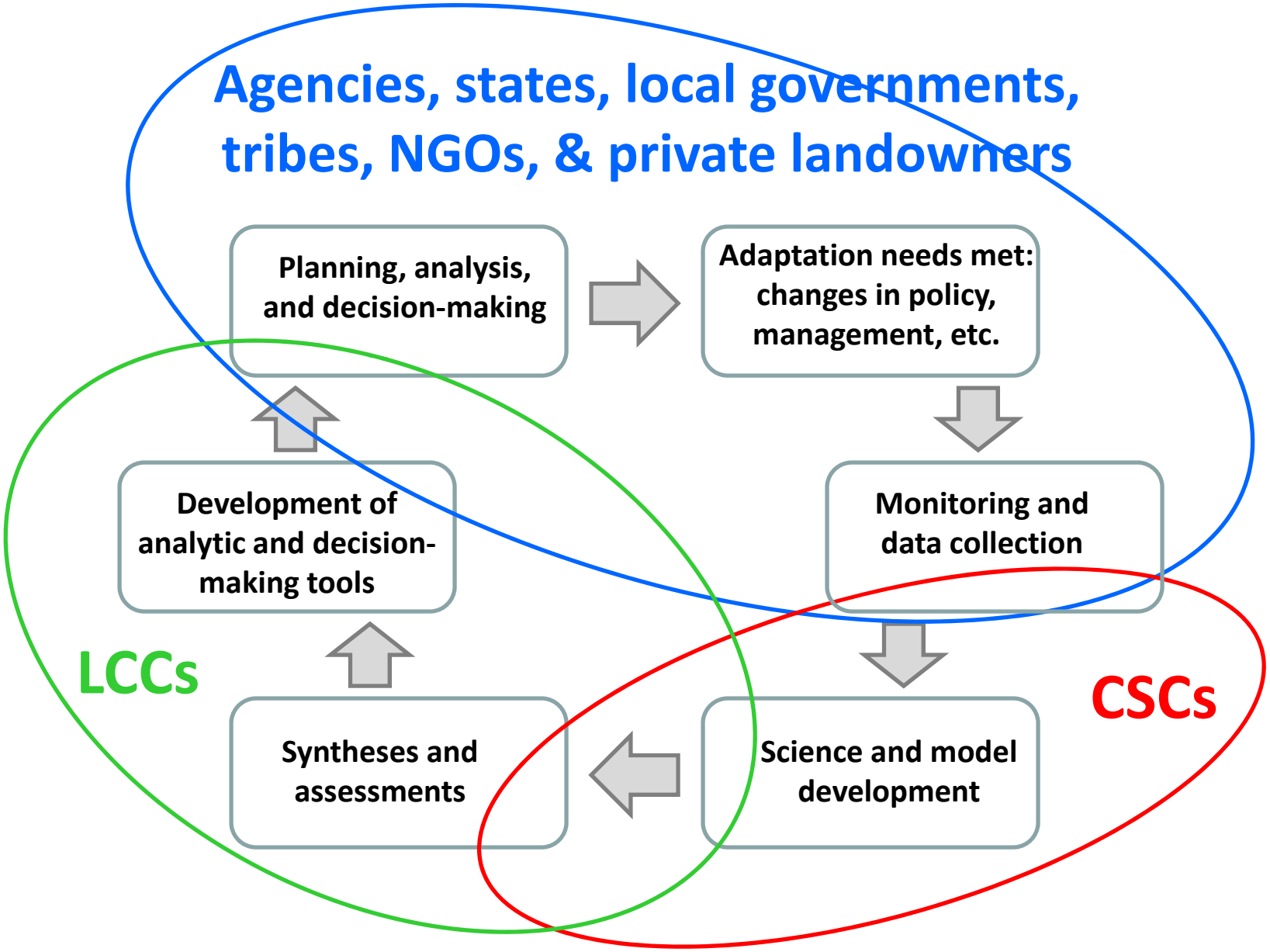
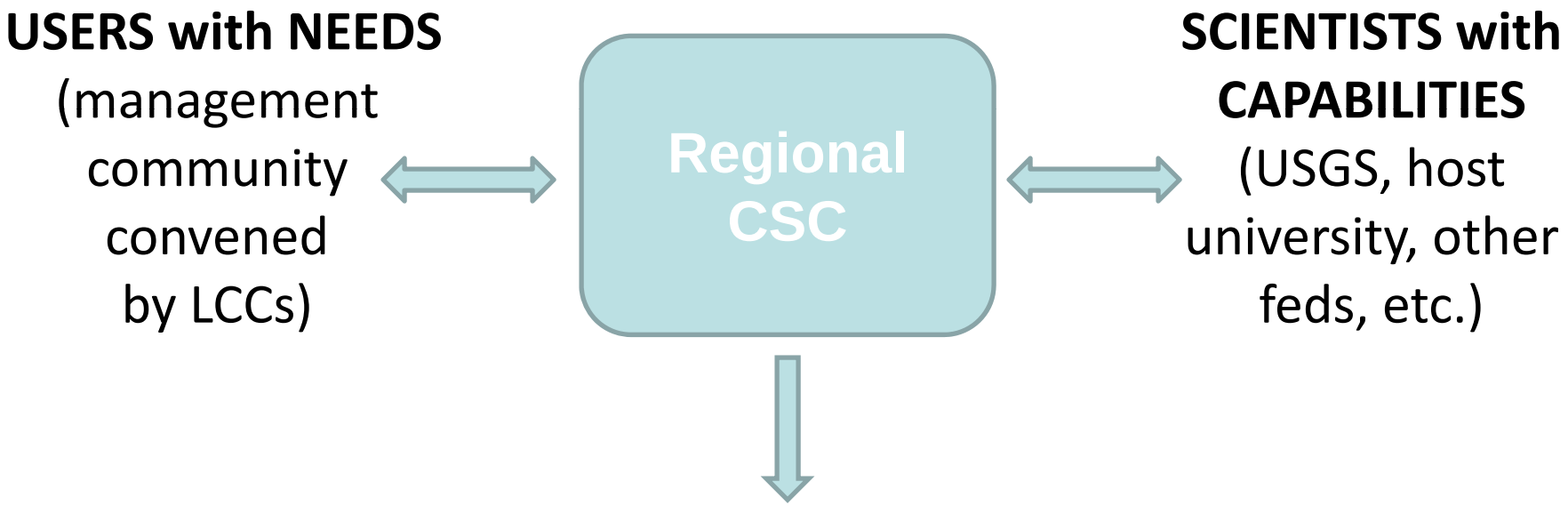
Climate Change Adaptation Conceptual Model



Climate Science Centers

Potentially most valuable role?

Convener of the parties



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National CCWSC and CSC Governance

- National Advisory Board
  - Input on priorities, opportunities, accomplishments
  - National agenda for science needs related to adaptation of fish / wildlife / ecosystems / habitats
  - Will include representation from science and management perspectives, and representatives from each CSC

- Advisory Councils for Climate Science Centers
  - Develop regional science agenda / priorities
  - Review activities and accomplishments
  - Will include representation from science and management perspectives, and representatives from each LCC in the region
-

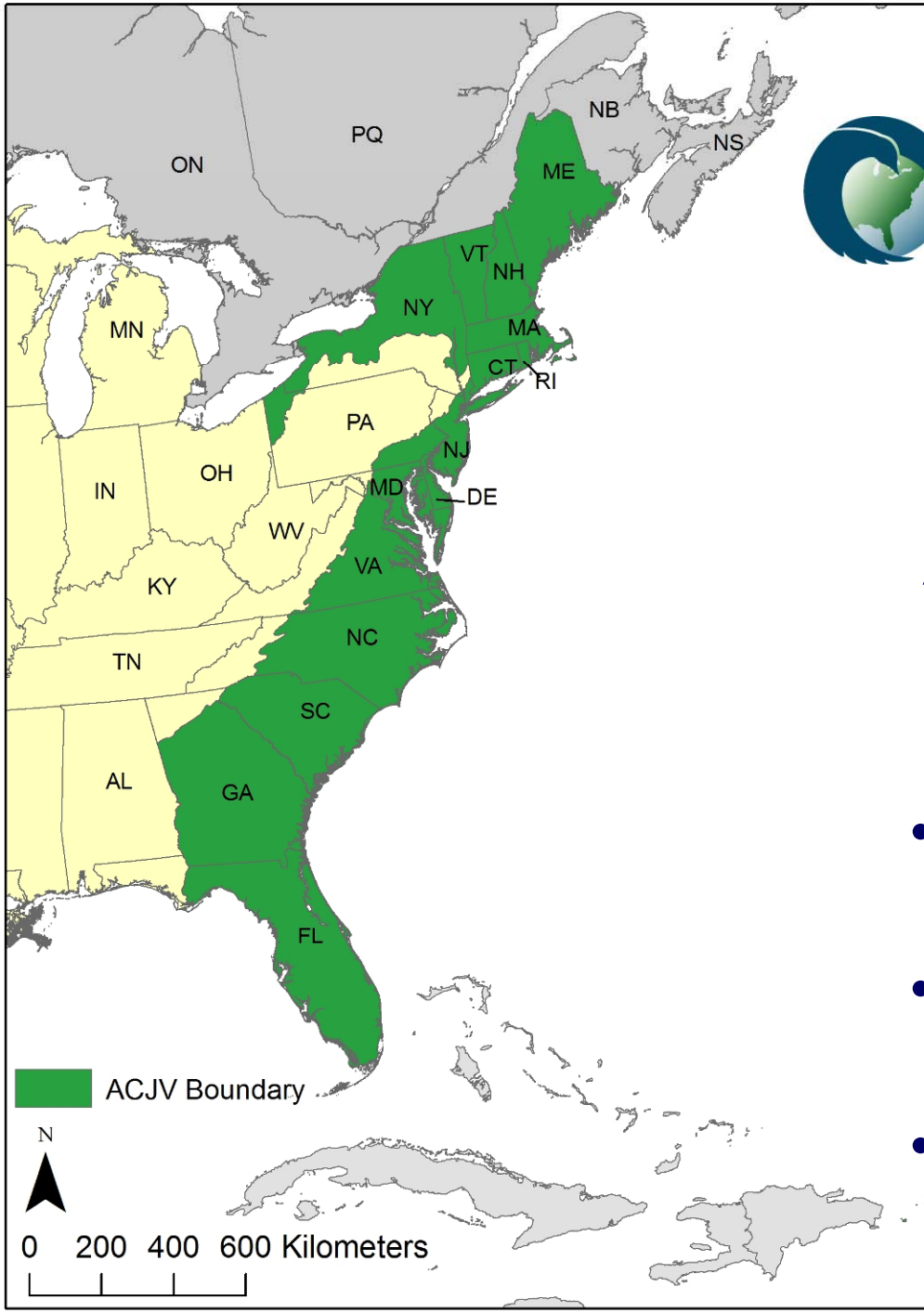
USGS
science for a changing world

Thank You – Questions?

Rachel Muir
Science Advisor
Northeast Area
U.S. Geological Survey
Reston, VA
703-946-6763

Atlantic Coast Joint Venture & LCCs – *Waterfowl, All Birds, All Taxa (Fish)??*

Atlantic Coastal Fish Habitat Partnership Meeting
Charleston, SC
November 10, 2010



Vision

Partners working together for the conservation of native bird species in the Atlantic Flyway region of the United States

Partners

- 16 A.F. States + Puerto Rico
- USFWS, USGS, NPS, USFS
- TNC, DU, WMI, NFWF

Mission

The Atlantic Coast Joint Venture will provide a forum for federal, state, regional and local partners to coordinate and improve the effectiveness of bird habitat conservation **planning, implementation and evaluation** in the Atlantic Flyway region of the United States.

Major Bird Conservation Initiatives

nabci

North American Waterfowl Management Plan

Partners in Flight

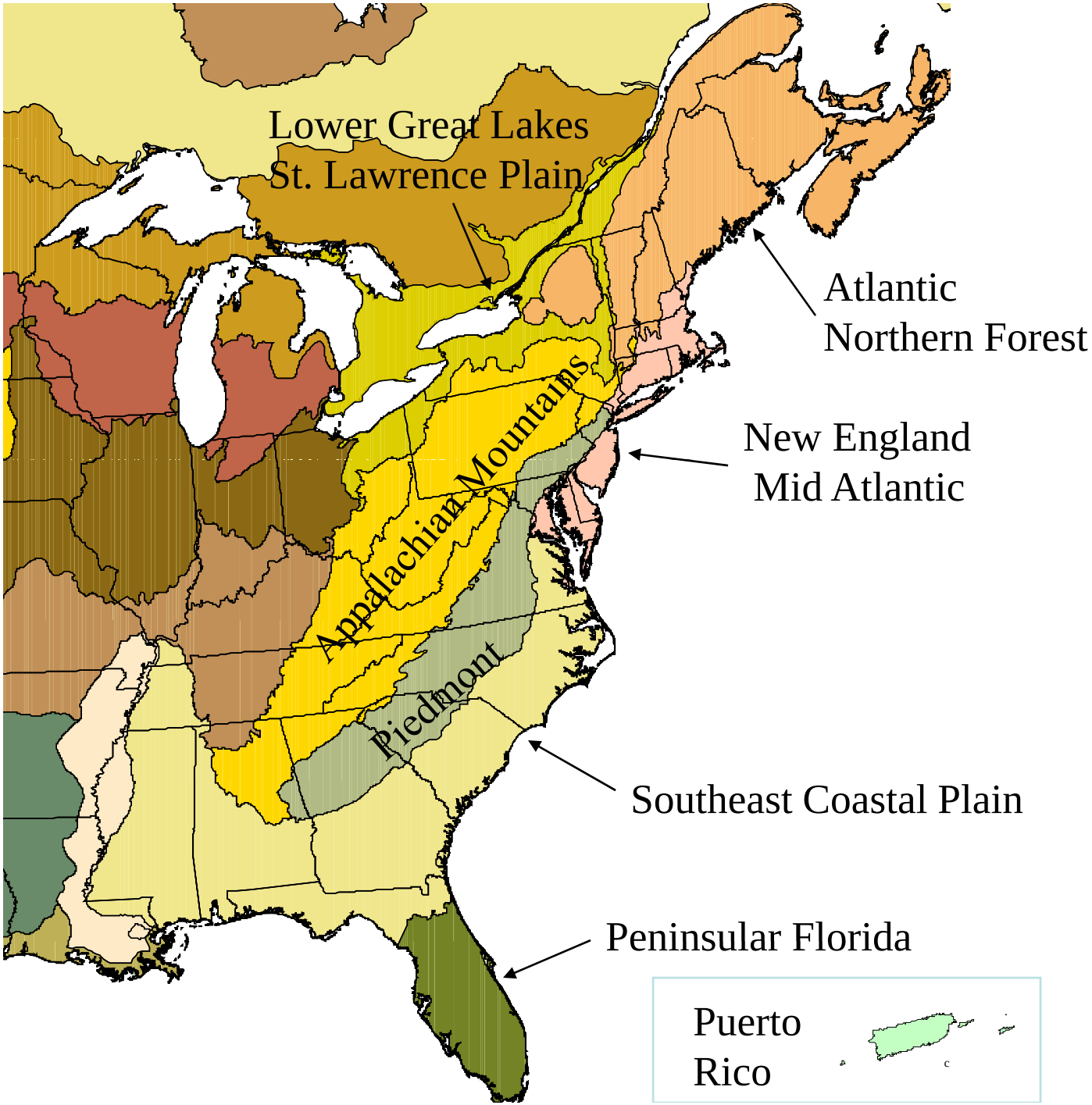
U.S. Shorebird Conservation Plan

North American Waterbird Conservation Plan

Upland Game Bird Initiatives: NBCI, Woodcock Management Plan, IAFWA Resident Game Birds

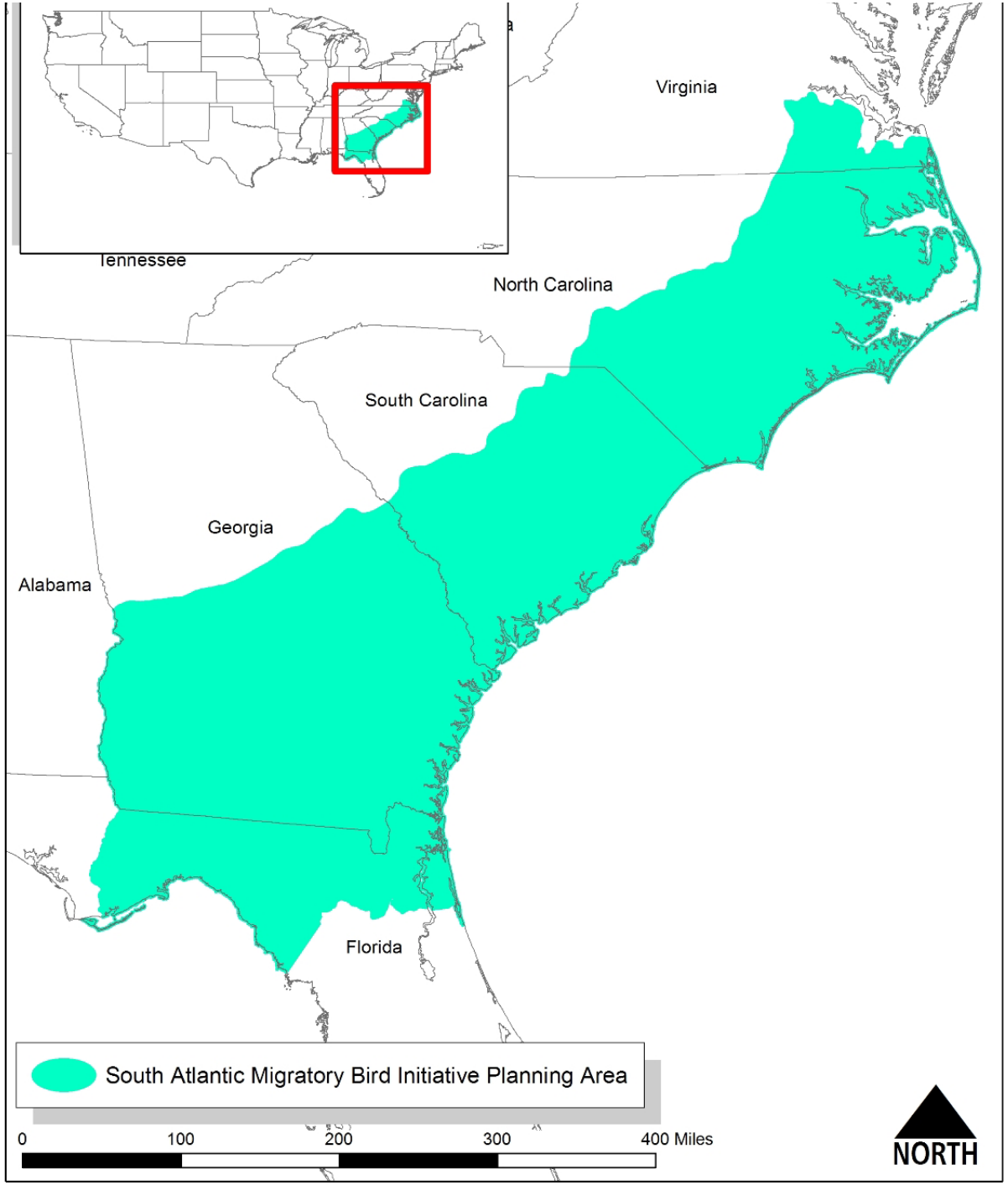
nabci

Bird Conservation Regions



South Atlantic Migratory Bird Initiative

- First effort at Integrated Bird Conservation Planning in ACJV under NABCI
- First workshop in June 1999, Webb Center, South Carolina
- Second Workshop, November, 1999, Greensboro, NC
- Implementation Began in 2000 with successful NAWCA Grant
- State Working Groups – key to delivery
- Plan Approved July 2005


Virginia
Tennessee
North Carolina
South Carolina
Georgia
Alabama
Florida
South Atlantic Migratory Bird Initiative Planning Area
0
100
200
300
400 Miles
NORTH

South Atlantic Migratory Bird Initiative (SAMBI)

- Priority species and habitats have been identified
- Population and habitat objectives for priority species have been developed
- All bird focus areas have been delineated – Priority project areas identified by State Working Groups
- Projects are being implemented for “all birds”
- Implementation Plan is complete and approved, July 2005, ACJV Mgmt. Board
- Endorsed by all the major bird groups

South Atlantic Migratory Bird Initiative

Delivering habitat conservation for all birds across all habitats; approximately $52 million has been awarded for the conservation of over 310,000 acres at over 120 project sites. Several of these projects were multi-state multi-activity projects. Over 320 partners provided $270 million in matching funds

Designing Sustainable Landscapes: Avian Communities, Predicted Landscapes and Decision Support Tools of the Future

- Funding
  - Multi-state Conservation Grant Program administered through the Association for Fish and Wildlife Agencies
- Key Cooperators
  - NC and AL Cooperative Fish & Wildlife Research Units
    - Key participants in state and regional GAP datasets
  - Atlantic Coast Joint Venture
    - Regional coordination

ASSOCIATION of FISH & WILDLIFE AGENCIES

Project Extent

- Pilot Area: South Atlantic Migratory Bird Initiative
- Future Expansion to Eastern US
- SE-GAP data set serves as the base dataset
- NE-GAP data set currently

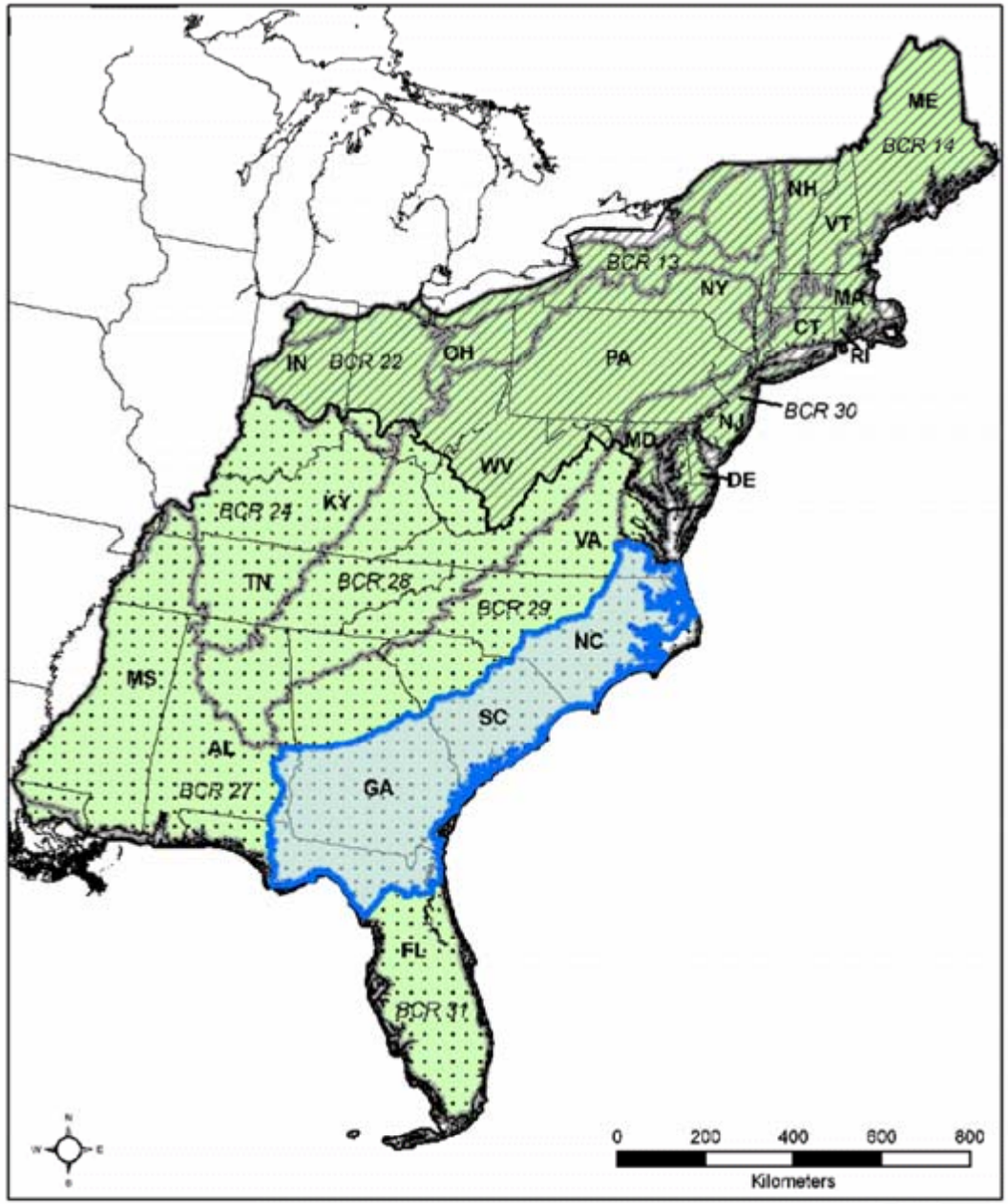
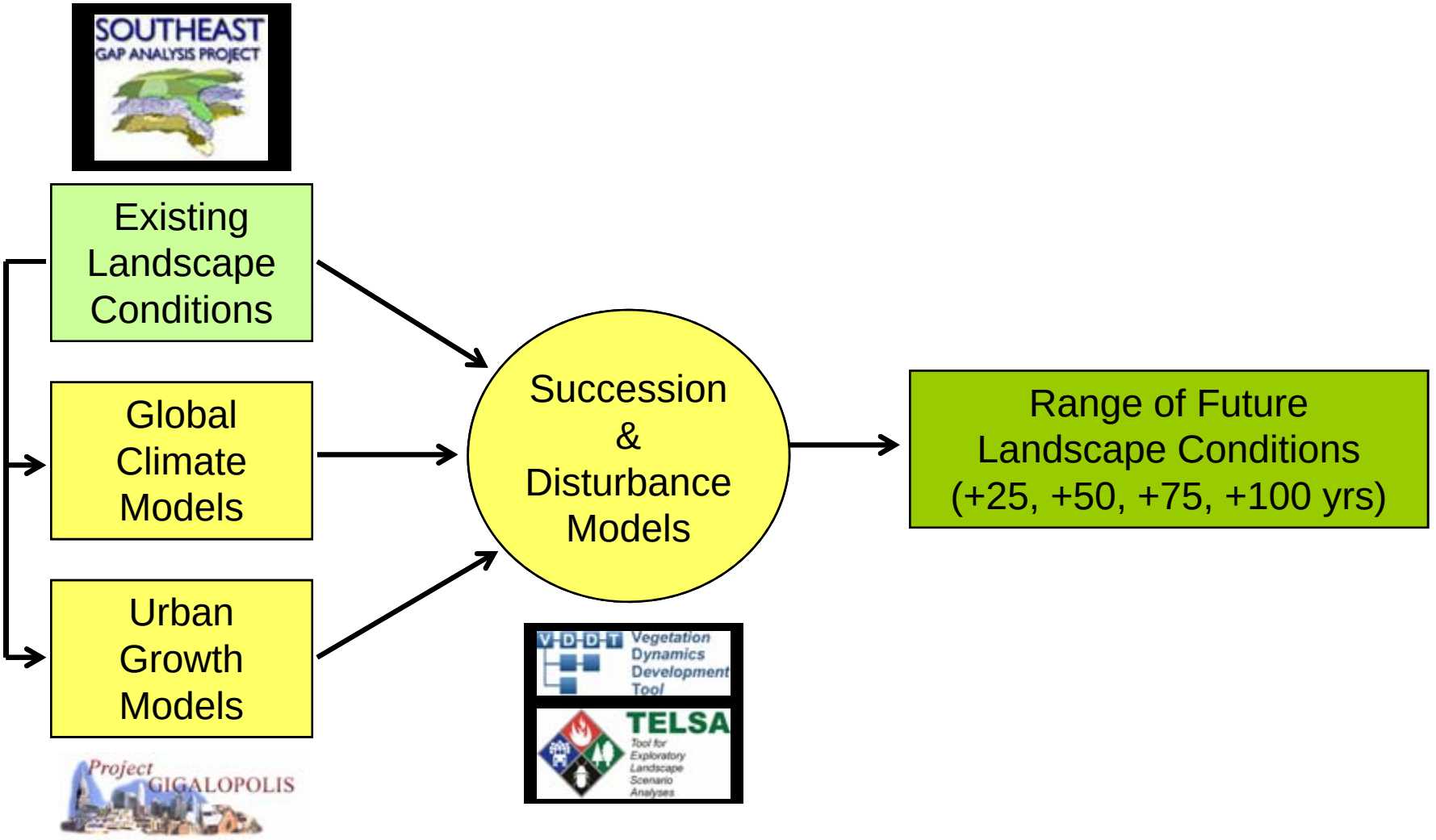


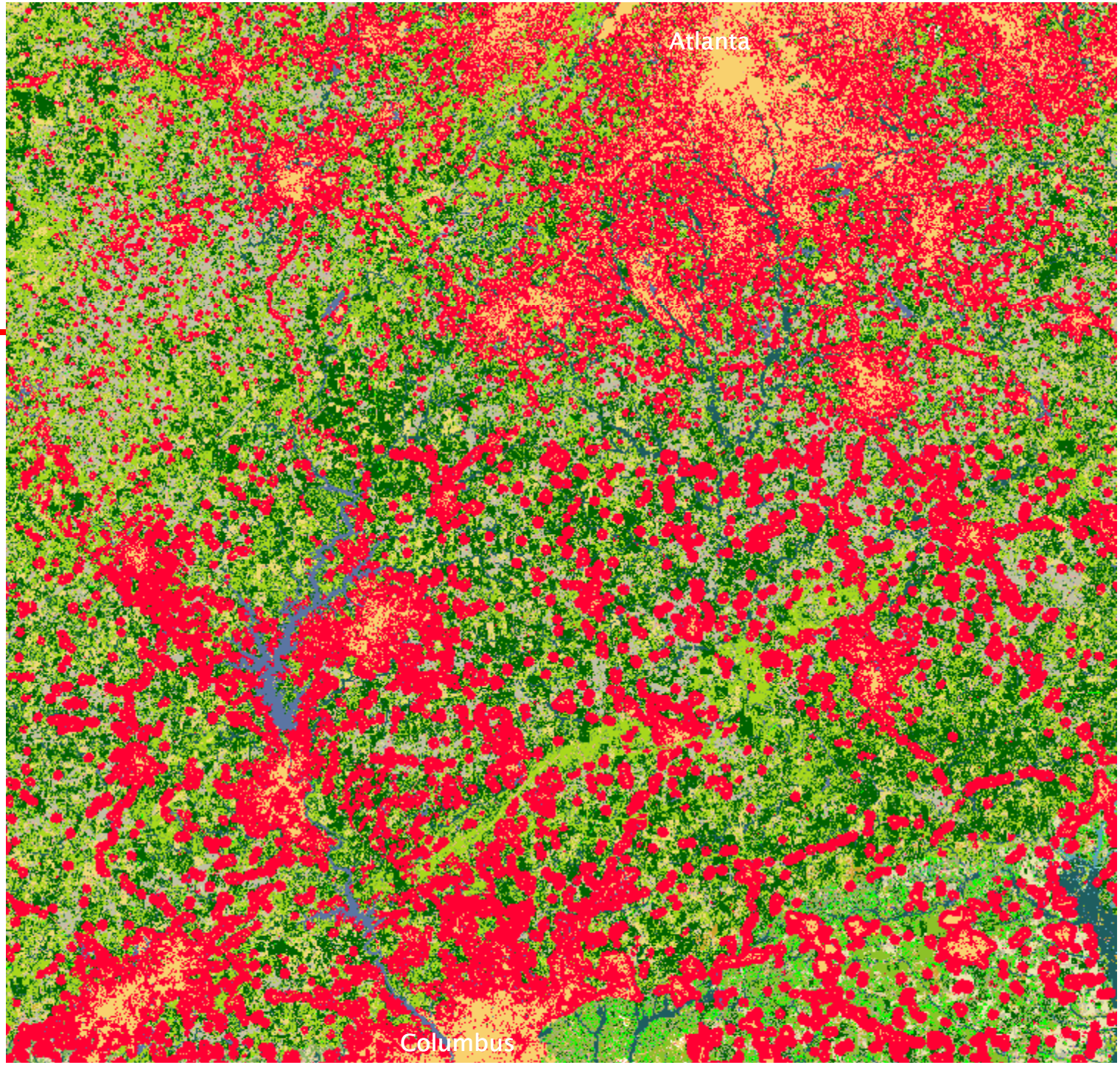
Figure 1

Modeling Landscape Change

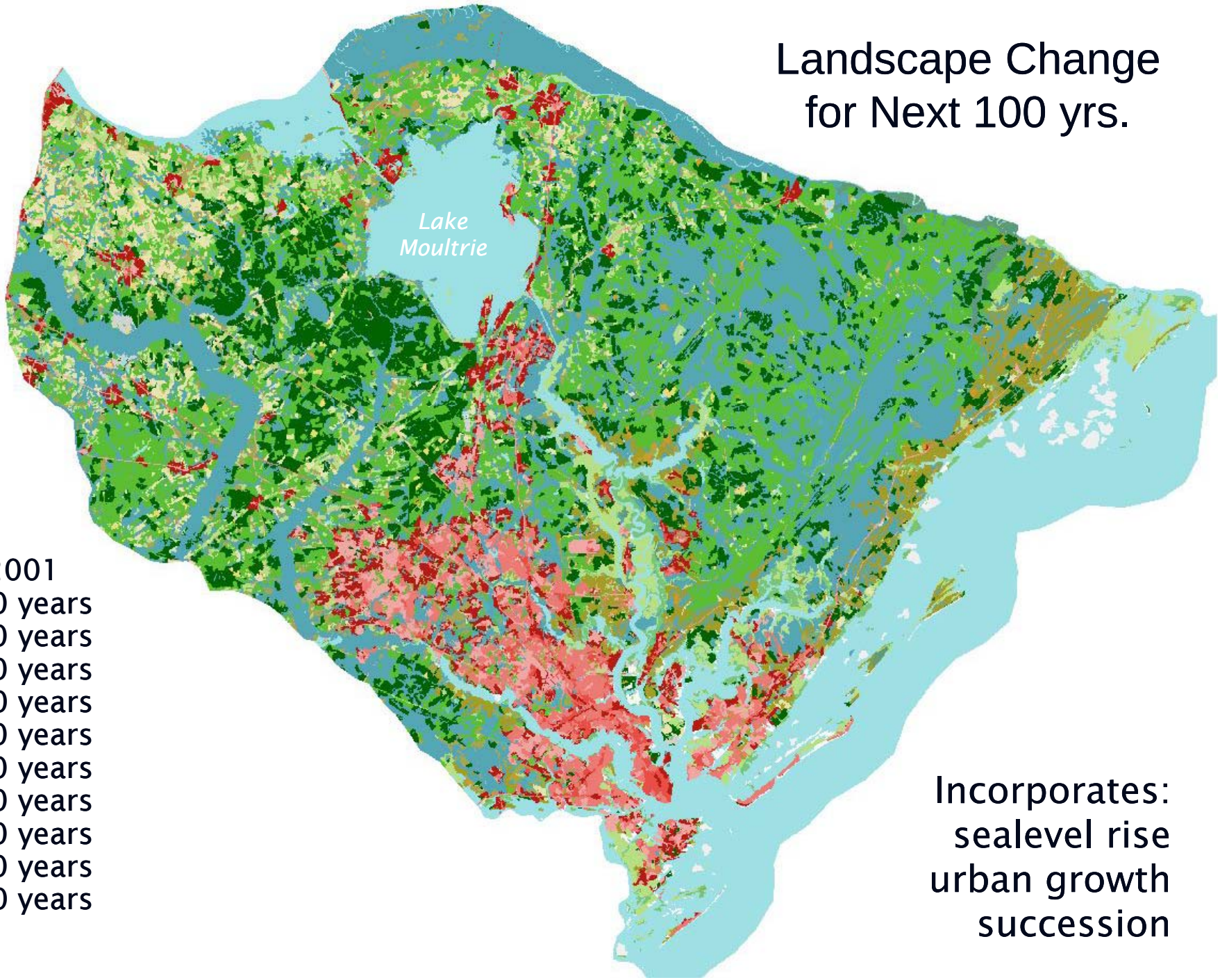


Urban Growth Prediction for Next 100 yrs.

Current
5 years
10 years
15 years
20 years
25 years
30 years
35 years
40 years
45 years
50 years
55 years
60 years
65 years
70 years
75 years
80 years
85 years
90 years
100 years

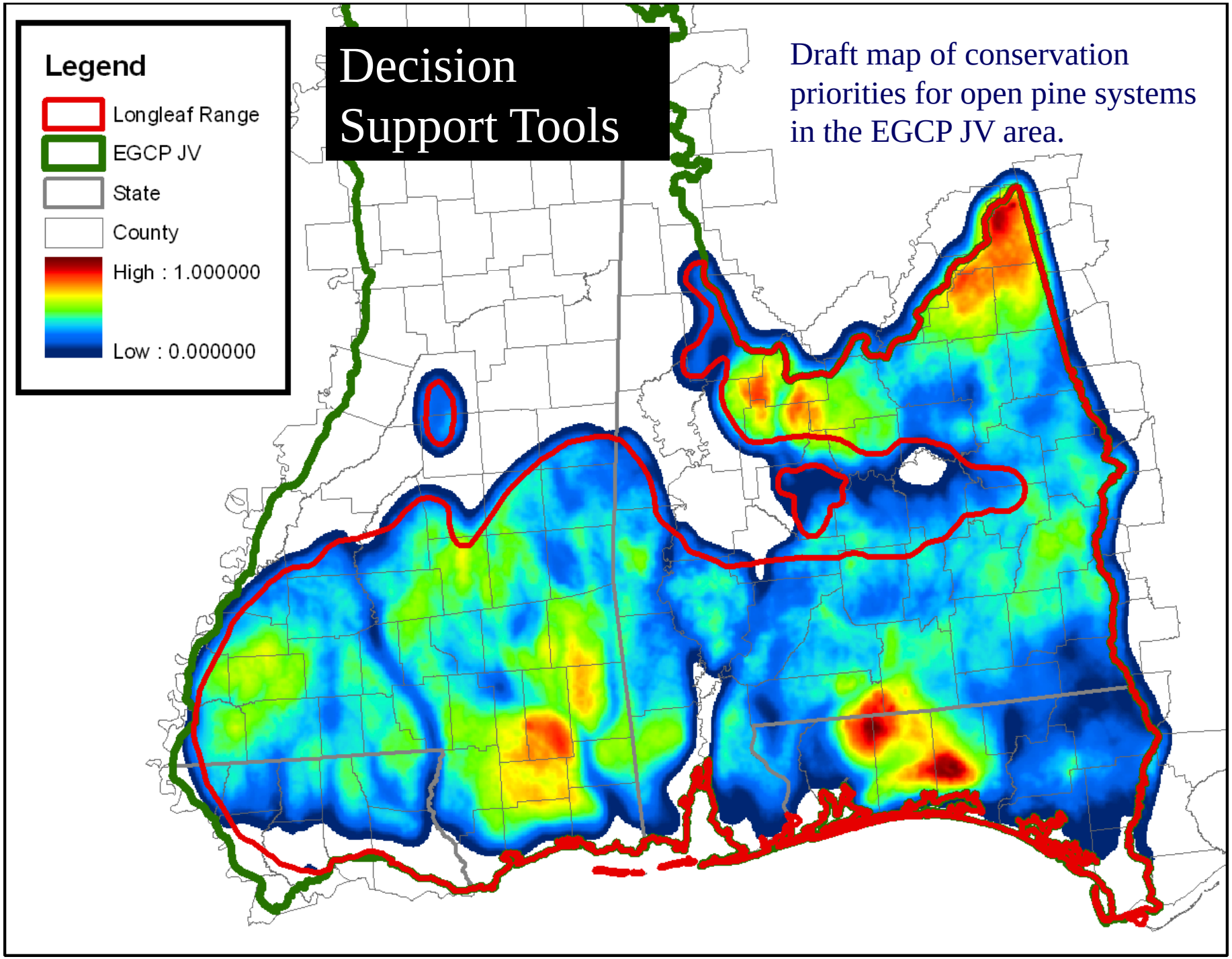


Landscape Change for Next 100 yrs.



2001
+10 years
+20 years
+30 years
+40 years
+50 years
+60 years
+70 years
+80 years
+90 years
+100 years

Incorporates:
sealevel rise
urban growth
succession

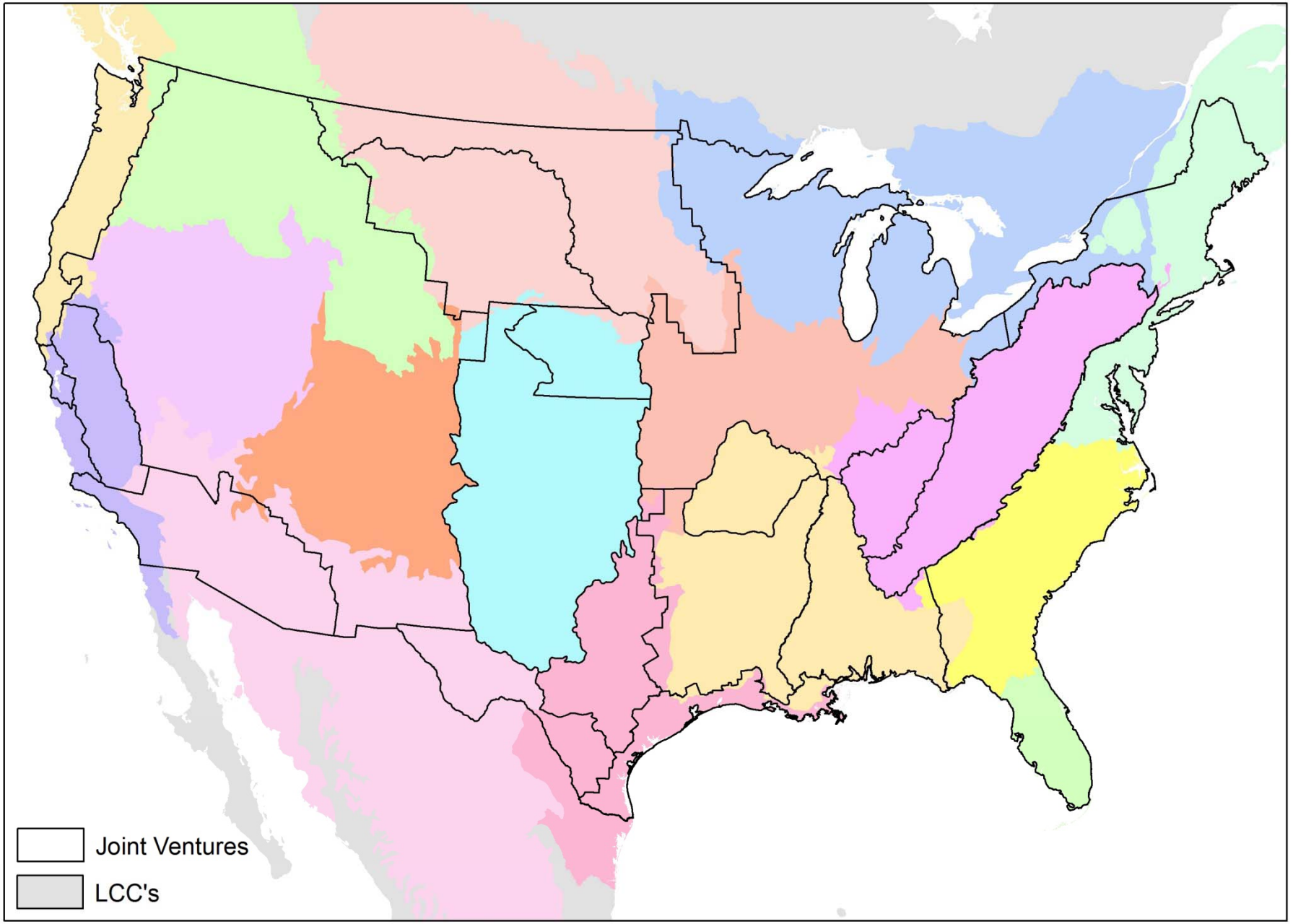

Legend
Longleaf Range
EGCP JV
State
County
High : 1.000000
Low : 0.000000
Decision Support Tools
Draft map of conservation priorities for open pine systems in the EGCP JV area.

LCCs Arrive!

- JV - new partnerships (SARP, ACFHP), SHC, climate
- USFWS Roanoke-Tar-Neuse-Cape Fear River Ecosystem Team
- Team charged with bringing landscape conservation to region Team
- Changed names to SE VA-NE NC SHC Team
- Developed conceptual plan for South Atlantic LCC

Relationship of LCCs to Existing JVs and other Partnerships

- **LCCs will build on existing partnerships**
- **LCCs partly modeled after joint ventures**
- **National geographic framework generally follows Bird Conservation Region/joint venture boundaries**
- **Discussions underway in all joint ventures about role in LCCs**
- **Each JV needs to evaluate appropriate level of involvement**
- **LCCs need to support all taxonomic groups and all relevant programs and partnerships**



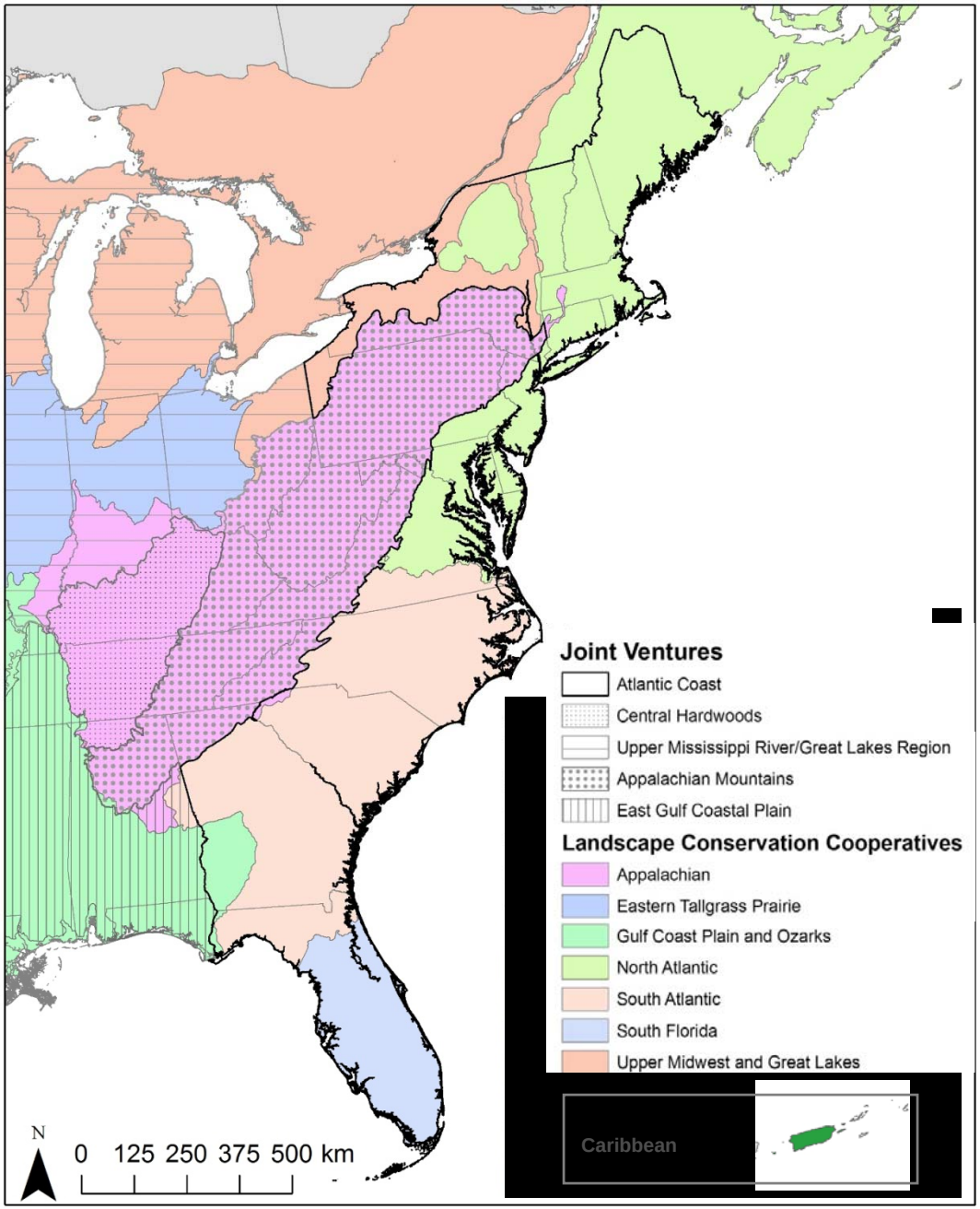
Landscape Conservation Cooperatives (LCC) and Joint Ventures

N

0 200 400 600 800 km

Atlantic Coast Joint Venture
Laurel, MD 20708
October 2009

Overlay of ACJV with LCC Boundaries



Landscape Conservation Cooperatives (LCC) in the Atlantic Coast Joint Venture

Atlantic Coast Joint Venture
Laurel, MD 20708
October 2009

Atlantic Coast Joint Venture and the LCCs

Some alternatives to consider:

1. **ACJV does not actively collaborate with LCCs**
2. **ACJV leads establishment of LCCs within the ACJV area**
3. **ACJV and Fish Habitat Partnerships lead establishment of LCCs within the ACJV area**
4. **ACJV splits into separate JVs aligned with LCC boundaries**
5. **ACJV helps lead establishment of LCC and actively collaborates in their development and science activities**

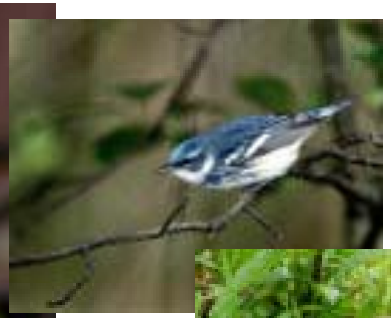
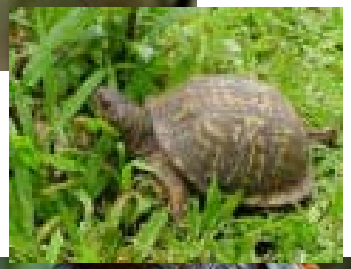
Atlantic Coast Joint Venture and the LCCs

- **Thank you for your interest in LCCs**
- **Some alternatives to consider:**
  1. **ACJV does not actively collaborate with LCCs**
  2. **ACJV leads establishment of LCCs within the ACJV area**
  3. **ACJV and Fish Habitat Partnerships lead establishment of LCCs within the ACJV area**
  4. **ACJV splits into separate JVs aligned with LCC boundaries**
  5. **ACJV helps lead establishment of LCC and actively collaborates in their development and science activities**

Where Are We Now??

- LCCs are “standing up – “birdy”
- JVs still evolving and developing
- JVs and LCCs closely working together
- Fish Habitat Partnerships developing
- Climate Centers emerging
- Major effort in marine habitats and issues
- Proliferation of science being done (eg. sea level rise)
- Major regional conservation efforts emerging-Gulf of Mexico

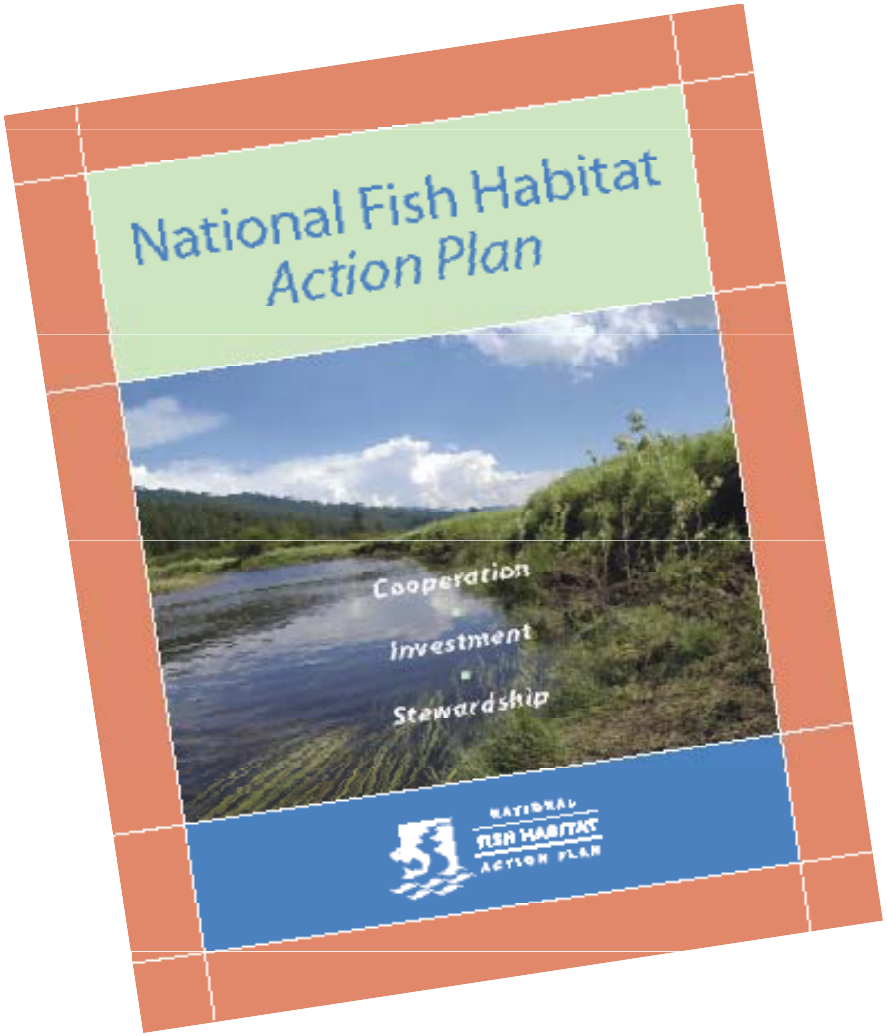
Thanks









National Fish Habitat Action Plan Update November 2010

Susan-Marie Stedman and

Tom Busiahn,

Board staff, and

Gary Whelan
NFHAP Science and Data Co-Chair

NATIONAL
FISH HABITAT
ACTION PLAN






Action Plan OBJECTIVES:

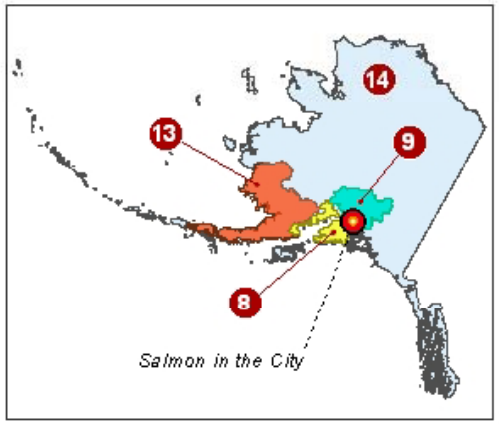
- **Identify priority fish habitats and establish Fish Habitat Partnerships targeting these habitats by 2010.**
- **Establish 12 or more Fish Habitat Partnerships throughout United States by 2010.**
- **Conduct condition analysis of all fish habitats within the United States by 2010.**
- **Prepare a *Status of Fish Habitats in the United States* in 2010, and every five years thereafter.**
- **Protect all healthy and intact habitats by 2015.**
- **Improve the condition of 90 percent of priority habitats and species targeted by Fish Habitat Partnerships by 2020.**

NATIONAL FISH HABITAT ACTION PLAN

Fish Habitat Partnerships

January 2010

NATIONAL FISH HABITAT ACTION PLAN



Pacific Marine and Estuarine Partnership

Fishers and Farmers Partnership

North American Salmon Stronghold Partnership

California Fish Passage Forum

Lower Mississippi River Conservation Committee

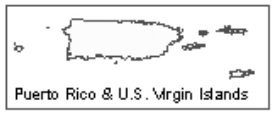
Geographic/Species Based Partnerships

1. Atlantic Coastal FHP
2. Desert FHP
3. Driftless Area Restoration Effort
4. Eastern Brook Trout Joint Venture
5. Great Lakes Basin FHP
6. Great Plains FHP
7. Hawaii FHP
8. Kenai Peninsula FHP
9. Mat-Su Basin Salmon Habitat Partnership
10. Midwest Glacial Lakes Partnership
11. Ohio River Basin FHP
12. Southeast Aquatic Resources Partnership
13. Southwest Alaska Salmon Habitat Partnership
14. Western Native Trout Initiative

System Based Partnership

Reservoir FHP

Denotes *"Candidate"* Fish Habitat Partnership








2010 Assessment

Vision

- Determine the status of key ecological processes
- Compare to the natural or expected variation

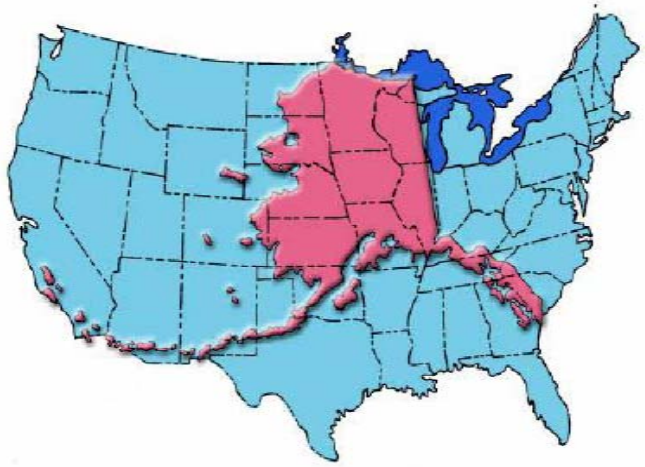
Reality

- National consistently measured data at the appropriate scale not available for most key process variables
- Surrogate summary variables used
  - Stressor analysis
- Built the logical spatial and analytical basement for the future

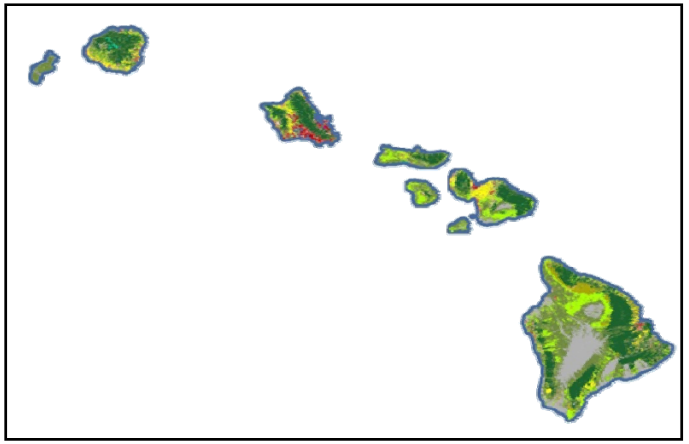
NATIONAL FISH HABITAT ACTION PLAN

Stressor Assessments – Inland Alaska, Inland Hawaii and the Coastal Assessments

- Goal: To estimate cumulative disturbance levels to fish habitats from landscape anthropogenic activities.



- General approach
  - Assemble mapping units
  - Collect anthropogenic datasets
  - Categorize data into disturbance classes
  - Combine variables to create sub-indicex for each disturbance classes
  - Combine subindices into a cumulative measure of relative disturbance



NATIONAL FISH HABITAT ACTION PLAN






2010 Assessment

Multi-phase approach

1. Stressor Analysis – Variance in each axes

2. Habitat Condition – Stressor axes related to regionally suitable fish community variables using stress response relationships

NATIONAL FISH HABITAT ACTION PLAN

A National Assessment of Landscape Influences on Riverine Fishes of the United States




Peter Esselman[1,2], **Dana Infante**[1], Lizhu Wang[2], William W. Taylor[1], **Arthur Cooper**[1,2], Dan Wieferich, Darren Thornbrugh[1], & Jared Ross[1]

1. Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI
2. Institute for Fisheries Research, Michigan Department of Natural Resources and University of Michigan, Ann Arbor, MI

Landscape variables

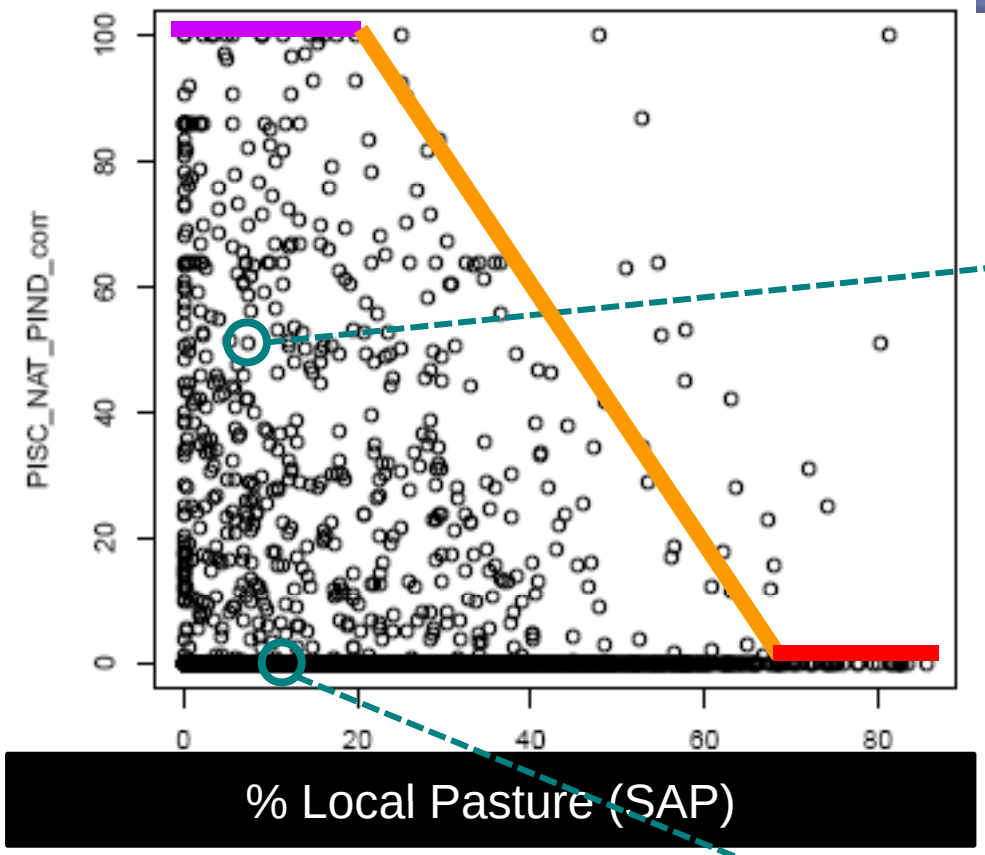
Abiotic variables:

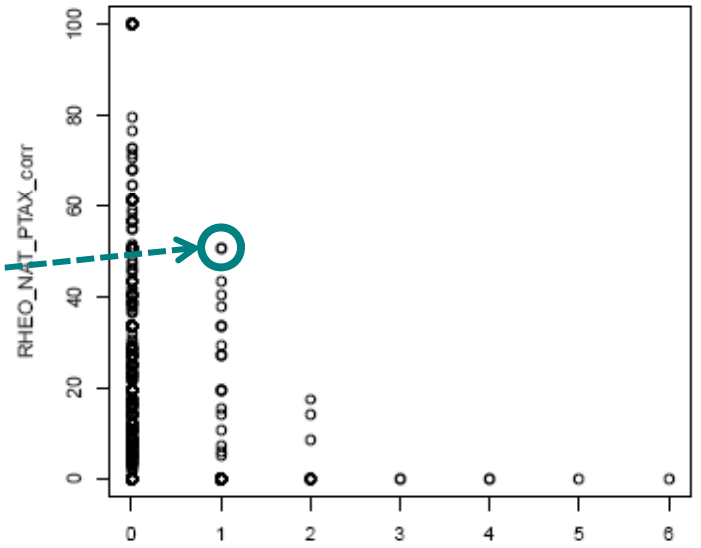
Mean slope of local catchment (degrees)
Mean annual air temperature (degrees C)
Mean annual precipitation (mm/year)
Network catchment area (km^2)
Baseflow Index

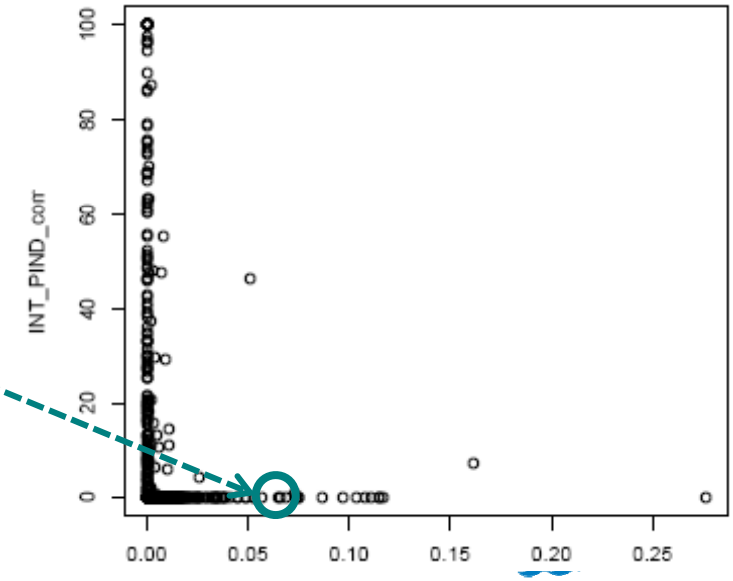
Open/Low intensity urban (%)
Medium intensity urban (%)
High intensity urban (%)
Pasture/hay (%)
Cultivated crops (%)
Population density (#/km^2)
Road crossings (#/km^2)
Road length (m/km^2)
Dams (#/km)
Mines or mineral processing plants (#/km^2)
Toxics Release Inventory sites (#/km^2)
National Pollution Discharge Elimination System sites (#/km^2)
Superfund National Priorities sites (#/km^2)

- *13 variables selected based on:*
  - *interpretability*
  - *utility for nationwide analysis*
  - *literature review*
  - *relationships to other variables*
  - *link to processes*

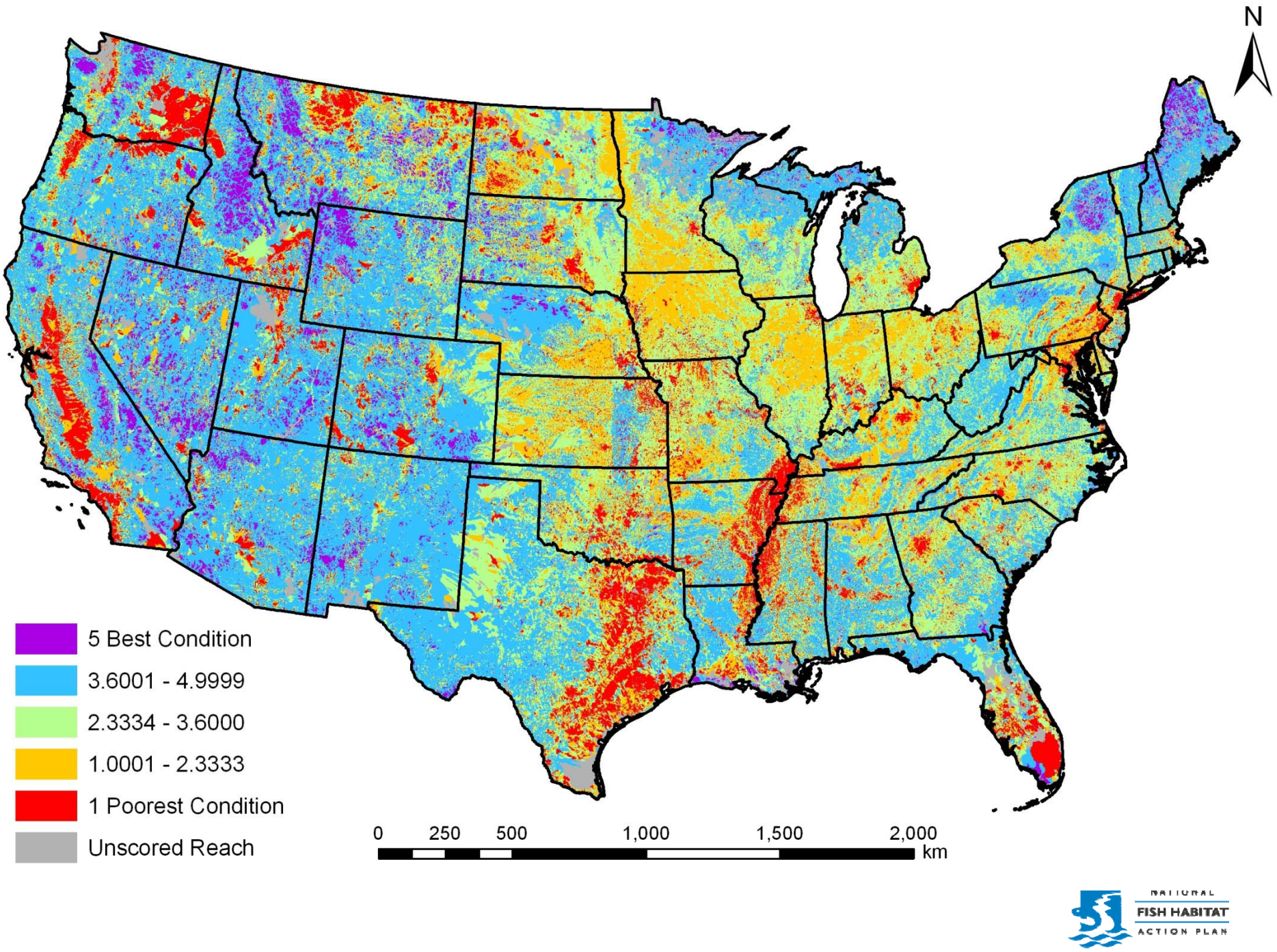
NATIONAL FISH HABITAT ACTION PLAN







Indicator-Stress relationships



NATIONAL FISH HABITAT ACTION PLAN






A Multiregional Assessment of Estuary and Coastal Fish Habitat of the United States

•Kristan Blackhart, Kirsten Larsen, Joe Nohner, David Moe Nelson, Susan-Marie Stedman, Correigh Greene, Stephen Brown, Thomas Noji, Allison Candelmo, Katharine Miller, Hiroo Imaki, Patrick Polte, and Kay McGraw

NATIONAL FISH HABITAT ACTION PLAN

Existing coastal spatial framework:

Six regions

Pacific, Gulf of Mexico, North Atlantic, Mid-Atlantic, South Atlantic, South Florida

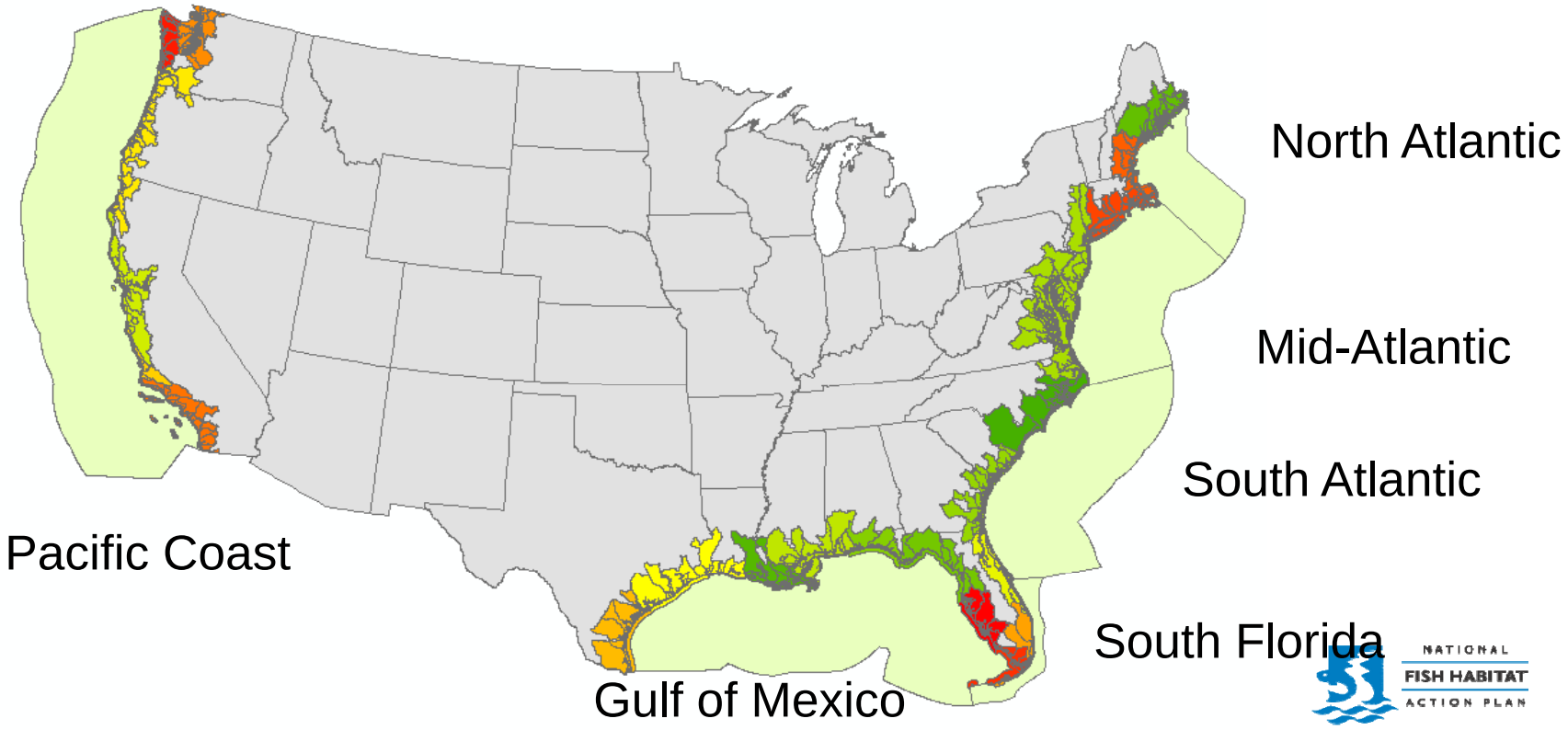
22 States, 22 Sub-regions

Four zones

Watersheds (EDA, CDA), Estuarine, Marine-State, Marine-Federal

612 Polygons (545+67)

201 Estuarine, 195 EDAs, 151 CDAs, 40 Marine-State, 6 Marine-Federal, 19 River Mouths



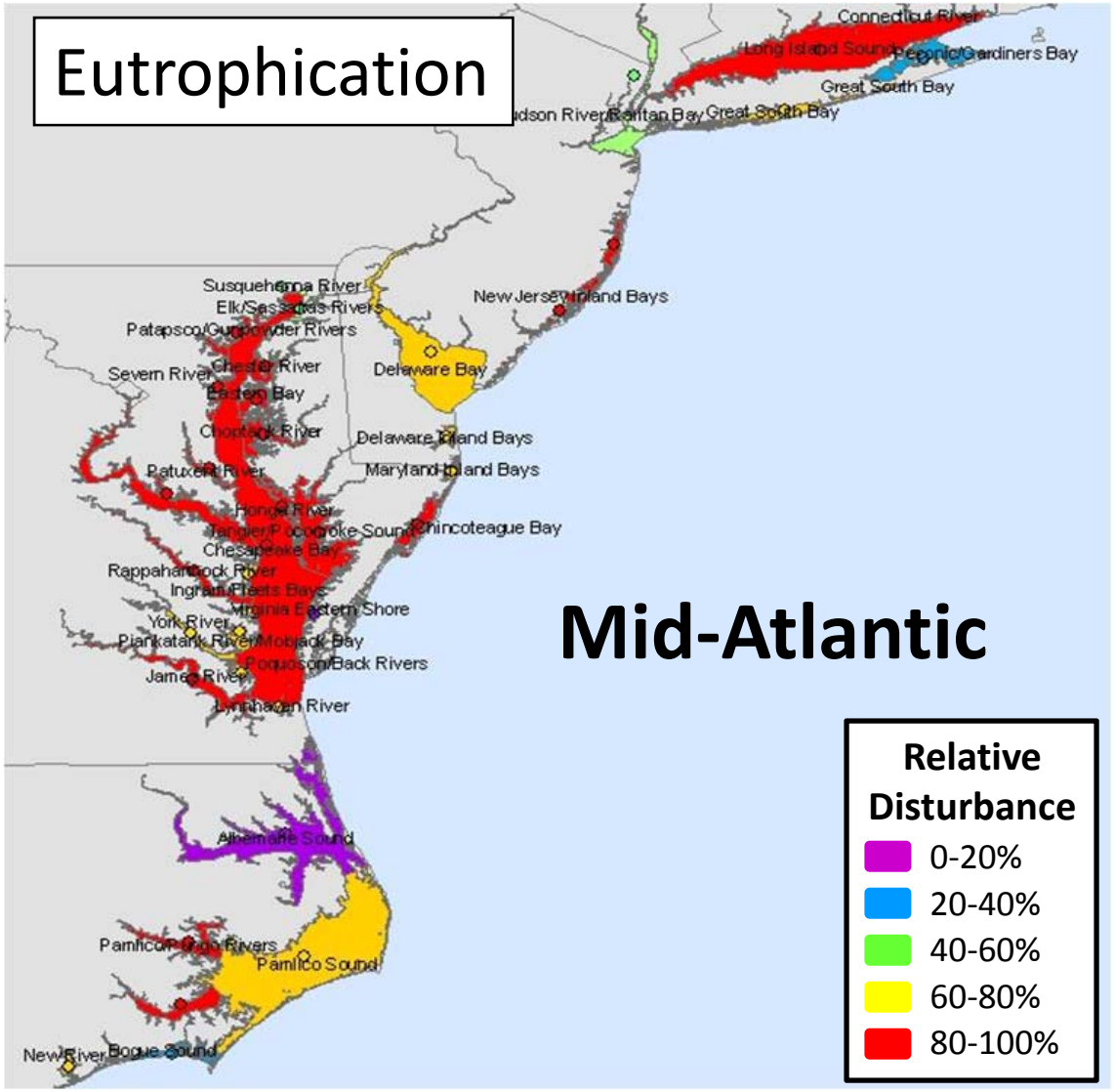
Available Sources of Data

- NOAA's Coastal Change Analysis Program (C-CAP)
- National Estuarine Eutrophication Assessment
- USGS river gage data
- National Coastal Condition Report
- NOAA's Mussel Watch and Bioeffects programs
- EPA and USGS pollution data sets
- Regional and local data sets

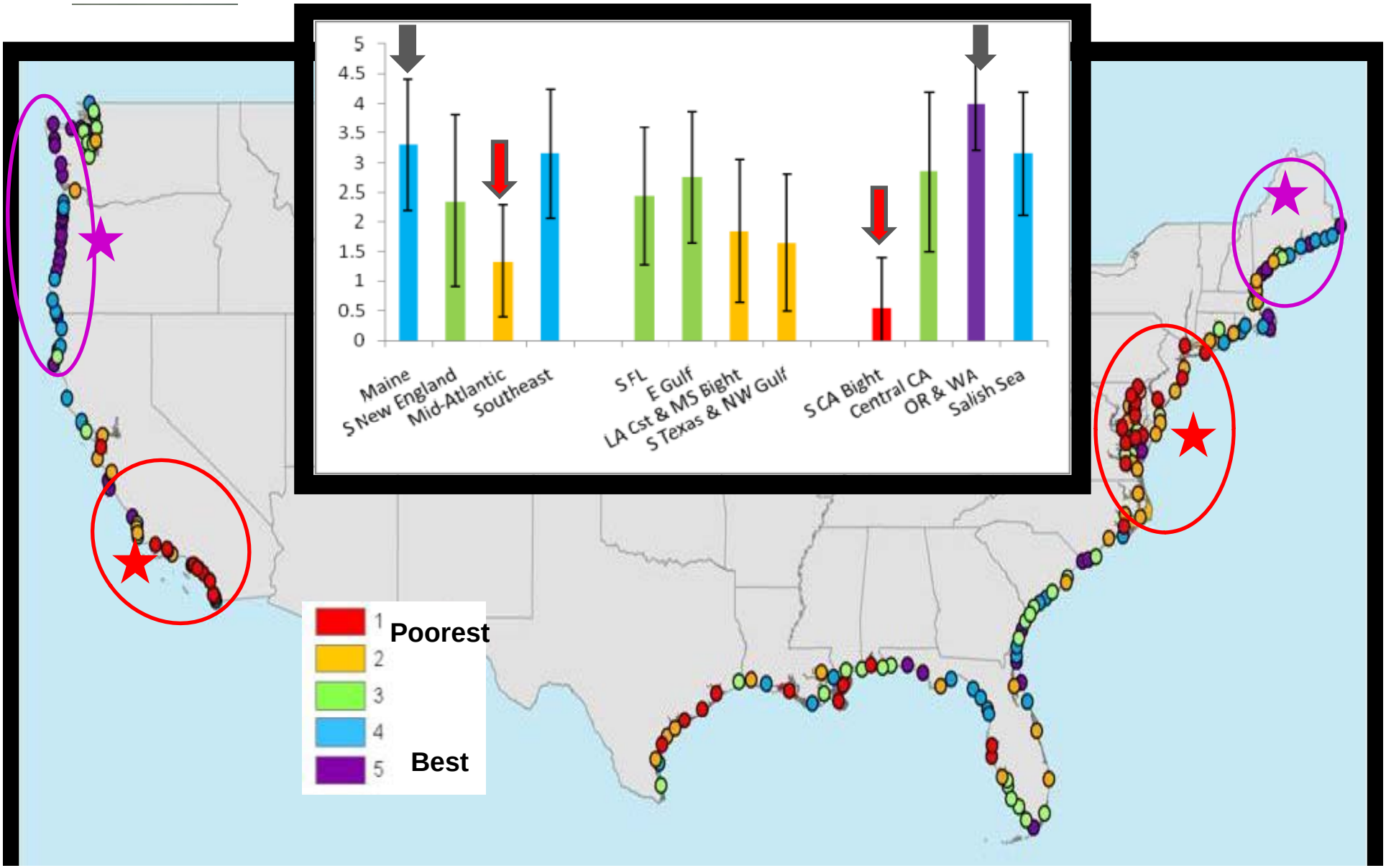
NATIONAL FISH HABITAT ACTION PLAN

Methods

- Indicator data assigned to estuaries
- Four stressor indices developed:
  - Eutrophication
  - Land cover
  - River flow
  - Pollution



Habitat Condition Index







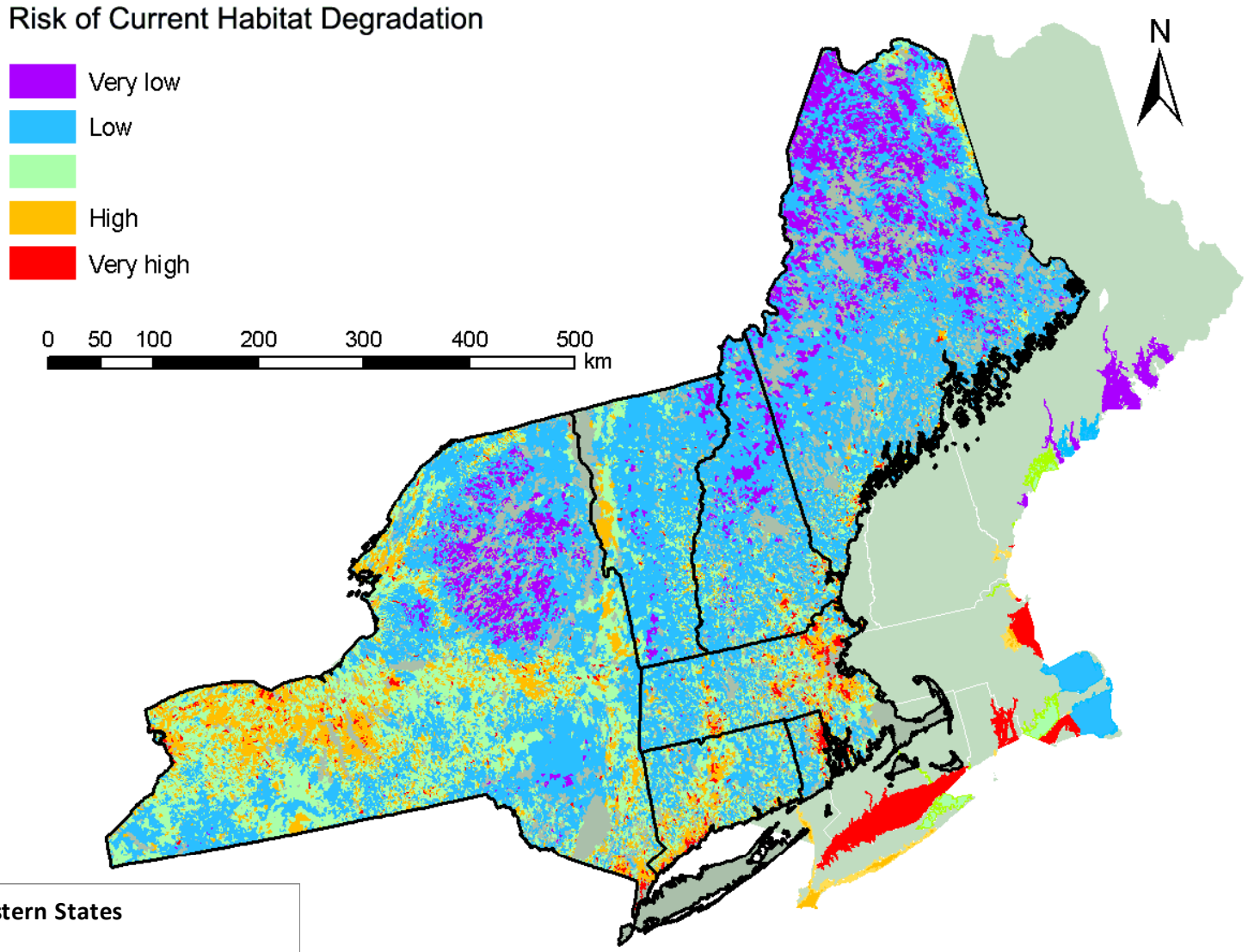

Completed:

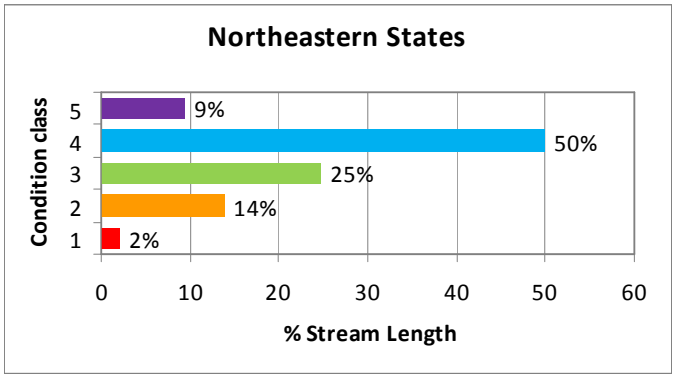
- Rivers – lower 48 states
- Rivers – Alaska
- Rivers – Hawaii
- Estuaries – Lower 48 states
- Estuaries – Southeast Alaska

Ongoing:

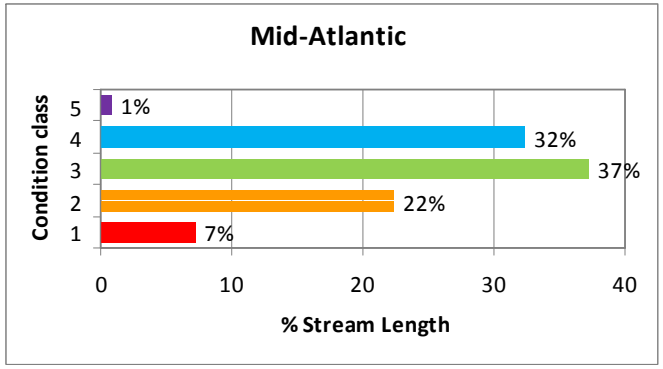
- Lakes and Reservoirs
- Great Lakes
- Hawaii reefs

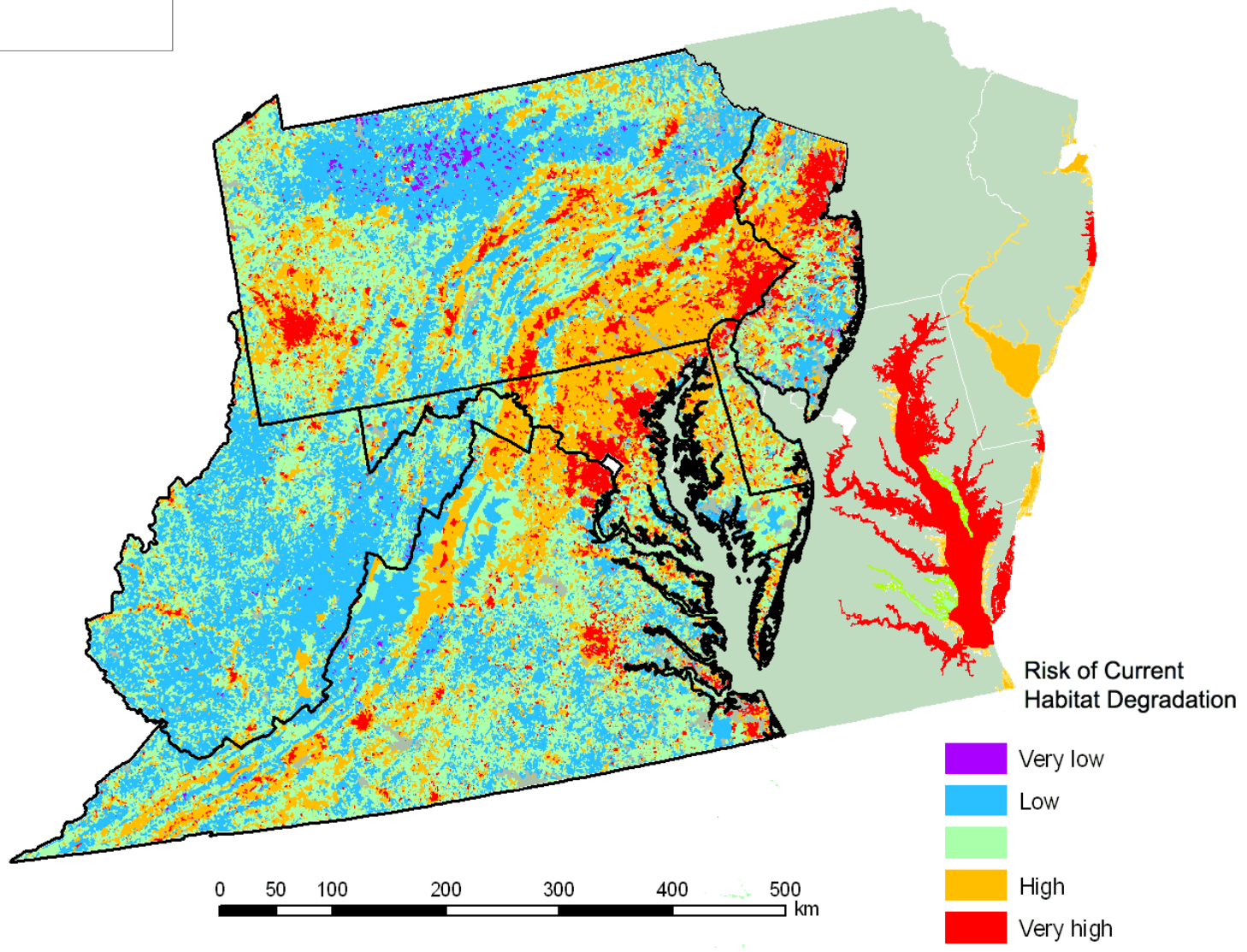
NATIONAL FISH HABITAT ACTION PLAN

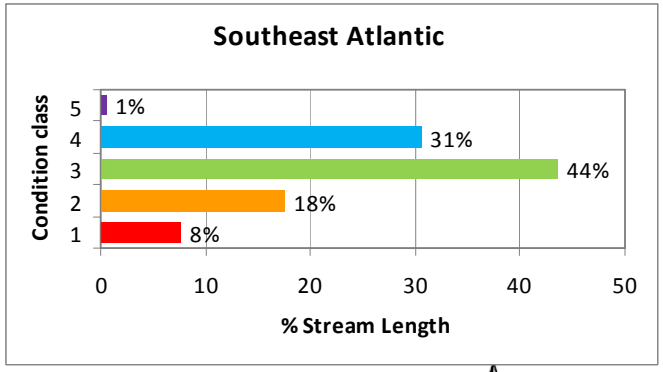


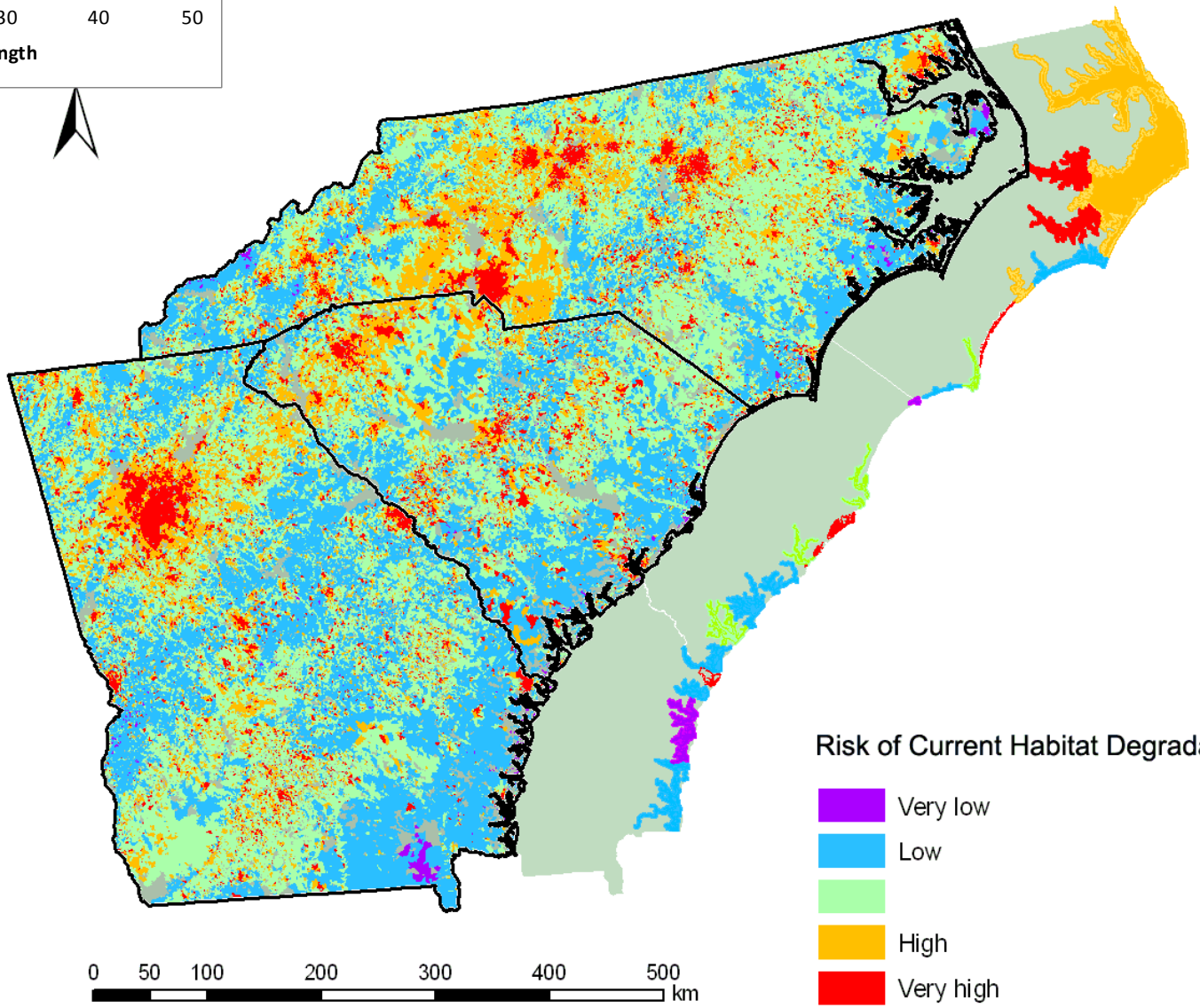


NATIONAL FISH HABITAT ACTION PLAN

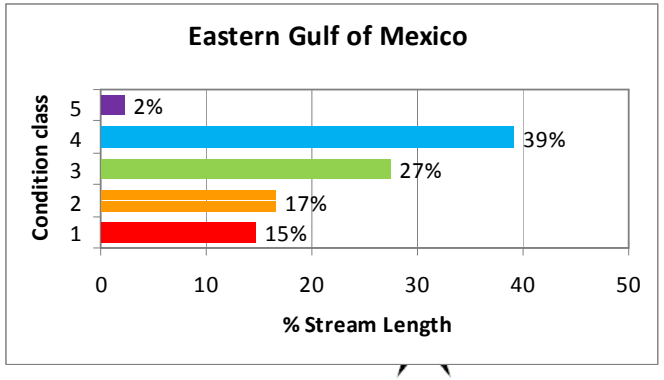

Mid-Atlantic
Condition class
5
4
3
2
1
1%
32%
37%
22%
7%
0
10
20
30
40
% Stream Length

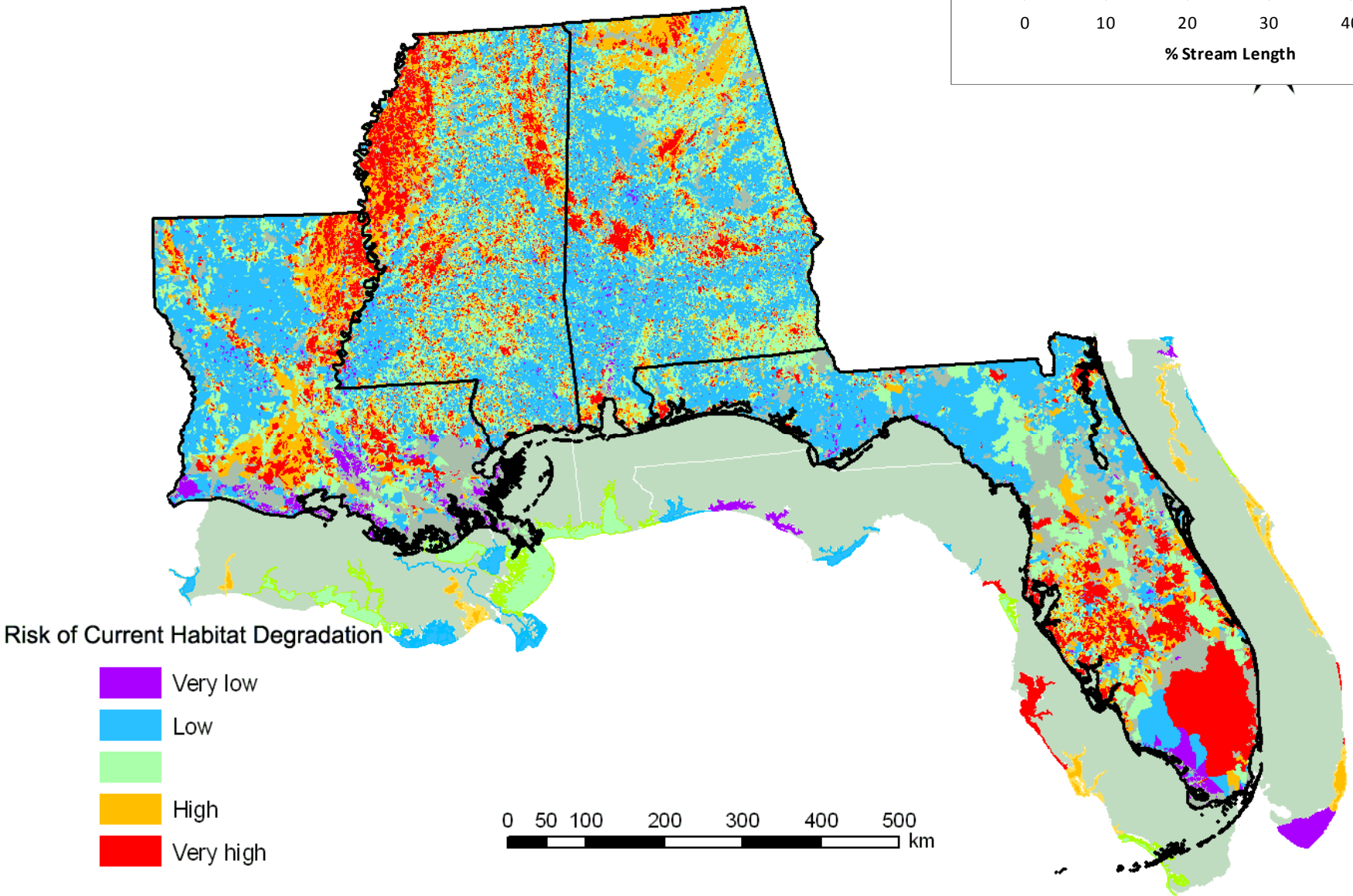

Risk of Current
Habitat Degradation
Very low
Low
High
Very high
0
50
100
200
300
400
500
km


Southeast Atlantic
Condition class
5
4
3
2
1
1%
31%
44%
18%
8%
0
10
20
30
40
50
% Stream Length


0 50 100 200 300 400 500
km
Risk of Current Habitat Degradation
Very low
Low
High
Very high





Eastern Gulf of Mexico
Condition class
5
4
3
2
1
2%
39%
27%
17%
15%
0
10
20
30
40
50
% Stream Length


Risk of Current Habitat Degradation
Very low
Low
High
Very high
0 50 100 200 300 400 500
km






Next Steps

- Spatial bias in fish data
- Incomplete stressor dataset
  - Hydrology and connectivity refinement
  - Water quality and land use refinement – CAFOs, Petroleum drilling, natural gas extraction, Mountain top mining
  - Invasive species
- Review by regional fisheries experts
  - Solicit feedback on scores and data needs
- Inland-Coastal interaction
- Integration of partnership data

NATIONAL FISH HABITAT ACTION PLAN






"Prepare a *Status of Fish Habitats in the United States* report in 2010 and every five years thereafter"

NATIONAL FISH HABITAT ACTION PLAN

The Sideboards

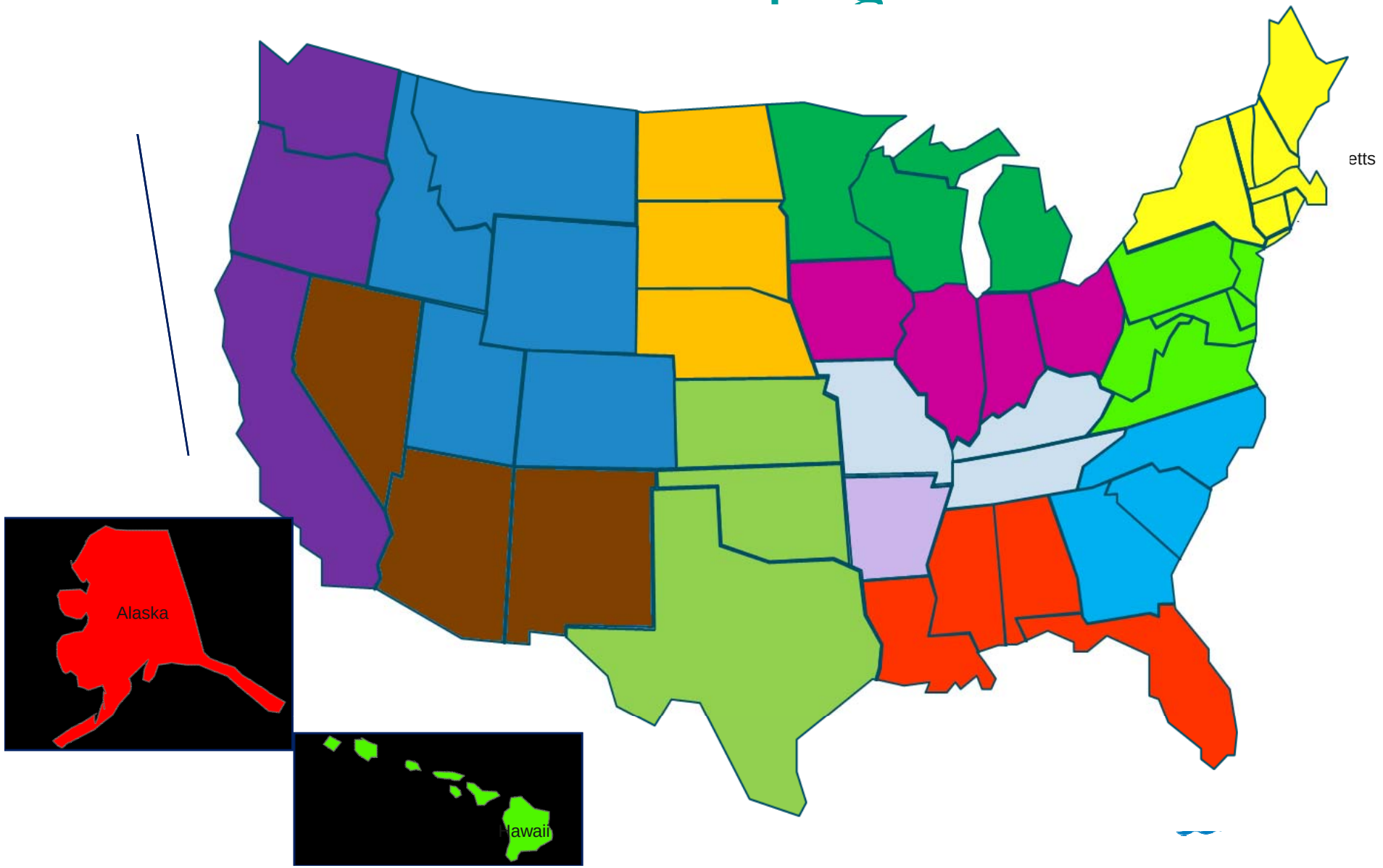
- Purpose of report
  - Call attention to the condition of fish habitat
  - Promote fish habitat conservation action
- Audience of report
  - Public
  - Policy-makers
- Scope of report
  - All fish habitat in United States

NATIONAL FISH HABITAT ACTION PLAN

The Model

- The State of the Birds Report (2009)
  - **Easily understood**
  - **Very visual**
  - **Mix of hard data and “so what” information**
  - **Mix of cautions and positive stories**

State Groupings








Input

- Results of assessments:
  - lower 48 rivers
  - Lower 48 estuaries
  - AK rivers
  - SE AK estuaries
  - Hawaii rivers
- Descriptions of Large Marine Ecosystems
- FHP strategic plans

NATIONAL FISH HABITAT ACTION PLAN






Translating the assessment

Risk of Current Habitat Degradation

- Very low
- Low
-
- High
- Very high

NATIONAL FISH HABITAT ACTION PLAN

When Will It Be Done??????

- Initial target date – October 2010
- Current target date - December 2010
- “Roll-Out” – April 2011 at Casting Call

NATIONAL FISH HABITAT ACTION PLAN






Current Timeline

10/8/2010	2nd draft sent to staff, Board, FHPs, Federal Caucus	3 week review
11/1/2010	comments on 2nd draft due	
11/5/2010	2nd draft sent to editor	1 week to edit
11/8/2010	revised 2nd draft due from editor	
11/8/2010	revised 2nd sent to writing and assessment teams	5 days to review
11/12/2010	comments due from teams on revised 2nd draft	
11/15/2010	draft final text sent to graphic artist	
11/29/2010	formatted version complete	
11/29/2010	final review version sent to staff, Board, and FHPs	2 week review
12/13/2010	last changes from Board, staff, and FHPs due	
mid-Dec	**Release 2010 report on web**	
Jan 2011	printed copies available	

NATIONAL FISH HABITAT ACTION PLAN

National Fish Habitat Conservation Act (HR2565, S1214)

- Authorizes the Action Plan & establishes the National Board
- Establishes a $75 million grant program for cost-share projects
- Provides $3M to DOI for program management; $10M to FWS, NMFS, and USGS (each) for technical assistance
- Provides $300,000 (possibly more) for reporting and accountability (shared between DOI, NOAA, and the NFHAP Board)

NATIONAL FISH HABITAT ACTION PLAN

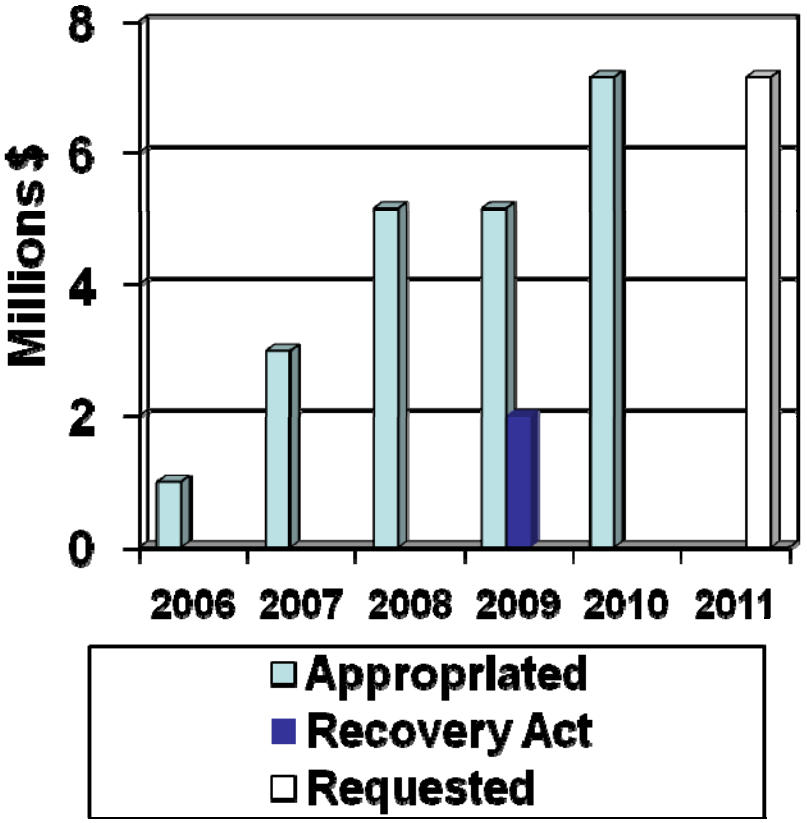





FWS Funding for NFHAP

- $7.153M appropriated for FY 2010
- Funds support conservation projects, Fish Habitat Partnerships, and NFHAP Board priorities
- Cost-share on projects

  >2.8 : 1



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NFHAP Executive Order

- Establish Board and direct Federal agencies to support NFHAP
- Vetted through NOAA (Asst Sec) and FWS (Director)
- Tenants may be implemented through America's Great Outdoors or other vehicle

NATIONAL FISH HABITAT ACTION PLAN






What's Next?

- Guidance on allocating funds
- National Measures of Success
- Performance measures for FHPs
- Additional sources of funding
- Additional strategies for leveraging

NATIONAL FISH HABITAT ACTION PLAN






What's Next?

- Identify priority fish habitats and establish Fish Habitat Partnerships targeting these habitats by 2010.
- Establish 12 or more Fish Habitat Partnerships throughout United States by 2010.
- Conduct condition analysis of all fish habitats within the United States by 2010.
- Prepare a *Status of Fish Habitats in the United States* in 2010, and every five years thereafter.
- Protect all healthy and intact habitats by 2015.
- Improve the condition of 90 percent of priority habitats and species targeted by Fish Habitat Partnerships by 2020.

NATIONAL FISH HABITAT ACTION PLAN


www.fishhabitat.org