



Joint Ventures and Landscape Conservation Cooperatives

Background and Options for Collaboration

Andrew Milliken, ACJV Coordinator

Craig Watson, ACJV South Atlantic Coordinator

National Wildlife Refuges Town Hall Meeting

Okefenokee National Wildlife Refuge

October 29, 2009



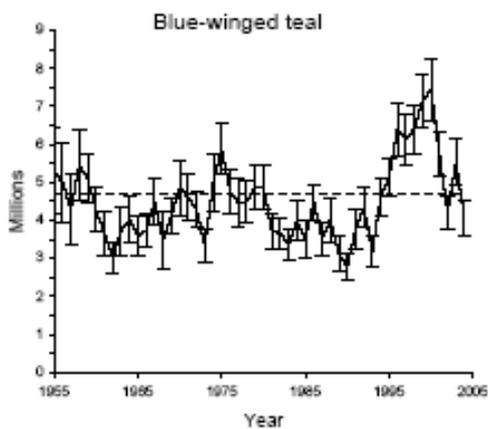
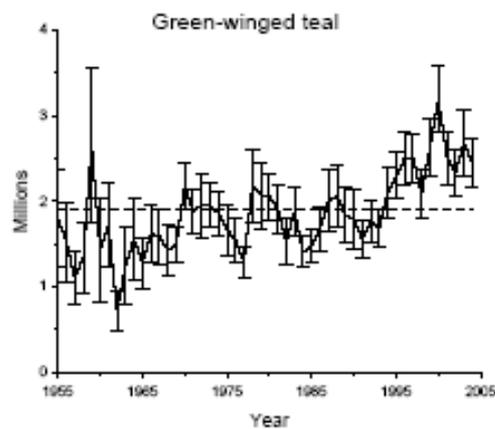
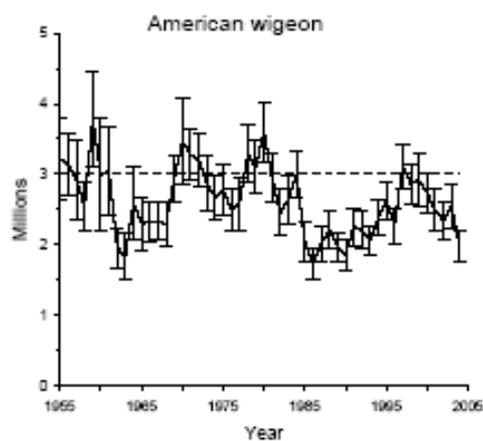
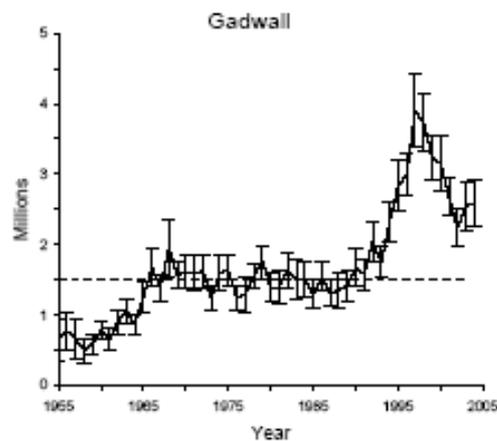
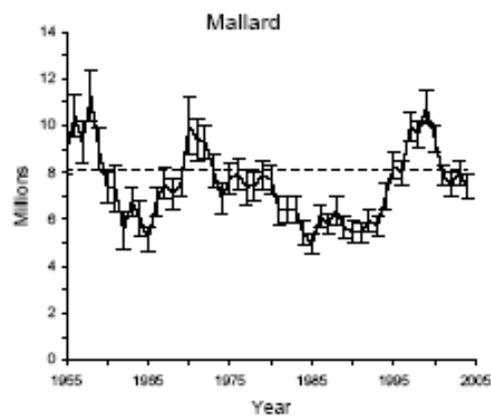
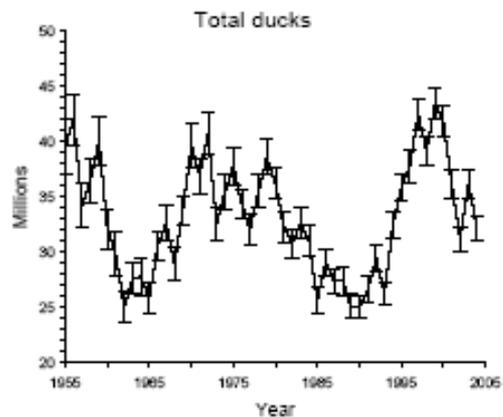


Joint Ventures and Landscape Conservation Cooperatives



- Joint Ventures/ACJV
Background/Mission/Description
- Conservation Science in the ACJV
 - BCR planning (e.g., South Atlantic)
 - Conservation design approaches
 - Integrated monitoring and management
 - Climate change adaptation planning
- Landscape Conservation Cooperatives and National Geographic Framework
- Potential roles of ACJV and other JVs in LCCs?
- What do NWRs need?







North American Waterfowl Management Plan

- First Continental Bird Conservation Plan – signed in 1986
- Set Continental Population Objectives linked to regional habitat conservation
- Identified important areas and relied on regional, self-directed partnerships (joint ventures) to deliver habitat conservation
- Dedicated funding source through North American Wetlands Conservation Act (NAWCA) in 1989.
 - 1,612 projects in three countries, \$791M grant funds, \$2.5B partner funds, 24M acres



Waterfowl Areas of Major Concern

NAWWMP
1986



HABITAT JOINT VENTURE AREAS



Major Bird Conservation Initiatives



North American Waterfowl Management Plan



Partners in Flight



U.S. Shorebird Conservation Plan

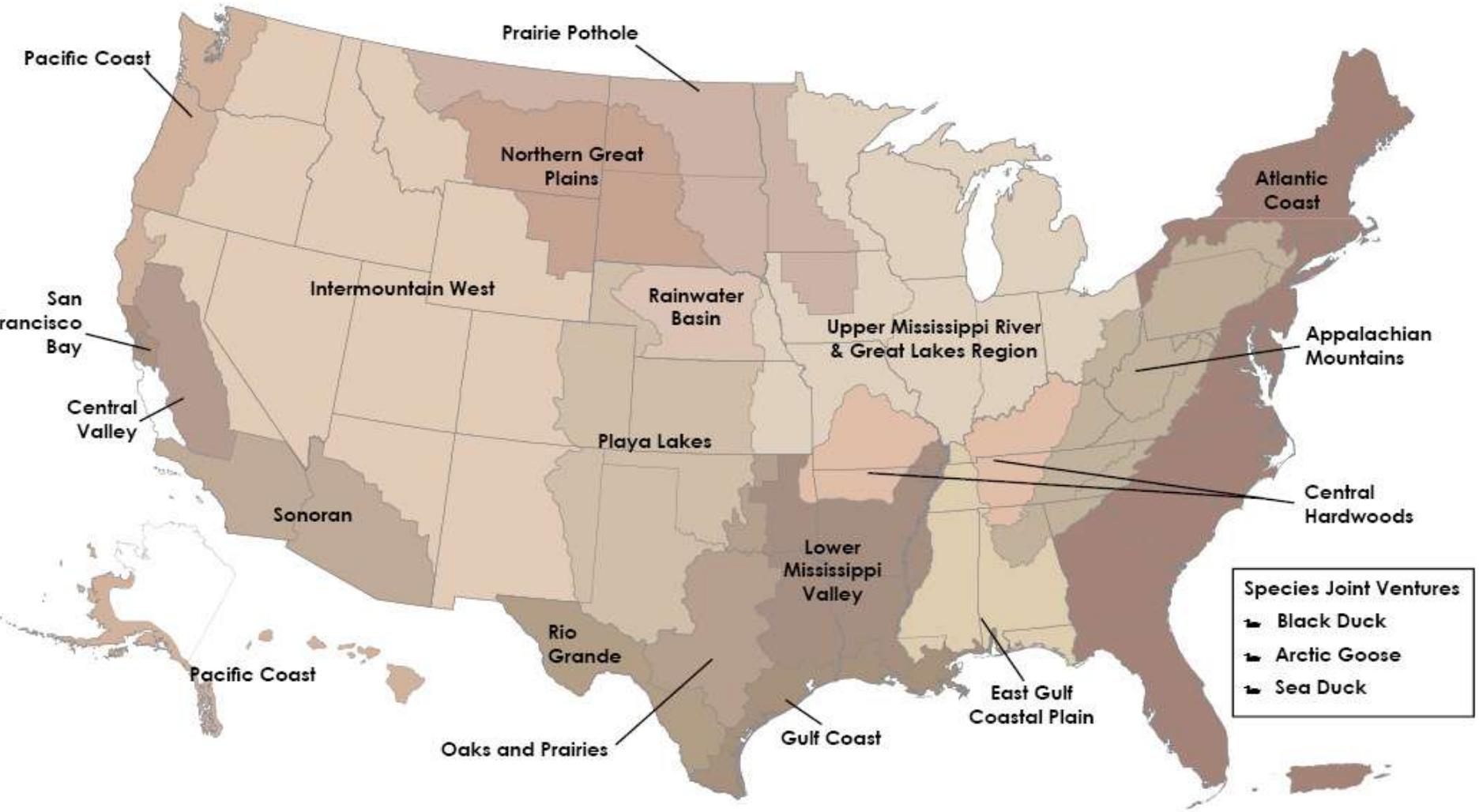


North American Waterbird Conservation Plan



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

U.S. Joint Ventures



Atlantic Coast Joint Venture

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



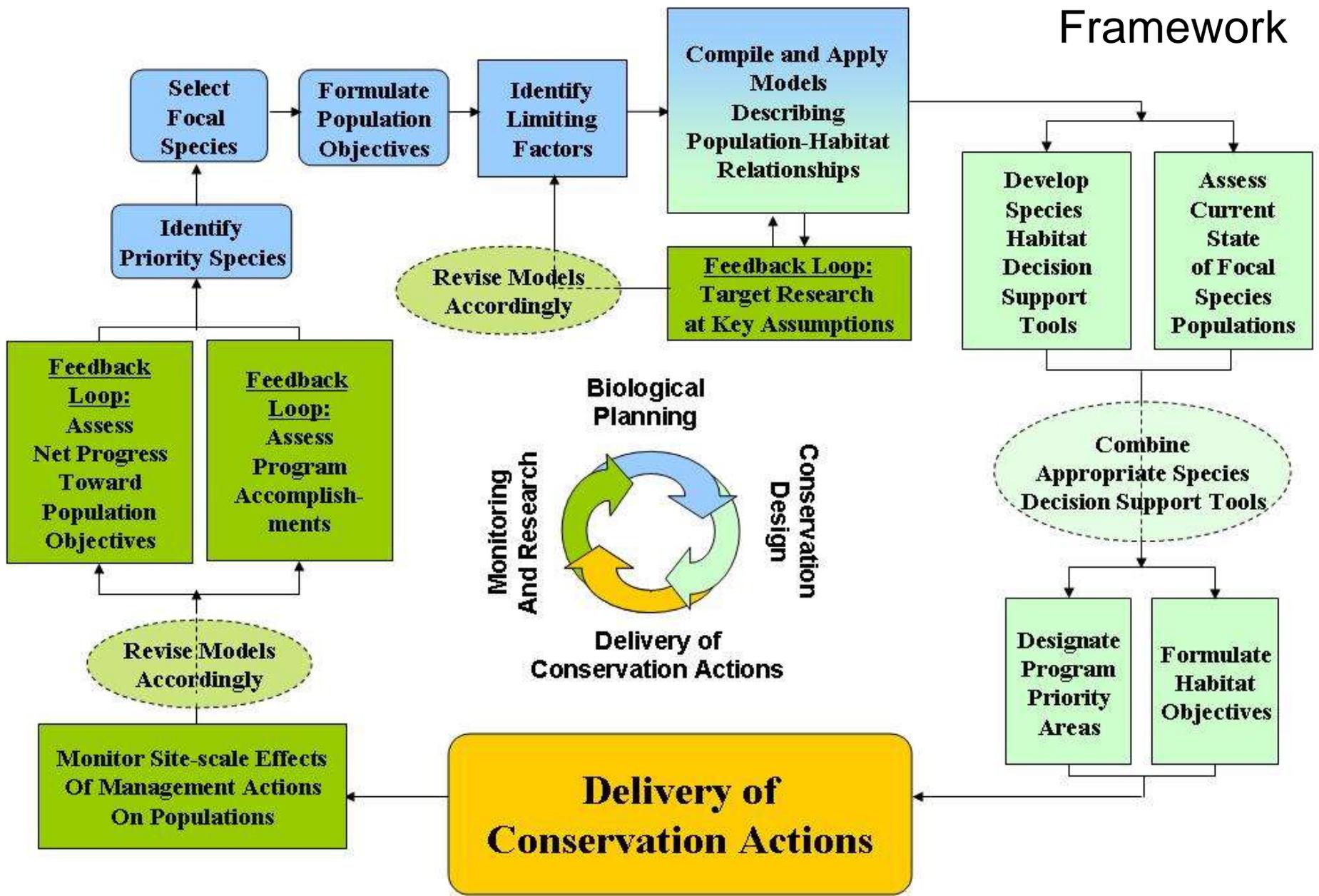
Mission

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



Within an Ecoregion

Landscape Conservation Framework



ACJV Staff

Regional

Mitch Hartley

North Atl. Coord. (Sunderland, MA)

States: ME, NH, VT, NY, MA, RI, CT

BCRs: LGL-SL, ANF, NE-MA

Other: Coord. With EHJV, Canada

Melanie Steinkamp

Mid Atl. Coord. (Laurel, MD)

States: NJ, PA, DE, MD, VA, WV

BCRs: NE-MA, Pied., N. Apps

Other: Ches. Bay, Del. Bay

Working Groups

Craig Watson

South Atl. Coord. (Charleston, SC)

States: NC, SC, GA, FL, PR

BCRs: SAMBI, S. Pdmt., Pen. FL, PR-VI

Other: Caribbean, Mexico

JV-Wide

Andrew Milliken

JV Coordinator

Debra Reynolds

Outreach Coordinator

(Hadley MA)

Tim Jones

Science Coordinator

(Laurel, MD)

Kirsten Luke

GIS Analyst (Contract)

(Panama City, FL)

Vacant

Assistant Science

Coordinator(s)



Ken Elowe, Board Chair, ME
 Dan Forster, Vice Chair, GA
 Steve Rockwood, GBTC Chair, FL
 Joe Fuller, GBTC Vice Chair, NC
 Laurel Barnhill, NGTC Chair, SC
 Brad Winn, NGTC Vice Chair, GA
 John Frampton, NAWMP
 Plan Committee, SC
 Wayne MacCallum,
 NAWCA Council, MA
 Rob Deblinger,
 NAWCA Council Staff, MA

Atlantic Flyway Council

Coast Joint Venture
 Management Board

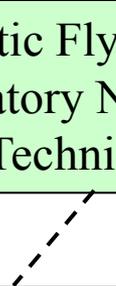
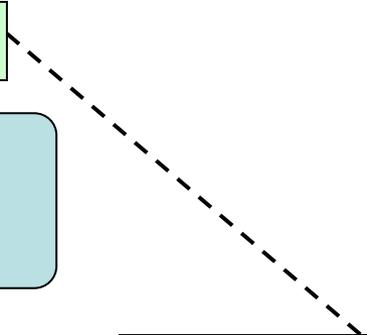
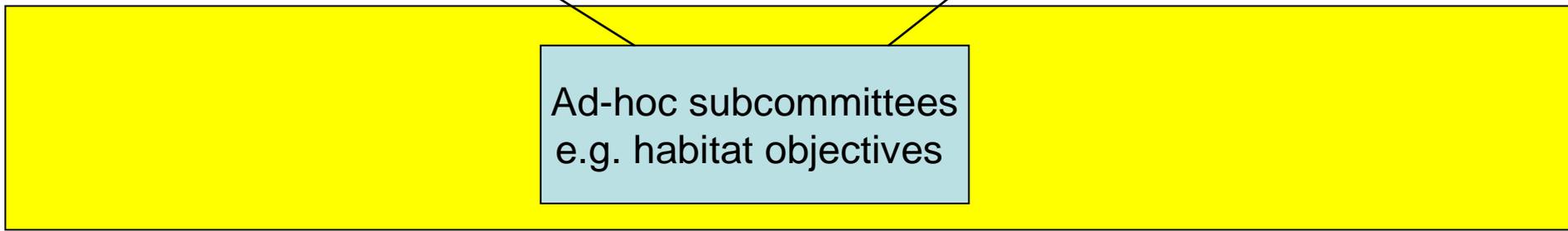
ACJV IBC
 Steering Committee
 (members & vice-chairs plus
 ACJV Coordinator)

Atlantic Flyway
 Migratory Nongame
 Bird Technical Section

 ACJV Nongame
 Technical Committee
 (representatives of Man. Board
 agencies and organizations
 plus initiatives) 

Committee including
 representatives of Man. Board
 agencies and organizations
 plus game bird initiatives)

Ad-hoc subcommittees
 e.g. habitat objectives



ACJV Acres Accomplished 1988-2008

Program	Protected	Restored	Enhanced	Total
Coastal	101,136	6,111	0	107,248
DU	171,808	98,838	108,701	379,349

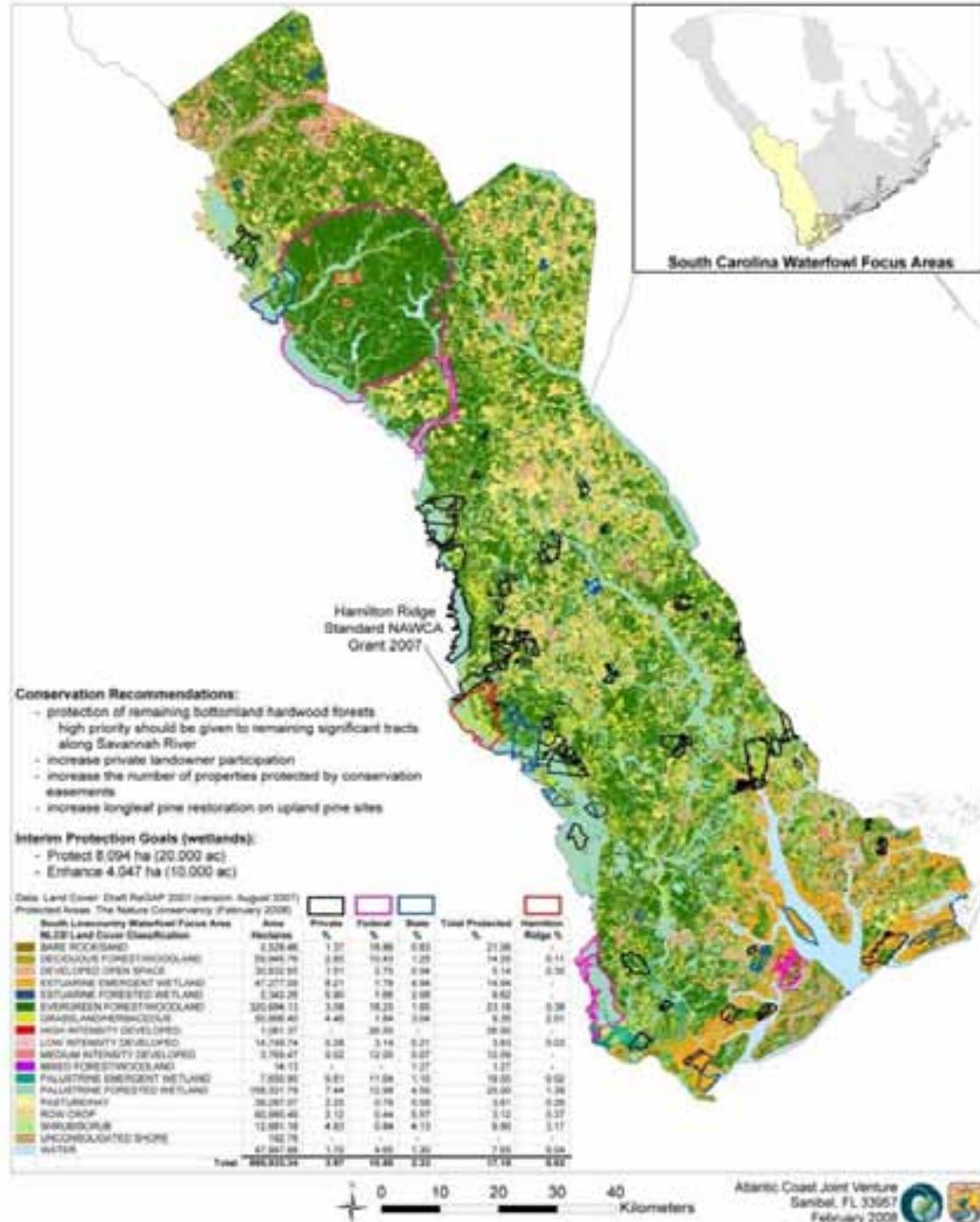
96% of NAWCA projects in ACJV focus areas

95% (85/101) refuge units in ACJV focus areas

TNC	1,267,408	0	0	1,269,408
USFS	1,359	232	2,035	3,626
WMI			12,265	12,265
Total	3,926,428	426,616	564,114	4,917,159

Monitoring and Evaluation

Enhanced planning, project tracking and evaluation



New or Expanded Funding Sources

Discretionary Funds 2007-2008

Funding Source	Project
AFWA/USFWS Multist. Grants	Northeast Coordinated Bird Monitoring
	Designing Sustainable Landscapes for Birds in the Eastern U.S.
BDJV/DU/state	Black duck wintering behavior and energetics
SDJV	Atlantic Coast Sea Duck Surveys, Seawatch
U. of Delaware	Brant wintering behavior and energetics
U.S.G.S. Science Support	Optimal Landscape Design
	Bird and Bat Migration on Appalachian Ridges
	Atlantic Coast Sea Level Rise and Impacts on Birds
	Migratory stopover habitat
	Post-breeding use of early successional habitats by forest birds
U.S.G.S. NBII	Atlantic Flyway SWAP Bird Information Database
Doris Duke	Regional Habitat Classification and Mapping, Phase I
NEAFWA	Regional Habitat Classification and Mapping, Phase II
NFWF	Rangewide Longleaf Pine Decision Support Tool
MMS	Seabird surveys and data compilation

Plan and implement at appropriate spatial scales

- Plan using ecologically-defined units that reflect our best understanding of how birds respond to habitats at broad spatial scales
 - Flyway
 - Atlantic Coast
 - Ecoregional (e.g. Bird Conservation Region)
- Implement at scales that recognize administrative or management responsibilities and local partnerships
 - Regional
 - State
 - Focus Area or Project
 - Site





Bird Conservation Regions

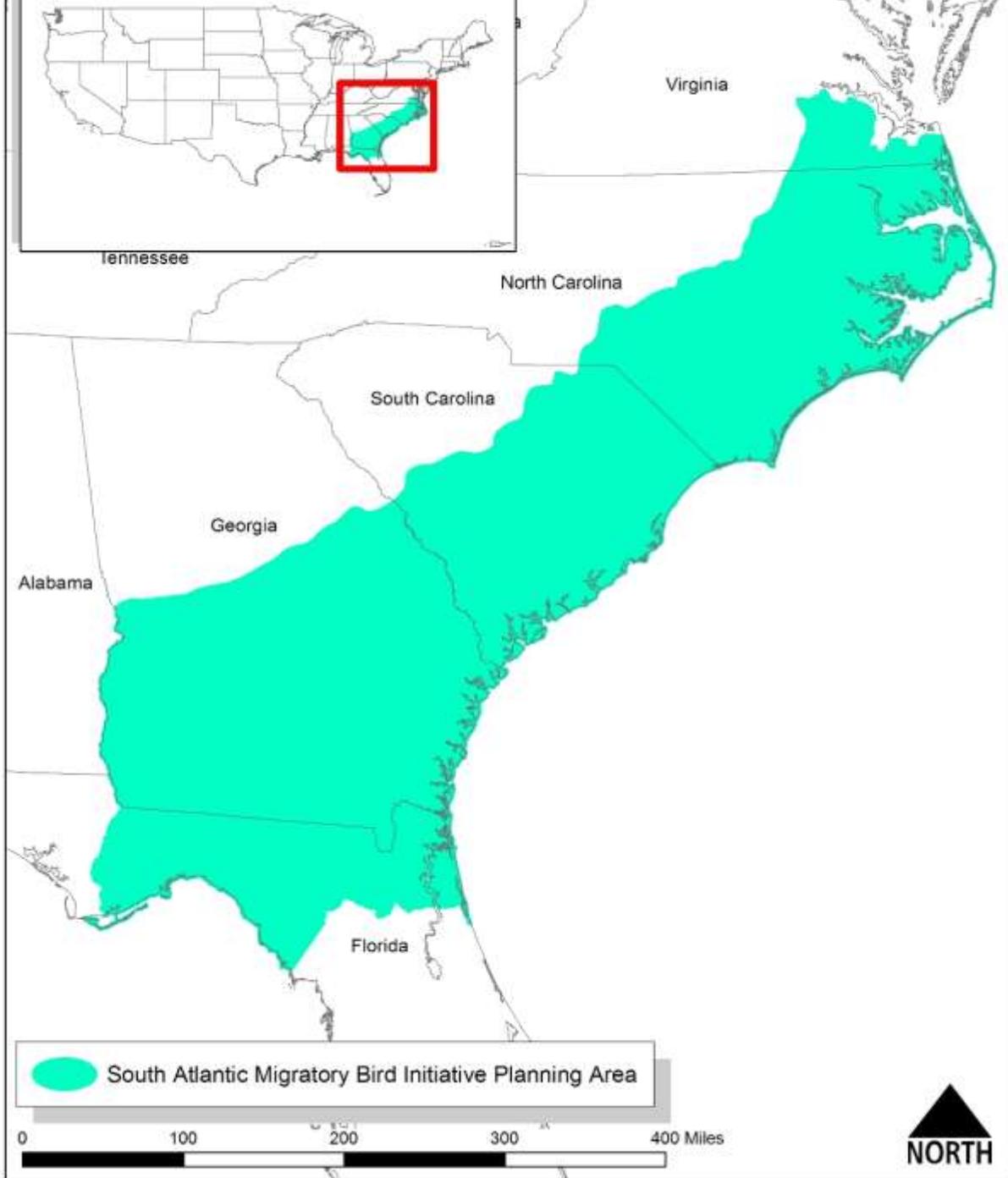


South Atlantic Migratory Bird Initiative

- 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

VISION

- Integrate Planning Efforts of 5 Major Bird Conservation Initiatives in a 5 State Area (FL, GA, SC, NC, VA)
 - NAWMP
 - Partners In Flight
 - United States Shorebird Conservation Plan
 - North American Waterbird Conservation Plan
 - Northern Bobwhite Conservation Initiative
- Seeking Common Goals and Objectives for Habitat Conservation



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

Priority Species of the Southeastern Coastal Plain Plain BCR/SAMBI

Waterfowl: Black Duck, Wood Duck, Tundra Swan, Northern Pintail

Shorebirds: American Oystercatcher, Piping Plover, Wilson's Plover

Landbirds: Swallow-tailed Kite, Painted Bunting, Northern Bobwhite, Salt-marsh sparrows

Waterbirds: White Ibis, Black Skimmer, Wood Stork, King Rail



Priority Habitats of the Southeastern Coastal Plain Bird Conservation Region/SAMBI

Forested Wetlands (STKI, IBWO, landbirds)



Managed Wetlands
(Waterbirds/Shorebirds/Waterfowl)



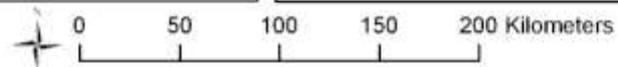
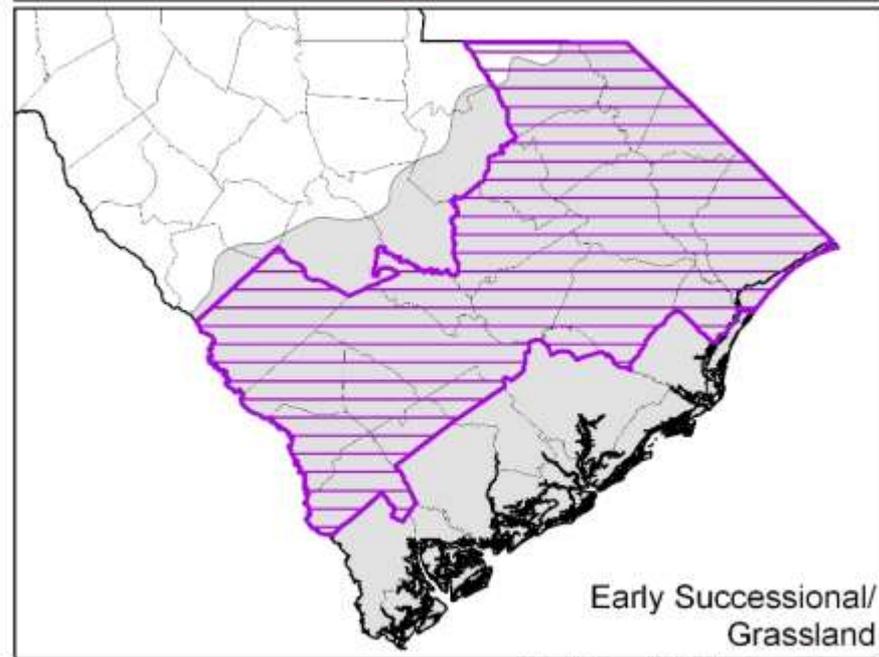
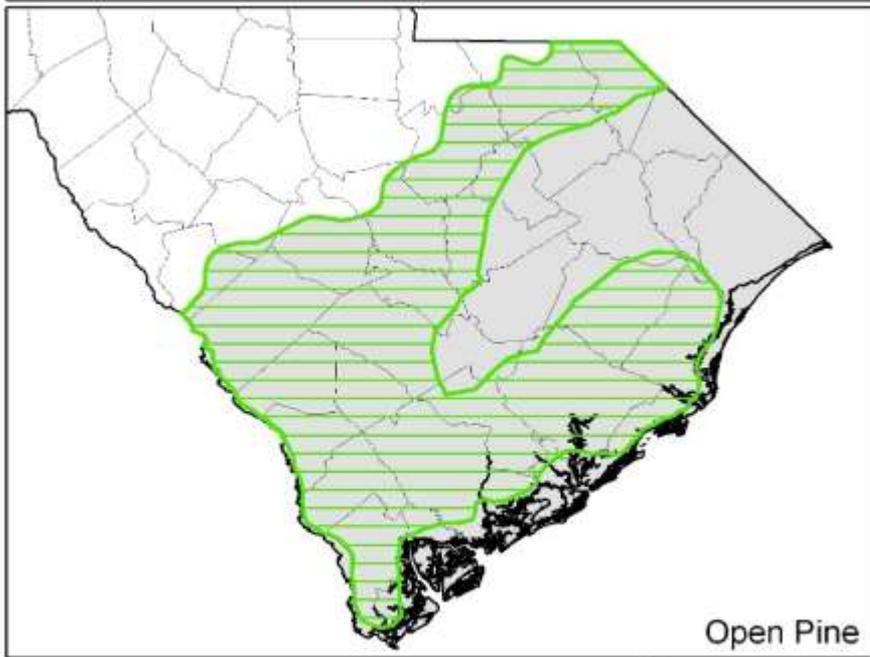
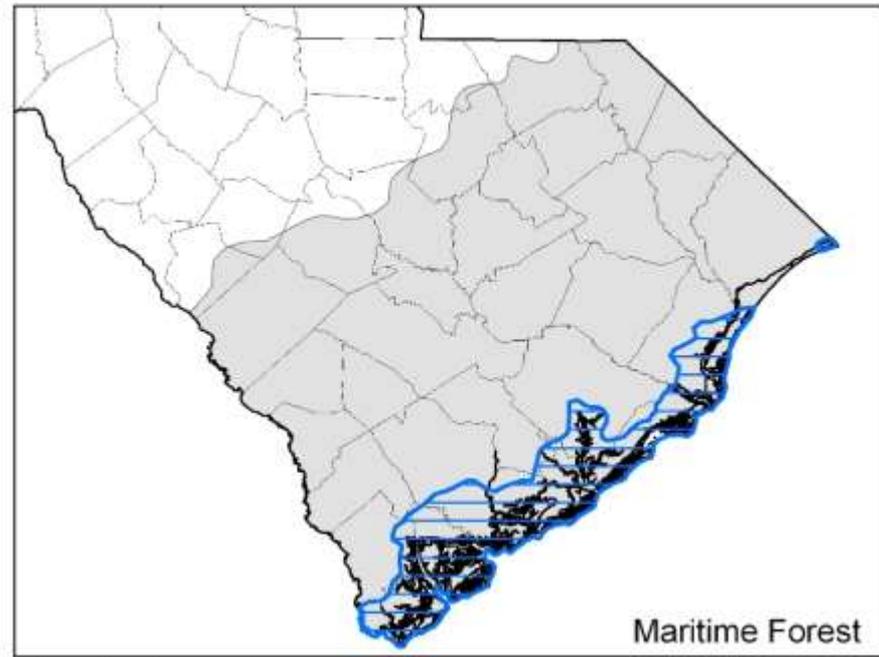
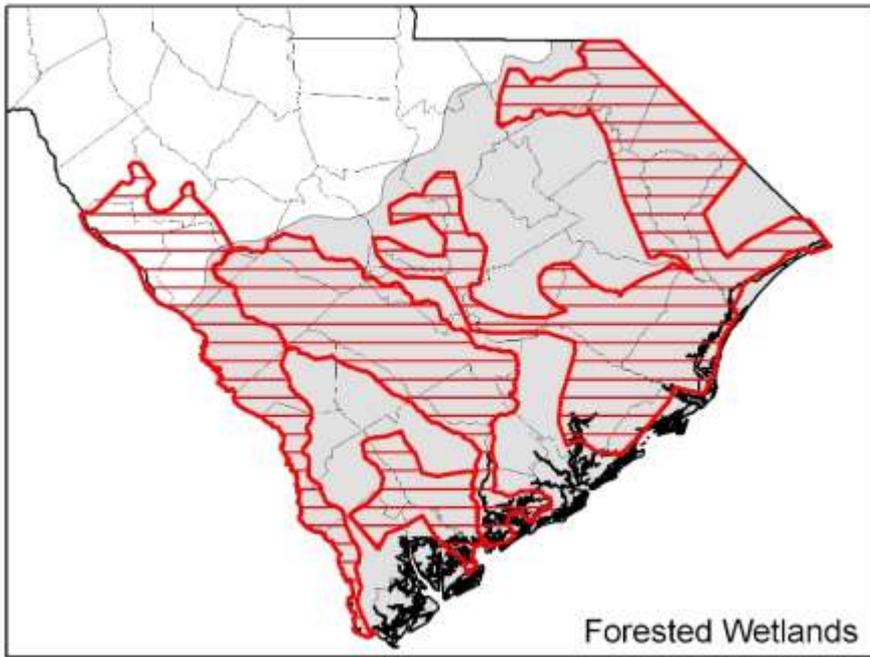
Maritime Forests (PABU)

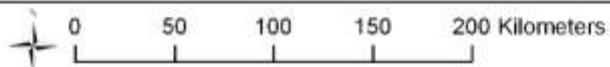
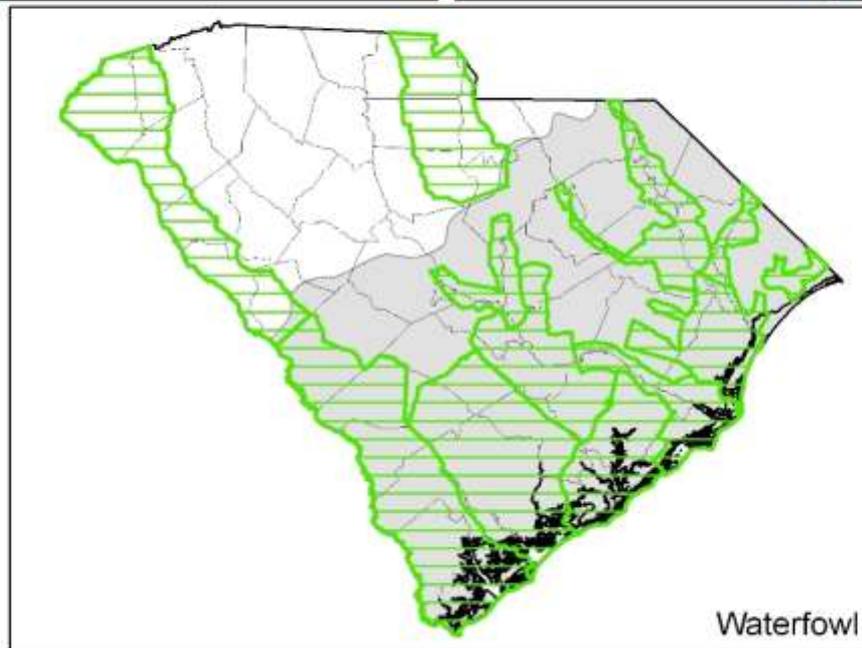
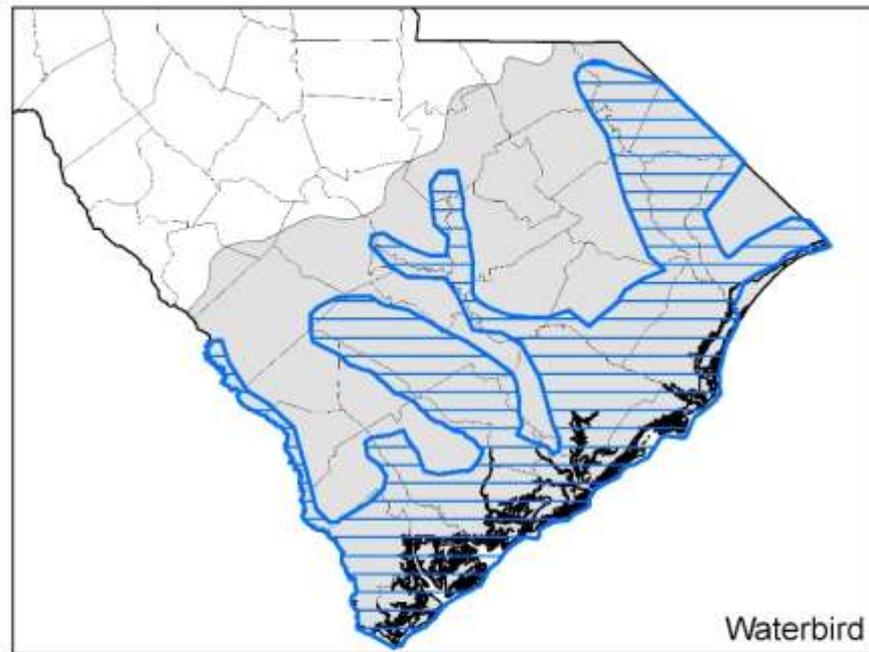
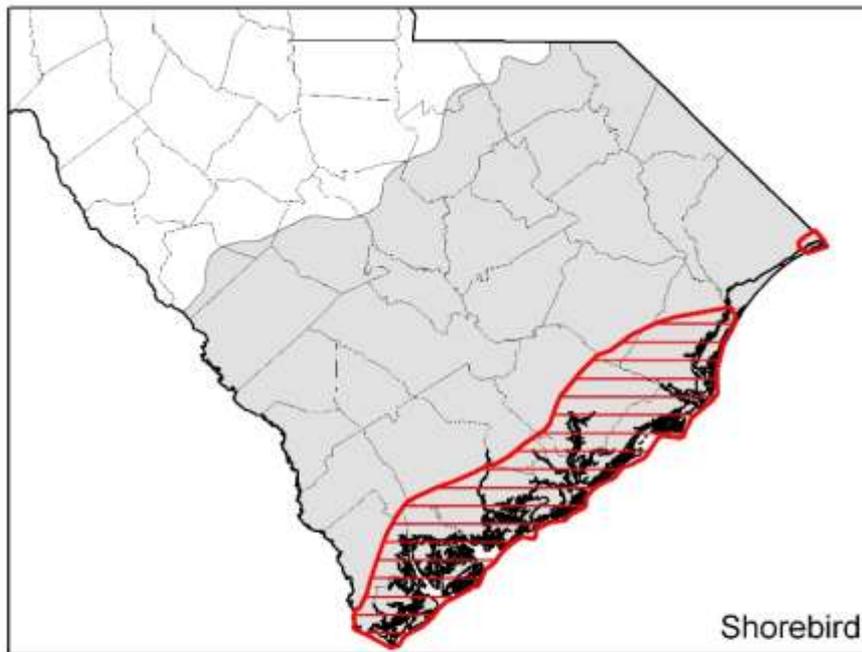


Shorelines, Beaches, and Dunes
(Shorebirds/Waterbirds)

Estuarine Systems (Rails, water quality)







South Atlantic Migratory Bird Initiative

Delivering habitat conservation for all birds across all habitats; approximately **\$45 million** has been awarded for the conservation of over **282,000** acres at over **90** project sites. Several of these projects were multi-state multi-activity projects. **Over 260** partners provided **\$227 million** in matching funds

Designing Sustainable Landscapes for Bird Populations in the Eastern United States

a cooperative project by:

NC Cooperative Fish & Wildlife Research Unit, NCSU

AL Cooperative Fish & Wildlife Research Unit, Auburn University

Atlantic Coast Joint Venture



Project Area

Eastern U.S.

Map Units

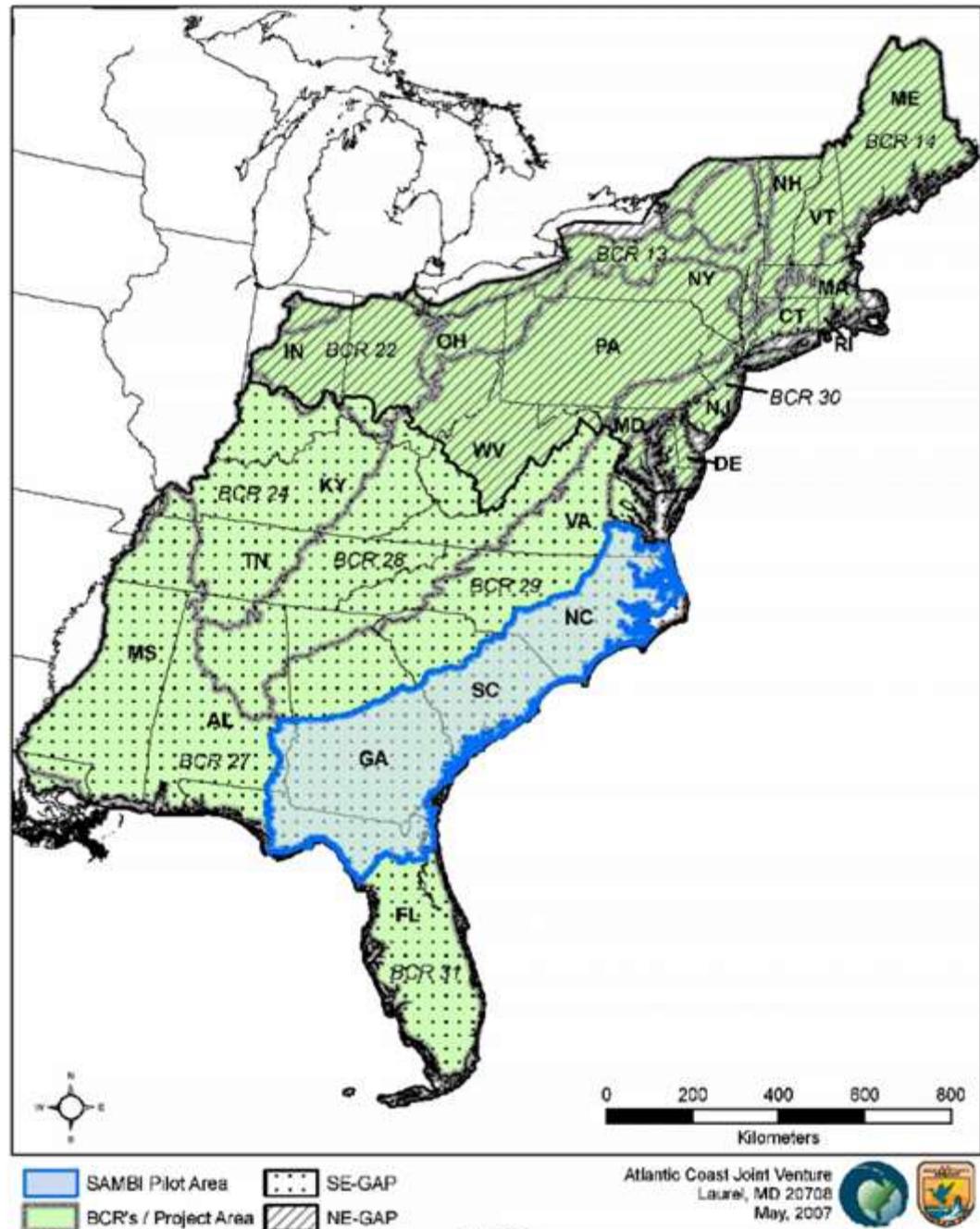
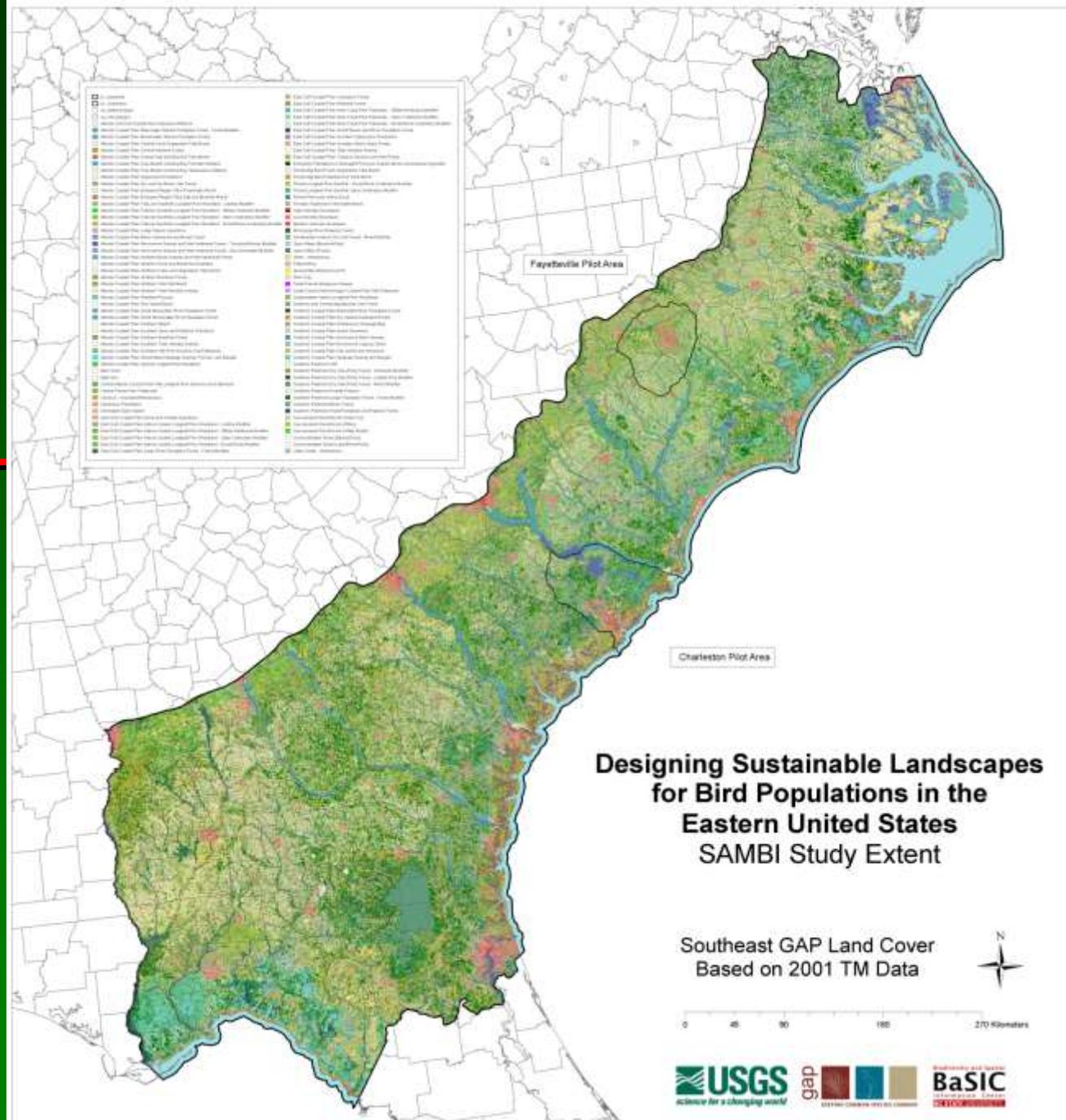


Figure 1

Project Objectives

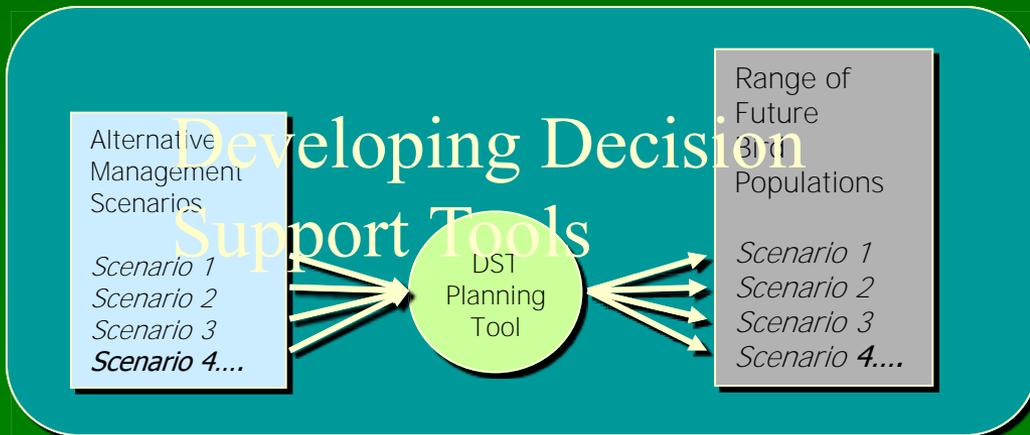
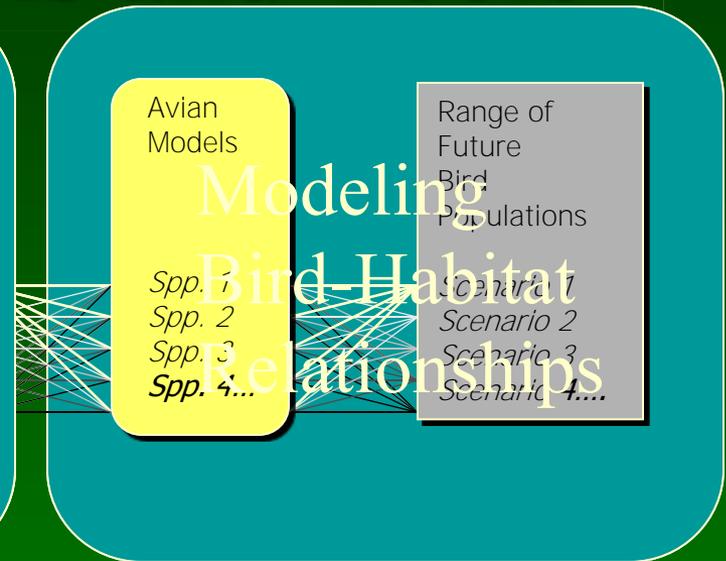
1. **Assess the current capability of habitats** in ecoregions in the eastern United States to sustain bird populations
2. **Predict the impacts of landscape-level changes** (e.g., from urban growth, conservation programs, climate change) on the **future capability of these habitats** to support bird populations
3. **Target conservation programs** to effectively and efficiently achieve objectives in State Wildlife Action Plans and bird conservation plans and evaluate progress under these plans
4. **Enhance coordination among partners** during the planning, implementation and evaluation of habitat conservation through conservation design

SAMBI Study Extent



Flowchart of Models and Tools

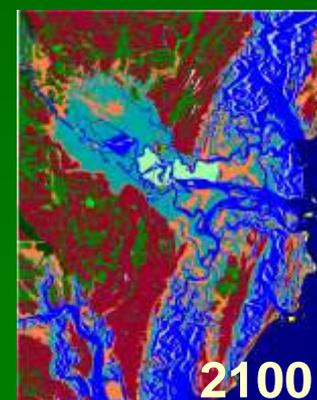
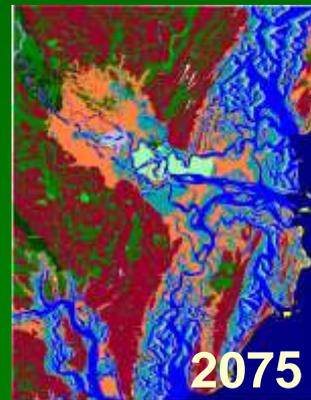
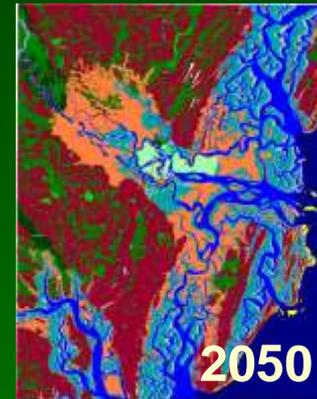
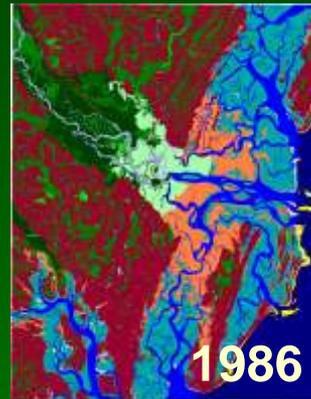
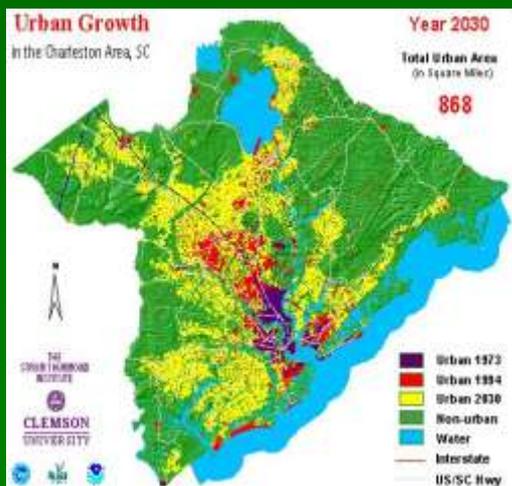
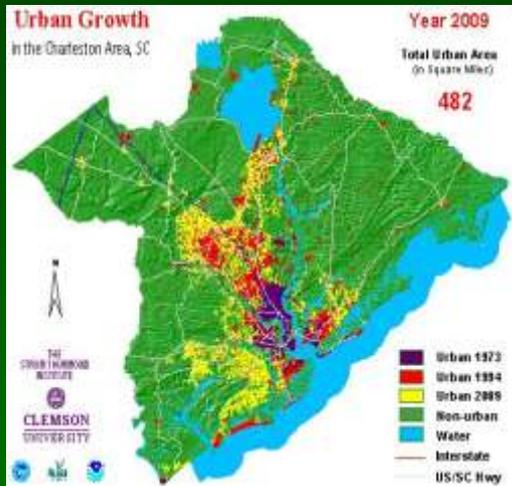
Modeling
Landscape Change
(Including Climate
Change)



Additional Stressors

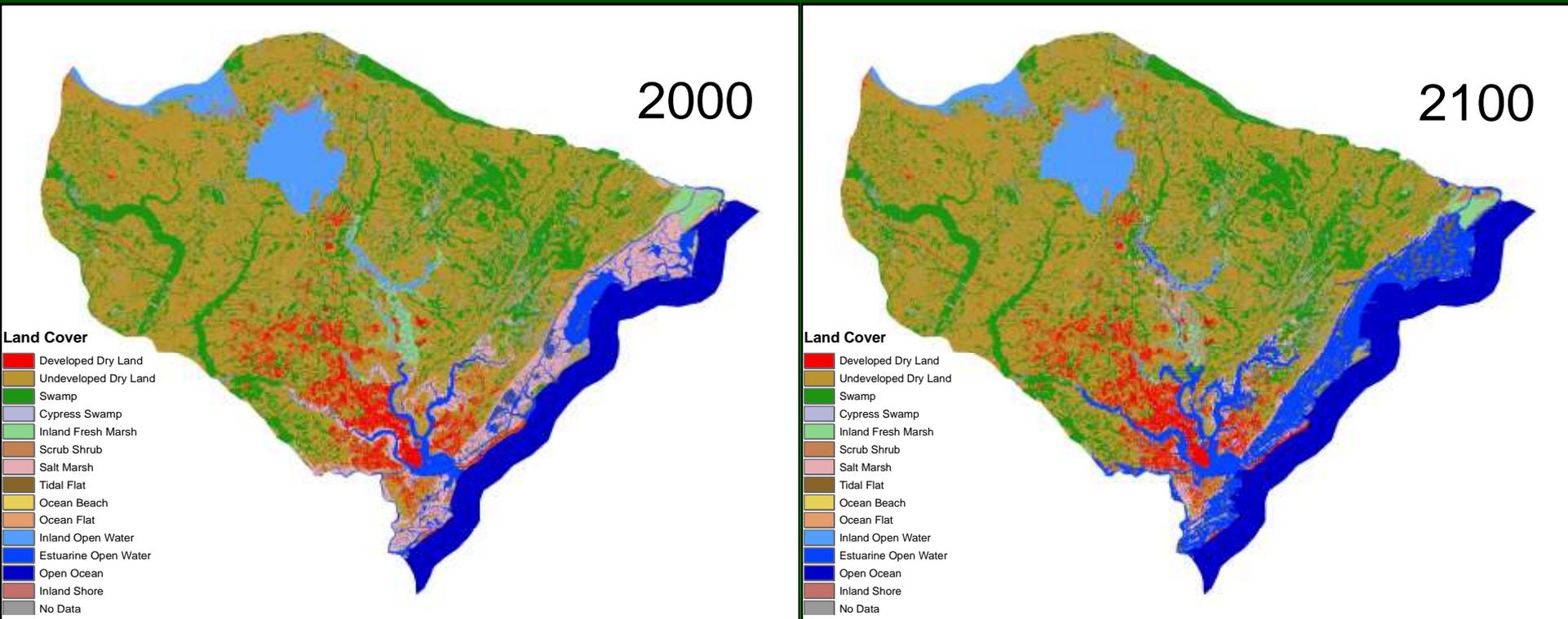
- Urban Growth

- Climate Change

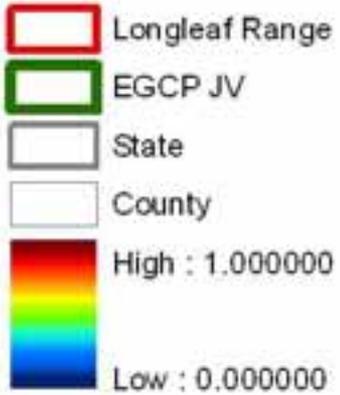


Legend	
Dev. Dry Land	Orange
Undev. Dry Land	Red
Hardwood Swamp	Dark Green
Cypress Swamp	Light Green
Inland Fresh Marsh	Yellow-Green
Tidal Fresh Marsh	Light Yellow
Transitional Salt Marsh	Light Blue
Saltmarsh	Blue
Mangrove	Purple
Estuarine Beach	Light Blue
Tidal Flat	Light Blue
Ocean Beach	Yellow
Ocean Flat	Light Green
Rocky Intertidal	Pink
Inland Open Water	Light Blue
Riverine Tidal	Blue
Estuarine Open Water	Blue
Tidal Creek	Blue
Open Ocean	Dark Blue
Brackish Marsh	Orange
Tall Spartina	Orange
Freshwater Shore	Brown
Tidal Swamp	Dark Green
Blank	White

Current and Future Landscape

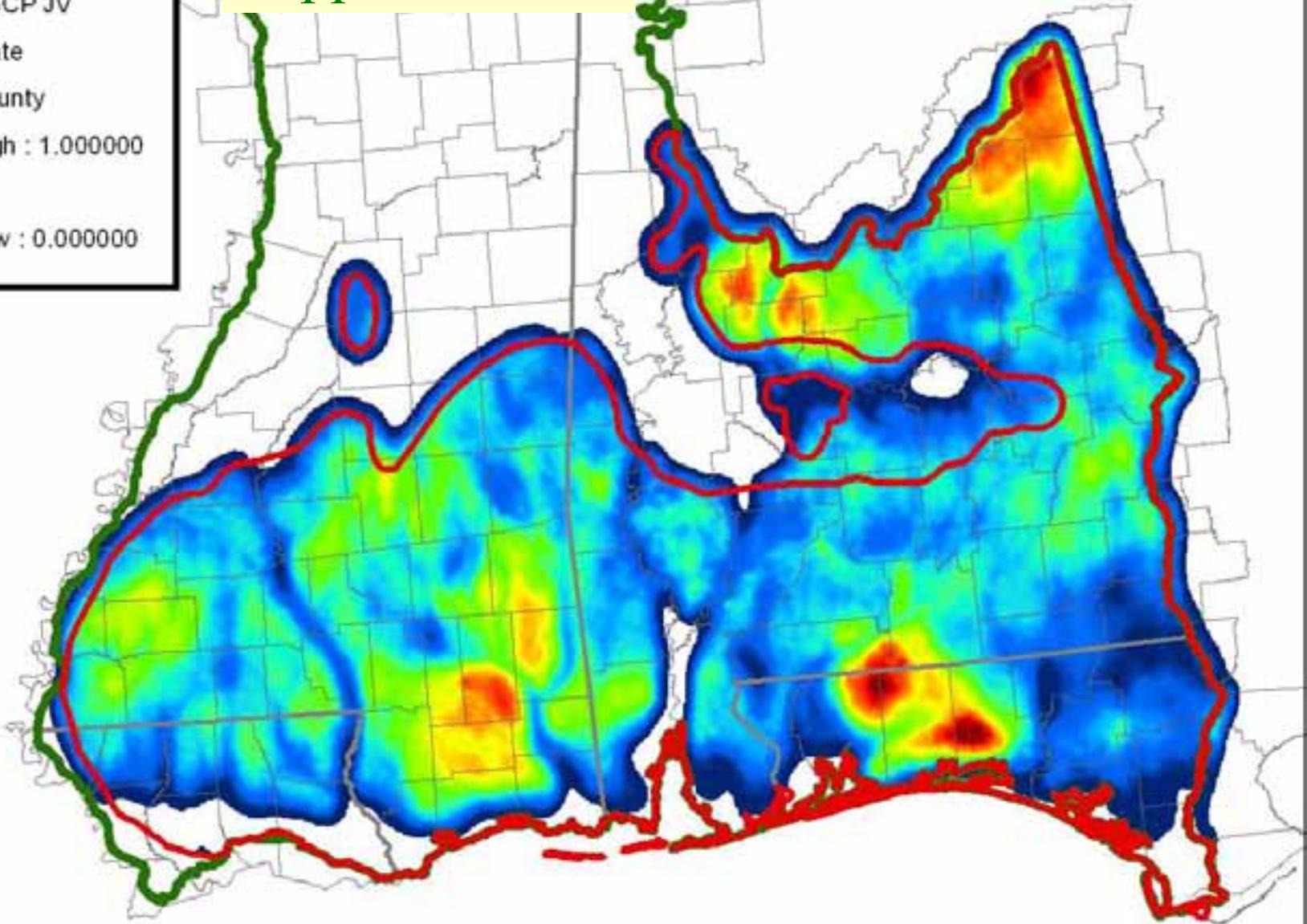


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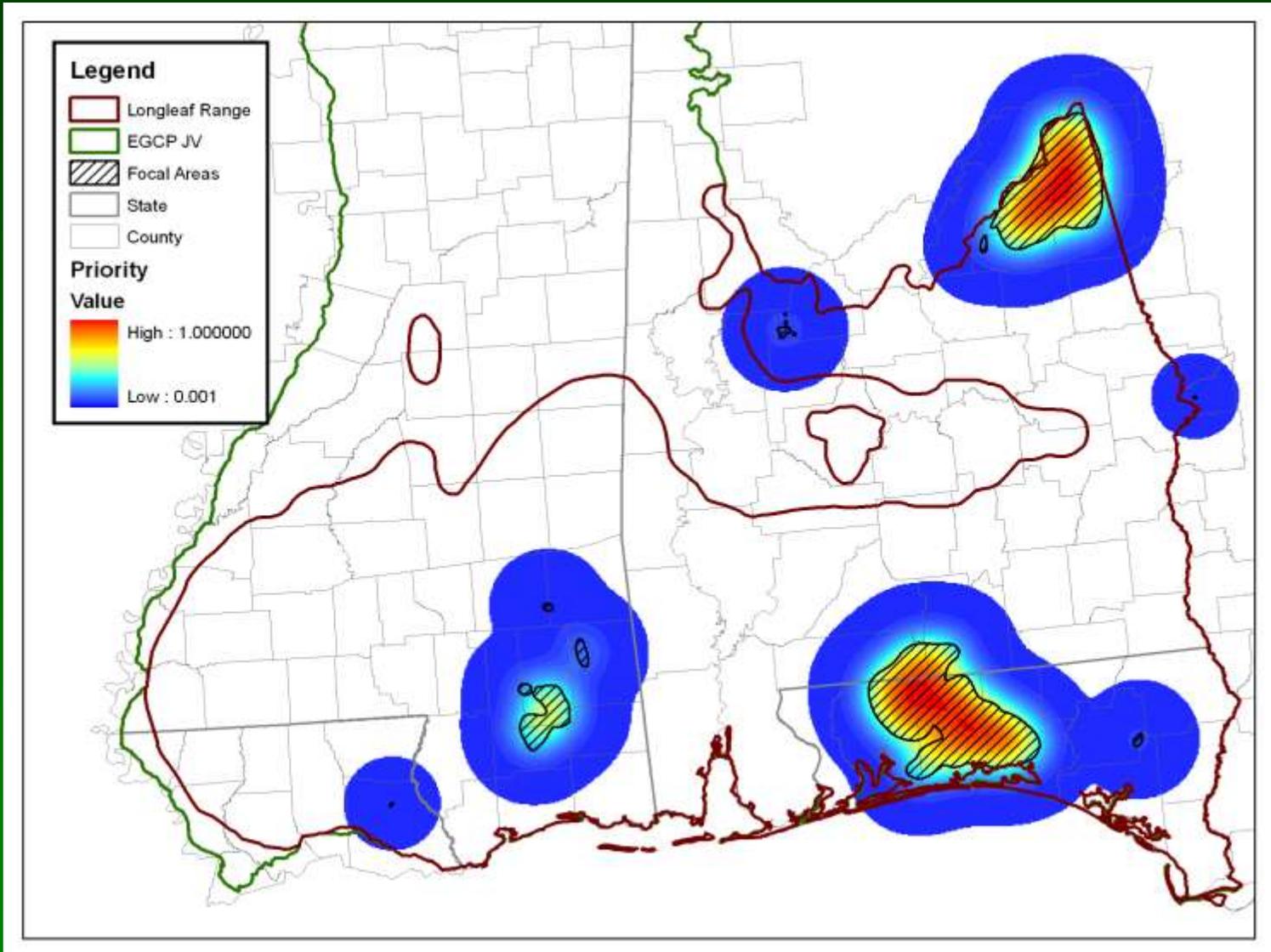


Decision Support Tools

Draft map of conservation priorities for open pine systems in the EGCP JV area.



Open pine focal



- Longleaf range much greater than the EGCP JV boundary

- Once covered nearly 90 M ac

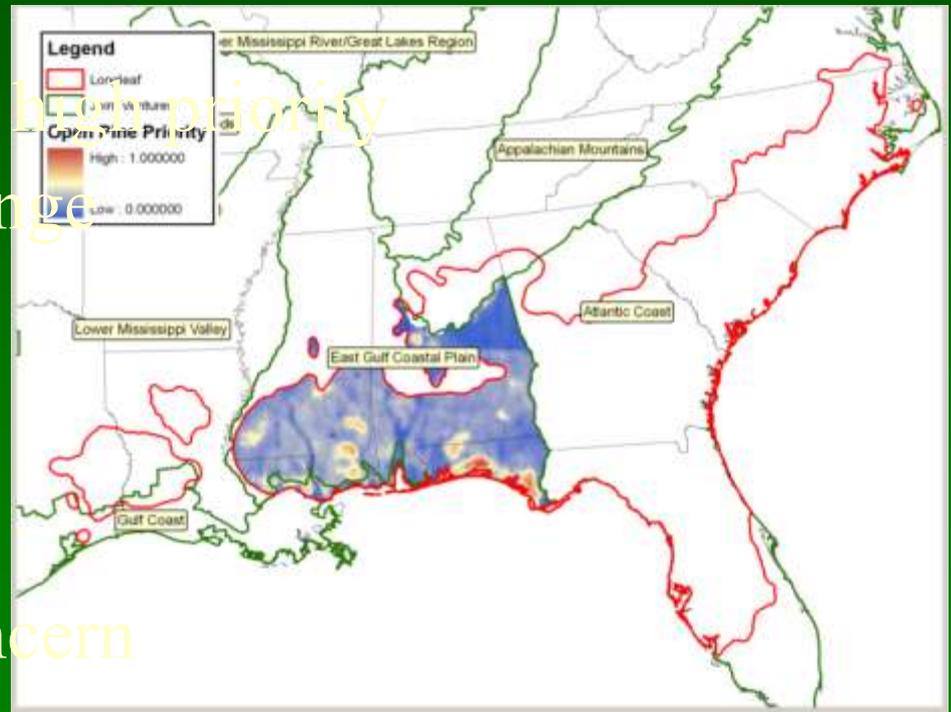
- Longleaf restoration is high priority

- JVs cover the entire range

- Atlantic Coast
 - Lower Mississippi Valley
 - East Gulf Coastal Plain
 - Gulf Coast
 - Appalachian Mountain

- Wildlife species of concern

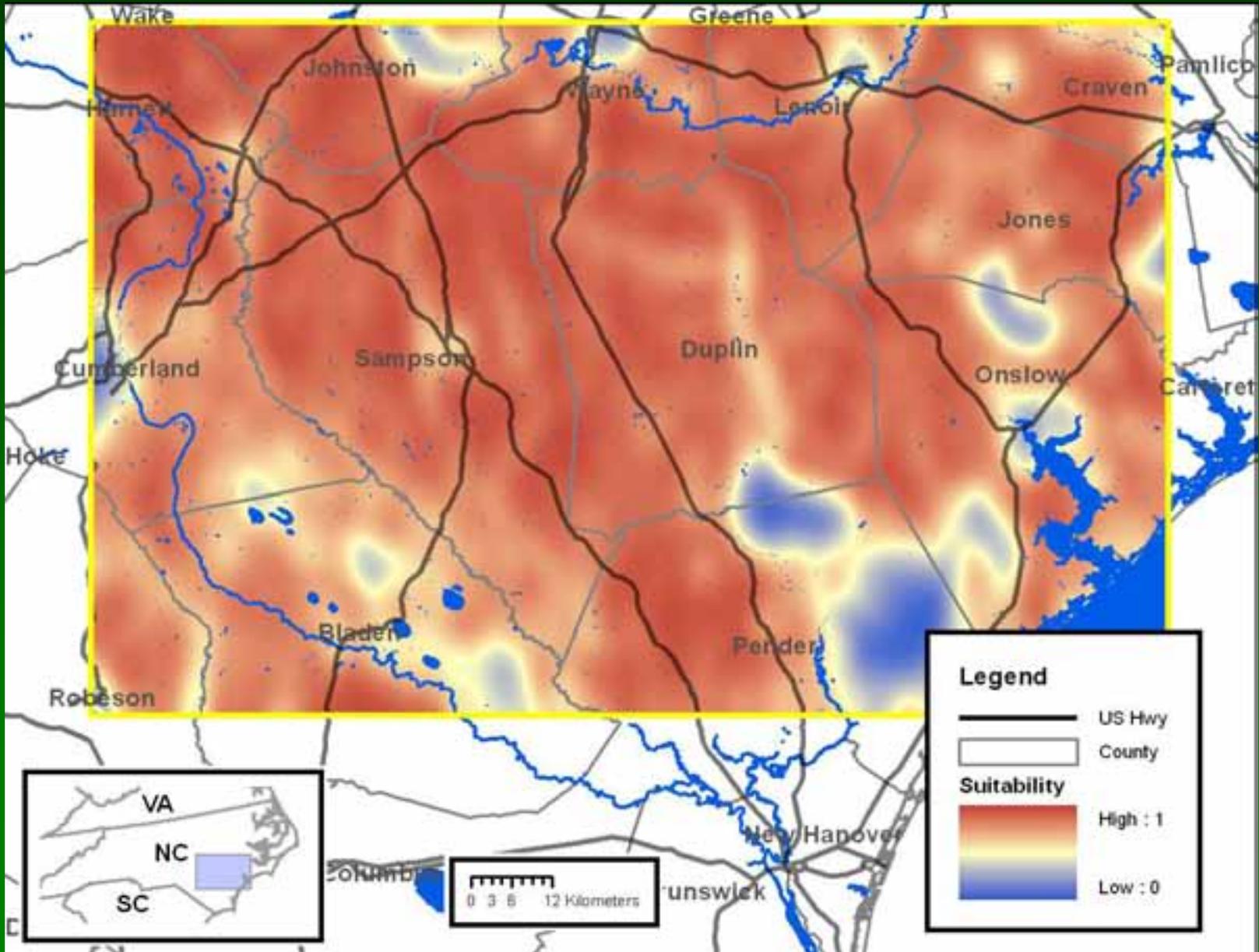
- Eastern indigo snake
 - Black pine snake



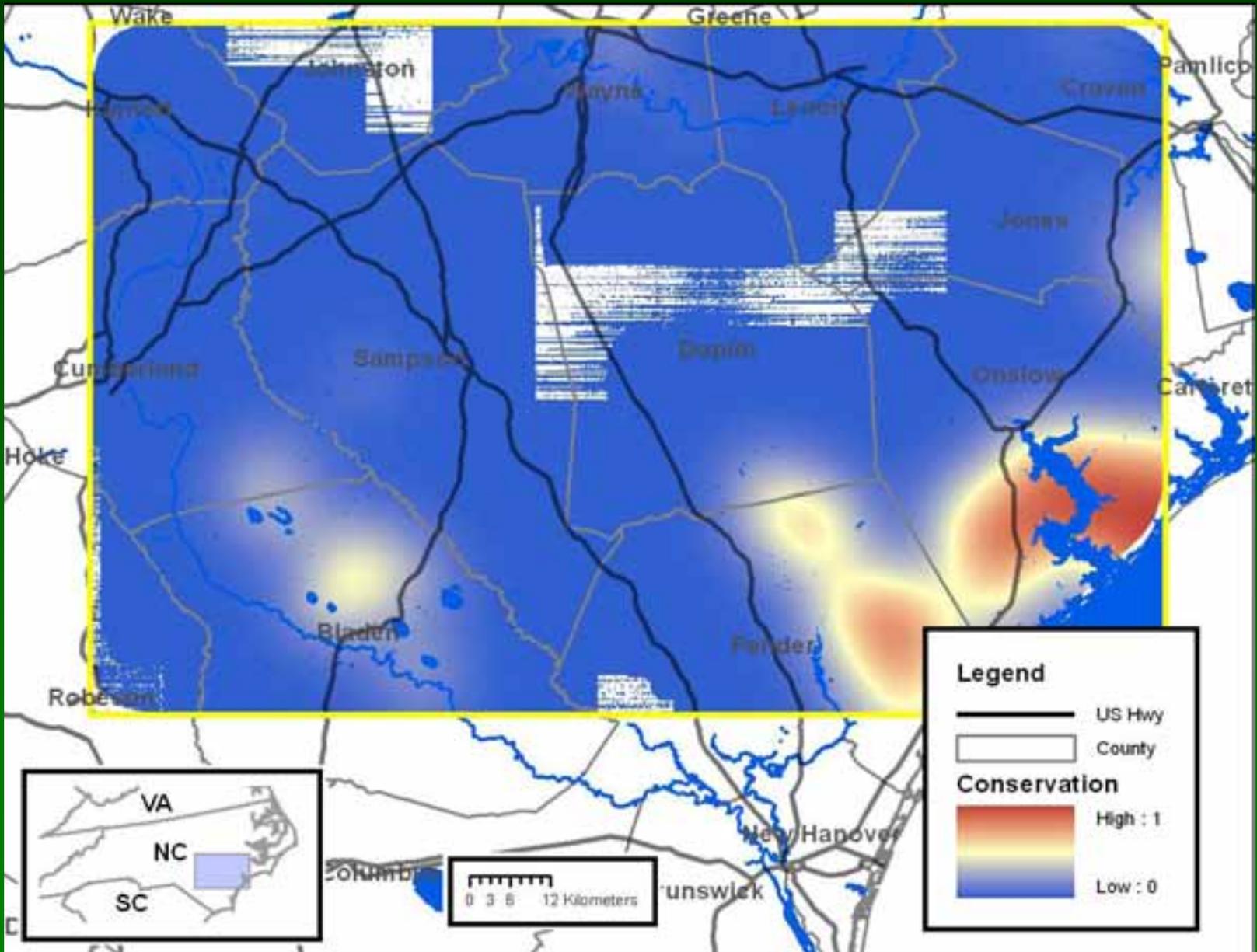
Example DSS

- **Prioritizing for multiple focal species in dynamic landscapes**
 - BHNU, NOBO, BACS, RCWO
- **Applying and evaluating conservation policies**

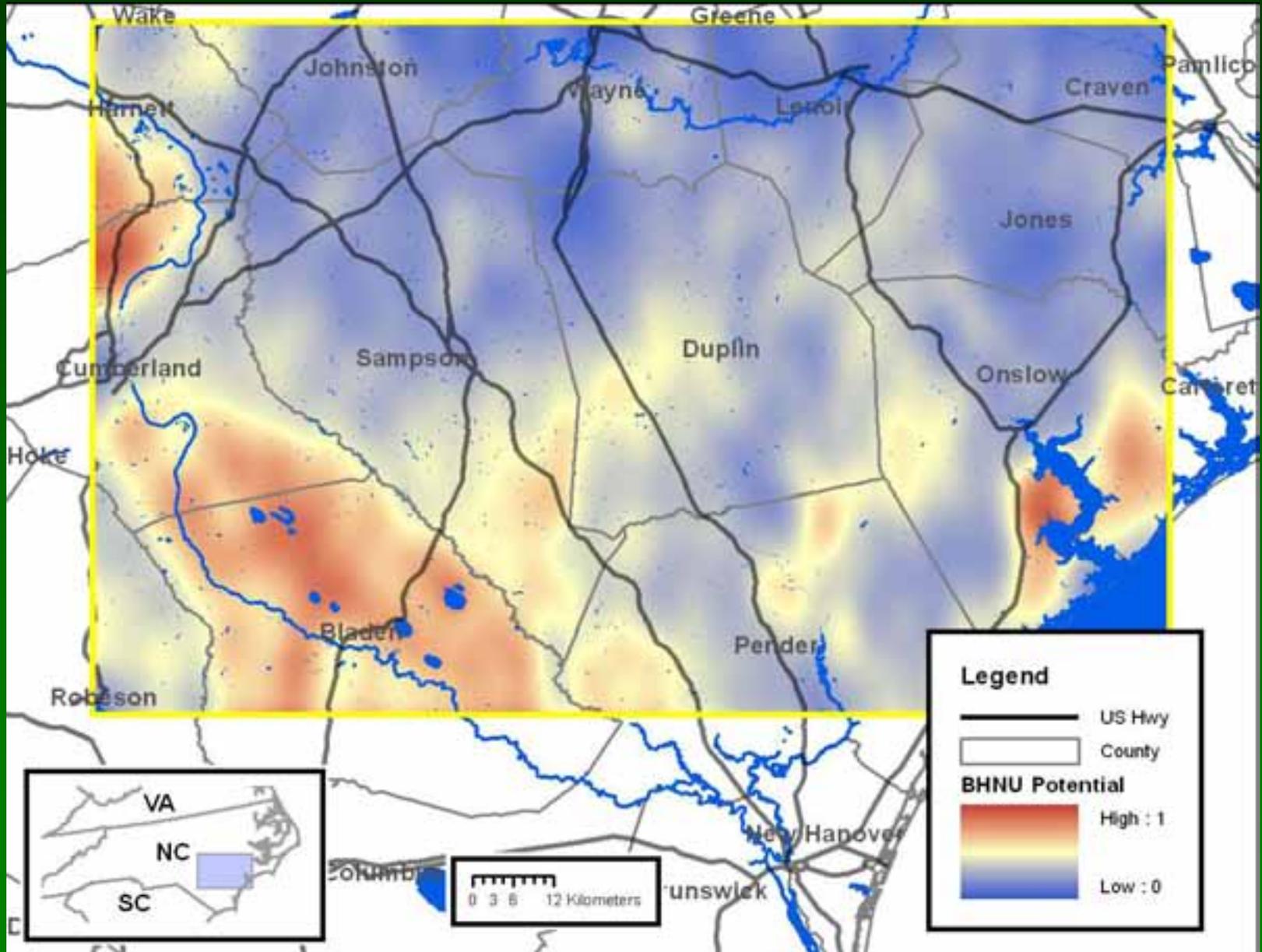
Suitability based on undeveloped lands (t0)



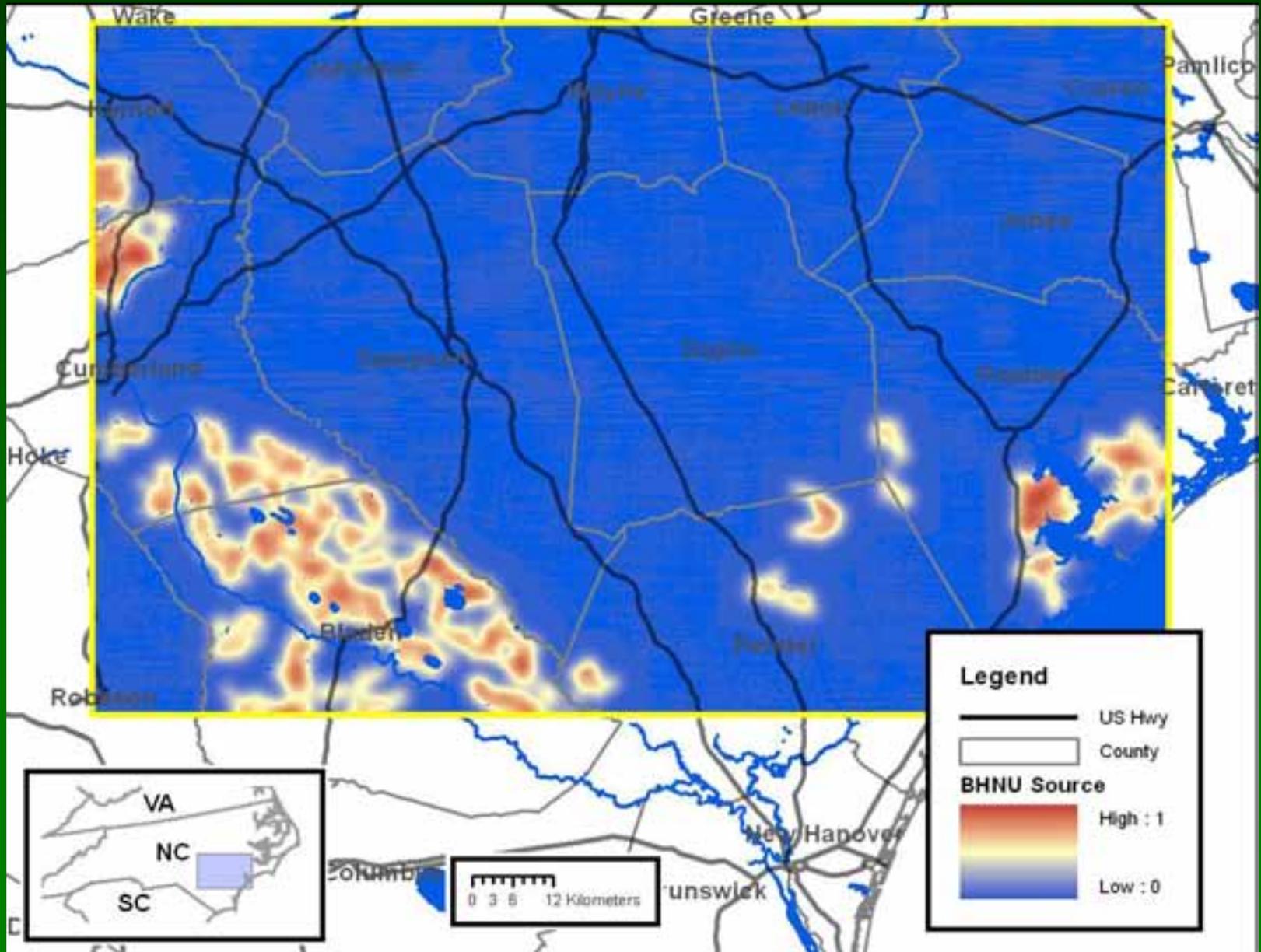
Conservation Lands(t0)



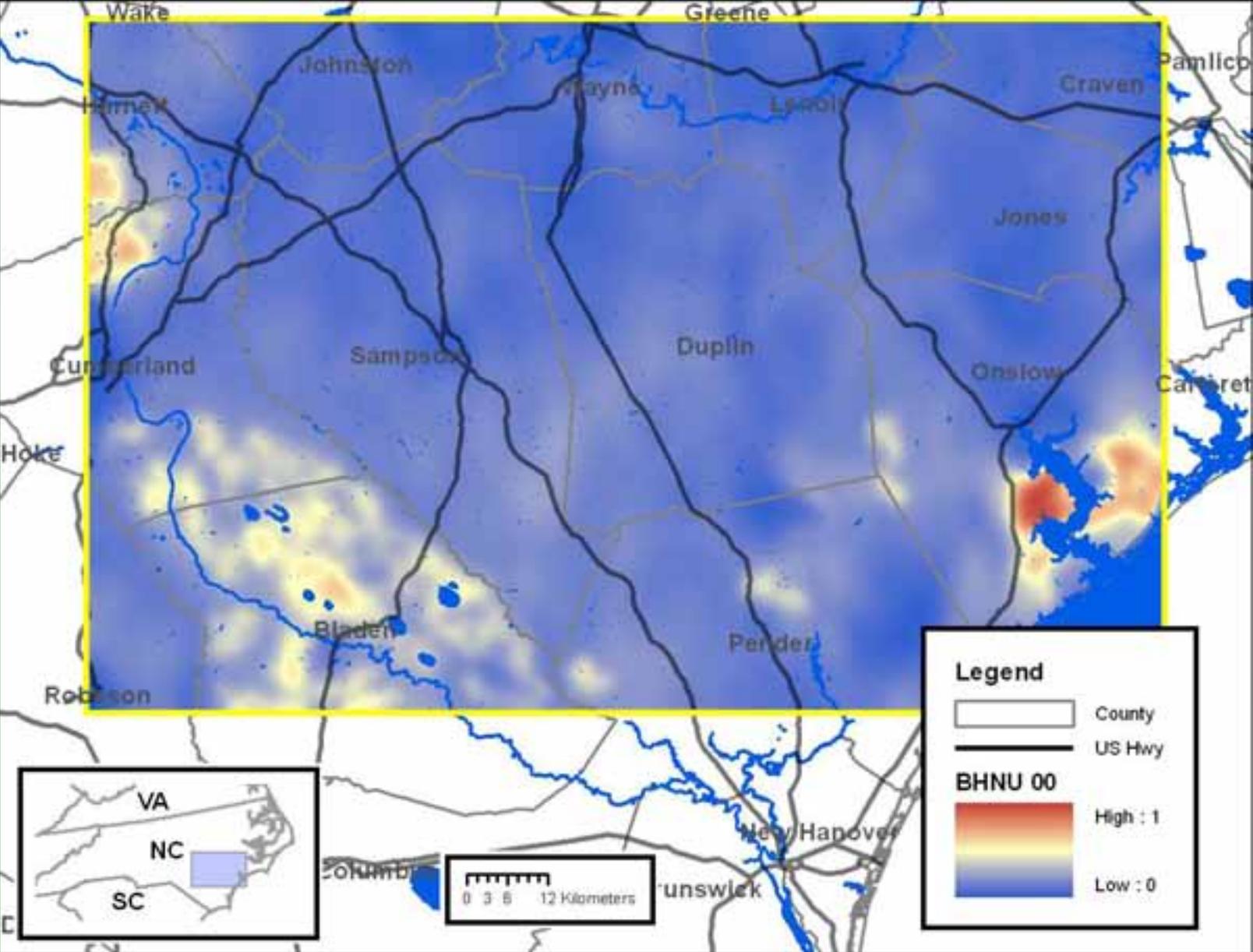
Brown-headed Nuthatch potential habitat (t0)



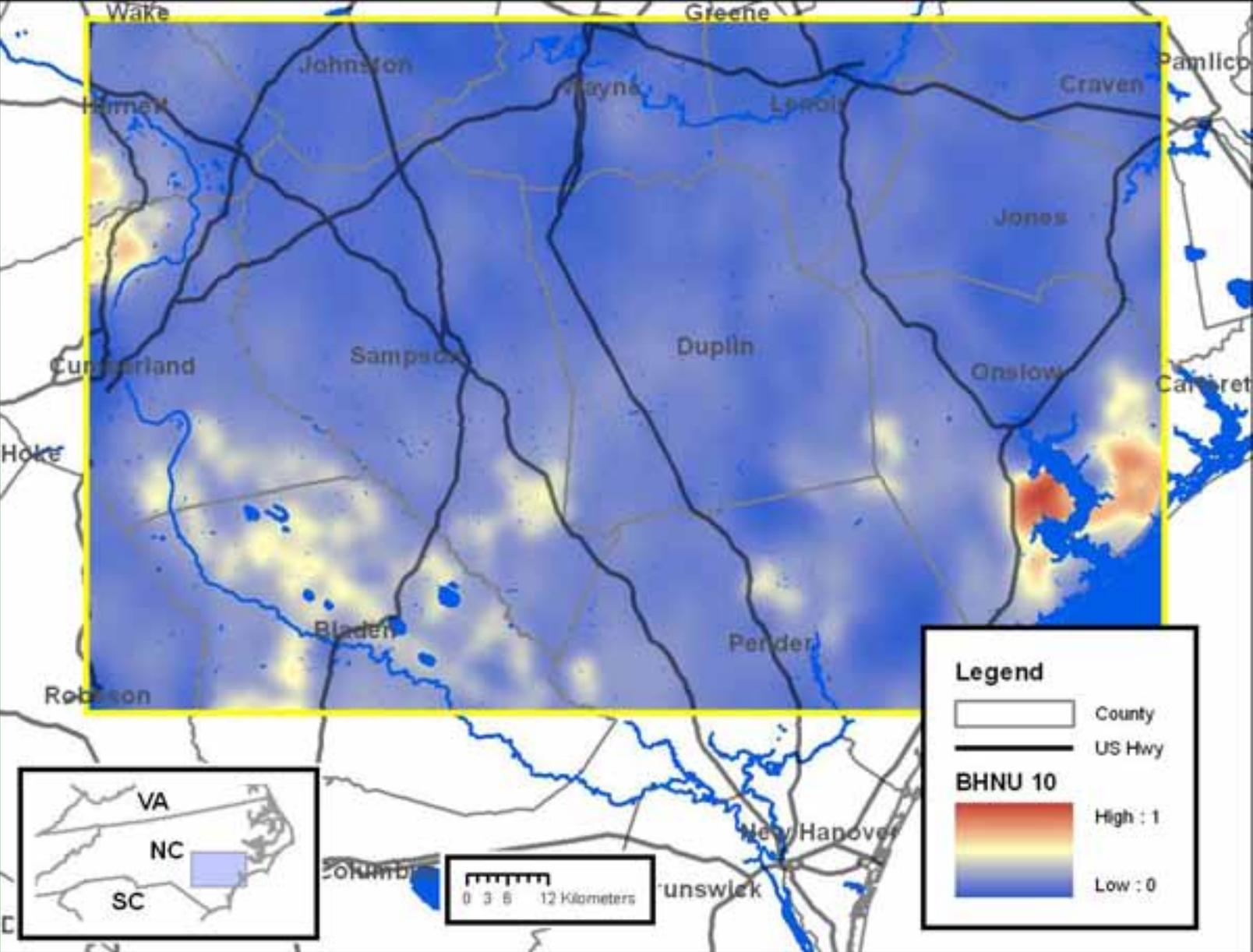
Brown-headed Nuthatch source populations at (t0)



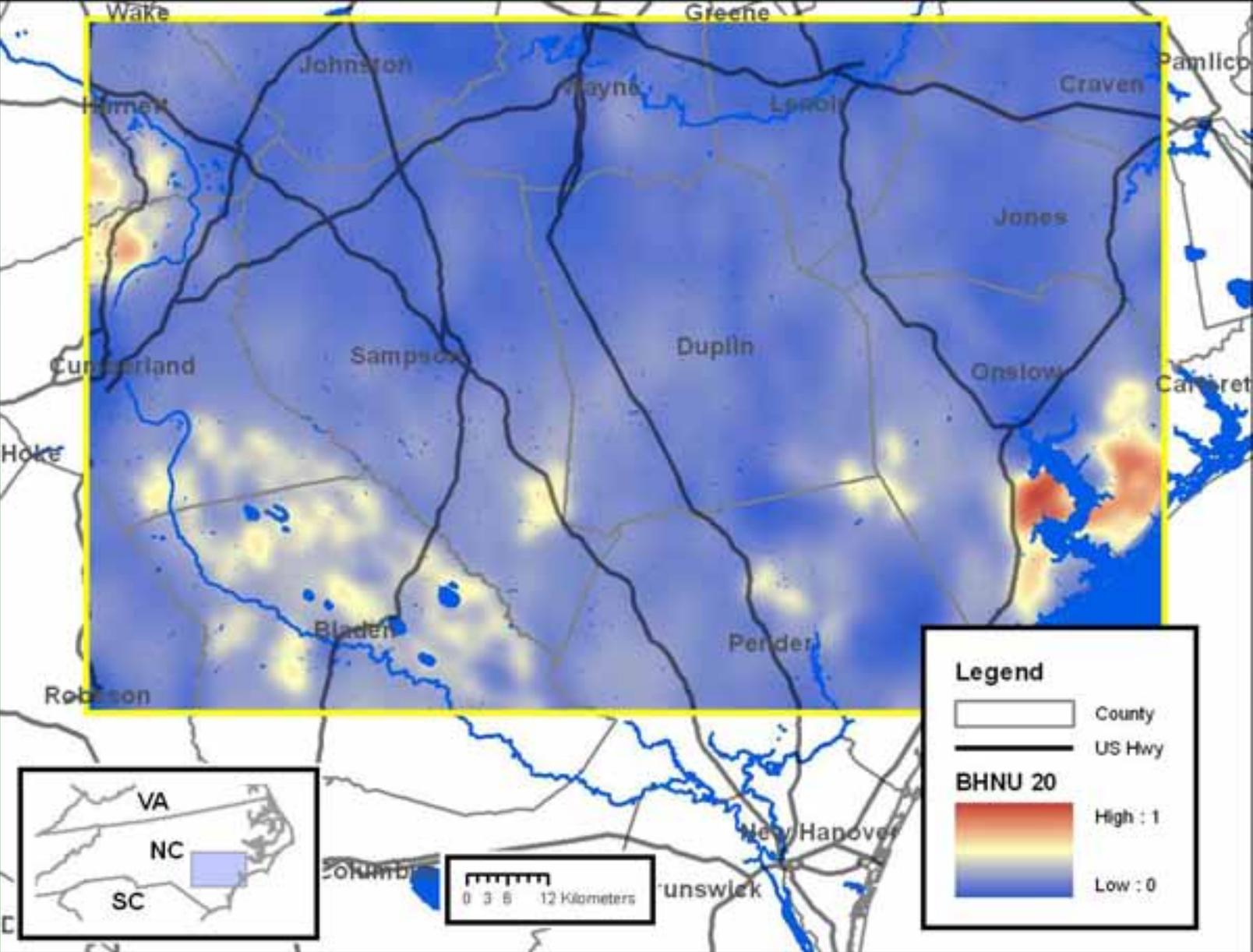
Priority for Brown-headed nuthatch for t0



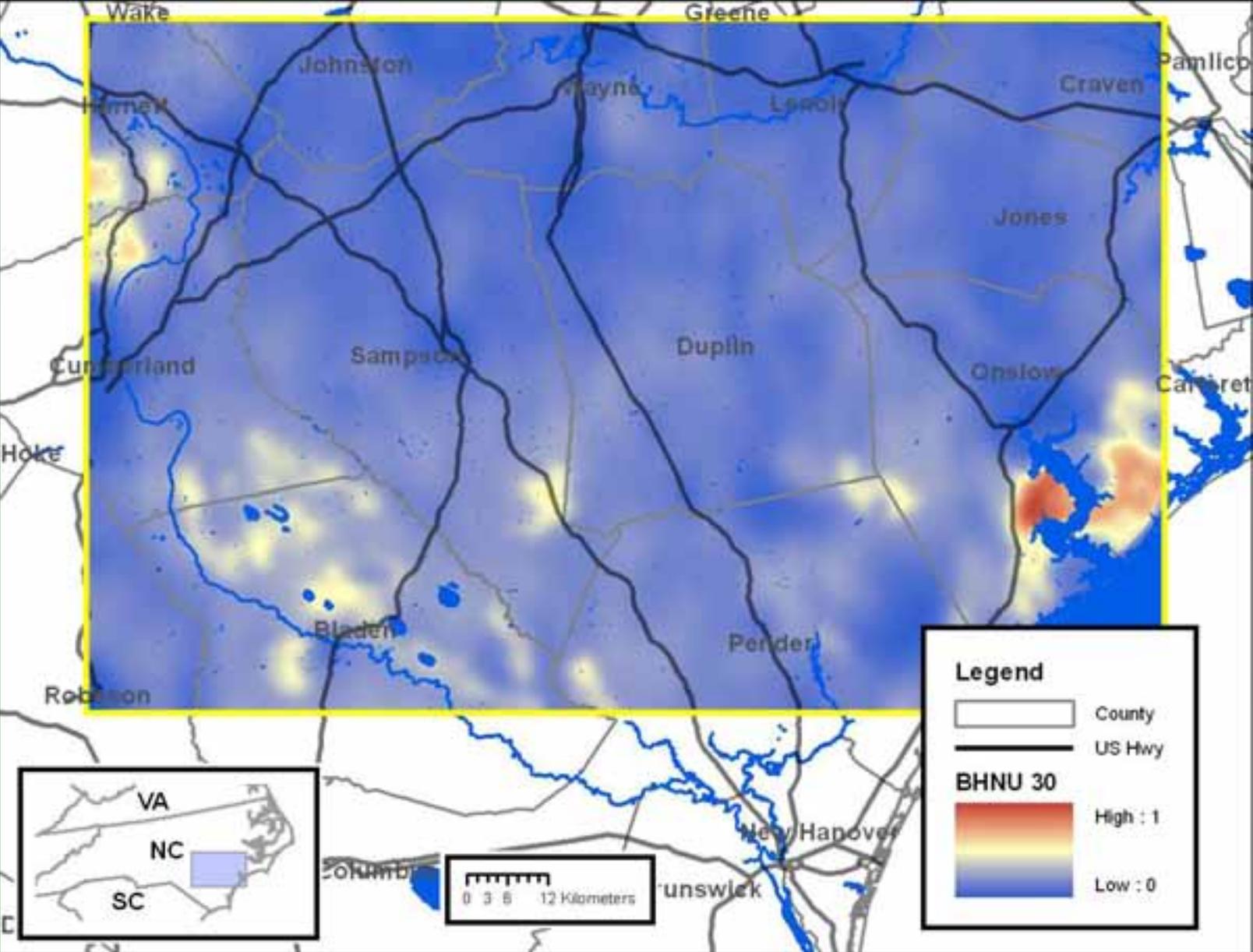
Priority for Brown-headed nuthatch for t10



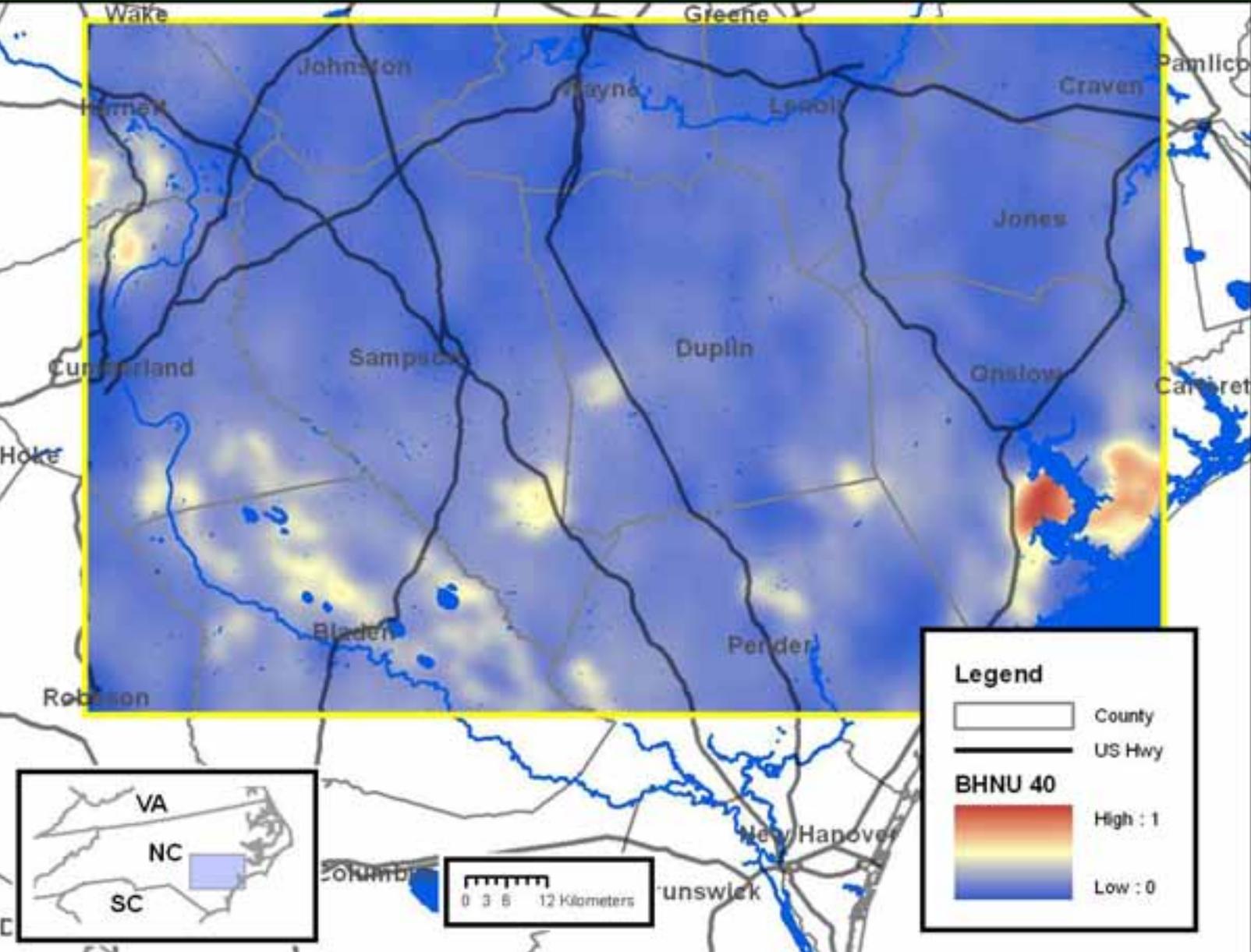
Priority for Brown-headed nuthatch for t20



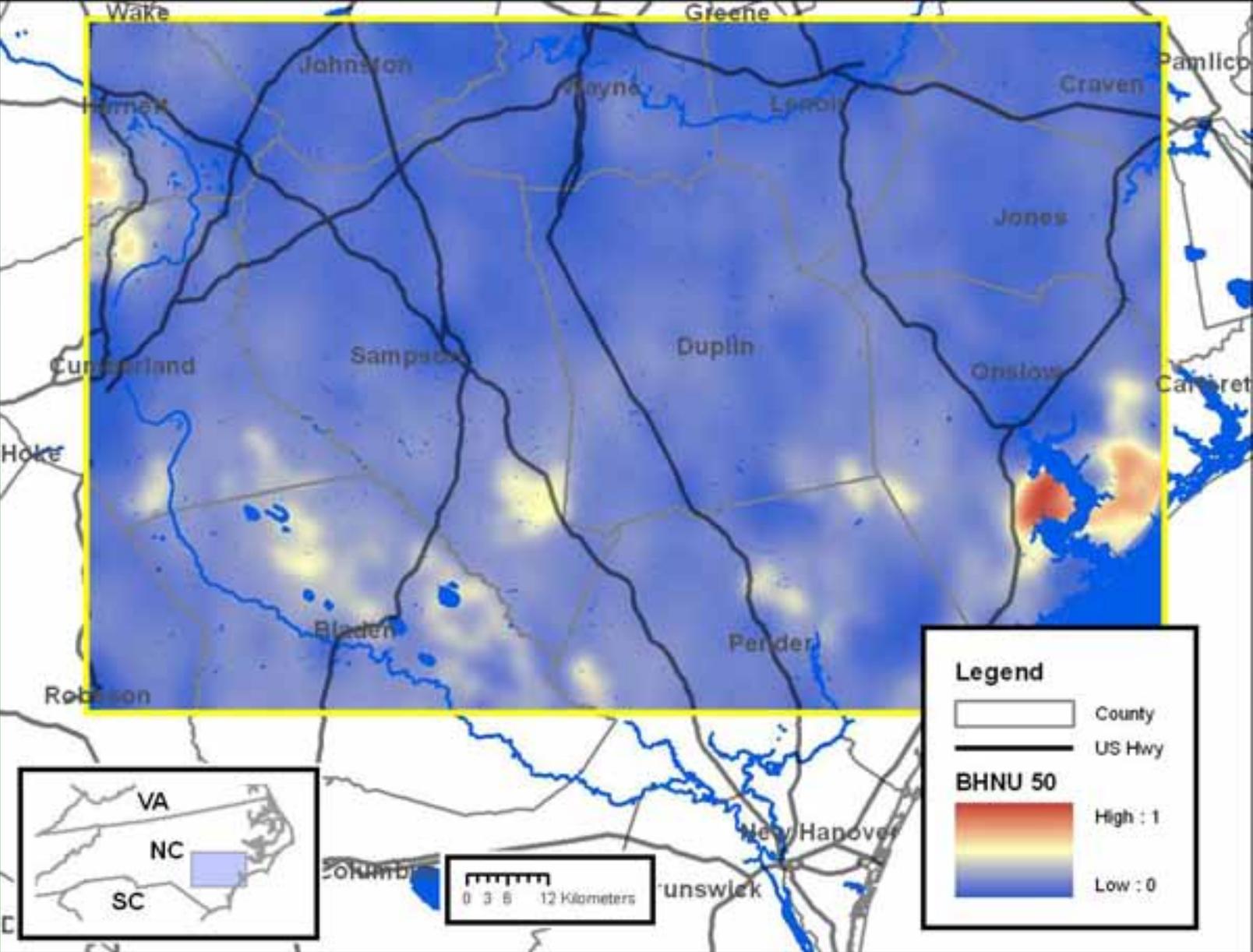
Priority for Brown-headed nuthatch for t30



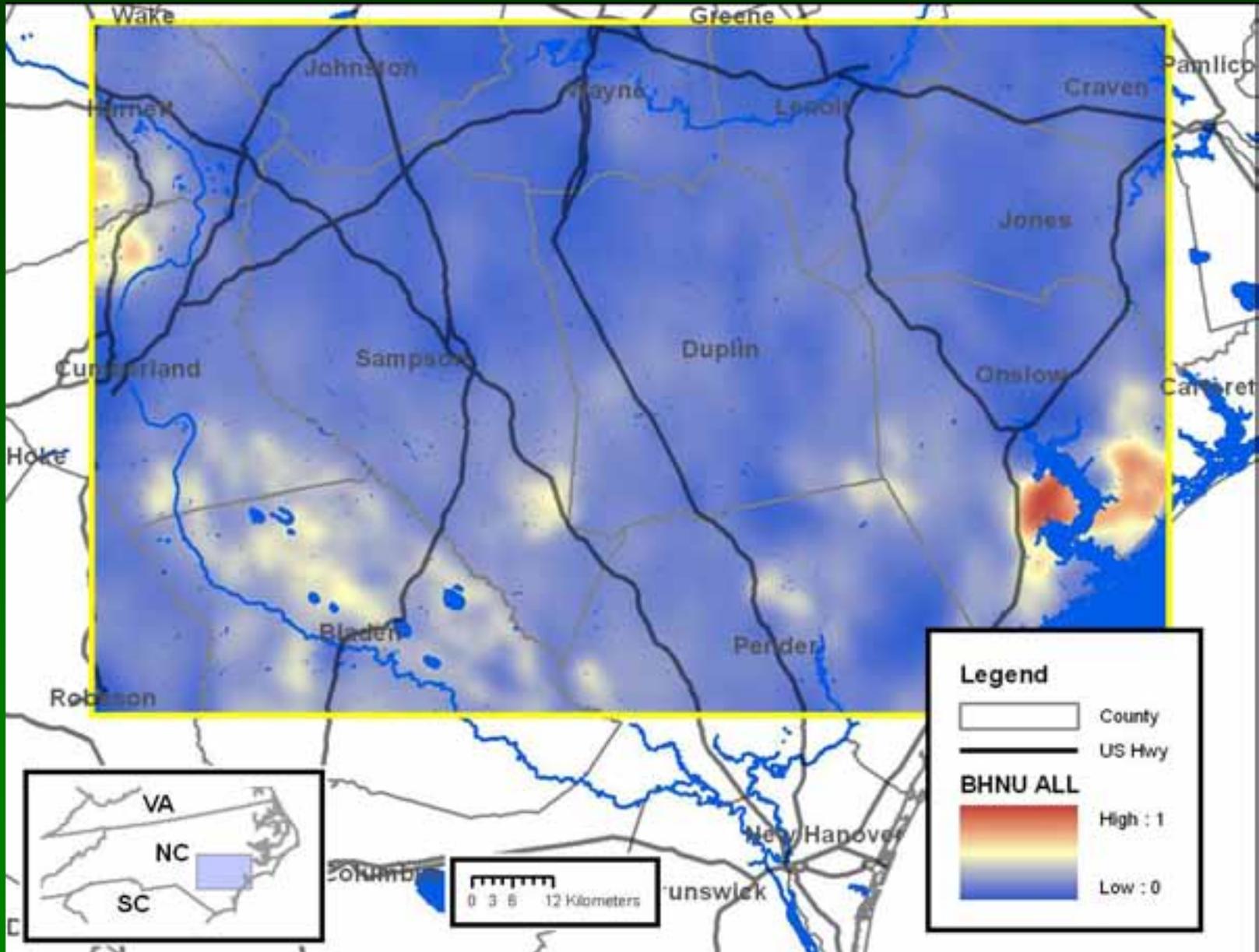
Priority for Brown-headed nuthatch for t40



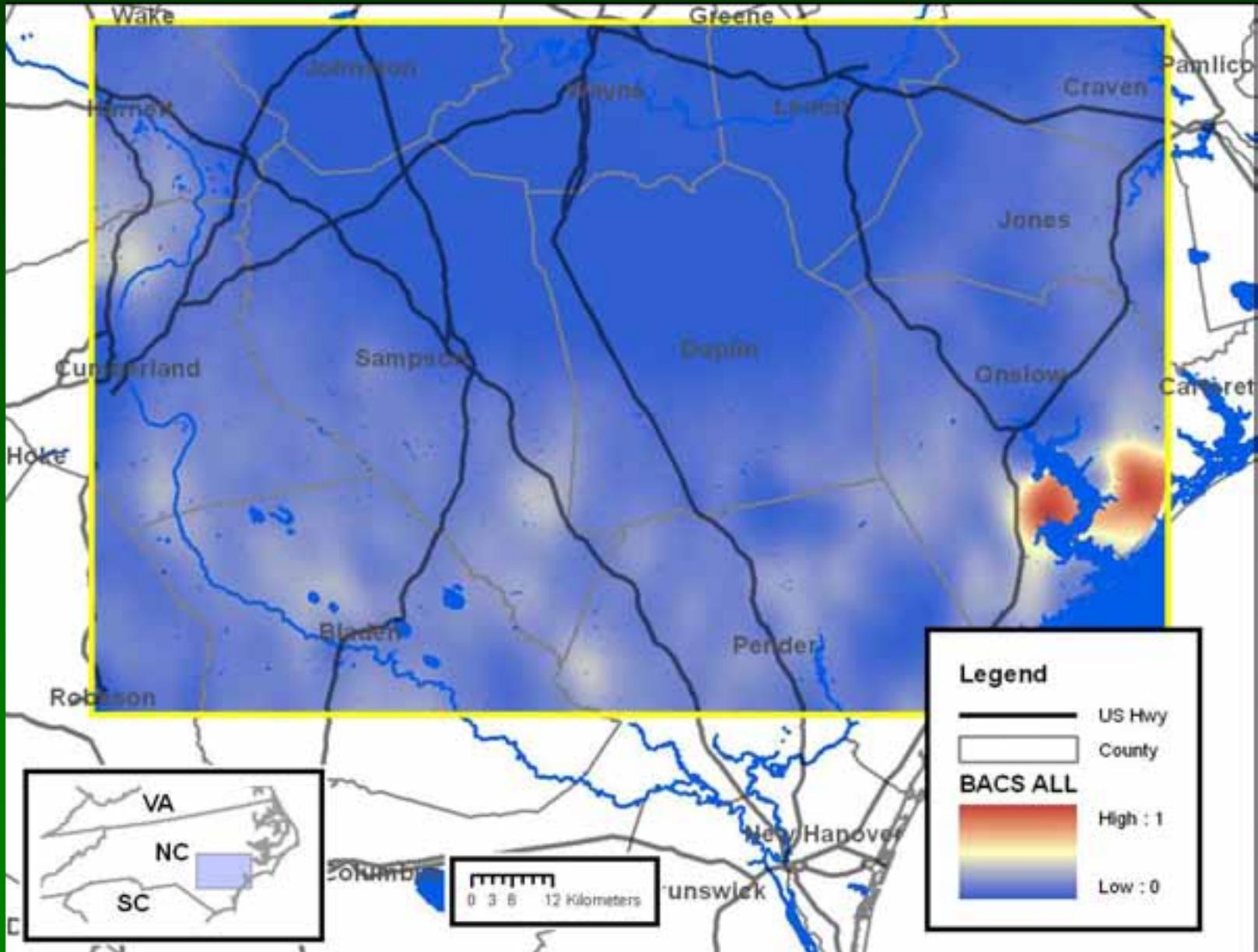
Priority for Brown-headed nuthatch for t50



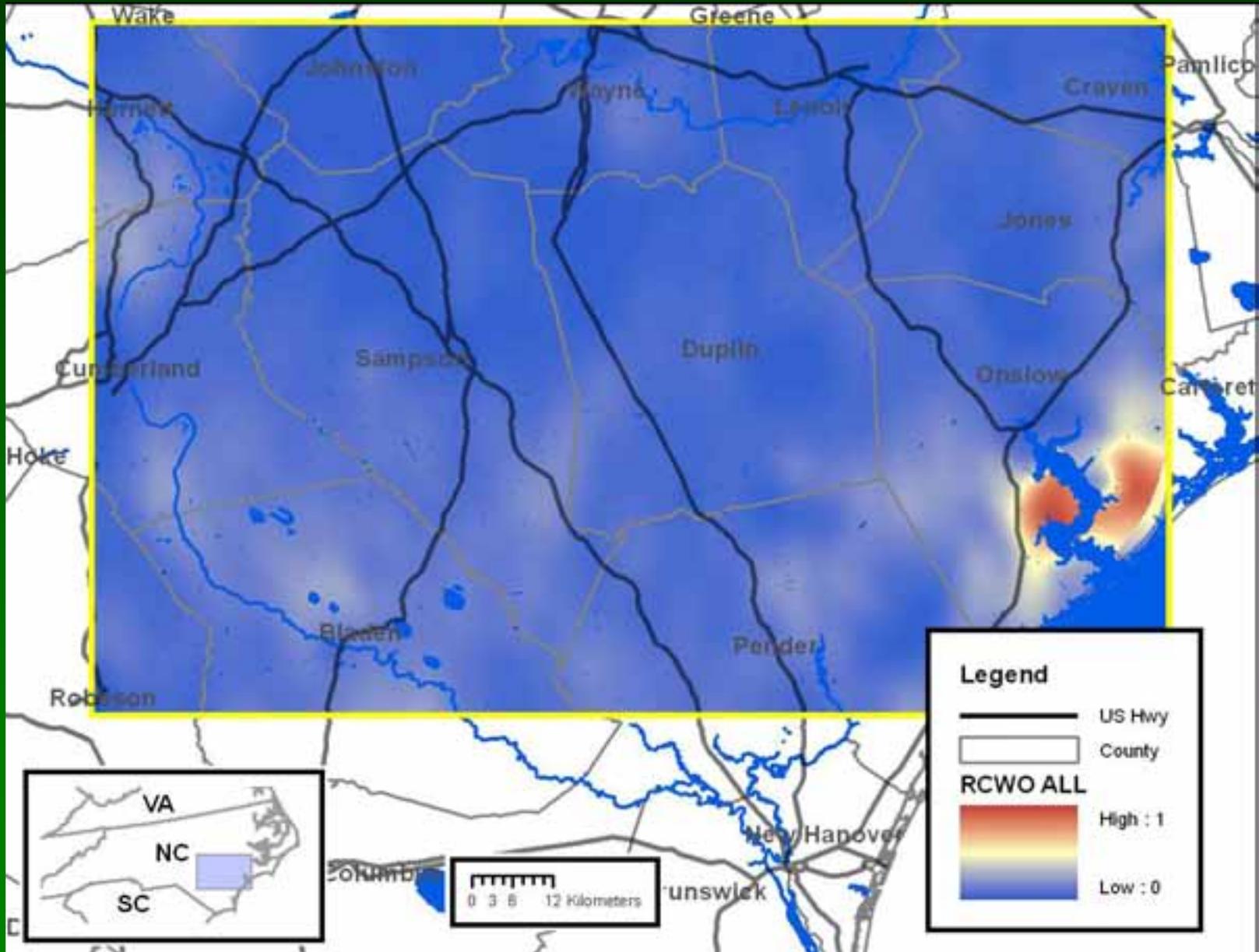
Combined across years for Brown-headed Nuthatch



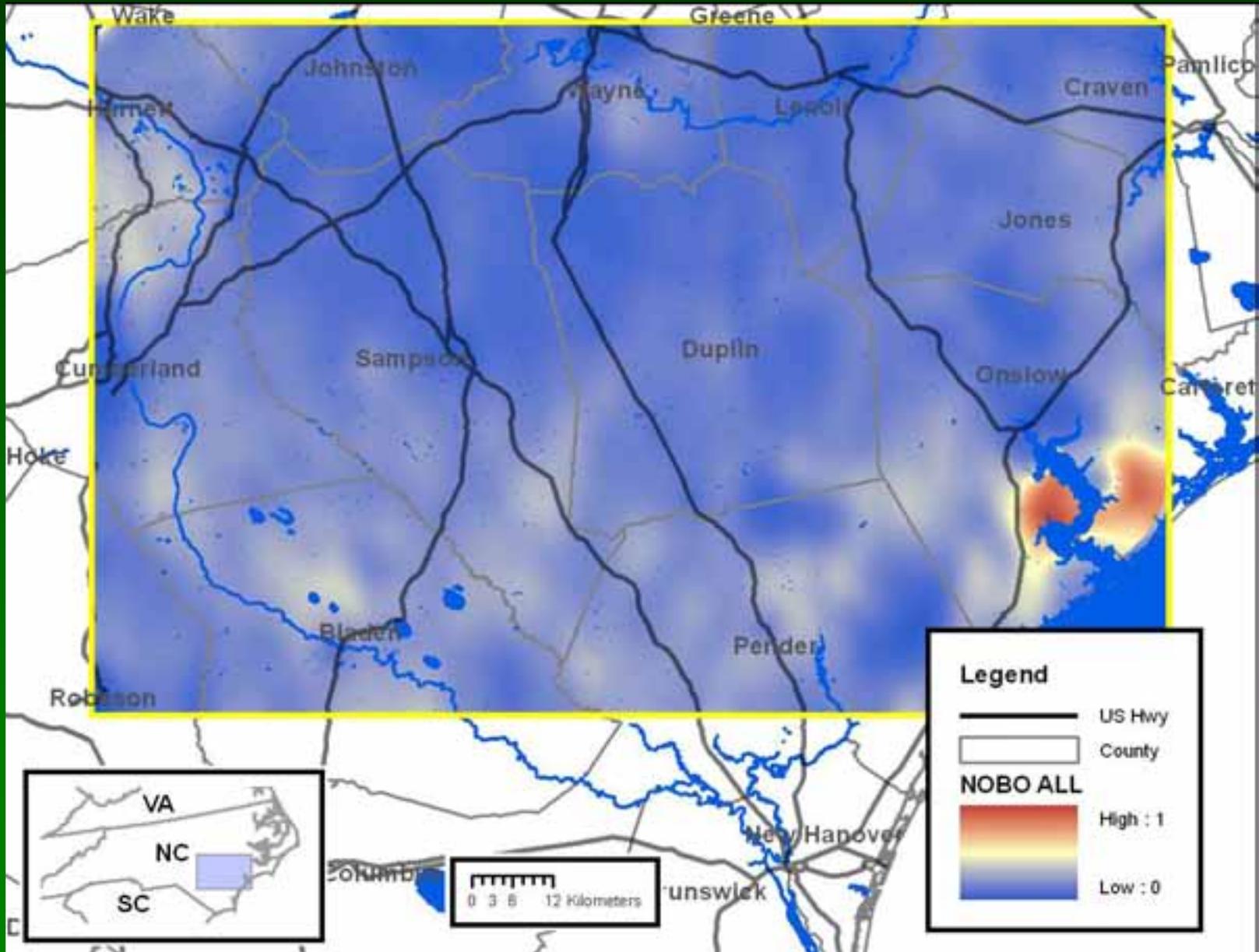
Combined across years for Bachman's Sparrow



Combined across years for Red-cockaded Woodpecker

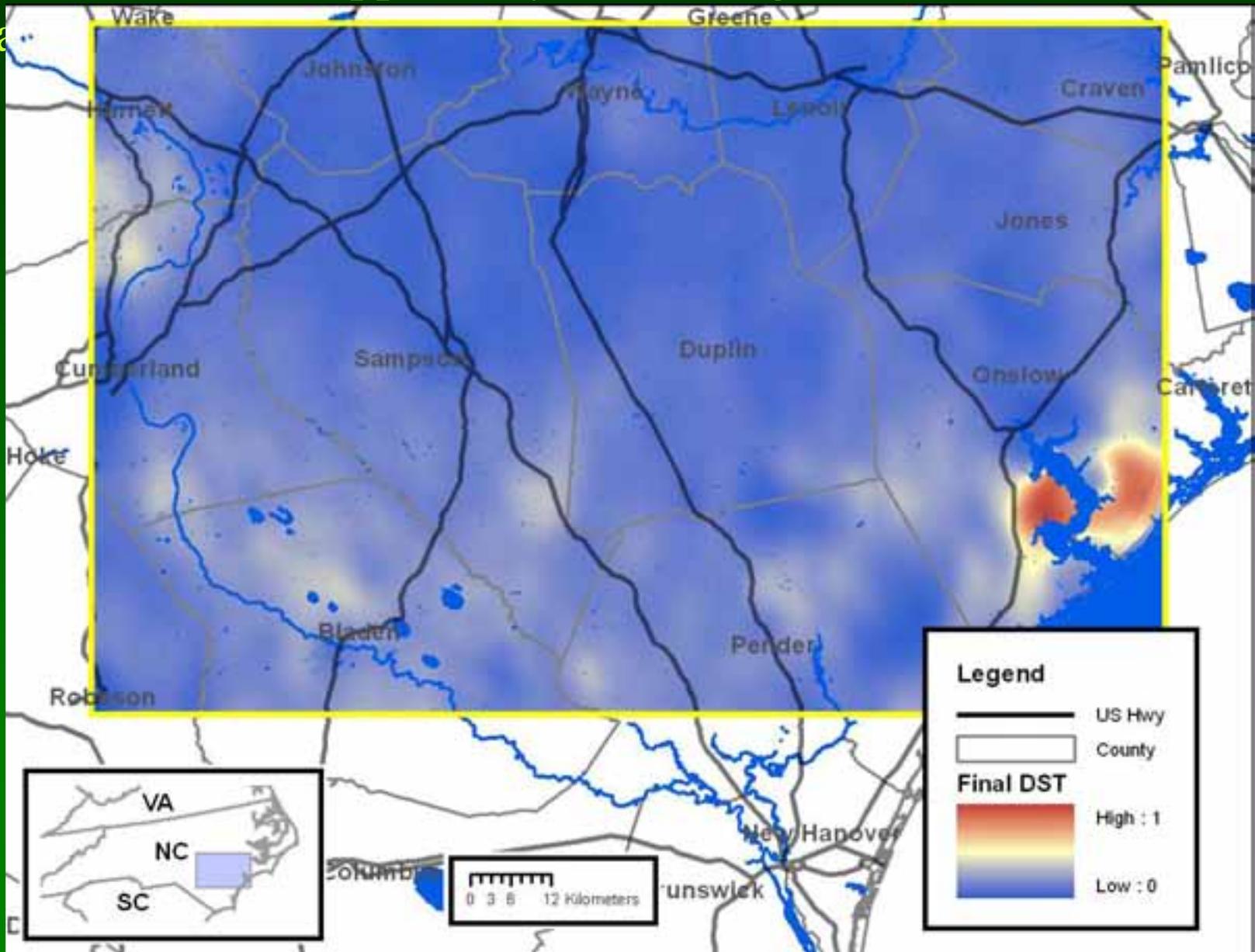


Combined across years for Northern Bobwhite



Final Decision Support Layer for Longleaf Conservation

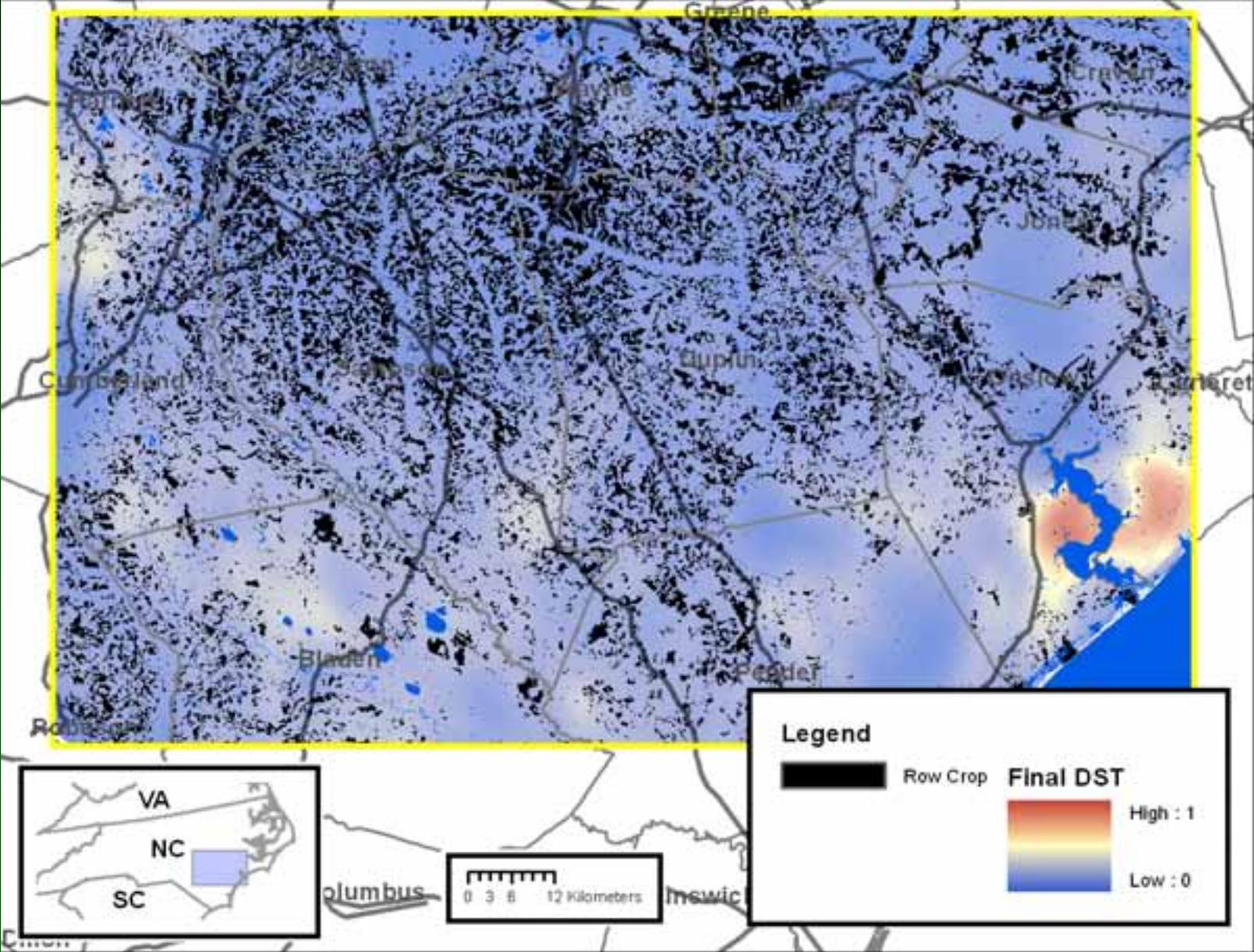
(a)



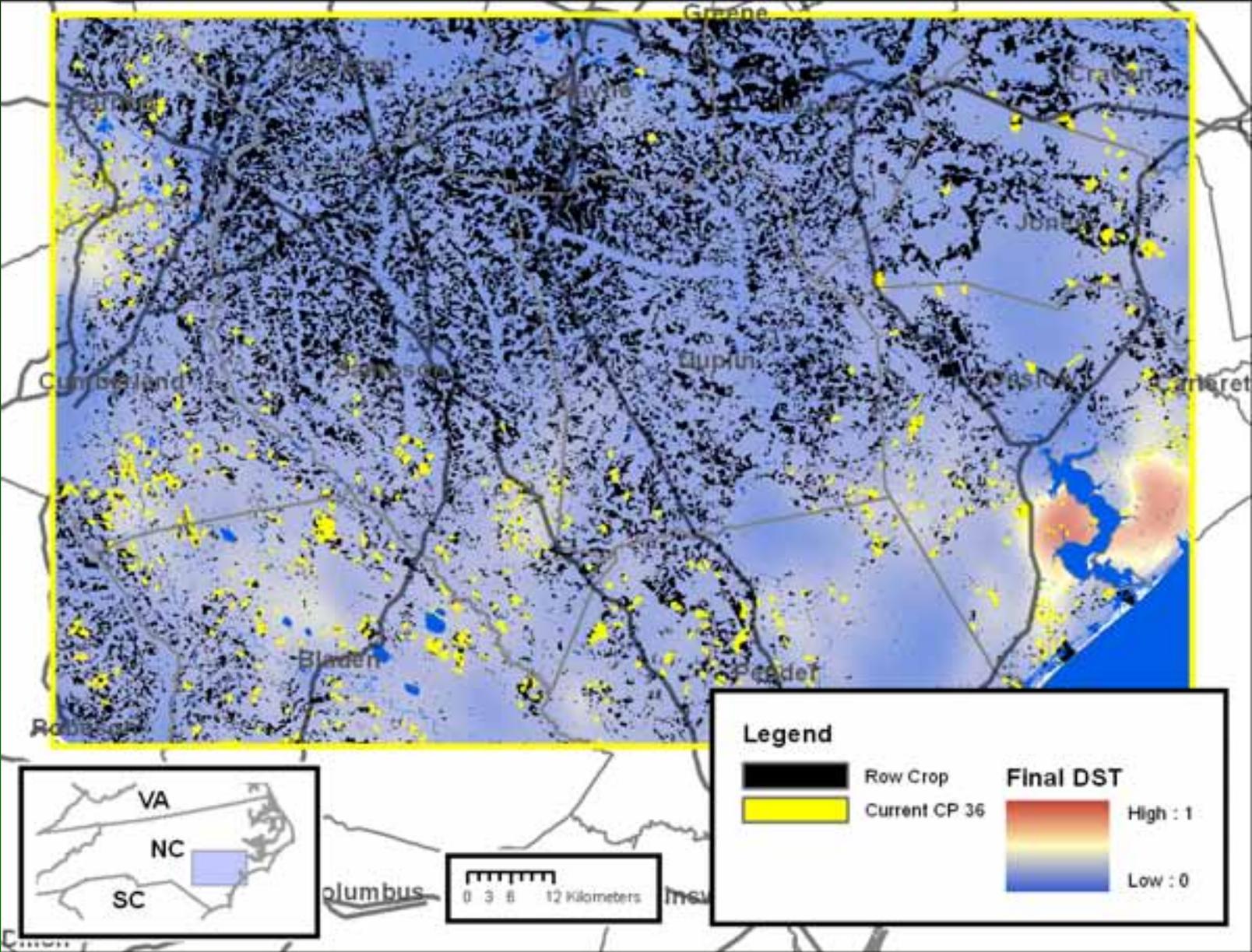
Conservation policies

1. Comparison to No CRP
2. Current CRP quota (~69,110 ac over 10 yrs)
 - Applied each year from $t_0 - t_{10}$ (~6,911 ac/yr)
3. Double CRP quota (138,200 ac over 10 yrs)
 - Select highest priority patches of row crop
 - Convert to Longleaf
 - Re-project LULC (not done yet)
 - Calculate priority ranking of potential habitat
 - Over time
 - Each species

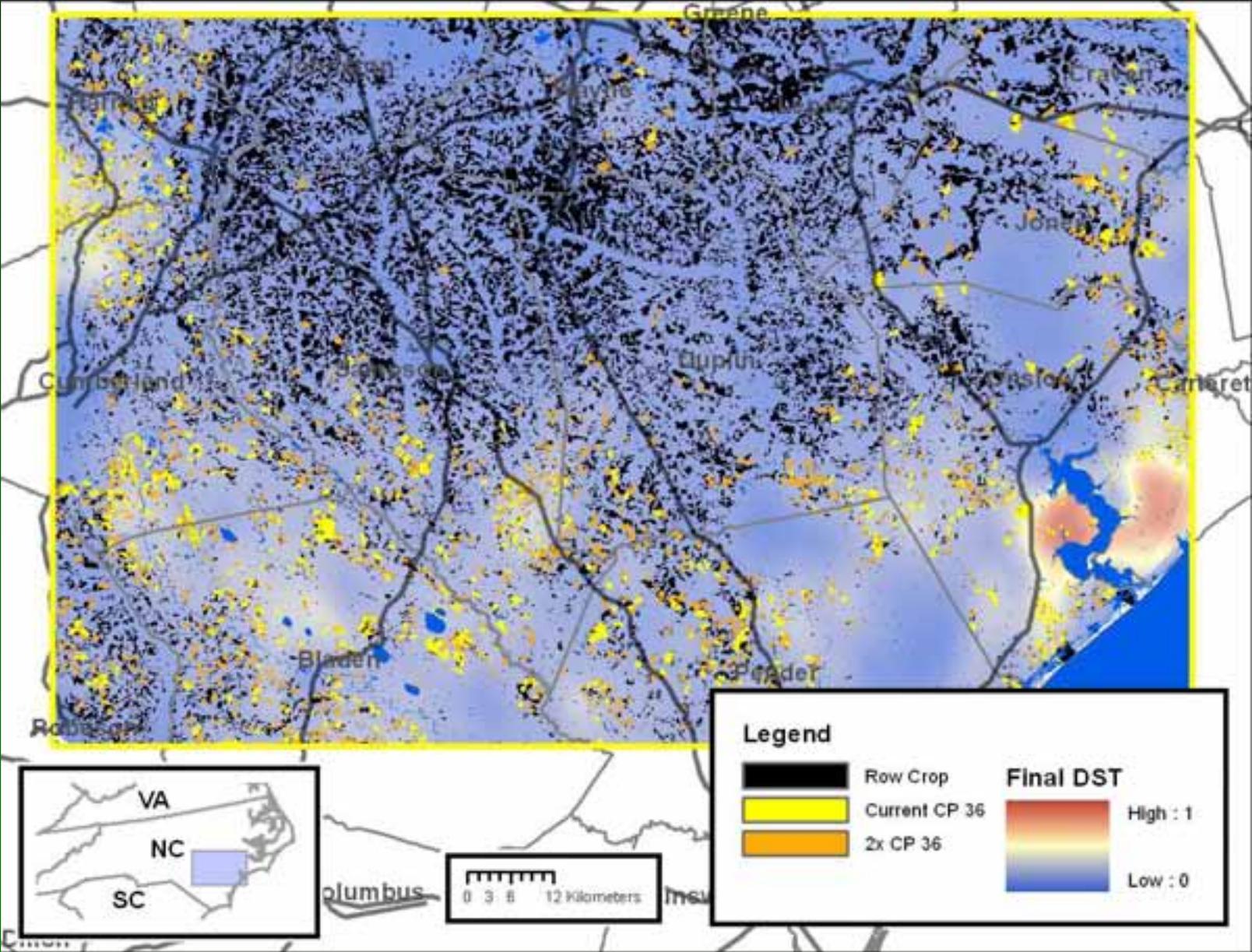
Cropland in study area



Highest priority patches under 10 yrs CP 36



Highest priority patches under 2x CP 36 quotas



Integrated Flyway Wetland Bird Management and Monitoring Initiative



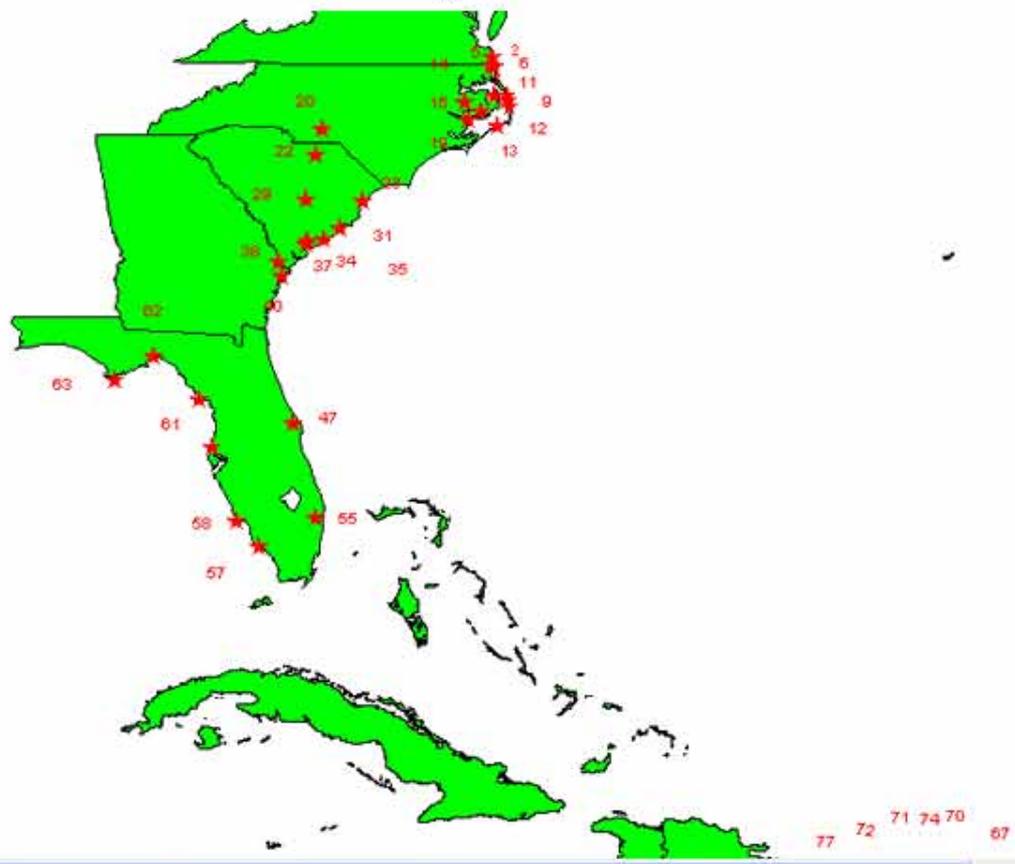
South Atlantic Migratory Bird Initiative of the Atlantic Coast Joint Venture



Shorebird Bird Data Page

Shorebird Data Viewing Section

- [ACE Basin NWR \(34\)](#)
- [Alligator River NWR \(7\)](#)
- [Back Bay NWR \(2\)](#)
- [Bear Island WMA \(35\)](#)
- [Cape Hatteras National Seashore - Bodie Island \(11\)](#)
- [Cape Hatteras National Seashore - Hatteras Island \(12\)](#)
- [Cape Hatteras National Seashore - Ocracoke Island \(13\)](#)
- [Cape Romain NWR \(31\)](#)
- [Carolina Sandhills NWR \(22\)](#)
- [Cedar Keys NWR \(61\)](#)
- [Culebra Island \(76\)](#)
- [Currituck NWR \(6\)](#)
- [Dino Darling NWR \(58\)](#)

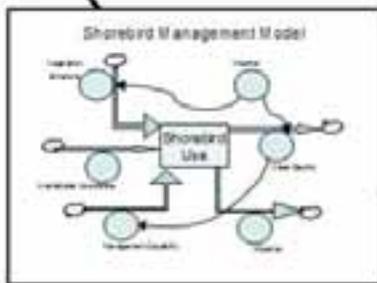


Flyway Integrated Wetland Bird Monitoring & Management

Monitoring
Wetland Managers work together using consistent habitat/population monitoring protocols.



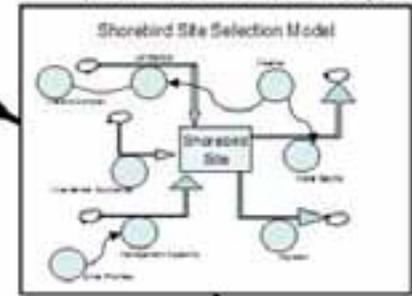
Management
Wetland Managers identify common management strategies.



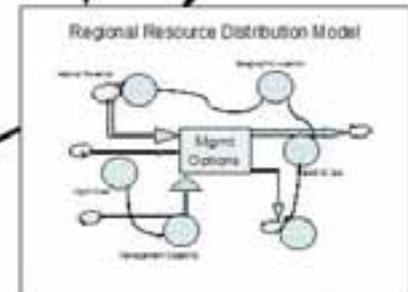
Management Model Applied
When Planning Annual
Wetland Mgmt Actions



Site Importance Model
(Model Revised Periodically)



Important Shorebird Sites



Regional or State Priorities and
Resource Allocation Model



Shorebird Mgmt (CCP, WAP
Guidance and Funds)

Flyway-Wide Waterbird Decisions:

- Prioritize species.
- Identify population targets.
 - Determine quantity/quality of habitat to meet population targets.
- Determine distribution of habitat to meet energetic needs of waterbirds.



Regional Waterbird Mgmt Decisions:

- Regional Priorities
- Approve Refuge Objectives (CCP)
- Distribution of Funds
 - Budget
 - Staff
 - Project Proposals



Local Scale: Refuge Decisions

- Propose priorities and objectives.
- Effective and efficient management strategies to achieve objectives.





Climate Change Adaptation Planning in the ACJV



- Landscape change analysis and decision support tools from *Designing Sustainable Landscapes* and related projects
 - Guide partner management decisions based in part on climate change
 - Assess vulnerable species, habitats and priority actions
- Research alternative/improved models of sea-level rise impacts
- Develop flyway-scale monitoring of birds and habitats to track changes and guide management
 - Integrated Flyway Wetland Bird Monitoring and Management
 - Other rangewide monitoring (e.g. marshbirds, Montane birds)
 - Track protected and managed lands
- Coordinate adaptation planning - work with states and NGOs to develop regional adaptation approach for St. Wildlife Act. Plans
- Ecological Resilience Analyses
 - Assessment of Representation, Replication, Size, Connectivity, Processes
 - Biological Integrity

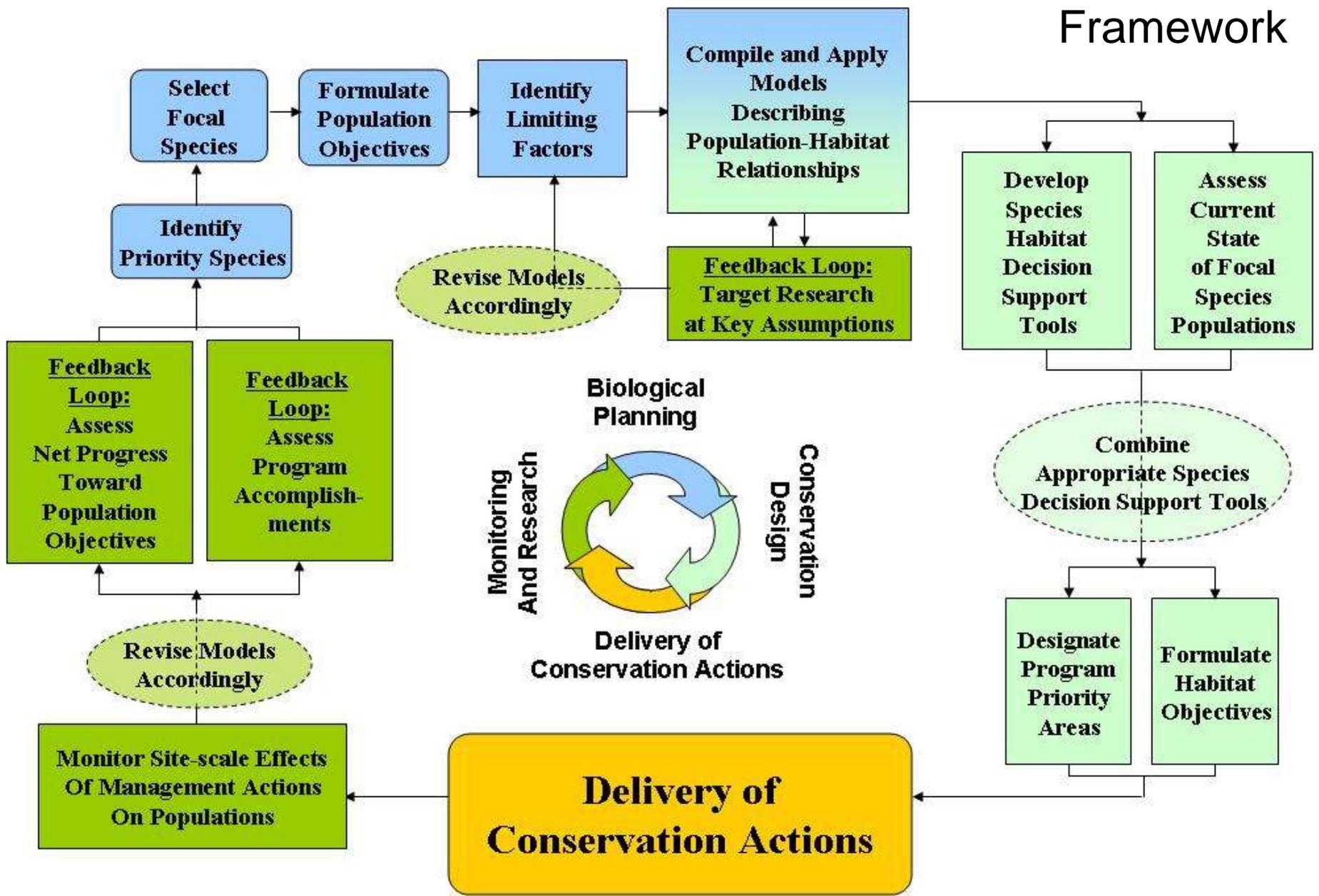


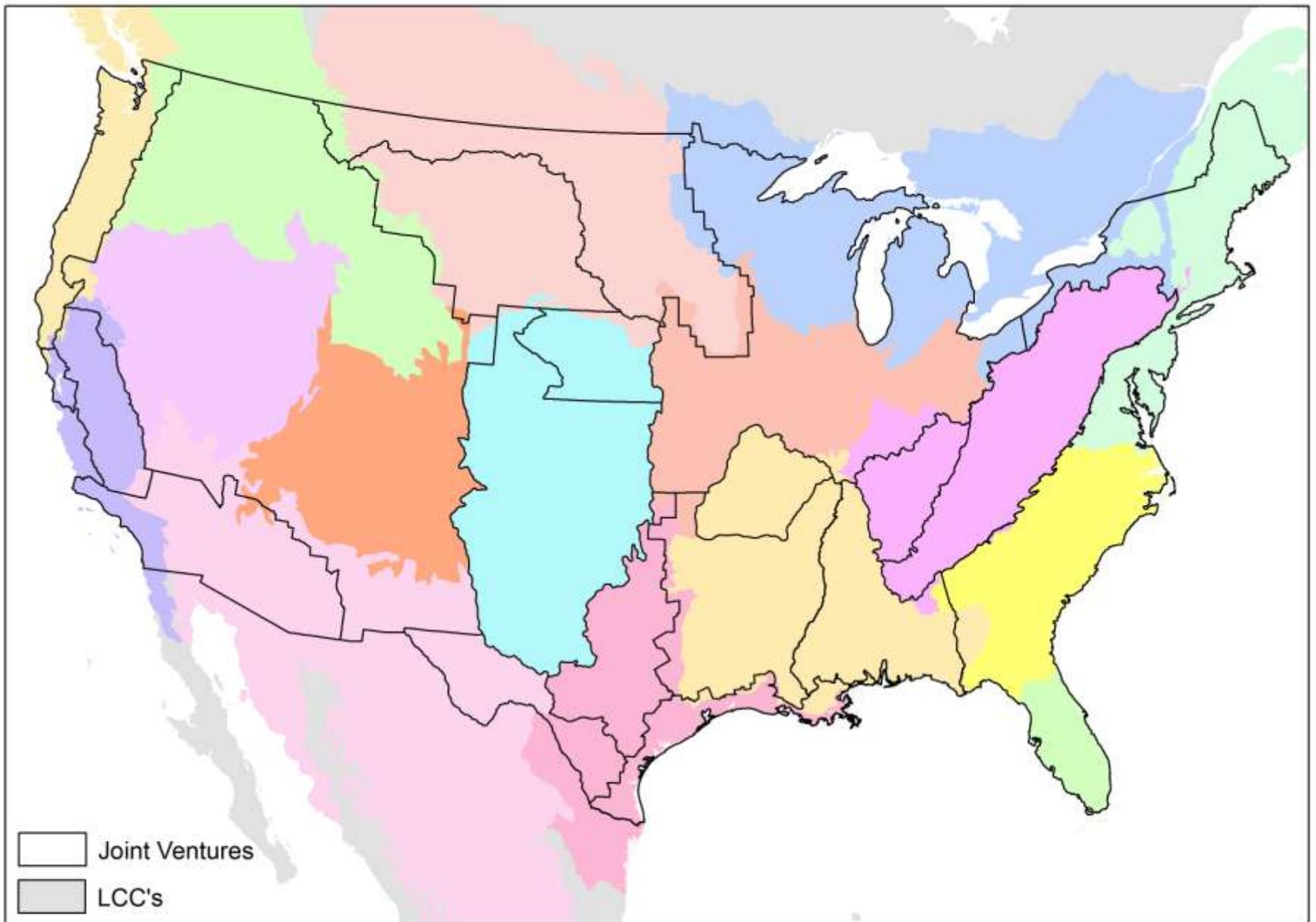
Landscape Conservation Cooperatives Defined

- Applied conservation science partnerships at landscape scales
- Partnerships between FWS, USGS, other DOI, other feds., states, tribes, NGOs, universities and others
- Inform resource management decisions to address national scale stressors, including climate change, in an integrated fashion across landscapes
- Provide scientific and technical support for landscape-scale conservation in an adaptive management framework (SHC)
 - biological planning, conservation design, prioritizing and coordinating research, and designing inventory and monitoring programs
- Products developed by the LCC are for the purpose of informing conservation delivery efforts on the ground as well as other actions taken by the conservation community

Within an Ecoregion

Landscape Conservation Framework





Landscape Conservation Cooperatives (LCC) and Joint Ventures



0 200 400 600 800 km

Atlantic Coast Joint Venture
Laurel, MD 20708
October 2009

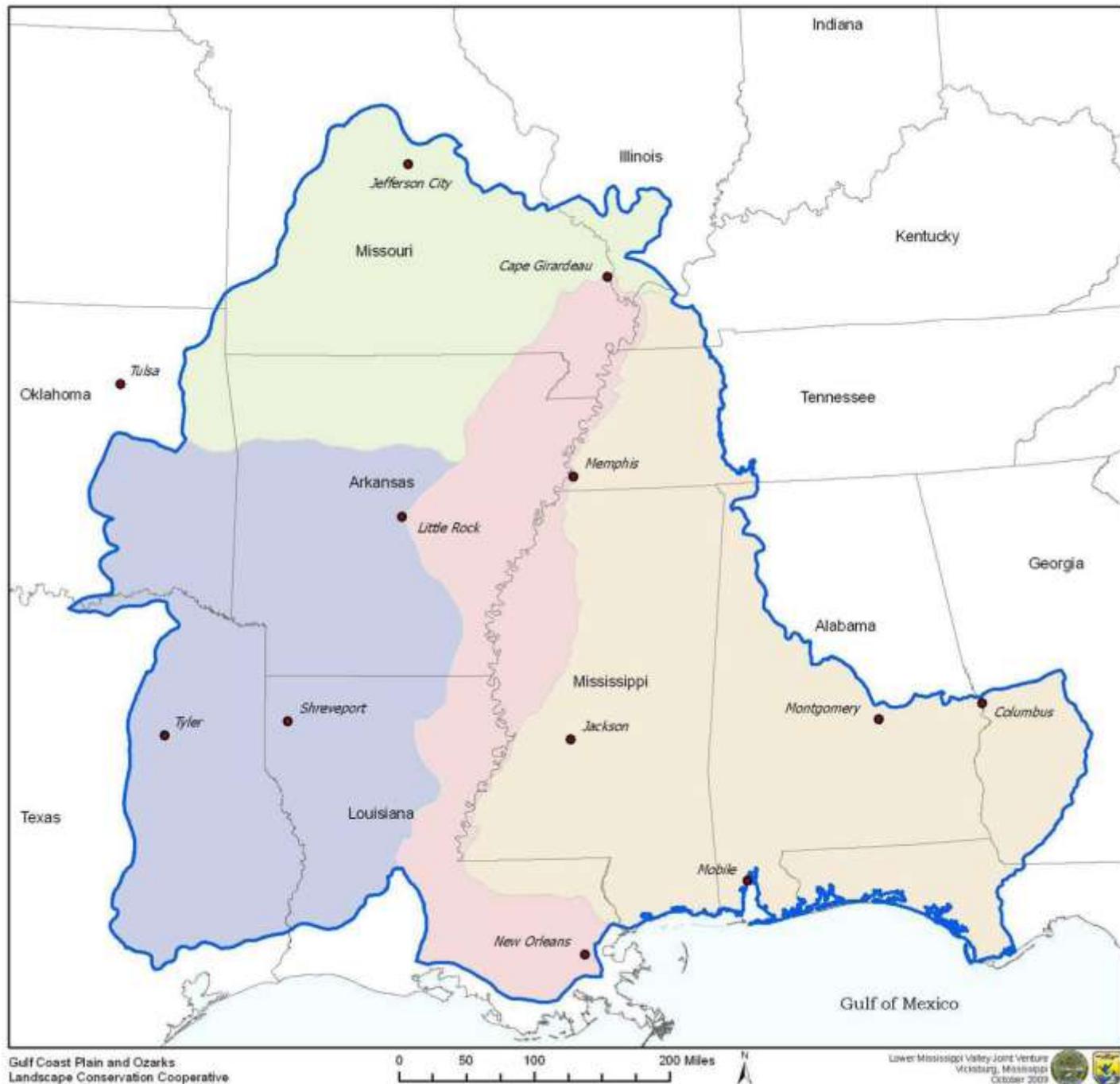


Overlay of Gulf Coast Plain/Ozarks LCC and JVs

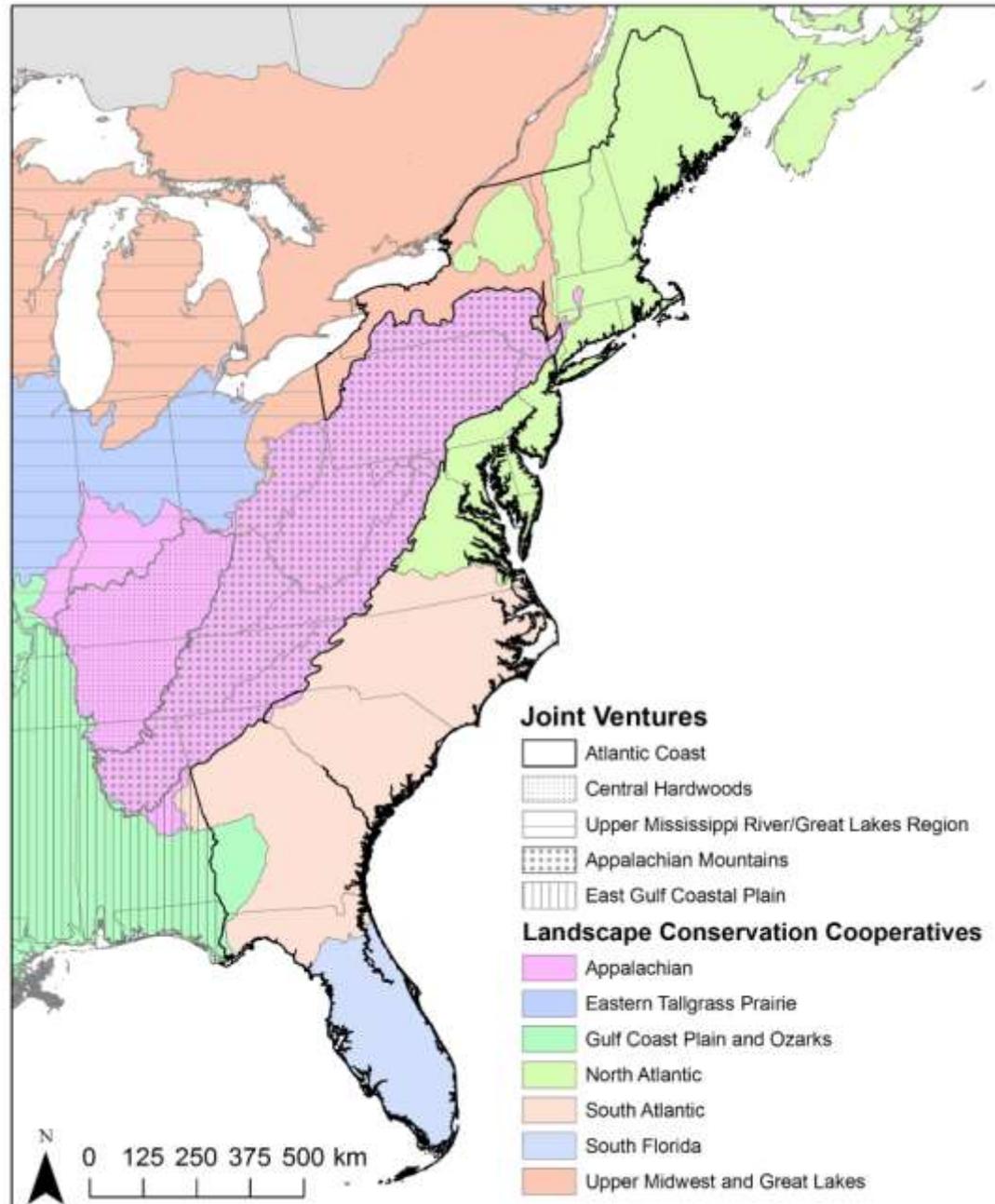
LMVJV

EGCPJV

CHJV



Overlay of ACJV and AMJV with LCC Boundaries





Atlantic Coast Landscape Conservation Cooperatives



- Joint effort of Regions 4 and 5 and ACJV
 - South Atlantic, Mid-North Atlantic, South Florida
 - Share approaches, expertise, products (e.g. sea level rise models)
 - Flyway/coastwide monitoring, management, secured lands data
 - Support from ACJV Board (& ACFHP?)
- Base approach in part on *Designing Sustainable Landscapes* project & related projects
 - Expand to other taxa
 - Expand to Piedmont
 - Expand to North Atlantic and Florida
- Include managers and partners from the beginning
 - Build on existing JV partnership
 - Inclusive approach
- Assess and add capacity
 - Shared science and GIS to refine and expand tools
 - Capacity in USFWS, USGS, partners

Lots more info. at acjv.org - Thanks!

Atlantic Coast Joint Venture

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[National, International, and Step-Down Plans](#) | [Bird Conservation Regions](#) | [Individual Species Plans](#)

The Atlantic Coast Joint Venture Vision

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

The Atlantic Coast Joint Venture is one of fourteen habitat Joint Venture partnerships in the United States. The joint venture brings together public and private agencies, conservation groups, and other partners focused on the conservation of habitat for native birds in the Atlantic Flyway of the United States from Maine south to Puerto Rico.

The Atlantic Coast Joint Venture encompasses the 17 Atlantic Flyway states and Puerto Rico. The habitats range from boreal forest and rocky coastlines to mangrove wetlands and coral reefs. Over 600 native bird species breed, migrate and winter in the Atlantic Coast Joint Venture.

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



ACJV boundary, shown in green