The North Atlantic LCC in Delaware

The North Atlantic Landscape Conservation Cooperative (LCC) is an applied science and management partnership that builds upon a long history of collaborative conservation in the North Atlantic region. It is a forum to unite agencies and stakeholders around common goals for sustaining natural and cultural resources, and to develop tools and strategies to achieve those goals in the face of threats and uncertainty.

Foundational information, assessments, and tools supported by the North Atlantic LCC offer resources for partners in Delaware to protect important species, habitats, and landscapes now and in the future. These products were designed to address specific needs expressed by partners and partnerships in Delaware, including:

- Regionally consistent habitat maps
- Regional context and conservation opportunity areas for State Wildlife Action Plan updates
- Prioritization tools for conservation of Eastern brook trout, piping plover, and other key species
- Conservation strategies to address sea-level rise and other climate change impacts
- Consistent approaches for assessing and prioritizing aquatic connectivity

Examples of North Atlantic LCC Science Products

AQUATIC CONSERVATION RESOURCES

North Atlantic Aquatic Connectivity Collaborative (NAACC)
A network of partners sharing resources to collectively take on the work of assessing road-stream crossings across the region, the NAACC provides a framework for prioritizing upgrades to bridges and culverts in order to improve passage for fish and wildlife while increasing resiliency to future floods.

Products (available now)
- Regional network of partners coordinating to assess and upgrade road-stream crossings
- Standard protocols and training for conducting road-stream assessments
- Regional database of road-stream crossings
- Web-based tools to prioritize upgrades based on both ecological benefits and resiliency

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Learn more
- North Atlantic LCC Projects page
- North Atlantic Aquatic Connectivity Collaborative

Migratory Landbird Stopover Sites in the Northeast

This project used weather surveillance data and field surveys to identify priority stopover sites across the region for sustaining populations of migratory landbirds that must rest and refuel during annual migrations between breeding and wintering grounds.

Products (in progress)
- Maps and model results indicating important stopover sites for migratory birds in the Northeast

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Learn more
- North Atlantic LCC Projects page

COASTAL & MARINE CONSERVATION RESOURCES

Hurricane Sandy Resilience Projects

A suite of projects that integrate monitoring, models, and tools to examine beaches, tidal marshes, and aquatic connectivity, and guide decisions about how to conduct restoration, conservation, and management in the face of increasing storms and sea-level rise associated with climate change.

Products (partial list)
- Reports on beach and inlet modifications (e.g. shoreline hardening, beach fill, inlet opening/closing, private/public ownership) before and after the storm
- iPlover smartphone app to collect data on beach nesting birds
- Best management practices for managing beaches for shorebirds after coastal storms
- Models of salt-marsh response to sea-level rise and storms
- Monitoring and assessment of marsh restoration approaches
- Maps identifying coastal areas that will be the most ecologically resilient to climate change

Prospects for plover: For one of the Hurricane Sandy projects, scientists from Virginia Tech and the U.S. Geological Survey collaborated to develop models that predict how sea-level rise and management actions will impact piping plover nesting habitat on barrier islands.

Contact
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Learn more
- North Atlantic LCC Coastal Resiliency page

Marine Bird Mapping and Risk Assessment Project

This project developed models that synthesize historic marine bird data to advance understanding of how marine birds use offshore waters in the North Atlantic region, and to offer decision support for marine spatial planning and offshore energy development.

Products (available now)

- Seasonal and annual maps for 24 species of marine birds
- Report outlining a framework for marine bird habitat risk assessments in the context of offshore development
- Methodology for modeling approach

Contacts

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Learn more

- North Atlantic LCC Projects page
- North Atlantic LCC Projects page
- North Atlantic LCC Conservation Planning Atlas (See "Marine Bird Assessment" folder)
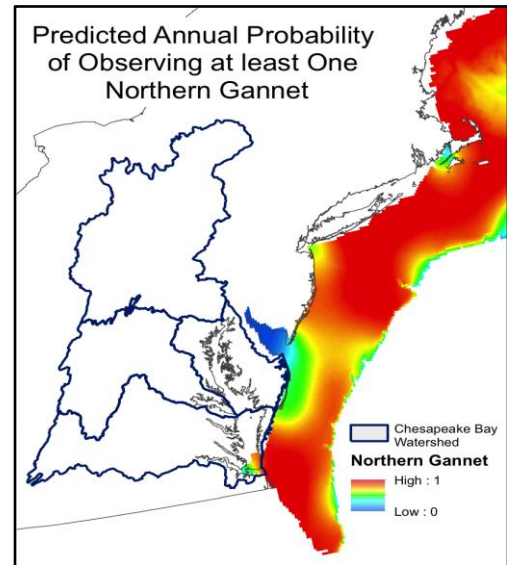
Hotspots for marine birds: Maps for 24 species of marine birds, including Northern Gannett, provide a visual reference for resource manages and marine spatial planners to understand how these species use Delaware's coastal waters.

LANDSCAPE CONSERVATION RESOURCES

Habitat Capability Models for Representative Species

These models can be used to identify potential conservation priorities based on areas that offer high quality habitat for a set of 30 representative species, selected because they typify lifecycles and habitat requirements for a larger group of species, are sensitive to landscape changes, and can be monitored feasibly.

Products (available now)

- Models for 30 species, including saltmarsh sparrow, black bear, wood turtle, and ovenbird, which collectively represent all major ecosystem/habitat types in the region

Contacts

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Learn more

- North Atlantic LCC Projects page
- UMass Designing Sustainable Landscapes page
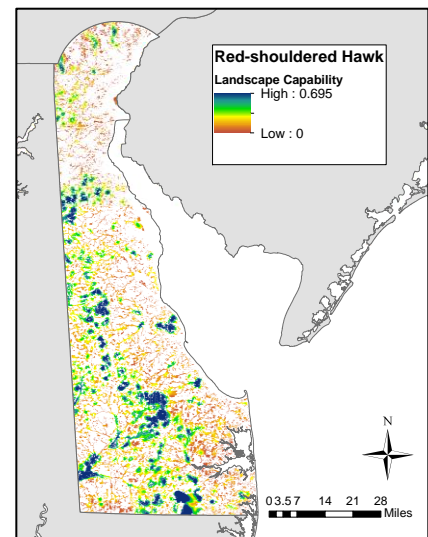
Sweet spots for red-shouldered hawk: Dark blue values indicate areas of relatively high habitat value for red-shouldered hawk and similar species with similar requirements.

The Index of Ecological Integrity (IEI)

This tool identifies areas with the greatest capability to support biodiversity now and into the future by assessing the intactness and resilience to sustain key biological functions over time, relative to other sites within the same ecological system (habitat class).

Products (available now)
- Maps of the relative integrity of ecological systems at regional, state, and watershed scales (For stratified versions, contact North Atlantic LCC GIS Analyst Renee Vieira Farnsworth: renee_vieira@fws.gov)

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Learn more
- North Atlantic LCC Projects page
- UMass Designing Sustainable Landscapes page
- North Atlantic LCC Conservation Planning Atlas

Index of Ecological Integrity V. 3.0
Value
High : 1
Low : 0.01

0 4 8 16 24 32
Miles
N
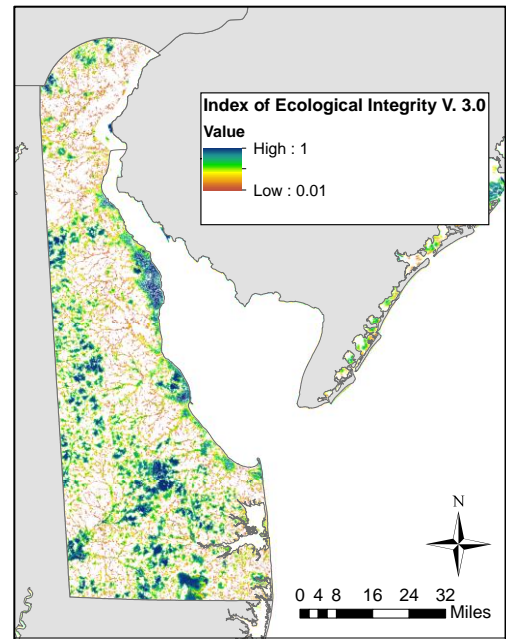
Visualizing integrity: The dark blue values indicate areas that are most likely to sustain ecological functions over time according to a suite of key metrics.
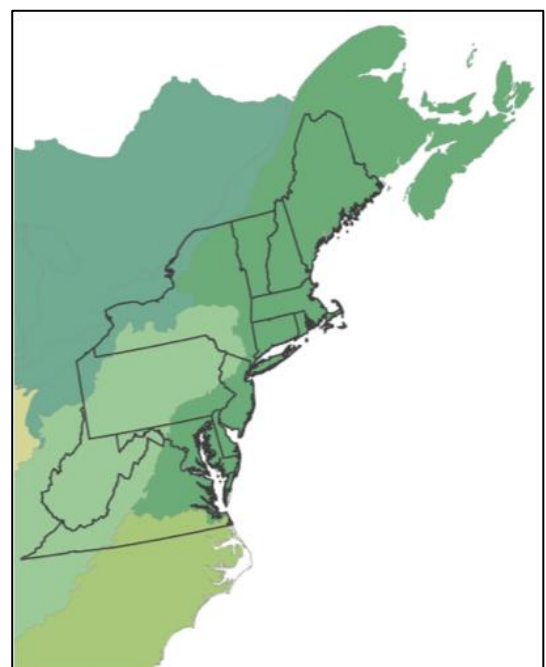
Regional Conservation Opportunity Areas (RCOAs)

This ongoing collaborative effort has brought technical experts from 13 states representing fish and wildlife agencies, federal programs, conservation organizations, and universities together to develop a regional conservation design that lays the groundwork for unified conservation action across the entire Northeast region. The resulting resources offer voluntary guidance for partners to identify the best opportunities for conserving and restoring terrestrial, aquatic, and coastal ecosystems and the host of different species that depend on them.

Products (Version 1.0 available now)
- Spatially delineated network of core areas and connectors across the Northeast
- Suite of regionally consistent datasets offering decision support through five conservation approaches: Terrestrial Core Networks, Aquatic Core Networks, Connectivity, Restoration, and Important Habitats for imperiled species and Species of Greatest Conservation Need

Contact

One region, 13 states, thousands of

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Learn more
- Regional Conservation Opportunity Areas Version 1.0 website

conservation opportunities: Partners worked together to develop a regional conservation design that lays the groundwork for unified conservation action across the Northeast.

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To learn more about North Atlantic LCC Science

Contact North Atlantic LCC Science Coordinator Scott Schwenk: william_schwenk@fws.gov
Explore products in the North Atlantic LCC Products database: http://northatlanticlcc.org/products
Explore maps and spatial data in the North Atlantic Conservation Planning Atlas: https://nalcc.databasin.org/