

North Atlantic LCC Steering Committee Meeting, Oct. 2014

Status of North Atlantic LCC Projects

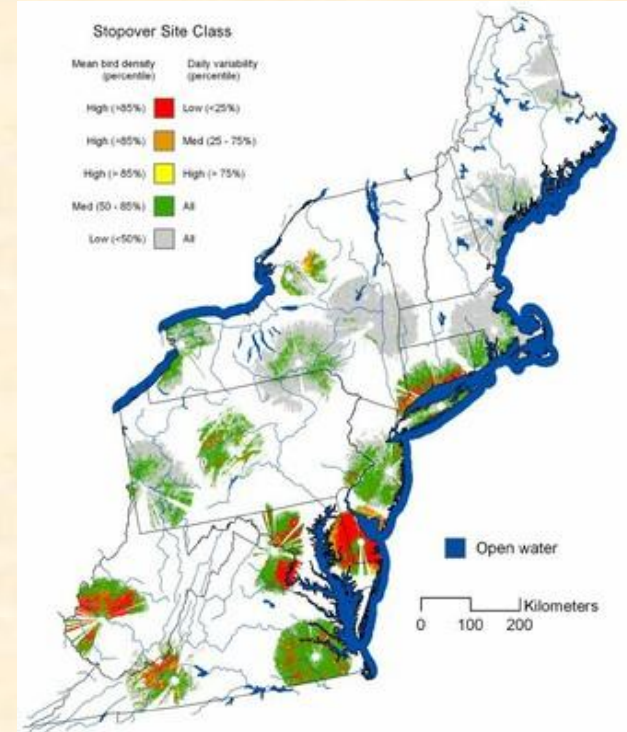
Scott Schwenk and Andrew Milliken

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Foundational Mapping: Important Migratory Landbird Stopover Sites

North Atlantic LCC Role	Co-sponsoring with USFWS, MD, USGS, U. of DE (lead), VCU, TNC, NASA
Products	Improved models of important fall migration stopover sites, based on weather radar and field surveys
Available Now	6 years of analyzed radar data; initial field survey results
Available within 3-6 months	
Longer Term	Complete report and maps (June 2015)



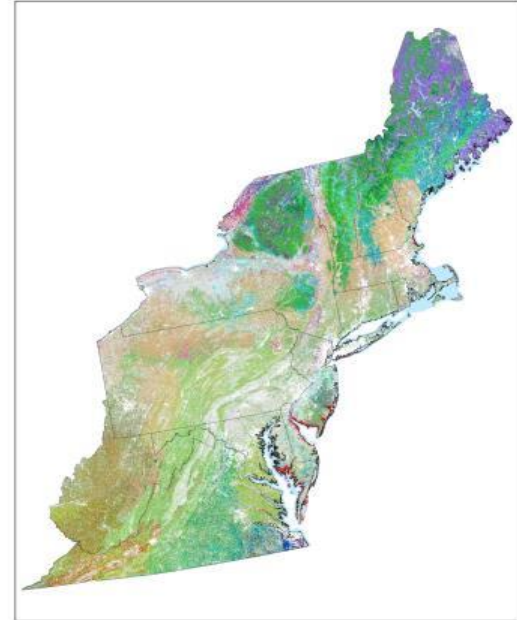
Foundational Mapping: Compilation of Regional Vernal Pool Data

North Atlantic LCC Role	Sponsoring project by Vermont Center for Ecostudies and UVM (initiated Jan. 2014)
Products	Regional GIS dataset of locations of potential or documented vernal pools
Available Now	Unified database structure
Available within 3-6 months	Remote sensing demonstrations
Longer Term	Complete report and dataset on NALCC Conservation Planning Atlas (2015)



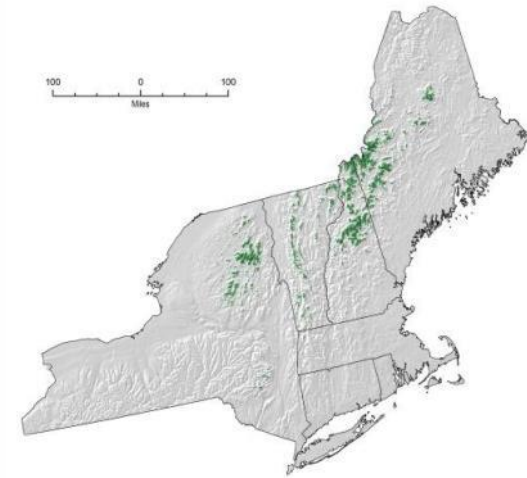
Foundational Mapping: Northeast Terrestrial Habitat Map

North Atlantic LCC Role	Support revising NEAFWA-sponsored project by TNC and UMass
Products	Classified terrestrial habitat map
Available Now	Virginia revisions (2012) March 2014: UMass enhancements to reflect roads, streams, 2006 development, and revised coastal NWI
Available within 3-6 months	
Longer Term	Expansion to Canadian portion of LCC (2015)



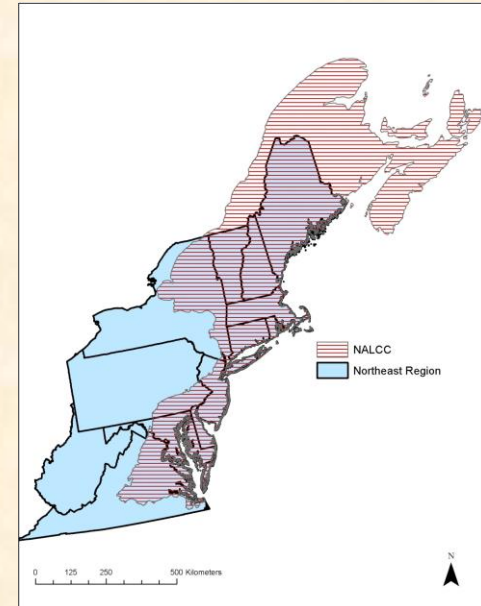
Vulnerability Assessments: Habitat Vulnerability to Climate Change

North Atlantic LCC Role	Completing NEAFWA-sponsored project by Manomet/NWF
Products	3 reports: terrestrial/wetland; cold water; and coastal habitats
Available Now	Reports completed; northeast climate database (neclimateus.org) developed in collaboration with NOAA and other partners



Conservation Design: *Designing Sustainable Landscapes*

North Atlantic LCC Role	Sponsoring project led by UMass Amherst
Products	Extensive spatial datasets, current and future species capability and ecological integrity, decision support tool for landscape design
Available Now	Many spatial datasets for entire Northeast
Available within 3-6 months	<ul style="list-style-type: none">• Additional regional spatial data• Regional models for 30 rep. species• Pilot design effort in CT River watershed
Longer Term	Phase 3 (to be initiated in Fall 2014) will enhance coastal components and use of tools by partners

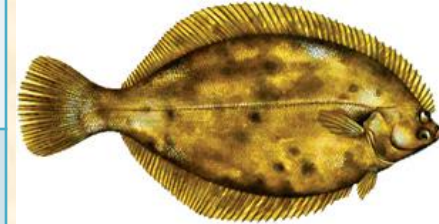


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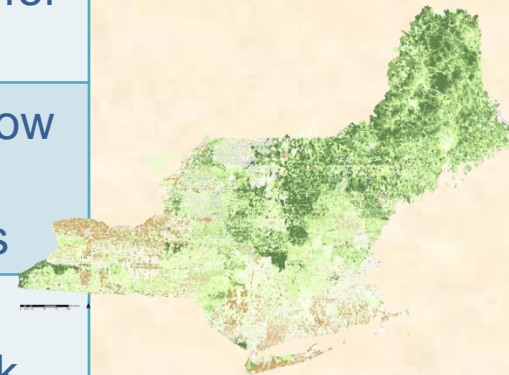
Conservation Design: Aquatic and Coastal Decision Support Tool

<i>North Atlantic LCC Role</i>	Sponsoring project with Atlantic Coastal Fish Habitat Partnership, led by Downstream Strategies
Products	Aquatic and coastal species models and decision support tools
Available Now	Pilot models and for brook trout in the Chesapeake Bay watershed and for winter flounder
Available within 3-6 months	Final brook trout and winter flounder models
Longer Term	Multi-species decision support tools for restoration and conservation available on-line (2015)



Conservation Design: Forecasting Streams and Brook Trout

North Atlantic LCC Role	Sponsoring project led by USGS
Products	Aquatic data and brook trout, forecasts and decision support tools
Available Now	<ul style="list-style-type: none">• Prototype web tool for stream conditions and climate change• Brook trout occupancy model for New York to Maine
Available within 3-6 months	<ul style="list-style-type: none">• Projections of future stream flow and temperature• Regional brook trout forecasts
Longer Term	Incorporate into conservation design; integrate with other brook trout tools (2015)

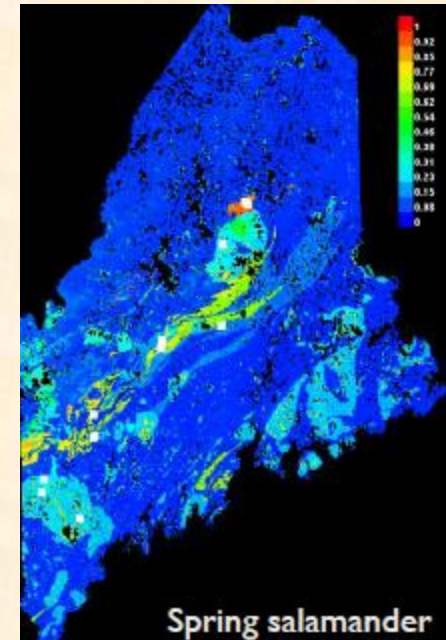


Brook trout
probability of occupancy



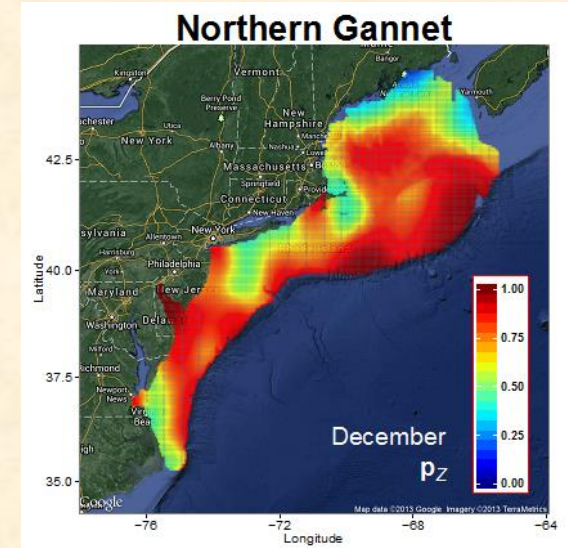
Conservation Design: Priority Amphibian and Reptile Conservation Areas (PARCAs)

North Atlantic LCC Role	Sponsoring project led by State of Maine, U. of Maine, and Clemson
Products	Species models for 60+ priority herp. species; report with priority areas identified
Available Now	Climate niche models for 61 species
Available within 3-6 months	<ul style="list-style-type: none">• Projected loss of climate envelope for species• C.C. Vulnerability reviews• Pilot PARCAs for Maine
Longer Term	Full PARCA report and recommendations (2015)



Conservation Design: Marine Bird Mapping and Risk Assessment

North Atlantic LCC Role	Sponsoring a project by NC State U., NOAA, BRI, CSI/CUNY
Products	Mapping of annual and seasonal abundance of 24 marine bird species to inform marine planning across Northwest Atlantic
Available Now	Marine bird species maps and report – in review
Available within 3-6 months	Final report and maps
Longer Term	

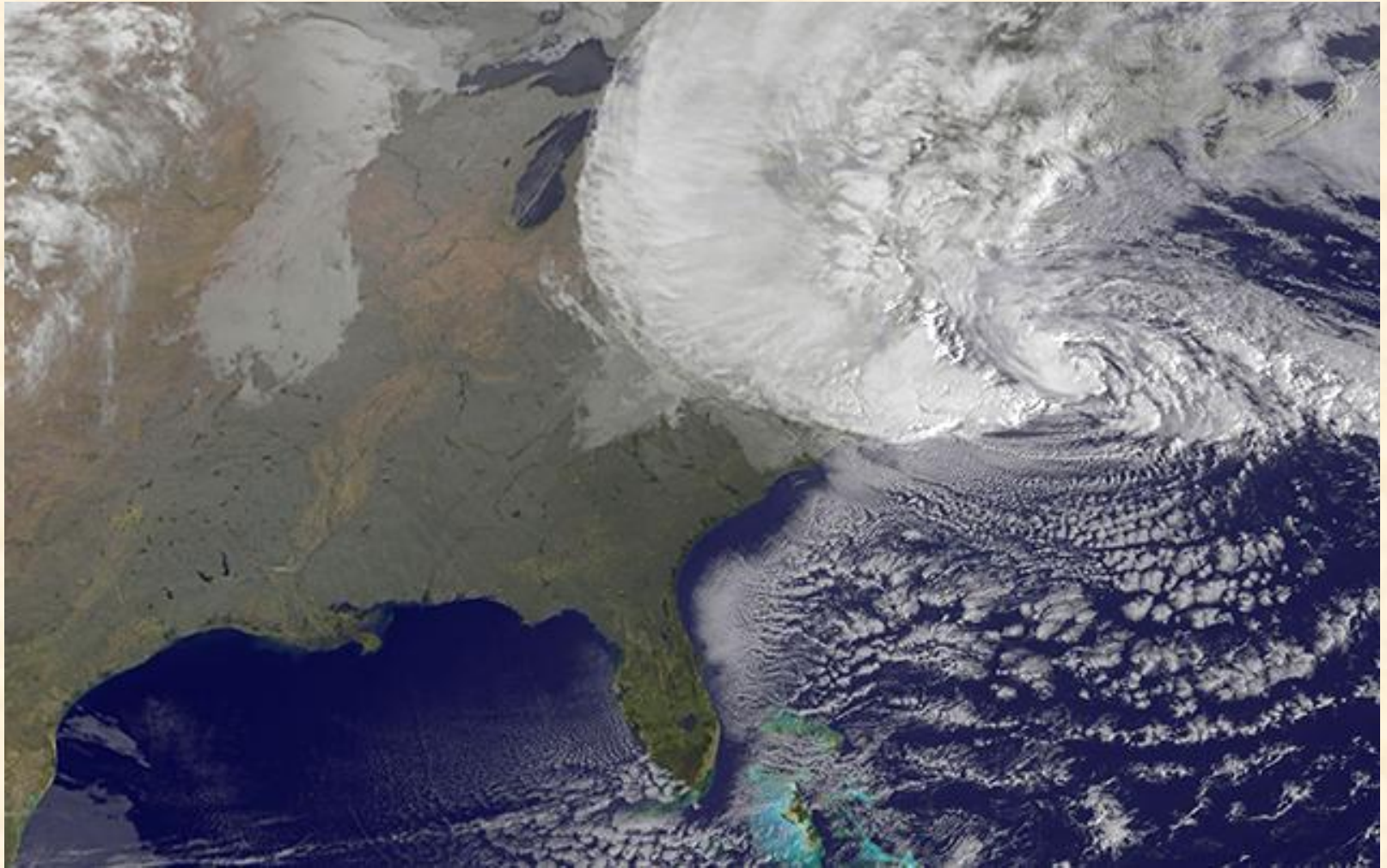


Discussion

- Are you familiar with the products and are they useful (do you think they will be useful) to your organization?
- How should we be communicating about LCC products?
- How should we be tracking the use of LCC products?
- How would you like us to document the successes and challenges of LCC projects?



Hurricane Sandy



Conservation Design: Increasing Aquatic Connectivity and Flood Resiliency (LCC + Hurricane Sandy)

North Atlantic LCC Role

Sponsoring/coordinating 2 related projects (one funded through Hurricane Sandy) led by UMass Amherst, USFWS, State F&W agencies, TNC, USGS, USFS, Trout Unlimited,

Products

Comprehensive, consistent, road-streams crossings database; recommended survey protocols and standards; prioritized surveys; flood resilience models; prioritization to improve fish passage and reduce flood risks;

Available Now

Available within 3-6 months

Initial survey protocols for first field season

Longer Term

Complete datasets and reports (2016); coordinate with Great Lakes



rative

Budget

Optimize the allocation of conservation efforts in a spatially explicit manner in order to sustain ecological values of beaches/tidal marshes across the NALCC in the face of storm impacts and sea level rise

Sustainable Conservation of Ecosystem Services
(Carbon + Protection of Human Infrastructure + Rec Measure)

Ensure Persistence of Native Habitats
(Pr Persist Beach Complex + Pr Persist Marsh Complex)

Ensure Persistence of Native Species
(Δ Suitability Spp Beach + Δ Suitability Spp Marsh)

Predictions
Vulnerability of Habitat - Sea level rise + Storm Impacts

Universe of Alternatives
(Suites of Actions)

Type of Action, State of Patch, Location of Patch, Time of Implementation

Acquire New Habitat – Future Buffering
(Habitat that could buffer effects, but will need management to transition)

Manage New Habitat - Transition
(Management to get newly acquired habitat to buffer effects)

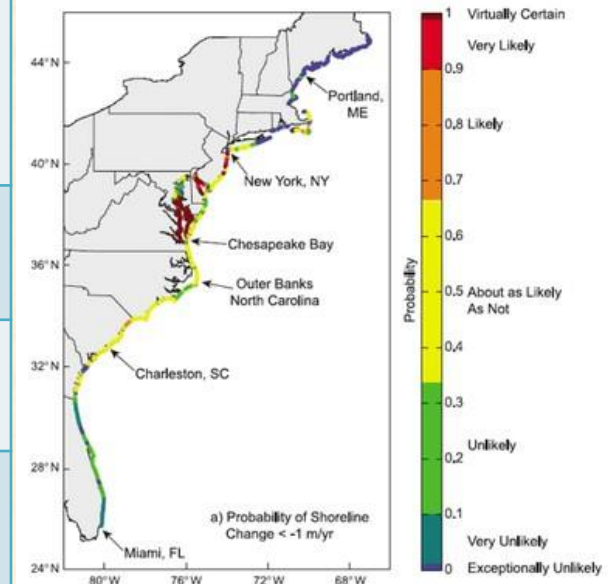
Acquire Existing Habitat
(Maintain high-quality habitat)

Manage Existing - Resiliency
(Management to habitat in conservation status to improve resiliency to effects)

Conservation Design:

Decision Support Tools for Sea-level Rise Impacts

North Atlantic LCC Role	NE Climate Science Center project with USGS; LCC facilitated conceptual model development through LCC structured decision making
Products	Geospatial data on SLR, decision support models
Available Now	Draft regional decision model
Available within 3-6 months	Initial regional decision model; species-habitat models and ecological integrity of coastal systems with SLR
Longer Term	Reports, tools, and recommendations; next steps through Hurricane Sandy projects



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Conservation Design:

Increasing Resiliency of Beach Habitats and Species in the Face of Storms & Sea Level Rise

North Atlantic LCC Role

Coordinating overall project among P.I.s, LCC and CSC partners and with P.I.s USGS, FWS, Virginia Tech, Rutgers, TCI, Conserve Wildlife NJ, NROC, MARCO

Products

Regional decision support models for coastal beach management and restoration for beach habitats and species (e.g., Piping Plover) in the face of storms and SLR; evaluation of the effectiveness of beach restoration and management

Available Now

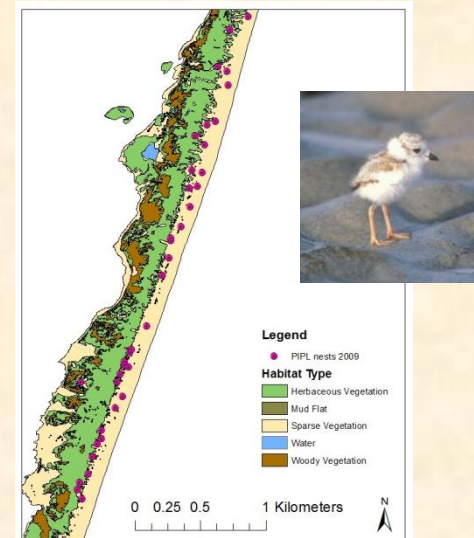
iPlover survey results; Pre-hurricane survey results of inlets and beaches

Available within 3-6 months

Initial post-hurricane beach nesting bird results

Longer Term

Complete models and results delivered to partners (2016);



Conservation Design:

Increasing Resiliency of Tidal Marsh Habitats and Species in the Face of Storms & Sea Level Rise

North Atlantic LCC Role

Coordinating overall project among P.I.s, LCC and CSC partners and P.I.s FWS, USGS, SHARP (Udel, UConn, UMaine, ME DIFW SUNY), USC, UCF, UMass

Products

Regional maps and decision support models for tidal marsh restoration and management for habitats and species in the face of storms and SLR; evaluation of the effectiveness of different marsh restoration approaches for increasing resiliency under different conditions

Available Now

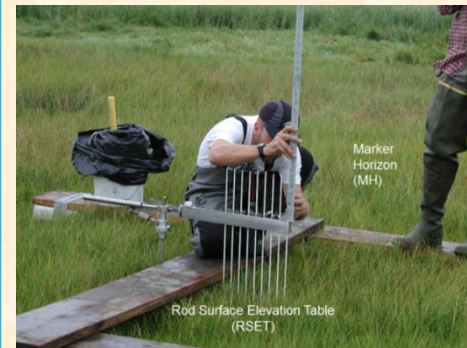
Pre-restoration and control site results

Available within 3-6 months

Consistent monitoring metrics; initial assessments of tidal marsh integrity

Longer Term

Complete models and results delivered to partners (2016); initial post restoration results.



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