Handout 7a Next Steps on North Atlantic Landscape Conservation Cooperative Common Science Needs **(actions for Steering Committee in bold)**

Common Science Need	**Specific Needs/Projects**	**Next Steps/Status**	**LCC Funding Actions**
Vulnerability of coastal wetlands and beaches to sea level rise and other anthropogenic stressors	Assessment of the current state and greatest needs for sea level rise models related to coastal wetlands and beaches; comprehensive assessment of tidal wetlands that unifies existing work.	LCC staff will consult with technical committee, partner federal agencies (NOAA, USGS, FWS, EPA) and state coastal zone agencies on best way to assess state of the science and greatest needs focused on habitats and species. Consult with new NPS Coastal Adaptation Specialist. **Will compile information this summer and fall and make recommendation to Steering Committee in November.**	**Fund additional needs if justified based on assessment.**
General vulnerability assessments to northeastern fish and wildlife habitats and species	Assessment of the impacts of climate change on northeastern fish & wildlife habitats and species through expert-driven model; complement expert-driven approach with data, models and maps.	Hector Galbraith (Manomet) and Lesley Sneddon (NatureServe) are working with LCC staff to finalize proposals for the incorporation of the NatureServe Climate Change Vulnerability Index (CCVI) into existing RCN projects.	**Increase funding by $70k to support incorporation of CCVI.**
Specific vulnerability assessments of northeastern amphibians and reptiles	Identification of highest priorities and gaps in distribution data for amphibians; vulnerability assessments including vernal pools, migratory barriers, sea level rise.	Work with NEPARC and AFWA to develop proposals for Important Herpetofaunal Areas (IHA) and national Climate Vulnerability Analysis for Amphibians and Reptiles to **present to Steering Committee for consideration in November.**	**Support IHA and national assessment pending satisfactory proposals. Approximately $100K.**
Specific vulnerability assessments of cold water stream habitats and species including brook trout	Bring together multiple approaches to assessing habitat and population factors for brook trout and other coldwater species including: habitat modeling to predict distribution; vulnerability assessments to altered stream temperature and hydrology; identification of resilient habitat; barrier identification in headwater streams; population genomics.	USGS will work with partners including Brook Trout Joint Venture to define and further support coldwater stream science needs building on FY 10 LCC project using FY 2011 USGS LCC funds.	Support from USGS for freshwater mussels ($20k) and flow and temperature models ($150k).
Habitat mapping and modeling of marine bird distributions and coastal migration of birds and bats	Spatial mapping of nearshore and offshore marine bird hotspots in the Atlantic Flyway and migration routes and distributions of birds and bats along the Atlantic Coast.	USFWS hosted a June meeting with partners to assess highest priority science needs for marine birds in the North Atlantic. **Subset of those needs will be provided to LCC for consideration prior to November meeting.**	**Consider support pending satisfactory proposals.**
Species-habitat modeling and mapping of aquatic species	Refine tools to classify and map aquatic habitat including hydrology, temperature and connectivity; develop habitat occupancy models; identify priority areas for conservation.	Work with partners to further define temperature and hydrology classification needs. Work with USFWS, partners and partnerships including the Atlantic Coastal Fish Habitat Partnership to define needs for representative species modeling	Not yet. Further refinement of need and projects.
Species habitat modeling and mapping of terrestrial and wetland species	Model and map the current and predicted future distributions and extents of representative habitats and species.	LCC staff will extend contract with Vermont Coop. Unit for the representative species habitat modeling work as part of the *Providing Science and Tools in Support of the North Atlantic Landscape Conservation Cooperative: Designing Sustainable Landscapes for Wildlife in the North Atlantic Landscape Conservation Cooperative* project.	**Contract extension for approximately $50k**

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Common Science Need	**Specific Needs/Projects**	**Next Steps/Status**	**LCC Funding Actions**
Assessment of forest condition and management	Assessment of the influence of forest condition and forest management on regional habitat capability and connectivity.	Complete Phase I of Designing Sustainable Landscapes project including species habitat modeling and ecological integrity of forests	Not at this time.
Climate model downscaling	Climate model downscaling at scales useful for stream flow and temperatures	Information will be available through USGS and UMass. Future needs should be developed through Climate Science Center.	Not anticipated.
Assessments of landscape connectivity	Assess the current and future status of connectivity and regional and local scales.	Consider support for ongoing TNC work through RCN proposal: *Permeable Landscapes for SGCN*	**Consider LCC support for RCN proposal $50k.**
Analysis of recent landscape change	Contemporary land-cover change in the North Atlantic LCC for guiding management decisions.	No specific steps identified. Technical committee will further assess needs and opportunities.	Not anticipated.
Identifying focal areas for conservation	Advancing landscape-scale conservation for Northeastern herpetofauna through support of the Priority Amphibian and Reptile Conservation Area (PARCA) system.	Work with NEPARC and AFWA to develop proposals for Important Herpetofaunal Areas (IHA) and national Climate Vulnerability Analysis for Amphibians and Reptiles to **present to Steering Committee for consideration in November.**	**Support IHA and national assessment pending satisfactory proposals. Cost estimate $100k for both.**
Best management practices	Developing conservation and management strategies for vernal pool dependent herpetofauna of the northeast including best management practices and model regulations.		
Detecting changes in species distribution	Rapid assessment and response to coastal marine invasive species.	Invasive species expert in the Fish and Wildlife Service to participate in detail with the LCC to determine the highest priority LCC needs related to invasive species.	Pending needs assessment.
Adaptation planning pilot projects	Project the impacts of climate change and Identify adaptation options at specific pilot sites; e.g., Chincoteague National Wildlife Refuge/Assateague National Seashore Complex.	**Work group will further define what types of demonstration projects the LCC would support.**	Not at this time.
Habitat mapping and modeling at NALCC scale	A characterization and "GAP" analysis of the LCC.	No specific needs identified.	Not at this time.
Adaptive Management Frameworks for Representative Species	Developing an adaptive management framework for American black duck habitat conservation in the LCC.	**Black Duck Joint Venture provided a proposal for LCC consideration. Need to modify to better match LCC needs. Will present revised proposal in November.**	**Proposal under consideration for $40k**

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Common Science Need	**Specific Needs/Projects**	**Next Steps/Status**	**LCC Funding Actions**
Long-term data management system	Overall project; Phase 1: Data needs assessment; Phase 2: Technical alternatives assessment; Phase 3: Pilot database	LCC staff will assemble a technical team and hire a contractor to conduct an information needs and technical alternatives assessment and then **present results and recommendations to technical and steering committee.**	**Fund contract for needs assessment; based on results consider support for pilot phase. Estimate for needs assessment $50k**
Managed Lands Database Development	Consistent/updated habitat management database for Northeast Region.	Consider as part of needs assessment; assess applicability of work with ACJV on proposal for Competitive SWG or LCC	Not at this time.
Consistent/updated secured lands database	Consistent, annually updated secured lands data for the Northeast Region.	No steps identified.	Not at this time.
Online tool for accessing the most recent conservation designs	Spatial database of conservation designs; RCN and LCC projects have a rapidly growing need for dissemination of spatial data products; would be part of overall data management needs but is highly feasible as a separate component to be integrated into future comprehensive database.	Consider as part of needs assessment; coordinate with Southeast Conservation Atlas; coordinate with rcngrants.org.	Support for spatial data atlas after needs assessment.
Additional Needs from Albany Workshop			
Develop regional, consistent, spatial databases	Support development of SWAP database to promote consistency in next generation of SWAPs	Consider as part of needs assessment	Support for SWAP database after needs assessment.
	RCN or LCC support for marine mapping	**Consider support for RCN proposal**	**$100k**
	Consider expansions of consistent data layers into Canada	Discuss with TNC and Canada	TBD