| **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. **LCC staff and NPS Coastal Adaptation Specialist could lead an assessment along with other federal agencies (e.g. NOAA, USGS, FWS, EPA, BOEM), marine partnerships and NEAFWA Vulnerability Assessment coastal group.** | **Fund additional needs if justified based on assessment. (hold back funds?)** |
| **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. | **Funding increased by $75k 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. | **NEPARC and AFWA to developed a joint proposal for Important Herpetofaunal Areas (IHA) and national Climate Vulnerability Analysis for Amphibians and Reptiles for Technical Committee review and recommendation** | **Provide recommendation on submitted NEPARC proposal $299k** |
| **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. **Aquatic workgroup needed to work with EBTJV and USGS assess status and remaining gaps in science needed.** | **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. | Northwestern Atlantic Marine Birds Cooperative hosted a June meeting with partners to assess highest priority science needs for marine birds in the North Atlantic. **Proposal developed for consideration by Technical Committee.** | **Provide recommendation on submitted proposal by NW Atlantic Marine Bird Conservation Cooperative $175k** |
| **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. | **Aquatic workgroup needed to work with partners to refine aquatic habitat maps and representative species and 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. | **Contract extended 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 $58k** |
| **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. **Need forest workgroup to begin framing this issue.** | 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.** | Assess status and needs with **Climate Science Center** |
| **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.* Coordinate with UMass Designing Sustainable Landscapes project.** | **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*.*** | **Provide recommendation on submitted NEPARC proposal $200-300k** |
| **Best management practices** | Developing conservation and management strategies for vernal pool dependent herpetofauna of the northeast including best management practices and model regulations. | Consider as part of NEPARC proposal? | Not at this time. |
| **Detecting changes in species distribution** | Rapid assessment and response to coastal marine invasive species. | **Invasive species expert in the Fish and Wildlife Service participating in detail with the LCC to determine the highest priority LCC needs related to invasive species.** | Not at this time. |
| **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. | **Steering Committee 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.** | **Provide recommendation on BDJV proposal submitted $40k** |
| **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. $20k** |
| **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. | Information available through TNC database and National Conservation Easement Database. 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. LCC staff can begin assembling data layers.** | **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 | Consider 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 |
| **Need for additional commitment to science translation and conservation adoption** | Users guide and training for habitat maps; | Consider support for Users guide; provide staff support for science translation and conservation adoption | Approx. $30k for supporting users guide |