**North Atlantic Landscape Conservation Cooperative**

**2010 – 2011 Science Projects**

**2012 Mid-year Update**

| Project | Status | Cost |
| --- | --- | --- |
| Projects initiated in 2010 | | |
| Assessment of landscape changes in the NALCC: decision support tools for conservation, Phase I (“Designing Sustainable landscapes”)  *P.I.: Kevin McGarigal, UMass* | Phase I ended in June. As the project transitions to Phase II, work in three pilot watersheds (Kennebec; middle Connecticut R., and Pocomoke/Nanticoke) is being completed and the final Phase I report is in preparation. | $435,000 |
| North Atlantic Landscape Conservation Cooperative: Wildlife Habitat Models for Terrestrial Vertebrates  *P.I.: Terri Donovan, Vermont Coop Fish & Wildlife Research Unit* | Complete. For representative species selected for the North Atlantic LCC, models were developed that relate characteristics of the landscape at multiple scales to suitability of the landscape as species-specific terrestrial wildlife habitat. These species habitat relationship models for representative species are part of the broader *Designing Sustainable Landscapes* project. | $90,005 |
| Forecasting changes in aquatic systems and resilience of aquatic populations in the NALCC: decision-support tools for conservation  *P.I. Ben Letcher, USGS / U. Mass.* | Models have been completed for stream flow and local (catchment scale) population persistence of brook trout. Applications to link forecasts of future precipitation and air temperature to the local population model are in development. Work is beginning on the development of large-scale brook trout occupancy models to complement the more data-intensive population models. | $420,000 |
| Forecast effects of accelerating sea-level rise on the habitat of Atlantic Coast piping plovers and identify responsive conservation strategies  *P.I. Sarah Karpanty, VA Tech* | Completed initial coupled hind cast plover and coastal change model, initial modeling on the future-cast model, and initial results on how varied conservation actions may impact patterns of piping plover habitat use and habitat change. | $204,000 |
| Vulnerabilities to climate change of Northeast fish and wildlife habitats, Phase II (through RCN grant program)  *P.I.s: Hector Galbraith, Manomet; Bruce Young, NatureServe* | Work on the habitat vulnerability component of this project by Manomet and National Wildlife Federation ($83,050) builds on the Phase I work funded through a 2009 RCN grant includes running the habitat model on another 7-10 northeastern habitat types, including forests, wetlands, and aquatic systems and an assessment of tidally-influenced habitat vulnerability. Coastal vulnerability is focused on the development of a database of ongoing projects by the National Wildlife Federation as part of a collaboration on a *NEclimateUS.org* site with NOAA and other partners. Work on the species vulnerability component of this project by NatureServe ($16,950) is described under 2011 projects below | $100,000 |
| Total 2010 Projects |  | $1,250,000 |
| Projects approved by the Steering Committee in 2011 | | |
| Use of a vulnerability index to assess species most likely to be impacted by climate change  *P.I.: Bruce Young, NatureServe* | With the help of an advisory committee, NatureServe has selected a list of 64 species for assessment. The set includes a mixture of foundational and representative species and species of high regional concern. Species assessments are beginning. (Total cost is $100,399 including $16,950 from 2010) | $83,449 |
| Permeable landscapes for Species of Greatest Conservation Need  *P.I.: Mark Anderson, TNC* | The agreement with TNC was finalized on March 1. An up-to-date map of land cover and roads has been compiled for the study area (including Canada) and work is underway to automate repeated connectivity analyses. | $49,868 |
| Information Needs Assessment  *Lead: B.J. Richardson, USFWS* | The information needs assessment by the contractor, Applied Geographics, is nearing completion. A number of focus groups and interviews have been conducted and a Needs Assessment Survey is being administered. | $45,600 |
| Development of a Northeast regional coastal and marine ecological classification standard  *P.I.: Mark Anderson, TNC* | The agreement with TNC was finalized on April 1. Work has just begun with a completion date of December 31, 2013. | $130,000 |
| Assessing priority amphibian and reptile conservation areas (PARCAs) and vulnerability to climate change in the NALCC  *P.I.: Priya Nanjappa* | Agreements with University of Maine, University of Georgia and Association of Fish and Wildlife Agencies were finalized on January 1. Sixty-two priority species have been identified and first-run species models have been developed for six. Species data have been obtained from three states (MD, NY, VA). A postdoc was hired to begin work at the University of Maine in August. | $315,944 |
| Mapping the distribution, abundance and risk assessment of marine birds in the Northwest Atlantic: Phase 1  *P.I.: Beth Gardner, NC State* | Agreements with NC State and others were finalized in May and June. Beth Gardner has been identified as lead P.I. As an initial step, new seabird data are being provided to the USGS seabird database so that they can be used in modeling. | $145,000 |
| Revisions to ecological systems map for Virginia and Maryland to be consistent with rest of region  *P.I.: Mark Anderson, TNC* | This project was completed on June 23, 2012. The final map and data are available at:  <http://conserveonline.org/workspaces/ecs/documents/ne-terrestrial-habitat-mapping-project> | $14,470 |
| Species-habitat modeling of additional representative species for the for the Designing Sustainable Landscapes project  *P.I.: Kevin McGarigal, UMass* | Complete. Models developed for an additional set of representative species to evaluate the species-habitat model and its complementarity to the ecological integrity model in three pilot watersheds during using the DSL landscape modeling framework. | $70,000 |
| Conservation Design and Synthesis  *Coordinator: Steve Fuller, North Atlantic LCC* | Coordination meeting with states on SWAP regional information hosted; initial conservation design meeting held at NEAFWA; LCC GIS analyst hired and LCC GIS analyst being hired in TNC office to assist with compilation and synthesis; meetings scheduled in association with the Northeast Fish and Wildlife Diversity Technical Committee; initial products to be produced by April , 2013 for SWAP Updates | $60,000 |
| Total 2011 Projects |  | $914,331 |