

NORTH ATLANTIC LANDSCAPE CONSERVATION COOPERATIVE GRANT 2014 PROGRESS REPORT

Quarter: (circle one)

2014 1st

2014 2nd

2014 3rd

2014 4th

Grant Number and Title: NALCC 2012-01 Extending Habitat Map into Canada

Grant Receipt/Organization: The Nature Conservancy

Grant Project Leader: Dr. Mark Anderson

Were planned goals/objectives achieved last quarter? Yes

NALCC Conservation Need Addressed: Supporting a Standardization of Terrestrial and Wetland Habitat Classification and Mapping that Includes Characterization of Climate Sensitive Systems.

Progress Achieved: (For each Goal/Objective, list Planned and Actual Accomplishments)

This quarter we made good progress on consulting with our steering committee of Canadian scientists, and activating and consulting with a classification team. We continued to assemble and assess datasets useful to the project, and had a notable success with an agreement to procure the extensive and critical forest inventory datasets for all four Provinces including the Quebec FORGEN forest inventory dataset without charge.

Summary of Progress: (Provide a paragraph describing progress, work to come, and timelines)

Goal 1) Activate classification team, host web ex and have discussion on forest systems:

As a subset of the Steering Committee, we created a classification team to help us develop a consistent classification of the Terrestrial Habitats we aim to map. This classification does not exist within Atlantic Canada so this team has been key is sorting out vegetation-type taxonomic problems and has done the critical work of linking current Canadian classification units to a mappable ecological systems classification. The group includes about 20 participants from all 4 provinces; an arrangement was made as well to include NatureServe ecologists, one of whom has experience working with Canadian ecologists on an ecological system taxonomy.

We circulated a document describing upland forest systems mapped in the northeastern US prior to an initial 2-hour web-ex and phone meeting with the classification team on 3/5 to discuss upland forest types in the Maritimes and southeastern Quebec. These were compared to forests mapped in the US; uniquely Canadian forest types were discussed where significant vegetative and ecological differences with US counterparts were identified.

Goal 2) Host a web-ex for steering committee members to review and discuss the data compiled to date.

We circulated a detailed methods document for the northeastern US habitat mapping project to the project steering committee prior to a 2-hour web-ex and phone meeting on 2/18. During the call about 20 of our project partners and collaborators on the committee were given an overview of the process, shown some of the critical datasets, and canvassed for suggestions and comments on the project.

Goal 3) Continue to compile data useful to the project; obtain the Provincial forest inventory data and familiarize ourselves with shared or similar attributes in forest inventories from all provinces.

We have compiled, collected, and created (mostly in this quarter) over 80 datasets related to natural community

and species occurrences in the project area, biophysical attributes of the landscape, ecological land classification in the provinces, and protected areas. The largest success we had was in procuring the forest inventory datasets from all four Provinces:

- New Brunswick Forest Inventory
- Nova Scotia Forest Inventory
- Quebec FORGEN Forest inventory
- Prince Edward Island enhanced land use – land cover

These impressive vegetation datasets contained detailed and geographically comprehensive information on individual forest stands as well as soils, wetlands, and other non-forest features, and they have no counterpart in the US. We await only the licensing agreement from Quebec for their forest inventory data, which should come here at the end of March. Happily, these data, which are valued at \$20,000, will be offered to the project for free, in return for free use of project outcomes and datasets developed during the course of the project. We also obtained extensive species location datasets from federal, provincial, and private NGO sources, particularly the Atlantic Conservation Data Centre. For each data set we have signed data sharing and licensing agreements with natural resource agencies in the provinces.

Metadata for natural resource datasets, and documents related to ecological land classification in the project area, have been assembled, and critical French language-only information translated into English. Biophysical grids for 8 "bioclimatic" variables relevant to biological distributions were compiled in-house in Boston from international datasets, as well as grids related to topography (land position and landform, aspect, slope, solar radiation, topographic roughness) and landcover. Further contacts have been made with Canadian scientists who have offered to supply recently developed spatial data on duration of growing season and growing season temperatures and precipitation.

Goal 4) Work out a crosswalk and a method for incorporating the forest inventory data into the mapping process.

A day-long face-to-face meeting with a core of the classification team has been arranged for late April in Fredericton, NB. (Project funds will be disbursed to team members that have to travel a long way and stay overnight.) Forest and wetland systems, and perhaps woodland or non-forest system types if time allows, will be discussed. In the interim, Maritime and Quebec ecologists have been asked to help us build a coarse forest classification that will serve as a starting point at the April meeting, and we continue to work on a set of attributes in each of the provincial forest datasets that will allow us to map ecological system-like entities.

Difficulties Encountered:

None this quarter. This has been a very productive quarter.

Activities Anticipated Next Quarter:

Goals for the upcoming Quarter include:

- With the help of Canadian ecologists, build a coarse forest system classification to use as a starting point at the face-to-face meeting with the classification team in Fredericton. At that meeting, sort out details of forest and wetland classification and linkage to ecological systems.
- Use the provincial forest inventories, along with support biophysical, natural community, and species datasets, to map to the forest system classification that emerges from that meeting. Extend the mapping into those areas of NB not covered by the provincial inventory, using models built from the biophysical information underlying forest systems in inventoried lands. Any analysis that we ask the Irving timber company to perform for their holdings could help us in this effort. It is anticipated that this effort may not be completed at the end of the next quarter.
- Hold a second steering committee web-ex meeting to review progress and solicit advice.
- Hold a second classification team web-ex meeting to discuss the work on forest systems and get into a broader

discussion of wetland systems types. Make progress on a wetland classification appropriate to the project area, and on mapping criteria that can be applied. This will most likely spill over into the next quarter as well.

Expected End Date:

January 2015. Please note that we have received a no-cost extension on the UMASS / USGS award to Sept 31, 2014.

Costs:

NALCC Funds Expended Previous to this Report: 659.78

Amount of NALCC Funds Requested within this Report: \$41,234.29

Total Approved Budgeted NALCC Funds: \$95,238.00

Are you within the approved budget plan? Yes

Are you within approved budget categories? Yes

Signature:

A handwritten signature in black ink, appearing to read "Mark Anderson", is enclosed within a thin black rectangular border.

Mark Anderson
Director of Conservation Science
The Nature Conservancy, Eastern Division

Date: April 30, 2014