

NORTHEAST REGIONAL CONSERVATION NEEDS GRANT

2012 PROGRESS REPORT

Quarter: (circle one)

2012 1st

2012 2nd

2012 3rd

2012 4th

Grant Program, Number and Title: RCN 2009-02 Geospatial Condition Analysis of Northeast Habitats based on the Northeast SGCN Habitat Maps

Grant Recipient: The Nature Conservancy

Grant Contact Name: Mark Anderson

Were planned goals/objectives achieved last quarter? Yes

Regional Conservation Need Addressed: Priority #10 Geospatial Condition Analysis based on Northeast SGCN Habitat Maps

Progress Achieved:

Goal 1) **Finalize decisions on audience and project.** We were able to finalize these decisions with feedback from the NA LCC staff (we were almost to this point last quarter but could not quite agree on the details). The final product will consist of three parts:

- A report on the condition of each habitat type with respect to human modifications and landscape context. The report will be tied to the terrestrial and aquatic habitat guides where detail on each system is summarized.
- Maps showing areas of exemplary condition within states and ecological regions. These will be continuous spatial grids or polygons of road bounded blocks contain multiple ecological features.
- A dataset of 20-30 attributes calculated for each mapped patch of each habitat type. Features will be identified at the smallest ecologically-meaningful scale possible and will include the seven types of units described below.

Goal 2) **Finalize the conceptual framework and list of specific metrics.** Yes we did finalize the framework and metrics. Our focus will be mainly on the indicators of human modification and securement because these directly reflect the quality or degradation of the habitats.

Terrestrial Habitats

- Direct fragmentation by roads or development, or dams
- Potential for future development,
- Age and size structure
- Context of surrounding land
- Connectedness to surrounding natural land

Aquatic Habitats

- Fragmentation by dams and road crossing
- Impervious surfaces in the watersheds
- Intactness of the floodplain
- Risk of flow alteration from dam storage

Where appropriate we will include biotic and ecological context indicators but these have proved more

controversial both in how they relate to “condition” and how comprehensive the datasets are. The team agreed on the six mapping listed below.

Goal 3) Meet with Steve Fuller to develop template and clarify links to State SWAP revisions and LCC. We held two productive meeting this quarter with the LCC staff, one in Boston and one in Amherst, the latter included staff from designing sustainable landscapes project. With Steve we brainstormed the template and set of supporting tables needed to ensure that the information will feed directly into the State Wildlife Action plans.

Goal 4) Begin calculating simple metrics such as of the amount of each system that is secured from development. We finished creating region wide datasets for each of the six spatial units that serve as the basic unit of analysis:

- 1) forest habitat patches,
- 2) wetlands (all sizes),
- 3) large and small patch terrestrial communities,
- 4) stream reaches,
- 5) lakes,
- 6) minor road-bounded blocks
- 7) major road-bounded blocks

Each unit is attributed with its habitat types.

Difficulties Encountered: None over this time period. However, one of our lead investigators has gone on an extended medical leave. We do not think it will disrupt this project directly but we will be requesting a no-cost extension on two closely related projects (terrestrial and aquatic habitat guides) so that these three projects will be in sync.

Activities Anticipated Next Quarter:

- Create example pages for each section of the report
- Finalize the database of habitat information.
- Continue meeting with LCC staff
- Calculate metrics for each habitat.
- Summarize full information for 10 habitat types.

Costs:

Amount of RCN Funds Expended to date: \$11,436.45

Total Approved Budgeted RCN Funds: \$60,167

Are you within the approved budget plan? Yes

Are you within approved budget categories? Yes



Signature: Mark Anderson, Director of Conservation Science

Date: February 11, 2013