

# NORTH ATLANTIC LANDSCAPE CONSERVATION COOPERATIVE GRANT 2012 ABSTRACT

Quarter: (circle one)

2012 1<sup>st</sup>

2012 2<sup>nd</sup>

2012 3<sup>rd</sup>

2012 4<sup>th</sup>

Grant Number and Title: 2011-04 Habitat Map for Virginia Piedmont and Coastal Plain

Grant Receipt/Organization: The Nature Conservancy

Grant Project Leader: Mark Anderson

Please provide a short (1-2 paragraphs) abstract that addresses EACH of the following: the objectives of your project, accomplishments to date, future plans and timelines with an estimate for when the project will be completed.

Objective:

Produce a habitat (ecological systems) map based on the Northeast Terrestrial Habitat Classification System for the Virginia portion of the Piedmont and Mid-Atlantic Coast Ecoregions.

To date:

We have completed all the steps required to map the “background” matrix forests through the Virginia Piedmont and southeastern coastal plain. These steps include: assembly of a set of known sample occurrences of the matrix ecological systems (or “habitats”), mostly from the VA Natural Heritage Program, NatureServe, and the Forest Service’s Forest Inventory and Analysis (FIA) plots; compilation/construction of over 50 region-wide datasets required for the matrix model-building exercise; attributing the known occurrences and the tessellated 100 acre hexagons for the region with the same set of 70-plus variables known to be related to ecological variability; performing a classification and regression tree analysis and modeling exercise for the matrix habitats using RandomForests (RF); and transferring the RF classification results from the hexagons to a set of “landscape units” derived from landforms.

Remaining work/timeline:

We will model upland small patch habitats and wetlands, which is a 3-week exercise at minimum. We are also going to take a crack at mapping pine plantations, and perhaps successional pine-hardwood habitats, and merging these human-altered systems over the “natural” systems. We intend to be done by the end of April 2012.

## **GRANTEE QUARTERLY REPORT**

Grant Number: 2011-04

Grant Title: Habitat Map for Virginia Piedmont and Coastal Plain

Grant Recipient: The Nature Conservancy

Grant Contact Name: Mark Anderson

Report #: 1

Were planned goals/objectives achieved last quarter? If not, please detail the reasons why not.  
Yes—our goals have been achieved.

Progress Achieved: (For each goal/objective, list planned and actual accomplishments and findings)

Here's what we have achieved: We have completed the many steps required to map the "background" matrix forests through the Virginia Piedmont and southeastern coastal plain. These steps include: assembly of a set of known sample occurrences of the matrix ecological systems (or "habitats"), mostly from the VA Natural Heritage Program, NatureServe, and the Forest Service's Forest Inventory and Analysis (FIA) plots; compilation/construction of over 50 region-wide datasets required for the matrix model-building exercise; attributing the known occurrences and the tessellated 100 acre hexagons for the region with the same set of 70-plus variables known to be related to ecological variability; performing a classification and regression tree analysis and modeling exercise for the matrix habitats using RandomForests (RF); and transferring the RF classification results from the hexagons to a set of "landscape units" derived from landforms.

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

We will be done with the mapping of the Piedmont and southern coastal plain well before the project period is over. We still have to model upland small patch habitats and wetlands, which is a 3-week exercise at minimum. We are also going to take a crack at mapping pine plantations, and perhaps successional pine-hardwood habitats, and merging these human-altered systems over the "natural" systems. This is something we haven't done in the rest of the Northeast, but wanted to try here because they are so much more prevalent here than elsewhere. We also have a couple of recently acquired datasets that may help us accomplish this.

Difficulties Encountered:

As usual, plenty, but nothing we couldn't deal with.

Activities Anticipated Next Quarter:

See "Summary of Progress" above.

Expected End Date:

End of April 2012.

Costs:

Are you within the approved budget plan? If not, please explain.

Yes.

Are you within approved budget categories? If not, please explain.

Yes.

Signature:

THE NATURE CONSERVANCY



By: \_\_\_\_\_ Date: April 5, 2012

Name: Mark Anderson

Title: Director of Conservation Science