

# NORTH ATLANTIC LANDSCAPE CONSERVATION COOPERATIVE GRANT 2015 PROGRESS REPORT

Quarter: (circle one)

2015 1<sup>st</sup>

2015 2<sup>nd</sup>

2015 3<sup>rd</sup>

2015 4<sup>th</sup>

Grant Program, Number and Title:

Priority Science Grant Program, NALCC 2013-03

*Conserving Important Habitat for Amphibians and Other Wildlife: Compilation of Vernal Pool Mapping Efforts across the North Atlantic Region.*

Organization: Vermont Center for Ecostudies

Project Leader: Steve Faccio

Abstract: 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.

This project has four primary objectives:

- 1) Compile a comprehensive database of vernal pool locations;
- 2) Describe the vernal pool mapping and verification approaches currently being employed in the region;
- 3) Develop a remote sensing method using LiDAR to efficiently identify potential vernal pool locations;
- 4) Prioritize areas for future vernal pool mapping.

During the last quarter we continued to archive vernal pool location data into the Access database, which now consists of over 57,000 records. At this writing, data have been received from cooperators in six states and two Canadian Provinces (VT, MA, NH, NJ, NY, VA, Nova Scotia and Quebec's Gaspé Peninsula), while cooperators in ME and MD have indicated their intent to submit data. S. Faccio attended the NEPARC annual meeting held in RI on August 18-20 to update stakeholders on the project and solicit relevant data sets. We also began to assemble the review document describing the various vernal pool mapping and certification approaches in the region.

We refined the sensitivity of the LiDAR model, incorporating feedback received during ground-truthing, to better distinguish between vernal pools and headwater seeps.

Future plans include final reporting, continuing to archive vernal pool location data into the database as they are received from cooperators, and completion of the review document of vernal pool mapping projects.

Were planned goals/objectives achieved last quarter?

Yes (see planned and accomplished goals/objectives in matrix below).

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

<b>Goal/Objective</b>	<b>Planned</b>	<b>Accomplished by 30 Sept.</b>
<b><i>Goal 1 - Compile a comprehensive dataset of vernal pool locations in the NALCC region, including potential and verified pools.</i></b>		
Assemble project steering committee and hold first conference call	X	X
Plan and host regional workshop at NE Natural History Conference	X	X
Present oral paper at NEAFWA Conference	X	X
Build database to archive geospatial and associated attribute data	X	X
Build a metadata library	X	X
Host workshop at NEPARC meeting (western NY)	X	X
Receive and archive data into database; proof and complete metadata	X	ongoing
Host regional workshop in mid-Atlantic region	X	X
Provide vernal pool data to NALCC	X	
<b><i>Goal 2 – Compile and describe the various mapping and certification approaches currently being employed in the region</i></b>		
Identify and review all coordinated mapping projects	X	ongoing
Prepare review document	X	ongoing
<b><i>Goal 3 – Develop a method to identify potential vernal pools using Light Detection and Ranging (LiDAR) technology and object-based image analysis (OBIA)</i></b>		
Compile vernal pool and LiDAR data for NJ and VT	X	X
Conduct preprocessing of LiDAR and other (NHD) data and imagery	X	X
Define characteristics of vernal pools in LiDAR	X	X
Prototype OBIA expert system	X	X
OBIA system development	X	ongoing
Evaluation and Accuracy Assessment	X	ongoing
Reporting	X	ongoing

Difficulties Encountered:

NA

Activities Anticipated Next Quarter:

1. Continue to archive vernal pool location data/metadata into the database as they are received from cooperators;
2. Complete LiDAR model documentation and reporting;
3. Complete review document describing the various mapping and certification approaches in the region.
4. Submit final database/metadata library, and all reporting documents to NALCC.

Expected End Date:

December 2015

Costs:

Total life to date expenses (include this quarter): \$69,266.38

Total Approved Budgeted Funds: \$100,000

Are you within the approved budget plan and categories? Yes.

Signature

A handwritten signature in blue ink, appearing to read "Steven Paul".

Date: October 13, 2015