NORTH ATLANTIC LANDSCAPE CONSERVATION COOPERATIVE GRANT 2014 PROGRESS REPORT

Quarter: (circle one)
 $2014 1^{st}$ $2014 2^{nd}$ $2014 3^{rd}$ $2014 4^{th}$

Grant Program, Number and Title: NALCC 2012-03 Integrating Science into Policy: Local Adaptation for Marsh Migration

Organization: Maine Department of Inland Fisheries and Wildlife

Project Leader: Robert Stratton / Bethany Atkins

<u>Abstract</u>: 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.

The goals of this project are to engage communities in integrating science into local policy and to facilitate the development of adaptation strategies that will protect the ability of tidal marshes to migrate and adapt to sea level rise and increased storm surge anticipated under changing climatic conditions. The primary objectives, accomplishments, and future plans are as follows:

- Objective 1: Complete spatial datasets that show areas likely to support future marsh habitat under various sea level rise scenarios. Project partners completed the planned data set using LiDAR, land cover, and natural community data to identify areas capable of receiving migrating marshes under three sea level rise scenarios (0.6 m., 1 m., and 6 m.).
- Objective 2: Develop outreach messages, materials, programs, and tools that increase visibility of the potential impacts of sea level rise on marsh systems and advance progress towards resiliency and adaptation in a larger number of Maine coastal towns. The project team has presented information at more than 20 public meetings and community forums; many televised on local access cable stations and posted as video files on partner websites. The project, data, and initial work with the pilot towns has also been presented at statewide forums, including the Maine Land Conservation Conference. Additionally, a day-long workshop to build awareness among the conservation community of the sea level rise and coastal marsh mapping and to discuss how to use this information for conservation efforts was held in April.

Much of the work over the past quarter has focused on the development of MAST (Marsh Adaptation to Sea Level Rise Tool), a decision support tool that is intended to inform the prioritization of local land protection activities in the face of rising sea levels. Wetland experts in Maine and local stakeholders in the Town of Scarborough were engaged to help develop and test this software modeling approach.

Over the next two quarters, further development and testing of MAST is planned and we will be working with a science communication expert at the Wells National Estuarine Research Reserve (WNERR) to craft outreach materials that highlight tidal marsh economic benefits, ecosystem services, and vulnerabilities to climate and to develop case studies that highlight the locally grown adaptation

approaches developed in each of the 6 partner towns described in Objective 3.

• Objective 3: Engage three to five partner communities to facilitate the identification of adaptation needs and local action necessary to accommodate future marsh migration through strategic conservation planning, land use policy, and local conservation investment. Following initial regional meetings held in 2013, an RFP was issued and 6 towns were selected for focused technical assistance. The project team is working directly with Bath, Bowdoinham, Georgetown, Phippsburg, Scarborough, and Topsham. Each community is at a different stage in the local planning process and each is pursuing a different approach to determining an adaptive planning strategy that best meshes with identified public concerns. Work with each town will be ongoing until the end of the project period.

Were planned goals/objectives achieved last quarter?

Yes. Specific tasks planned for the previous quarter were to engage the wider coastal conservation community, to initiate development of MAST, and to continue technical assistance within the six pilot towns.

<u>Progress Achieved</u>: (For each Goal/Objective, list Planned and Actual Accomplishments) The planned and actual accomplishments for each project objective include:

- *Objective 1:* Spatial datasets were completed in past quarters. Project partners are now identifying an approach to widely distributing this data.
- *Objective 2:* A planned task for this quarter was to engage the wider coastal conservation community. To accomplish this, project partners convened a day-long workshop of more than 40 coastal conservation stakeholders. The goal of the meeting was to build awareness of the sea level rise and coastal marsh mapping done through this grant and to begin the discussion of how to use this information for conservation efforts (see agenda attached). Project partners from Maine Coast Heritage Trust, the Maine Natural Areas Program, and Maine Geologic Survey provided presentations describing how the sea level rise and marsh migration data was developed and a discussion identifying potential uses for this data within the conservation community followed, including incorporation into the State Wildlife Action Plan and Beginning with Habitat Program and into local and regional conservation plans.

Also planned for the previous quarter was development of MAST (Marsh Adaptation to Sea Level Rise Tool). MAST combines the best available science with sea level rise mapping to assess the future wildlife and economic benefits of specific conservation actions. Wetland experts in Maine and local stakeholders in the Town of Scarborough were engaged to help develop and test this software modeling approach. For specifics, please see the attached report.

- Objective 3: Engage three to five partner communities to facilitate the identification of adaptation needs and local action necessary to accommodate future marsh migration through strategic conservation planning, land use policy, and local conservation investment. Significant progress was accomplished through work with each of the six towns:
 - Georgetown continues to maintain a very intense focus on the topic of climate change. They are continuing to work on the development of a town-wide vulnerability assessment.
 - Phippsburg's Conservation Commission pursued training and purchased GIS software in this reporting period to develop more internal capacity to use the data developed through the marsh migration project along with other data sets. They have identified several parcels that provide opportunity for coastal marsh to migrate inland with increasing sea levels. Next steps will be to do a more strategic assessment of those parcels.

- Bath used the sea level rise and storm surge modeling created through this project to support an application for an American Institute of Architects (AIA) Design and Resiliency Team grant. Bath was awarded the grant of technical assistance and will continue its resilience planning through this process. They will be looking at creating more resilience to sea level rise in their downtown area through ordinance changes.
- Scarborough has been working closely with the project partners to develop strategic conservation actions based on impacts to Scarborough Marsh and the surrounding areas. The town worked with project partners to develop and test the MAST tool. Further testing of this tool will be completed in Scarborough over the next two quarters to assist the town and land trust with strategic conservation decisions based on opportunities for future marsh migration.
- Bowdoinham developed a climate change chapter for their new comprehensive plan during this reporting period. The project partners provided technical assistance and support at committee meetings and at public hearings and meetings prior to the June town meeting. The comprehensive plan with climate change chapter was adopted at the town meeting and has been submitted to the Dept. of Agriculture, Conservation and Forestry, Municipal Planning Assistance Team to be reviewed for consistency with Maine's Growth Management Act. For a copy of the Bowdoinham Comprehensive Plan, visit

http://www.maine.gov/dacf/municipalplanning/comp_plans/Bowdoinham%202014.pdf.

• Topsham has made less progress than expected. Project partners, however, continue to work with the town to identify an approach to integrating sea level rise and marsh migration information.

Town	Key contact	Effort this reporting period
Georgetown	Conservation	Continued work on the vulnerability assessment.
	Committee	
Phippsburg	Conservation	Determined to pursue GIS capability to make most use of data developed through
	Committee	this project. Purchased GIS software; attended GIS training.
Bath	Town Planner	Used economic modeling and sea level rise mapping created during earlier reporting
		periods to apply for an AIA Design and Resilience Team grant. Bath was awarded
		the grant of technical assistance and will use it to continue planning for increased
		resilience in their waterfront downtown.
Scarborough	Conservation	Identified key parcels to test for marsh migration potential.
	Committee	
Bowdoinham	Town Planner	Adopted comprehensive plan with new climate change chapter.
Topsham	Conservation	Efforts continue to more engage town staff and identify desired approaches to
	Committee, Town	integrate sea level rise and marsh migration planning.
	Planner	

Summary of local actions:

Difficulties Encountered:

No significant difficulties encountered.

Activities Anticipated Next Quarter:

Over the next quarter we plan to:

- Work with the Scarborough Land Trust and Town of Scarborough to test the MAST tool.
- Continue technical assistance work with the six pilot towns.
- Work with WNERR to begin development of outreach materials and case studies.

Expected End Date:

We expect this project will be complete by December 2014.

Costs:

Total life to date expenses (include this quarter): \$0

Total Approved Budgeted Funds: \$20,000

Are you within the approved budget plan and categories? Yes. Other funds received by project partners are contributing to completion of this project. To date, we have been spending down these funding sources. We expect to request funds from this grant in the next two quarters to reimburse project partners for municipal and land trust technical assistance work and to complete development of the MAST tool.

Bithany S. atto

Signature:

Date: July 15, 2014