**QUARTERLY PROGRESS REPORT**

Quarter: (circle one) 2022 1st 2022 2nd 2022 3rd 2022 4th

Grant Program, Number and Title: RCN GSA 00151, Development and Production of the 2022 Conservation Status of Fish, Wildlife, and Natural Habitats in the Northeast Landscape

Contractor: The Nature Conservancy. Center for Resilient Conservation Science

Project Leader: Dr. Mark Anderson

Abstract:

This quarter was busy. Reacting to the commitment to a shorter timeline and key decisions on the six types of reporting units, we begin analyzing the data and assembling the report chapters. We completed a draft of the forest chapter and circulated it to the steering committee for review of text, maps, charts, tables, and format plus a supplemental tableau-based interactive storymap. After receiving the thumbs-up review on the forest chapter, we begin assembling the three chapters: wetlands, unique communities, river and streams. We had an impromptu meeting with Lexicon team to resolve differences that have emerged in our targets and terminology. That meeting resulted in an expanded approach to the unique communities, further exploration of ruderal grasslands /shrublands, and clarification on our tidal systems. The only delay has been resolving unexpected problems in the compiled regional conservation lands dataset.

Were planned goals/objectives achieved last quarter?

Yes, we received the review and feedback we needed to proceed further with the rest of the chapters. Additionally, we received positive feedback from the NE Directors meeting and resolved discrepancies with the Lexicon team as to targets and nomenclature.

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

1. Conservation Lands: Yes, the regional dataset is now assembled based on updated information compiled and integrated from 13 states. We quality controlled the data for consistency in attributes, GAP status, and boundaries, and we are reviewing discrepancies within and among states in order to finalize the data. We compared the dataset to three other sources the 2018 Secured Areas, Harvard Forest Wildlands, and PAD-US, and resolved disagreements in GAP and/or boundary and overlaps. There were more inconsistencies than we expected and it is taking time to work through them all.

2) Forests: We combined Northeast Terrestrial Habitat Map and the 2019 NLCD to map the extent and type of Forests. We analyzed the forest change data by forest type, state, ecoregion, and region, and we calculated metrics for:

* historic conversation,
* 20-year loss/gain,
* securement,
* fragmentation and connectedness, and
* canopy height.

We created the text, maps and charts for the Forest Chapter and circulated a draft version to the Steering Committee for review. We also created a spreadsheet based storymap in Tableau (spreadsheet display software) that allows users to interact with the information. We hosted one call to collect feedback on the chapter and received excellent feedback and full support to go forward with this chapter in itself and as a model for the other chapters.

3) Wetlands: We combined multiple sources: the Northeast Terrestrial Habitat Map, the 2019 NLCD, the Fathom floodplain data and the TNC resilient coastal site map to delineate the extent of the wetlands in the study region by the three lexicon types. We analyzed the wetland change by each type, and by state, ecoregion, and region. We calculated metrics for:

* historic conversation,
* 20-year loss/gain,
* securement,
* fragmentation and connectedness, and
* threat of conversion

We are creating the text, maps, and charts for this chapter.

1. Birds: No progress this quarter. We have assembled the BBS survey data going back to 1991, matched it with our table from 2011, and tagged birds with their preferential habitat type, but we put this target on the back-burner while we resolved other issues.
2. Rivers and Streams. Using the assembled baseline data we have started the analysis of the freshwater metrics. We clarified taxonomy and basemap and recommend HUC6 by state as a subunit for reporting. We have completed the analysis for length of network, temperature and gradient variation, dam density in the headwaters, naturalness of the floodplain and water quality (nitrogen, phosphorus, and sediment). With the Lexicon team we agreed on a simplified stream classification. We are now starting to draft the chapter.
3. Lakes: No progress this quarter. Lake data set is ready to run awaiting revised secured lands and loon data.
4. Unique habitats: After conversation with the Lexicon team, we expanded this section to include more complete merge of geology and elevation (broad scale) and mapped habitats (small scale) to address issues of historic conversion, current securement, and threat of conversion at both scales. We expanded the chapter outline to reflect these changes and we are beginning work on the revised analysis. Native and ruderal grasslands will be added to this chapter.
5. Climate Change: We intersected the TNC land-based climate resilience data with the Northeast Terrestrial habitat map to identify areas of high climate resilience relative to the targets above. We are still experimenting with fine-scale climate models, and are working to confirm that they will be useful to state-based status estimates.

Difficulties Encountered in Meeting Goals and Objectives:

The quarter had few difficulties other than the unexpected extent of discrepancies in the conservation lands dataset which resulted in the data requiring substantially more time than anticipated to finalize than anticipated. Additionally, our central office in Boston remained closed and is now set to reopen in November. Our team continues to work remotely.

Activities Anticipated Next Quarter:

1. Conservation Lands: Finalized and incorporated in the other chapters.
2. Forests and Wetlands: Both chapters completed, circulated, and finalized.
3. Birds: Analysis completed for all habitats and birds.
4. Rivers and Streams. Chapter completed and finalized.
5. Lakes: Analysis complete, chapter started.
6. Unique habitats: Chapter completed and finalized.
7. Climate Change: Analysis complete, chapter started.

Expected End Date:

The end of February 2023.

Costs:

Total life to date expenses (include this quarter): $52,514,85 (qtr. 13,911.77)

Total Approved Budgeted Funds: $80,000

Are you within the approved budget plan and categories? Yes

**The foregoing information is accurate as of the date set forth below.**

**THE NATURE CONSERVANCY – CENTER FOR RESILIENT CONSERVATION SCIENCE**

By: 

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Title: Director, Center for Resilience Conservation Science

Date: 10/31/2022