

January 29, 2016

Mark Zinan
Grants and Agreements Assistant
U.S. Fish and Wildlife Service
300 Westgate Center Drive
Hadley, MA 01035

**Re: Performance Report – 12/31/2015
F14ACO1023**

Dear Mark:

Below is a detailed report highlighting the progress we have made on the above-referenced project for the period ending 12/31/15. Please let me know if you would like any further clarification on our progress to date.

Sincerely,



Brooke Maslo, Ph.D.
Assistant Professor

**PROTECTION OF CRITICAL BEACH-NESTING BIRD HABITATS IN THE WAKE
OF SEVER COASTAL STORMS
Interim Progress Report – F14AC01023
December 31, 2015**

Tasks Completed This Period

Quantify Changes in Habitat Resulting from Superstorm Sandy

Completed. Below is a table listing the available habitat for target species prior to Superstorm Sandy and after Sandy under two management scenarios. In the “Same Management Zone” scenario, we left the pre-Sandy beach-nesting bird management zones in place. In the “Protection Zone” scenario, we essentially told the habitat models that all habitat was available to be protected/managed for beach-nesting bird species.

Species	Extent of Available Habitat (ha)		
	pre-Sandy	post-Sandy (Same Mgmt Zones)	post-Sandy* (Protection Zone)
American oystercatcher	4,920	4,815	4,972
black skimmer	3,605	3,441	4,363
least tern	591.7	585.3	2,445
piping plover	673.2	702.5	2033

*It’s important to note that the post-Sandy Protection Zone habitat area cannot directly be compared to the pre-Sandy existing habitat (i.e. we are not reporting that Sandy actually created 1,360 ha of piping plover habitat) because the pre-Sandy modeled calculated species’ probability of occurrence based on the management regime that was in place, which was an important predictor.

Evaluation of Storm Recovery Impacts on BNB Habitat (April – September 2015)

After seeing Tracy Rice’s presentation at the 2016 Piping Plover and Least Tern Workshop in West Virginia on quantifying changes to coastal habitat after Sandy, we are very interested in using her data to complete this task. Originally, we collected habitat information from transects over the entire study area. We ran the transects in 2014. However, many beach stabilization projects have occurred since then, and we feel that it would be more useful to use Tracy’s more current data. We have requested a no-cost extension for our project, which hopefully will allow us to incorporate this new GIS data into our habitat models to provide a more robust estimate of the impacts of beach stabilization projects on beach-nesting bird habitat.

Development of a Storm Response Protocol for Identifying Beach-Nesting Bird Habitat

We have begun to generate this protocol, which we have outlined as consisting of four components. First, we are identifying needs that would allow wildlife biologists to adequately assess habitats in the wake of severe storms. These include immediate access to sites (once

deemed safe for human entry), presence during aerial flyovers, and authorization to view aerial imagery. We also feel it is necessary for wildlife agencies to participate in multi-agency storm response meetings. The second component of the protocol is considered a rapid assessment, and generally describes methodologies to visually identify sites with potentially high habitat value (either from flyovers, aerial imagery, or on-the-ground assessment). Biologists would then quantitatively score candidate sites based upon suitability criteria (i.e. pre-Sandy model outputs, intensity of recreational use, proximity to historic nesting sites, etc.). Sites can then be ranked for protection. Phase 3 of the protocol involves running new habitat suitability models that incorporate post-storm landscape changes. Biologists can then use model-generated suitability scores to rank sites for protection. Finally, the protocol will include recommendations for regulatory changes that can be incorporated into new beach management agreements with municipalities and other management units. Such recommendations include: adding built-in flexibility to change protection zonation annually based on current conditions; annual (not seasonal) protections for important nesting sites, particularly in fall when birds are prospecting for next year; and fencing obligations regardless of bird presence. Finally, we are exploring ways to create a mitigation banking system for management units with high recreational use.

Best Management Practices for Preservation of Beach-Nesting Bird Habitat

We have not begun this task to date. We anticipate working on this during the next project period. This work will be disseminated in our regional stakeholder workshops, which are planned for Fall 2016.

New Applications of Work:

1. We have submitted our draft report entitled *Identification of Potential Beach-nesting Bird Habitat to Be Set Aside in Municipal Beach Management Plans* to USFWS, USFWS-NJFO, NJ Endangered and Nongame Species Program, and to the New York wildlife agencies, and we have received some good feedback from many people. We have placed a deadline for feedback by January 31, 2016. We will then incorporate feedback into the main document and submit a final draft by the end of February.
2. As part of this project, we have also evaluated the capacity in which piping plovers serve as a surrogate species for American oystercatchers, black skimmers and least terns. For this study, we are using the model results generated in the pre-Sandy landscape. We are not ready to disclose the main findings of this exercise; however, we anticipate submitting a manuscript of this work in February 2016.
3. During the Workshop, we engaged in several discussions about the utility of our models to Long Island. We have requested a no-cost extension so that we can utilize our remaining staffing funds to complete this task. Provided we receive the data we request from various NY agencies, we are confident that we can expand our work to the NY area.

Youth and Veteran Involvement

We are continuing to employ part-time a female, minority youth, who is assisting PI-Maslo in the generation of models and maps.