



Compensatory Mitigation for Birds: Opening a Dialog

July 26, 2022, Tarrytown, NY

Notes

A side meeting of the NYSERDA State of the Science on Wildlife and Offshore Wind Hosted by Atlantic Marine Bird Cooperative Marine Spatial Planning Working Group

(I) INTRODUCTION & BACKGROUND PRESENTATION:

Meeting Focuses:

- Identify, compile and utilize bird abundance, distributions, and movement at sea
- Inform management and conservation of decisions related to marine spatial planning (offshore wind emphasis)

Definitions:

- “Mitigation” *to avoid, minimize, restore, and or compensate for loss*
- “Compensatory mitigation” - *replacement, substitution, protection of ecological resources to offset anticipated losses caused by a permitted activity = no net loss* (USFWS definition)
 - Monitoring is sometimes listed as a form of mitigation BUT is not in itself mitigation – Rather it is a way to identify efficacy of mitigation.
- MBTA regulation: New rule under development by USFWS; Notice of Proposed Rulemaking to develop permitting system for incidental take – October 2021
 - Special provisions for regulating incidental take associated w/ 7 activities including wind energy; release for public comment expected within next several months

Background:

- Why open a dialog?
 - offshore wind is growing rapidly
 - science incomplete but growing (to date no finding of impacts BUT new science, tech and data efforts are ongoing)
 - avoidance and minimization options limited (few viable options esp for cumulative impacts)
 - effective compensatory mitigation takes time
- The AMBC Marine Spatial Planning Working Group held an initial (virtual) meeting about mitigation on 5/14/2022 (notes available on request). Presentations were given by:
 - The Conservation Fund (Nick Morgan): Mitigation solutions
 - NYSERDA (Kate McClellan-Press): Environmental Mitigation & Monitoring Planning
 - NJDEP (Reneé Reilly): Offshore Wind Research and Monitoring Initiative (RMI)



Precedent for compensatory mitigation

- onshore wind impacts (raptors and ESA-listed species such as California Condor)
- state offshore renewable energy certificates (NY and NJ require mitigation plans as a condition of power purchase agreements)

Objectives for today's meeting:

- Initiate a dialog on considerations for proactive compensatory mitigation planning
- Review & discuss AMBC Marine Spatial Planning Working Group efforts to identify conservation actions
- Identify potential partners, roles, & mechanisms
- Discuss next steps for informing future planning processes

(II) ADDITIONAL PRESENTATIONS:

1) Aspen Ellis - *Considerations for effective compensatory mitigation planning for Marine Birds*

- Seabirds are highly threatened
 - 20% marine extinctions
 - Most have declining pop trends
 - Current populations have been reduced 50-77%
 - Seabirds are threatened by wind due to life history strategies
 - There is a spatial overlap of exposure, behavior and pop status and demography
 - 2 main impacts of offshore wind: Displacement and collision
 - Cumulative impacts are important with multiple populations and multiple facilities with multiple impacts
 - Empirical measure of impacts will be extremely challenging! Need for modelling (e.g., PVA).
 - Monitoring provides data to populate models
 - First aspect of mitigation is avoidance but there are economic, technological demands and societal demands which may complicate avoidance.
 - Minimization options: layout, deterrents, curtailment
 - Compensation: precedent for compensatory mitigation for habitat and endangered species impacts
 - For marine birds, regulatory agency prescribes mitigation
 - UCSC working on models to compare efficacy and efficiency of different types of compensatory mitigation
- e.g.s, compensatory mitigation: Translocation- to other island sites, eradication of predator species, bycatch reduction

- PVAs: uncertainty in outputs, data limitations -> Estimates must be precautionary! Incentivize further research!

Take homes:

- Monitoring and modelling will be essential to estimate impacts.
- Selection of appropriate temp and spatial scale of mitigation will be critical.
- Management by an overarching regulatory agency will be key to success

Discussion/Q&A:

- Could do compensatory mitigation for non-breeding populations and areas (e.g. terns in South America)

- How do we link it to the offshore wind industry?

A: Based on modelling techniques of risk.

- Remaining question- How do you arrange that compensatory mitigation in practice?

A: This is a question that the AMBC MSP would like to help stakeholders answer

2) Stephanie Vail-Muse - USFWS Compensatory Mitigation Policy

- Mitigation hierarchy: avoid, minimize, compensate

-- Mitigation- actions taken to avoid, minimize, restore and compensate or the loss of ecological values due to an activity

- Compensatory mitigation-replacement, substitution, enhancement, or protection of ecological values

-- Efforts to avoid & minimize, precede compensatory mitigation... BUT
There are sometimes impacts that can't be avoided or minimized.

-- Considerations: landscape/big scale, no net loss, in-kind mitigation of species, reliable consistent metrics, durability, effective conservation outcomes, effective collaboration

- Mechanisms used: habitat-based vs. non-habitat based

- Permittee: responsible for mitigation for a site via Conservation bank program, in-lieu fee program site, habitat credit exchange, etc

Discussion/Q&A:

- In the context of offshore wind, when is comp mitigation required?

A: No comp mitigation as of yet.

- How does this apply for species that are global?

A: global species are generally eligible, though focus on impacted population

- Can a developer establish a proactive compensatory mitigation arrangement with USFWS?

A: Yes. California Condor plan mentioned as an example used for onshore wind

3) Shilo Felton - *Renewable Energy Wildlife Research Fund* (www.rewi.org)

- REWI Mission: facilitate responsible development of wind and solar energy while protecting wildlife and wildlife habitat
- Renewable energy wildlife research fund: industry provides funding to inform BMP for wildlife for renewable energy facilities
- Priority questions addressed by program: land based wind -> bat and bird activity and fatality risk, eagle fatalities, etc

Note: all research results must become public as report or scientific publication pub.

- RFPs: \$65-175K per year per project, favors cost effective proposals then REWI gets funding from project partners

Discussion/Q&A:

- How does this apply to compensatory mitigation fund?
A: Having a single steward helps to pool funds, a system to id priorities with stakeholder buy-in, make sure conservation offsets have quantifiable and verifiable conservation outcomes

(III) COMPENSATORY MITIGATION DISCUSSION

Ideas and priority concerns for establishing compensatory mitigation projects*

- 1) Description of specific impact to the system/receptor
- 2) What kinds of conservation actions could help to offset the loss?
- 3) Species/life stages targeted by conservation
- 4) Other known threat targeted by conservation if not directly offshore wind related
- 5) New/ongoing projects that fulfill this need

**See table, last page of notes for discussion participant input*

(IV) ADDITIONAL QUESTIONS TO CONSIDER IN COMPENSATORY MITIGATION PLANNING

-- Group ran out of time to discuss these questions during meeting; Will be addressed in subsequent meetings hosted by the AMBC Marine Spatial Planning WG.

1) Concerns & challenges in using compensatory mitigation to address impacts?

- Are there enough options for compensatory mitigation for species with limited ranges?
- How to put a dollar amount for developer on impact?
A: Maybe something like NYSERDA - per megawatt charge for developers (insurance for developers).
A: Best options for compensatory mitigation actions could be in another country.

2) What mechanisms exist for developing a compensatory mitigation plan? Fed and/or State agencies (via which authorities?); Stakeholder/industry groups (voluntary?)



3) How to structure a mitigation bank, or in lieu fee program? Who would manage (Fed & State agencies? Regional Cooperative? NGO?)

4) Other topics that need to be addressed in recommendations for effective compensatory mitigation planning:

-VALUATION: How to translate bird impacts into compensatory actions? Risk models?

-CUMULATIVE IMPACTS: How can actions address, when permitting at site scales?

-DISPLACEMENT/HABITAT LOSS: How to account for these impacts?

(V) NEXT STEPS:

- AMBC Marine Spatial Planning WG intends to develop a document with recommended considerations, components, alternatives, & examples to inform future compensatory mitigation planning efforts

- WG leads will host a virtual meeting with interested participants in the upcoming months to further discuss components of these recommendations

Draft Impact Concerns – Conservation Solutions Table. Developed with participant input during discussion. Insufficient time to complete.

Priority Offshore Wind-related Concerns	Species/life stage impacted	Conservation Activity	Species/Life stages targeted by conservation	Threat targeted by conservation (if not directly offshore wind related)	New/ongoing projects that fulfill this need
Description of the specific impact to the system/receptor; timing of potential impact (construction/operation/decommissioning)	Specific species and age affected	Actions that offset realized losses to the impacted system/receptor. These may be activities that limit impacts from other sources	The specific species and age targeted through proposed conservation activity	If conservation does not directly address an impact from offshore wind, what threat is being addressed in compensation to ensure 'no net loss'	Projects (proposed or ongoing) that fulfill the conservation activity to offset potential take.
Collision (offshore turbines) ^a	Northern Gannet/adult; subadult	Reduce commercial fishing in bycatch areas	adult/subadult	reduce bycatch mortality	
	Northern Gannet/adult; subadult	Remove ghost gear (and other debris)	adult; subadult; juvenile	reduce entanglement mortality	
	Northern Gannet/adult; subadult	Develop avian influenza monitoring/control protocols	adult; subadult; juvenile	Decrease disease mortality	
Reduction in foraging opportunities ^b via 1) displacement 2) prey habitat change	Roseate Tern/adult; subadult; chick				
Avoidance/barrier effects ^c	Red Knot/adult; subadult; juvenile				
Habitat loss - cable landfalls & substations	Piping Plover/adult; subadult; juvenile; egg-productivity				

^aAdditional species listed: 1) Roseate Tern/breeding; pre- post-breeding dispersal, 2) Black-capped Petrel/adult; subadult, 3) Short-tailed Albatross (Pacific coast), 4) Murrelet species (Pac coast)

^bAdditional species listed: Northern Gannet/adult; subadult

^cAdditional species listed: 1) Northern Gannet/adult; subadult, 2) Piping Plover/adult; subadult; juvenile