ATLANTIC MARINE BIRD COOPERATIVE

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Karen J. Baker, Chief, Office of Renewable Energy Programs
William Yancey Brown, Chief, Environmental Program
Bureau of Ocean Energy Management (BOEM)
45600 Woodland Road, VAM-OREP
Sterling, VA 20166

CC: David Bigger, Tre Glenn, David Pereksta, and Timothy White

RE: Request for guidance on avian compensatory mitigation and voluntary conservation offsets, to achieve net gain for marine birds from offshore wind energy development

Dear Karen Baker and Dr. William Brown,

On behalf of the Atlantic Marine Bird Cooperative (AMBC) Marine Spatial Planning (MSP) Working Group[1], we write to identify the urgent need for guidance on addressing expected impacts to birds from offshore wind energy development. We request that the Bureau of Ocean Energy Management (BOEM) lead the development of a framework, in coordination with the United States Fish & Wildlife Service (USFWS), to guide mitigation of these impacts – including both mandatory compensatory mitigation and voluntary conservation offsets[2]. Two landmark documents generated the immediate need for such a framework, which were released in May 2023 by BOEM and the USFWS:

- BOEM's Ocean Wind 1 Offshore Wind Farm Final Environmental Impact Statement (BOEM 2023), which set the first precedent requiring offsets for take of listed birds from a U.S. offshore wind energy project.
- USFWS's final Endangered Species Act Compensatory Mitigation Policy (ESA-CMP)[3].

[1] The views and opinions expressed herein do not necessarily state or reflect views, opinions, or policies of the United States or Canadian governments or any agency thereof, nor any state or provincial government or agency thereof. Mention of any trade names or commercial products does not constitute their endorsement by federal, state, or provincial governments.

[2]* Conservation offsets may be less than, equal to or greater than the adverse impacts for which mitigation is sought. *'**Compensatory mitigation**'* is generally defined as a regulatory requirement to offset unavoidable adverse impacts to wildlife and achieve no net loss of biodiversity. In contrast, '***voluntary conservation offsets***' are generally implemented by developers to go above and beyond no net loss, and achieve net benefit to wildlife. *'**Net gain**'* broadly refers to voluntary and/or mandatory mitigation measures that cumulatively achieve '***net positive impacts***' on wildlife.

[3] https://www.fws.gov/press-release/2023-05/final-policies-mitigating-impacts-development-further-conservation

These new precedents influence dozens of other projects anticipating BOEM Records of Decision and USFWS Biological Opinions, some expected before the end of this year. Many developers have already expressed interest in voluntary measures to conserve birds affected by offshore wind energy development (Jedele et al. 2023). ***Voluntary*** measures may either:

1. achieve **no net loss** of birds, or otherwise
2. contribute to **net positive impacts** on birds from offshore wind energy development.

With guidance from BOEM, developers may even set up voluntary measures to pre-emptively fulfill expectations for ***required* compensation**, or to modify approved compensatory mitigation arrangements (ESA-CMP). Given aggressive permitting timelines, guidance from BOEM is urgently needed to plan and implement conservation measures effectively and consistently among projects. We would like to see BOEM involved in a planning process that incentivizes developers to take on meaningful projects contributing to positive impacts.

We recommend that BOEM convene a stakeholder workshop in 2023, in coordination with USFWS, to develop a framework on net gain strategies for marine birds. In this context, '***marine birds***' refers to all birds using the marine environment, including offshore airspace, that may be affected by offshore wind energy development. This workshop should include subject matter expert input from federal and state agencies, the offshore wind energy industry, academia, consulting firms, and environmental non-governmental organizations (eNGOs). The framework should provide guidance on implementing both mandatory compensatory mitigation and voluntary conservation offsets for offshore wind energy development. **We suggest that such a framework identify a set of common conservation objectives and associated metrics that all stakeholders employ to achieve consistent, empirically-based, and scientifically supported results.**

The AMBC MSP Working Group

Founded in 2005, the AMBC is an international group of resource managers, scientists, and other professionals, with interest and expertise in marine birds. Members of the AMBC MSP represent a diverse set of agencies, non-governmental organizations, environmental consulting firms, offshore wind industry, and universities. The AMBC MSP Working Group brings together experts in avian data, analysis, and planning to inform management and conservation decisions related to marine spatial planning. Our purpose is to synthesize and evaluate information on bird abundance, distribution, and movement in the offshore environment. Since May 2022, AMBC MSP members have participated in six working group meetings that led to the recommendations included in this letter, including a workshop in Tarrytown, NY (July 2022) and a meeting of the AMBC held jointly with the Roseate Tern Recovery Team (December 2022).

ATLANTIC MARINE BIRD COOPERATIVE

The Need to Achieve Net Gain to Marine Birds

The climate crisis has had drastic consequences for marine birds (Dias et al. 2019). Rising ocean temperatures have led to increased sea levels that flood major breeding colonies, and changes in prey distributions that cause mass starvations of marine birds (as seen in the Gulf of Maine, Gulf of Alaska, Pacific Northwest; Kress et al. 2017, Jones et al. 2018, Romano et al. 2020). Seabirds are already one of the most threatened groups of birds in the world (Croxall et al. 2012). The development of commercial-scale offshore wind projects in the United States is a critical part of a much needed shift in our national portfolio of energy production to sources that are carbon neutral (Lee et al. 2021). **However, our responsibility as stakeholders is to ensure that the development of offshore wind energy avoids unintended detrimental impacts to marine bird populations.**

While offshore wind energy development is an important strategy to address the impacts of climate change to marine birds, it also poses threats of collision and displacement-induced habitat loss (Drewitt and Langston 2006, Thaxter et al. 2015, Dierschke et al. 2016, Welcker and Nehls 2016). Potential impacts from these immediate threats include increased mortality and decreased population size, given the long lifespan and slow population growth rates of seabirds (Sandvik and Erikstad 2008). While there are European precedents for understanding some aspects of the challenges marine birds face due to offshore wind development, the installation of thousands of large turbines (10 MW+) in the marine landscape of the U.S. poses a novel set of potential threats to North American bird populations. Uncertainty around these impacts can delay actions, thereby increasing the risk that negative effects on bird populations occur without redress.

To address these concerns and manage risk, some offshore wind energy developers are considering **voluntary conservation measures.** These include a range of offsets and management actions that seek to promote net population gain for species protected under the Migratory Bird Treaty Act (MBTA). Until completion of the USFWS proposed MBTA rulemaking[4], compensatory mitigation is currently required of developers only for species listed under the ESA. Though mandatory compensation and voluntary net positive approaches to biodiversity conservation are treated as separate processes, both contribute to the goal of improving bird populations while rapidly advancing offshore wind. **Whether required or voluntary, these processes are complementary – to attain net gain from voluntary actions, compensatory mitigation must first achieve no net loss.**

Achieving no net loss of birds from offshore wind energy development is key to meeting the obligations set out in the Memorandum of Understanding between BOEM and the USFWS. This agreement aims to "protect, restore, and enhance habitat of migratory birds."[5] As per the memorandum, BOEM and the USFWS are responsible for "developing a framework for appropriate mitigation measures to offset offshore mortality episodes." Compensatory mitigation measures for eagles are standard practice for USFWS-permitted land-based wind energy facilities, which use collision

[4] https://www.regulations.gov/document/FWS-HQ-MB-2021-0105-0001

[5] https://www.boem.gov/sites/default/files/renewable-energy-program/MMS-FWS_MBTA_MOU_6-4-09.pdf

risk models, post-construction mortality monitoring, and science-informed resource equivalency analysis to determine appropriate conservation measures that offset potential take. However, carcass searches are infeasible over the open ocean, and turbine strike detection systems are not yet broadly verified (or in some cases commercially available) for use offshore, which has made it difficult to validate offshore wind collision risk models for marine birds. In anticipation of emerging models and technologies to assess collision and displacement, now is the time to engage in proactive planning for conservation offsets.

Existing industry-standard impact avoidance and minimization measures are unlikely to achieve net gain, let alone no net loss (BOEM 2023). Avoidance involves selecting sites for offshore wind energy developments in low-use areas for seabirds, while minimization may include structural or temporal alterations to turbine design and operation (Croll et al. 2022). **Although these approaches have the capacity to reduce some impacts, they cannot fully mitigate all impacts to seabirds,** due to siting, engineering, efficacy, and economic constraints (Croll et al. 2022). Indeed, the cumulative effects of approved projects in the U.S. are expected to be moderate (BOEM 2021). The rapid pace of wind energy development further limits the time and capacity for empirical measurement of impact and its adaptive reduction, thus threatening to increase cumulative risks to seabirds. Not only are seabirds more threatened than other groups of birds, but the deterioration of their conservation status has accelerated in recent decades (Croxall et al. 2012). Therefore, it is critical to develop a framework under the mitigation hierarchy that avoids, minimizes, and compensates for anticipated negative impacts on seabirds (Croll et al. 2022).

Mandatory conservation offsets not only mitigate residual impacts but can also achieve net positive benefits to increase affected seabird populations (Moilanen and Kotiaho 2021). A broad suite of existing conservation actions that have been demonstrated as effective at boosting seabird populations have not yet been put into practice by the offshore wind energy industry in the U.S. (Croxall et al. 2012, Raine et al. 2022). Such conservation is most effective via a combination of onsite/in-kind[6] measures (e.g., "kittiwake hotels"[7] and other nesting structures or roosting areas constructed by offshore wind energy developers in Europe) and various offsite/out-of-kind conservation activities (Croll et al. 2022). Although a framework for achieving marine net gain from offshore wind energy development does not yet exist in the U.S., such an effort has garnered substantial support from multiple stakeholders[8]. Particularly noteworthy, many offshore wind energy developers have made organizational commitments to achieve net positive impacts from new offshore wind energy projects by 2030.

[6] '***In kind***' refers to "a resource of a similar structural and functional type to the impacted resource (33 CFR 332.2); when used in reference to a species, in-kind means the same species" (ESA-CMP).

[7] https://hornseaproject3.co.uk/kittiwake-compensation; https://www.scottishpowerrenewables.com/news/pages/lowestoft_kittiwake_hotels_open_for_business.aspx

[8] Marine Law Symposium held by Roger Williams School of Law and The Nature Conservancy, 20-21 Apr 2023. *Can Offshore Wind Development Have a Net Positive Impact on Biodiversity? Regulatory and Scientific Perspectives and Considerations*. https://law.rwu.edu/events/marine-law-symposium

Stakeholders seek guidance from BOEM to implement conservation offsets effectively through a process that has buy-in from all sectors, including regulatory agencies.

Rapid Development Needs Rapid Conservation Actions to Combat Uncertainty: Why Delaying Mitigation Until Post-Construction Is Not Precautionary

Rapid action will be necessary to assess the efficacy of selected mitigation efforts in achieving marine net gain. This effort will require the development of rigorous, quantitative, evidence-based approaches to estimate take, assess resource/habitat equivalency, and calculate offsets. This is particularly true given the paucity of post-construction monitoring data from the U.S. and the high degree of uncertainty with regard to impacts. Assessing the effects of offshore wind turbines on seabird populations is a significant conceptual and logistical challenge, and may take years to refine. Yet the unprecedented speed of project reviews, paired with the current biodiversity crisis, means that **we cannot wait until we fully understand impacts, to implement compensatory mitigation measures.**

Retroactive fees charged only once effects are thoroughly assessed will result in delayed conservation opportunities - and delayed mitigation programs on the ground. Rather, **we suggest that the net benefit approach be based primarily on implementation of conservation offsets prior to (or during) the actual measurement of effects. Mitigation approaches can then be adjusted to adaptively manage for the known impacts of offshore projects, if impact assessments indicate that we have failed to achieve an overall positive effect.** This is in line with current net positive impact and marine net gain actions for offshore wind energy being undertaken in other parts of the world (e.g., DEFRA 2022).

We urge BOEM to develop an actionable framework in coordination with USFWS, starting in 2023, which identifies, operationalizes, and supports robust conservation actions to offset the potential loss of birds at offshore wind facilities. Such a framework should also address how to evaluate the associated benefits of compensatory mitigation and/or voluntary conservation offsets. A consistent framework to identify offsite/out-of-kind compensatory mitigation actions that benefit bird populations across their ranges (not just at the site of impact) can also serve as a tool to align and validate voluntary actions that contribute to net positive impacts on biodiversity. Marine net gain approaches help to further manage risk resulting from uncertainties in the impacts of offshore wind energy development on birds (Hooper et al. 2021). Establishing this process will take time, as will subsequent conservation actions. Therefore, we urge the agencies to initiate a planning process within the next six months and identify actionable near-term approaches as well as a longer-term framework.

Next Steps

Within the next 6 months we urge BOEM to initiate the development of guidance, in coordination with USFWS, on how best to offset known or estimated adverse impacts of offshore wind energy development on birds through coordinated conservation actions. This plan should inform both voluntary and mandatory conservation actions, by identifying an agreed-upon set of conservation goals and scientifically robust management actions for marine birds. A proactive approach to conservation offsets will empower BOEM to address impacts to birds early in the lease periods of offshore wind projects, rather than reactively.

We urge BOEM to initiate this process via a workshop of expert stakeholders, in coordination with USFWS, then convene a standing working group of internal and external experts that continues to develop and refine this guidance. The guidance should focus on: **using conservation offsets to maintain or improve quality habitat, and facilitate stable or growing avian populations affected by offshore wind energy development**. In developing such a framework, components and questions to consider at the workshop include the applications of the ESA-CMP (and proposed MBTA rulemaking) to offshore wind energy and birds, such as:

1. Agreeing on the best available scientific methods to quantify unavoidable impacts on birds from offshore wind energy development (e.g., how should direct and indirect impacts be measured, across multiple species, regions, and stressors?).

2. Identifying and quantifying anticipated benefits from proposed offset activities and objectives (e.g., how should the effects of onsite/in-kind, and/or offsite/out-of-kind conservation offsets be calculated and adaptively managed, across multiple species, regions, and stressors?).

3. Ascertaining that the value of the offset activities outweighs the unavoidable effects of offshore wind energy development, such that a predetermined level of net gain is achieved (DEFRA 2022; e.g., how to structure, manage, and distribute funds such that all stakeholders gain confidence in the assessment of impacts, prioritization of species, selection of actions, and implementation of conservation plans?)

In summary, it is critical that BOEM act with stakeholders now to facilitate a plan for conservation offsets for birds, with respect to offshore wind energy development. The first two utility-scale projects in U.S. federal waters are already permitted and under construction. Existing avoidance and minimization measures are not expected to achieve no net loss of birds, so the USFWS is requiring compensatory mitigation for impacts from recent projects (BOEM 2023)**.** Over a dozen more projects have construction and operation plans undergoing federal approval and multiple projects have pledged to conduct voluntary conservation actions. Now is the time to engage in planning to support ambitions for a net positive environmental impact from this burgeoning industry.

ATLANTIC MARINE BIRD COOPERATIVE

The Atlantic Marine Bird Cooperative's working group for Marine Spatial Planning is happy to provide our own time and expertise in this process. Please reach out to our coordinator, Dr. Holly Goyert, with any questions. We thank BOEM for the agency's efforts to date that encourage offshore wind development to best protect marine birds and other bird species that use the marine environment.

Sincerely,

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Rutgers University
UMass Amherst
University of California Santa Cruz
University of Rhode Island

Federal or State Agency[9]
USFWS
Maine Dept. Inland Fisheries and Wildlife
Connecticut Department of Energy & Environmental Protection
Virginia Department of Wildlife Resources

Nonprofit
American Bird Conservancy
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[9] Views and opinions expressed herein do not necessarily state or reflect views, opinions, or policies of the United States government or any agency thereof, nor any state government or agency thereof.

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