

Focus on Advancing Technologies for Whale Conservation and Responsible Offshore Wind Development

National Oceanic and Atmospheric Administration (NOAA) Fisheries, Bureau of Ocean Energy Management (BOEM), and Department of Energy (DOE) support the rapid development and deployment of advanced or new technologies that can further improve the ability to detect, monitor, and avoid negative interactions between marine mammals and offshore wind facility construction and operations, as well as other anthropogenic stressors. Through collaboration with scientists, industry, and other experts, NOAA, BOEM and DOE can help advance current and novel technology solutions, evaluate their effectiveness in detecting large marine mammals, and explore their potential benefits for applications in sustainable energy development and other ocean sectors, as well as for other priority species. This collaboration is intended to provide new options to the suite of existing mitigation measures that are already protecting marine mammals from the impacts of offshore wind facility construction.

Catalyst Summit

On November 1st, 2023, NOAA Fisheries, BOEM, and DOE co-hosted a hybrid meeting of more than 50 representatives of government, the offshore wind industry, environmental non-profit organizations, scientists, and other leaders in the area of technological advancement in support of whale conservation and responsible offshore wind development. Though focused on technologies at the nexus of offshore wind and whales, it is anticipated that these tools will likely either emerge from or benefit other ocean use sectors and marine conservation priorities.

The Summit marked the kickoff of a series of other workshops and expert-level conversations that will inform next steps, including a collaborative technology workshop series. Specifically, the Summit included reaffirmations of commitments from all sectors represented, including U.S. government participants, to continue collaborative engagement in this space; a call to identify models, technologies, and information from other sectors, research areas, and potential partners; and an understanding of the value from both conservation and economic standpoints of developing, validating, and incorporating whale detection and monitoring technologies into offshore wind construction and operations.

Upcoming Activities

At the Summit, NOAA, BOEM, and DOE shared updates and announcements including:

Collaborative Technology Workshop Series

This [workshop series](#) will be hosted by the Regional Wildlife Science Collaborative and Marine Technology Society, in partnership with DOE National Laboratories, with support from DOE and contributions from NOAA and BOEM. The series is aimed at assessing the state of the science regarding technologies, tools, and methods for monitoring marine mammals around offshore wind construction activities. The workshops will evaluate existing technologies, develop a technical framework for evaluating efficacy of existing and new technologies, as well as inform the rapid development and deployment of new and advanced technologies that can further improve the ability to detect, monitor, and avoid negative interactions with marine mammals with offshore wind facility construction.

Notably this effort will engage diverse subject matter experts and stakeholders (e.g., federal, industry, academia, NGO) to:

1. Identify variables by which technology efficacy can be assessed;
2. Detail the efficacy, application to date, and extent of validation of existing tools and techniques; and
3. Analyze technology development needs and identify additional technology development or validation needs.

Collaborators will also produce a set of technical papers on the topics above and publications in peer-reviewed journals.

NOAA Fisheries' Commitment to Technical Guidance

NOAA Fisheries will incorporate the outcomes from the Collaborative Technology Workshop Series, as well as its own efforts and ongoing work, to consolidate expertise, process, and information needs into a guidance document that can be used by project sponsors to effectively collaborate with the agency and, ultimately, provide a broader suite of effective tools for mitigating impacts of OSW development on protected species to be considered during environmental reviews.

BOEM-NOAA MOU Annex

As BOEM and NOAA approach the two-year anniversary of their [offshore wind MOU](#), the agencies are considering a number of annexes that reflect procedural progress and other priorities. Among those, is an annex solidifying BOEM and NOAA's shared commitment to innovation and harnessing technologies.

NOAA Fisheries-The MITRE Corporation Potential Partnership

NOAA Fisheries is exploring partnership opportunities with The MITRE Corporation, a technology-focused, federally funded, research, and development center that can support pathways to fast-track technological ideas and bring research technologies to the marketplace, including those that can reduce North Atlantic right whale fishing gear entanglements and impacts due to vessel strikes. MITRE has experience working with other partners on similar technologies relevant to NOAA Fisheries' needs. Industries such as shipping, offshore wind, recreational fishing, and others have expressed a need to accelerate this technological development. MITRE also has unique and extensive technical experience in underwater acoustics.

NOAA Fisheries-NASA Potential Collaboration

As part of a historic investment made possible by the Inflation Reduction Act, NOAA Fisheries is interested in developing/advancing satellite tag technologies and technologies for right whale detection to minimize ship strike risk. These technologies would then enable enhanced management strategies based on more informed understanding of spatial/temporal distribution of whales and enabling timely responses where whales are detected. NOAA Fisheries is working on an interagency collaboration with NASA that will collect information from the public on opportunities to advance satellite telemetry data and vessel-based detection technologies.