



# MARINE MAMMAL COMMISSION

21 July 2023

Dr. Rodney E. Cluck, Chief  
Division of Environmental Sciences  
Bureau of Ocean Energy Management  
45600 Woodland Road  
Sterling, Virginia 20166

Dear Dr. Cluck:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors, provides the following comments on the Bureau of Ocean Energy Management's (BOEM) Environmental Studies Program Studies Development Plan (SDP) for Fiscal Year (FY) 2024–2025. Overall, the Commission supports the projects identified in the FY 2024–2025 SDP and commends BOEM for its continued investments in marine mammal research and its commitment to working collaboratively with other agencies and funding entities to further our understanding of the effects of offshore energy development on marine mammals and their habitat.

## **Studies proposed for marine mammals**

BOEM's offshore energy program requires regularly updated information on marine mammals and their habitat to assess and monitor the potential impacts of various energy-related activities in all active Outer Continental Shelf (OCS) planning areas. Foundational to these assessments are ecosystem-wide surveys to estimate abundance and distribution of marine mammals and develop spatially-explicit, habitat-density models for use in incidental take estimation. The Commission is encouraged to see not only plans for continued funding for the Atlantic Marine Assessment Program for Protected Species (AMAPPS), but also plans to renew support for the Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS). Those marine assessment surveys would provide data on cetacean abundance, distribution patterns, and trends in OCS waters that have the greatest levels of offshore renewable energy and oil and gas development. The Commission is especially pleased to see the incorporation of alternative sampling platforms and new technologies in its marine assessment programs, such as eDNA and plankton sampling, the use of very high-resolution satellite imagery from space-based transceivers and other platforms, and machine-based learning to automate identification and classification of remotely-detected marine mammals.

The Commission also recognizes the importance of establishing monitoring programs for marine mammals and other protected species in new areas of wind energy development, such as California, Puerto Rico, and the U.S. Virgin Islands. Data are lacking on cetacean abundance and distribution from Puerto Rico and the Virgin Islands, in particular, and current information is essential in advance of renewable energy development in these and other U.S. territories (as per amendments to the Outer Continental Shelf Lands Act in Public Law 117-169).

The Commission is encouraged that the study plans for AMAPPS and GoMMAPPS include the use of telemetry. The Commission strongly supports tagging and telemetry studies as part of marine assessment programs. Such studies provide data to correct abundance estimates to account for animals that were missed or unavailable for detection during aerial and ship-based surveys. Tagging and telemetry data also inform our understanding of foraging and diving behavior, daily and seasonal movements, environmental characteristics, habitat use, and animal behavior in space and time, particularly in un-surveyed or under-surveyed areas. Deployment of multi-sensor tags provides environmental and biological context for sightings and acoustic detections through the collection of associated environmental and behavioral information including water temperature, salinity, pH, dive behavior, vocal behavior, and anthropogenic sound sources, providing for a better understanding of the relationship between marine mammals and their environment and responses to human activities.

The Commission encourages BOEM to also continue collecting biopsies as part of the AMAPPS and GoMMAPPS surveys. Remotely-collected samples of skin and blubber would support genetic and epigenetic analyses, as well as allow for chemical analyses to understand exposure to pollutants. Such analyses can elucidate genetic population structure, provide information on sex- and age-structure, and help to evaluate the overall health and diet of individuals. All of this information will contribute to BOEM's cumulative impact assessments.

The Commission additionally acknowledges BOEM's renewed support for the U.S. Animal Telemetry Network (ATN). The ATN provides a platform for coordination and collaboration among federal, academic, and private researchers to share information from telemetry studies conducted on the same or similar species or in the same areas. Continued funding for expansion of the ATN data repository and analytical tools, and perhaps extending additional funding to help cover Argos-related costs for researchers, will provide a means to complement visual and acoustic detection data collected during large-scale surveys.

The Commission underscores the importance of BOEM's proposal to fund temporary threshold shift (TTS) studies that would investigate marine mammal exposure to complex sound and how marine mammals are affected by varying degrees of impulsiveness and duty cycles associated with the sound. The current classification of sounds as either impulsive or non-impulsive is overly simplistic and, as BOEM has acknowledged, does not reflect real-world conditions. The Commission agrees and notes that animals are routinely exposed to various types of sound and rarely perceive purely impulsive or purely non-impulsive sound during the course of a day. The results of a TTS study on complex sound likely will have implications for revising, and potentially reassessing, the criteria and thresholds used to estimate impacts on marine mammal hearing both domestically and abroad. As such, if BOEM is unable to fully fund the TTS study, the agency should consider funding it in partnership with other federal agencies, as well as with industry, which has a vested interest in this topic.

Further, the Commission supports BOEM's proposal for continued analyses of protected species observer data collected aboard seismic survey vessels in the Gulf of Mexico. These analyses will help to evaluate compliance with mitigation and monitoring measures for geophysical surveys that were required by the National Marine Fisheries Service in its final rule that published in January 2021 (86 Fed. Reg. 5322). It would also be helpful to compare the analyses of compliance rates with

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those evaluated prior to implementation of the final rule (Barkaszi et al. 2012, Barkaszi and Kelly 2019) and to refine mitigation and monitoring measures as necessary for future rulemakings.

The Commission appreciates the opportunity to provide these comments. Please contact me if you have questions.

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

Cc: Dr. James Kendall, Director, BOEM Gulf of Mexico Regional Office  
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## References

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- Barkaszi, M.J. and C.J. Kelly. 2018. Seismic survey mitigation measures and protected species observer reports: synthesis report. Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, New Orleans, Louisiana. Contract No.: M17PD00004. OCS Study BOEM 2019-012. 220 pages.