



MARINE MAMMAL COMMISSION

4 February 2019

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 suggestions for consideration in the development of the Bureau of Ocean Energy Management's (BOEM) Environmental Studies Plan for Fiscal Years (FY) 2020–2022.

Overall, the Commission supports the projects identified in the current FY 2019–2021 Studies Development Plan (SDP) and commends BOEM for its investments in research and commitment to working collaboratively with other agencies and funding entities to further our understanding of the effects of offshore energy development on marine mammals. The proposed expansion of both oil and gas leasing and renewable energy development in U.S. offshore waters could have significant implications for marine mammals, and subsistence hunters of marine mammals in Alaska, underscoring the importance of collecting biological information in energy development areas on an ongoing basis. BOEM's Atlantic Marine Assessment Program for Protected Species (AMAPPS I and II), Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS), and Pacific Marine Assessment Program for Protected Species (PacMAPPS) are contributing significantly to the body of information needed to assess the abundance and distribution of marine mammals in both coastal and offshore waters and to evaluate the effects of energy development¹. The Commission recognizes that during these surveys, there is an opportunity to obtain additional information (e.g., from tissue samples, photographs, and satellite tagging) that can be used to evaluate the effects on marine mammals of energy development and other anthropogenic activities. The Commission encourages BOEM to support efforts by the National Marine Fisheries Service (NMFS) to collect those data as part of the MAPPS surveys when possible.

National

There is an ongoing need to increase our understanding of how different sound sources affect marine mammals, particularly low-frequency sound generated by oil and gas and renewable energy exploration and development activities. To that end, the Commission was pleased to see the inclusion of an inter-agency effort to develop audiograms for low-frequency cetaceans in BOEM's

¹ Throughout this letter, "energy development" refers to energy exploration, extraction, production, transport, and decommissioning.

FY 2019–2021 SDP. As noted by a recent expert panel, information is lacking on how different species respond behaviorally to anthropogenic sound, the influence of factors (internal or external) on the severity of those responses, and the cumulative effects of such sounds in combination with other stressors (National Academies of Sciences, Engineering, and Medicine [NASEM] 2017). Frequently, it is assumed that mitigation measures are effective but generally there are few data to evaluate that assumption. Thus, studies are needed to investigate both individual and population-level impacts and the effectiveness of mitigation measures to minimize sound-related disturbance. The Commission commends BOEM for its work on these topics and encourages BOEM to continue its work with federal, state, and external partners to evaluate how marine mammals respond to sound sources used in energy development, the factors that affect those responses, and the cumulative effects of sound and other anthropogenic stressors on survival and reproduction at both the individual and population level.

Alaska

Cook Inlet

Given the current status and population trend of Cook Inlet beluga whales, the Commission remains concerned about potential impacts of oil and gas exploration and development and other human activities, on this small endangered population. Among other things, better information is needed on the distribution of beluga whales in Cook Inlet during winter, a period when the whales were historically known to venture further south into the lower inlet (Rugh et al. 2010). In its FY 2019–2021 SDP, BOEM has proposed to partner with NMFS to extend NMFS’s planned winter aerial surveys for beluga whales to the southern portion of Cook Inlet. BOEM indicated in the study plan that it would augment the aerial surveys with passive acoustic monitoring (PAM) “as funding permits.” The Commission encourages BOEM to use PAM to supplement aerial surveys given the poor weather conditions and low light conditions that exist in Cook Inlet in winter that impair visual detections by observers and limit aerial survey flight days. Simultaneous PAM and aerial surveys would increase the probability of detections and provide a correction factor for visual detections that accounts for Beaufort sea state. An additional means for tracking movements and occurrence of beluga whales throughout the inlet would be through continued photo-identification and drone studies. As with aerial surveys, those types of studies should be done in partnership with NMFS.

Disturbance of beluga whales by anthropogenic sound and the effects of sound on prey availability were ranked by NMFS as high concerns by NMFS in the recovery plan for Cook Inlet beluga whales (NMFS 2016). The Commission encourages BOEM to work with NMFS and the Alaska Department of Fish and Game to initiate year-round PAM to monitor the overall soundscape of Cook Inlet, assess the contributions to that soundscape by various anthropogenic activities, and evaluate, in particular, the extent to which sound from oil and gas-related activities are affecting beluga whales.

Yakutat Bay

Considerable uncertainty continues to exist regarding the abundance, status, and stock structure of beluga whales in Yakutat Bay (Lucey et al. 2015, O’Corry-Crowe et al. 2015, 2018). The 2019–2021 SDP states that BOEM is partnering with the University of Alaska Fairbanks to assess

the environmental feasibility of a wave energy project in State of Alaska waters near Yakutat. In advance of renewable energy development in Yakutat Bay, the Commission encourages BOEM to initiate aerial surveys and passive acoustic monitoring of the bay to generate reliable population estimates and characterize the distribution of beluga whales at various times of the year. The Commission would also encourage BOEM to partner with NMFS to develop a strategy for continued collection of tissue samples for genetic analyses to better understand the relationship of this isolated population to other Alaska beluga whale stocks.

Arctic

The Commission strongly supports the continued funding of the Aerial Surveys of Arctic Marine Mammals (ASAMM). Those surveys have been conducted annually since 1979 and provide information on the distribution, relative abundance, and migratory behavior of bowhead, gray, humpback, fin, minke, beluga, and killer whales and harbor porpoises, walruses, ice seals, and polar bears. Given the significant inter-annual variability in weather conditions in the Arctic, the rapidly changing climate, the potential for expanded oil and gas development, increases in vessel traffic, and the importance of marine mammals to Alaska Native communities for subsistence and cultural purposes, the Commission encourages BOEM to continue to conduct the ASAMM surveys in the Chukchi and Beaufort Sea planning areas on an annual basis.

In addition to aerial surveys, more fine-scale information is needed about potential or expected marine mammal high-use areas in the Arctic planning areas (Clarke et al. 2015). In particular, based on traditional/indigenous knowledge, the waters off Camden Bay were identified as an area used for feeding by bowhead, beluga, and gray whales, and ringed, bearded, and spotted seals (Huntington 2013). Other nearshore areas that may be important for feeding by bowhead whales include coastal waters west of Kaktovik and off Smith Bay (Clarke et al. 2015). The Commission acknowledges the challenge of obtaining fine-scale information on bowhead whale and ice seal occurrence and behavior in Beaufort Sea coastal waters and encourages BOEM to continue the collection of traditional/indigenous knowledge to determine the extent to which bowhead whales and other marine mammals use these areas for feeding, resting, or other biologically important functions.

The Commission commends BOEM for continued monitoring of the Cross Island subsistence whale hunt. Cross Island is an area that the Commission has repeatedly recommended for exclusion from leasing based on its importance as a subsistence use area for North Slope Alaska Native communities. Continued review of subsistence use data will inform decision-making on whether this area should be excluded from future lease sales and the development of appropriate mitigation measures to avoid disturbance of traditional whaling activities.

Atlantic

The recent increase in deaths of North Atlantic right whales and decline in successful calving warrant increased scrutiny of anthropogenic activities that could cause disturbance, injury, or death to members of this critically endangered population and the management of such activities as necessary. Sound from pile driving associated with construction of wind turbines is a potential source of disturbance from wind energy development for right whales and other marine mammals.

Such disturbance may result in displacement of animals from preferred habitat or migration corridors.

With NMFS's issuance of incidental harassment authorizations for oil and gas exploration in the Atlantic, seismic surveys present a significant new threat to offshore marine mammals. The sound produced by seismic airguns can cause changes in swimming or diving behavior, displacement from preferred habitats, changes in vocalization patterns, and an increase in strandings (Blackwell et al. 2015, Robertson et al. 2015, McGeady et al. 2016). Standard mitigation measures, such as ramping up the sound source to full power, have been widely adopted by industry. However, questions remain regarding their effectiveness in minimizing impacts (Dunlop et al. 2016).

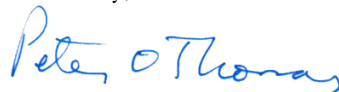
The Commission encourages BOEM to continue investigation of potential sound-related disturbance to right whales and other marine mammals resulting from energy development in coastal and offshore waters of the Atlantic OCS. Information gained from such efforts would help minimize disturbance through the development or refinement of mitigation measures.

Gulf of Mexico

As noted previously, GoMMAPPS is providing significant information regarding the distribution and abundance of marine mammals in coastal and offshore waters of the Gulf. However, given the challenge of conducting a comprehensive range-wide survey due to the limited availability and high cost of vessels and aircraft, the Commission encourages BOEM to consider supplementing the GoMMAPPS surveys with bottom-mounted PAM. Priority should be given to deploying recorders in areas that are either under-represented in GoMMAPPS surveys or for which species distribution is uncertain (i.e., Bryde's whales in the western Gulf). Other supplementary survey methods could include high-resolution aerial imagery or observations from platforms of opportunity.

The Commission appreciates the opportunity to provide these suggestions regarding marine mammal research and monitoring in conjunction with ocean energy development. Please contact me if you have questions concerning any of the Commission's comments and suggestions.

Sincerely,

A handwritten signature in blue ink that reads "Peter O. Thomas".

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

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