

## MARINE MAMMAL COMMISSION

30 March 2015

Ms. Kelly Hammerle Five Year Program Manager (HM-3120)

Mr. Geoffrey L. Wikel Acting Chief, Division of Environmental Assessment (HM-3107)

Office of Environmental Program Bureau of Ocean Energy Management 381 Elden Street Herndon, Virginia 20170-4817

Dear Ms. Hammerle and Mr. Wikel:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Bureau of Ocean Energy Management's (BOEM) Draft Proposed Program for the 2017-2022 Outer Continental Shelf (OCS) oil and gas leasing program. The Commission also has reviewed BOEM's 29 January 2015 notice (80 Fed. Reg. 4939) announcing its intent to prepare a programmatic environmental impact statement (EIS). The Commission provided extensive comments on the Request for Information (RFI) on the preparation of the 2017-2022 Draft Proposed Program (see letter dated 31 July 2014<sup>1</sup>), including information on the potential impacts of oil and gas activities on marine mammals, the adequacy of existing baseline information, planning areas and portions of planning areas that should be excluded from leasing, and recommendations regarding leasing approaches. The following provides recommendations and rationales regarding the planning areas that BOEM has included as options in the 2017-2022 Draft Proposed Program.

## Provisions of the 2017-2022 Draft Program Plan

BOEM has included 14 lease sales in 8 OCS planning areas in its 2017-2022 Draft Proposed Program. The proposed lease sale schedule is as follows:

- 1 lease sale in Cook Inlet, restricted to the northern portion of the planning area but excluding certain sea otter and beluga whale critical habitat. The Cook Inlet lease sale would be scheduled for 2021.
- 1 lease sale in the Chukchi Sea, excluding a 25-mile buffer zone along the coast and potentially other areas around Hanna Shoal, Herald Shoal, Ledyard Bay critical habitat and other subsistence-use or environmentally sensitive areas as identified through the scoping process. The lease sale would be scheduled for 2022.
- 1 lease sale in the Beaufort Sea, excluding the Barrow and Kaktovik whaling areas and potentially other areas around Cross Island, Camden Bay, and other subsistence-use or environmentally

<sup>&</sup>lt;sup>1</sup> Commission letters are posted at www.mmc.gov.

sensitive areas as identified through the scoping process. The Beaufort Sea lease sale would be scheduled for 2020.

- 1 lease sale in the mid-Atlantic / South Atlantic planning areas from Georgia to Virginia, excluding a 50-mile buffer zone along the coast. The Atlantic lease sale would be scheduled for 2021.
- 10 lease sales in the Gulf of Mexico, offering all available acreage in all three GOM planning areas. Lease sales would be scheduled for twice per year, rather than the current practice of annual lease sales in each Gulf planning area.

## Comments on specific planning areas

<u>Cook Inlet.</u> Cook Inlet is heavily industrialized compared to the other planning areas in Alaska. The Commission is concerned that expanded oil and gas leasing, when added to other existing human activities in state and federal waters of Cook Inlet, will pose significant risks to the endangered resident beluga whale population and adversely affect important habitat areas. The beluga population in Cook Inlet declined precipitously during the 1990s, presumably due to overharvesting, and was expected to rebound after subsistence hunting was brought under control in 1999. While subsistence hunters reportedly have taken only five whales since then, the population has not grown as expected and, in fact, has declined at an average rate of 1.3 percent per year since the management of the hunt began in 1999 and currently numbers about 300 animals (Hobbs et al. 2012). Information regarding this population's ecology, life history, and reproductive potential is limited and factors adversely affecting the population and its habitat have yet to be definitively identified. However, oil and gas activities in state waters were among the factors cited by the National Marine Fisheries Service (NMFS) as possibly contributing to the population's observed decline (NMFS 2008).

Given the precarious status of Cook Inlet beluga whales, any additional activity that may contribute to or worsen the observed decline could place this population at significant risk of extirpation. For this reason, as well as BOEM's estimates of low oil and gas recovery potential in federal waters of Cook Inlet (BOEM 2012), the Commission recommended in its comments on the RFI that BOEM omit the Cook Inlet planning area from the 2017-2022 leasing program until such time that the causes for the decline of the Cook Inlet beluga whale population are better understood and addressed and until progress toward recovery of this population has been demonstrated. For these same reasons, <u>the Commission once again recommends</u> that BOEM defer leasing in the Cook Inlet Planning Area in its 2017-2022 leasing program.

If BOEM determines that it will include the Cook Inlet Planning Area in its 2017-2022 Proposed Program, those portions of the planning area that overlap with beluga whale foraging and overwintering habitat should be excluded from leasing. Historical records indicate that beluga whales used to be found throughout Cook Inlet (Laidre et al. 2000). Although their range has contracted since the mid 1990's and is now limited primarily to the upper portion of the inlet (Rugh et al. 2010), there have been some sightings in recent years in the mid-inlet, close to (within 50-60 km of) the northern portion of the Planning Area. In a May 2012 NMFS aerial survey, observers spotted seven beluga whales southeast of West Foreland moving toward Trading Bay (Hobbs et al. 2012, Shelden et al. 2013). Photo-identification surveys conducted in 2011-2013 documented seven groups ranging

in size from four to ten whales, including calves, in the Kenai River Delta, with the whales observed feeding on salmon in the Delta on at least one occasion (McGuire et al. 2014). Industry-conducted monitoring of oil and gas activities detected one beluga whale at the Cosmopolitan drilling site (near Anchor Point) in August 2013 (Owl Ridge Natural Resource Consultants 2014). Two other incidental sightings of beluga whales in the lower inlet were of a single animal in February 2013 in the Kenai River and a group south of Ninilchik in March 2013 (McGuire et al. 2014).

BOEM has indicated in the Draft Proposed Program that it would provide protection for endangered species as identified in the Lease Sale 244 Area ID. However, as noted in the Commission's comments on Lease Sale 244 (letter dated 8 Dec 2014), the area identified for leasing included a portion of beluga whale "Area 2" critical habitat along the western edge of Cook Inlet. Based on recent sightings data, the lease sale area should exclude beluga whale critical habitat. BOEM should also consider excluding adjacent areas to the east and north as a buffer. Therefore, to provide additional protection for beluga whales and their habitat from potential disturbance from oil and gas activities, <u>the Commission recommends</u> that BOEM exclude from leasing beluga whale critical habitat and adjacent areas in the Cook Inlet Planning Area that extend west and north of Anchor Point.

<u>Arctic.</u> The protection of marine mammals is critical in the Arctic planning areas, where local communities are highly dependent on some species for subsistence (Braund and Associates 2010), and access to food from other sources is limited and expensive. The Arctic is also on the front line of climate change. The rapid decline of multi-year sea ice<sup>2</sup> will result, or has already resulted, in habitat loss and changes in foraging patterns for ice-dependent species such as walruses, ringed seals, bearded seals, and polar bears (Schliebe et al. 2006, Kelly et al. 2010, Jay et al. 2012, Pagano et al. 2012, MacIntyre et al. 2013). Other species, such as gray whales, humpback whales, fin whales, and killer whales, appear to have altered their migration patterns and are now more prevalent in Arctic waters, perhaps as a result of increased opportunities for foraging in ice-free waters (Perryman et al. 2002, Stafford et al. 2007, Clarke et al. 2013, Moore et al. 2014: Fig 11.10).

BOEM, the National Oceanic and Atmospheric Administration (NOAA), the Fish and Wildlife Service (FWS), the U.S. Geological Survey, the State of Alaska, the North Slope Borough, the oil and gas industry, and others have made significant investments in research to gather baseline information on the distribution and movements of marine mammals, better characterize the broadscale physical and biological processes of the Beaufort and Chukchi Sea, and monitor changes as seasonal sea ice declines and ocean temperatures increase. Nevertheless, major uncertainties remain regarding how best to mitigate potential short-term, long-term, and cumulative impacts of oil and gas development on marine mammals and Alaska coastal communities (Holland-Bartels and Pierce 2011, Clement et al. 2013).

There is also considerable uncertainty regarding industry's ability to respond to oil spills in the Arctic environment. As evidenced by the low recovery rate of oil during the Deepwater Horizon oil spill (NOAA 2010), current oil spill response methods and technologies are inadequate for recovery of spilled oil even under ideal conditions. Oil spill response efforts in the Arctic would be hampered by ice and the inadequacy of in-ice response technologies, the remoteness, the extended

<sup>&</sup>lt;sup>2</sup> http://nsidc.org

periods of darkness and severe weather, the lack of trained personnel, and the insufficiency of equipment and infrastructure (Ebinger et al. 2014). Although considerable research has been carried out on oil spill response and recovery in ice-filled waters, and newly proposed regulations of exploratory drilling in the Arctic OCS (80 Fed. Reg. 9916), industry and regulators have had few opportunities to test promising methods and technologies in Arctic conditions at operational scales (NRC 2014).

There are currently 487 leases held in the Chukchi Sea and 207 leases in the Beaufort Sea,<sup>3</sup> and BOEM has additional lease sales scheduled for each of these areas under the current five-year program. Given the increased risk to marine mammals in these waters from loss of habitat, changes in prey availability, and the current lack of adequate oil spill response capability, the Commission recommended in its comments on the RFI that BOEM limit oil and gas development in the Arctic by omitting the Chukchi and Beaufort Sea planning areas from the 2017-2022 leasing program. This would allow responsible agencies to collect sufficient baseline information on biological and physical processes and provide industry with the opportunity to demonstrate its ability to produce oil and gas safely on current leases and respond effectively to oil spills. It would also provide a relatively stable foundation for agencies and industry to work together to develop and adapt measures to mitigate and monitor the risks of oil and gas development in this rapidly changing environment. For these same reasons, the Commission once again recommends that BOEM defer leasing in the Chukchi and Beaufort Sea Planning Areas in its 2017-2022 leasing program.

BOEM has indicated that if it were to include the Chukchi and Beaufort Sea Planning Area in its 2017-2022 Proposed Program, it would defer from the Chukchi Sea lease sale a 25-mile coastal buffer zone and a subsistence deferral area northwest of Barrow, as identified in the 2012-2017 Program. It would defer from the Beaufort Sea lease sale areas around the Barrow and Kaktovik whaling areas that were also deferred in the 2012-2017 Program. In its comments on the Call for Information for the Chukchi and Beaufort Sea lease sales in the current leasing program (Lease Sales 237 and 242, respectively), the Commission recommended that BOEM exclude additional areas from leasing to protect environmentally sensitive areas and areas that are important for subsistence.

The Commission recommended that for the Chukchi Sea, BOEM exclude from leasing:

- an expanded 64-km (35-nmi) coastal buffer zone off Kasegaluk Lagoon and Point Hope;
- the Hanna Shoal area (defined by the 40-m isobath);
- a buffer zone established beyond the 40-m isobath around Hanna Shoal<sup>4</sup>;
- an expanded coastal buffer zone off Barrow that includes Barrow Canyon and the waters north and west from there to Hanna Shoal; and
- waters north of  $72^{\circ}$  N (see Figure 1).

<sup>&</sup>lt;sup>3</sup> http://www.boem.gov/uploadedFiles/BOEM/About\_BOEM/BOEM\_Regions/Alaska\_Region/Leasing\_and\_Plans/Leasing/Historical\_Alaska\_Region\_Lease\_Sales.pdf

<sup>&</sup>lt;sup>4</sup> The Commission recommended that BOEM consult with scientists who have appropriate expertise and knowledge regarding the physical and biological processes of the Hanna Shoal area to determine the size of the buffer zone that should extend beyond the 40-m isobath; in lieu of that process, BOEM should establish a buffer zone of at least 93 km (50 nmi) from the boundaries of the shoal.

Similarly, the Commission recommended that for the Beaufort Sea, BOEM exclude from leasing:

- an expanded area north and east of the current Barrow exclusion area, including all of Barrow Canyon to the shelf break and coastal waters out to the 20m isobath extending to the western edge of Smith Bay;
- Cross Island, including waters east to Tigvariak Island and seaward to the 50 m isobath;
- waters seaward of Camden Bay to the 20m isobath; and
- an expanded area east of the current Kaktovik exclusion area and seaward to the 40m isobath (see Figure 2).

If BOEM determines that it will include the Arctic in its 2017-2022 Proposed Program, <u>the</u> <u>Commission recommends</u> that BOEM exclude from leasing those areas identified by the Commission in its comments on the Chukchi and Beaufort Sea lease sales (Lease Sales 237 and 242, respectively), as illustrated in Figures 1 and 2.

Atlantic. The Commission has a number of concerns regarding proposed offshore oil and gas development in the Atlantic. Because this area includes various types of marine mammal habitat, the impact of leasing and development is highly dependent on the number and location of lease blocks offered. Coastal areas are inhabited by endangered North Atlantic right whales, which migrate annually between calving grounds off Florida and Georgia to feeding grounds in the Gulf of Maine. Because a large part of their time is spent in coastal waters, they are particularly vulnerable to mortality and serious injury from vessel strikes and entanglement in fishing gear (Kraus and Rolland 2007). Certain stocks of bottlenose dolphins are also coastal in distribution, and are vulnerable to periodic unusual mortality events caused by epizootics such as morbillivirus, as implicated in the ongoing unusual mortality event involving dolphins from Florida to New York<sup>5</sup> as well as previous events dating back to at least the early 1980's (Duignan et al. 1996). Periodic surveys have provided information regarding the distribution and abundance of these and other marine mammals in coastal and more offshore waters, but this information remains incomplete for rare or difficult to detect species such as beaked whales and Kogia *spp*.

BOEM has identified a lease sale in the areas offshore of the Commonwealth of Virginia and the states of North Carolina, South Carolina, and Georgia as an option in its 2017-2022 Draft Proposed Program. The lease sale would exclude a buffer zone extending from shore out to 50 miles. The Commission supports the inclusion of a 50-mile buffer zone in any planned lease sale in the Atlantic to provide a degree of protection to North Atlantic right whales (at least in part of their range) and coastal bottlenose dolphins. However, additional uncertainties exist regarding potential impacts of oil and gas exploration and development on offshore species of marine mammals.

BOEM's Environmental Studies Program, in collaboration with the Navy, has provided multi-year funding to NMFS for the Atlantic Marine Assessment Program for Protected Species (AMAPPS). That program involves broad-scale, multi-year, seasonal collection of abundance and distribution data for marine mammals and other wildlife in the U.S. Atlantic, using visual aerial and

<sup>&</sup>lt;sup>5</sup> http://www.nmfs.noaa.gov/pr/health/mmume/midatldolphins2013.html

shipboard surveys with towed passive acoustic arrays. The Commission is encouraged to learn that BOEM has recently committed to continue funding the program for an additional five years. The information from AMAPPS and AMAPPS II, once available, promises to contribute significantly to the quality of baseline information needed for marine mammal stock assessments in both coastal and offshore waters and to assess impacts of energy development. Of particular importance for AMAPPS II would be a tissue sample collection component for genetics analyses to better understand stock structure.

Oil and gas resources in the south and mid-Atlantic are estimated to be relatively small based on available data (BOEM 2012, Post et al. 2012). BOEM is reviewing several applications for geological and geophysical (G&G) exploration of the Atlantic planning area. If conducted with sufficient safeguards to protect marine mammals (see the Commission's letter dated 3 July 2012 regarding BOEM's Programmatic EIS on Atlantic G&G activities), seismic surveys could help determine whether sufficient resources exist in the Atlantic to warrant leasing. <u>The Commission</u> <u>recommends</u> that BOEM defer leasing in the Mid- and South Atlantic Planning Areas in its 2017-2022 leasing program until further information is collected and synthesized on both the potential impacts of leasing oil and gas activities on offshore marine mammals and the potential scale of oil and gas resources relative to other planning areas.

If BOEM determines it will include the Mid- and South Atlantic Planning Areas in its 2017-2022 Proposed Program, it should consider establishing state-based regional task forces to assist BOEM in identifying specific lease blocks that may be suitable for oil and gas development. This geographically targeted approach to leasing has helped to reduce potential conflicts between potential wind energy projects and fishing, shipping, tourism, military and other human activities in marine and coastal areas of the Atlantic. It would also allow for a more meaningful environmental assessment of potential impacts, as recommended by the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. Therefore, the Commission recommends that BOEM use a geographically targeted, task force approach to select potentially suitable oil and gas lease areas in the Atlantic with the aim of minimizing interactions with marine mammals and conflicts with other human uses of the marine environment.

<u>Gulf of Mexico.</u> The Gulf of Mexico is the most productive OCS planning area for oil and gas, and will likely remain so for many years to come. However, it is probably the least studied of all the OCS planning areas with respect to the presence and distribution of marine mammals. Despite decades of oil and gas development in the Gulf, there are no regularly planned surveys of the 22 marine mammal species/57 marine mammal stocks that reside in the inshore, coastal, and offshore waters of the Gulf of Mexico (Waring et al. 2014). As a result, baseline information is lacking on (1) abundance, stock structure, and trends of many bottlenose dolphin bay, sound, and estuary stocks, and (2) stock structure and trends for most oceanic marine mammal species. Without sufficient information on marine mammal abundance, distribution, stock structure, and trends in the Gulf, decision-makers have an inadequate basis for determining whether, where, and under what conditions to authorize or conduct activities that could have acute or long-term adverse effects on marine mammals and other marine species.

A long-term and consistent investment in collecting the data needed to generate stock assessments and to evaluate the impacts of oil and gas development on marine mammals in the Gulf

would ensure that the decisions regarding proposed activities are guided by the best available scientific information. NMFS's guidelines for assessing marine mammal stocks suggest that surveys be conducted at least every eight years to enable detection of a 10 percent decline in abundance (NMFS 2005, Moore and Merrick 2011). BOEM is supporting broad-scale, multi-year collection of abundance and seasonal distribution data for marine mammals and other wildlife in the Atlantic (the Atlantic Marine Assessment Program for Protected Species), and the Commission believes a similar program, couple with tissue sample collection to determine stock structure, is long overdue for the Gulf. To support decision-making for continued oil and gas activities in the Gulf, <u>the Commission recommends</u> that BOEM work with NMFS, the Department of Defense, and other relevant entities to design a multi-year, Gulf-wide assessment program to provide reliable information on abundance, distribution, and stock structure of marine mammals and other protected species.

I trust these comments will be helpful. Please let me know if you have any questions with regard to this letter.

Sincerely,

Rebecca J. hent

Rebecca J. Lent, Ph.D. Executive Director

Enclosures (Figures)

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Figure 1



