2 April 2015

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, Maryland 20910-3226

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application from Shell Gulf of Mexico Inc. (Shell), seeking an incidental harassment authorization (IHA) under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA). Shell is seeking authorization to take small numbers of marine mammals by harassment incidental to ice overflight surveys in the Alaskan Beaufort and Chukchi Seas from 1 May 2015 to 30 April 2016. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 4 March 2015 notice (80 Fed. Reg. 11634) announcing receipt of the application and proposing to issue the authorization subject to certain conditions.

Some issues raised in previous Commission letters reflect ongoing concerns that apply more broadly to incidental take authorization applications, not just to this application from Shell. For example, the Commission has recommended numerous times that NMFS adjust density estimates used to estimate the numbers of potential takes by incorporating some measure of uncertainty[1] when available density data are either out of date or originate from other geographical areas and temporal scales, and that it formulate a policy or other guidance setting forth a consistent approach for how applicants should incorporate uncertainty in density estimates. The Commission would welcome the opportunity to work with NMFS as it develops such policies.

Background

Shell plans to conduct ice overflight surveys in the Beaufort and Chukchi Seas during spring (May–July) break-up and winter (November–April) freeze-up periods. The surveys would be conducted during daylight hours and would include a total of 4,630 km of tracklines. Shell has proposed 14 flights total: 5 fixed-wing and 1 helicopter flight during spring and 7 fixed-wing and 1 helicopter flight during winter.

NMFS's preliminary determination is that the proposed ice overflight surveys would result in a temporary modification in the behavior of small numbers of up to seven species of marine mammals, but that the total taking would have a negligible impact on the affected species or stocks. NMFS does not anticipate any take of marine mammals by death or serious injury. NMFS also believes that the potential for temporary or permanent hearing impairment from Shell's proposed

[1] Including using the maximum density when other measures of uncertainty are not provided.

overflight survey would be at the least practicable level because of the proposed mitigation measures. The mitigation, monitoring, and reporting measures include—

(1) using trained protected species observers to record marine mammal sightings and other environmental information;
(2) maintaining a 1.6-km radius when flying over areas where seals appear to be concentrated in groups of 5 or more individuals;
(3) not landing on ice within 0.8 km of hauled-out seals or polar bears;
(4) avoiding flying over polynyas and along adjacent ice margins;
(5) reporting injured and dead marine mammals to NMFS's Office of Protected Resources and the Alaska regional stranding coordinator(s) using NMFS's phased approach and suspending survey activities, if appropriate; and
(6) submitting field and technical reports and a final comprehensive report to NMFS.

The Commission understands that NMFS does not typically, or may never have, authorized the taking of cetaceans incidental to aerial overflights for purposes not associated with directed marine mammal research. The Commission understands that, since publication of the proposed IHA, NMFS has determined that overflight surveys will not affect cetaceans and thus takes of cetaceans would not need to be authorized. However, if this is not the case and NMFS intends to authorize the taking of cetaceans incidental to aerial overflights (absent any directed marine mammal research), the Commission recommends that NMFS develop criteria (e.g., based on aircraft type, aircraft speed, altitude, potential hovering/circling, and affected species or stocks) and guidance for determining when prospective applicants should request taking of cetaceans by Level B harassment from aircraft overflights.

Availability of marine mammals for subsistence

Shell has developed a plan of cooperation in consultation with North Slope communities outlining measures that it would implement to minimize any adverse effects on the availability of marine mammals for subsistence. That plan includes requirements to maintain the minimum approach distances and operational requirements outlined in the previous section, as well as (1) developing and implementing a communications plan before initiating overflight surveys, (2) employing local community liaison officers and/or subsistence advisors to provide consultation and guidance regarding whale migration and subsistence activities, and (3) engaging with local communities and subsistence groups to ensure no disturbance of whaling or other subsistence activities. Based on the survey design, the timing and location of the proposed overflight surveys, and the proposed mitigation measures, NMFS has preliminarily determined that the proposed taking would not have an unmitigable adverse impact on the availability of marine mammals for subsistence use by Alaska Natives.

Density estimates for bearded seals

The density estimates for bearded seals in the winter may need to be adjusted upward to account for year-round presence in at least portions of the survey area. Shell indicated in its application that bearded seals were not expected to be present in the survey area in large numbers during winter based on tagging studies. However, MacIntyre et al. (2013) detected bearded seal calls year-round in the Beaufort Sea just east of Barrow, with an increase in calls during winter and spring

(December–June). Acoustic detections in the Chukchi Sea exhibited the same pattern with an increase in calls during winter (Jones et al. 2014). Although density estimates are not available for bearded seals in the winter because of a lack of aerial survey data at that time of year, it appears from the referenced acoustic monitoring studies that bearded seals are just as likely, or even more likely, to be present in the survey area in winter as in spring. Therefore, the Commission recommends that NMFS (1) use density estimates for bearded seals in winter that are either equal to or greater than spring bearded seal density estimates and (2) recalculate take estimates for bearded seals during winter, accordingly.

Peer review panel recommendations

The Commission understands that the peer review panel met during the public comment period for this notice to discuss Shell's marine mammal mitigation and monitoring plan. The recommendations of the panel will not be available until after the close of the comment period. If NMFS issues the incidental harassment authorization for the ice overflight surveys, the Commission recommends that NMFS incorporate the peer review panel's recommendations into the authorization.

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

Sincerely,

Rebecca J. Lent, Ph.D.
Executive Director

Cc: Jon Kurland, National Marine Fisheries Service Alaska Regional Office

References

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MacIntyre, K.Q., K.M. Stafford, C.L. Berchok, and P.L. Boveng. 2013. Year-round acoustic detection of bearded seals (*Erignathus barbatus*) in the Beaufort Sea relative to changing environmental conditions, 2008–2010. Polar Biology doi:10.1007/s00300-013-1337-1.