

MARINE MAMMAL COMMISSION
4340 East-West Highway, Room 700
Bethesda, MD 20814-4447

25 July 2008

Mr. P. Michael Payne
Chief, Permits Division
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway
Silver Spring, MD 20910

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application from Shell Offshore, Inc., and its geophysical contractor, WesternGeco, Inc., for an incidental harassment authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act. The applicant is seeking authorization to take by harassment small numbers of marine mammals incidental to conducting seismic surveys in the Chukchi and Beaufort Seas during the open-water season. The potentially affected species are bowhead, fin, gray, humpback, minke, killer, and beluga whales, harbor porpoises, and ringed, spotted, bearded, and ribbon seals. The Commission also has reviewed the National Marine Fisheries Service's 25 June 2007 *Federal Register* notice announcing receipt of the application and proposing to issue the authorization, subject to certain conditions. Based on its review of these documents, the Commission offers the following recommendations and comments.

RECOMMENDATIONS

The Marine Mammal Commission recommends that, before approving the request for an incidental harassment authorization, the National Marine Fisheries Service—

- conduct a more extensive analysis of the potential effects of the applicant's proposed operations that considers (1) the direct effects of the proposed operations; (2) the potential or likely effects of other currently authorized and proposed oil and gas activities, climate change, and additional anthropogenic risk factors (e.g., industrial operations); and (3) the possible cumulative effects of all of these activities over time;
- together with the applicant and other appropriate agencies and organizations, develop a broad-based population monitoring and impact assessment program to assess whether these activities, in combination with other risk factors, are (1) individually or cumulatively having any significant adverse population-level effects on marine mammals or (2) having an unmitigable adverse effect on the availability of marine mammals for subsistence use by Alaska Natives. Such a monitoring program should focus initially on the need to collect adequate baseline information to allow for future analyses of effects; and
- establish specific mitigation measures for bowhead and beluga whales that will ensure that the proposed activities do not affect the subject species in ways that will make them less available to subsistence hunters.

If the Service decides to issue the requested incidental harassment authorization absent the recommended broader, longer-term analysis, it should—

- require the applicant to implement all practicable monitoring and mitigation measures to minimize behavior disturbance and other possible adverse impacts to bowhead whales, beluga whales, and other marine mammal species, with an emphasis on key areas known to be important for breeding, molting, and feeding; and
- require that operations be suspended immediately if a dead or seriously injured marine mammal is found in the vicinity of the operations and the death or injury might be attributable to the applicant's activities. Any suspension should remain in place until the Service (1) has reviewed the situation and determined that further deaths or serious injuries are unlikely to occur or (2) has issued regulations authorizing such takes under section 101(a)(5)(A) of the Act.

RATIONALE

The Service has preliminarily determined that the impact of conducting the proposed seismic surveys in the northern Chukchi and central Beaufort Seas will (1) result only in the temporary modification in behavior of small numbers of marine mammals, (2) have no more than a negligible impact on the affected marine mammal stocks, and (3) have no unmitigable adverse impact on the availability of marine mammal species or stocks for subsistence use. The Service bases these determinations on the information provided in several documents, including the application from Shell Offshore, Inc., the Minerals Management Service's 2006 final programmatic environmental assessment for seismic surveys in the Beaufort and Chukchi Seas, and the monitoring reports for similar activities prepared by the applicant and others in 2006 and 2007, and is in the process of preparing a supplemental environmental assessment that examines the proposed issuance of the incidental harassment authorization. Also, the National Marine Fisheries Service proposes to establish additional mitigation, monitoring, and reporting measures, such as expanded safety zones for bowhead and gray whales and enhanced monitoring.

Cumulative impacts

As stated in its previous letters to the Service concerning activities in the Chukchi and Beaufort Seas, including its 10 July 2007 letter (enclosed) on the applicant's previous application to conduct similar activities during the 2007 open-water season, the Commission continues to be concerned about the potential cumulative impacts of climate-related ecosystem changes occurring in the Arctic and the apparently increasing level of seismic and other oil and gas-related activities in the region. As such, the Marine Mammal Commission recommends that the National Marine Fisheries Service conduct a more extensive analysis of the potential effects of the applicant's proposed operations that considers (1) the direct effects of these operations; (2) the potential combined effects of other currently authorized and anticipated oil and gas-related activities, climate change, and industrial development; and (3) the cumulative effects of these activities over time. The Service

should analyze these effects with respect to their potential population-level consequences and their implications for the availability of marine mammals for subsistence use by Alaska Natives.

Further, the Marine Mammal Commission recommends that the National Marine Fisheries Service, the applicant, and other appropriate agencies and organizations develop a broad-based population monitoring and impact assessment program to assess whether the activities covered by this and other incidental take authorizations, in combination with other risk factors, are (1) individually or cumulatively having any significant adverse population-level effects on marine mammals or (2) having an unmitigable adverse effect on the availability of marine mammals for subsistence use by Alaska Natives. Expedient development of such a monitoring program is important to ensure that scientists have the baseline information necessary to detect and possibly identify the causes of change over time. The Commission would welcome the opportunity to discuss with the Service and interested parties how best to develop such a program (for example, through co-sponsorship of a workshop).

Potential impacts on subsistence hunting

As noted in previous letters regarding incidental take requests for seismic activities in the Chukchi and Beaufort Seas, the Commission is especially concerned about the potential impact of such activities on the availability of bowhead and beluga whales to subsistence hunters. Therefore, we strongly support the inclusion of additional measures to protect these species. The Marine Mammal Commission therefore recommends that issuance of the requested incidental harassment authorization be contingent on the Service establishing specific mitigation measures for bowhead and beluga whales that will ensure that the proposed activities do not affect these species in ways that will make them less available to subsistence hunters. Such measures should reflect the provisions of any conflict avoidance agreements between Alaska Native hunters and the applicant as well as meeting the requirements of the Marine Mammal Protection Act.

Monitoring and mitigation

The Commission notes that the Service is proposing to include in the incidental harassment authorization additional mitigation and monitoring measures that were included in authorizations issued to Shell Offshore in 2006 and 2007. The Commission also notes that studies conducted as part of a joint industry studies program by the applicant during its 2006 and 2007 survey operations would continue during the proposed 2008 seismic operations. These studies include aerial surveys of marine mammal distribution and abundance along the Chukchi Sea coastline, collection of data (using an acoustic net array) on the occurrence and distribution of beluga whales and on ambient noise levels near villages along the Chukchi coast, and collection of data on the characteristics and propagation of sounds from offshore seismic and vessel-based drilling operations that may have the potential to deflect bowhead whales from their migratory routes in the Beaufort Sea.

The Marine Mammal Commission supports these proposed mitigation and monitoring measures and recommends that they be incorporated in the incidental harassment authorization, if issued. Further, because of the importance of undisturbed habitat to the many marine mammal

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species in the area, the Marine Mammal Commission recommends that known key areas, such as breeding, molting, and feeding areas received an increased level of monitoring. Also, the Commission requests that the Service provide information on whether and, if so, how many times activities were shut down during the 2006 and 2007 operations within the 180-dB, 160-dB, and 120-dB safety and disturbance zones due to the presence of cetaceans.

In addition, the Marine Mammal Commission recommends that the incidental harassment authorization require that operations be suspended immediately if a dead or seriously injured marine mammal is found in the vicinity of the operations and if that death or injury could be attributable to the applicant's activities. Any suspension should remain in place until the Service (1) has reviewed the situation and determined that further deaths or serious injuries are unlikely to occur or (2) has issued regulations authorizing such takes under section 101(a)(5)(A) of the Act.

Please contact me if you or your staff has questions about these comments and recommendations.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Enclosure