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Office of Environmental Policy and Compliance
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July 30, 2007

Mr. P. Michael Payne
Chief, Permits, Conservation and Education Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-325

Dear Mr. Payne:

The U.S. Department of the Interior (DOI) has further reviewed the February 2007, Seismic Surveys in the Beaufort and Chukchi Seas, Alaska, Draft Programmatic Environmental Impact Statement (EIS). We believe the comments provided in this letter need to be addressed in the Final Programmatic EIS. These comments replace my letter to you dated June 12, 2007, and are based on input provided by the DOI's U.S. Fish and Wildlife Service (FWS).

The Draft Programmatic EIS is for reasonably foreseeable proposed geophysical exploration and scientific research using seismic surveys in Outer Continental Shelf (OCS) waters of the Beaufort and Chukchi seas. The Draft Programmatic EIS evaluates nine alternatives for conducting seismic surveys in the Beaufort Sea and Chukchi Sea OCS planning areas. The alternatives include seismic surveying during the open water season in the two planning areas resulting from the annual issuance of up to six seismic survey-related geophysical exploration permits or ancillary activity notices in each planning area by the DOI's Minerals Management Service (MMS). Surveys would likely operate concurrently in both planning areas.

FWS has management responsibility for a number of trust resources that could be affected by seismic activities in the Beaufort and Chukchi seas, as well as oil exploration and eventual development that may follow such activities. These include listed, proposed, and candidate species, as well as those petitioned for listing under the Endangered Species Act (ESA), migratory birds, anadromous fish, polar bears, and Pacific walrus (walrus), and the habitats on which these depend. FWS is also responsible for stewardship of National Wildlife Refuge System units in the vicinity of the project area. These include the Arctic National Wildlife Refuge and the Cape Thompson and Cape Lisburne units of the Alaska Maritime National Wildlife Refuge.

FWS recently provided comments to MMS regarding its proposed 5-Year OCS Oil and Gas Leasing Program for 2007-2012 (see letter dated April 10, 2006, from the FWS Regional Director, Region 7 to the MMS Regional Director, Alaska OCS Region) and proposed Lease Sale 193 in the Chukchi Sea OCS Planning Area (see letter dated December 19, 2006, from the FWS Regional Director, Region 7 to the MMS Regional Director, Alaska OCS Region). Those comments included detailed information on fish and wildlife resources that occur in, and adjacent to, the Beaufort Sea and Chukchi Sea OCS planning

areas and that may be affected by oil and gas activities in those areas. Rather than repeat that information in this letter, we are providing updates regarding the status of several species, as well as additional information and recommendations for those species that are most likely to be affected by seismic activities in the Beaufort and Chukchi seas. This information needs to be included in the Final Programmatic EIS.

The Beaufort Sea and Chukchi Sea OCS planning areas and adjacent nearshore waters are within the ranges of the spectacled eider and the Alaska-breeding population of Steller's eider, both of which are listed as threatened under the ESA. FWS consulted with MMS in accordance with Section 7 of the ESA for listed eiders and for Kittlitz's murrelet, a candidate species for listing (see letter dated April 3, 2007, from the FWS Endangered Species Branch Chief, Fairbanks Fish and Wildlife Field Office to the MMS Regional Director, Alaska OCS Region). FWS concluded that the proposed seismic survey activities as outlined in MMS's March 2006 Biological Evaluation would not adversely affect listed or candidate species, if mitigation measures proposed by MMS are implemented. No other listed species occur in the project area at this time. However, status updates on polar bears (proposed for listing under the ESA) and yellow-billed loons (petitioned for listing) are provided in the Attachment.

With regard to most resources for which FWS is responsible, FWS believes the mitigation measures and standard permit requirements proposed in the Draft Programmatic EIS and agreed to via Section 7 consultation under the ESA will minimize the likelihood of significant impacts from seismic survey activities in the Beaufort Sea and Chukchi Sea OCS planning areas. However, FWS is concerned about potential impacts of increased seismic activities on walruses and subsistence walrus hunters.

Based on its review of the alternatives included in the Draft Programmatic EIS, FWS recommends that the Final Programmatic EIS: (1) include an alternative that limits the number of simultaneous seismic surveys in the Chukchi Sea Planning Area to four annually, and that allows only a single source vessel or limits the total amount of noise generated per seismic permit or authorized ancillary activity; (2) identify additional information needs necessary to analyze potential impacts on walruses and polar bears, particularly data on walrus and polar bear numbers, distribution, habitat use, responses to seismic activities, and potential impacts to subsistence walrus hunting; and (3) includes, for all alternatives, a provision to ensure that an Adaptive Management Plan is developed that defines research and monitoring needed to demonstrate the effectiveness of proposed mitigation measures and that seismic activities are not having greater than expected impacts on fish, wildlife and subsistence users. The Attachment provides additional information regarding these recommendations as well as other related recommendations.

We appreciate this opportunity to review and comment on the Draft Programmatic EIS, as well as the earlier invitations to FWS to provide resource data, maps, and other technical information. FWS looks forward to working closely with you as you proceed to the Final Programmatic EIS and Record of Decision. If you have questions concerning these comments, or if you would like further assistance with regard to FWS trust resources, please contact Mr. Larry Bright of the Fairbanks Fish and Wildlife Field Office at 907-456-0324.

Sincerely,

A handwritten signature in black ink that reads "Pamela Bergmann". The signature is written in a cursive, flowing style.

Pamela Bergmann
Regional Environmental Officer – Alaska

Attachment

ATTACHMENT

GENERAL COMMENTS

Information Needs

Much remains to be learned about the locations and importance of specific coastal and offshore areas to polar bears and Pacific walrus (walrus), and to foraging, molting, and staging waterfowl, seabirds, and shorebirds, particularly in the Chukchi Sea Planning Area. However, both the Chukchi Sea and Beaufort Sea Outer Contingency Shelf (OCS) planning areas and adjacent nearshore and coastal waters provide important habitat for a number of species that may be affected by seismic and associated support activities. Of particular concern with regard to seismic survey activities are potential impacts to walruses and subsistence walrus hunters. Seismic activities could also affect threatened spectacled and Alaska-breeding Steller's eiders, in addition to other waterfowl species thought to be suffering declines, including king and common eiders and Pacific brant. Seabirds, shorebirds, loons, and polar bears also could be disturbed or displaced by seismic surveys, and seismic vessels and associated boat and air traffic could pose a collision risk to migrating birds. The Draft Programmatic Environmental Impact Statement (EIS) summarizes available information regarding these resources while recognizing that important information for some species, including distribution and habitat use, is dated or lacking.

Specifically, additional information is needed on the status and trend of the walrus population because the current lack of such data makes it difficult to detect and quantify potential population level effects. Additional data on walrus distributions and habitat use patterns in the Chukchi Sea Planning Area are also needed to predict when and where walruses and seismic survey operations are likely to interact. The sensitivity of walruses to seismic survey operations and the potential long-term impacts of offshore seismic operations on walrus distributions and habitat use patterns also need to be studied.

To help reduce the likelihood of potential adverse impacts to walruses and subsistence walrus hunters, Fish and Wildlife Service (FWS) recommends that the Final Programmatic EIS limit the number of simultaneous seismic surveys (single source vessel per survey) in the Chukchi Sea Planning Area to four annually until additional data are collected on walrus numbers, distribution, habitat use, responses to seismic activities, and subsistence walrus hunting. FWS believes such data are necessary to analyze the potential impacts of increased seismic and support activities and to demonstrate that mitigation measures can be implemented that minimize the likelihood of significant impacts and meet the intent of the Marine Mammal Protection Act (MMPA).

We understand that FWS will continue collaborating with Minerals Management Service (MMS) on research needed to fill these and other information gaps and to develop and evaluate measures to mitigate potential impacts of oil and gas activities, including seismic surveys on walruses, subsistence walrus hunters, and polar bears in the Beaufort Sea and Chukchi Sea planning areas. FWS looks forward to also partnering with the National Marine Fisheries Service (NMFS) and other stakeholders on this work as well.

Threatened and Endangered Species and Candidate Species

As stated above, the Beaufort Sea and Chukchi Sea OCS planning areas and adjacent nearshore waters are within the ranges of the spectacled eider (*Somateria fisheri*) and the Alaska-breeding population of Steller's eider (*Polysticta stelleri*), both of which are listed as threatened under the Endangered Species Act (ESA). Both species use nearshore and offshore waters along the Beaufort and Chukchi sea coasts as they migrate to and from Arctic Coastal Plain breeding areas. Open-water leads are thought to be important to spring migrating eiders, while post-breeding and fall migrating eiders use nearshore waters

and lagoons as foraging and staging areas. Ledyard Bay is an important molting area where spectacled eiders congregate each year. As a result, Ledyard Bay has been designated as critical habitat for this species. FWS consulted with MMS in accordance with Section 7 of the ESA for listed eiders and concluded the Proposed Action, as outlined in the Draft Programmatic EIS, would not adversely affect listed or candidate species, if mitigation measures proposed by MMS are implemented.

No other listed species occur in the project area; however, Kittlitz's murrelet (*Brachyramphus brevirostris*), a candidate species for listing, has been recorded as nesting on the Lisburne Peninsula adjacent to the Chukchi Sea Planning Area. The potential impacts of the Proposed Action on this species were also evaluated during the Section 7 consultation described above.

The polar bear (*Ursus maritimus*), which occurs in both planning areas, has been proposed for listing as threatened under the ESA. A final listing determination and proposed rule for polar bears are anticipated in December 2007. For proposed species, such as the polar bear, action agencies may need to "conference" with FWS. Under the ESA, "conference" refers to a process of early interagency cooperation designed to identify potential conflicts between an action and species conservation, and to minimize or avoid adverse effects to proposed species or proposed critical habitat. The regulatory "trigger" for "conferring" is different than that for consultation. While agencies are required to consult with FWS when their actions "may affect" the continued existence of listed species or designated critical habitat, action agencies are only required to "confer" with FWS for those actions "likely to jeopardize" the continued existence of the proposed species or result in the "destruction or adverse modification" of proposed critical habitat. Based on the experience of FWS with agency consultations in northern Alaska, and given that Alaska comprises only a small portion of the circumpolar range of the polar bear, FWS does not anticipate the requirement to conference over the next few months. However, conferring with FWS may be a valuable voluntary tool in the conservation of the species.

Additionally, on June 6, 2007, FWS made a positive 90-day finding regarding a petition to list the yellow-billed loon (*Gavia adamsi*) under the ESA. The determination of whether such listing is warranted will be made after completion of a status review, which is anticipated to be completed by summer, 2008. Under Section 7 of the ESA, species petitioned for listing are not assessed as part of the consultation; however, if these or any other species are listed in the future, it will be necessary to reinstate consultation.

Polar Bears

Seismic surveys will be conducted during the open water period, a time when polar bears are not likely to be encountered frequently. Alternatives 3 through 8 include requirements for trained observers to visually monitor safety and/or exclusion zones for marine mammals and to call for a shut-down if marine mammals enter the zone. FWS believes vessel-based visual monitoring would be adequate for polar bears. However, FWS requests that the Final Programmatic EIS ensure that marine mammal monitoring plans for open water seismic activities includes monitoring of polar bears and their reactions to noise, and that data collected during such monitoring be provided to the FWS's Region 7 Marine Mammals Management Office.

If polar bears are encountered, precaution should be taken to avoid disturbance to all bears, but most importantly family groups (females with dependent cubs, especially cubs-of-the-year) on sea ice, particularly isolated floes. If disturbed, small cubs may be forced to swim extended distances in areas where no alternative ice platforms may be available, which may subject them to hypothermia or drowning, as well as increase the energetic demands of mothers. The Final Programmatic EIS should describe what avoidance and mitigation measures will be required of operators if they encounter polar bears (with particular regard to family groups) during seismic surveys and associated support activities.

The Draft Programmatic EIS states that operators will apply for MMPA authorization during activities specified in Alternatives 3 through 8. The Final Programmatic EIS needs to note that monitoring plans and operating conditions will be required when seismic operators apply for Letters of Authorization for incidental and intentional take of polar bears. For example, operating conditions have been previously established and used in the Chukchi Sea, including requirements for marine vessels to avoid all polar bears by 0.5 mile, and that aircraft maintain 1,000 feet elevation above observed polar bears. The Final Programmatic EIS needs to also note that in the event of emergencies, such as a petroleum discharge or hazardous substance release, additional mitigation or monitoring actions may be necessary to avoid harassment or injury to polar bears. Furthermore, the Final Programmatic EIS needs to note that in the event that polar bears are listed in the future under the ESA, oil discharge and hazardous substance release response-related activities will be performed in accordance with the *Inter-Agency Memorandum of Agreement Regarding Oil Spill Planning and Response Activities Under the Federal Water Pollution Control Act's National Oil and Hazardous Substances Pollution Contingency Plan and the Endangered Species Act*.

Pacific Walruses

FWS recently provided comments on MMS's proposed Lease Sale 193 (see letter dated December 19, 2006, from the FWS Regional Director, Region 7 to the MMS Regional Director, Alaska OCS Region) outlining the importance of the Chukchi Sea Planning Area to Pacific walruses (*Odobenus rosmarus divergens*). Information was provided on the species' life history, range, breeding biology, habitat use, seasonal concentrations, susceptibility to disturbance, and its cultural and economic significance to many coastal Native communities in the Bering and Chukchi seas. The comments also noted that much remains to be learned regarding the species' population status and use of the planning area; and that due to the lack of adequate data, FWS is limited in its ability to assess potential impacts of oil and gas activities and to evaluate the effectiveness of proposed mitigation measures.

The Draft Programmatic EIS frequently references further mitigation measures to be prescribed at a later date by NMFS and FWS through the MMPA authorization process to help mitigate potential impacts to marine mammals and subsistence hunters. However, because those mitigation measures and monitoring requirements are not explicitly identified in the document, it is not possible to evaluate them with regard to potential impacts to walruses and walrus hunters. It is DOI's understanding that representatives of the MMS Alaska OCS Region and the FWS's Region 7 Marine Mammals Management Office will continue working together to develop appropriate mitigation and monitoring requirements for walruses for inclusion in the Final Programmatic EIS. We recommend that NMFS representatives also participate in these discussions. Examples of potential mitigation measures and/or monitoring requirements for walruses (and for polar bears) that should be examined for potential inclusion in the Final Programmatic EIS include:

- Ceasing seismic operations if walruses are sighted within the 180-decibels (dB) acoustical safety/exclusion zone.
- Requiring seismic survey and associated support vessels to observe a 0.5-mile (~800 meters) safety radius around walruses (and polar bears).
- Requiring aircraft to maintain a 1,000 foot minimum altitude within 0.5 mile (~800 meters) of hauled out walruses to avoid trampling injuries.
- Requiring FWS and MMS to perform an annual joint review of the seismic survey plans and to require (if appropriate) special restrictions, such as additional temporal or spatial separations to help avoid significant additive and synergistic effects from simultaneous seismic survey operations that might interfere with the migration, feeding, resting, and nursing of walruses.

- Promoting industry sharing of seismic data (as was the case in 2006) to reduce the need for multiple surveys.
- Promoting consolidation of seismic and support operations to the greatest extent possible to reduce the number of boats and aircraft operating in an area.
- Prohibiting seismic surveys during conditions of low-visibility.
- Promoting use of the lowest practicable sound source level and establishing a process for independent verification of that standard.

FWS is concerned that multiple simultaneous seismic operations could form an acoustic barrier that could limit the free movement of walrus across their summer range and affect their ability to move to preferred foraging areas or traditional hunting areas, potentially resulting in adverse impacts to both walrus and subsistence walrus hunters. Hunters from North Slope villages raised this concern at recent public meetings regarding this Proposed Action, and they have suggested that offshore seismic operations in the summer of 2006 contributed to a below average harvest year. It is important that the Final Programmatic EIS note that additional data on walrus distribution, habitat use, and seasonal movements will be needed to analyze this potential effect. FWS is also concerned that potential impacts on walrus hunting opportunities could also occur as a result of multiple supply ships, fuel barges, aircraft, and helicopters transiting the coastal zone in support of up to six simultaneous seismic operations. As a result, the Final Programmatic EIS also needs to acknowledge that these potential impacts need additional investigation as well.

FWS believes the Final Programmatic EIS needs to acknowledge the following with respect to walrus-related information: (1) the uncertain status and trend of the Pacific walrus population make it difficult to detect and quantify any potential population level effects due to seismic survey operations; (2) the information available regarding walrus distributions and habitat use patterns in the Chukchi Sea Planning Area is insufficient to predict when and where walrus and seismic survey operations are likely to interact; and (3) the sensitivity of walrus to seismic survey operations and the potential long-term effects of offshore seismic operations on walrus distributions and habitat use patterns are largely unknown.

Because of the uncertainty associated with potential impacts of seismic survey operations on walrus and subsistence walrus hunters, and until these information needs can be addressed and the effectiveness of proposed mitigation measures demonstrated through research and monitoring, FWS believes it would be premature, and recommends against, increasing the number of concurrent seismic exploration permits issued in the Chukchi Sea Planning Area. To reduce the potential for adverse impacts to walrus and subsistence walrus hunters, FWS recommends limiting the number of seismic source vessels allowed to operate concurrently in the planning area to four (as supported by MMS's 2006 Seismic Programmatic Environmental Assessment and Finding of No Significant Impact) and monitoring both the impacts associated with these activities and the effectiveness of mitigation measures for adequacy prior to considering any further expansion of seismic activities. FWS's rationale and additional information supporting this recommendation are provided below under *Alternatives*.

The Draft Programmatic EIS also includes the stated assumption that requirements for a plan of cooperation with affected Alaskan Native communities will be met, and that a Conflict Avoidance Agreement will be developed to mitigate potential negative impacts to subsistence-harvest activities. However, because the Draft Programmatic EIS does not include provisions for authorizing or requiring participation in such agreements by seismic operators, and because there is no guarantee that such agreements will be reached between seismic operators and affected Native communities or organizations,

FWS believes that the Final Programmatic EIS needs to eliminate any reference to additional mitigation that may, or may not, be achieved through such an agreement(s).

Alternatives

The Draft Programmatic EIS evaluates nine alternatives for conducting seismic surveys during the open water season in the Beaufort Sea and Chukchi Sea OCS planning areas. In addition to the No Action Alternative (Alternative 1), Alternatives 2 through 8 include seismic surveying resulting from the annual issuance of up to six MMS seismic survey-related geophysical exploration permits or ancillary activity notices in each planning area. These alternatives differ principally in the sizes of exclusion and protection zones that would be identified for the protection of marine mammals, primarily whales. Alternative 9 would limit seismic activities to one survey or authorized ancillary activity annually in each planning area. Under all action alternatives, surveys would likely operate concurrently in both planning areas.

The Draft Programmatic EIS is confusing in that it describes Alternative 2 as the Proposed Action (p. II-1), but then excludes it from further evaluation because it is "...contrary to the mandates under the OCS Lands Act..." and "...is therefore not feasible or acceptable..." (page II-10). It also eliminates Alternative 9 from further evaluation. FWS recommends that another alternative be designated as the Proposed Action and selected as a Preferred Alternative in the Final Programmatic EIS.

Alternatives 3 through 8 would increase the allowable number of seismic exploration permits issued in the Chukchi Sea Planning Area in a given year from four to six. The purpose of the Draft Programmatic EIS is to provide programmatic National Environmental Policy Act (NEPA) documentation necessary for MMPA authorizations. Section 101(a)(5)(A) of the MMPA (16 U.S.C. 1371) provides for the authorization of incidental, but not intentional, taking (by harassment) of small numbers of marine mammals provided that such taking: (1) will have no more than a negligible impact on these species, and (2) will not have unmitigable adverse impacts on the availability of these species for subsistence use by Alaska Natives. With respect to walrus and the subsistence use of walrus along the Chukchi Sea coast, FWS does not believe that the Draft Programmatic EIS clearly demonstrates that either standard could be met if one of these alternatives is selected. Therefore, FWS recommends evaluation in the Final Programmatic EIS of an alternative that limits to four the number of concurrent seismic operations that would be permitted in the Chukchi Sea Planning Area, and to consider adopting this alternative as the Proposed Action and Preferred Alternative in the Final Programmatic EIS.

For Alternatives 3 through 8, FWS believes the Final Programmatic EIS needs to more thoroughly analyze the potential impacts to walrus and subsistence walrus hunters of up to six concurrent seismic operations in the Chukchi Sea Planning Area, including the total area that hypothetically could be ensonified to 160 dB, and the number of walrus likely to be potentially affected under such a scenario. FWS recommends that additional information and analyses be provided in the Final Programmatic EIS regarding the potential impacts on walrus of mobilizing and servicing up to six simultaneous seismic operations. This additional analysis should address questions including, but not limited to:

- Will icebreakers be used in conjunction with seismic vessels in the planning areas and, if so, during what dates/time frames? What impact might those activities have on walrus and subsistence walrus hunters along the transit route?
- What is the most likely scenario for seismic support operations in the Chukchi Sea Planning Area, and how might these activities impact walrus and subsistence walrus hunting opportunities?

The Draft Programmatic EIS concluded that reducing the number of seismic source vessels may not necessarily reduce potential impacts to fish and wildlife, and that "...impacts from seismic surveys are more directly related to where, when, how long, and how close together seismic surveys are conducted than to the absolute number of seismic source vessels" (pg. II-11). However, given the substantial uncertainty regarding potential impacts to walruses and subsistence walrus hunters and the effectiveness of proposed mitigation measures, FWS believes limiting the overall amount of seismic noise generated in the Chukchi Sea Planning Area would reduce the likelihood of significant impacts to walruses and subsistence hunting of walruses. Therefore, FWS recommends allowing only a single source vessel or otherwise limiting the total amount of noise generated per seismic survey and/or ancillary activity to minimize the proportion of the planning area exposed to potentially disturbing sound sources at any given time.

Furthermore, in keeping with Secretarial Order No. 3270, FWS believes the Final Programmatic EIS needs to include a provision, for all alternatives, that ensures that an Adaptive Management Plan will be developed to guide decisions regarding appropriate levels of seismic activities in both the Beaufort Sea and Chukchi Sea OCS planning areas. The plan should clearly define a research and monitoring program that will be implemented to evaluate impacts of seismic activities on fish and wildlife resources and subsistence users, and the effectiveness of proposed mitigation measures. FWS recommends against increasing the level of seismic activities, particularly in the Chukchi Sea Planning Area, until such a plan is designed and implemented in consultation with FWS and other stakeholders, as appropriate. The plan would determine if, and at what levels, additional seismic activity could be permitted in the future without substantially increasing the likelihood of impacts to walruses and walrus hunters.

Additional Recommendations

FWS also recommends that the Final Programmatic EIS include the following:

- A provision for encouraging seismic survey operators and contractors to participate in FWS's Incidental Take Program for polar bears and walruses.
- A provision for ensuring that marine mammal monitoring plans for open water seismic activities include monitoring of polar bears and their reactions to noise, and that data collected during such monitoring be provided to the FWS's Region 7 Marine Mammals Management Office.
- An expansion of the analysis of potential impacts to subsistence walrus hunting patterns to include the Native communities in the Bering Straits region and the northern coastline of Chukotka, Russia. Information concerning hunting patterns in these communities is available from the FWS's Region 7 Marine Mammals Management Office.
- Support of research on methods to reduce noise from seismic survey activities.
- Support of research on the distribution and habitat use patterns of walruses and other marine mammals in the proposed survey areas.
- Support of research into the behavioral responses of walruses to seismic survey noise.

SPECIFIC COMMENTS

Page II-3, Proposed Mitigation and Monitoring Requirements Specific to Marine Mammals: The Final Programmatic EIS needs to note that FWS also has a role in setting specific requirements for seismic monitoring programs and observers.

Page II-4, Temporal/Spatial Restriction: FWS's role in seismic surveys in the Chukchi Sea spring lead system needs to be revised to read as follows "Seismic surveys must not occur in the Chukchi Sea spring lead system before July 1, unless authorized under the MMPA by NMFS and FWS, to provide bowhead whale and walrus cow/calf pairs additional protection."

Page V-1, 2, List of Reviewers: In the Final Programmatic EIS, the FWS Marine Mammals Management Office needs to be added as a reviewer of future NEPA documents for activities that have the potential to affect walruses, polar bears, and sea otters in Alaska.