



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

National Marine Fisheries Service

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Subject: Minerals Management Service (MMS) Draft Environmental Impact Statement (DEIS) for the Beaufort Sea and Chukchi Sea Planning Areas - Oil and Gas Lease Sales 209, 212, 217, and 221.

Dear Mr. Goll:

Thank you for soliciting comments on the DEIS for this proposed multi-sale action. The National Marine Fisheries Service (NMFS) has reviewed the subject DEIS and offers the following comments. The DEIS analyzes four Lease Sales (209, 212, 217, and 221) proposed in the Beaufort and Chukchi Seas in 2010-2012. Supplemental EISs may be prepared for Lease Sales 217 and 221. MMS proposes to offer the entire program area for lease in both basins (Alternative II – All Areas Open). Below, NMFS offers general and specific comments for endangered species, marine mammals, commercial fisheries, and fish habitat.

General Comments

We remain very concerned about potential impacts to living marine resources, their habitats, fisheries, and subsistence uses of marine resources as a result of oil and gas lease sales, exploration, and development in the planning areas. The individual and cumulative effects of development in these relatively pristine environments could be significant. The DEIS includes discussions of effects should a warming trend continue in Alaska. The Chukchi Sea, and adjoining Bering and Beaufort Seas, are experiencing a change in oceanic condition, and the effects to marine resources and their movements are uncertain. Therefore, any proposals for development in these areas should fully account for the associated environmental, economic, and social consequences to ensure the continued productivity of living marine resources for future generations.

This is the second time that MMS has written a multi-sale EIS for the Alaskan OCS region. The DEIS presents a fairly accurate description of the environmental baseline within the planning area and describes some impacts that would be associated with the proposed sales. However, the DEIS presents a huge amount of information for stakeholders to digest in a limited amount of



time, which is greatly complicated by the inclusion of both the Beaufort and Chukchi Seas under the same DEIS. Furthermore, the DEIS is difficult to read and understand, due to its confusing format and the systematic redundancies throughout the document.

The DEIS states that it tiers from the Programmatic EIS prepared for the 2007-2012 5-year program, and incorporates by reference information presented in the Beaufort Sea Multi-Sale EIS for Sales 186, 195, and 202; the Chukchi Sea Sale 193 EIS; and the draft EIS for Seismic Surveys in the Beaufort and Chukchi Seas, Alaska. However, the most recent NEPA document prepared for OCS oil and gas activities in the Beaufort Sea is the Lease Sale 202 EA. That document presents the most recent information on OCS activities in the Beaufort Sea, and should be referenced, rather than the Beaufort Sea Multi-Sale EIS for Sales 186, 195, and 202.

Marine Mammal Issues

General Comments

We have limited our review to sections of the DEIS pertaining directly to marine mammals and the subsistence use of those resources. Consequently, we have not had the opportunity to evaluate the data or models used for oil spill risk assessment.

The Chukchi and Beaufort Sea lease sale areas include important habitat for marine mammals. The proposed multi-sale action described in the DEIS has the potential to result in significant impacts to marine mammal populations and habitats in Alaska. We remain particularly concerned over the individual and cumulative effects of oil and gas activities on the Western Arctic population of bowhead whales. The MMS has responded to these concerns in its environmental studies program, researching many issues and providing decision makers with important data.

One of the most contentious and potentially harmful activities associated with leasing of the OCS is the introduction of underwater noise to the environment. As noted in the DEIS, marine mammals are sensitive to noise and prone to disturbances by human activities. The noise generated by the proposed exploration and development activities (e.g., seismic surveys, icebreakers, airplanes, helicopters, drilling operations and support vessels) has the potential to cause serious impacts to marine mammals. High levels of noise can result in temporary or permanent hearing damage. Even low levels of noise can disrupt biological processes such as nursing, resting or feeding or result in disturbance events. Long term or repeated disturbances and interactions may displace marine mammals from preferred forage areas and migratory routes with potential consequences to animal fitness and reproduction.

Marine mammals are also a resource of enormous cultural and economic importance to coastal communities in Alaska. The proposed activities described in the DEIS have the potential to disrupt or interfere with subsistence hunting activities in communities bordering the proposed lease sale areas. Any impacts to marine mammal populations or alteration of migratory pathways could have significant consequences for subsistence hunters across Arctic Alaska.

However, the DEIS fails to take a hard look at the impacts that oil field development in important habitat areas of the Beaufort and Chukchi Seas might have on marine mammal

populations and subsistence hunters. For example, displacement of migrating bowhead whales or heightened sensitivity to noise may adversely impact traditional subsistence use of these whales by Alaska Natives. We believe repeated exposure of migrating bowhead whales to noise sources may be an example of synergistic impact. While whales may avoid a sound source by moving further offshore before resuming their normal course, and may make such avoidance movements around several sources (additive impact), there may be a point at which the whales remain offshore after exposure to multiple sources, even once the sound source is no longer present. Given the many potential noise sources associated with exploration, development, and production on the OCS, Alaska Natives and scientists consider this a real possibility. MMS should address these concerns in the DEIS through the proposal and analysis of specific mitigation measures designed to address these potential impacts.

While the multi-sale DEIS provides a useful overview of the potential range of activities and environmental impacts that might occur over the next 20 years, this overview is extremely generalized and lacks sufficient site-specific details necessary for a rigorous assessment of the various proposed actions and their potential impacts to marine mammals. The information necessary to properly assess the biological effects of the proposed lease sales must be more thorough and at a much finer scale than what is provided in this DEIS. Unfortunately, much of this essential information is not available. Data to describe marine mammals and their habitat within the sale areas are lacking or inadequate to support impact assessment and mitigation planning. The DEIS contains many statements to this effect, and some of these data gaps are striking given the ecological, social, and cultural importance of the marine mammals in question. For example:

- p. 3-76, “recent data to evaluate bowhead use of the Chukchi Sea Planning Area, or adjacent areas to the south, are insufficient to be conclusive; studies are under way to further define use patterns.”
- p. 3-81, “we caution against over interpretation of these data out of context of survey effort, because these Chukchi Sea data were collected between 1979 and 1991, they should not be interpreted as indicating current use of the Chukchi Sea by bowhead whales.”
- p. 4-79, “very little is known about the actual hearing capabilities of the large whales or the impacts of sound on them.”

Such data gaps are clearly a hindrance to MMS’s ability to prescribe specific mitigation measures for future exploration and development plans or permits. Without a detailed look at when and where marine mammals are likely to be distributed within the lease sale areas, it is difficult to determine what level of interactions are likely to occur, or what the magnitude of potential impacts might be. As a result, it is critical that MMS and its subject matter experts, who are most familiar with the proposed action, present a clear and logical analysis of the proposed action, and the actions proposed to mitigate potential adverse effects resulting from it. Based on this knowledge, the MMS should propose and evaluate a suite of specific mitigation measures to address potential impacts, rather than defer that mitigation and analysis to subsequent actions by NMFS and FWS at some point in the future. The DEIS does not meet this standard.

For example, there is little analysis in the DEIS on the potential impacts to migrating bowhead whale and subsistence hunting of that species in the Beaufort Sea. Other than providing alternatives for deferral areas in the Beaufort Sea, there is little discussion of the effectiveness of time/area closures for mitigating potential impacts to the bowhead whale migrations or subsistence hunting practices. Without more specific descriptions of existing and proposed mitigation measures, it is impossible to evaluate their effectiveness or assess to what degree they will mitigate potential effects of oil and gas activities. As a result, the DEIS fails to analyze the effectiveness of proposed mitigation measures to protect marine mammals, their habitat, and subsistence hunting from potential impacts.

The DEIS should consider that the offshore lease sale areas are not homogeneous with respect to biological significance or environmental challenges. One case in point is the proposed Hanna Shoal deferral area. It does not appear that the DEIS considered the thickness of built up and grounded sea ice in this region in its oil spill risk assessment, or the difficulty industry would face in protecting pipelines from heavy sea ice in this region. The shallow waters of Hanna Shoal often retain grounded sea ice late into the season, which in turn traps floating sea ice, creating a refuge for ice dependent species such as ice seals throughout the open water season. Even during the summer “open water season”, exploration and development activities will have a high probability of encountering and impacting ice dependent marine mammal species in this region.

Underwater noise associated with oil and gas leasing, such as seismic and drilling noise, represents a significant source of harassment for marine mammals. The potential for disturbances to marine mammals associated with the proposed action will depend on the timing, location and scale of operations. Activities occurring near productive forage areas such as the Hanna Shoal deferral area, or along migratory corridors (e.g. the coastal zone deferral area) are most likely to encounter and impact marine mammals. Without current and thorough data which describe the habitat use and function of the proposed lease areas, along with the seasonal presence and distribution patterns of marine mammals in the planning areas, it will be very difficult to permit and conduct OCS activities in a manner that has no more than a negligible impact to the stock and minimizes disturbance and harassment to the extent practicable.

The continued lack of basic audiometric data for key marine mammal species that occur throughout the proposed lease sale areas hampers our ability to determine the nature and biological significance of exposure to various levels of both continuous and impulsive oil and gas sounds. Audiometric data, including threshold shifts and recovery for the dominant marine mammals in each region, should be obtained to support lease sale actions and for NMFS to consider authorizing incidental taking under the Endangered Species Act and Marine Mammal Protection Act. Acquisition of these data should precede leasing where acoustic effects on marine mammal species have not been adequately researched.

The DEIS should acknowledge that the uncertain status and trend of the marine mammal populations inhabiting the proposed lease sale areas will make it difficult to detect and quantify any population level effects from the proposed actions. The lack of information on population size and trend will also make it difficult to monitor the impacts and effects of proposed activities. The distribution and habitat use patterns of marine mammals within the proposed lease sale areas are only generally known and may be subject to change in the foreseeable

future, due to changing habitat conditions. Information regarding preferred migratory routes and the identification and delineation of important forage areas are necessary to evaluate potential effects of proposed activities on individuals and populations. We recommend that MMS give high priority to addressing these information needs through its Environmental Studies Program. Until such time as these information needs can be addressed through research and monitoring, we recommend MMS proceed cautiously with long term lease sales to ensure no adverse impacts to marine mammals or important habitat areas occurs. Because data on the impacts to marine mammals are not readily available, the MMS must give a more thorough explanation in the DEIS of how, in light of those gaps, it still believes this action would not cause significant impacts to marine mammals and the communities that hunt them.

As noted in the DEIS, projected sea ice changes are expected to present some significant adaptive challenges for marine mammal population in the near future. For example, in 2008 NMFS was petitioned to list three ice seal species (bearded, spotted, and ringed) as threatened or endangered under the ESA, largely as a consequence of global climate change. Although the merits of that petition are currently under review, it underscores the need to identify and protect important habitat areas and use a precautionary approach to carrying out commercial activities in the Arctic.

Specific Comments

The current organization of the DEIS is unnecessarily confusing, repetitive, and difficult to follow. For example, although effects definitions are provided in section 4.4.1.1, they are unnecessarily reiterated in many subsequent sections of the DEIS. Another source of confusion is that specific topics, such as oil spill impacts, are discussed in multiple places for a single species or group of species (e.g., there is no “one-stop” section for each resource for a complete discussion of potential impacts from oil spills). We suggest that the oil spill scenario section be written such that it can easily be referenced from each section of analysis of impacts, rather than continually repeating information common to all resources in each section of the DEIS.

The information in Section 4.4.1.8.3 seems to be universal to the analyses of impacts to all resource groups; it’s inclusion here is confusing and redundant with information presented elsewhere in the DEIS. It is not clear why sections are duplicated repeatedly within each species group (e.g., vessel traffic noise) nor why there are separate sections on “vessel traffic and noise” and “vessel disturbance”, and “aircraft noise” and “aircraft disturbance” (e.g., under Alt 1, Other Marine Mammals). These categories of impacts are essentially the same and should be combined for clarity and ease of reading. In general, much information is repeated numerous times in section after section, making the document cumbersome, unnecessarily long, and very difficult to read. For example, why are there two sections on “Effects from Vessel and Aircraft Disturbance” (4.4.1.8.1.2, 4.4.1.8.3.2.4)? The DEIS would be greatly improved if such sections were condensed and consolidated. For example, details of the oil spill analysis should be consolidated into one stand-alone section that individual analysts can refer the reader back to. Additional comments follow:

- Another example of redundancy is the following paragraph found throughout the DEIS: “According to oil-spill records, most accidental spills in Alaska happen in harbors or during groundings. Vessel-related spills on the high seas are considered infrequent

events. Concern has been expressed about increasing tourism and shipping vessel traffic between the Bering Sea and the North Atlantic, especially vessels with crews unaccustomed or ill-prepared for these remote and dangerous areas. If recent performance in the Antarctic is any indication, vessels transiting the Chukchi Sea during ice periods may be prone to ice-related accidents. The ADEC (2007) reports the highest probability of spills of noncrude products occurs during fueltransfer operations at remote North Slope villages. Other sources of petroleum spills include contamination from oil and gas exploration or development.”

- What is the purpose of Section 4.5.2.8.1? It only serves as another source of confusion for the reader.
- The recent ribbon seal status review published by NMFS in December 2008 provides the most current information for that species.
- P. 4-181- no discussion is provided of icebreaker effects on belugas.
- Several places in the DEIS mention exploration drilling in the Beaufort and Chukchi Seas in 2007 (p. 4-105, 4-192). NMFS was not aware of any such activities. Could this topic be elaborated on?
- Invasive Species: On p. 2-20, the DEIS states “The Chukchi and Beaufort seas pose harsh and frigid environmental conditions that are believed to impose major and difficult challenges to AIS that might be introduced into the region’s waters by vessels or equipment. Therefore, the likelihood of introducing AIS from the Proposed Actions is considered to be very low, and this issue is not considered further in this EIS.” Yet on p. 4-128, the DEIS states “changing conditions potentially could provide opportunity for exotic or invasive species of marine life to expand into the Chukchi or Beaufort sea, and potential pathogens and parasites previously absent in the Arctic could survive and affect Arctic species lacking resistance or immunity.” A similar statement is made at p. 4-657. This is an issue of serious concern to NMFS; consequently we would like a detailed explanation of this discrepancy in the DEIS.
- There are many other contradictions throughout the DEIS. For example, p. 4-701 of the DEIS states that “In the Chukchi it is estimated that 10 exploration wells could be drilled on the existing leases.” In the very next paragraph, it says “In the Chukchi, it is estimated that 8-14 exploration wells could be drilled on the existing leases.”
- Some sections of the DEIS say that “oil and gas development in the Chukchi Sea is not considered reasonably foreseeable”, other sections say that “it is reasonable foreseeable to assume production activities could occur in the foreseeable future.” Please clarify the position that MMS is taking in this regard.
- P. 4-187 refers to sections of the DEIS that do not exist: “activities noted in Sections 4.4.1.8.2.1 and 4.4.1.8.2.2...”
- On p. 4-453, the DEIS states “The MMS mitigation measures likely would require no discharges into marine waters but that they be treated and disposed of into the subsurface in disposal wells or barged to and disposed of in designated and approved disposal wells,” and on p. 4-506, the DEIS states “mitigation measures require that most discharges (cuttings and drilling muds) from production wells be reinjected into authorized disposal wells.” Could the MMS elaborate on this point? Specifically, is the MMS advocating a “zero-discharge” policy with regard to drilling muds and cuttings?
- P. 4-602, “The primary reduction in impacts of this deferral would be to exclude disturbance and collision impacts to endangered whales arising from exploration

activities in these blocks for the remainder of the 2007-2012 5-Year Program period.” Why does the reduction in impacts only last for a 5-year period? Why not for the life of the sale?

- Citations and rationale for conclusory statements are largely lacking throughout the marine mammal sections, particularly for the Chukchi Sea. For example, under Alt 1, Chukchi, T&E Whales, there is a distinct lack of citations for the information presented. Please provide citations here, and throughout the other marine mammal sections, so that we are able to tell what primary sources were used to arrive at the conclusions presented in the DEIS.
- P. 4-656, 2nd bullet: what species is being referred to here?
- P. 4-795, Mitigation measures are mentioned in Section 4.5.2.6.1.3, but the section references itself in the last sentence.

Oil Spills

The potential for a major oil release into the arctic marine environment is the most significant risk to marine and coastal wildlife associated with this proposed action. As a result, we urge MMS to seek NMFS review of all future Oil Spill Response Plans (OSRPs) submitted to MMS for approval to ensure adequate safeguards are included in OSRPs for our trust species.

- On p. 4-17, the DEIS cites ADEC, 2001 for assumptions regarding oil spills. Please include a discussion of all the pipeline spills on the North Slope since 2006 which have resulted from corrosion of existing pipelines. Although these have been terrestrial spills, they are still indicative of what normal “wear and tear” can do to pipelines, particularly in a more corrosive and inaccessible environment such as under marine waters, and should be considered when making assumptions about oil spills.
- On p. 4-23 and p. 4-824, LEOS is cited as one method to detect subsea pipeline leaks. In other recent MMS NEPA documents (e.g., the 193 EIS), this system was described as “proven to detect leaks equal to <1% of the total daily pipeline flow. This type of technology will help prevent large undetected oil spills from small chronic leaks under the ice.” However, the rate at which BP’s large oil spill on Alaska’s North Slope occurred in March 2006 was small enough that it would not have been detected by LEOS. According to the Alaska Department of Environmental Conservation, the leak detection system on the pipeline that leaked was “successfully tested in 2002 as capable of detecting a leak of 0.5 percent of the flow in 24 hours. That detection level is significantly more sensitive than the current regulatory requirement of 1 percent.” However, ADEC findings indicated that the rate of oil loss may have occurred over time at a rate that was below the rate of loss that would have to occur to trigger the leak detection system. Although this spill occurred on land, next to a main trunk road on the North Slope, it still went undetected long enough for over 200,000 gallons of oil to spill from the pipeline before it was discovered. In light of these facts, we encourage MMS to continue to work to improve technology to more effectively identify potential leaks in subsea pipelines. Although the March 2006 spill occurred in a pipeline that did not utilize the LEOS system, it still indicates that the LEOS system is obviously inadequate to mitigate large oil spills from chronic subsea pipeline leaks of this type. LEOS is not, as stated in the DEIS, “proven to provide adequate leak detection.”

- On p. 4-24, the DEIS suggests tracking an oil spill can be accomplished through the use of FLIR. The DEIS should explicitly state that this technology is largely inadequate for tracking an oil spill, as it would not be useful once the oil spill reached ambient temperatures. That would not take long in the arctic environment, and therefore is not really a useful tool for tracking and responding to an oil spill.
- On p. 4-25, the DEIS states “oil-spill response equipment dedicated to oil-industry spill response on the North Slope is located primarily in Deadhorse.” This is inadequate for responding to potential oil spills in the Chukchi, due to the distances involved and the complications resulting from unpredictable weather conditions across the North Slope. The DEIS states “an effective response, regardless of the environment relies on...the ability to act quickly once the event occurs.” How does MMS intend to address this contradiction?
- Oil spill clean-up in the broken ice and open water conditions that characterize arctic waters is problematic. In the 193 EIS, the MMS noted that there are difficulties in effective oil-spill response in broken-ice conditions:

“The MMS advocates the use of nonmechanical methods of spill response, such as in situ burning, during periods when broken ice would hamper an effective mechanical response. In situ burning has the potential to rapidly remove large quantities of oil and can be employed when broken-ice conditions may preclude mechanical response. However, there is a limited window of opportunity (or time period of effectiveness) to conduct successful burn operations. The type of oil, prevailing meteorological and oceanographic conditions, and the time it takes for the oil to emulsify define that window. Once spilled, oil begins to form emulsions. When water content exceeds 25% most slicks are unignitable”.

Yet the DEIS states on p. 4-27 that “ISB is the preferred method of non-mechanical response for ice-infested waters.” What is MMS doing to address the admitted inadequacies of their “preferred method of non-mechanical response for ice-infested waters?”

- On p. 4-28, the DEIS discusses the use of dispersants for responding to an oil spill, yet admits “aircraft could be over the spill site within 9 hours to apply dispersants.” That could be a critically long time to effectively respond to an oil spill. What is MMS doing to address this weakness in its response strategy, considering that the DEIS states “an effective response, regardless of the environment relies on...the ability to act quickly once the event occurs?”
- On p. 4-461, the DEIS states “The probability of an oil/fuel spill increases with more and broader regional distribution of oil- and gas-related activity...” Also, on p. 4-518, the DEIS states that “Production from these existing leases and any new leases is not anticipated, but we evaluated the potential effects of production, including the potential for a large spill, and these effects closely approximate the levels of effects described for the previous lease sales.” What is the cumulative oil spill probability for all active and proposed sales (e.g., 193, 202, 195, etc.)? It doesn’t make sense to separate oil spill probabilities for Beaufort/Chukchi for migratory species such as bowheads.

Beaufort Sea

Four extensive areas in the Beaufort Sea previously were recommended for deferral during scoping for the 2003 Beaufort Multisale EIS. The same four areas were again recommended for deferral during scoping for this DEIS. However, this alternative (termed the “Large Bowhead-Whaling Deferral Area in the Beaufort Sea” in the DEIS) was considered, but not included in this DEIS for further analysis, without explanation. We request the reason for this be further explained. For the purposes of mitigating potential impacts to subsistence practices, we also request that this alternative be included and analyzed as an alternative to the Proposed Action.

As written, the DEIS seems to intend that the alternatives presented are mutually exclusive. In other words, no alternative includes all three Beaufort Sea whaling and the Beaufort Sea Deepwater deferral areas. However, in the absence of the Large Bowhead-Whaling Deferral Alternative mentioned above, we recommend the adoption of Alternatives 3, 4, 5, and 6, inclusive, as the preferred alternative. The combination and selection of these four alternatives would help reduce potential conflicts between bowhead whale subsistence hunters and offshore oil and gas operations.

Chukchi Sea

MMS’s analysis supporting Alternative 2, Proposed Action for Sales 212 and 221, did not present a strong enough case to NMFS that marine resources would be adequately protected. The MMS presents a broad, but certainly not exclusive, range of potential alternatives for consideration. Much of the coastal region within the Chukchi Lease Sale area is an important subsistence hunting area for Alaska Native villages on the Chukchi Sea. Leasing and exploration activity in these waters would increase the potential for impacts to subsistence hunting.

NMFS strongly recommended Alternative III (Corridor I deferral) for Lease Sale 193, yet this alternative was considered in this DEIS, but not included for further analysis. However, no real explanation was given, other than saying the effects would be essentially the same under both the Corridor 1 and Corridor 2 alternatives. That is a curious conclusion, considering the two alternatives provide a protective buffer offshore of the coastline of 60 miles versus 25 miles, respectively. In our comments on Lease Sale 193, we noted the limited amount of biological and physical information available for the Chukchi Sea. Alternative III (Corridor I) offered a larger migration corridor for marine resources, including those that are important to subsistence activities. Thus, this Alternative offered a precautionary approach to afford protection to marine resources in a data limited environment, and should be included for analysis as an Alternative in this DEIS.

We strongly endorse the inclusion and selection of the original Alternative III from Lease Sale 193 for several reasons. This would:

- Provide some degree of impact reduction for the endangered bowhead whale, as this population migrates through the nearshore lead system of the sea ice during its spring migration into the Beaufort Sea. The spring lead system is one of the most sensitive environments for these whales.

- Afford some mitigation and avoidance for the Native villages along the Chukchi coast which depend on subsistence resources, especially marine mammals.
- Protect nearshore marine resources and reduce the potential for a catastrophic event to impact benthic habitats, migratory current corridors, and nearshore estuarine habitats.
- Offer a precautionary setback to better protect marine resources facing warmer oceanic conditions and larger open water areas.
- Reduce the effect of seismic geophysical surveys occurring in the Hannah Shoal region and the productive nearshore zone of the Chukchi Sea.

Several of the alternatives in the DEIS contain deferments that would also protect important habitat and subsistence hunting areas to some degree, but unfortunately these are presented in a mutually exclusive fashion. For example, Alternative 3 recognizes the importance of the near shore coastal zone for migrating marine mammals and marine mammal subsistence hunting, while Alternative 5 recognizes the Hanna Shoal region as a unique and diverse habitat and as an important feeding area for gray whales and other marine mammals. However, none of the alternatives presented would protect both of these important habitat areas. MMS should develop and consider an alternative that defers leasing in both these areas until such time as it can be demonstrated that exploration and development activities in these sensitive regions can be accomplished without significant impacts to marine mammal populations or subsistence hunters.

Alternative 3 as adopted in this DEIS was developed by MMS as the Corridor II deferral alternative in the Sale 193 EIS to reduce potential conflicts between subsistence users and OCS oil and gas operations, and was ultimately selected as the preferred alternative. In the absence of other alternatives to consider, we recommend combining Alternative 3 with Alternative 5, the Hannah Shoal Deferral Alternative, and Alternative 6, the Chukchi Sea Deepwater Deferral, as the preferred Alternative. This would better protect marine mammals, their habitat, and subsistence hunting, and reduce unnecessary work on areas likely to have low industry interest. In the absence of that, adoption of Alternative 3 by MMS as the preferred alternative would help to reduce potential impacts to marine mammals and subsistence practices.

However, as noted above, we strongly recommend that Alternative III from the 193 EIS should be included for analysis as an Alternative in this DEIS, as it offers a precautionary approach to OCS development, and affords protection to marine resources in the current data limited environment.

Legal standards of the MMPA have not been fully presented or considered

Section 101(a)(5) of the MMPA provides for the incidental, but not intentional, taking of small numbers of marine mammals for maritime activities provided that the Secretary finds the total of such takings will have no more than a negligible impact on the species and does not have an unmitigable adverse impact on the availability of these species for subsistence uses. Activities occurring in areas used by large numbers of animals or areas of biological significance to the population may not qualify for take exemptions, unless it can be demonstrated that mitigation measures can effectively reduce potential impacts to animals in these regions.

The MMPA standard also restricts take authorization to activities unlikely to have an unmitigable adverse impact on the availability of these species for subsistence uses. Chukchi

Sea Lease Sale 193 deferred leasing of near shore blocks, in part, to minimize potential impacts to subsistence hunting of marine mammals near coastal communities. The DEIS provides no compelling information suggesting that the concerns of the subsistence hunting communities have been addressed, or that any evaluation of existing mitigation measures to mitigate impacts to subsistence uses has been undertaken. Indeed, much of the public record contained in the DEIS indicates that these concerns persist and that ongoing exploration activities in the region may be impacting subsistence hunting near the communities. As noted above, we recommend that the MMS defer leasing in the coastal zone, particularly near subsistence communities, until adequate mitigation standards have been developed to address concerns about impacts to subsistence hunting. Further, we recommend that MMS prepare a NTL advising that MMPA take authorization may not be possible in biologically sensitive regions or in areas important for subsistence hunting of marine mammals.

Cumulative Impacts

The DEIS should present an expanded discussion of oil and gas activities within the Canadian Beaufort, particularly off the McKenzie delta, as well as vessel movement into and out of Canadian waters necessary to support activities within the Alaskan OCS region. Cumulative impacts associated with activities in Canadian waters would present several concerns with respect to bowhead whales and subsistence hunting, especially as late season traffic in the eastern Beaufort Sea would be most likely to encounter and harass these whales.

Mitigation

The EIS states that “the analyses in this EIS also consider whether the mitigation that is proposed as part of the proposed actions is likely to reduce or eliminate all or parts of the potential adverse effects.” However, from the text of the analyses, it is not clear how this was accomplished. Rather, MMS seems to have resorted to conclusory statements that mitigation will be effective in place of explaining and analyzing how, in fact, mitigation measures will reduce effects. In order to be effective, a mitigation measure must be supported by analytical data demonstrating why it will constitute an adequate buffer against the negative impacts that may result from the authorized activity. Stakeholders must be able to review, in advance, how specific measures will mitigate potential impacts to the environment. In order to rely on mitigation to obviate further analysis, the measure must be identified and its effectiveness analyzed. For example:

- Throughout document, “mitigation” is cited that would “avoid or eliminate” adverse effects, yet the “mitigation” is rarely specified, analyzed, or a description provided on how the “mitigation” would in fact mitigate potential effects.
- On p.2-13, the DEIS says the lease stipulation to prohibit permanent OCS production facilities within a 10-mi radius shoreward of Cross Island was considered but not incorporated into this action. The objective of the stipulation was to ensure that OCS development in that area did not preclude reasonable subsistence access. The DEIS states “analysis of the measure concluded that the stipulation would provide little protection of subsistence whaling activities”, and was not included for further analysis. What was the analysis that was conducted of this measure which contravened MMS’s previous inclusions of this stipulation as mitigation in its NEPA documents? No

explanation is given for why this stipulation was dropped. Please provide a detailed explanation of what analysis was conducted, and how the conclusion was reached that this mitigation was no longer effective or needed.

- On p. 2-16, lease blocks are listed to which Stipulation #3 (Permanent Facility Siting in the Vicinity Seaward of Cross Island) apply, yet it is not clear how these blocks differ from the original lease stipulation described on p. 2-13 which was dropped from further consideration in this EIS. Please explain the difference, as this is a point of confusion.
- On p. 2-16, the new NTL No. 08-A02 is described, and Adaptive Management and Mitigation Plans are alluded to. What does this mean? What are some specific mitigation measures that may be adopted to mitigate future EPs and DPPs, based on MMS's past experience?
- Information is presented on the effects of ice-breakers on marine mammals (e.g., p. 4-89, "effects of an actual icebreaker on migrating bowheads, especially mothers and calves, could be biologically significant"), yet nothing in the DEIS specifically addresses mitigating this potentially significant source of disturbance to marine mammals. How does MMS intend to mitigate the effects of icebreakers on marine mammals?
- P.4-105, "We believe that the strongest effects could be avoided through careful shaping of the action through the implementation of sufficient monitoring coupled with adaptive management to focus area, timing and bowhead presence-related mitigating measures where most needed." What specifically does the MMS envision, and how, specifically, would this help to avoid the "strongest effects?" Details and analysis of the "mitigation" alluded to is notably lacking.
- P.4-121, "additional mitigation measures (Appendix G) may be selectively incorporated." However, there is nothing there; Appendix G is blank.
- P.4-123, "required mitigation would avoid or minimize the effect of such activity (icebreakers) on spring and fall whale migration so as to not interfere with the traditional availability of bowhead for subsistence hunts or concentrations of vulnerable cows and calves in the spring lead system." What is the mitigation referred to, and how would it "avoid or minimize the effect" of icebreakers?
- P.4-124, "Mitigation measures would be required to avoid deflecting migrating whales away from subsistence-hunt areas when drillship location is east of subsistence hunting areas and periods avoid impacts to subsistence harvest opportunity. Similar mitigation would be applied should delineation and production wells be developed. Synergistic adverse effects as result of platform placement and construction, drilling, and other concurrent activities are avoided or minimized by application of mitigation measures that avoid or minimize the footprint of multiple activities relative to bowhead whale and other endangered whale biological activities and subsistence-hunt periods." Again, what are the mitigation measures being referred to, and what analysis led to the conclusion that only minor temporary, nonlethal effects would take place?
- P. 4-451, "The MMS would impose mitigation measures to avoid deflecting migrating whales away from and provide for historical levels of whale access to and presence within subsistence-hunting areas during hunting periods, when drillship location is east of subsistence-hunting areas, to avoid impacts to subsistence-harvest opportunity. Similar mitigation would be applied should delineation and production wells be drilled. Synergistic adverse effects as a result of platform placement and construction, drilling, and other concurrent activities are avoided or minimized by application of mitigation

measures that avoid or minimize the footprint of multiple activities relative one another and to the bowhead whale and other endangered whale biological activities, movement, and subsistence hunts.” A similar statement is made at 4-797. What are the specific mitigation measures being referred to, and what analysis has been conducted to reach the conclusion that there will be no effect to bowhead whale migration and subsistence?

- P. 4-459, “Depending on where discovery and production activities occur, MMS-required mitigation measures would ensure whale movement into harvest areas, subsistence-hunting activities, and opportunity to harvest bowhead whales are not impaired or enhanced by OCS actions. The OCS activities are not anticipated to alter the subsistence harvest or the vulnerability of bowhead whales to harvest.” Again, what are the specific mitigation measures being referred to, and what analysis has been conducted to reach the conclusion that there will be no effect to whale movements and subsistence?
- We strongly endorse the command system concept outlined on p. 4-448 and p. 4-794. In 2008, NMFS, MMS, and FWS successfully implemented a trial run of this system. We feel the continued implementation and improvement of this system would greatly enhance the ability to manage the synergistic effects of multiple OCS activities that may occur simultaneously and in proximity to one another.
- P. 4-500, “The potential effects from MMS-authorized activities would be moderated by the mitigation and monitoring measures (NTLs and ITLs) listed in Appendix F.” However, ITLs are not listed in Appendix F of the DEIS.
- P. 4-500, “Any MMS-required measures would be in addition to or superseded by those mandated under an IHA or LOA.” No specific mitigation is identified, or analyzed in the context of the proposed action and its potential effects.

In short, mitigation measures alluded to in the DEIS for the subsistence use of marine mammals are inadequate. The result is that MMS has failed to take a hard look at the potential effects of OCS activities on subsistence hunting. The document frequently references further mitigation measures to be prescribed at a later date by NMFS and USFWS through the MMPA authorization process to help mitigate impacts to subsistence hunters. However, these mitigation measures are not explicitly identified in this document and, consequently, cannot be evaluated. Therefore, MMS abdicates its responsibility for analyzing the effects on subsistence practices by leaving it up to other parties to mitigate the impacts, outside of the NEPA process. In order to rely on mitigation measures to obviate further analysis of impacts to hunters, MMS needs to identify the specific measures and analyze their effectiveness at mitigating potential impacts. Only a carefully constructed and monitored mitigation plan is likely to address potential impacts to subsistence hunting, and these mitigations need to be detailed in this DEIS to evaluate their efficacy at mitigating potential effects.

Following are some recommendations to mitigate the impacts of proposed activities on marine mammals and subsistence practices. These recommendations are by no means comprehensive. In order to reduce the impacts of multiple, concurrent exploration and development projects in biologically sensitive regions, we recommend MMS: (1) consolidate support operations to the greatest extent possible; for example, share support operations to reduce the number of boats and aircraft operating in an area, (2) fund research on suppression of high-frequency noise and other methods of noise reduction, (3) review future exploration and development plans with NMFS and subsistence hunting organizations regarding the timing and location of simultaneous operations to ensure the least practicable impact to marine mammals and subsistence activities,

(4) provide for specific time/area closures to protect subsistence hunting practices, and (5) allow NMFS to review all future OSRPs submitted to MMS for approval to ensure adequate safeguards are included for our trust species. This will enable us to make recommendations based on the latest information resulting from changes in Arctic ecosystems and our knowledge base.

Commercial Fisheries

While no commercial fisheries occur in the lease sale area, MMS should be aware of recent discussions undertaken by the North Pacific Fishery Management Council (NPFMC) and NMFS regarding the northward expansion of Bering Sea fisheries. Recently, the NPFMC prepared a Fishery Management Plan (FMP) for Arctic waters. For FMP purposes, Arctic waters are all waters north of the Bering Strait. The Arctic FMP is accompanied by an Environmental Assessment (EA) and Regulatory Impact Review/Initial Regulatory Flexibility Analysis (RIR/IRFA). These documents support NMFS's and the NPFMC's precautionary approach to conserve habitat in absence of research, and protect habitat where uncertainty exists. If approved and implemented by NMFS, the Arctic FMP would close Arctic waters to commercial fishing activities until such a time that systematic surveys have been properly designed, implemented, and, with scientific certainty, indicate that sustainable commercial fisheries can occur. For more information see <http://www.fakr.noaa.gov/sustainablefisheries/arctic/>. NMFS offers these most recent developments as these may be complimentary to the MMS's Alaska Environmental Studies Program and Coastal Marine Institute.

Essential Fish Habitat (EFH)

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires a federal agency to consult with NMFS for any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken by such agency that may adversely affect EFH. MMS initiated EFH consultation by copy of the DEIS.

NMFS has reviewed the DEIS and finds the various EFH sections difficult to ascertain whether or not MMS has determined their action may have adverse effects on EFH. An example is within the EFH section under Alternative II (Section 4.4.2.5; page 4-441) as "the direct and indirect effects of implementing this alternative would have no more than minor level of effect on EFH". Alternative II is the proposed action, or preferred alternative, and yet no clear determination is offered using *may adversely affect EFH*; the point when MMS needs to further describe impacts on EFH.

Further, EFH sections of the deferral Alternatives III, IV, and V offer "...this alternative would result in a somewhat reduced level of adverse affect"; "...this reduction in size would reduce adverse effects to EFH..."; or "minimize adverse effects to EFH". Importantly, the use of adverse affect is now mentioned and is compared directly to Alternative II. However, Alternative II states that only minor effects to EFH will occur. The adverse affect determination becomes important because once this is determined, an EFH Assessment is required. Thus, NMFS finds these determinations contradictory and unclear.

The DEIS begins to discuss mitigation measures in Section 2.2, however the discussion is basically a regulatory overview; no specific mitigation measures are offered. Further, specific mitigation measures by alternative do not offer any specific measures to avoid, reduce, or mitigate for adverse effects. Section 4.4.2.5.2. offers three primary mitigation measures “to avoid or minimize adverse effects to EFH”. Again, the discussion conflicts with the previously stated minor effect determination. More importantly, the first mitigation measure notes seismic operations would not occur in Ledyard Bay Critical Habitat. While critical habitat is important to discuss, this designation has no relationship to EFH and any adverse effects. The remaining two measures are also specific to seismic operations. MMS offers a reduction of effect may occur from not operating adjacently and simultaneously, however, little if any conservation benefit could be really be measured. NMFS asks what would be the measure of effect.

The MSA defines the term *fish* to mean any finfish, mollusk, crustacean, and all other forms of marine life animal life other than marine mammals or birds. This definition is important to consider because Section 4.4.2.3 of the DEIS summarizes effects from oil exploration and development activities on lower trophic marine organisms. Many of these organisms are EFH species or prey of EFH species. Specifically, this section details potential discharge wastewater potentials and describes effects to kelp communities from seismic cables.

MMS offers that many unknown areas are affected by seismic cable laying operations. Limited data exists to determine how rare these areas are. What is commonly known is that these living substrates are sensitive, ecologically significant, provide cover, and concentrate prey. In summer 2008, Arctic seismic cable laying and retrieval operations encountered kelp habitats (MMS Staff contacted NMFS staff). Using that lease sale’s mitigation measures, these operations were to avoid or modify operations should activities contact unique, biologically significant habitats or areas deserving protection. Kelp densities meet these considerations. Organisms were released wholly or partially back into the marine environment. However, MMS has not demonstrated that operations were not drastically modified nor what avoidance measures used.

Foremost, conservation measures should offer to avoid sensitive habitats. MMS likely has the information to demonstrate a better knowledge of these areas and offer measures to avoid them. Seismic vessels are some of the most state-of-the art vessels in the marine industry. Their mission is to identify seafloor substrates and beyond. NMFS offers that these vessels should be able to pre-survey areas for concentrations of living substrates and avoid these areas entirely.

DEIS Figure 3.2.1-4 depicts seismic transect coverage throughout the planning areas and the overlapping of transects are several times over one another. Information is also somewhat limited, because even more data has been collected than is shown. Additionally, recent transect data are not available for public release. NMFS fails to understand why all levels of information are proprietary, when it is rather obvious the entire area has been covered and some usable information, such as substrate type, would likely be non-proprietary. Nonetheless, NMFS feels that MMS has the information to describe both living and non-living substrates from data transects and can do so in manner that does not release confidential data. Lastly, effects to sensitive living marine substrates, such as kelps and sponges, need to be mitigated for; MMS needs to address this concern.

In previous comments, NMFS has noted the limited amount of biological and physical information for the northern Chukchi and Beaufort Seas. NMFS found the data base prevented meaningful analysis and could not support MMS conclusions of minor effects to fish populations. Unfortunately, little additional fisheries information has been recently gathered. We continue to find that the extant data do not support the impact assessments presented in the DEIS, and recommend additional research on the coastal, anadromous, and marine fishery resources within the planning area.

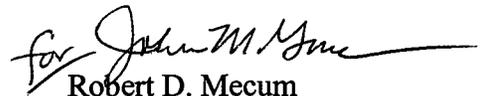
Conclusions

NMFS recommends that MMS develop and adopt more protective alternatives than those presented in the DEIS. MMS's analyses supporting Alternative II do not present a strong enough case to NMFS that marine resources would be adequately protected, nor are mitigation measures presented in a manner which allows for stakeholder evaluation of their effectiveness. Further, the DEIS is insufficient to be used supplementally, or to be "tiered" from for future assessments. NMFS's conclusions are based upon the following:

- Existing Chukchi and Beaufort lease sale blocks, and any subsequent developments, provide for oil production to expand in the Arctic Region. MMS needs to demonstrate that additional OCS activities can occur in an environmentally sound manner. This multi-lease sale is duplicative and the potential for oil related incidents increase exponentially. This reasoning is supported by existing area lease Figures 3.1.1-2 and 3.2.1-3 and by oil trajectory predictions Maps A.1-2a through d.
- Comprehensive, region-wide, systematic research is needed to determine habitat distribution, such as to delineate non-living and living substrates. NMFS is willing to discuss cooperative efforts with MMS and industry to utilize existing substrate data to delineate these habitats.
- The DEIS lacks a clear determination as to whether or not EFH will be adversely affected by the Proposed Action – Alternative II. MMS needs to: 1) determine whether or not their actions may have an adverse effect on EFH; 2) submit an EFH Assessment, including mandatory contents [50 CFR 600.920 (e)], if adverse affects are determined.

For further coordination on this lease sale please contact Brad Smith regarding marine mammal issues (907-271-3023) or Matt Eagleton regarding fish habitat issues (907-271-6354).

Sincerely,



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cc:

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