

Scoping Report Alaska Outer Continental Shelf (OCS) Region Beaufort Sea and Chukchi Sea Planning Areas Oil and Gas Lease Sales 209, 212, 217, and 221 Environmental Impact Statement

I. INTRODUCTION

With the publication of a Notice of Intent (Notice) to Prepare an Environmental Impact Statement (EIS) in the *Federal Register (FR)* on August 23, 2007 (72 *FR* 48295), the Minerals Management Service (MMS) initiated the process to prepare a multiple-sale EIS for the Beaufort Sea Lease Sales 209 and 217 and Chukchi Sea Lease Sales 212 and 221 (See Figure 1). Beaufort Sea Lease Sale 209 and Chukchi Sea Lease Sale 212 are tentatively scheduled for 2010. Beaufort Sea Lease Sale 217 and Chukchi Sea Lease Sale 221 are tentatively scheduled for 2012.

In September 2007, MMS initiated scoping for the EIS. This report summarizes the information MMS received during initial scoping. It provides information regarding the issues, environmental resource categories, and alternatives that will be analyzed in the EIS.

II. BEAUFORT SEA AND CHUKCHI SEA MULTIPLE SALE SCOPING PROCESS

The Notice provided instructions for interested parties to submit written comments on the scope of the EIS by mail, email, or hand delivery; noted that scoping meetings would be held, as needed, in appropriate locations announced at a later date; and invited inquiries from other Federal, State, tribal, and local agencies interested in becoming cooperating agencies in the preparation of the EIS.

Through scoping, MMS receives information used to determine the issues, alternatives, and mitigation measures that will be analyzed in depth in the EIS. Scoping also helps determine issues, alternatives, and mitigation measures that do not need to be fully analyzed in the EIS – those that can be “scoped out.” This report presents a summary of the written comments submitted to MMS and comments made during public scoping meetings. It does not present an exhaustive list of all the individual comments received. It does not present responses to the comments, conclusions about the comments, or decisions related to the content of the comments. Section I of the EIS will present and discuss the issues and concerns listed in the summary below, and the significant issues will be identified for further detailed analysis (Section IV Analysis of Effects) in the EIS.

Comments were received through a variety of channels.

- During the scoping process, interested parties submitted written comments to MMS on the Beaufort Sea and Chukchi Sea multiple-sale EIS via electronic mail (email delivery), U.S. mail delivery, and hand delivery.
- The MMS held public meetings in Point Hope (September 17, 2007); Point Lay (September 18, 2007); Anchorage (September 27, 2007); Nuiqsut (October 30, 2007); Barrow (November 1, 2007); and Wainwright (November 2, 2007). The MMS also provided a toll-free phone session (February 10, 2006). Inupiat translation was provided where needed.
- Government-to-Government meetings with the federally recognized tribes: the Native Village of Point Hope (September 18, 2007); the Native Village of Kaktovik (October 29, 2007); the Native Village of Nuiqsut (October 30, 2007); and the Inupiat Community of the Arctic Slope (ICAS) (October 4, 2007).
- Contacts with the State of Alaska and local governments.

Approximately two-dozen organizations or individuals, including federally recognized tribes; environmental organizations; private industry; and local, State, and Federal government agencies provided written or other input. In addition to written comments received in response to the Notice, we also examined comments that MMS received during the 2007-2012 5-year Program process for relevance to the multiple-sale EIS.

During public meetings and Government-to-Government meetings, MMS personnel discussed proposed Lease Sales 209, 212, 217, and 221 and other OCS activities, including seismic-survey activity in summer 2007 in the Beaufort Sea and Chukchi Sea, and the potential continuation of that activity in 2008. The presentations highlighted our desire to receive input on the resources, issues, alternatives, and mitigation measures to be included in the environmental analysis. We emphasized that the EIS is an information document that discloses the potential effects of the proposed actions and alternatives, including potential mitigation measures to the decisionmakers, and that no decision regarding the proposed actions has been made.

Information distributed at the meetings included a presentation on the National Environmental Policy Act (NEPA) process, a summary of past scoping comments associated with Beaufort Sea Lease Sales 186, 195, and 202 and Chukchi Sea Lease Sale 193, maps depicting the program areas for both the Beaufort and Chukchi seas, and an overview on participation in the scoping process. At these meetings, MMS received and documented input on issues, alternatives, mitigation measures, and environmental justice concerns.

III. RESULTS OF THE SCOPING PROCESS

The following section summarizes the comments received during the scoping period. It is a compilation of the remarks received; no attempt is made to analyze, support, or refute the information. The wording is intended to categorize and summarize the substance of the comments and does not reproduce the exact wording of individual comments. The order in which the issues are presented is not intended to reflect their relative importance. The summary does not evaluate the comments, nor does it attempt to depict any majority opinions or trends. There is a wide range of interests and opinions about the proposed Beaufort Sea and Chukchi Sea OCS oil and gas lease sales and about OCS activities in general. The range of comments in each issue category is illustrative of the varied and, perhaps, contradictory issues, concerns, and desired future conditions expressed by individuals, organizations, and public agencies. While some overlap between categories is unavoidable, an effort has been made to reduce repetition of issues between the categories.

III.A. NEPA Process/Analysis/Scenario.

Commenters asserted that the multiple-sale EIS is an unacceptable approach to use for such large areas of consideration. There is too much activity going on too fast with too little information. The agency's ability to capture the nuances associated with vastly different environments in one document is not likely to be adequate. The Beaufort and Chukchi seas are very different environments and not enough information is available to make informed decisions. Commenters also took issue with the MMS approach to developing scenarios.

- A primary concern is that the multiple-sale EIS approach is unsuitable for use in arctic waters because of lack of data, changing conditions, and uniqueness.
- There are too many differences between planning areas. A separate EIS must be prepared for each planning area.
- Regarding review of the draft EIS: Distribution of draft EIS for review must include sufficient printed copies for each community (CD-ROM and internet are not sufficient); review period must allow extra time needed to deliver the documents to the communities; close of comment period must be sufficiently past the time of public hearing to allow consultations among affected parties; no hearings should be held from September to early November.
- If MMS prepares environmental assessments for subsequent sales, scoping (meetings) should be incorporated into the process and a scoping report published.

- The MMS must make a focused effort to solicit and gather all relevant local knowledge and must do so on terms and within a timeframe acceptable to local people. This knowledge must be considered with Western science. The EIS should note where the two are complimentary and where they appear in conflict.
- The MMS must continue to allow comments submitted by email. Public Connect has problems.
- Public should have at least 30 days, and preferably 60 days, to review the EIS prior to public meetings or hearings.
- Previous EIS's had many deficiencies: inappropriate significance criteria, mischaracterized or ignored science, and lack of adequate deferrals.
- The MMS should use projections of long-term price of oil from the EIA Annual Energy Outlook 2007 report.
- The MMS should not use the near/mid/far zones used in previous Beaufort Sea multiple-sale EIS.
- Scenario should be conservative; given the range of possibilities, choose variables that ultimately lead to prediction of greater rather than lesser effects.
- In previous EIS's, short-term oil prices were underestimated, which led to an underestimate of industry interests, industrial activity, and impacts.
- Consider full range of oil and gas transportation options, including lengthy subsea pipelines from distant Chukchi locations, pipeline corridor across the North Slope, and tankering, unless that option is explicitly prohibited.
- Effects from onshore facilities, such as ports, roads, staging and support bases, production sites and pipelines, and activities (helicopters, barging, seismic) need to be addressed.
- Public health needs to be examined as a separate resource area, not environmental justice, with significance criteria.
- Industry needs to educate people better to make informed decisions.
- The MMS must include analysis of greenhouse gas emissions.
- The MMS must gain information on air pollution. There is inadequate monitoring and a significant air pollution problem in the Arctic.
- The MMS must include Russian and Canadian Arctic residents in this process. They will be impacted as well.

III.B. Accidents.

Commenters asserted that offshore oil and gas infrastructure is subject to accidents from severe environmental conditions, such as coastal erosion and the movement of ice. The ability of operators and the government to respond to prevent or control oil spills was questioned. Commenters expressed attendant concerns about the inability to clean up an oil spill in broken-ice conditions.

- A primary concern is the potential that a significant release of oil into the arctic marine environment will impact the region's fish and wildlife resources and the essential harvest of those resources.
- The MMS must ensure that the risk of oil spills is minimized, that chronic leaks are contained, and that there is no offshore discharge of drilling muds.
- The Inupiat subsistence community is particularly concerned that to date, no reliable method or technology has been proven effective at cleaning spilled oil in broken ice. The MMS must require that operators developing oil in the Chukchi Sea demonstrate that they possess the capability and technology to deploy effective devices to clean up spilled oil in broken ice.
- Regarding oil-spill risk or accidental loss of drilling muds, solvents, or other toxic liquids: What happens when they are released? Where do they go? How do they affect the health of the bowhead whales and the Inupiat who eat them? There is no technology to clean up an oil spill in broken-ice conditions.
- Given the more severe environmental conditions, the spill-risk estimate for a Chukchi Sea lease sale must certainly be higher.
- Estimates of oil spills should be based on sound modeling and accepted statistical techniques and be presented in a straightforward manner without inappropriate qualifying language. Use of the "unlikely" to describe oil spill risks may be inappropriate.

- Migratory birds that could be oiled in marine areas affected.

III.C. Mitigation and Stipulations.

- Stipulations 4, 5, and 6 included in recent sales provide for an industry site-specific bowhead whale-monitoring program, a conflict avoidance mechanism to protect subsistence activities, and a zone around Cross Island within which permanent facilities are restricted, respectively, and are the product of lengthy negotiations involving the North Slope Borough (NSB), Alaska Eskimo Whaling Commission (AEWC), Federal Agencies, and industry. If the OCS leasing program continues in the Arctic, the NSB will insist that these stipulations be included in and enforced under any future lease sale.
- Examine operations in other offshore arctic environments (Canada, Russia, North Sea) to identify the more efficient and cost-effective measures and stipulations. Any mitigation measures should be directed towards the minimization of impacts to identifiable resources from drilling operations.
- It is imperative that MMS continue to require lessees to carry out the Industry Site-Specific Bowhead Whale Monitoring Program, which is a critical element to the development of effective mitigation for subsistence communities.
- The MMS would do well to implement in the Chukchi Sea all lease stipulations and Information to Lessees (ITLs) that are in place for lessees in the Beaufort Sea, as well as establish deferral areas around the communities of Barrow, Wainwright, Point Lay, and Point Hope.
- Stipulation 5, Conflict Avoidance, should be incorporated into MMS regulations as stipulations are, by nature, impermanent. The MMS' confidence in this stipulation to smooth relations between subsistence marine mammal hunters and industrial operators should be reflected in formal agency rules, and we encourage MMS to consider this course of action.
- Drilling and seismic operations have displaced bowhead whales as far as 12 miles from the source as a direct deflection point. As far as 20 miles from the point, whales are observed as disturbed. There must be made a special habitat for the entire route of the whale.
- Industry needs to educate people better to make informed decisions.
- Stipulations or mitigation in the form of seasonal windows in which there are restrictions placed on oil and gas activities must be implemented to protect and preserve subsistence hunting.

III.D. Sociocultural/Subsistence/Environmental Justice.

The division of issues on this list is not precise given the often seamless connection between subsistence hunting, primarily of marine mammals; the village and larger Inupiat culture; group and individual sense as a "people" and "self," and the security net that shared subsistence food and the rituals and practices that surround it provides. Commenters emphasized the importance of subsistence-harvest activities not only as a source of food but as the foundation of the traditional and modern culture and the Inupiat sense of well-being. Comments emphasized the importance of the ocean resources, often referred to as "our garden." Commenters requested that specific plans be developed to avoid conflicts between exploration and development and subsistence activities and offered a number of deferral alternatives to protect the resources. Commenters also requested that the EIS consider the interconnectedness of subsistence and potential effects on wildlife, a relationship often referred to as the "web of life."

III.D.1. Sociocultural Systems.

The EIS must analyze the effect that the sale could have on the ability to support a family if the source of food is put in jeopardy. There is no other source of food for the community. The MMS must realize the importance of all subsistence hunting to provide food, which is shared with outlying villages. Subsistence provides "cultural medicines" and spirituality that have been proven to help our community. To lose the ocean as a source of food would be catastrophic.

- The EIS must address health impacts and incorporate recommended mitigation measures, including dietary change; hunger, food, insecurity, and malnutrition; airborne emissions; increased risk to subsistence users; infectious diseases from temporary worker/resident interaction; increase in drug use and trafficking from new access routes; social pathologies, etc.

- Displacement of existing sociocultural systems is not an appropriate significance threshold and should be dropped from the impact definition.
- The sociocultural significance threshold fails to recognize impacts at the level of family or individuals.
- Significance threshold timeframe of 2-5 years is vague and too long; it should be 1 or more years.
- There is an obligation to speak up to protect the way of life ancestors fought for. When people cannot get medical assistance from the main village or when Western medicine does not work, they rely on old ways—Eskimo food is the medicine.
- Offshore drilling has a serious impact on the community and outlying villages.
- Subsistence hunting has been around for many generations. The people still rely on it year-round. It brings the people to work together and celebrate and thank God. Catching ocean animals keeps them strong and outgoing. The lease sale will greatly affect the next generation.
- The threat of possible activity causes stress and anxiety with regards to subsistence hunting among the people.
- An Inupiat hunter remarked that he is dependent on seasonal marine mammals consisting of bowhead and beluga whales; ringed, spotted, and bearded seals; walrus; and polar bears to sustain his Inupiat identity in perpetuity.
- Public assistance is not a substitute for our traditional way of life, as it does not last when someone spends \$200-\$300 per visit at the store for food.
- The ocean harvest is the Inupiat's livelihood, garden, and way of life. There is no way to clean up oil spills in broken ice. The activities will only damage the "goods" from the ocean. This is the intent of the Federal Government.
- The EIS analysis must reflect the importance of subsistence resources to the villages; it is more than just food.
- The MMS must make a focused effort to solicit and gather all relevant local knowledge and must do so on terms and within a timeframe acceptable to local people. The EIS should describe actions taken to identify minority and low-income populations, and determine effects from alternatives on these populations, and present opportunities for the communities to have input into the NEPA process.
- Need to recognize the importance of the bowhead whale (see also *III.F.3.d. Bowhead Whale: Subsistence* for additional comments that relate to subsistence harvest).
- The MMS should consider the long-term effects of the activities and look at the experience of Nuiqsut. They were opposed to development and were not heard.

III.D.2. Socioeconomics.

- The MMS should evaluate the socioeconomic effects and benefits of exploration and development of Chukchi Sea leases on the local communities, boroughs, and the State of Alaska. The evaluation should include the benefits of job creation, tax revenue from onshore facilities, electrical power generation from natural gas supplies, and potential Federal revenue sharing.
- The MMS should analyze benefits to local communities, boroughs, and the State.
- The Economy analysis needs to recognize smaller scale impacts (families, individuals) not just population-based effects.
- The Economy analysis uses a 5-year timeframe, which is not appropriate; need shorter period of time, 1 year.
- The Economy analysis needs to include link between individual and family income and public health outcomes.
- The Economy significance threshold concentrates on increased employment, needs to include decreased employment.
- Revenues for oil and natural gas provide about 89% of general funds. Exploration in the Federal offshore areas of the State could yield important data regarding potential for commercial development of oil and natural gas on State lands onshore and offshore.
- All known data sources indicate good resource potential in both areas, and the State's interests are best served by facilitating commercialization of these resources.

- The EIS should analyze economic impact of royalty subsidies that may be provided by leases.

III.D.3. Subsistence.

- Effects of smaller magnitude and duration can be significant: deflection of whales due to noise can lead to loss of harvest opportunities or spoilage of whale meat. This is short term, but impact to village is significant.
- Subsistence activities could be affected. The leasing activity represents a trampling of Inupiat subsistence rights.
- Subsistence resources for the communities include bowhead whales, beluga whales, salmon, arctic cisco, tom cod, arctic char, whitefish, caribou, and eider ducks.
- Fish, bowhead whales, beluga whales, seals, bearded seals, all provide nourishment and skins that allow the Inupiat to survive the winter.
- Subsistence communities depend on the health of the bowhead whale, and any evidence that the whales have been oiled or that their food source has been compromised will force people to curtail the hunt, or to stop it altogether for fear of tainted meat.
- The effects of activities on organisms in the food chain (“circle of life”) that support subsistence species are important. What is the baseline for these organisms? Monitoring is very important.
- Subsistence fishing occurs in the lagoons and uses set nets along the coast.
- Of particular concern is the potential for onshore pipelines and other infrastructure associated with offshore Chukchi Sea development to impact the Western Arctic Caribou Herd and subsistence use of the herd.
- The MMS should adopt standard in the Marine Mammal Protection Act (MMPA), i.e., no unmitigable adverse impact on the availability of a species or stock for taking for subsistence uses. Whenever the potential exists for the take of subsistence resource to fall below the level required to meet subsistence need for a season, the effects must be considered significant.
- Subsistence significance threshold timeframe does not recognize shorter term losses. It should be “one season.”
- Subsistence significance threshold does not recognize displacement of hunters as a significant effect.
- Subsistence significance threshold should be based on volume of food represented by each subsistence resource.
- A bowhead whale represents 12 tons of food. If oil and gas activities make one whale unavailable, this is a significant effect because of volume of food lost.
- U.S.-provided information to the Aboriginal Subsistence Whaling Subcommittee of IWC sets forth the number of whales required to satisfy nutritional and cultural needs of each community.
- Subsistence significance thresholds should incorporate the psychological effects that follow from communities' perception of risk to food supply and to hunters.
- The bowhead whale quota caused a reduction in the Point Hope whaling harvest, forcing them to rely on gathering more fish and marine mammals to make up the reduction of their nutritional needs. They are now faced with another possible reduction of subsistence resources.

III.D.4. Cumulative Sociocultural Effects.

- Greenland and Canadian Inuit people are reporting adverse subsistence impacts from climatic conditions limiting their ability to hunt and access traditional hunting grounds. The arctic ice pack is melting fast, and each year the ice pack leaves the area and does not return as it did in the past. People are traveling longer distances to harvest marine mammals.
- Fewer walrus are being harvested because of retreating ice, making a difficult situation.

III.E. Climate Change.

Numerous stakeholders were concerned with the uncertainty associated with climate change and offered the following comments.

- The EIS must contain a rigorous analysis of the warming trend and its potentially significant effects.
- The measurable trend has been toward a shortening of the solid-ice season, slower forming thick and stable ice, longer periods of open water, broken ice and instability, and more frequent dramatic and destructive ice events.
- Subsistence hunters have found ice-based walruses, seals, and polar bears increasingly more difficult to access and harvest and believe populations to be declining.
- Longer duration and greater expanse of open water has meant a greater frequency and severity of high-impact storms. Coastal erosion is increasing. Implications for design, protections, and operation of industrial facilities are significant and deserve comprehensive treatment in the EIS.
- The EIS must address the possible northern expansion of commercial fishing into the Chukchi Sea with associated impacts to marine mammals and subsistence harvest.
- The EIS must address the climate change impacts on polar bears as this is a principal threat to the species that depends on the ice.

III.F. Wildlife and Aquatic Habitat.

Commenters identified several species, particularly subsistence species, that may be affected in varying degrees by offshore oil and gas and other activities. The bowhead whales were the most cited and prominent species mentioned in the comments, particularly their response to potential noise. Other species mentioned included beluga whales, walruses, seals, and other marine mammals; terrestrial mammals, especially the Western Arctic Caribou Herd; fish such as the arctic cisco, tom cod, and other species; and shore, marine, and coastal birds, especially the various species of eiders and designated critical habitat. Commenters suggested that alternatives be considered that deferred areas critical to wildlife and to the related subsistence use of those species.

III.F.1. Terrestrial Mammals.

Of particular concern is the potential for onshore pipelines and other infrastructure associated with offshore Chukchi Sea development to impact the Western Arctic Caribou Herd and subsistence use of the herd.

III.F.2. Fishes.

- The EIS must address the effects of onshore infrastructure, including the impacts of winter water withdrawal, on fish and their food web.
- The EIS must address the effects of a potential oil spill on salmon and snow crabs and the effects this could have on commercial fishing for these species that occurs outside the Chukchi Sea Lease Sale 193 area.

III.F.3. Bowhead Whale.

Comments during scoping addressed the bowhead whales including their reaction to noise, information on their natural history, effects of oil spills, and information on subsistence harvest.

III.F.3.a. Bowhead Whale: Seismic Surveys, Reaction to Noise.

- People feel deeply about protecting the migratory path of the bowhead. If exploration and development could be done without disrupting the whales, then they would support OCS activity. Industrial activity in the ocean makes a lot of noise, the bowheads hear it and change their normal patterns of travel and feeding.
- The EIS should include a risk analysis of the effects of noise.
- Because seismic testing could occur 8 nautical miles offshore, and because the reach of noise from airgun pulses can affect whales a *minimum* of 12 miles away, MMS must analyze how bowhead whales might react to seismic noise while migrating through the spring lead system. In the case of

- Barrow, MMS also must include in the EIS an analysis of the effects of seismic noise on fall-migrating whales, as they head around the point and continue through the east Chukchi Sea.
- Because the spring hunt occurs in the lead system, which bowhead whales use to surface and breathe, their behavior patterns and migration may be altered in ways MMS has not previously considered. For the sake of the subsistence communities along the western coast of Alaska, MMS must study and analyze the potential effects of noise on the spring bowhead whale hunt.
 - If there is any chance that bowhead whales will exhibit avoidance behavior or change their migration patterns so that they will become unavailable for use by our subsistence communities, MMS must implement seasonal restrictions for seismic testing.
 - There is abundant evidence that seismic testing has the greatest potential to cause avoidance behavior in migrating bowhead whales from long distances, driving them beyond the reach of whaling boats or causing unpredictable swimming and diving patterns. Very little is known about the fall migration in the Chukchi Sea, and MMS must pay particular attention in its EIS to the implications of geophysical testing for the Barrow bowhead whale hunt, as Barrow appears to be the village closest to the lease-sale boundary and hunts during both fall and spring.
 - The studies on noise pollution and its effect on whales by Don Ljungblad indicate that whale deviate from the noise. (Note: For this reference, see previous testimony at <http://www.mms.gov/alaska/ref/PublicHearingsArctic/1986%20ANILCA%20Kaktovik.pdf>).
 - The MMS also must analyze the potential adverse effects on the bowhead whale subsistence hunt from noise associated with construction of facilities and oil development, such as pipeline trenching, gravel fill, helicopter, and other vessel traffic.
 - Barrow hunters' experience with the Cabot test well in 1988-1991 was offered as an example of potential effects. The rig was left near Cooper Island from 1989-1990, and its presence caused the whales and other marine wildlife to be driven due north 30 miles offshore.
 - Have there been any reports of dead or beached whales after seismic activity?
 - Whaling captains report that seismic survey activity resulted in not landing whales at Wainwright. A 55-horsepower engine will scare whales away, what will seismic surveys do by comparison?

III.F.3.b. Bowhead Whale: Information on Natural History and Migration Patterns.

- Bowheads return from the Beaufort Sea toward Russia in the fall via a different route than the spring migration to the Beaufort Sea. Point Hope reports that bowhead whales move straight across the top of the Chukchi Sea (approximating the northern boundary of the proposed lease sale area).
- Virtually nothing is known about the fall migration of bowhead whales in the Chukchi Sea. Currently, a research program is under way that has the potential to shed light on the behavior and headings of fall migrating bowhead whales in the Chukchi Sea. This program will derive data from satellite tags attached to whales at Barrow. Vessel traffic and construction activities that result from Sale 193 underscore the importance of the satellite-tagging program, and MMS should be alert for the results.
- Bowhead calving takes place in the polynya and throughout the area.
- The locations, migrations, and habitat of species found in the area should be identified and evaluated, especially the bowhead whales' spring migration pathway east of Barrow and fall migration areas and feeding areas located offshore ANWR and subsistence areas such as Cross Island.

III.F.3.c. Bowhead Whale: Oil Spill Effects.

- In situ burning leaves chemical residue in the water, which could have harmful effects on the marine environment, including the habitat of bowhead whales and potentially the whales themselves. The sight and experience of the burning oil definitely would affect nearby marine animals, including bowhead whales. The MMS must thoroughly evaluate the effects of in situ burning before it concludes that this method could or should replace mechanical methods of oil recovery.

- If whales swallowed globs of oil, the oil could clog a connecting tube between their stomachs. The MMS has a responsibility to analyze as fully as possible the potential for whales to contact oil and the effects that contact would have on their health and the subsistence hunt.
- There are concerns about oil-spill effects on the feeding habits of the bowhead whale and that contamination will deflect them from the feeding area. What are the likely effects of the bowheads' ingestion of contaminated prey?
- The Chukchi and Beaufort seas are important feeding habitat for bowhead whales. This past fall hunting season, bowhead whales taken from the extreme eastern Chukchi Sea had food in their stomachs that was likely Chukchi-derived invertebrates and euphausiids. Given that the western and eastern Chukchi are known to be feeding areas to bowheads and that little is known about the importance of the central Chukchi Sea as a feeding area, it is imperative that MMS analyze the risk and effects of bowhead whales ingesting contaminated prey and possibly being displaced from their feeding areas in the Chukchi Sea.
- Evaluate the likelihood that bowheads will encounter spilled oil or other contaminants, either in open water (considering the fall hunt in Barrow) or in the spring lead system (considering the spring hunt in Wainwright, Point Lay, and Point Hope). (Note: While Point Lay is not in possession of a quota to hunt bowhead whales, it has applied to do so.)
- The EIS should address the possibility of spilled oil or other contaminants making their way into the spring lead system during the bowhead whale migration, with potentially lethal effects. Indeed, MMS should evaluate the potential for an oil spill in the Chukchi Sea and the Beaufort Sea during all seasons, and the likely effects of spilled oil on bowhead whales.
- AEWG reports that subsistence communities depend on the health of the bowhead whale, and any evidence that the whales have been oiled or that their food source has been compromised will force them to curtail the hunt, or stop altogether for fear of tainted meat.

III.F.3.d. Bowhead Whale: Subsistence.

- Major concern is the cumulative effect of noise on bowhead whales. Additional concerns about threats to bowheads include oil spills, commercial fishing, ship strikes, killer whale predation, climate change, and competitors (e.g., gray whales).
- The Village of Point Hope may try fall whaling. Point Lay is seeking a bowhead whale quota.
- Between 1988 and 1990 when a drill rig was parked near Barrow, hunters had to go 30 miles due north of Barrow to get whales, and the rig was not operational.
- Noise-generating activities in the Chukchi Sea cause bowhead whales to become skittish or alter their migration path, so that they are more difficult or impossible for subsistence hunters to take.
- If bowheads are further endangered from industrial activity, the International Whaling Commission (IWC) could restrict or eliminate the quota as the only means available to them of limiting the damage to the species.
- The EIS should examine noise from seismic activity, vessel traffic, and construction and development activities and the probability it will cause deflection of whales, making them unavailable for the harvest.
- Barrow whalers have encountered unacceptable levels of disturbance from industrial activities where whales were harvested far from normal locations. This puts hunters in greater danger. Some boats have succumbed to storms and greater wave action and sunk; in some cases individuals have lost their lives. After a 12-hour tow or more, the whale gasifies, contaminating the meat to the point it cannot be eaten. This is a direct impact to the feeding of the people who depend on the bowhead whale.
- With effects to habitat from industrial activities, the IWC may have no alternative but to protect the whale the way it has in the past, discontinuing a thousand-year-old way of life of the indigenous people hunting to survive.
- Craig George of the North Slope Borough (NSB) Wildlife Department has a bowhead whale subsistence-activity map with information for Russia.
- Canadian Inuit people were not allowed to hunt bowheads and they lost a taste for it; now they only hunt beluga.

- Subsistence communities depend on the health of the bowhead whale, and any evidence that the whales have been oiled or that their food source has been compromised will force us to curtail the hunt or stop altogether for fear of tainted meat.
- The MMS must adopt as the significance threshold for subsistence effects the standard in the MMPA, i.e., no unmitigable adverse impact on the availability of a species or stock for taking for subsistence uses. Whenever the potential exists for the take of subsistence resource to fall below the level required to meet subsistence needs for a season, the effects must be considered significant.
- Accelerating warming of the Arctic may facilitate the near-term opening of a northern sea route that would allow large vessel traffic through the Bering, Chukchi, and Beaufort seas. The potential exists that any perceived threat to the bowhead whale resulting from increased commercial-vessel traffic in the Bering, Chukchi, and Beaufort seas may elicit action by the IWC to the further detriment of subsistence communities. The IWC has no authority to restrict industrial operations and could see a reduction in the subsistence quota as the only means of providing enhanced protection to a whale population at risk following the establishment of a commercial sea route through the animals' range.
- Barrow whalers have observed endangered bowhead whales entangled in commercial fishing rope.

III.F.4. Nonendangered Marine Mammals.

- Point Hope reports killer whales, bowhead whales, and beluga whales are in the area between the lease-sale area and the shore (polynya). Plankton loss in areas to the south is causing grey whales to come north.
- Several communities' residents recalled that seals harvested during certain times would sink rather than float, a phenomena caused by starvation. They originally attributed this to concurrent activity at the Red Dog mine.
- Point Lay reports that beluga whales are present throughout the lease sale area and have calving grounds in the area north of Point Lay. One group of belugas is resident in the Chukchi Sea, while another migrates between the Chukchi Sea and the Beaufort Sea.
- Point Lay relies on the harvest of beluga for subsistence. One participant noted "it is not only what we eat, it is our medicine." The beluga hunt occurs from June to mid-July, but is usually done by July 4.
- The potential for exploration and development to occur and cause impacts within any area known to be critical to the success of the subsistence harvest of bowhead and beluga whales and other marine resources is the central concern of our Chukchi Sea community.
- Wildlife used for subsistence includes walrus and seals.
- When the area in front of the gravel pit near Barrow was dredged, the bearded and ring seals relocated.
- For polar bears, there are no current approvals for incidental take during oil and gas operations. The Center for Biological Diversity has petitioned the Fish and Wildlife Service to list polar bears as "threatened" under the Endangered Species Act (ESA); the petition is for worldwide designation, based on climatic change and reduction in habitat.
- Disturbance and the effects of oil releases to the Pacific walrus is a major concern.
- Cumulative effects to beluga whales include noise, oil spills, climate change, commercial fishing, and overhunting.
- A hunter reports that he saw many beluga whales while whaling near Kivalina in 1999. Since the Red Dog mine has begun operation, the whales have gone farther offshore.
- Fewer walrus are being harvested because of retreating ice, making a difficult situation.
- When analyzing effects, look at the food web. Ocean wildlife feeds on clams, fish, and krill.
- Direct and indirect loss and degradation of habitat from noise, facilities, or pollution to denning polar bears on land.
- Walrus are being seen by the thousands along the beaches in the Chukchi Sea. These animals need the ice.

III.F.5. Water Quality.

Commenters highlighted the concerns over contamination of sediments, the water column, and the food chain that may be associated with offshore oil and gas development.

- The EIS should describe existing physical, chemical, and biological characteristics of the Chukchi Sea. Data from relevant sampling and other research and monitoring efforts should be included as part of the affected environment. Discussion should identify the amount and quality of the available resource information, including data gaps and needs.
- Regarding oil-spill risk or accidental loss of drilling muds, solvents, or other toxic liquids: What happens when they are released? Where do they go? How do they affect the health of the bowhead whales and the Inupiat who eat them? There is no technology to clean up an oil spill in broken-ice conditions.
- The MMS must ensure that the risk of oil spills is minimized, that chronic leaks are contained, and that there is no offshore discharge of drilling muds.
- The ocean current structure north and east of Hanna Shoal is poorly known. The pollutant concern is that material will be trapped to the vicinity of the shoal or brought back to the Barrow area.
- The flow on the north side of Hanna Shoal (including the shelf break) would bring material and water from the central and western Chukchi back toward the head of Barrow Canyon. From there it would then flow northeastward toward the Beaufort slope.

III.F.6. Physical Oceanography.

Commenters offered a number of perspectives about the physical oceanographic regime including the effects of winds and currents on circulation and sea ice within the Chukchi Sea.

- What information do we have on currents and ice for the Chukchi Sea? Current studies are needed prior to leasing.
- A report of the Marine Mammal Commission entitled, *Impacts of Oceanography, Sea Ice, Climate Change. Changes in Sea Ice and Other Environmental Parameters in the Arctic*, December 2000, may provide the most recent information.
- Currents and physical oceanographic data may be available from the Alaska Coastal Ocean Observing System and at the Barrow Cabled Observatory. Bernie Coakely may be a source of information.
- The Chukchi Sea generally presents deeper waters than the Beaufort Sea, more extreme ice conditions, stronger currents, and greater distance from existing infrastructure.
- Currents on the southwest side of Barrow are very strong.
- Multiyear ice is still occurring; the EIS analysis must account both for it and effects of warming.
- The EIS need to consider the extent of sea-ice coverage and recent changes.
- The ice dynamics in the vicinity of Pt. Franklin to Barrow and offshore to the west side of Barrow Canyon are likely very complex due to large currents with large horizontal shears in these currents. The ice probably does not simply drift with the winds in this area. Ice ridging and gouging will be a big issue near the coast.
- Currents drive the ice, not the winds.
- To see the extent of ice-sheet travel and problems that it presents, look at the experience and path of the *Polar Sea* that was stuck in ice in 1992.
- Ice is a “frozen tsunami” that can affect infrastructure.
- Pressure ridges come up to 100 feet high and could affect facilities placed on the ocean. Have the recent ice sheets coming onshore affected Northstar in any way? Northstar protective armor is deforming and may need a major overhaul.
- Strong currents and ice buildup make it impossible to cap a well and clean up an oil spill.
- The ocean current structure north and east of Hanna Shoal is poorly known. The models suggest that there will be an eastward flow around the north side of the shoal and southwestward along the east side of the shoal. Mike Spall’s model suggests that water may move west of Hanna Shoal before turning southward then eastward further south of the shoal. Eventually, this recirculated water will merge with the outflow through Barrow Canyon. A researcher measured the eastward flow (well to the south of Hanna Shoal) in earlier measurements, but we do not know anything

about the flow on the north side of the shoals (including the shelf break, where the currents are likely very swift) or the recirculation cell.

- Currents will carry any spilled oil toward Kivalina and the Russian coast. Inner current goes east while an outer current along the Chukchi coast goes west.

III.F.7. Cumulative Effects.

Commenters identified a number of projects and activities temporally and spatially proximate to potential OCS oil and gas development in the Chukchi Sea that should be considered in the cumulative effects analysis. Commenters identified the effects of climate change on several resources as a major concern.

- Previous cumulative effects analysis has not considered the range of potential effects-producing factors. Different leasing documents repeatedly recognize the likelihood of significant cumulative impacts. MMS conclusions have supported continued OCS leasing with no substantive added protections imposed.
- The 2003 National Research Council report on Cumulative Environmental Effects of oil and gas activities on Alaska's North Slope should be used as starting point for improved analysis including effects from industrial and nonindustrial sources.
- The EIS must acknowledge the work and conclusions of Pew and U.S. Oceans Commission.
- The EIS must include a thorough analysis of the relationship between increasing and geographically expanding onshore and offshore energy activities. They may facilitate each other with effects crossing the shoreline and affecting wildlife.
- The MMS should undertake a rigorous cumulative effects analysis incorporating new significance criteria for subsistence, sociocultural, and other resources that affect the communities. The analysis must include anticipated barge traffic serving onshore development operations in light of increased leasing in the National Petroleum Reserve-Alaska (NPR-A).

III.F.7.a. Cumulative Effects: Projects to Include in Analysis.

- The upper-end scenario for oil and gas development of the South, Northeast, and Northwest NPR-A including roads, pipelines, port and coastal staging area facilities, and marine transport.
- The upper-end scenario for Beaufort Sea oil and gas development and the Mackenzie River area of the Canadian Beaufort.
- Expansion of the Delong Mountain Terminal port site or Red Dog Mine.
- Spur road from Red Dog Mine to Noatak.
- New jet-capable airport at Noatak.
- Hard-rock mining in Ambler Mining District.
- Construction of road linking Dalton Highway to Red Dog Mine and Nome.
- Coal and mineral development within and outside of the NPR-A.
- Effects due to Arctic warming including near-term potential for a northern sea route, thawing of permafrost, shifts in plant and animal species abundance and distribution, increased incidence of severity of ocean storms and coastal erosion, loss of ice cellars to thawing and need for more frequent hunts, and shorter tundra-travel openings and other technological challenges.
- Increasing onshore and offshore industrialization and commercialization of the eastern Russian Arctic. U.S. Arctic Research Commission has information on the commercialization of Arctic waters.
- Red Dog Mine, operations in the Beaufort and Chukchi seas and onshore, which means accounting for the effects of barging.

III.F.7.b. Cumulative: Sociocultural.

- The EIS must consider the impacts of the development of industry support hubs and staging areas at Barrow, Camp Lonely, and elsewhere.
- Subsistence activity is affected by high fuel costs and restrictions on access by air to hunting camps and potential restrictions for national security. Examine impact assistance and infrastructure improvements to lower cost and increase access.

- The high level of activity is contributing to the sense that communities are being surrounded.
- Much of what is occurring related to climate change is outside the bounds of traditional knowledge.

III.F.7.c. Cumulative: Commercial Fishing.

- Changes in distribution of marine species could lead to expansion of commercial fishing into the Arctic Ocean, with corresponding application of quota system for catch. The expansion of commercial fishing north into the Chukchi Sea could have associated impacts to marine mammals and subsistence. Barrow whalers already have observed endangered bowhead whales entangled in commercial-fishing rope. Point Hope has observed and photographed gear and other material from fishing vessels that have come ashore on area beaches.

III.F.7.d. Cumulative: Climate Change.

- It is important to understand, however, that “typical” conditions are changing. The measurable trend has been toward a shortening of the solid-ice season; slower forming thick and stable ice; longer periods of open water, broken ice, and instability; and more frequent dramatic and destructive ice events. This has not been, but must be, fully addressed by MMS in assessing the risks associated with continued Beaufort Sea leasing, exploration, and development. For subsistence hunters, ice-based seal species have been more difficult to access and harvest. The longer duration and greater expanse of open water has meant a greater frequency and severity of high-impact storms. More storms have meant greatly accelerated coastal erosion. The implications for the design, protection, and operation of industrial facilities are complex, in most respects troubling, and deserving of comprehensive treatment.
- The EIS must address the effect of arctic climate change, including reports that animal movement is changing; people have seen changes in where the animals go. Are timeframes used in analysis in synch with these changes? The EIS must identify trends in the wildlife resource numbers, health, and distribution associated with warming.
- The loss of coastal lands through erosion is an important occurrence that should be documented and compared with any incremental projected effects from leasing and development.
- Accelerating arctic warming may facilitate the near-term opening of a northern sea route that would allow large vessel traffic through the Bering, Chukchi, and Beaufort seas. Any perceived threat to the bowhead whale resulting from increased commercial vessel traffic in the Bering, Chukchi, and Beaufort seas may elicit action by the IWC to the further detriment of subsistence communities. The IWC has no authority to restrict industrial operations, and could see a reduction in the subsistence quota as the only means of providing enhanced protection to a whale population at risk following the establishment of a commercial sea route through the animals’ range.
- Greenland and Canadian Inuit people are reporting adverse subsistence impacts from climatic conditions limiting their ability to hunt and access traditional hunting grounds. The arctic ice pack is melting fast, and each year the ice pack leaves and does not return as it did in the past. People are traveling longer distances to harvest marine mammals.
- Fewer walrus are being harvested because of retreating ice, making a difficult situation.

III.F.8. Alternatives to the Proposed Action.

The CEQ regulations for implementing NEPA (40 CFR 1502.14) address alternatives, including the proposed action. Agencies must “rigorously explore and objectively evaluate all reasonable alternatives and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.”

According the Interior Department Manual for Implementing NEPA (516 DM 4), the range of alternatives is “all reasonable alternatives that will be rigorously explored and objectively evaluated as well as other alternatives that are eliminated from detailed study after providing reasons for their elimination.”

“Reasonable alternatives” are those “alternatives that are technically and economically practical or feasible and that meet the purpose and need of the proposed action.”

Consistent with the stated purpose of past lease sales in the Alaska OCS Region, the purpose of this Federal action is to offer for lease areas on the Beaufort Sea and Chukchi Sea OCS that might contain economically recoverable oil and gas resources. The need for the action arises from the scheduling of lease sales in the Final Outer Continental Shelf Oil and Gas Leasing Program 2007-2012 program. These 5-year programs and subsequent actions to implement the programs are the means by which the Secretary of the Interior oversees the OCS oil and gas program, balancing orderly resource development with protection of the human, biological, and human environment, as required by the OCS Lands Act, as amended.

III.F.8.a. Alternatives Identified During Scoping.

The following alternatives were identified during the scoping process.

III.F.8.a(1) Cancel the Sale. This alternative was the overwhelming favorite of those expressing a preference. At nearly all of our public meetings, we received a suggestion to drill for oil and gas on land first and exhaust the availability of land-based oil and gas reserves prior to exploration, development, and production of offshore oil and gas reserves. For Lease Sales 209 and 217, this deferral should not be recommended for further consideration as it approximates the no-sale alternative, which will be discussed in the EIS.

III.F.8.a(2) Suite of Previously Identified Deferrals by the NSB. At the beginning of the scoping process, a letter was sent by the NSB recommending the use of a suite of four general deferrals (see Figure 3) previously identified during the past Beaufort Sea multiple-sale process.

III.F.8.a(3) Chukchi Sea/Beaufort Sea Deferral. The NSB suggests it is appropriate to defer from leasing the entire Chukchi Sea Planning Area, and those portions of the Beaufort Sea Planning Area described above that are critical to the subsistence harvest of bowhead whales and other marine species. For Lease Sales 209 and 217, this deferral should not be recommended for further consideration as it approximates the no-sale alternative, which will be discussed in the EIS.

III.F.8.a(4) General Deferral. The Environmental Protection Agency (USEPA) suggested MMS consider removal of additional areas with sensitive fish and wildlife, subsistence, and cultural resources, at a minimum, deferring areas until further research and studies are conducted to ensure development can occur without significant impacts to critical resources. As the USEPA suggestion identified no specific areas, the other deferrals appear to address the suggestion.

III.F.8.a(5) Directional Drilling Alternative. At several meetings, requests were made that only areas that could be directionally drilled from onshore be included in the lease sale. The Lease Sales 209 and 217 sale areas appear to be largely beyond the limit of present and reasonably foreseeable advances in technology for extended-reach drilling from shore. The MMS, Alaska OCS Region, Field Operations provided information on the present horizontal distance achievable by extended-reach drilling, the distance envisioned by one operator to develop Liberty in the Beaufort Sea, and an anticipated 10-year maximum theoretical distance of 50,000 feet. While this approach constitutes a useful oversimplification of the complexities of extended-reach drilling, the information indicates that the area that could be reached by the greatest of these three values is outside the proposed Sale 209 and 217 area.

III.F.8.a(6) Public Land Order 324 Deferral. A statement in one meeting in Kaktovik indicated the belief that Public Land Order 324 gave subsistence-hunting rights to Alaska Natives 50 miles out into the ocean, and that if still valid, the right-of-way should be applied. On further investigation, this Order appears to be related to the following statement found in Indian Affairs: Laws and Treaties compiled by the Government Printing Office. If so, the offshore area reserved is outside of the lease sale area, occurring within State waters. Public Land Order 324 states:

Subject to valid existing rights and to existing withdrawals, the following described public lands in Alaska are hereby temporarily withdrawn from settlement, location, sale, or entry and reserved for the purpose of classification and proposed designation under section 2 of the act of May 1, 1936, 49 Stat. 1250 (U.S.C., Title 48, sec. 358a), as a native reservation for the use and occupancy of the native inhabitants of the Native Village of Barrow and vicinity, Alaska:

Beginning at a point on the Arctic Ocean 30 miles southwest of Point Barrow, air line, approximate lat. 71°05'27" N., approximate long. 157°10' W., running thence in a southeasterly direction of McTavish Point; thence following along the coast of Dease Inlet, Elson Lagoon, and the Arctic Ocean, including Point Barrow, to the place of beginning, and including the waters adjacent to the above-described area extending 3,000 feet from the shore at mean low tide, all as shown on the Reconnaissance Map of Northwestern Alaska, 1930, prepared by the United States Geological Survey in cooperation with the Bureau of Engineering, Department of the Navy, containing approximately 750 square miles of land and approximately 50 square miles of water. (http://digital.library.okstate.edu/kappler/vol7/html_files/v7p1459b.html)

IV. INCORPORATION OF SCOPING INFORMATION INTO THE EIS

The information gathered during scoping provides direction for the preparation of the EIS through the identification of issues and concerns. The information collected has helped MMS identify the alternatives, mitigating measures, resource topics, and issues to be evaluated in the EIS.

IV.A. Government-to-Government Meetings.

The MMS held Government-to-Government meetings with Tribal Council of the Native Village of Point Hope and the Native Village of Nuiqsut, and with the Inupiat Community of the Arctic Slope.

IV.B. Environmental Justice.

Environmental Justice activities to identify and engage low-income and minority communities during scoping included:

- Open public meetings in the affected communities of Kaktovik, Nuiqsut, Point Hope, Point Lay, Wainwright, and Barrow with translation available where requested. Notice of meetings was provided within the community and to media outlets. Each meeting included a fairly detailed overview of the activities that could occur in the area, provided information on the environmental review of each activity, and identified opportunities for public participation in the process.
- A handout on the NEPA process and public participation in the scoping process was distributed at the public meetings.
- Information on the proposed actions associated with this multiple-sale EIS was distributed at the public meetings.

Summaries of these activities will be incorporated into the Environmental Justice analysis in the EIS.

IV.C. Stipulations and Mitigation.

The EIS will analyze the past stipulations and mitigations for applicability and effectiveness. Analysis of the stipulations and mitigation performed during internal scoping has identified instances where content and applicability of the stipulations and mitigation may need to be adjusted during the EIS process to reflect unique circumstances in the Beaufort and Chukchi seas. As a result of analyses, some of the past stipulations and mitigation may not remain the same. Any such changes will be addressed in the EIS.

The following mitigation measures were suggested during scoping:

- Require demonstration of the capability to clean up an oil spill in broken-ice conditions.

- Establish a 20-mile activity-exclusion zone around bowhead whales to prevent deflection and disturbance from offshore-activity-related noise.

IV.D. Information-to-Lessee (ITL) Clauses.

The EIS will contain a number of ITL clauses, some of which were included in past NEPA documents for lease sales in both the Beaufort and Chukchi seas. ITL's are like bulletins or advisory notices providing information to the lessees. They are not enforceable requirements. Internal scoping indicated that some of the existing ITLs need to be evaluated for applicability and effectiveness. Any such changes will be addressed in the EIS.

IV.E. Resource Categories to be Examined in the EIS.

The EIS will include description and analysis of the potential effects of the proposed action and cumulative activities to the physical, biological, and human environment. The following categories will be included in the EIS for detailed analysis:

- **Physical Environment:** Water quality and air quality, as well as descriptions of quaternary geology, climate and meteorology, oceanography, and sea ice in support of the analysis.
- **Biological Environment:** Lower trophic-level organisms, fishes, essential fish habitat, endangered and threatened species, marine and coastal birds, marine mammals, terrestrial mammals, and vegetation and wetlands.
- **Social Systems:** Economy, subsistence harvest, sociocultural systems, archaeological resources, land use and coastal management, and environmental justice.

Resource categories that have been included in some Alaska OCS Region EIS's include Visual Effects, Tourism and Recreation, and National and State Parks and other Special Areas. We received no comments during scoping to indicate that potential effects to these resource areas from the proposed actions were a significant issue. Effects to commercial-fish species (snow crab and salmon) will be examined as part of the Fishes section with potential effects, if any, addressed in the Economy section. As such, Commercial Fishing as a separate resource will not be included in the EIS.

V. COOPERATING AGENCIES

The Notice invited Federal Agencies and others to become cooperating agencies. The MMS received informal indications from the NSB that it would like to be considered as a cooperating agency. As a result of follow-up discussions, the NSB opted to not be a cooperating agency but expressed the desire to continue to actively participate in the NEPA process and the review process upon completion of the draft EIS.

VI. OPPORTUNITIES FOR FURTHER PUBLIC INVOLVEMENT

Scoping is an ongoing process. During the public scoping meetings in the communities, we pointed out that input about issues, alternatives, mitigation, and information would be welcomed throughout development of the EIS. Similarly, we recognize that Government-to-Government exchanges are part of the ongoing relationship with Tribes. The exchanges are not limited to input on a particular proposed action or EIS or subject to deadlines for input published in the Notice.

Additional opportunities for public involvement will be provided during the preparation of the EIS. The next public comment period will commence with publication of the draft EIS, tentatively scheduled for fall 2008.

The MMS appreciates the public's and interested organizations' participation and comments during the scoping process and welcomes their continued involvement in the next stage of the EIS process.

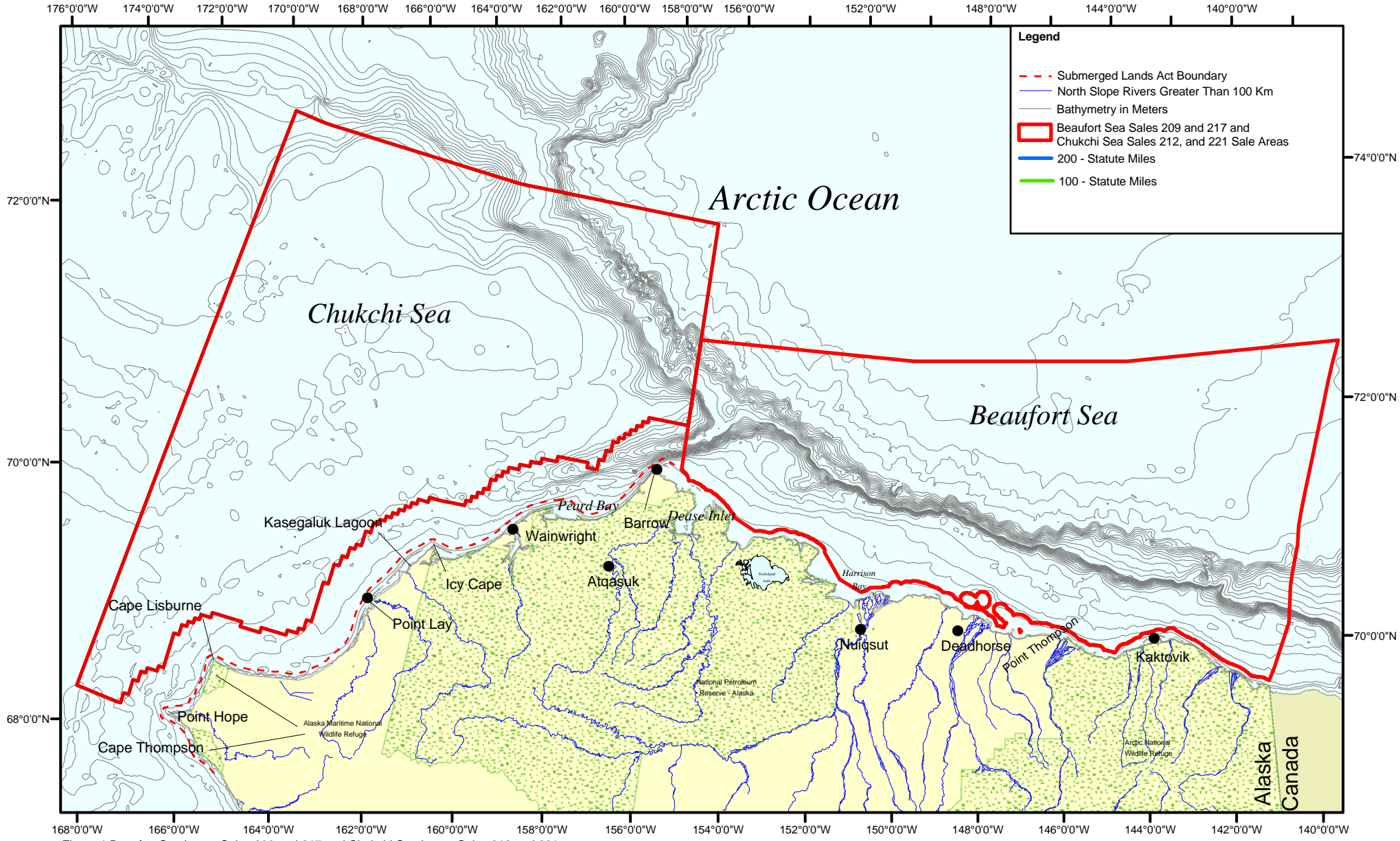
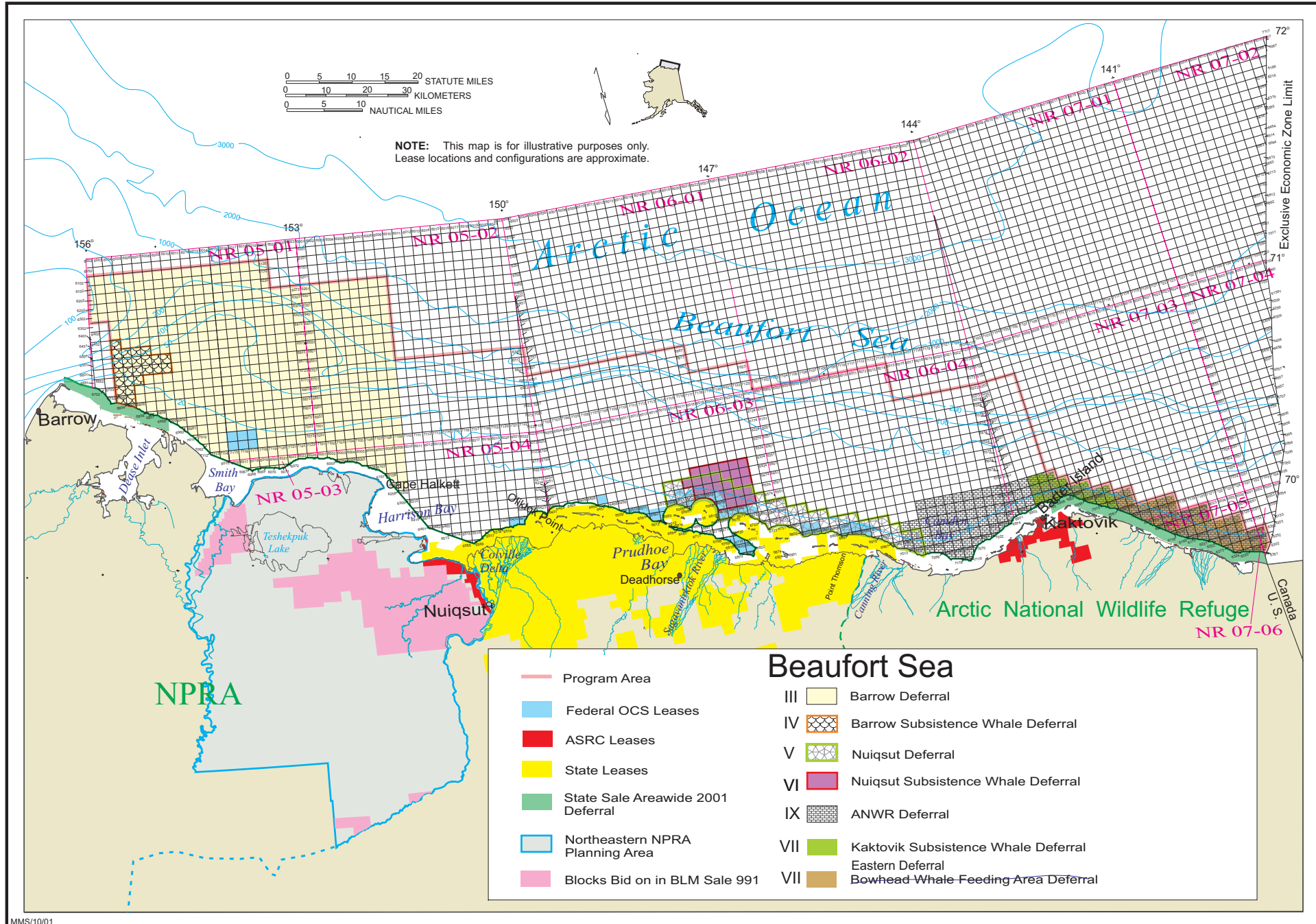


Figure 1 Beaufort Sea Lease Sales 209 and 217 and Chukchi Sea Lease Sales 212 and 221.



MMS/10/01

Figure 2 Depiction of a map indicating general deferrals suggested by the North Slope Borough.