

STATE OF ALASKA

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Dear Coastal Consistency Review Participant:

SUBJECT: Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

The Alaska Department of Natural Resources (ADNR), Division of Oil and Gas (DO&G), is reviewing proposed Beaufort Sea Areawide oil and gas lease sales, 2009-2018 for consistency with the Alaska Coastal Management Program (ACMP). There is currently no approved district plan in effect for the North Slope Borough, and therefore there are no district enforceable policies against which to review the lease sales. The proposed lease sale area lies predominately within the Alaska Coastal Zone. DO&G is issuing this proposed consistency determination under 11 AAC 110.255.

Project Description

The project under review for consistency with the ACMP is for oil and gas lease sales in the Beaufort Sea for 2009-2018. The review is for the disposal phase only, and this project does not propose any specific exploration, development, production, or transportation activities or facilities. An oil and gas lease grants the lessee the exclusive right to drill for, extract, remove, clean, process, and dispose of oil, gas, and associated substances. However, issuance of a lease does not authorize these activities. These activities, which occur subsequent to leasing, must be approved by a plan of operations. A plan of operations is subject to public notice, the opportunity for public comment, and an ACMP consistency review if the proposed activities are within the coastal zone.

The State of Alaska is proposing to offer for lease all available state-owned acreage in Beaufort Sea Areawide oil and gas lease sales from 2009-2018. The proposed lease sale area lies within Alaska's coastal zone (Map 1), within the North Slope Borough, and consists of state-owned tide and submerged land in the Beaufort Sea between the Canadian Border and Point Barrow. The southern fringe of the sale area includes some state-owned uplands. The gross area is about 2 million acres and is divided into 573 tracts ranging in size from 640 to 5,760 acres. However, this project does not propose any specific site locations for any specific exploration, development, production, or transportation activities or facilities.

This project continues the 1999-2008 Beaufort Sea Areawide oil and gas lease sales that were previously found to be consistent with the ACMP.

Project History

On April 2, 2009, DO&G issued an Alaska Coastal Management Program Consistency Analysis for the proposed Beaufort Sea Areawide oil and gas lease sales, 2009-2018, along with a preliminary best interest finding of the director (<http://www.dog.dnr.state.ak.us/oil/>). Agencies, affected districts, local governments, the oil industry, environmental organizations, and the public were invited to comment on the proposed lease sale's consistency with the ACMP from April 2, 2009 through June 1, 2009.

Public Comments

DO&G received comments addressing the consistency analysis from three organizations: the North Slope Borough, Crag Law Center (representing the Inupiat Community of the Arctic Slope and the Alaska Eskimo Whaling Commission), and Inupiat Community of the Arctic Slope (comments submitted at a public hearing). Comments focused on consistency with the ACMP, activities subsequent to leasing, effects of activities subsequent to leasing, and additional mitigation measures. Summaries of comments received and responses to those comments are provided in Attachment B.

In response to comments, consistency of the Beaufort Sea Areawide oil and gas lease sales has been considered further, as provided in Attachment A.

Additional Opportunities for Public Comment, ACMP Review, and Other Review

Additional opportunities will be available for comment on the Beaufort Sea oil and gas lease sales. In the 9 years following the issuance of a best interest finding, ADNR annually issues a Call for New Information (AS 38.05.035(e)(6)(F)). The Call for New Information is a request for any new information that has become available since the most recent best interest finding or supplement for that lease sale area was issued. The Call for New Information provides opportunity for public comment for a period of not less than 30 days. Based on the information received, the commissioner determines whether it is necessary to supplement the finding. Ninety days before the lease sale, the commissioner either issues a supplement to the finding or a "Decision of No New Substantial Information". The supplement has the status of a final written best interest finding. The supplement is subject to a new consistency review if the supplement may cause significant additional impacts to coastal uses or resources and (1) a new resource agency authorization subject to the consistency review process or a new federal authorization under 11 AAC 110.400 is required, or (2) a change to an existing resource agency or federal authorization is required (11 AAC 110.820).

Activities and projects subsequent to leasing must be approved by a plan of operations. A plan of operations is subject to public notice, the opportunity for public comment, and an ACMP consistency review if the proposed activities are within the coastal zone.

In addition, all oil and gas activities (exploration, development, production, and transportation) are subject to numerous federal, state, and local laws, regulations, policies, and ordinances, with which the lessee is obligated to comply. Many of these include public notice and comment requirements. Chapter Seven of the preliminary finding discusses many of these agencies and regulations and provides an overview of the broad spectrum of authority various government agencies have to prohibit, regulate, and condition activities related to oil and gas. The various

regulatory agencies (state, federal, and local) have different roles in the oversight and regulation of oil and gas activities, although some agencies may have overlapping authorities. Important laws and regulations applicable to oil and gas activities are found in Appendix B of the preliminary finding.

Phasing

This consistency review is for the lease sale phase only, which is a disposal phase. AS 46.40.094 allows phasing of consistency determinations for a use or activity if:

- 1) at the time the proposed use or activity is initiated, there is insufficient information to evaluate and render a consistency determination of the entirety of the proposed use or activity;
- 2) the proposed use or activity is capable of proceeding in discrete phases based upon developing information that was not available to the project applicant at the time of the previous phase; and
- 3) each subsequent phase of the proposed use or activity is subject to discretion to implement alternative decisions based upon the developing information.

The proposed Beaufort Sea oil and gas lease sales meet these three criteria for phasing. The first criterion is met because at the time of lease sales, it is unknown if any leases will be sold, which specific tracts will be leased, if there will be specific subsequent projects, what those specific projects would be, the size of specific projects, and where specific projects would be sited. Industry may or may not be interested in bidding on leases, and therefore leases may or may not be sold. If, when, and where exploration takes place depends on whether or not leases are sold, and if they are, which leases are sold and the specific situation of the lease owners. Therefore, at this time, there is insufficient information to evaluate and render a consistency determination on the entirety of the proposed use or activity.

The second criterion for phasing is met because oil and gas activities proceed in several discreet phases, each of which is dependent on the previous phase: lease sale, exploration, development, production, and transportation. Whether or not exploration will take place, and where exploration might occur, depend on whether or not leases are sold, and if they are, which leases are sold. This information is not available for the exploration phase until the lease sale phase is complete. Whether or not development takes place depends on information gathered at the exploration phase because, before development can occur, exploration must show and confirm, through drilling a well, not only the existence of oil or gas but that the oil or gas exists in economically producible quantities. Production and transportation phases, which would occur subsequent to development, rely on information obtained during the development phase. Therefore, each discreet phase of oil and gas activity relies on information that is obtained during the previous phase.

The third criterion for phasing is met because each subsequent phase is subject to discretion to implement alternative decisions based upon the developing information. Decisions are made about how, when, where, and whether to proceed with a project based on information gathered during preceding phases, and these decisions are not made until subsequent phases. In addition, phases subsequent to oil and gas lease sales require numerous decisions relating to permits,

leases, and authorizations at each particular phase, and these decisions are subject to a large array of alternatives and options based on information gathered at each phase.

Under AS 46.40.094(b), when a use or activity is authorized or developed in discrete phases and each phase will require decisions relating to a permit, lease, or authorization for that particular phase, the agency responsible for the consistency determination for the particular phase may, in its discretion, limit the consistency review to that particular phase if, but only if,

- A) the agency or another state agency must carry out a subsequent consistency review and make a consistency determination before a later phase may proceed; and
- B) the agency responsible conditions its consistency determination for that phase on a requirement that a use or activity authorized in a subsequent phase be consistent with the Alaska Coastal Management Program.

These conditions are met because ADNR must carry out ACMP consistency reviews for all plans of operations within the coastal zone at each subsequent phase, and all plans of operations at subsequent phases must be consistent with the ACMP to be approved. During exploration, development, production, and transportation phases, lessees must submit proposed plans of operations for permit approval. During this time, agency staff review information developed from previous phases, review additional information that has become available such as new technological developments and site-specific data, and implement necessary mitigation measures to ensure permits comply with the ACMP.

Reasonably Foreseeable, Significant Effects

At the disposal phase, it is unknown whether any leases will be sold; if they are sold, which tracts will be sold; whether any exploration, development, production, or transportation will be proposed; and if it is, the specific location, type, size, extent, and duration. In addition, methods to explore for, develop, produce, and transport petroleum resources will vary depending on the area, lessee, operator, and discovery. Speculation about possible future effects subject to future permitting that cannot be reasonably determined until the project or proposed use is more specifically defined is not required (AS 38.05.035(h)). Legislative findings for SB 308 (Eighteenth Legislature) Section 1(8) (Ch. 38 SLA 1994) state that “speculation concerning future development activities that will be subject to independent permitting requirements is not necessary at the time a decision is made to dispose of state land or an interest in state land”.

However, AS 46.40.094(b)(2)(C) does require that consistency determinations consider the reasonably foreseeable, significant effects of the disposal. Although the April 2, 2009 consistency analysis did not specifically cite effects of the lease sales, DO&G has considered and discussed the reasonably foreseeable, significant effects of oil and gas lease sales in the Beaufort Sea in the companion document, *Proposed Beaufort Sea Areawide Oil and Gas Lease Sale – Preliminary Finding of the Director*, dated April 2, 2009, which is hereby incorporated into this proposed consistency determination by reference.

Citing about 120 sources, Chapter Eight of the preliminary finding discusses the reasonably foreseeable cumulative effects of leasing and subsequent activity on the area’s air quality, land and water habitats, lower-trophic level organisms, fishes, birds, caribou, muskoxen, brown bears,

furbearers, polar bears, bowhead whales, other marine mammals, subsistence, and historic and cultural resources. In Chapter Three of the preliminary finding, geologic hazards are considered, including faults and earthquakes, sea ice, ice gouging, ice movement, sub-sea permafrost, onshore permafrost, frozen ground, thermokarst, waves and erosion, coastal currents, flooding, overpressed sediments, unstable sediments, shallow gas deposits, and natural gas hydrates. These chapters also include a discussion of mitigation measures and how those measures are expected to avoid, minimize, or mitigate potential effects.

Further Consideration of Consistency

In the Alaska Coastal Management Program Consistency Analysis for the Proposed Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018, issued April 2, 2009, DO&G provided an analysis of consistency of the proposed lease sales with the ACMP statewide standards; currently, there is no approved district plan in effect for the North Slope Borough. Based on comments received during the public comment period, further consideration of consistency of the Beaufort Sea Areawide oil and gas lease sales, 2009-2018 with the ACMP statewide standards is provided in Attachment A. In Attachment A, each ACMP statewide standard is presented, followed by further discussion of how mitigation measures and other regulatory protections ensure that the lease sales are consistent with the standard. Mitigation measures discussed were designed to avoid, minimize, or mitigate the potential impact of lease sales on the coastal zone.

Consistency Determination

As the coordinating agency, DO&G has reviewed the proposed Beaufort Sea Areawide lease sales, 2009-2018 for consistency with the statewide standards of the Alaska Coastal Management Program set out in 11 AAC 112, and has determined that mitigation measures included in the consistency analysis, as modified based on comments received during the public comment period (Attachments B, C, and D), ensure that the Beaufort Sea Areawide lease sales, 2009-2018 are consistent with the ACMP. DO&G proposes to find the Beaufort Sea Areawide lease sales, 2009-2018, consistent with the ACMP.

This proposed consistency determination is based upon the consistency analysis issued on April 2, 2009, additional consistency considerations in Attachment A, mitigation measures and lessee advisories developed by DO&G in consultation with the other resource agencies as revised based on public comment (Attachments B, C, and D), and the lease contract (Attachment E). Mitigation measures are legally binding terms of any lease that might result from a Beaufort Sea areawide oil and gas lease sale. Lessee advisories alert lessees to other regulatory requirements and additional restrictions that may be imposed at the permitting stage of a proposed project or activity where entities other than DO&G have regulatory, permitting, or management authority.

An oil and gas lease grants the lessee the exclusive right to drill for, extract, remove, clean, process, and dispose of oil, gas, and associated substances. However, it does not authorize subsequent activities. Subsequent activities, other than activities that would not require a land use permit under ADNR's regulations, must be approved by a plan of operations. A plan of operations is subject to public notice, the opportunity for public comment, and an ACMP review if the proposed activities are within the coastal zone.

Conclusion

Based upon the review of all currently available information, including public, coastal district, and agency input, ADNR has independently determined that the proposed Beaufort Sea areawide oil and gas lease sales for 2009-2018, conditioned by the mitigation measures and lessee advisories, are consistent with the standards of the ACMP.

Elevation

Pursuant to 11 AAC 110.600, a state resource agency or affected coastal resource district that does not concur with this proposed consistency determination may request an elevation to the commissioner of the proposed consistency determination. A request for elevation must be in writing; be received by DO&G within 5 days after the requestor receives the proposed consistency determination; and explain the requestor's concern, including any addition of or modification to an alternative measure identified in the proposed consistency determination that would achieve consistency with the enforceable policies of the program (11 AAC 110.600). A request for elevation must be filed with the Division of Oil and Gas, 550 W 7th Avenue, Suite 800, Anchorage AK, 99501; by fax, 269-8938; or by email to saree.timmons@alaska.gov.



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ATTACHMENTS:

- A – Additional Consistency Considerations
- B – Summaries of Public Comments and Responses
- C – Mitigations Measures
- D – Summary of Changes Made to Mitigation Measures
- E – Sample Lease Contract

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Map 1. Map of the Beaufort Sea Areawide lease sale area within Alaska's coastal zone.

ATTACHMENT A
Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018
Additional Consistency Considerations

An analysis of the consistency of Beaufort Sea Areawide lease sales, 2009-2018 with the ACMP statewide standards (11 AAC 112) was issued on April 2, 2009. The public comment period was from April 2, 2009 – June 1, 2009. This attachment provides additional consideration of consistency of the lease sales with the ACMP, and incorporates by reference the *Proposed Beaufort Sea Areawide Oil and Gas Lease Sale – Preliminary Finding of the Director*, issued April 2, 2009. These additional consistency considerations incorporate by reference the previously issued consistency analysis and supersede it.

It should be noted that “speculation concerning future development activities that will be subject to independent permitting requirements is not necessary at the time a decision is made to dispose of state land or an interest in state land” (SB 308 [Eighteenth Legislature] Section 1[8]; Ch. 38 SLA 1994). At the disposal phase, it cannot reasonably be foreseen whether developable resources will be discovered that would result in coastal development. It is unknown whether any leases will be sold; for which tracts leases will be sold; whether any exploration, development, production, or transportation will be proposed; and if it is, the specific location, type, size, extent, and duration of those activities. If leases are sold, and if, subsequently, specific projects, activities, and site locations are proposed, these will be analyzed for consistency with the ACMP (11 AAC 112) based on developing information gathered during the previous phases. Before they may commence, any projects or activities proposed for exploration, development, production, or transportation phases subsequent to leasing must be found consistent with the ACMP, well as all enforceable policies of any approved district plans in effect for the affected coastal district. At this time, there is no approved district plan in effect for the North Slope Borough.

Issuance of an oil and gas lease does not authorize the use of, or approve activities on, a lease. A plan of operations must be approved before any operations may be undertaken on or in the leased area, except for activities that would not require a land use permit or operations undertaken under an approved unit plan of operations. In addition, all oil and gas activities subsequent to leasing (exploration, development, production, and transportation) are subject to numerous federal, state, and local laws, regulations, policies, and ordinances, with which the lessee is obligated to comply. Chapter Seven of the preliminary best interest finding (incorporated by reference, as stated in the proposed consistency determination) discusses many of these agencies and regulations, and provides an overview of the broad spectrum of authority various government agencies have to prohibit, regulate, and condition activities related to oil and gas. The various regulatory agencies (state, federal, and local) have different roles in the oversight and regulation of oil and gas activities, although some agencies may have overlapping authorities. Important laws and regulations applicable to oil and gas activities are found in Appendix B of the preliminary finding.

Plans of Operations

The requirement for a plan of operations (11 AAC 83.158 and paragraph 10 of the lease), described in Chapter Seven, Section A(2) of the preliminary finding, is an important consideration concerning consistency of the Beaufort Sea Areawide lease sales with all of the

ACMP statewide standards. The requirement for a plan of operations ensures that the various resources and uses identified in 11 AAC 112 can be considered and protected at each phase (exploration, development, production, transportation), before a specific project or activity is permitted. Plans of operations must identify specific measures, design criteria, and construction methods and standards to be employed to comply with Beaufort Sea Areawide mitigation measures. Additional mitigation measures may be required to ensure consistency with the ACMP. Applications for required state or federal agency authorizations or permits must be submitted with plans of operations. **Plans of operations must comply with the ACMP consistency review process, including public notice requirements, and must be found consistent with the ACMP before lessees may begin any projects or activities.**

By requiring that lessees obtain prior approval of the details of their activities before any lease activities may occur, plans of operations:

- protect fish and wildlife populations and habitats, and protect subsistence, commercial, and sport harvest activities which may be other water-dependent or water related uses and activities (11 AAC 112.200);
- ensure that appropriate measures are taken to protect public safety, services, and the environment from potential damage by requiring that lessees identify specific measures, design criteria, and construction methods and standards to be employed (11 AAC 112.210);
- ensure that appropriate measures are taken in the siting, design, construction, and operation of proposed activities to maintain public access to, from, and along coastal waters (11 AAC 112.220);
- protect local environments and uses by ensuring that siting of major energy facilities is consistent with the ACMP (11 AAC 112.230);
- ensure that utility routes and facilities are sited appropriately to account for drainage patterns, wildlife transit, and access (11 AAC 112.240);
- protect coastal waters, intertidal areas, barrier islands, and spits from unnecessary disturbances from sand and gravel extraction (11 AAC 112.260);
- avoid or minimize impacts to subsistence uses of coastal resources (11 AAC 112.270);
- ensure that transportation routes and facilities are sited appropriately to account for drainage patterns, wildlife transit, and access (11 AAC 112.280);
- avoid, minimize, or mitigate adverse impacts to the eight habitats identified, and to competing uses if those uses are determined to be in competition with a proposed use (11 AAC 112.300);
- ensure that appropriate measures are taken to protect air, land, and water quality by complying with ADEC requirements (11 AAC 112.310);
- protect historic, prehistoric, and archaeological resources by ensuring compliance with applicable state statutes and regulations (11 AAC 112.320); and,
- ensures that adverse impacts are first avoided, then minimized where avoidance is not practicable, and then mitigated if neither avoidance nor minimization is practicable (11 AAC 112.900).

Provided below is additional consideration of consistency of the Beaufort Sea Areawide lease sales with each of the ACMP statewide standards (11 AAC 112). Each ACMP statewide standard is presented, followed by additional consideration of how mitigation measures and other

regulatory protections ensure that Beaufort Sea Areawide lease sales are consistent with the standard. Mitigation measures discussed below were designed to minimize the potential adverse impact of lease sales on the coastal zone.

11 AAC 112.200 Coastal Development

- (a) *In planning for and approving development in or adjacent to coastal waters, districts and state agencies shall manage coastal land and water uses in such a manner that those uses that are economically or physically dependent on a coastal location are given higher priority when compared to uses that do not economically or physically require a coastal location.*
- (b) *Districts and state agencies shall give, in the following order, priority to*
 - (1) *water-dependent uses and activities;*
 - (2) *water-related uses and activities; and*
 - (3) *uses and activities that are neither water-dependent nor water-related for which there is no practicable inland alternative to meet the public need for the use or activity.*
- (c) *The placement of structures and the discharge of dredged or fill material into coastal water must, at a minimum, comply with the standards contained in 33 C.F.R. Parts 320 - 323, revised as of July 1, 2003.*

Additional Considerations:

This standard requires that uses that are economically or physically dependent on a coastal location be given a higher priority than those that are not. The standard establishes a priority for water-dependent uses and activities, water-related uses and activities, and uses and activities which are neither water-dependent nor water-related. Water-dependent activities are given priority. "Water-dependent" means a use or activity that can be carried out only on, in, or adjacent to a water body because the use requires access to the water body (11 AAC 112.990 (31)). Water-related activities are given a second priority. "Water-related" means a use or activity that is not directly dependent upon access to a water body, but which provides goods or services that are directly associated with water-dependence and which, if not located adjacent to a water body, would result in a public loss of quality in the goods or services offered (11 AAC 112.990 (32)). Third priority is given to uses and activities that are neither water-dependent nor water-related for which there is no practicable inland alternative to meet the public need for the use or activity.

Oil and gas leases give the lessee the exclusive right to drill for, extract and dispose of oil, gas and associated substances in or under the lease tracts. Therefore, because many of the tracts in the Beaufort Sea Areawide lease sale area are located on or adjacent to the Beaufort Sea, lessees will have a right to the oil and gas deposits under their tracts. However, **there are no specific projects, activities, or site locations being proposed for coastal development at this phase, and it is unknown if any projects, activities, or site locations will be proposed subsequent to leasing.**

Offshore oil and gas deposits are located under a body of water. Thus, any activities subsequent to the Beaufort Sea lease sales will be carried out on, in, or adjacent to, the water body in order to access the water body's underlying minerals. Some offshore deposits can be reached from onshore locations by directional drilling. However, there are physical limitations which restrict the obtainable offset distances. Considerations include the depth of the deposit and the distance to the nearest feasible onshore drill site, the geology of the area, and the type of rock that must be drilled. These limitations generally dictate that a well site must be located as close to the deposit as possible, adjacent to the water body, and not significant distances inland. Offshore drilling vessels and platforms must operate in the water in those instances where it is not practicable to reach the underlying oil and gas deposits by directional drilling.

Offshore oil and gas activities that will be carried on or in a water body to access the water body's underlying minerals, and onshore directionally drilled wells, are "water-dependent" as defined at 11 AAC 112.990(31). As a result, they are given priority under 11 AAC 112.200.

Other onshore activities, except those such as port facilities and docks which require access to water and are water-dependent, may, depending upon the specific activity or use, be water-related (11 AAC 112.200(b)(2)) or neither water-related nor water-dependent, but for which there is no practicable inland alternative to meet the public need for the use or activity (11 AAC 112.200(b)(3)). Onshore oil and gas deposits must be reached from surface locations reasonably overlying the deposit or from a location from which the deposit can reasonably be reached by directional drilling. Onshore sites for drilling and other support activities outside such locations, that may be further inland, are not practicable for this type of activity (11 AAC 112.990(18)).

This standard also requires that placement of structures and discharge of dredged or fill material into coastal waters must meet federal requirements and permits issued by the U.S. Army Corps of Engineers. Standard (c) will specifically be applied to an activity if and when a structure is actually being sited or discharges are proposed at the exploration, development, or production stages. Lessees and any future activities will have to comply with all applicable state and federal laws including 11 AAC 112.200(c), and will have to go through separate consistency reviews.

Granting oil and gas leases in the lease sale area will not preempt other uses of the area. The state reserves the right to establish or grant easements or rights-of-way on the leased land as well as the right to manage and dispose of the state's interests, if any, in the surface of the leased area or any state-owned interests therein by grant, lease or permit to third parties. All leases are subject to applicable local, state and federal laws, rules and regulations, including 33 CFR 320-323.

Mitigation measures provide some terms and conditions that will be incorporated into future agency reviews and authorizations; other measures may be developed when specific use proposals undergo separate consistency reviews. Lessee advisories and other regulatory protections provide additional safeguards. However, it is important to note that an oil and gas lease sale does not plan for, approve, or authorize any activities beyond issuing of leases. Any future use by, or activity of, lessees within the coastal zone will be subject to an ACMP consistency determination before a use or activity is authorized.

The following mitigation measures, lessee advisories, and other regulatory protections will ensure that Beaufort Sea Areawide lease sales are consistent with the ACMP statewide standard concerning coastal development (11 AAC 112.200) by: 1) preventing significant interference between water-dependent oil and gas activities and other water-dependent activities; 2) providing deference of oil and gas activities of lesser priority to higher priority uses or activities that may exist at the time; and 3) mitigating, in general, potential adverse effects of coastal development.

These mitigation measures, lessee advisories, and other regulatory protections also ensure consistency by avoiding, minimizing, or mitigating adverse effects to fish and wildlife populations and their habitats. By protecting fish and wildlife populations and their habitats, potential impacts to subsistence fishing and hunting, which are other water-dependent or water related activities that exist in the lease sale area, will be avoided, minimized, or mitigated.

Mitigation Measures A(1)(a)-(m) and A(2)(a)-(g) are designed to directly protect other uses; or are designed to protect fish and wildlife populations and their habitats, which in turn will prevent

adverse impacts to subsistence, commercial, and sport harvest activities, which may be other water-dependent or water-related activities present in the lease sale area.

Mitigation Measure A(1)(a) protects other uses by requiring that plans of operations must describe the lessee's plans to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas. This measure ensures that when specific projects, activities, and site locations are proposed, impacts to other uses will be minimized.

Mitigation Measure A(1)(b) protects fish and wildlife habitats by requiring that facilities be designed and operated to minimize sight and sound impacts including such methods as natural buffers and screening. This measure protects other uses by minimizing noise and sight disturbances in the vicinity of facilities.

Mitigation Measure A(1)(c) protects fish and riparian habitats by requiring buffers between facilities and fish-bearing streams and water bodies. It also specifies how road, utility, and pipeline crossings must be sited when they are near watercourses. This measure limits disturbances to habitats of several major water bodies that are particularly important to fish and wildlife populations, and minimizes runoff that could negatively affect those habitats.

Mitigation Measure A(1)(d) protects wetland habitats by requiring that impacts to wetlands be minimized when siting facilities. By siting facilities in the least sensitive areas, this measure prevents deterioration of important wetland habitats and disturbance of species supported by it. By assuring adequate water flow and avoiding adverse effects on natural drainage patterns, the potential effects of development will be minimized.

Mitigation Measure A(1)(e) protects marine, freshwater, and terrestrial habitats through restrictions on exploration facilities and gravel structures. This measure minimizes disturbances to fish and wildlife habitats and populations by protecting the integrity of the habitats, and by limiting habitat fragmentation.

Mitigation Measure A(1)(f) protects marine, freshwater, and terrestrial habitats by requiring that pipelines must utilize existing transportation corridors where conditions permit; by addressing siting and design of pipelines and gravel pads to facilitate containment and cleanup of spilled fluids; and by assuring integrity against climatic conditions, geophysical hazards, corrosion and other hazards. This measure limits disturbances to fish and wildlife habitats. It maintains the physical, biological, and chemical characteristics of fish and wildlife habitats by limiting the potential for unintended releases of hazardous substances which could harm fish and wildlife habitats and populations, and by limiting potential negative effects of a spill or accident on fish and wildlife habitats and populations.

Mitigation Measure A(1)(g) protects wildlife populations by ensuring that onshore pipelines will minimize alteration of caribou and other large ungulate movement and migration patterns. Maintaining movement and migration routes will avoid or minimize impacts to other uses of the area, particularly subsistence uses.

Mitigation Measure A(1)(h) protects marine, freshwater, and terrestrial habitats by requiring that design and construction of pipelines provide adequate protection from water currents, storm and ice scouring, subfreezing conditions, coastal erosion, permafrost thawing, and other hazards. These measures help to avoid or minimize unintentional releases of oil, gas, and other hazardous substances that could pollute or damage fish and wildlife habitats, or that could injure or kill fish or wildlife. By preventing the discharge of oil, gas, and other hazardous substances into

freshwater, marine, and terrestrial habitats, the biological, physical and chemical properties of those habitats will be maintained; and fish and wildlife populations will not come into contact with substances that could injure or kill them.

Mitigation Measures A(1)(i) and (j) protect marine habitats and populations of marine fish and wildlife by encouraging offshore oil and gas transportation pipelines if they are technically feasible and environmentally preferable to transport by oil tanker or other means; and by requiring that, following the installation of a pipeline of sufficient capacity, no crude oil will be transported by surface vessel from offshore production sites, except in an emergency. These measures help to avoid or minimize unintentional releases of oil, gas, and other hazardous substances into the marine environment, which could pollute or damage fish and wildlife habitats, or that could injure or kill fish or wildlife. By preventing the discharge of oil, gas, and other hazardous substances into marine habitats, the biological, physical and chemical properties of those habitats will be maintained; and fish and wildlife populations will not come into contact with substances that could injure or kill them.

Mitigation Measures A(1)(k)(i-iii) protect marine habitats and populations of marine fish and wildlife by prohibiting continuous-fill causeways, and instead requiring environmentally preferred alternatives such as buried pipelines, onshore directional drilling, or elevated structures. This measure also restricts the location of causeways, docks, artificial gravel islands, and bottom founded structures, and requires that non-continuous-fill causeways be designed, sited, and constructed to prevent significant changes to nearshore oceanographic circulation patterns, water quality characteristics, and passage of marine and anadromous fish. These measures will protect marine habitats by avoiding or minimizing unnecessary disturbances to marine habitats, by maintaining the natural flow of currents, and by ensuring that movements of fish and wildlife populations are unimpeded.

Mitigation Measure A(1)(l) protects terrestrial habitats and adjacent marine and freshwater habitats by requiring dismantlement, removal and rehabilitation upon abandonment, and requiring that drilling sites, roads, buildings, or other facilities be removed and the site rehabilitated. Removing unneeded facilities and rehabilitating unused sites will protect natural vegetation, and will maintain the biological, physical, and chemical characteristics of the terrestrial, marine, and freshwater habitats and the fish and wildlife populations that rely on them.

Mitigation Measure A(1)(m) protects terrestrial habitats and adjacent marine and freshwater habitats by restricting gravel mining to the minimum necessary to develop the field efficiently and with minimal environmental damage, limiting gravel mine sites in floodplains, and specifying other requirements for gravel mine sites. This measure will avoid or minimize disturbances to natural vegetation, water quality, water flow, and fish and wildlife habitats.

Mitigation Measure A(2)(a) protects freshwater habitats and fish populations by specifying requirements for use of explosives in fish-bearing streams and lakes. This measure prevents harm to fish habitats and populations during construction and seismic testing, and maintains the physical and biological characteristics and productivity of aquatic habitats and populations.

Mitigation Measure A(2)(b) and (c) protect freshwater habitats and fish populations by requiring approval of DMLW and ADF&G for removal of water and snow from fish-bearing rivers, streams, and natural lakes; by specifying requirements for water removal; and by prohibiting compaction of snow cover overlying fish-bearing water bodies. These measures

protect water quality and natural water flow in freshwater habitats, and they maintain passage of fish.

Mitigation Measure A(2)(d) protects brown bears and polar bears by requiring a human-bear interaction plan; specifying what must be in the plan; requiring consultation with ADF&G to identify location of brown bear den sites; restricting activities during certain sensitive times; requiring consultation with the USFWS to identify locations of polar bear dens; and providing other requirements to protect brown bears and polar bears. This multi-faceted measure protects bear populations by minimizing non-hunting bear/human interactions, and by protecting habitats and populations during sensitive times.

Mitigation Measures A(2)(e) and (f) protect nesting and brooding habitats and populations of several species of important birds (brant, white-fronted goose, snow goose, tundra swan, king eider, common eider, Steller’s eider, spectacled eider, and yellow-billed loon) through restrictions on siting of facilities; and through seasonal and geographical restrictions on operations in the Teshekpuk Lake Special Area (TLSA) and other specific tracts. By limiting disturbances to important nesting and brooding habitats at specific important locations and at specific sensitive times, this measure will help ensure that these bird populations and the water-dependant uses of them will not be negatively affected.

Mitigation Measure A(2)(g) protects populations of spotted seals through seasonal and area restrictions on boat and barge traffic. By limiting disturbances of important haul-out locations at specific times, this measure will help ensure that spotted seal populations and the water-dependant or water-related uses of them will not be negatively affected.

Mitigation Measures A(3)(a)-(e) are designed to directly protect subsistence activities which may be other water-dependent or water-related activities present in the lease sale area.

Mitigation Measures A(3)(a)(i)-(iii) protect subsistence activities and avoid conflicts with subsistence uses by requiring lessees to make reasonable efforts to assure that exploration, development, and production activities are compatible with subsistence activities and will not result in unreasonable interference with subsistence harvests. These measures also allow for restrictions to be imposed on oil and gas activities to avoid conflicts with subsistence uses, and provide a mechanism for resolving disagreements.

Mitigation Measure A(3)(b) protects traditional and customary access to subsistence areas and avoids conflicts with subsistence uses by requiring that access to subsistence areas be maintained, and by requiring consultation with the NSB, nearby communities, and Alaska Native organizations in identifying and contacting local subsistence users.

Mitigation Measure A(3)(c) protects subsistence whaling and avoids conflicts with subsistence whaling through prohibitions and restrictions on permanent facilities on Cross Island, in state waters within 3 miles of Cross Island, and in certain state waters in the vicinity of Arey Island and Barter Island; consultation with the NSB and AEWG is provided for.

Mitigation Measures A(3)(d)(i)-(ii) protect subsistence whaling and avoid conflicts with subsistence whaling through a series of detailed seasonal and geographical drilling and operating restrictions, and coordination with local whaling crews.

Mitigation Measure A(3)(d)(iii) protects marine habitats and fish and wildlife populations by requiring training and qualifications in accordance with Minerals Management Service standards

pertaining to well-control equipment and techniques; by providing requirements for oil spill contingency plans; and by requiring participation in an oil spill research program.

Mitigation Measures A(3)(e)(i)-(iii) protect subsistence whaling and avoid conflicts with subsistence whaling by requiring consultation with the North Slope Borough, the Alaska Eskimo Whaling Commission, and the community of Kaktovik, and by requiring that the lessee make every reasonable effort to ensure that their activities will not result in unreasonable interference with subsistence whale hunting. These measures also provide a mechanism for resolving disagreements.

Mitigation Measures A(4)(a)-(k) are designed to protect fish and wildlife populations and their habitats, which in turn will prevent adverse impacts to subsistence, commercial, and sport harvest activities, which may be other water-dependent or water-related activities present in the lease sale area.

Mitigation Measures A(4)(a)-(f) protect fish and wildlife populations and their habitats by specifying procedures and restrictions to prevent leaking, dripping, and spilling of fuel and hazardous substances during storage of fuel and hazardous substances, equipment storage, maintenance, fuel and hazardous substance transfers, and refueling. These measures prevent spills of oil, fuel, and other hazardous substances that could pollute or damage fish and wildlife habitats, or that could injure or kill fish or wildlife. By preventing the discharge of oil, fuel, and other hazardous substances into freshwater, marine, and terrestrial habitats, the biological, physical and chemical properties of those habitats will be maintained; and fish and wildlife populations will not come into contact with substances that could injure or kill them.

Mitigation Measure A(4)(g) protects fish and wildlife populations and their habitats by allowing for requirement of fresh water aquifer monitoring wells and water quality monitoring down gradient of above-ground liquid hydrocarbon storage facilities. The measure will avoid or minimize discharges to freshwater habitats by providing a method for detecting unintentional discharges quickly.

Mitigation Measures A(4)(h)–(k) protect fish and wildlife populations and their habitats through requirements and restrictions on the disposal of wastes (including garbage, putrescible wastes, and muds and cuttings). These measures avoid or minimize possible sources of pollution that could harm fish and wildlife populations or habitats.

Mitigation Measures A(5)(a)-(b) are designed to directly protect subsistence, commercial, and sport harvest activities, which may be other water-dependent or water related activities present in the lease sale area; or to protect fish and wildlife populations and their habitats, which in turn will prevent adverse impacts to subsistence, commercial, and sport harvest activities.

Mitigation Measure A(5)(a) protects fish and wildlife habitats through restrictions on off-road travel. This measure protects fish and wildlife habitats and populations by avoiding or minimizing unnecessary disturbances to tundra and wetlands.

Mitigation Measure A(5)(b) protects subsistence, commercial, and sport harvest activities by requiring that public access to, and use of, the lease area be maintained, and by requiring that facilities and operations not be located so as to block access to or along navigable or public waters.

Mitigation Measure A(7)(c) protects subsistence, commercial, and sport harvest activities directly, and protects fish and wildlife habitats and populations, by requiring a training program

designed to inform workers about local environmental, social, and cultural concerns; to provide them with methods to preserve the area’s biological resources; and to increase sensitivity and understanding of local community values, customs, and lifestyles. By providing this training, individual workers will be more likely to act in ways that protect subsistence uses, fish and wildlife populations, and habitats in the areas where they are working.

Lessee Advisories provided notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements provide additional protections for fish and wildlife populations and their habitats, and for other uses that may be water-dependent or water-related.

11 AAC 112.210 Natural Hazard Areas

- (a) *In addition to those identified in 11 AAC 112.990, the department, or a district in a district plan, may designate other natural processes or adverse conditions that present a threat to life or property in the coastal area as natural hazards. Such designations must provide the scientific basis for designating the natural process or adverse condition as a natural hazard in the coastal area, along with supporting scientific evidence for the designation.*
- (b) *Areas likely to be affected by the occurrence of a natural hazard may be designated as natural hazard areas by a state agency or, under 11 AAC 114.250(b), by a district.*
- (c) *Development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction, and operation of the proposed activity to protect public safety, services, and the environment from potential damage caused by known natural hazards.*
- (d) *For purposes of (c) of this section, “appropriate measures in the siting, design, construction, and operation of the proposed activity” means those measures that, in the judgment of the coordinating agency, in consultation with the department’s division of geological and geophysical surveys, the Department of Commerce, Community, and Economic Development as state coordinating agency for the National Flood Insurance Program under 44 C.F.R. 60.25 and other local and state agencies with expertise,*
 - (1) *satisfy relevant codes and safety standards; or*
 - (2) *in the absence of such codes and standards;*
 - (A) *the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazard; or*
 - (B) *the level of risk presented by the design of the project is low and appropriately addressed by the project plans.*

Additional Considerations:

This standard addresses siting, design, construction, and operations in areas that have natural hazards or that have been designated as natural hazards areas by the department or by a district in a district plan. The department has not designated any natural hazard areas for Beaufort Sea Areawide lease sales, and there is currently no approved district plan in effect for the North Slope Borough. 11 AAC 112.990(15)(A) defines natural hazards as “the following natural processes or adverse conditions that present a threat to life or property in the coastal area: flooding, earthquakes, active faults, tsunamis, landslides, volcanoes, storm surges, ice formations, snow avalanches, erosion, and beach processes”. Chapter Three, Section G of the preliminary finding discusses many geologic hazards that may occur in the lease sale area. These include faults, earthquakes, sea ice, ice gouging, ice movement, sub-sea permafrost, onshore permafrost, frozen ground, thermokarst, waves, erosion, coastal currents, flooding, overpressured sediments, unstable sediments, shallow gas deposits, and natural gas hydrates. These hazards could impose constraints to exploration, production, and transportation activities associated with possible petroleum development, and will be required to be considered before any siting, design, or construction of facilities.

Oil and gas leases give the lessee the exclusive right to drill for, extract and dispose of oil, gas and associated substances in or under the lease tracts, therefore lessees will have a right to the oil and gas deposits under their tracts. The following mitigation measures, lessee advisories, and other regulatory protections address geologic hazards in the lease sale area. However, **there are no specific projects, activities, or site locations proposed at this time, and it is unknown at this time whether any specific projects or activities will be proposed for sites that could be affected by natural hazards.**

If they propose specific projects, activities, or locations, there are many procedures that lessees must take to ensure that their project or activity is consistent with this statewide standard. For example, the U.S. Geological Survey seismic hazard maps, available on the USGS website, are incorporated into the International Building Code for establishing the seismic design values for a selected location. Lessees must comply with all applicable local, state, and federal codes, statutes, and regulations. Proper siting, design, construction, and engineering will minimize the risks of these natural processes.

The following mitigation measures, lessee advisories, and other regulatory protections will ensure that Beaufort Sea Areawide lease sales are consistent with the ACMP statewide standard concerning natural hazards (11 AAC 112.210) by ensuring that risks due to natural hazards are avoided, minimized, or mitigated.

Mitigation Measures A(1)(f) and (h) ensure that appropriate measures are taken in the siting, design, construction, and operation of proposed activities to protect public safety, services, and the environment from potential damage by requiring that wherever possible, onshore pipelines must be buried where soil and geophysical conditions permit; and by requiring that all pipelines, including flow and gathering lines, be designed, constructed and maintained to assure integrity against climatic conditions, geophysical hazards, corrosion, water currents, storm and ice scouring, subfreezing conditions, and other hazards.

Lessee Advisories provide notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements also help to protect the public, services, and the environment from potential damage, and ensure that any project or activity that may be proposed is consistent with 11 AAC 112.210.

11 AAC 112.220 Coastal Access

Districts and state agencies shall ensure that projects maintain and, where appropriate, increase public access to, from, and along coastal water.

Additional Considerations:

This standard seeks to protect and improve public access of coastal waters. At this time, **specific projects, activities, and locations are not being proposed at this time, and it is unknown which tracts and specific locations within tracts might be proposed for exploration, development, production, or transportation projects or activities subsequent to leasing.** The following mitigation measures, lessee advisories, and other regulatory protections will ensure that if any of these activities are proposed, they will be consistent with the ACMP.

Mitigation Measures A(3)(b) and A(5)(b) ensure that access to areas used for subsistence activities is maintained and that restrictions to other public access is avoided, minimized, or

mitigated. Lessees are prohibited from blocking access to or along navigable or public waters. These measures will ensure that public access to, from, and along coastal waters is maintained.

Lessee Advisories provide notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements also help to ensure that coastal access is protected and that any project or activity that may be proposed is consistent with 11 AAC 112.220.

11 AAC 112.230 Energy Facilities

- (a) *The siting and approval of major energy facilities by districts and state agencies must be based, to the extent practicable, on the following standards:*
- (1) *site facilities so as to minimize adverse environmental and social effects while satisfying industrial requirements;*
 - (2) *site facilities so as to be compatible with existing and subsequent adjacent uses and projected community needs;*
 - (3) *consolidate facilities;*
 - (4) *consider the concurrent use of facilities for public or economic reasons;*
 - (5) *cooperate with landowners, developers, and federal agencies in the development of facilities;*
 - (6) *select sites with sufficient acreage to allow for reasonable expansion of facilities;*
 - (7) *site facilities where existing infrastructure, including roads, docks, and airstrips, is capable of satisfying industrial requirements;*
 - (8) *select harbors and shipping routes with least exposure to reefs, shoals, drift ice, and other obstructions;*
 - (9) *encourage the use of vessel traffic control and collision avoidance systems;*
 - (10) *select sites where development will require minimal site clearing, dredging, and construction;*
 - (11) *site facilities so as to minimize the probability, along shipping routes, of spills or other forms of contamination that would affect fishing grounds, spawning grounds, and other biologically productive or vulnerable habitats, including marine mammal rookeries and hauling out grounds and waterfowl nesting areas;*
 - (12) *site facilities so that design and construction of those facilities and support infrastructures in coastal areas will allow for the free passage and movement of fish and wildlife with due consideration for historic migratory patterns;*
 - (13) *site facilities so that areas of particular scenic, recreational, environmental, or cultural value, identified in district plans, will be protected;*
 - (14) *site facilities in areas of least biological productivity, diversity, and vulnerability and where effluents and spills can be controlled or contained;*
 - (15) *site facilities where winds and air currents disperse airborne emissions that cannot be captured before escape into the atmosphere;*
 - (16) *site facilities so that associated vessel operations or activities will not result in overcrowded harbors or interfere with fishing operations and equipment.*
- (b) *The uses authorized by the issuance of state and federal leases, easements, contracts, rights-of-way, or permits for mineral and petroleum resource extraction are uses of state concern.*

Additional Considerations:

This standard contains 16 standards upon which the siting and approval of major energy facilities must be based to the extent practicable. By specifying issues that must be considered in selecting sites for energy facilities, this standard helps to ensure that adverse environmental and social effects from energy facilities will be minimized, and that energy facilities will be compatible with other uses.

At this phase, **there are no projects or activities proposed for major energy facilities, and no siting of energy facilities proposed.** A lease does not authorize energy facilities and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered

that might warrant energy facilities. Until energy facilities are proposed, there is no opportunity for siting or approving energy facilities or authorizing uses under 11 AAC 112.230. However, if and when such a project is proposed, it must be consistent with this standard, as well as all other statewide standards of the ACMP and any enforceable policies of district plans in effect.

Although the following mitigation measures, lessee advisories, and other regulatory protections were designed to avoid, minimize, or mitigate negative effects to the environment and to other uses, the energy facilities standard recognizes the importance of these facilities to the public. The standard applies the regulatory requirement “to the extent practicable”. 11 AAC 112.990(18) defines practicable as “feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the standard”. Energy facilities are also considered “uses of state concern”, which includes uses of national interest, uses of more than local concern, siting of major energy facilities, facilities serving statewide or interregional transportation and communication needs, and uses in areas established as state parks or recreational areas or as state game refuges, game sanctuaries, or critical habitat areas (AS 46.40.210).

Mitigation Measures A(1)(a-b) and A(3)(e) address working with land owners and other users, and require facilities to be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. These measures ensure that facility siting will minimize adverse social effects and will be compatible with other uses. They ensure cooperation with landowners, developers, other users, and federal agencies. They also ensure that facility siting will minimize site clearing, dredging, and construction; and that areas of particular value identified in district plans¹ will be protected.

Mitigation Measures A(1)(c-d, k), A(2)(e-f), A(3)(c) and A(5)(b) prohibit the siting of facilities within certain buffer zones of fish bearing streams and water bodies, current surface drinking water sources, certain major rivers of the area, and coastal marshes; restrict construction and siting in certain locations important to birds and subsistence whaling; and prohibit blocking access to or along navigable waters. These measures ensure that facility siting will minimize adverse environmental effects while satisfying industrial requirements, will be compatible with other uses, will allow for free passage and movement of fish and wildlife, will protect areas of particular value identified in district plans, and will be located in areas of least biological importance.

Lessee Advisories provide notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements also help to ensure that any energy facility that may be proposed is consistent with 11 AAC 112.230.

11 AAC 112.240 Utility Routes and Facilities

- (a) *Utility routes and facilities must be sited inland from beaches and shorelines unless*
 - (1) *the route or facility is water-dependent or water related;*
 - (2) *no practicable inland alternative exists to meet the public need for the route or facility.*
- (b) *Utility routes and facilities along the coast must avoid, minimize, or mitigate*
 - (1) *alterations in surface and ground water drainage patterns;*
 - (2) *disruption in known or reasonably foreseeable wildlife transit;*
 - (3) *blockage of existing or traditional access.*

¹ There is no approved district plan in effect for the North Slope Borough at this time.

Additional Considerations:

This statewide standard specifies that utility routes and facilities be sited inland unless the route or facility is water-dependent or water related, or no practicable alternative exists. Because tracts in Beaufort Sea Areawide lease sales are located adjacent to or in the Beaufort Sea, utility routes or facilities that might be proposed in future phases would probably be supporting water-dependent or water related projects, activities, or facilities. However, a lease does not authorize utility routes and facilities, and at this phase, **there are no specific projects or activities being proposed for utility routes or facilities, and it cannot be reasonably foreseen whether developable deposits might be discovered that might result in proposals for utility routes or facilities and their siting.** If and when such a project is proposed, it must be consistent with this standard, as well as all other ACMP statewide standards and the enforceable policies of any district plans in effect.

The following mitigation measures, lessee advisories, and other regulatory protections will ensure that utility routes and facilities along the coast will avoid, minimize, or mitigate alterations in surface and ground water drainage patterns, disruption in known or reasonably foreseeable wildlife transit, and blockage of existing or traditional access.

Mitigation Measure A(1)(c) addresses the siting of facilities and utility and pipeline crossings, and requires utility and pipeline crossings to be consolidated and aligned perpendicular to watercourses.

Mitigation Measure A(1)(f) requires pipelines to use existing transportation corridors, be designed to facilitate cleanup of spilled fluids, be located on the upslope of roadways and pads, and be buried where conditions permit.

Mitigation Measure A(1)(g) requires pipelines be designed and constructed to avoid significant alteration of large ungulate movements and migration.

Mitigation Measure A(1)(h) requires all pipelines to be designed and constructed to provide adequate protection from water currents, storm and ice scouring, subfreezing conditions, and other hazards.

Mitigation Measure A(2)(e) requires permanent, staffed facilities to be sited outside identified outside identified brant, white-fronted goose, snow goose, tundra swan, king eider, common eider, Steller’s eider, spectacled eider, and yellow-billed loon nesting and brood rearing areas to the extent practicable.

Mitigation Measure A(2)(f) prohibits the construction and siting of facilities within one mile of coastal salt marshes unless it is determined that no other feasible and prudent location exists.

Mitigation Measure A(3)(c) prohibits the siting of permanent facilities on Cross Island, in state waters within 3 miles of Cross Island, and in state waters between the west end of Arey Island and the east end of Barter Island unless it is demonstrated that reasonable access to whales is not precluded.

Mitigation Measure A(5)(b) prohibits locating facilities so as to block access to or along navigable or public waters.

Lessee Advisories provide notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements also help

to ensure that any utility routes and facilities that may be proposed are consistent with 11 AAC 112.240.

11 AAC 112.250 Timber Harvesting and Processing

AS 41.17 (Forest Resources and Practices Act) and the regulations adopted under that chapter with respect to the harvest and processing of timber are incorporated into the program and constitute the components of the program with respect to those purposes.

Additional Considerations:

There are no forests located within the Beaufort Sea Areawide lease sale area and no timber harvesting or processing is proposed as part of the proposed oil and gas lease sales. Therefore, this standard is not applicable to this project.

11 AAC 112.260 Sand and Gravel Extraction

Sand and gravel may be extracted from coastal waters, intertidal areas, barrier islands, and spits if there is no practicable alternative to coastal extraction that will meet the public need for the sand or gravel.

Additional Considerations:

This statewide standard protects coastal habitats, fish and wildlife populations, and uses by allowing gravel extraction from coastal waters, intertidal areas, barrier islands, and spits only if there is no practicable alternative. By limiting sand and gravel extraction, disturbance of sensitive habitats will be limited. However, a lease does not authorize sand and gravel extraction, and at the lease sale phase, **there are no sand and gravel extraction activities or projects being proposed, and it cannot be reasonably foreseen whether developable resources will be discovered that would result in proposals for sand and gravel extraction.** If and when a project requiring sand and gravel extraction is proposed, it must be consistent with this standard, as well as all other ACMP statewide standards and the enforceable policies of any district plans in effect.

The following mitigation measures, lessee advisories, and other regulatory protections will ensure that sand and gravel will be extracted from coastal waters, intertidal areas, barrier islands, and spits only if there is no practicable alternative to coastal extraction that will meet the public need for the sand or gravel.

Mitigation Measure A(1)(m) restricts gravel mining sites to the minimum necessary to develop the field efficiently and with minimal environmental damage and gravel mine sites must not be located within an active floodplain of a watercourse unless DMLW, after consultation with ADF&G, determines that there is no practicable alternative, or that a floodplain site would enhance fish and wildlife habitat after mining operations are completed and the site is closed. Further, mine site development and rehabilitation within floodplains must follow the procedures outlined in McLean, R. F. 1993, North Slope Gravel Pit Performance Guidelines, ADF&G Habitat and Restoration Division Technical Report 93-9, available from ADF&G.

Lessee Advisories provide notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements also help to ensure that any sand and gravel extraction that may be proposed is consistent with 11 AAC 112.260.

11 AAC 112.270 Subsistence

- (a) *A project within a subsistence use area designated by the department or under 11 AAC 114.250(g) must avoid or minimize impacts to subsistence uses of coastal resources.*
- (b) *For a project within a subsistence use area designated under 11 AAC 114.250(g), the applicant shall submit an analysis or evaluation of reasonably foreseeable adverse impacts of the project on subsistence use as part of*
 - (1) *a consistency review packet submitted under 11 AAC 110.215; and*
 - (2) *a consistency evaluation under 15 C.F.R. 930.39, 15 C.F.R. 930.58, or 15 C.F.R. 930.76.*
- (c) *Repealed 10/29/2004.*
- (d) *Except in nonsubsistence areas identified under AS 16.05.258, the department may, after consultation with the appropriate district, federally recognized Indian tribes, Native corporations, and other appropriate persons or groups, designate areas in which a subsistence use is an important use of coastal resources as demonstrated by local usage.*
- (e) *For purposes of this section, “federally recognized Indian tribe” “local usage,” and “Native corporation” have the meanings given in 11 AAC 114.990.*

Additional Considerations:

There is currently no district plan in effect for the North Slope Borough, and no areas have been designated as subsistence use areas by the department for Beaufort Sea Areawide lease sales. A lease does not authorize exploration, development, production, or transportation projects, activities, or siting. **There are no specific projects, activities, or site locations being proposed at this time, and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would affect subsistence uses of coastal resources.** If and when specific projects, activities, or locations for these are proposed, they must be consistent with this standard, as well as all other enforceable policies of the ACMP, and any district plan that is in effect. However, all mitigation measures, lessee advisories, and other regulatory protections for Beaufort Sea Areawide lease sales support the subsistence standard, either by protecting subsistence uses directly, or indirectly by protecting fish and wildlife populations and their habitats.

The following mitigation measures protect subsistence uses directly.

Mitigation Measure A(1)(a) requires that a plan of operations describe efforts to minimize impacts to subsistence.

Mitigation Measure A(1)(b) requires facilities to be designed and operated to minimize sight and sound impacts in areas of high subsistence use.

Mitigation Measure A(3)(a) requires operations to be conducted in a manner that prevents unreasonable conflicts between lease-related activities and subsistence activities.

Mitigation Measure A(3)(b) requires that traditional and customary access to subsistence areas be maintained.

Mitigation Measures A(3)(c) and (d) protect subsistence whaling zones and require that development not preclude reasonable access to whales.

Mitigation Measure A(3)(e) requires exploration, development and production activities located on lease tracts 1 through 26 to be conducted in a manner that prevents unreasonable conflicts between oil and gas activities and subsistence whale hunting.

Mitigation Measure A(5)(b) limits restrictions to public access, and prohibits facilities and operations from blocking access to or along navigable or public waters.

Lessee Advisories provide notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements also help to ensure that any projects or activities that may be proposed are consistent with 11 AAC 112.270.

11 AAC 112.280 Transportation Routes and Facilities

Transportation routes and facilities must avoid, minimize, or mitigate

- (1) *alterations in surface and ground water drainage patterns;*
- (2) *disruption in known or reasonably foreseeable wildlife transit; and*
- (3) *blockage of existing or traditional access.*

Additional Considerations:

This statewide standard protects fish and wildlife populations, their habitats, and subsistence and other uses by requiring that transportation routes and facilities avoid, minimize, or mitigate alterations in surface and ground water drainage patterns; disruption in known or reasonably foreseeable wildlife transit; and blockage of existing or traditional access. However, a lease does not authorize transportation routes and facilities, and at this phase, **there are no specific projects or activities being proposed for transportation routes or facilities, and it cannot be reasonably foreseen whether developable deposits might be discovered that might result in proposals for transportation routes or facilities and their siting.** If and when such a project is proposed, it must be consistent with this standard, as well as all other ACMP statewide standards and the enforceable policies of any district plans in effect.

The following mitigation measures, lessee advisories, and other regulatory protections will ensure that transportation routes and facilities will avoid, minimize, or mitigate alterations in surface and ground water drainage patterns, disruption in known or reasonably foreseeable wildlife transit, and blockage of existing or traditional access.

Mitigation Measure A(1)(c) addresses the siting of facilities, roads, and pipeline crossings and requires utility and pipeline crossings to be consolidated and aligned perpendicular to watercourses.

Mitigation Measure A(1)(f) requires pipelines to use existing transportation corridors, be designed to facilitate cleanup of spilled fluids, be located on the upslope of roadways and pads, and be buried where conditions permit.

Mitigation Measure A(1)(g) requires pipelines be designed and constructed to avoid significant alteration of large ungulate movements and migration.

Mitigation Measure A(1)(h) requires all pipelines to be designed and constructed to provide adequate protection from water currents, storm and ice scouring, subfreezing conditions, and other hazards.

Mitigation Measure A(1)(i) encourages offshore oil and gas transportation pipelines if the director determines that the laying of such pipelines is technically feasible and environmentally preferable to transport by oil tanker or other means.

Mitigation Measure A(1)(j) prohibits crude oil from being transported by surface vessel from offshore production sites following the installation of a pipeline of sufficient capacity.

Mitigation Measure A(1)(l) requires abandoned roads and facilities to be removed and the site rehabilitated.

Mitigation Measure A(2)(e) requires permanent, staffed facilities to be sited outside identified outside identified brant, white-fronted goose, snow goose, tundra swan, king eider, common eider, Steller’s eider, spectacled eider, and yellow-billed loon nesting and brood rearing areas to the extent practicable.

Mitigation Measure A(2)(f) prohibits the construction and siting of facilities within one mile of coastal salt marshes unless it is determined that no other feasible and prudent location exists.

Mitigation Measure A(3)(c) prohibits the siting of permanent facilities on Cross Island, in state waters within 3 miles of Cross Island, and in state waters between the west end of Arey Island and the east end of Barter Island unless it is demonstrated that reasonable access to whales is not precluded.

Mitigation Measure A(5)(a) requires exploration activities to be supported only by ice roads, winter trails, existing road systems or air service. Wintertime off-road travel across tundra and wetlands may be approved in areas where snow and frost depths are sufficient to protect the ground surface. Summertime off-road travel across tundra and wetlands may be authorized subject to approval of time periods and vehicle types if travel can be accomplished without damaging vegetation or the ground surface.

Mitigation Measure A(5)(b) prohibits locating facilities so as to block access to or along navigable or public waters.

Lessee Advisories provide notification to lessees of over 28 additional requirements from seven different state, federal, and local agencies. All lessees are required to comply with all applicable state, federal, and local codes, statutes, and regulations. These additional requirements also help to ensure that any transportation routes and facilities that may be proposed are consistent with 11 AAC 112.280.

11 AAC 112.300 Habitats

- (a) *Habitats in the coastal area that are subject to the program are*
- (1) *offshore areas;*
 - (2) *estuaries;*
 - (3) *wetlands;*
 - (4) *tideflats;*
 - (5) *rocky islands and sea cliffs;*
 - (6) *barrier islands and lagoons;*
 - (7) *exposed high-energy coasts;*
 - (8) *rivers, streams, and lakes and the active floodplains and riparian management areas of those rivers, streams, and lakes; and*
 - (9) *important habitat.*
- (b) *The following standards apply to the management of the habitats identified in (a) of this section:*
- (1) *offshore areas must be managed to avoid, minimize, or mitigate significant adverse impacts to competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;*
 - (2) *estuaries must be managed to avoid, minimize, or mitigate significant adverse impacts to*
 - (A) *adequate water flow and natural water circulation patterns; and*
 - (B) *competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;*

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

- (3) *wetlands must be managed to avoid, minimize, or mitigate significant adverse impacts to water flow and natural drainage patterns;*
 - (4) *tideflats must be managed to avoid, minimize, or mitigate significant adverse impacts to*
 - (A) *water flow and natural drainage patterns; and*
 - (B) *competing uses such as commercial, recreational, or subsistence uses, to the extent that those uses are determined to be in competition with the proposed use;*
 - (5) *rocky islands and sea cliffs must be managed to*
 - (A) *avoid, minimize, or mitigate significant adverse impacts to habitat used by coastal species; and*
 - (B) *avoid the introduction of competing or destructive species and predators;*
 - (6) *barrier islands and lagoons must be managed to avoid, minimize, or mitigate significant adverse impacts*
 - (A) *to flows of sediments and water;*
 - (B) *from the alteration or redirection of wave energy or marine currents that would lead to the filling in of lagoons or the erosion of barrier islands; and*
 - (C) *from activities that would decrease the use of barrier islands by coastal species, including polar bears and nesting birds;*
 - (7) *exposed high-energy coasts must be managed to avoid, minimize, or mitigate significant adverse impacts*
 - (A) *to the mix and transport of sediments; and*
 - (B) *from redirection of transport processes and wave energy;*
 - (8) *rivers, streams, and lakes must be managed to avoid, minimize, or mitigate significant adverse impacts to*
 - (A) *natural water flow;*
 - (B) *active floodplains; and*
 - (C) *natural vegetation within riparian management areas; and*
 - (9) *important habitat*
 - (A) *designated under 11 AAC 114.250(h) must be managed for the special productivity of the habitat in accordance with district enforceable policies adopted under 11 AAC 114.270(g) ; or*
 - (B) *identified under (c)(1)(B) or (C) of this section must be managed to avoid, minimize, or mitigate significant adverse impacts to the special productivity of the habitat.*
- (c) *For purposes of this section,*
- (1) *“important habitat” means habitats listed in (a)(1) - (8) of this section and other habitats in the coastal area that are*
 - (A) *designated under 11 AAC 114.250(h) ;*
 - (B) *identified by the department as a habitat*
 - (i) *the use of which has a direct and significant impact on coastal water; and*
 - (ii) *that is shown by written scientific evidence to be biologically and significantly productive; or*
 - (C) *identified as state game refuges, state game sanctuaries, state range areas, or fish and game critical habitat areas under AS 16.20;*
 - (2) *“riparian management area” means the area along or around a waterbody within the following distances, measured from the outermost extent of the ordinary high water mark of the waterbody:*
 - (A) *for the braided portions of a river or stream, 500 feet on either side of the waterbody;*
 - (B) *for split channel portions of a river or stream, 200 feet on either side of the waterbody;*
 - (C) *for single channel portions of a river or stream, 100 feet on either side of the waterbody;*
 - (D) *for a lake, 100 feet of the waterbody.*

Additional Considerations:

This statewide standard protects eight habitats identified in coastal areas and protects competing uses. It also provides for protection of other important habitats designated in enforceable policies in approved district plans, or identified by the department. There is currently no approved district plan in effect for the North Slope Borough, and the department has not identified other important habitats for Beaufort Sea Areawide lease sales. This statewide standard requires that significant adverse impacts to the eight habitats be avoided, minimized, or mitigated. Significant adverse impacts to competing uses such as commercial, recreational, or subsistence uses, to the extent that those uses are determined to be in competition with the proposed use, must also be avoided, minimized, or mitigated. Most harvest activities are related to subsistence, although minimal commercial and sport harvest activities, and other recreational activities, occur in the Beaufort

Sea area. Most oil and gas exploration, development, production, and transportation projects and activities are compatible with subsistence harvest activities, as well as other uses and activities.

A lease does not authorize exploration, development, production, or transportation. At the lease sale phase, **no specific projects, activities, or siting of projects are being proposed, and it cannot reasonably be foreseen whether developable resources will be discovered that would affect habitats or competing uses.** If projects or activities are proposed subsequent to leasing, they must be consistent with this statewide standard by avoiding, minimizing, or mitigating adverse impacts to the habitats and to competing uses if those uses are determined to be in competition with a proposed use. They must also be consistent with all other ACMP statewide standards and the enforceable policies of any district plans in effect.

The following mitigation measures, lessee advisories, and other regulatory protections will ensure that specific exploration, development, production, and transportation projects will avoid, minimize, or mitigate significant adverse impacts to habitats and competing uses.

Mitigation Measures A(1)(b)-(m), A(2)(a)-(g), A(4)(a)-(k), and A(5)(a) protect various habitats of the lease sale area through restrictions on exploration, development, production, or transportation activities, infrastructure, design, siting, or timing.

Mitigation Measures A(1)(a), A(3)(a)-(e), A(5)(b), and A(7)(a)-(c) protect other uses by avoiding, minimizing, or mitigating significant adverse impacts to competing uses of the lease sale area through restrictions on exploration, development, production, and transportation activities, infrastructure, design, siting, and timing.

11 AAC 112.310 Air, Land, and Water Quality

Notwithstanding any other provision of this chapter, the statutes and regulations of the Department of Environmental Conservation with respect to the protection of air, land, and water quality identified in AS 46.40.040(b) are incorporated into the program and, as administered by that department, constitute the exclusive components of the program with respect to those purposes.

Additional Considerations:

This standard incorporates the statutes and regulations of ADEC (with respect to protection of air, land, and water quality) into the ACMP. A lease does not authorize any projects or activities, and at the lease sale phase, **there are no specific proposals for exploration, development, production, or transportation projects or activities. At the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would impact air, land, and water quality.** However, mitigation measures to protect air, land, and water quality were developed in consultation with ADEC, and many of the mitigation measures, lessee advisories, and other regulatory protections for Beaufort Sea Areawide oil and gas lease sales address protection of air, land, and water quality. Projects and activities that may be proposed during phases subsequent to leasing will be subject to these mitigation measures, lessee advisories, and other regulatory protections; and they must be consistent with the ACMP statewide standards and enforceable policies of any approved district plan in effect.

Mitigation Measures A(1)(c)-(f) and(h)-(m), A(2)(d)(iii), A(4)(a)-(k) ensure that projects and activities will be consistent with this statewide standard by restricting certain activities, specifying how certain facilities and infrastructure will be designed and sited, and specifying how fuel, hazardous substances, and waste are to be handled.

Lessee Advisories B(2)(a)-(d) specifically address ADEC statutes and regulations with respect to the protection of air, land, and water quality.

11 AAC 112.320 Historic, Prehistoric, and Archaeological Resources

- (a) *The department will designate areas of the coastal zone that are important to the study, understanding, or illustration of national, state, or local history or prehistory, including natural processes.*
- (b) *A project within an area designated under (a) of this section shall comply with the applicable requirements of AS 41.35.010 - 41.35.240 and 11 AAC 16.010 - 11 AAC 16.900.*

Additional Considerations:

This statewide standard protects historic, prehistoric, and archaeological resources by requiring that areas designated as important for these resources comply with statutes and regulations specifying disposition of these resources. The department has not designated any areas for historic, prehistoric, and archaeological resources for the Beaufort Sea Areawide lease sales. Chapter Three, Section D of the preliminary finding discusses cultural and historic resources of the Beaufort Sea area; Chapter Seven, Section A(9) discusses statutes and regulations concerning these resources; and Chapter Eight, Section O discusses potential effects on historic and cultural resources.

At the lease sale phase, **there are no specific projects, activities, or sites being proposed that would affect historic, prehistoric, and archaeological resources.** A lease does not authorize exploration, development, production, or transportation projects or activities, and at the lease sale phase **it cannot be reasonably foreseen whether developable resources will be discovered that would result in exploration, development, production, or transportation.** However, if and when a specific project or activity is proposed in subsequent phases, it must be consistent with this statewide standard before it will be allowed to proceed.

Several mitigation measures ensure that projects and activities subsequent to leasing are consistent with the ACMP statewide standards by preventing possible harm to, or loss of, historic, prehistoric, and archaeological resources.

Mitigation Measures A(6)(a)-(c) require an inventory of prehistoric, historic, and archaeological sites before development, and reporting and consultation with DPOR Office of History and Archaeology and the North Slope Borough.

11 AAC 112.900 Sequencing Process to Avoid, Minimize, or Mitigate

- (a) *As used in this chapter and for purposes of district enforceable policies developed under 11 AAC 114, “avoid, minimize, or mitigate” means a sequencing process of*
 - (1) *avoiding adverse impacts to the maximum extent practicable;*
 - (2) *where avoidance is not practicable, minimizing adverse impacts to the maximum extent practicable; or*
 - (3) *if neither avoidance nor minimization is practicable, conducting mitigation to the extent appropriate and practicable; for purposes of this paragraph, “mitigation” means*
 - (A) *on-site rehabilitation of project impacts to affected coastal resources during or at the end of the life of the project; or*
 - (B) *to the extent on-site rehabilitation of project impacts is not practicable, substituting, if practicable, rehabilitation of or an improvement to affected coastal resources within the district, either on-site or off-site, for a coastal resource that is unavoidably impacted.*
- (b) *For a project that requires a federal authorization identified under 11 AAC 110.400, the coordinating agency shall consult with the authorizing federal agency during that federal agency's authorization review process to determine whether the mitigation requirements proposed by the federal agency for that federal authorization would satisfy the mitigation requirements of (a)(3) of this section. If the coordinating agency determines that the mitigation requirements proposed by the federal agency would not satisfy the mitigation requirements of*

- (a)(3) of this section, the coordinating agency shall require appropriate mitigation in accordance with (a)(3) of this section.
- (c) For purposes of (a)(3) of this section, a determination of practicability includes consideration of the following factors, as applicable:
- (1) the magnitude of the functional values lost by the impacted coastal resources;
 - (2) the likelihood that the mitigation measure or improvement will succeed in actually rehabilitating the impacted resource; and
 - (3) the correlation between the functional values lost by the coastal resources impacted and the proposed mitigation measure or improvement.
- (d) To the extent feasible and not otherwise addressed by state or federal law, any requirements imposed under (a)(3) of this section for mitigation through on-site or off-site rehabilitation of project impacts shall be established by the coordinating agency at the time of the project's consistency review under 11 AAC 110.
- (e) In applying the mitigation process described in (a)(3) of this section, unless required by a federal agency issuing an authorization identified under 11 AAC 110.400 for the project, the coordinating agency may not require
- (1) that no net loss of impacted coastal resources occur; or
 - (2) monetary compensation.

Additional Considerations:

This standard sets out a sequencing process that requires, to the extent practicable, that adverse impacts are first avoided, then minimized if avoidance is not practicable, and then mitigated if neither avoidance nor minimization is practicable. A lease does not authorize any projects or activities subsequent to leasing, and at the lease sale phase, **there are no specific projects or activities being proposed. At this time, it is unknown and cannot be reasonably foreseen whether developable resources will be discovered that would result in proposals for specific projects or activities.** If specific projects or activities are proposed, in phases subsequent to leasing, they will be required to be consistent with this standard, and will be required to first avoid adverse impacts, then minimize them, and then mitigate them if neither avoidance nor minimization is practicable.

Many of the Beaufort Sea Areawide mitigation measures address avoiding, minimizing, or mitigating adverse impacts. Mitigation measures A(1)(g), A(2)(d), A(3)(a), A(3)(c), A(3)(e), and A(6)(b) specifically address avoiding adverse impacts. Mitigation measures A(1)(a), A(1)(b), A(1)(d), A(2)(d), A(4)(k), and A(6)(b) specifically address minimizing adverse impacts. Mitigation measure A(1)(g), A(1)(l), and A(1)(m) specifically address mitigation and rehabilitation. Paragraph 9s and 21 of the lease contract address sequencing and rehabilitation.

11 AAC 112.990 Definitions

Unless the context indicates otherwise, in this chapter,

- (1) “active floodplain” means the low land and relatively flat areas adjoining rivers, lakes, and streams that are subject to regular inundation by floods;
- (2) “adjacent” means near but not necessarily touching;
- (3) “barrier islands and lagoons” means
 - (A) depositional coastal environments formed by deposits of sediment offshore; or
 - (B) coastal remnants that form a barrier of low-lying islands and bars protecting a salt-water lagoon with free exchange of water to the sea;
- (4) “beach” has the meaning given in 11 AAC 114.990;
- (5) “coastal area” has the meaning given “coastal zone” in AS 46.40.210, except that “coastal area” includes federally owned land and water within the coastal zone;
- (6) “coastal water” means those waters, adjacent to the shorelines, that contain a measurable quantity or percentage of sea water, including sounds, bays, lagoons, ponds, estuaries, and tidally influenced waters;
- (7) “department” has the meaning given in AS 46.40.210;

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

- (8) “designate” means
 - (A) for a district, to identify in a district plan approved by the department; and
 - (B) for a state agency, to identify in a planning document or as part of a review under 11 AAC 110;
- (9) “district” means a coastal resource district as defined in AS 46.40.210 ;
- (10) “district plan” has the meaning given in 11 AAC 114.990;
- (11) “estuary” means a semiclosed coastal body of water that has a free connection with the sea and within which seawater is measurably diluted with freshwater derived from land drainage;
- (12) “exposed high-energy coasts” means open and unprotected sections of coastline with exposure to ocean generated wave impacts and usually characterized by coarse sand, gravel, boulder beaches, and well-mixed coastal water;
- (13) “freshwater wetlands” means those environments characterized by rooted vegetation that is partially submerged either continuously or periodically by surface freshwater with less than 0.5 parts per thousand salt content and not exceeding three meters in depth;
- (14) “major energy facility”
 - (A) means a development of more than local concern carried out in, or in close proximity to, the coastal area, that is:
 - (i) required to support energy operations for exploration or production purposes;
 - (ii) used to produce, convert, process, or store energy resources or marketable products;
 - (iii) used to transfer, transport, import, or export energy resources or marketable products;
 - (iv) used for in-state energy use; or
 - (v) used primarily for the manufacture, production, or assembly of equipment, machinery, products, or devices that are involved in an activity described in (i) - (iv) of this subparagraph;
 - (B) includes marine service bases and storage depots, pipelines and rights-of-way, drilling rigs and platforms, petroleum or coal separation, treatment, or storage facilities, liquid natural gas plants and terminals, oil terminals and other port development for the transfer of energy products, petrochemical plants, refineries and associated facilities, hydroelectric projects, other electric generating plants, transmission lines, uranium enrichment or nuclear fuel processing facilities, geothermal facilities, natural gas pipelines and rights-of-way, natural gas treatment and processing facilities, and infrastructure related to natural gas treatment and processing facilities;
- (15) “natural hazards”
 - (A) means the following natural processes or adverse conditions that present a threat to life or property in the coastal area: flooding, earthquakes, active faults, tsunamis, landslides, volcanoes, storm surges, ice formations, snow avalanches, erosion, and beach processes;
 - (B) includes other natural processes or adverse conditions designated by the department or by a district in a district plan;
- (16) “natural hazard area” means an area designated by a district under 11 AAC 114.250(b) or a state agency under 11 AAC 112.210(b) ;
- (17) “offshore areas” means submerged lands and waters seaward of the coastline as measured from mean low tide;
- (18) “practicable” means feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the standard;
- (19) “program” has the meaning given in 11 AAC 110.990;
- (20) “public need” has the meaning given in 11 AAC 114.990;
- (21) “reasonably foreseeable” has the meaning given in 11 AAC 110.990;
- (22) “resource agency” has the meaning given in AS 46.39.010 ;
- (23) “rivers, streams, and lakes” means those portions of water bodies that
 - (A) are catalogued under AS 41.14.870 as important for anadromous fish;
 - (B) are not catalogued under AS 41.14.870 as important for anadromous fish, but have been determined by the deputy commissioner of the department to contain or exhibit evidence of anadromous fish, in which event the anadromous portion of the stream or waterway extends up to the first point of physical blockage; or
 - (C) are delineated based on written scientific findings demonstrating to the satisfaction of the coordinating agency, in consultation with the state resource agency with expertise, that the project or activity would cause significant and adverse impact to
 - (i) water bodies identified in (A) or (B) of this paragraph; and
 - (ii) coastal waters;

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

- (24) *“rocky islands and sea cliffs” means islands of volcanic or tectonic origin with rocky shores and steep faces, offshore rocks, capes, and steep rocky seafronts;*
- (25) *“saltwater wetlands” means those coastal areas along sheltered shorelines characterized by halophilic hydrophytes and macro algae extending from extreme low tide to an area above extreme high tide that is influenced by sea spray or tidally induced water table changes;*
- (26) *“scientific evidence” has the meaning given in 11 AAC 114.990;*
- (27) *“tideflats” means mostly unvegetated areas that are alternately exposed and inundated by the falling and rising of the tide;*
- (28) *“transportation routes and facilities” include natural transportation routes dictated by geography or oceanography, roads, highways, railways, air terminals, and facilities required to operate and maintain the route or facility;*
- (29) *“uses of state concern” has the meaning given in AS 46.40.210;*
- (30) *“utility routes and facilities” include power transmission lines, mineral slurry lines, oil and gas pipelines, natural transportation routes dictated by geography or oceanography, water and sewage transfer, and facilities required to operate and maintain the route or facility;*
- (31) *“water-dependent” means a use or activity that can be carried out only on, in, or adjacent to a water body because the use requires access to the water body;*
- (32) *“water-related” means a use or activity that is not directly dependent upon access to a water body, but which provides goods or services that are directly associated with water-dependence and which, if not located adjacent to a water body, would result in a public loss of quality in the goods or services offered;*
- (33) *“wetlands” means saltwater wetlands and those freshwater wetlands that have a direct drainage to coastal waters.*
- (34) *“avoid or minimize” means a process of avoiding adverse impacts to the maximum extent practicable and, if avoidance is not practicable, minimizing impacts where practicable;*
- (35) *“coordinating agency” has the meaning given in 11 AAC 110.990.*
- (36) *“direct and significant impact” has the meaning given in 11 AAC 114.990;*
- (37) *“subsistence fishing” has the meaning given in AS 16.05.940;*
- (38) *“subsistence uses” has the meaning given in AS 16.05.940.*

ATTACHMENT B
Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018
Public Comments and Responses

The public comment period was April 2, 2009 – June 1, 2009 for the Alaska Coastal Management Program (ACMP) consistency analysis of Beaufort Sea Areawide oil and gas lease sales, 2009-2018. Public comments are to address the consistency of a project (11 AAC 110.510(a)) with the ACMP, and must identify the enforceable policy and explain how the project is inconsistent with the policy (11 AAC 110.510(b)).

Some comments addressed the preliminary best interest finding and other issues rather than the ACMP analysis. Comments considered during the ACMP process are limited to the consistency of the project with the ACMP. Although comments concerning the best interest finding process and other issues are beyond the scope of the ACMP consistency analysis and determination, response is provided below to those few that are closely connected to a comment concerning ACMP consistency or the ACMP process.

Comments from the North Slope Borough (NSB)

***Comment:** That ADNR failed to demonstrate that the proposed lease sales are consistent with the enforceable policies of the ACMP; that additional analysis is required concerning consistency with the energy facilities, transportation, habitat, and subsistence statewide standards; and that the NSB objects to the determination of consistency with the energy facilities and subsistence standards; and that the NSB objects to the certification of coastal consistency.*

Response: On April 2, 2009, ADNR issued a consistency analysis for Beaufort Sea oil and gas lease sales that listed the mitigation measures addressing each statewide standard, but explaining that a phased review is being conducted according to AS 46.40.094; that the project being analyzed is oil and gas lease sales; that lease issuance does not authorize any activity subsequent to leasing; that at the lease sale phase it is unknown if exploration, development, production, or transportation will occur; that it cannot be reasonably foreseen if those phases will occur; that if they do, the specific location, type, size, extent, and duration of specific projects and activities is unknown and cannot be reasonably foreseen at this time; and that if and when specific projects or activities are proposed in phases subsequent to leasing, they must be consistent with ACMP standards before they may commence.

Additional consideration of the consistency of Beaufort Sea Areawide lease sales with each statewide standard is provided in Attachment A. The additional consideration and the proposed consistency determination incorporate by reference the *Proposed Beaufort Sea Areawide Oil and Gas Lease Sale – Preliminary Finding of the Director* (preliminary finding), issued April 2, 2009. The consistency analysis and additional consideration are sufficient to determine that the lease sales are consistent with the ACMP statewide standards.

***Comment:** That it is inappropriate to state that at the lease sale phase it cannot be reasonably foreseen whether development will occur, and that it is inappropriate to wait until specific projects are proposed to determine if they are consistent with the ACMP.*

Response: At the time of lease issuance, DO&G cannot reasonably foresee specific exploration, development, production, or transportation projects. Each phase of oil and gas exploration, development, production, and transportation activities build on the previous phase. Depending upon the information gathered at the exploration phase, development may or may not take place. Before any development may occur, exploration must reveal and confirm, through drilling and other geologic investigative activities, not only the existence of oil and/or gas but that the oil/gas exists in economically producible quantities. Therefore, at the lease sale phase, there is insufficient information to render a consistency determination for the future exploration, development, production, and transportation phases.

At each phase, proposed site-specific or project-specific activities will be analyzed for consistency with the ACMP standards based on developing information gathered at the previous phase. Further, each subsequent phase is subject to independent review based upon this developing information. During the phases subsequent to leasing, lessees must submit proposed plans of operation for permit approval before beginning activities or projects. DO&G then reviews information developed from the previous phases along with new technological developments and site-specific data, and implements any needed alternative mitigation measures when determining whether the permit request is consistent with the ACMP.

An underlying issue with this comment appears to be phasing. AS 46.40.094 clearly allows phasing, and Beaufort Sea oil and gas lease sales clearly meet the criteria for phasing. The proposed consistency determination describes the conditions under which phasing is allowed, and explains how Beaufort Sea lease sales meet those conditions.

***Comment:** That the ACMP analysis should include thorough, well-reasoned discussions, scenarios, and analyses examining the proposed lease sale area and reasonably foreseeable consequent activities, as measured against each ACMP standard, and that ADNR did not do this.*

Response: Chapter Three of the preliminary finding discusses the lease sale area in depth, including a property description, land and mineral ownership, historical background, information about the communities of Barrow, Nuiqsut, Kaktovik, and Prudhoe Bay/Deadhorse, cultural resources, climate, oceanography, sea ice, permafrost, and geologic hazards.

As explained above, in the section on phasing in the proposed consistency determination, and in Section G of the preliminary finding, at the lease sale phase it is unknown if exploration, development, production, or transportation will occur; it cannot be reasonably foreseen if those phases will occur; and if they do, the specific location, type, size, extent, and duration of specific projects and activities is unknown and cannot be reasonably foreseen at this time. Speculation about possible future effects subject to future permitting that cannot be reasonably determined until the project or proposed use is more specifically defined is not required (AS 38.05.035(h)). Legislative findings for SB 308 (Eighteenth Legislature) Section 1(8) state that “speculation concerning future development activities that will be subject to independent permitting requirements is not necessary at the time a decision is made to dispose of state land or an interest in state land”.

Federal environmental impact statements may include lengthy and speculative analyses and discussions of multiple development scenarios. However, Legislative findings for SB 308 (Eighteenth Legislature) Section 1(7) state clearly that this type of discussion and analysis is not required for ACMP reviews, “analyses comparable to those generally required...for the preparation of an environmental impact statement...are not required by the state for support of...conclusive coastal zone consistency determinations...”. Therefore, the ACMP analysis did not include development scenarios, nor do the additional considerations in Attachment A.

In the ACMP analysis and additional consistency considerations in Attachment A, a discussion is provided of mitigation measures that would be required of all projects subsequent to leasing, along with a discussion of how those measures ensure consistency with the ACMP statewide standards.

***Comment:** That ADNR inappropriately stated that a number of ACMP standards are not applicable at the lease issuance phase.*

Response: The complete context of this statement in the ACMP analysis is:

A number of ACMP standards are not applicable at the lease issuance phase. These standards will be applied when specific activities are proposed for specific locations in the lessee’s plan of operations. Lessees will be required to comply with the ACMP, including the statewide standards and the enforceable policies of an affected coastal district with a plan in effect, before a plan of operations may be approved.

The point being made in the consistency analysis is that a lease does not authorize coastal development or other coastal activities identified in 11 AAC 112, and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would warrant coastal development or other coastal activities. Until specific projects are proposed, there is no opportunity for planning or approving development in or adjacent to coastal waters under 11 AAC 112. However, if and when specific projects are proposed, they will be measured against these standards, as well as all other enforceable policies of any district plans in effect at that time.

As stated above, AS 46.40.094 clearly allows phasing, and Beaufort Sea oil and gas lease sales clearly meet the criteria for phasing.

All of the statewide standards were addressed in the ACMP analysis, and are further addressed in the additional consistency considerations in Attachment A, for Beaufort Sea oil and gas lease sales.

The analysis states that 11 AAC 112.250 concerning timber harvesting and processing is not applicable because there are no forests located within the Beaufort Sea lease sale area and no timber sales or harvesting are proposed as part of the oil and gas lease sales.

Comment: That the ACMP analysis does not address reasonably foreseeable significant effects; that the preliminary finding and the ACMP analysis should consider the range of foreseeable post-lease activities that could affect subsistence; and that it does not matter that actual details of specific projects are not available and cannot be reviewed at this time.

Response: DO&G has considered and discussed the reasonably foreseeable, significant effects of oil and gas lease sales in the Beaufort Sea in the companion document, *Proposed Beaufort Sea Areawide Oil and Gas Lease Sale – Preliminary Finding of the Director*, dated April 2, 2009, which is incorporated into the proposed consistency determination by reference. Citing to about 120 sources, the preliminary finding devotes the entirety of Chapter Eight to reasonably foreseeable significant effects, including a discussion of effects on air quality, water, lower trophic-level organisms, land habitat, fish, birds, caribou, muskoxen, brown bears, furbearers, polar bears, bowhead whales, other marine mammals, subsistence uses, historic and cultural resources, and the North Slope Borough and communities. In Chapter Three of the preliminary finding, geologic hazards are considered, including faults and earthquakes, sea ice, ice gouging, ice movement, sub-sea permafrost, onshore permafrost, frozen ground, thermokarst, waves and erosion, coastal currents, flooding, overpressed sediments, unstable sediments, shallow gas deposits, and natural gas hydrates.

The ACMP statewide subsistence standard (11 AAC 112.270) applies to projects within a subsistence use area designated by the department or under 11 AAC 114.250(g). There are no subsistence areas designated by the department for the Beaufort Sea Areawide oil and gas lease sales, and there is no approved district plan in effect for the North Slope Borough. However, Chapter Five of the preliminary finding does provide a thorough overview of subsistence uses in the Beaufort Sea area, citing to over 30 sources and discussing the community subsistence characteristics of Barrow, Nuiqsut, and Kaktovik; providing statistics on harvests of plants, fish, birds, polar bears, walrus, and terrestrial mammals; and providing the latest information available about subsistence whaling from the North Slope Borough, the National Marine Fisheries Service, Minerals Management Service, the Alaska Department of Fish and Game, the Alaska Eskimo Whaling Commission, and the International Whaling Commission.

It does matter that actual details of specific projects are not available and cannot be reviewed at this time. Phasing is specifically allowed for these reasons (AS 46.40.094(a)(1) and (b)). At the lease sale phase it is unknown if exploration, development, production, or transportation will occur; it cannot be reasonably foreseen if those phases will occur; if they do, the specific location, type, size, extent, and duration of specific projects and activities is unknown and cannot be reasonably foreseen at this time. If and when specific projects or activities are proposed in phases subsequent to leasing, they must be consistent with ACMP standards before they may commence. Speculation about possible future projects or uses is not required for ACMP analyses and consistency determinations.

Comment: That ADNR should conduct the ACMP analysis as recommended by NOAA’s Office of Ocean and Coastal Resource Management in its “312 Evaluation”.

Response: ADNR followed the process required by AS 46.40.094 in conducting the ACMP analysis for Beaufort Sea oil and gas lease sales.

Comment: That this is the only significant chance for comment in the next 10 years.

Response: Many additional opportunities to comment on oil and gas development in the Beaufort Sea are available in the next 10 years. If the Areawide lease sales are found to be in the best interests of the state, there is an opportunity to provide additional information every year (AS 38.05.035(e)(6)(F)). If a supplement to the finding is issued that may cause significant additional impacts to coastal uses or resources, a new consistency review is required (11 AAC 110.820). If specific projects or activities are proposed, plans of operations are required before those projects or activities may commence. Plans of operations are subject to public noticing and public comment.

Comment: That the preliminary finding and ACMP analysis are insufficient as areawide planning documents and processes.

Response: The purpose and scope of best interest findings, and ACMP analyses and determinations, is narrowly defined in AS 38.05.035(e)-(h), AS 40, and 11 AAC 110, 112, and 114. Other mechanisms are available for the type of planning to which the NSB appears to be alluding in this comment. For example, AS 38.04.005 provides for the state to “plan and manage state-owned land to establish a balanced combination of land available for both public and private purposes. The choice of land best suited for public and private use shall be determined through the inventory, planning, and classification processes set out in AS 38.04.060 - 38.04.070”. Plans derived through this process specify management intent, land-use designations, and management guidelines that apply to all state lands in the planning area. This type of planning is beyond the scope of best interest findings and ACMP review.

Comment: That the description of the ACMP process in Chapter Seven of the preliminary finding is too brief and contains factual errors.

Response: Corrections will be made to the final finding. The level of description for the ACMP process was not changed because the purpose of Chapter Seven of the finding is to give an overview of the various regulatory agencies with authorities over oil and gas development, not to give the complex details of each agency and program.

Comment: That the definition of “major energy facility” is needed.

Response: The definition of “major energy facility” is given in 11 AAC 112.990 and has been added to the additional consistency considerations in Attachment A.

Comment: That the subsistence statewide standard disallows the use of “mitigation measures” to demonstrate consistency with the standard.

Response: As explained above, the subsistence standard applies to subsistence use areas designated by the department or under 11 AAC 114.250(g). There are no subsistence use areas designated by the department for Beaufort Sea Areawide oil and gas lease sales, and there is no approved district plan in effect for the North Slope Borough. In addition, there appears to be a

misunderstanding with the use of the term “mitigation measures”. The term “mitigation measures” as used in the preliminary finding and as a title for Attachment C refers to the full range of various measures that would be required of lessees, and encompasses avoidance, minimization, and mitigation. The word “avoid” has been added to Mitigation Measures A(1)(a) and (b) to address this concern.

Comment: That the energy facilities statewide standard was inadequately addressed; and that mitigation measures requiring a Conflict Avoidance Agreement should be added to the final finding.

Response: The energy facilities statewide standard (11 AAC 112.230) specifically addresses siting and approval. At the lease sale phase, there are no proposals for energy facilities, no sites have been proposed for energy facilities, and no approvals have been sought for energy facilities. If and when energy facilities and sites for them are proposed, or approvals are sought, they will be subject to a consistency review and must be found consistent with this standard before they may proceed.

A program for Conflict Avoidance Agreements already exists, and is managed by the Alaska Eskimo Whaling Commission. Mitigation measures in the preliminary Beaufort Sea finding also provide a means of coordinating oil and gas activities so that they do not conflict with subsistence whaling. Adding additional measures as proposed by the NSB would unnecessarily duplicate and complicate an existing program and would not contribute to making Beaufort Sea oil and gas lease sales consistent with the ACMP statewide standards.

Comment: That the lease sale area should be decreased, so that the eastern boundary of the lease sale area ends at the Canning River, because it is unlikely that shore-based infrastructure could be developed in the next 10 years east of the Canning River because ANWR is adjacent to the lease sale area east of the Canning River.

Response: Removing some 80 tracts from the lease sale area would unnecessarily restrict future oil and gas exploration and development, and would not be in the state’s best interest. The Beaufort Sea finding includes measures to ensure that exploration, development, and production activities within the lease sale area would be conducted in a manner that avoids, minimizes, or mitigates impacts to fish and wildlife populations and habitats, and avoids or minimizes impacts to subsistence uses.

Comment: That baseline data are needed before the proposed lease sale can be found consistent with the ACMP; and therefore, a mitigation measure should be added requiring lessees to identify data gaps, develop an inventory of needed scientific information, and collaborate with resource agencies to obtain the data; and that no project-specific consistency analysis should be conducted prior to the availability of the data.

Response: AS 46.40.094(b)(2)(B) states that consistency reviews and determinations are to be based on “the facts pertaining to a use or activity for which the consistency determination is sought that are known to the state agency responsible or made a part of the record during the consistency review; and material to the consistency determination”. DO&G has concluded that

sufficient data exist to make a determination of consistency for this phase, which is the disposal of state interest. Additional information available in the future will be considered during review of each subsequent phase.

***Comment:** That the proposed mitigation measures fall short of protecting bowhead whale subsistence. The NSB proposed 15 mitigation measures addressing subsistence bowhead whaling. Included were measures that would promulgate a program similar to Conflict Avoidance Agreements, restrict vessel traffic and aircraft traffic, limit interactions of vessels and aircraft with bowhead whales, place additional restrictions on industrial activities, prohibit discharges in the Beaufort Sea, require monitoring of discharged materials in collaboration with the Alaska Eskimo Whaling Commission and the NSB, and require adherence to the AEW/C/NSB/Inupiat Community of the Arctic Slope oil spill mitigation agreement.*

Response: The subsistence standard applies to subsistence use areas designated by the department or under 11 AAC 114.250(g). There are no subsistence use areas designated by the department for Beaufort Sea Areawide oil and gas lease sales, and there is no approved district plan in effect for the North Slope Borough. The 15 measures proposed by the NSB that address subsistence bowhead whaling are duplicative of other existing regulatory protections, many of which are outside the authority of DO&G and ADNR, and the proposed measures would not contribute towards making Beaufort Sea oil and gas lease sales consistent with the ACMP.

The program proposed by the NSB for coordinating subsistence whaling activities with oil and gas activities is duplicative of the Conflict Avoidance Agreement program already in place that is managed by the AEW/C. Mitigation measures required for Beaufort Sea Areawide oil and gas leases also address conflict avoidance adequately.

NSB proposals to severely restrict vessel and aircraft traffic are either unnecessary, duplicate existing regulations, or are outside the jurisdiction of ADNR. NSB proposals concerning interactions of vessels and aircraft with bowhead whales are unnecessary because these interactions are already highly regulated by NMFS under the Endangered Species Act and Marine Mammal Protect Act, and are outside the authority of ADNR.

Additional mitigation measures proposed by the NSB would unduly restrict industrial activities; mitigation measures (Attachment C), which were modified from those in the preliminary finding based on comments received during the public comment period, are adequate to ensure protection of subsistence bowhead whaling. Discharges into the Beaufort Sea are regulated by the NPDES (administered by ADEC) and provide adequate protection for the habitats, fish and wildlife populations, and subsistence uses of the area. Oil spill contingency plans are required by ADEC and Mitigation Measure A(3)(d)(iii).

***Comment:** That all offshore development of hydrocarbons should only be allowed by use of directional drilling from onshore locations.*

Response: Allowing only directional drilling from onshore locations would unnecessarily restrict future oil and gas exploration and development, and would not be in the state's best interest. The Beaufort Sea finding includes many measures to ensure that exploration,

development, and production activities within the lease sale area would be conducted in a manner that avoids, minimizes, or mitigates impacts to fish and wildlife populations and habitats, and avoids or minimizes impacts to subsistence uses.

Comments – Crag Law Center

(Representing the Inupiat Community of the Arctic Slope and
the Alaska Eskimo Whaling Commission)

***Comment:** That the ACMP consistency analysis is deficient and fails to support oil and gas activities in the Beaufort Sea.*

Response: The ACMP consistency analysis follows requirements of AS 46.40.094 and, with the additional considerations provided in Attachment A, is sufficient for making a proposed consistency determination concerning Beaufort Sea Areawide oil and gas lease sales for 2009-2018.

***Comment:** That ADNR failed to work with local communities who will be impacted by the proposed lease sales.*

Response: Obtaining input from local governments, communities, and residents is important. However, local concerns must be balanced with the concerns of many other stakeholders, and ADNR must ensure that the process for obtaining public input is fair and follows legally-mandated processes. Therefore, ADNR followed the process specified in AS 38.05.035, AS 38.05.945, and AS 38.05.946 for developing best interest findings for oil and gas lease sales and obtaining public input on the findings, and in 11 AAC 110.500 for the ACMP analysis. ADNR sent a Request for Agency Information to almost 50 agencies, local governments, and Native corporations. Responses were received from six: the Alaska Department of Environmental Conservation; ADNR, Office of Habitat Management and Permitting¹; ADNR, Division of Parks and Outdoor Recreation; ConocoPhillips Alaska, Inc.; the Alaska Fisheries Science Center; and the North Slope Borough.

ADNR held public hearings in Barrow on May 11, 2009; in Nuiqsut on May 12, 2009; and in Kaktovik on May 19, 2009. A public hearing by teleconference was held for Wainwright on May 21, 2009; and an informational public meeting was held in Anchorage on May 21, 2009. Meetings were announced through a combination of statewide media releases, newspaper ads, public service announcements on local radio stations, flyers, and announcements over local VHF radio.

***Comment:** That ADNR failed to adequately account for and protect subsistence uses in the area.*

Response: Chapter Five of the preliminary finding contains comprehensive information about subsistence uses in the area, Chapter Eight contains information about potential effects on

¹ The Office of Habitat Management and Permitting (OHMP) of the Alaska Department of Natural Resources became the Division of Habitat, a part of the Alaska Department of Fish and Game (ADF&G), effective July 1, 2008, as a result of Executive Order 114.

subsistence uses, and Chapter Nine includes many mitigation measures and lessee advisories that protect bowhead whaling and access to subsistence areas.

Comment: That the lease sale should not occur until ADNR has adequate baseline data.

Response: AS 46.40.094(b)(2)(B) states that consistency reviews and determinations are to be based on “the facts pertaining to a use or activity for which the consistency determination is sought that are known to the state agency responsible or made a part of the record during the consistency review; and material to the consistency determination”. DO&G has concluded that sufficient data exist to make a determination of consistency for this phase, which is the disposal of state interest. Additional information available in the future will be considered during review of each subsequent phase.

Comment: That ADNR did not analyze a number of ACMP standards because they were not applicable.

Response: See response to the similar NSB comment above.

Comment: That coastal development, energy facilities, subsistence, and transportation routes and facilities standards were not properly addressed.

Response: These standards were addressed to the point that it is possible to address them until specific projects or activities are proposed in phases subsequent to leasing. AS 46.40.094 clearly allows phasing, and the Beaufort Sea Areawide lease sales clearly meet the criteria for phasing.

Comment: That ADNR should withdraw the preliminary finding and ACMP analysis until the North Slope Borough’s Coastal District Plan is finalized.

Response: It is not required or necessary to wait until the North Slope Borough’s Coastal District Plan is finalized. The consistency of the Beaufort Sea Areawide oil and gas lease sales has been analyzed against the statewide standards.

Comment: That mitigation measures in the preliminary finding are inadequate.

Response: Mitigation measures (Attachment C), as modified based on comments received during the public comment period for the preliminary finding and ACMP review, are adequate and provide a wide range of protections to fish and wildlife populations and habitats, and subsistence and other uses.

Comments – Inupiat Community of the Arctic Slope

Comment: That the proposed lease sale is not consistent with the ACMP, that the existing ACMP is not sufficient to protect coastal interests in the Beaufort Sea, and that the preliminary finding should be withdrawn until the North Slope Borough’s district plan is approved.

Response: The ACMP consistency analysis issued on April 2, 2009 and additional consistency considerations provided in Attachment A follow requirements of AS 46.40.094 and are sufficient for making a proposed consistency determination concerning Beaufort Sea Areawide oil and gas lease sales for 2009-2018. It would not be in the state's best interest to delay the sale until the North Slope Borough has an approved plan because it is unknown when a plan will be approved. (The North Slope Borough coastal district submitted the Final Plan Amendment of its Coastal Management Plan on April 12, 2007 per 11 AAC 114.345(g)). Future activities must comply with the ACMP statewide standards and any applicable local coastal district plans in effect. A new coastal management consistency review may be conducted if the commissioner determines that new information or conditions suggest Beaufort Sea Areawide lease sales may no longer be consistent with ACMP statewide standards.

Comment: That the leasing program is not consistent with the state plan because it does not address the lack of proven feasibility for long buried sub-sea pipelines required for production.

Response: The ACMP consistency analysis was limited to the lease sale phase according to AS 46.40.094(b)(1). Transportation and production projects would be required to meet ACMP statewide standards, and any local coastal district plans in effect, if and when such projects are proposed.

ATTACHMENT C

Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

Mitigation Measures and Lessee Advisories

AS 38.05.035(e) and the departmental delegation of authority provide the director, Division of Oil and Gas (DO&G) (“director”), with the authority to impose conditions or limitations, in addition to those imposed by statute, to ensure that a resource disposal is in the state’s best interests. Consequently, to mitigate the potential adverse social and environmental effects of specific lease-related activities, DO&G has developed mitigation measures and will condition plans of operation, exploration, or development and other permits based on these mitigation measures.

Lessees must obtain approval of a detailed plan of operations from the director before conducting exploration, development, or production activities. A plan of operations must identify the sites for planned activities and the specific measures, design criteria, construction methods, and operational standards to be employed to comply with the restrictions listed below. It must also address any potential geophysical hazards that may exist at the site.

These measures were developed after considering terms imposed in earlier competitive lease sales and comments and information submitted by the public, local governments, environmental organizations, and other federal, state, and local agencies. Additional measures will likely be imposed when lessees submit a proposed plan of operations.

Lessees must comply with all applicable local, state, and federal codes, statutes, and regulations, as amended, as well as all current or future ADNR area plans and recreation rivers plans; and ADF&G game refuge plans, critical habitat area plans, and sanctuary area plans within which a lease area is located. Lease activities must be consistent with the enforceable policies of the Alaska Coastal Management Program (ACMP), including statewide standards and the enforceable policies of an affected coastal district with a plan in effect.

The director may grant exceptions to these mitigation measures. Exceptions will only be granted upon a showing by the lessee that compliance with the mitigation measure is not practicable or that the lessee will undertake an equal or better alternative to satisfy the intent of the mitigation measure. Requests and justifications for exceptions must be included in the plan of operations. The decision whether to grant an exception will be made during the public review of the plan of operations.

Except as indicated, the mitigation measures do not apply to geophysical exploration on state lands; geophysical exploration activities are governed by 11 AAC 96. Lessees or non-lessee companies may propose various operations, which include seismic surveys, in the sale area. Lessees may not have control over those activities not contracted by them. However, post-lease seismic surveys conducted or contracted by the lessee, are considered lease-related activities. Restrictions on geophysical exploration permits, whether lease-related or not, will depend on the size, scope, duration, and intensity of the proposed project and on the reasonably foreseeable effects on important species, specifically marine mammals.

Studies indicate that some geophysical activities may have an impact on the behavior of bowhead whales. Measures may be imposed on geophysical exploration permits in the vicinity of bowhead whale migratory routes during spring or fall migrations. See the subsistence mitigation measures. The extent of effects on marine mammals varies depending on the type of survey and gear used.

Copies of the non-proprietary portions of all Geophysical Exploration Permit Applications will be made available to the North Slope Borough, Alaska Eskimo Whaling Commission, and potentially affected subsistence communities for comment.

Agency abbreviations are:

Abbreviation	Agency Name
ADF&G	Alaska Department of Fish and Game
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
AEWC	Alaska Eskimo Whaling Commission
DMLW	Division of Mining, Land, and Water (ADNR)
DO&G	Division of Oil and Gas (ADNR)
DPOR	Division of Parks and Recreation
NMFS	National Marine Fisheries Service
NSB	North Slope Borough
USFWS	U.S. Fish and Wildlife Service

A. Mitigation Measures

1. Facilities and Operations

- a. A plan of operations must be submitted and approved before conducting exploration, development, or production activities, and must describe the lessee’s plans to avoid or minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas. At the time of application, lessee must submit a copy of the proposed plan of operations to all surface owners whose property will be entered.
- b. Facilities must be designed and operated to avoid or minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the director, in consultation with ADF&G and the NSB.
- c. To the extent practicable, the siting of facilities, other than docks, roads, utility, and pipeline crossings will be prohibited within 500 feet of all fish-bearing streams and water bodies and 1,500 feet from all current surface drinking water sources. Additionally, to the extent practicable, the siting of facilities will be prohibited within one-half mile of the banks of the main channel of the Colville, Canning, Sagavanirktok, Shaviovik, Kadleroshilik, and Kuparuk rivers. Facilities may be sited within these buffers if the lessee demonstrates to the satisfaction of the director, in consultation with ADF&G, that site locations outside these buffers are not practicable or that a location inside the buffer is environmentally preferred. Road, utility, and pipeline crossings must be consolidated and aligned perpendicular or near perpendicular to watercourses.
- d. Impacts to identified wetlands must be minimized to the satisfaction of the director, in consultation with ADF&G and ADEC. The director will consider whether facilities are sited in the least sensitive areas. Further, certain activities within wetlands require permission from the U.S. Army Corps of Engineers (see Lessee Advisories).
- e. Exploration facilities must be temporary and must be constructed of ice unless the director determines that no practicable alternative exists. Use of gravel structures may be permitted on a case-by-case basis by the director, after consultation with DMLW, and ADF&G. Approval for use of existing structures will depend on the extent and method of restoration needed to return these structures to a usable condition.

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

- f. Pipelines must utilize existing transportation corridors where conditions permit. Pipelines and gravel pads must be designed to facilitate the containment and cleanup of spilled fluids. Where practicable, onshore pipelines must be located on the upslope side of roadways and construction pads unless DMLW determines that an alternative site is environmentally acceptable. Wherever possible, onshore pipelines must be buried where soil and geophysical conditions permit. All pipelines, including flow and gathering lines, must be designed, constructed and, maintained to assure integrity against climatic conditions, geophysical hazards, corrosion and other hazards as determined on a case-by-case basis.
- g. Onshore pipelines shall be designed and constructed to minimize alteration of caribou and other large ungulate movement and migration patterns. At a minimum, above-ground pipelines shall be elevated 7 feet, as measured from the ground to the bottom of the pipe, except where the pipeline intersects a road, pad, or a ramp installed to facilitate wildlife passage. Lessees shall consider increased snow depth in the sale area in relation to pipe elevation to ensure adequate clearance for wildlife. ADNR may, after consultation with ADF&G, require additional measures to mitigate impacts to wildlife movement and migration.
- h. All pipelines, including flow and gathering lines, must be designed and constructed to provide adequate protection from water currents, storm and ice scouring, subfreezing conditions, coastal erosion, permafrost thawing, and other hazards as determined on a case-by-case basis.
- i. Offshore oil and gas transportation pipelines will be encouraged if the director determines that the laying of such pipelines is technically feasible and environmentally preferable to transport by oil tanker or other means.
- j. Following the installation of a pipeline of sufficient capacity, no crude oil will be transported by surface vessel from offshore production sites, except in an emergency. The director will evaluate the emergency and determine an appropriate response to the condition.
- k. Causeways
 - i. Continuous-fill causeways are prohibited. Environmentally preferred alternatives for field development include use of buried pipelines, onshore directional drilling, or elevated structures. Non-continuous-fill causeways must be designed, sited, and constructed to prevent significant changes to nearshore oceanographic circulation patterns and water quality characteristics (e.g., salinity, temperature, suspended sediments) that exceed water quality criteria, and must maintain free passage of marine and anadromous fish.
 - ii. Causeways and docks shall not be located in river mouths or deltas. Artificial gravel islands and bottom founded structures shall not be located in river mouths or active stream channels on river deltas, except as provided for in measure iii below.
 - iii. Each proposed structure will be reviewed on a case-by-case basis. Causeways, docks, artificial gravel islands, and bottom-founded structures may be permitted if the director, in consultation with ADF&G, ADEC, and the NSB determines that a causeway or other structures are necessary for field development and that no practicable alternatives exist. A monitoring program may be required to address the objectives of water quality and free passage of fish, and mitigation shall be required where significant deviation from objectives occurs. (See also Lessee Advisories regarding U.S. Army Corps of Engineers requirements.)
- l. Dismantlement, Removal and Rehabilitation (DR&R): Upon abandonment of material sites, drilling sites, roads, buildings, or other facilities, such facilities must be removed and the site rehabilitated to the satisfaction of the director, unless the director, in consultation with DMLW, ADF&G, ADEC, NSB, and any non-state surface owner, determines that such removal and rehabilitation is not in the state's interest.

- m. Gravel mining sites required for exploration and development activities will be restricted to the minimum necessary to develop the field efficiently and with minimal environmental damage. Where practicable, gravel sites must be designed and constructed to function as water reservoirs for future use. Gravel mine sites required for exploration activities must not be located within an active floodplain of a watercourse unless DMLW, after consultation with ADF&G, determines that there is no practicable alternative, or that a floodplain site would enhance fish and wildlife habitat after mining operations are completed and the site is closed.

Mine site development and rehabilitation within floodplains must follow the procedures outlined in McLean, R. F. 1993, North Slope Gravel Pit Performance Guidelines, ADF&G Habitat and Restoration Division Technical Report 93-9, available from ADF&G.

2. Habitat, Fish, and Wildlife

- a. Detonation of explosives will be prohibited in open water areas of fish-bearing streams and lakes. Explosives must not be detonated beneath, or in proximity to fish-bearing streams and lakes if the detonation of the explosive produces a pressure rise in the water body of greater than 2.7 pounds per square inch, or unless the water body, including its substrate, is solidly frozen. Detonation of explosives within or in close proximity to a fish spawning bed during the early stages of egg incubation must not produce a peak particle velocity greater than 0.5 inches per second. Blasting criteria have been developed by ADF&G and are available upon request from ADF&G. The location of known fish-bearing waters within the project area can also be obtained from ADF&G.

The lessee will consult with the NSB before proposing the use of explosives for seismic surveys. The director may approve the use of explosives for seismic surveys after consultation with the NSB.

- b. Removal of water from fish-bearing rivers, streams, and natural lakes shall be subject to prior written approval by DMLW and ADF&G. Water intake pipes used to remove water from fish-bearing water bodies must be surrounded by a screened enclosure to prevent fish entrainment and impingement. Screen mesh size shall be no greater than 1 mm (0.04 inches), unless another size has been approved by ADF&G. The maximum water velocity at the surface of the screen enclosure may be no greater than 0.1 foot per second, unless an alternative velocity has been approved by ADF&G.
- c. Removal of snow from fish-bearing rivers, streams, and natural lakes shall be subject to prior written approval by ADF&G. Compaction of snow cover overlying fish-bearing water bodies is prohibited except for approved crossings. If ice thickness is not sufficient to facilitate a crossing, ice or snow bridges may be required.
- d. Bears:
 - i. Lessees are required to prepare and implement a human-bear interaction plan designed to minimize conflicts between bears and humans. The plan should include measures to:
 - A. minimize attraction of bears to facility sites, including garbage and food waste;
 - B. organize layout of buildings and work areas to minimize interactions between humans and bears such as including the use of electric fencing;
 - C. warn personnel of bears near or on facilities and the proper actions to take;
 - D. if authorized, deter bears from the drill site;
 - E. provide contingencies in the event bears do not leave the site;
 - F. provide for proper storage and disposal of materials that may be toxic to bears; and

- G. document and communicate the sighting of bears onsite or in the immediate area to all shift employees.
- ii. Before commencement of any activities, lessees shall consult with ADF&G to identify the locations of any known brown bear den sites that are occupied in the season of proposed activities. Exploration and development activities started between September 20 and May 15 may not be conducted within one-half mile of known occupied brown bear dens, unless alternative mitigation measures are approved by ADF&G. A lessee who encounters an occupied brown bear den not previously identified by ADF&G must report it to the Division of Wildlife Conservation, ADF&G, within 24 hours. Mobile activities shall avoid such discovered occupied dens by one-half mile unless alternative mitigation measures are approved by DO&G with concurrence from ADF&G. Non-mobile facilities will not be required to relocate.
- iii. Before commencement of any activities, lessees shall consult with the USFWS to identify the locations of known polar bear den sites. Operations must avoid known polar bear dens by 1 mile. A lessee who encounters an occupied polar bear den not previously identified by USFWS must report it to the USFWS within 24 hours and subsequently avoid the new den by 1 mile. If a polar bear should den within an existing development, off-site activities shall be restricted to minimize disturbance.
- e. Permanent, staffed facilities must be sited to the extent practicable outside identified brant, white-fronted goose, snow goose, tundra swan, king eider, common eider, Steller’s eider, spectacled eider, and yellow-billed loon nesting and brood rearing areas.
- f. Due to high concentrations of staging and molting brant and other waterbirds within the coastal habitats along the Teshekpuk Lake Special Area (TLSA) and other areas, operations that create high levels of disturbance, including but not limited to dredging, gravel washing, and boat and barge traffic along the coast, will be prohibited from June 20 to September 15 within one-half mile of coastal salt marshes, specifically tracts 187, 209, 320, 483-485, 493, 494, 496, 497, 500-514, 517-519, 524, and 530. In addition, tracts 228 and 231, and tracts 521-526 are subject to the same restrictions between May 15 and July 30 to protect large concentrations of breeding snow geese. The construction and siting of facilities within one mile of these areas may be allowed on a case-by-case basis if the director and ADF&G determine that no other feasible and prudent location exists.
- g. To protect hauled-out spotted seals, boat and barge traffic will be prohibited between July 15 and October 1 within one-half mile of the Piasuk River delta and Oarlock Island.

3. Subsistence, Commercial, and Sport Harvest Activities

- a. i. Before submitting a plan of operations for either onshore or offshore activities that have the potential to disrupt subsistence activities, the lessee shall consult with the potentially affected subsistence communities, the AEWC, and the NSB (collectively “parties”) to discuss the siting, timing, and methods of proposed operations and safeguards or mitigating measures that could be implemented by the operator to prevent unreasonable conflicts. The parties shall also discuss the reasonably foreseeable effect on subsistence activities of any other operations in the area that they know will occur during the lessee’s proposed operations. Through this consultation, the lessee shall make reasonable efforts to assure that exploration, development, and production activities are compatible with subsistence hunting and fishing activities and will not result in unreasonable interference with subsistence harvests. In order to avoid conflicts with subsistence, commercial, and sport harvest activities, restrictions may include alternative site selection, requiring directional drilling, seasonal drilling restrictions, and other technologies deemed appropriate by DO&G.

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

- ii. A discussion of resolutions reached or not reached during the consultation process and any plans for continued consultation shall be included in the plan of operations. The lessee shall identify who participated in the consultation and send copies of the plan to participating communities and the NSB when it is submitted to the division.
 - iii. If the parties cannot agree, then any of them may request that the commissioner of ADNR or his/her designee to intercede. The commissioner may assemble the parties or take other measures to resolve conflicts among the parties.
 - iv. The lessee shall notify the director of all concerns expressed by subsistence hunters during operations and of steps taken to address such concerns.
- b. Traditional and customary access to subsistence areas shall be maintained unless reasonable alternative access is provided to subsistence users. “Reasonable access” is access using means generally available to subsistence users. Lessees will consult the NSB, nearby communities, and native organizations for assistance in identifying and contacting local subsistence users.
- c. Whale Harvest Protection:
- i. Permanent facility siting on Cross Island will be prohibited unless the lessee demonstrates to the satisfaction of the NSB, in consultation with the AEWG, that the development will not preclude reasonable access to whales as defined in Section A8 and as may be determined in a conflict avoidance agreement, if required by the NSB. With the approval of the NSB, the director may authorize permanent facilities.
 - ii. Permanent facility siting in state waters within 3 miles of Cross Island will be prohibited unless the lessee demonstrates to the satisfaction of the director, in consultation with the NSB and the AEWG, that the development will not preclude reasonable access to whales as defined in Section A8 and as may be determined in a conflict avoidance agreement if required by the NSB.
 - iii. Permanent facility siting in state waters between the west end of Arey Island and the east end of Barter Island (Tracts 40 through 45) will be prohibited unless the lessee demonstrates to the satisfaction of the director, in consultation with the NSB and the AEWG, that the development will not preclude reasonable access to whales as defined in Section A8 and as may be determined in a conflict avoidance agreement if required by the NSB.
- d. Any tract or portion thereof in the Beaufort Sea Areawide lease sale area may be subject to seasonal drilling restrictions in conjunction with the submission of a plan of operations permit application by the lessee.
- i. Exploratory Drilling From Bottom-founded Drilling Structures and Natural and Gravel Islands: Subject to measure iii below, exploratory drilling operations and other downhole operations from bottom-founded drilling structures and natural and gravel islands are allowed year-round in the Central Subsistence Whaling Zone (SWZ).¹ In the Eastern SWZ, drilling is prohibited upon commencement of the fall bowhead whale migration until whaling quotas have been met.
 - ii. Exploratory Drilling Operations from Floating Drilling Structures: Subject to measure iii below, exploratory drilling below a predetermined threshold depth and other downhole

¹ Subsistence Whaling Zones:

Eastern SWZ is that area within 20 nautical miles of the shoreline between 141° and 144° W longitude.
Central SWZ is that area within 20 nautical miles of the shoreline between 144° and 151° W longitude.
Western SWZ is that area within 20 nautical miles of the shoreline between 154° and 157° W longitude.

operations from floating drilling structures is prohibited throughout the Beaufort Sea upon commencement of the fall bowhead whale migration until the whale migration mid-point.²

In addition to the above restriction, exploratory drilling above and below a predetermined threshold depth in the Eastern SWA from floating drilling structures is prohibited upon commencement of the fall bowhead whale migration until the whaling quotas have been met.

In the Central and Western SWZ, exploratory drilling above and below a predetermined threshold depth may be prohibited on a case-by-case basis until the whaling quotas have been met.³ The following criteria will be used to evaluate these operations: 1) proximity of drilling operations to active or proposed whaling areas, 2) drilling operation type and feasible drilling alternatives, 3) number of drilling operations in the same area, 4) number of whaling crews in the area, and 5) the operator's plans to coordinate activities with the whaling crews in accordance with Mitigation Measure A3a.

All non-essential activities associated with drilling are prohibited in the Central SWZ during the whale migration until whaling quotas have been met. Essential support activity associated with drilling structures occurring within active whaling areas shall be coordinated with local whaling crews in accordance with Mitigation Measure A3a.

“Essential activities” include those necessary to maintain well control, maintain physical integrity of the drilling structure, and scheduled crew changes. Support craft include aircraft, boats, and barges. “Non-essential activity,” by exclusion, are those activities that do not fit the definition of essential activities. Both types of activities must be described by the operators in their exploration plans submitted for state review. To the extent feasible, mobilization or demobilization of the drilling structures should not occur during the whale migration. If operators propose to mobilize or demobilize during the whale migration, they must describe the activity in their exploration plan and must demonstrate why the activity must occur during the migration period.

- iii. Exploratory Drilling in Broken Ice: Lessees conducting drilling operations during periods of broken ice must:
 - A. be trained and qualified in accordance with Minerals Management Service standards pertaining to well-control equipment and techniques; and
 - B. have an oil spill contingency plan approved by the state that includes requirements for in situ igniters, fire resistant boom, relief well plans, and a decision process for igniting an uncontrolled release of oil;
 - C. participate in an oil spill research program.

2 Migration Dates:

Eastern SWZ - September 1 - October 10 with the midpoint of the migration on September 20.

Central SWZ and Western SWZ - September 10 - October 20 with the midpoint of the migration on September 28.

Outside SWZ - Seaward of the Eastern SWZ - September 1 - October 10 with the midpoint of the migration on September 20; Seaward and west of the Central SWZ - September 10 - October 20 with the midpoint of migration on September 28. The midpoint of the migration is when 50 percent of the whales have been deemed to have passed the drill site.

- 3 If upon review of the proposed operation using the above described criteria, the state determines that conflict with subsistence whaling activities may occur, additional drilling restrictions, similar to those imposed for the Eastern SWZ, may be imposed in the Central and Western SWZ's. In the Eastern SWZ, drilling is prohibited upon commencement of the fall bowhead migration until whaling quotas have been met.

- e. Exploration, development and production activities located on lease tracts 1 through 26 shall be conducted in a manner that prevents unreasonable conflicts between oil and gas activities and subsistence whale hunting.
 - i. Before submitting a plan of operations for activities on lease tracts 1 through 26, the lessee shall consult with the NSB, the AEW, and the community of Kaktovik to discuss how the siting, timing, and methods of proposed operations can be planned and carried out to avoid potential conflicts with subsistence whale hunting. Through this consultation, which may include the negotiation of a conflict avoidance agreement, the lessee shall make every reasonable effort to ensure that their activities will not result in unreasonable interference with subsistence whale hunting.
 - ii. A plan of operations for activities on lease tracts 1 through 26 shall include a discussion of the consultation process and any resulting conflict avoidance agreements. In the event that no agreement is reached, the lessee, the NSB, the AEW, or the community of Kaktovik may request that ADNR call a meeting of representatives of the NSB, the AEW, the community of Kaktovik, and the lessee to discuss the potential conflict caused by the proposed activities, and attempt to resolve the issues. If the parties are still unable to reach an agreement, then ADNR will make a final determination of the measures proposed to be taken to prevent unreasonable interference with subsistence whale hunting.

4. Fuel, Hazardous Substances, and Waste

- a. Secondary containment (see definition) shall be provided for the storage of fuel or hazardous substances.
- b. Containers with a storage capacity larger than 55 gallons that contain fuel or hazardous substances shall not be stored within 100 feet of a water body, or within 1,500 feet of a current surface drinking water source.
- c. During equipment storage or maintenance, the site shall be protected from leaking or dripping fuel and hazardous substances by the placement of drip pans or other surface liners designed to catch and hold fluids under the equipment, or by creating an area for storage or maintenance using an impermeable liner or other suitable containment mechanism.
- d. During fuel or hazardous substance transfer, secondary containment or a surface liner must be placed under all container or vehicle fuel tank inlet and outlet points, hose connections, and hose ends. Appropriate spill response equipment, sufficient to respond to a spill of up to 5 gallons, must be on hand during any transfer or handling of fuel or hazardous substances. Trained personnel shall attend transfer operations at all times.
- e. Vehicle refueling shall not occur within the annual floodplain, except as addressed and approved in the plan of operations. This measure does not apply to water-borne vessels.
- f. All independent fuel and hazardous substance containers shall be marked with the contents and the lessee's or contractor's name using paint or a permanent label.
- g. A fresh water aquifer monitoring well, and quarterly water quality monitoring, may be required down gradient of a permanent above-ground liquid hydrocarbon storage facility.
- h. Waste from operations must be reduced, reused, or recycled to the maximum extent practicable. Garbage and domestic combustibles must be incinerated or disposed of at an approved site in accordance with 18 AAC 60. (See also Section B2, below.)
- i. New solid waste disposal sites will not be approved or located on state property during the exploration phase. Exceptions may be provided for drilling waste if the facility will comply with the applicable provisions of 18 AAC 60.

- j. Wherever practicable, the preferred method for disposal of muds and cuttings from oil and gas activities is by underground injection. Other methods of disposal shall be allowed only upon approval by the director, in consultation with ADEC and ADF&G.
- k. Proper disposal of garbage and putrescible waste is essential to minimize attraction of wildlife. The lessee must use the most appropriate and efficient method to achieve this goal. The primary method of garbage and putrescible waste disposal is prompt, on-site incineration in compliance with state air quality control regulations (18 AAC 50). The secondary method of disposal is on-site frozen storage in animal-proof containers with backhaul to an approved waste disposal facility. The tertiary method of disposal is on-site non-frozen storage in animal proof containers with backhaul to an approved waste disposal facility. Daily backhauling of non-frozen waste must be achieved unless safety considerations prevent it.

5. Access

- a. Except for approved off-road travel, exploration activities must be supported only by ice roads, winter trails, existing road systems or air service. Wintertime off-road travel across tundra and wetlands may be approved in areas where snow and frost depths are sufficient to protect the ground surface. Summertime off-road travel across tundra and wetlands may be authorized subject to time periods and vehicle types approved by DMLW. Exceptions may be granted by DMLW, and the director, if an emergency condition exists; or, if it is determined, after consulting with ADF&G that travel can be accomplished without damaging vegetation or the ground surface.
- b. Public access to, or use of, the lease area may not be restricted except within the immediate vicinity of drill sites, buildings, and other related facilities. Areas of restricted access must be identified in the plan of operations. Lease facilities and operations shall not be located so as to block access to or along navigable or public waters as defined in AS 38.05.965.

6. Prehistoric, Historic, and Archaeological Sites

- a. Before the construction or placement of any gravel, or other structure, road, or facility resulting from exploration, development, or production activities, the lessee must conduct an inventory of prehistoric, historic, and archaeological sites within the area affected by an activity. The inventory must include consideration of literature provided by the NSB, nearby communities, Native organizations, and local residents; documentation of oral history regarding prehistoric and historic uses of such sites; evidence of consultation with the Alaska Heritage Resources Survey and the National Register of Historic Places; and site surveys. The inventory must also include a detailed analysis of the effects that might result from the activity.
- b. The inventory of prehistoric, historic, and archaeological sites must be submitted to the director and to DPOR Office of History and Archaeology who will coordinate with the NSB for review and comment. If a prehistoric, historic, or archaeological site or area could be adversely affected by a lease activity, the director, after consultation with DPOR Office of History and Archaeology and the NSB, will direct the lessee as to the course of action to take to avoid or minimize adverse effects.
- c. If a site, structure, or object of prehistoric, historic, or archaeological significance is discovered during lease operations, the lessee must report the discovery to the director as soon as possible. The lessee must make reasonable efforts to preserve and protect the discovered site, structure, or object from damage until the director, after consultation with DPOR Office of History and Archaeology and the NSB, has directed the lessee as to the course of action to take for its preservation.

7. Local Hire, Communication, and Training

- a. Lessees are encouraged to employ local and Alaska residents and contractors, to the extent they are available and qualified, for work performed in the lease area. Lessees shall submit, as part of the plan

of operations, a proposal detailing the means by which the lessee will comply with the measure. The proposal must include a description of the operator’s plans for partnering with local communities to recruit, hire and train local and Alaska residents and contractors. The lessee is encouraged, in formulating this proposal, to coordinate with employment and training services offered by the State of Alaska and local communities to train and recruit employees from local communities.

- b. A plan of operations application must describe the lessee’s past and prospective efforts to communicate with local communities and interested local community groups.
- c. A plan of operations application must include a training program for all personnel including contractors and subcontractors. The program must be designed to inform each person working on the project of environmental, social, cultural, health, and safety concerns that relate to that person’s job. The program must use methods to ensure that personnel understand and use techniques necessary to preserve geological, archaeological, and biological resources. In addition, the program must be designed to help personnel increase their sensitivity and understanding of community values, customs, and lifestyles in areas where they will be operating.

8. Definitions

Facilities means any structure, equipment, or improvement to the surface, whether temporary or permanent, including, but not limited to, roads, pads, pits, pipelines, power lines, generators, utilities, airstrips, wells, compressors, drill rigs, camps and buildings.

Hazardous substance means (A) an element or compound that, when it enters into or on the surface or subsurface land or water of the state, presents an imminent and substantial danger to the public health or welfare, or to fish, animals, vegetation, or any part of the natural habitat in which fish, animals, or wildlife may be found; or (B) a substance defined as a hazardous substance under 42 USC 9601 - 9675 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980); “hazardous substance” does not include uncontaminated crude oil or uncontaminated refined oil (AS 46.09.900).

Identified wetlands are those areas that have been identified as wetlands by the U. S. Army Corps of Engineers under Section 404 of the Clean Water Act.⁴

Minimize means to reduce adverse impacts to the smallest amount, extent, duration, size, or degree reasonable in light of the environmental, social, or economic costs of further reduction.

Plan of operations means a lease plan of operations under 11 AAC 83.158 and a unit plan of operations under 11 AAC 83.346.

Practicable means feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the standard.

Reasonable access means access using means generally available to subsistence users.

Secondary containment means an impermeable diked area or portable impermeable containment structure capable of containing 110 percent of the volume of the largest independent container. Double walled tanks do not qualify as Secondary Containment unless an exception is granted for a particular tank.

Temporary means no more than 12 months.

⁴ **Wetlands** means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (40 CFR Parts 122.2, 230.3, and 232.2).

B. Other Regulatory Requirements (Lessee Advisories)

Lessees must comply with all applicable local, state, and federal codes, statutes, and regulations, as amended. Lessee Advisories alert lessees to additional restrictions that may be imposed at the permitting stage of a proposed project or activity where entities other than DO&G have regulatory, permitting, or management authority.

1. Alaska Department of Natural Resources, Division of Coastal and Ocean Management

- a. Pursuant to AS 46.40, projects are required to comply with all policies and enforceable standards of the Alaska Coastal Management Program, including the District Coastal Management Plans.

2. Alaska Department of Environmental Conservation

- a. Pursuant to AS 46.04.030, lessees are required to have an approved oil discharge prevention and contingency plan (C-Plan) before commencing operations. The plan must include a response action plan to describe how a spill response would occur, a prevention plan to describe the spill prevention measures taken at the facility, and supplemental information to provide background and verification information.
- b. Pursuant to state regulations administered by ADEC and the Clean Air Act administered by EPA, lessees are required to obtain air quality permits before construction and operation. The permits will include air quality monitoring, modeling, and emission control obligations.
- c. Unless authorized by an ADEC permit, surface discharge of reserve pit fluids and produced waters is prohibited.
- d. Unless authorized by National Pollutant Discharge Elimination System or state permits, disposal of wastewater into freshwater bodies is prohibited.

3. Alaska Department of Fish and Game

- a. Under the provisions of Title 16 of the Alaska Statutes, the measures listed below may be imposed by ADF&G below the ordinary high water mark to protect designated anadromous water bodies and to ensure the free and efficient passage of fish in all fish-bearing water bodies. Specific information on the location of anadromous water bodies in and near the area may be obtained from ADF&G.
 - i. Alteration of riverbanks may be prohibited.
 - ii. The operation of equipment, excluding boats, in open water areas of rivers and streams may be prohibited.
 - iii. Bridges or non-bottom founded structures may be required for crossing fish spawning and important rearing habitats.
 - iv. Culverts or other stream crossing structures must be designed, installed, and maintained to provide free and efficient passage of fish.
- b. Removal of water from fish-bearing water bodies is subject to the regulations for the Appropriation and Use of Water (11 AAC 93.035-.147) and Fish and Games statutes AS 16.05.841 and AS 16.05.871.
- c. The director, in consultation with ADF&G, may impose seasonal restrictions on activities located in, or requiring travel through or overflight of, important caribou or other large ungulate calving and wintering areas during the plan of operations approval stage.

- d. The director, in consultation with ADF&G, may impose seasonal restrictions on activities located in and adjacent to important waterfowl and shorebird habitat during the plan of operations approval stage.
- e. To minimize impacts on Dolly Varden (arctic char) overwintering areas, permanent, staffed facilities must be sited to the extent practicable outside identified Dolly Varden overwintering areas.
- f. Lessees are encouraged in planning and design activities to consider the recommendations of oil field design and operations in the final report to the Alaska Caribou Steering Committee: Cronin, M. et al., 1994. “Mitigation of the Effects of Oil Field Development and Transportation Corridors on Caribou.” LGL Alaska Research Associates, Inc., July.
- g. Lessees must comply with the provision of Appendix B of the “Yellow-billed Loon Conservation Agreement,” dated July 31, 2006, between ADF&G, ADNRR, USFWS, Bureau of Land Management, and the National Park Service.

4. Alaska Department of Labor and Workforce Development

- a. The Lessee shall facilitate Alaska resident hire monitoring by reporting project wages on a quarterly basis for each individual employed by the Lessee in the lease area, through electronic unemployment insurance reporting, and by requiring the same of the lessee’s contractors and subcontractors.

5. U.S. Army Corps of Engineers

- a. A U.S. Army Corps of Engineers permit is required when work is anticipated on, in, or affects navigable waters or involves wetland-related dredge or fill activities. A Section 10 permit is required for construction, excavation, or deposition of material in, over, or under navigable waters, or for any work which would affect the course, location, condition, or capacity of navigable waters, or for any work which would affect the course, location, condition, of capacity of navigable waters (33 USC 403). Oil and gas activities requiring this type of permit include, but are not limited to, exploration drilling from a jackup drill rig, installation of a production platform, or construction of a causeway. A Section 404 permit (33 USC 404) authorizes the discharge of dredged and fill material into waters and wetlands of the United States. The process and concerns are similar for both permits and, at times, both may be required.

6. Pipeline and Hazardous Materials Safety Administration

- a. Lessees are advised that any pipeline used for transportation of gas or hazardous liquids may be subject to Federal Pipeline Safety Laws (49 USC 60101 et seq.) and regulations (49 CFR 190-195) under the jurisdiction of the U.S. DOT – Pipeline and Hazardous Materials Safety Administration.

7. U.S. Fish and Wildlife Service and National Marine Fisheries Service

- a. Lessees are advised that the Endangered Species Act of 1973 (ESA), as amended (16 USC 1531-1544) protects endangered and threatened species and candidate species for listing that may occur in the lease sale area. Lessees shall comply with the Recommended Protection Measures developed by the USFWS to ensure adequate protection for all endangered, threatened and candidate species. The following endangered or threatened species occur in or adjacent to the lease sale area:

Common Name	ESA Status
Bowhead whale	Endangered
Spectacled eider	Threatened
Steller's eider (Alaska breeding population)	Threatened
Polar bear	Threatened

- b. Lessees are advised of the need to comply with the Migratory Bird Treaty Act (MBTA; 16 USC 703) which is administered by the USFWS. Under the MBTA, it is illegal to "take" migratory birds, their eggs, feathers or nests. "Take" is defined (50 CFR 10.12) to include "pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting." The MBTA does not distinguish between "intentional" and "unintentional" take. Migratory birds include songbirds, waterfowl, shorebirds, and raptors. In Alaska, all native birds except grouse and ptarmigan (which are protected by the State of Alaska) are protected under the MBTA.

In order to ensure compliance with the MBTA, it is recommended that lessees survey the project area before construction, vegetation clearing, excavation, discharging fill or other activities which create disturbance, and confirm there are no active migratory bird nests. It is recommended lessees contact the USFWS for assistance and guidance on survey needs, and other compliance issues under the MBTA. While the USFWS can recommend methods (such as surveys and timing windows) to avoid unintentional take, responsibility for compliance with the MBTA rests with lessees.

- c. Lessees are advised that they must comply with the provisions of the Marine Mammal Protection Act of 1972, as amended (16 USC 1361-1407). USFWS shares authority for marine mammals with the NMFS.
- d. Peregrine falcon nesting sites are known to occur in the sale area. Lessees are advised that disturbing a peregrine falcon nest violates federal law. Lessees are required to comply with the federal resource recovery plan for the arctic peregrine falcon.
- e. Lessee are advised that the Magnuson-Stevens Fishery Conservation and Management Act requires identification of Essential Fish Habitat (EFH) for all species managed under a federal Fisheries Management Plan. Subsequent exploration and/or development activities associated with the lease sale may be subject to consultation under EFH. EFH information, consultation, guidance, and species life history information are available on the NMFS website at <http://www.fakr.noaa.gov/habitat>.

8. North Slope Borough

- a. Lessees are advised that the NSB Assembly has adopted a comprehensive plan and land management regulations under Title 29 of the Alaska Statutes (AS 29.40.020-040). The NSB regulations require borough approval for all proposed uses, development, and master plans. The former NSBCMP policies are included as part of the NSB zoning regulations (Title 19) and all NSB permit approvals will require the proposal to be substantially consistent with these policies.
- b. Lessees are advised that restricting access to and use of fish camps and other subsistence use areas defined in the NSB Traditional Land Use Inventory, may violate the former NSBCMP and NSBMC subsistence harvest protection and land use regulations. Lessees are advised to consult with the NSB Planning Department and local communities during planning of operations.
- c. Lessees are encouraged to bring one or more residents of communities in the area of operations into their planning process. Local communities have a unique understanding of their environment and community activities. Involving local community residents in the earliest stages of the

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

planning process for oil and gas activities can be beneficial to the industry and to the community. Community representation on management teams developing plans of operation, oil spill contingency plans, and other permit applications can help communities understand permitting obligations and help industry to understand community values and expectations for oil and gas operations being conducted in and around their area.

- d. In order to protect species that are sensitive to noise or movement, horizontal and vertical buffers will be required, consistent with aircraft, vehicle, and vessel operations regulated by NSB Code §19.70.050(I)(1), which codifies former NSBCMP policy 2.4.4.(a). Lessees are encouraged to apply the following provisions governing aircraft operations in and near the sale area:
 - i. From June 1 to August 31, aircraft overflights must avoid identified brant, white fronted goose, tundra swan, king eider, common eider, and yellow-billed loon nesting and brood rearing habitat, and from August 15 to September 15, the fall staging areas for geese, tundra swans, and shorebirds, by an altitude of 1,500 feet, or a lateral distance of 1 mile.
 - ii. To the extent practicable, all aircraft should maintain an altitude greater than 1,500 feet or a lateral distance of 1 mile, excluding takeoffs and landings, from caribou and muskoxen concentrations. A concentration means numbers of animals in excess of the general density of those animals found in the area.
 - iii. Human safety will take precedence over flight restrictions.
- e. Lessees are advised that certain areas are especially valuable for their concentrations of marine birds, marine mammals, fishes, or other biological resources; cultural resources; and for their importance to subsistence harvest activities. The following areas must be considered when developing plans of operation. Identified areas and time periods of special biological and cultural sensitivity include:
 - i. the Boulder Patch in Stefansson Sound, year round;
 - ii. the Canning River Delta, January-December;
 - iii. the Colville River Delta, January-December;
 - iv. the Cross, Pole, Egg, and Thetis Islands, June-December;
 - v. the Flaxman Island waterfowl use and polar bear denning areas, including the Leffingwell Cabin national historic site located on Flaxman Island;
 - vi. the Jones Island Group (Pingok, Spy, and Leavitt Islands) and Pole Island are known polar bear denning sites, November-April; and
 - vii. the Sagavanirktok River delta, January-December.
 - viii. Howe Island supports a snow goose nesting colony, May-August.
- f. No lease facilities or operations may be located so as to block access to, or along, navigable and public waters as defined by AS 38.05.965(13) and (18).
- g. Subsistence whaling activities occur generally during the following periods:
 - i. August to October: Kaktovik whalers use the area circumscribed from Anderson Point in Camden Bay to a point 30 km north of Barter Island to Humphrey Point east of Barter Island. Nuiqsut whalers use an area extending from a line northward of the Nechelik Channel of the Colville River to Flaxman Island, seaward of the Barrier Islands.
 - ii. September to October: Barrow hunters use the area circumscribed by a western boundary extending approximately 15 km off Cooper Island, with an eastern boundary on the east side of Dease Inlet. Occasional use may extend eastward as far as Cape Halkett.

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

- h. ADF&G reports that Howe Island may be one of only two significant known snow goose nesting colonies in the United States. (The other colony is in the Ikpikpuk River Delta; several small colonies occur in the area of Harrison Bay.) Lessees are advised that surface entry onto Howe Island will likely be prohibited.
- i. Lessees are advised that the NSB may, under its authorities, require the lessee to enter into a Conflict Avoidance Agreement with the AEWG before applying for a NSB rezoning or development permit for the siting of permanent facilities in state waters. If the director permits permanent facility siting in state waters within 3 miles of Cross Island, subject to the subsistence harvest protection and whale harvest protection mitigation measures, the NSB has advised the state they will require a Conflict Avoidance Agreement.

ATTACHMENT D
Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018
Summary of Changes Made to Mitigation Measures
In Response to Public Comments

The following changes were made to mitigation measures proposed in the preliminary best interest finding and ACMP consistency analysis, based on comments received during the public comment period.

Mitigation Measure A(1)(a) was changed to specify that a plan of operations must describe the lessee's "plans", rather than "efforts". Also, "avoid" was added, so that plans must "avoid or minimize" impacts.

"Avoid" was added to *Mitigation Measure A(1)(b)*.

In *Mitigation Measures A(1)(d)*, "all activities" was changed to "certain activities" to more accurately reflect requirements of the U.S. Army Corps of Engineers concerning wetlands.

The exception for gravel islands was removed from *Mitigation Measure A(1)(e)*. "Abandoned" was removed from the reference to gravel structures, and was changed to existing in the second occurrence.

In *Mitigation Measure A(1)(g)* concerning wildlife movement and migration, the phrase "avoid significant" was replaced with "minimize".

Coastal erosion and permafrost thawing were added to the list of hazards in *Mitigation Measure A(1)(h)*.

Mitigation Measure A(1)(k)(i) was changed from "The State of Alaska discourages the use of continuous fill causeways" to "Continuous-fill causeways are prohibited". Also, "Approved causeways must be designed, sited, and constructed..." was changed to "Non-continuous-fill causeways must be designed, sited, and constructed...".

Tracts 521-526 were added to *Mitigation Measure A(3)(f)* concerning protection of brant and other waterbirds.

References to the former North Slope Borough Coastal Management plan, which is no longer in effect, and to North Slope Borough Municipal Codes were removed from *Mitigation Measure A(3)(c)*; readers are instead directed to the definitions section (A8) of the mitigation measures, where a definition of "reasonable access" is provided.

In *Mitigation Measure A(3)(d)(ii)*, "proximity of drilling operations to active whaling areas" was changed to "proximity of drilling operations to active or proposed whaling areas".

Mitigation Measures A(4)(b) was changed from "Containers with an aggregate storage capacity of greater than 55 gallons..." was changed to "Containers with a storage capacity larger than 55 gallons..."

"Health and safety" were added to *Mitigation Measure A(7)(c)*.

A lessee advisory concerning Essential Fish Habitat was added as *Lessee Advisory B(7)(e)*.

A lessee advisory concerning federal pipeline laws and regulations was added as *Lessee Advisory B(6)(a)*.

ATTACHMENT E
Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018
Sample Lease

Competitive Oil and Gas Lease
Form #DOG 200604 (rev. 3/2009)

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES

Competitive Oil and Gas Lease **ADL No.**

THIS LEASE is entered into _____, between the State of Alaska, "the state,"
and _____

"the lessee," whether one or more, whose sole address for purposes of notification is under Paragraph 25.

In consideration of the cash payment made by the lessee to the state, which payment includes the first year's rental and any required cash bonus, and subject to the provisions of this lease, including applicable stipulation(s) and mitigating measures attached to this lease and by this reference incorporated in this lease, the state and the lessee agree as follows:

1. GRANT. (a) Subject to the provisions in this lease, the state grants and leases to the lessee, without warranty, the exclusive right to drill for, extract, remove, clean, process, and dispose of oil, gas, and associated substances in or under the following described tract of land:

containing approximately _____ acres, more or less (referred to in this lease as the "leased area"); the nonexclusive right to conduct within the leased area geological and geophysical exploration for oil, gas, and associated substances; and the nonexclusive right to install pipelines and build structures on the leased area to find, produce, save, store, treat, process, transport, take care of, and market all oil, gas, and associated substances and to house and board employees in its operations on the leased area. The rights granted by this lease are to be exercised in a manner which will not unreasonably interfere with the rights of any permittee, lessee or grantee of the state consistent with the principle of reasonable concurrent uses as set out in Article VIII, Section 8 of the Alaska Constitution.

(b) For the purposes of this lease, the leased area contains the legal subdivisions as shown on the attached plat marked Exhibit A.

(c) If the leased area is described by protracted legal subdivisions and, after the effective date of this lease, the leased area is surveyed under the public land rectangular system, the boundaries of the leased area are those established by that survey, when approved, subject, however, to the provisions of applicable regulations relating to those surveys. If for any reason the leased area includes more acreage than the maximum permitted under applicable law (including the "rule of approximation" authorized in AS 38.05.145 and defined in AS 38.05.965 (18)), this lease is not void and the acreage included in the leased area must be reduced to the permitted maximum. If the state determines that the leased area exceeds the permitted acreage and notifies the lessee in writing of the amount of acreage that must be eliminated, the lessee has 60 days after that notice to surrender one or more legal

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

subdivisions included in the leased area comprising at least the amount of acreage that must be eliminated. Any subdivision surrendered must be located on the perimeter of the leased area as originally described. If a surrender is not filed within 60 days, the state may terminate this lease as to the acreage that must be eliminated by mailing notice of the termination to the lessee describing the subdivision eliminated.

(d) If the State of Alaska's ownership interest in the oil, gas, and associated substances in the leased area is less than an entire and undivided interest, the grant under this lease is effective only as to the state's interest in that oil, gas, and associated substances, and the royalties and rentals provided in this lease must be paid to the state in the proportion that the state's interest bears to the entire undivided fee.

(e) The state makes no representations or warranties, express or implied, as to title, or access to, or quiet enjoyment of, the leased area. The state is not liable to the lessee for any deficiency in title to the leased area, nor is the lessee or any successor in interest to the lessee entitled to any refund due to deficiency in title for any rentals, bonuses, or royalties paid under this lease.

2. RESERVED RIGHTS. (a) The state, for itself and others, reserves all rights not expressly granted to the lessee by this lease. These reserved rights include, but are not limited to:

(1) the right to explore for oil, gas, and associated substances by geological and geophysical means;

(2) the right to explore for, develop, and remove natural resources other than oil, gas, and associated substances on or from the leased area;

(3) the right to establish or grant easements and rights-of-way for any lawful purpose, including without limitation for shafts and tunnels necessary or appropriate for the working of the leased area or other lands for natural resources other than oil, gas, and associated substances;

(4) the right to dispose of land within the leased area for well sites and well bores of wells drilled from or through the leased area to explore for or produce oil, gas, and associated substances in and from lands not within the leased area; and

(5) the right otherwise to manage and dispose of the surface of the leased area or interests in that land by grant, lease, permit, or otherwise to third parties.

(b) The rights reserved may be exercised by the state, or by any other person or entity acting under authority of the state, in any manner that does not unreasonably interfere with or endanger the lessee's operations under this lease.

3. TERM. This lease is issued for an initial primary term of 7 years from the effective date of this lease. The term may be extended as provided in Paragraph 4 below.

4. EXTENSION. (a) This lease will be extended automatically if and for so long as oil or gas is produced in paying quantities from the leased area.

(b) This lease will be extended automatically if it is committed to a unit agreement approved or prescribed by the state, and will remain in effect for so long as it remains committed to that unit agreement.

(c) (1) If the drilling of a well whose bottom hole location is in the leased area has commenced as of the date on which the lease otherwise would expire and is continued with reasonable diligence, this lease will continue in effect until 90 days after cessation of that drilling and for so long as oil or gas is produced in paying quantities from the leased area.

(2) If oil or gas in paying quantities is produced from the leased area, and if that production ceases at any time, this lease will not terminate if drilling or reworking operations are commenced on the leased area within six months after cessation of production and are prosecuted with reasonable diligence; if those drilling or reworking operations result in the production of oil or gas, this lease will remain in effect for so long as oil or gas is produced in paying quantities from the leased area.

(d) If there is a well capable of producing oil or gas in paying quantities on the leased area, this lease will not expire because the lessee fails to produce that oil or gas unless the state gives notice to the lessee, allowing a reasonable time, which will not be less than six months after notice, to place the well into production, and

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

the lessee fails to do so. If production is established within the time allowed, this lease is extended only for so long as oil or gas is produced in paying quantities from the leased area.

(e) If the state directs or approves in writing a suspension of all operations on or production from the leased area (except for a suspension necessitated by the lessee's negligence), or if a suspension of all operations on or production from the leased area has been ordered under federal, state, or local law, the lessee's obligation to comply with any express or implied provision of this lease requiring operations or production will be suspended, but not voided, and the lessee shall not be liable for damages for failure to comply with that provision. If the suspension occurs before the expiration of the primary term, the primary term will be extended at the end of the period of the suspension by adding the period of time lost under the primary term because of the suspension. If the suspension occurs during an extension of the primary term under this paragraph, upon removal of that suspension, the lessee will have a reasonable time, which will not be less than six months after notice that the suspension has been removed, to resume operations or production. For the purposes of this subparagraph, any suspension of operations or production specifically required or imposed as a term of sale or by any stipulation made a part of this lease will not be considered a suspension ordered by law.

(f) If the state determines that the lessee has been prevented by force majeure, after efforts made in good faith, from performing any act that would extend the lease beyond the primary term, this lease will not expire during the period of force majeure. If the force majeure occurs before the expiration of the primary term, the primary term will be extended at the end of the period of force majeure by adding the period of time lost under the primary term because of the force majeure. If the force majeure occurs during an extension of the primary term under this paragraph, this lease will not expire during the period of force majeure plus a reasonable time after that period, which will not be less than 60 days, for the lessee to resume operations or production.

(g) Nothing in subparagraphs (e) or (f) suspends the obligation to pay royalties or other production or profit-based payments to the state from operations on the leased area that are not affected by any suspension or force majeure, or suspends the obligation to pay rentals.

5. RENTALS. (a) The lessee shall pay annual rental to the state in accordance with the following rental schedule:

- (1) For the first year, \$1.00 per acre or fraction of an acre;
- (2) For the second year, \$1.50 per acre or fraction of an acre;
- (3) For the third year, \$2.00 per acre or fraction of an acre;
- (4) For the fourth year, \$2.50 per acre or fraction of an acre;

(5) For the fifth year and following years, \$3.00 per acre or fraction of an acre; provided that the state may increase the annual rental rate as provided by law upon extension of this lease beyond the primary term.

(b) Annual rental paid in advance is a credit on the royalty or net profit share due under this lease for that year.

(c) The lessee shall pay the annual rental to the State of Alaska (or any depository designated by the state with at least 60 days notice to the lessee) in advance, on or before the annual anniversary date of this lease. The state is not required to give notice that rentals are due by billing the lessee. If the state's (or depository's) office is not open for business on the annual anniversary date of this lease, the time for payment is extended to include the next day on which that office is open for business. If the annual rental is not paid timely, this lease automatically terminates as to both parties at 11:59 p.m., Alaska Standard Time, on the date by which the rental payment was to have been made.

6. RECORDS. The lessee shall keep and have in its possession books and records showing the development and production (including records of development and production expenses) and disposition (including records of sale prices, volumes, and purchasers) of all oil, gas, and associated substances produced from the leased area. The lessee shall permit the State of Alaska or its agents to examine these books and records at all reasonable times. Upon request by the state, the lessee's books and records shall be made available to the state at the state office designated by the state. These books and records of development, production, and disposition must employ

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

methods and techniques that will ensure the most accurate figures reasonably available without requiring the lessee to provide separate tankage or meters for each well. The lessee shall use generally accepted accounting procedures consistently applied.

7. APPORTIONMENT OF ROYALTY FROM APPROVED UNIT. The landowners' royalty share of the unit production allocated to each separately owned tract shall be regarded as royalty to be distributed to and among, or the proceeds of it paid to, the landowners, free and clear of all unit expense and free of any lien for it. Under this provision, the state's royalty share of any unit production allocated to the leased area will be regarded as royalty to be distributed to, or the proceeds of it paid to, the state, free and clear of all unit expenses (and any portion of those expenses incurred away from the unit area), including, but not limited to, expenses for separating, cleaning, dehydration, gathering, saltwater disposal, and preparing oil, gas, or associated substances for transportation off the unit area, and free of any lien for them.

8. PAYMENTS. All payments to the State of Alaska under this lease must be made payable to the state in the manner directed by the state, and unless otherwise specified, must be tendered to the state at:

DEPARTMENT OF NATURAL RESOURCES
550 WEST 7TH AVENUE, SUITE 1410
ANCHORAGE, ALASKA 99501-3561
ATTENTION: FINANCIAL SERVICES SECTION

or in person at either of the Department's Public Information Centers located at

550 W. 7th Ave., Suite 1260
Anchorage, Alaska

3700 Airport Way
Fairbanks, Alaska

or to any depository designated by the state with at least 60 days notice to the lessee.

9. PLAN OF OPERATIONS. (a) Except as provided in (b) of this section, a plan of operations for all or part of the leased area must be approved by the commissioner before any operations may be undertaken on or in the leased area.

- (b) A plan of operations is not required for:
- (1) activities that would not require a land use permit; or
 - (2) operations undertaken under an approved unit plan of operations.

(c) Before undertaking operations on or in the leased area, the lessee shall provide for full payment of all damages sustained by the owner of the surface estate as well as by the surface owner's lessees and permittees, by reason of entering the land.

(d) An application for approval of a plan of operations must contain sufficient information, based on data reasonably available at the time the plan is submitted for approval, for the commissioner to determine the surface use requirements and impacts directly associated with the proposed operations. An application must include statements and maps or drawings setting out the following:

(1) the sequence and schedule of the operations to be conducted on or in the leased area, including the date operations are proposed to begin and their proposed duration;

(2) projected use requirements directly associated with the proposed operations, including the location and design of well sites, material sites, water supplies, solid waste sites, buildings, roads, utilities, airstrips, and all other facilities and equipment necessary to conduct the proposed operations;

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

(3) plans for rehabilitation of the affected leased area after completion of operations or phases of those operations; and

(4) a description of operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the leased area and adjacent areas, including fish and wildlife habitats, historic and archeological sites, and public use areas.

(e) In approving a lease plan of operations or an amendment of a plan, the commissioner will require amendments that the commissioner determines necessary to protect the state's interest. The commissioner will not require an amendment that would be inconsistent with the terms of sale under which the lease was obtained, or with the terms of the lease itself, or which would deprive the lessee of reasonable use of the leasehold interest.

(f) The lessee may, with the approval of the commissioner, amend an approved plan of operations.

(g) Upon completion of operations, the lessee shall inspect the area of operations and submit a report indicating the completion date of operations and stating any noncompliance of which the lessee knows, or should reasonably know, with requirements imposed as a condition of approval of the plan.

(h) In submitting a proposed plan of operations for approval, the lessee shall provide ten copies of the plan if activities proposed are within the coastal zone, and five copies if activities proposed are not within the coastal zone.

10. PLAN OF DEVELOPMENT. (a) Except as provided in subparagraph (d) below, within 12 months after completion of a well capable of producing oil, gas, or associated substances in paying quantities, the lessee shall file two copies of an application for approval by the state of an initial plan of development that must describe the lessee's plans for developing the leased area. No development of the leased area may occur until a plan of development has been approved by the state.

(b) The plan of development must be revised, updated, and submitted to the state for approval annually before or on the anniversary date of the previously approved plan. If no changes from an approved plan are contemplated for the following year, a statement to that effect must be filed for approval in lieu of the required revision and update.

(c) The lessee may, with the approval of the state, subsequently modify an approved plan of development.

(d) If the leased area is included in an approved unit, the lessee will not be required to submit a separate lease plan of development for unit activities.

11. INFORMATION ACQUIRED FROM OPERATIONS. (a) The lessee shall submit to the state all geological, geophysical and engineering data and analyses obtained from the lease within 30 days following the completion of a well. The lessee shall submit to the state data and analyses acquired subsequent to well completion within 30 days following acquisition of that data. The state may waive receipt of operational data from some development, service or injection wells. The state will inform the operator of the waiver prior to well completion. The lessee shall submit the data and analyses to the Division of Oil and Gas, Department of Natural Resources, at the location specified in paragraph 25 of this lease. The data and analyses shall include the following:

(1) a copy of the completion report (AOGCC form 10-407) with an attached well summary, including daily drilling reports, formation tops encountered, a full synopsis of drillstem and formation testing data, an identification of zones of abnormal pressure, oil and gas shows and cored intervals;

(2) latitudinal and longitudinal coordinates for the completed surface and bottom hole locations;

(3) a copy of the permit to drill (AOGCC form 10-401 only, additional documentation not required) and the survey plat of the well location;

(4) a paper copy (no sepiacopies) of all final 2-inch open hole and cased hole logs, including measured depth and true-vertical depth versions, specialty logs (such as Schlumberger's cyberlook, formation microscanners and dipmeter logs), composite mud or lithology log and report, measured-while-drilling (MWD) and logged-while-drilling (LWD) logs, velocity and directional surveys;

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

(5) a digital version of well logs in LAS, LIS or ASCII format on IBM format floppy disks, a digital version of velocity surveys in SEG Y format, a digital version of directional surveys in ASCII format (other formats may be acceptable upon agreement with the Division of Oil and Gas); and

(6) a paper copy of all available well analyses, including geochemical analyses, core analyses (porosity, permeability, capillary pressure, photos, and descriptions), paleontologic and palynologic analyses, thermal maturation analyses, pressure build up analyses, and fluid PVT analyses (an ASCII format digital version of the above information shall also be submitted, if available). The state may require the lessee to submit additional information in accordance with the applicable statutes and regulations in effect at the time of the completion date of the well.

(b) Any information submitted to the state by the lessee in connection with this lease will be available at all times for use by the state and its agents. The state will keep information confidential as provided in AS 38.05.035(a)(9) and its applicable regulations. In accordance with AS 38.05.035(a)(9)(C), in order for geological, geophysical and engineering information submitted under paragraph 11(a) of this lease to be held confidential, the lessee must request confidentiality at the time the information is submitted. The information must be marked **CONFIDENTIAL**.

12. **DIRECTIONAL DRILLING.** This lease may be maintained in effect by directional wells whose bottom hole location is on the leased area but that are drilled from locations on other lands not covered by this lease. In those circumstances, drilling will be considered to have commenced on the leased area when actual drilling is commenced on those other lands for the purpose of directionally drilling into the leased area. Production of oil or gas from the leased area through any directional well surfaced on those other lands, or drilling or reworking of that directional well, will be considered production or drilling or reworking operations on the leased area for all purposes of this lease. Nothing contained in this paragraph is intended or will be construed as granting to the lessee any interest, license, easement, or other right in or with respect to those lands in addition to any interest, license, easement, or other right that the lessee may have lawfully acquired from the state or from others.

13. **DILIGENCE AND PREVENTION OF WASTE.** (a) The lessee shall exercise reasonable diligence in drilling, producing, and operating wells on the leased area unless consent to suspend operations temporarily is granted by the state.

(b) Upon discovery of oil or gas on the leased area in quantities that would appear to a reasonable and prudent operator to be sufficient to recover ordinary costs of drilling, completing, and producing an additional well in the same geologic structure at another location with a reasonable profit to the operator, the lessee must drill those wells as a reasonable and prudent operator would drill, having due regard for the interest of the state as well as the interest of the lessee.

(c) The lessee shall perform all operations under this lease in a good and workmanlike manner in accordance with the methods and practices set out in the approved plan of operations and plan of development, with due regard for the prevention of waste of oil, gas, and associated substances and the entrance of water to the oil and gas-bearing sands or strata to the destruction or injury of those sands or strata, and to the preservation and conservation of the property for future productive operations. The lessee shall carry out at the lessee's expense all orders and requirements of the State of Alaska relative to the prevention of waste and to the preservation of the leased area. If the lessee fails to carry out these orders, the state will have the right, together with any other available legal recourse, to enter the leased area to repair damage or prevent waste at the lessee's expense.

(d) The lessee shall securely plug in an approved manner any well before abandoning it.

14. **OFFSET WELLS.** The lessee shall drill such wells as a reasonable and prudent operator would drill to protect the state from loss by reason of drainage resulting from production on other land. Without limiting the generality of the foregoing sentence, if oil or gas is produced in a well on other land not owned by the State of Alaska or on which the State of Alaska receives a lower rate of royalty than under this lease, and that well is within 500 feet in the case of an oil well or 1,500 feet in the case of a gas well of lands then subject to this lease, and that well produces oil or gas for a period of 30 consecutive days in quantities that would appear to a reasonable and prudent operator to be sufficient to recover ordinary costs of drilling, completing, and producing an additional well in the same geological structure at an offset location with a reasonable profit to the operator, and if, after notice to the lessee and an opportunity to be heard, the state finds that production from that well is draining lands then subject to this lease,

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

the lessee shall within 30 days after written demand by the state begin in good faith and diligently prosecute drilling operations for an offset well on the leased area. In lieu of drilling any well required by this paragraph, the lessee may, with the state's consent, compensate the state in full each month for the estimated loss of royalty through drainage in the amount determined by the state.

15. UNITIZATION. (a) The lessee may unite with others, jointly or separately, in collectively adopting and operating under a cooperative or unit agreement for the exploration, development, or operation of the pool, field, or like area or part of the pool, field, or like area that includes or underlies the leased area or any part of the leased area whenever the state determines and certifies that the cooperative or unit agreement is in the public interest.

(b) The lessee agrees, within six months after demand by the state, to subscribe to a reasonable cooperative or unit agreement that will adequately protect all parties in interest, including the state. The state reserves the right to prescribe such an agreement.

(c) With the consent of the lessee, and if the leased area is committed to a unit agreement approved by the state, the state may establish, alter, change, or revoke drilling, producing, and royalty requirements of this lease as the state determines necessary or proper to secure the proper protection of the public interest.

(d) Except as otherwise provided in this subparagraph, where only a portion of the leased area is committed to a unit agreement approved or prescribed by the state, that commitment constitutes a severance of this lease as to the unitized and nonunitized portions of the leased area. The portion of the leased area not committed to the unit will be treated as a separate and distinct lease having the same effective date and term as this lease and may be maintained only in accordance with the terms and conditions of this lease, statutes, and regulations. Any portion of the leased area not committed to the unit agreement will not be affected by the unitization or pooling of any other portion of the leased area, by operations in the unit, or by suspension approved or ordered for the unit. If the leased area has a well certified, under 11 AAC 83.361, as capable of production in paying quantities as defined in 11 AAC 83.395(4) on it before commitment to a unit agreement, this lease will not be severed. If any portion of this lease is included in a participating area formed under a unit agreement, the entire leased area will remain committed to the unit and this lease will not be severed.

16. INSPECTION. The lessee shall keep open at all reasonable times, for inspection by any duly authorized representative of the State of Alaska, the leased area, all wells, improvements, machinery, and fixtures on the leased area, and all reports and records relative to operations and surveys or investigations on or with regard to the leased area or under this lease. Upon request, the lessee shall furnish the State of Alaska with copies of and extracts from any such reports and records.

17. SUSPENSION. The state may from time to time direct or approve in writing suspension of production or other operations under this lease.

18. ASSIGNMENT, PARTITION, AND CONVERSION. This lease, or an interest in this lease, may, with the approval of the state, be assigned, subleased, or otherwise transferred to any person or persons qualified to hold a lease. No assignment, sublease, or other transfer of an interest in this lease, including assignments of working or royalty interests and operating agreements and subleases, will be binding upon the state unless approved by the state. The lessee shall remain liable for all obligations under this lease accruing prior to the approval by the state of any assignment, sublease, or other transfer of an interest in this lease. All provisions of this lease will extend to and be binding upon the heirs, administrators, successors, and assigns of the state and the lessee. Applications for approval of an assignment, sublease, or other transfer must comply with all applicable regulations and must be filed within 90 days after the date of final execution of the instrument of transfer. The state will approve a transfer of an undivided interest in this lease unless the transfer would adversely affect the interests of Alaska or the application does not comply with applicable regulations. The state will disapprove a transfer of a divided interest in this lease if the transfer covers only a portion of the lease or a separate and distinct zone or geological horizon unless the lessee demonstrates that the proposed transfer of a divided interest is reasonably necessary to accomplish exploration or development of the lease, the lease is committed to an approved unit agreement, the lease is allocated production within an approved participating area, or the lease has a well capable of production in paying quantities. The state will make a written finding stating the reasons for disapproval of a transfer of a divided interest. Where an assignment, sublease, or other transfer is made of all or a part of the lessee's interest in a portion of the leased area, this lease may, at the option of the state or upon request of the transferee and with the approval of the state, be

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

severed, and a separate and distinct lease will be issued to the transferee having the same effective date and terms as this lease.

19. SURRENDER. The lessee at any time may file with the state a written surrender of all rights under this lease or any portion of the leased area comprising one or more legal subdivisions or, with the consent of the state, any separate and distinct zone or geological horizon underlying the leased area or one or more legal subdivisions of the leased area. That surrender will be effective as of the date of filing, subject to the continued obligations of the lessee and its surety to make payment of all accrued royalties and to place all wells and surface facilities on the surrendered land or in the surrendered zones or horizons in condition satisfactory to the state for suspension or abandonment. After that, the lessee will be released from all obligations under this lease with respect to the surrendered lands, zones, or horizons.

20. DEFAULT AND TERMINATION; CANCELLATION. (a) The failure of the lessee to perform timely its obligations under this lease, or the failure of the lessee otherwise to abide by all express and implied provisions of this lease, is a default of the lessee's obligations under this lease. Whenever the lessee fails to comply with any of the provisions of this lease (other than a provision which, by its terms, provides for automatic termination), and fails within 60 days after written notice of that default to begin and diligently prosecute operations to remedy that default, the state may terminate this lease if at the time of termination there is no well on the leased area capable of producing oil or gas in paying quantities. If there is a well on the leased area capable of producing oil or gas in paying quantities, this lease may be terminated by an appropriate judicial proceeding. In the event of any termination under this subparagraph, the lessee shall have the right to retain under this lease any and all drilling or producing wells for which no default exists, together with a parcel of land surrounding each well or wells and rights-of-way through the leased area that are reasonably necessary to enable the lessee to drill, operate, and transport oil or gas from the retained well or wells.

(b) The state may cancel this lease at any time if the state determines, after the lessee has been given notice and a reasonable opportunity to be heard, that:

(1) continued operations pursuant to this lease probably will cause serious harm or damage to biological resources, to property, to mineral resources, or to the environment (including the human environment);

(2) the threat of harm or damage will not disappear or decrease to an acceptable extent within a reasonable period of time; and

(3) the advantages of cancellation outweigh the advantages of continuing this lease in effect. Any cancellation under this subparagraph will not occur unless and until operations under this lease have been under suspension or temporary prohibition by the state, with due extension of the term of this lease, continuously for a period of five years or for a lesser period upon request of the lessee.

(c) Any cancellation under subparagraph (b) will entitle the lessee to receive compensation as the lessee demonstrates to the state is equal to the lesser of:

(1) the value of the cancelled rights as of the date of cancellation, with due consideration being given to both anticipated revenues from this lease and anticipated costs, including costs of compliance with all applicable regulations and stipulations, liability for clean-up costs or damages, or both, in the case of an oil spill, and all other costs reasonably anticipated under this lease; or

(2) the excess, if any, over the lessee's revenues from this lease (plus interest on the excess from the date of receipt to date of reimbursement) of all consideration paid for this lease and all direct expenditures made by the lessee after the effective date of this lease and in connection with exploration or development, or both, under this lease, plus interest on that consideration and those expenditures from the date of payment to the date of reimbursement.

21. RIGHTS UPON TERMINATION. Upon the expiration or earlier termination of this lease as to all or any portion of the leased area, the lessee will be directed in writing by the state and will have the right at any time within a period of one year after the termination, or any extension of that period as may be granted by the state, to remove from the leased area or portion of the leased area all machinery, equipment, tools, and materials. Upon the

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

expiration of that period or extension of that period and at the option of the state, any machinery, equipment, tools, and materials that the lessee has not removed from the leased area or portion of the leased area become the property of the state or may be removed by the state at the lessee's expense. At the option of the state, all improvements such as roads, pads, and wells must either be abandoned and the sites rehabilitated by the lessee to the satisfaction of the state, or be left intact and the lessee absolved of all further responsibility as to their maintenance, repair, and eventual abandonment and rehabilitation. Subject to the above conditions, the lessee shall deliver up the leased area or those portions of the leased area in good condition.

22. DAMAGES AND INDEMNIFICATION. (a) No rights under the AS 38.05.125 reservation may be exercised by the lessee until the lessee has provided to pay the owner of the land, his lessees and permittees, upon which the AS 38.05.125 reserved rights are sought to be exercised, full payment for all damage sustained by the owner by reason of entering the land. If the owner for any reason does not settle the damages, the lessee may enter the land after posting a surety bond determined by the state, after notice and an opportunity to be heard, to be sufficient as to form, amount, and security to secure to the owner, his lessees and permittees, payment for damages, and may institute legal proceedings in a court of competent jurisdiction where the land is located to determine the damages which the owner of the land may suffer. The lessee agrees to pay for any damages that may become payable under AS 38.05.130 and to indemnify the state and hold it harmless from and against any claims, demands, liabilities, and expenses arising from or in connection with such damages. The furnishing of a bond in compliance with this paragraph will be regarded by the state as sufficient provision for the payment of all damages that may become payable under AS 38.05.130 by virtue of this lease.

(b) The lessee shall indemnify the state for, and hold it harmless from, any claim, including claims for loss or damage to property or injury to any person caused by or resulting from any act or omission committed under this lease by or on behalf of the lessee. The lessee is not responsible to the state under this subparagraph for any loss, damage, or injury caused by or resulting from the sole negligence of the state.

(c) The lessee expressly waives any defense to an action for breach of a provision of this lease or for damages resulting from an oil spill or other harm to the environment that is based on an act or omission committed by an independent contractor in the lessee's employ. The lessee expressly agrees to assume responsibility for all actions of its independent contractors.

23. BONDS. (a) If required by the state, the lessee shall furnish a bond prior to the issuance of this lease in an amount equal to at least \$5 per acre or fraction of an acre contained in the leased area, but no less than \$10,000, and must maintain that bond as long as required by the state.

(b) The lessee may, in lieu of the bond required under (a) above, furnish and maintain a statewide bond in accordance with applicable regulations.

(c) The state may, after notice to the lessee and a reasonable opportunity to be heard, require a bond in a reasonable amount greater than the amount specified in (a) above where a greater amount is justified by the nature of the surface and its uses and the degree of risk involved in the types of operations being or to be carried out under this lease. A statewide bond will not satisfy any requirement of a bond imposed under this subparagraph, but will be considered by the state in determining the need for and the amount of any additional bond under this subparagraph.

(d) If the leased area is committed in whole or in part to a cooperative or unit agreement approved or prescribed by the state, and the unit operator furnishes a statewide bond, the lessee need not maintain any bond with respect to the portion of the leased area committed to the cooperative or unit agreement.

24. AUTHORIZED REPRESENTATIVES. The Director of the Division of Oil and Gas, Department of Natural Resources, State of Alaska, and the person executing this lease on behalf of the lessee shall be authorized representatives for their respective principals for the purposes of administering this lease. The state or the lessee may change the designation of its authorized representative or the address to which notices to that representative are to be sent by a notice given in accordance with Paragraph 25 below. Where activities pursuant to a plan of operations are underway, the lessee shall also designate, pursuant to a notice under Paragraph 25 below, by name, job title, and address, an agent who will be present in the state during all lease activities.

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

25. NOTICES; PROTEST. (a) Any notices required or permitted under this lease must be by electronic media producing a permanent record or in writing and must be given personally or by registered or certified mail, return receipt requested, addressed as follows:

TO THE STATE:

DIRECTOR, DIVISION OF OIL AND GAS
DEPARTMENT OF NATURAL RESOURCES
550 WEST 7TH AVENUE, SUITE 800
ANCHORAGE, ALASKA 99501-3560

TO THE LESSEE:

(b) Any notice given under this paragraph will be effective when delivered to the above authorized representative.

(c) A lessee who wishes to protest the amount of money due the state under the lease or any action of the state regarding a provision of this lease must file a written protest with the Division of Oil and Gas within 30 days after the mailing date of the state's notice or bill. A lessee who fails to file a protest within the required time waives any further right to protest. The state will establish the administrative appeal procedure to be followed and will inform the lessee of the procedure no later than 30 days after the filing of the written protest.

26. STATUTES AND REGULATIONS. This lease is subject to all applicable state and federal statutes and regulations in effect on the effective date of this lease, and insofar as is constitutionally permissible, to all statutes and regulations placed in effect after the effective date of this lease. A reference to a statute or regulation in this lease includes any change in that statute or regulation whether by amendment, repeal and replacement, or other means. This lease does not limit the power of the State of Alaska or the United States of America to enact and enforce legislation or to promulgate and enforce regulations affecting, directly or indirectly, the activities of the lessee or its agents in connection with this lease or the value of the interest held under this lease. In case of conflicting provisions, statutes and regulations take precedence over this lease.

27. INTERPRETATION. This lease is to be interpreted in accordance with the rules applicable to the interpretation of contracts made in the State of Alaska. The paragraph headings are not part of this lease and are inserted only for convenience. The state and the lessee expressly agree that the law of the State of Alaska will apply in any judicial proceeding affecting this lease.

28. INTEREST IN REAL PROPERTY. It is the intention of the parties that the rights granted to the lessee by this lease constitute an interest in real property in the leased area.

29. WAIVER OF CONDITIONS. The state reserves the right to waive any breach of a provision of this lease, but any such waiver extends only to the particular breach so waived and does not limit the rights of the state with respect to any future breach; nor will the waiver of a particular breach prevent cancellation of this lease for any

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

other cause or for the same cause occurring at another time. Notwithstanding the foregoing, the state will not be deemed to have waived a provision of this lease unless it does so in writing.

30. SEVERABILITY. If it is finally determined in any judicial proceeding that any provision of this lease is invalid, the state and the lessee may jointly agree by a written amendment to this lease that, in consideration of the provisions in that written amendment, the invalid portion will be treated as severed from this lease and that the remainder of this lease, as amended, will remain in effect.

31. LOCAL HIRE. The lessee is encouraged to hire and employ local and Alaska residents and companies, to the extent they are available and qualified, for work performed on the leased area. Lessees shall submit, with the plans of operations, a proposal detailing the means by which the lessee will comply with this measure. The lessee is encouraged, in formulating this proposal, to coordinate with employment services offered by the State of Alaska and local communities and to recruit employees from local communities.

32. CONDITIONAL LEASE. If all or a part of the leased area is land that has been selected by the state under laws of the United States granting lands to the state, but the land has not been patented to the state by the United States, then this lease is a conditional lease as provided by law until the patent becomes effective. If for any reason the selection is not finally approved, or the patent does not become effective, any rental, royalty, or other production or profit-based payments made to the state under this lease will not be refunded.

33. NONDISCRIMINATION. The lessee and the lessee's contractors and subcontractors may not discriminate against any employee or applicant because of race, religion, marital status, change in marital status, pregnancy, parenthood, physical handicap, color, sex, age, or national origin as set out in AS 18.80.220. The lessee and its contractors and subcontractors must, on beginning any operations under this lease, post in a conspicuous place notices setting out this nondiscrimination provision.

34. DEFINITIONS. All words and phrases used in this lease are to be interpreted where possible in the manner required in respect to the interpretation of statutes by AS 01.10.040. However, the following words have the following meanings unless the context unavoidably requires otherwise:

(1) "oil" means crude petroleum oil and other hydrocarbons, regardless of gravity, that are produced in liquid form by ordinary production methods, including liquid hydrocarbons known as distillate or condensate recovered by separation from gas other than at a gas processing plant;

(2) "gas" means all natural gas (except helium gas) and all other hydrocarbons produced that are not defined in this lease as oil;

(3) "associated substances" means all substances except helium produced as an incident of production of oil or gas by ordinary production methods and not defined in this lease as oil or gas;

(4) "drilling" means the act of boring a hole to reach a proposed bottom hole location through which oil or gas may be produced if encountered in paying quantities, and includes redrilling, sidetracking, deepening, or other means necessary to reach the proposed bottom hole location, testing, logging, plugging, and other operations necessary and incidental to the actual boring of the hole;

(5) "reworking operations" means all operations designed to secure, restore, or improve production through some use of a hole previously drilled, including, but not limited to, mechanical or chemical treatment of any horizon, plugging back to test higher strata, etc.;

(6) "paying quantities" means production in quantities sufficient to yield a return in excess of operating costs, even though drilling and equipment costs may never be repaid and the undertaking considered as a whole may ultimately result in a loss; and

(7) "force majeure" means war, riots, acts of God, unusually severe weather, or any other cause beyond the lessee's reasonable ability to foresee or control and includes operational failure of existing transportation facilities and delays caused by judicial decisions or lack of them.

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

35. ROYALTY ON PRODUCTION. Except for oil, gas, and associated substances used on the leased area for development and production or unavoidably lost, the lessee shall pay to the state as a royalty 12.50 percent in amount or value of the oil, gas, and associated substances saved, removed, or sold from the leased area and of the gas from the leased area used on the leased area for extraction of natural gasoline or other products.

36. VALUE. (a) For the purposes of computing royalties due under this lease, the value of royalty oil, gas, or associated substances shall not be less than the highest of:

(1) the field price received by the lessee for the oil, gas, or associated substances;

(2) the volume-weighted average of the three highest field prices received by other producers in the same field or area for oil of like grade and gravity, gas of like kind and quality, or associated substances of like kind and quality at the time the oil, gas, or associated substances are sold or removed from the leased or unit area or the gas is delivered to an extraction plant if that plant is located on the leased or unit area; if there are less than three prices reported by other producers, the volume-weighted average will be calculated using the lesser number of prices received by other producers in the field or area;

(3) the lessee's posted price in the field or area for the oil, gas, or associated substances;

or

(4) the volume-weighted average of the three highest posted prices in the same field or area of the other producers in the same field or area for oil of like grade and gravity, gas of like kind and quality, or associated substances of like kind and quality at the time the oil, gas, or associated substances are sold or removed from the leased or unit area or the gas is delivered to an extraction plant if that plant is located on the leased or unit area; if there are less than three prices posted by other producers, the volume-weighted average will be calculated using the lesser number of prices posted by other producers in the field or area.

(b) If oil, gas, or associated substances are sold away from the leased or unit area, the term "field price" in subparagraph (a) above will be the cash value of all consideration received by the lessee or other producer from the purchaser of the oil, gas, or associated substances, less the lessee's actual and reasonable costs of transportation away from the leased or unit area to the point of sale. The "actual and reasonable costs of transportation" for marine transportation are as defined in 11 AAC 83.229(a), (b)(2), and (c) – (f).

(c) In the event the lessee does not sell in an arm's-length transaction the oil, gas, or associated substances, the term "field price" in subparagraphs (a) and (b) above will mean the price the lessee would expect to receive for the oil, gas, or associated substances if the lessee did sell the oil, gas, or associated substances in an arm's-length transaction, minus reasonable costs of transportation away from the leased or unit area to the point of sale or other disposition. The lessee must determine this price in a consistent and logical manner using information available to the lessee and report that price to the state.

(d) The state may establish minimum values for the purposes of computing royalties on oil, gas, or associated substances obtained from this lease, with consideration being given to the price actually received by the lessee, to the price or prices paid in the same field or area for production of like quality, to posted prices, to prices received by the lessee and/or other producers from sales occurring away from the leased area, and/or to other relevant matters. In establishing minimum values, the state may use, but is not limited to, the methodology for determining "prevailing value" as defined in 11 AAC 83.227. Each minimum value determination will be made only after the lessee has been given notice and a reasonable opportunity to be heard. Under this provision, it is expressly agreed that the minimum value of royalty oil, gas, or associated substances under this lease may not necessarily equal, and may exceed, the price of the oil, gas, or associated substances.

37. ROYALTY IN VALUE. Except to the extent that the state elects to receive all or a portion of its royalty in kind as provided in Paragraph 38 below, the lessee shall pay to the state that value of all royalty oil, gas, and associated substances as determined under Paragraph 36 above. Royalty paid in value will be free and clear of all lease expenses (and any portion of those expenses that is incurred away from the leased area), including, but not limited to, expenses for separating, cleaning, dehydration, gathering, saltwater disposal, and preparing the oil, gas, or associated substances for transportation off the leased area. All royalty that may become payable in money to the State of Alaska must be paid on or before the last federal banking day of the calendar month following the month in which the oil, gas, or associated substances are produced. The amount of all royalty in value payments which are not

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

paid when due under this lease or the amount which is subsequently determined to be due to the state or the lessee as the result of a redetermination will bear interest from the last federal banking day of the calendar month following the month in which the oil, gas, or associated substances were produced, until the obligation is paid in full. Interest shall accrue at the rate provided in AS 38.05.135(d) or as may later be amended. Royalty payments must be accompanied by such information relating to valuation of royalty as the state may require which may include, but is not limited to, run tickets, evidence of sales, shipments, and amounts of gross oil, gas, and associated substances produced.

38. ROYALTY IN KIND. (a) At the state's option, which may be exercised from time to time upon not less than 50 days' notice to the lessee, the lessee shall deliver all or a portion of the state's royalty oil, gas, or associated substances produced from the leased area in kind. Delivery will be on the leased area, unit area, or at a place mutually agreed to by the state and the lessee, and must be delivered to the State of Alaska or to any individual, firm, or corporation designated by the state.

(b) Royalty oil, gas, or associated substances delivered in kind must be delivered in good and merchantable condition, of pipeline quality, and free and clear of all lease expenses (and any portion of those expenses incurred away from the leased area), including, but not limited to, expenses for separating, cleaning, dehydration, gathering, saltwater disposal, and preparing the oil, gas, or associated substances for transportation off the leased area.

(c) After having given notice of its intention to take, or after having taken its royalty oil, gas, or associated substances in kind, the state, at its option, may elect to receive a different portion or none of its royalty in kind. If, under federal regulations, the taking of royalty oil, gas, or associated substances in value by the state creates a supplier-purchaser relationship, the lessee hereby waives its right to continue to receive royalty oil, gas, or associated substances under that relationship, and further agrees that it will require any purchasers of the royalty oil, gas, or associated substances likewise to waive any supplier-purchaser rights.

(d) The lessee shall furnish storage for royalty oil, gas, and associated substances produced from the leased or unit area to the same extent that the lessee provides storage for the lessee's share of oil, gas, and associated substances. The lessee shall not be liable for the loss or destruction of stored royalty oil, gas and associated substances from causes beyond the lessee's ability to control.

(e) If a state royalty purchaser refuses or for any reason fails to take delivery of oil, gas, or associated substances, or in an emergency, and with as much notice to the lessee as is practical or reasonable under the circumstances, the state may elect without penalty to underlift for up to six months all or a portion of the state's royalty on oil, gas, or associated substances produced from the leased or unit area and taken in kind. The state's right to underlift is limited to the portion of royalty oil, gas, or associated substances that the royalty purchaser refused or failed to take delivery of, or the portion necessary to meet the emergency condition. Underlifted oil, gas, or associated substances may be recovered by the state at a daily rate not to exceed 100 percent of its royalty interest share of daily production at the time of the underlift recovery.

39. REDUCTION OF ROYALTY. Lessee may request a reduction of royalty in accordance with the applicable statutes and regulations in effect on the date of application for the reduction.

40. EFFECTIVE DATE. This lease takes effect on

BY SIGNING THIS LEASE, the state as lessor and the lessee agree to be bound by its provisions.

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

STATE OF ALASKA

By: _____

Kevin R. Banks

Director, Division of Oil and Gas

STATE OF ALASKA)
) ss.
Third Judicial District)

On _____, before me appeared _____ of the Division of Oil and Gas of the State of Alaska, Department of Natural Resources, and who executed this lease and acknowledged voluntarily signing it on behalf of the State of Alaska as lessor.

Notary public in and for the State of Alaska
My commission expires _____

LESSEE: _____

Signature: _____

Printed Name/Title: _____

INSERT NOTARY ACKNOWLEDGMENT OF LESSEE'S SIGNATURE HERE.

LESSEE: _____

Signature: _____

ACMP Proposed Consistency Determination – Beaufort Sea Areawide Oil and Gas Lease Sales, 2009-2018

Printed Name/Title: _____

INSERT NOTARY ACKNOWLEDGMENT OF LESSEE'S SIGNATURE HERE.

LESSEE: _____

Signature: _____

Printed Name/Title: _____

INSERT NOTARY ACKNOWLEDGMENT OF LESSEE'S SIGNATURE HERE.