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STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

May 9, 2007

Dr. William T. Hogarth
Assistant Administrator for Fisheries
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
1315 East West Highway
Silver Spring, MD 20910

Dear Dr. Hogarth:

The proposed rule to list Cook Inlet beluga whale as endangered under the Endangered Species Act (FR Vol. 72, No. 76, April 20, 2007, p. 19855) has caused great concern among the residents of Southcentral Alaska pertaining to their activities in Cook Inlet and its drainages. We therefore respectfully request that the National Marine Fisheries Service extend the comment period one additional month, to July 19, 2007. The proposed rule provides only a 60-day comment period ending June 19, 2007, which is insufficient for us to gather, analyze, and prepare our comments. It is also insufficient time for us to provide the requested information concerning the Cook Inlet beluga population and its habitat, for evaluating development activities, for preparing economic information, and for compiling a comprehensive list of the existing regulatory mechanisms to protect Cook Inlet beluga whales currently in effect in Alaska laws, regulations, and permit conditions.

The comment period for proposed listings under the Endangered Species Act is commonly a 90-day period. I believe the public and communities within the Cook Inlet watershed should be afforded 90 days to comment given their concerns over this issue. Please note that the existing comment period coincides with the start of the affected residents' subsistence, personal use, and commercial season for harvest of fish, tourism and other industries' seasonal startups, unavailability of the biologists due to the start of field season, and the extensive involvement of whale expertise in the May meeting of the International Whaling Commission.

The State of Alaska also requests that the National Marine Fisheries Service conduct public hearings in the major communities within the Cook Inlet watershed,

Dr. William T. Hogarth
May 9, 2007
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including Anchorage, Palmer/Wasilla, Kenai/Soldotna, Homer and other communities as necessary to fully understand the concerns of Cook Inlet residents regarding this proposed listing.

We respectfully request that the following information be provided to the public at each hearing in addition to the opportunity for oral public comments: 1) a summary of the status of Cook Inlet beluga whales, and the range of modeling predictions; 2) information needed to evaluate options for designation of critical habitat; 3) discussion of development and other activities occurring or proposed in the communities that could be subject to federal section 7 consultation if beluga whales are listed as endangered; 4) evaluation process that will be used to render a nonlisting determination and proceed to update the conservation plan versus a listing determination that necessitates development of a recovery plan; and, 5) the range and extent of economic information that will be used in the subsequent economic analyses.

Thank you for your expedited consideration of these requests.

Sincerely,



Sarah Palin
Governor

cc: Alaska Congressional Delegation
Mayors of all Cook Inlet Municipalities

STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

P.O. BOX 115528
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May 10, 2007

Ms. Kaja Brix
Assistant Regional Administrator-Alaska Region
National Marine Fisheries Service
National Oceanic and Atmospheric Association
P.O. Box 21668
Juneau, AK 99802

Dear Ms. Brix:

By virtue of this letter, and the enclosed letter from Governor Sarah Palin to Dr. William Hogarth dated May 9, 2007, the State of Alaska requests that public hearings be held on the proposed rule to list beluga whales in Cook Inlet as endangered under the Endangered Species Act (ESA).

Specifically, we request that the National Marine Fisheries Service (NMFS) conduct public hearings in Anchorage, Palmer/Wasilla, Kenai/Soldotna, Homer and other communities as necessary to fully understand the concerns of Cook Inlet and southcentral Alaska residents regarding this potential ESA listing.

As noted in Governor Palin's letter, we request that a suite of information be provided to the public at each hearing, including materials and discussion on 1) status of Cook Inlet beluga whales, 2) information regarding designation of critical habitat, 3) activities occurring or proposed in the area that could be subject to consultation under section 7 of the ESA, 4) the process that would be used to render a nonlisting determination versus a listing determination, and 5) economic information that will be used in subsequent economic analyses.

Thank you for your consideration.

Sincerely,



Denby S. Lloyd
Commissioner

Enclosure



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910
THE DIRECTOR

MAY 23 2007

The Honorable Sarah Palin
Governor of Alaska
P.O. Box 110001
Juneau, Alaska 99811-0001


Dear Governor Palin:

Thank you for your letter regarding the proposal by NOAA's National Marine Fisheries Service (NMFS) to list the Cook Inlet beluga whale as an endangered species under the Endangered Species Act, specifically concerning an extension of the public comment period and request for public hearings.

The Endangered Species Act specifically provides for at least one public hearing to be held promptly if requested within 45 days of publication of the proposal. NMFS will schedule separate hearings to be held in Anchorage and on the Kenai Peninsula. Specific dates and locations for these hearings will be announced in local newspapers and in the *Federal Register*. To allow time for these hearings to be scheduled, and in response to your request, the public comment period for this action will be extended 45 days, now ending August 3, 2007.

NMFS will continue to coordinate this listing process with the State of Alaska, and I appreciate your interest in this matter.

Sincerely,



William T. Hogarth, Ph.D.



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August 1, 2007

Dr. William Hogarth
Assistant Administrator for Fisheries
National Oceanic and Atmospheric Association
1315 East West Highway, 9th Floor
Silver Spring, MD 20910

Dear Dr. Hogarth:

I am writing to express my extreme concern regarding the April 20, 2007, proposed rule responding to a petition to list the Cook Inlet stock of beluga whales under the Endangered Species Act (ESA). On June 22, 2000, National Marine Fisheries Service (NMFS) published a final rule that evaluated the factors in previous petitions and determined a listing was not warranted. Nothing has changed since 2000 to warrant a listing under ESA today.

NMFS predicted that the population would be very slow to recover because of its low reproductive rate, and developed co-management agreements with Alaska Native organizations to provide for subsistence and to conserve whales, including suspending hunting some years to encourage recovery of the population.

NMFS's recent Status Assessment evaluated factors such as habitat, prey, predation, disease, pollution, and noise and found nothing has changed that would cause further decline. The activities that NMFS and the state can regulate, such as hunting, oil and gas development, construction, and vessel traffic, are already being closely examined, regulated, and are not causing a decline. In fact, recent beluga surveys indicate that the population is beginning to increase as predicted.

In 2000, NMFS committed to cooperate with the state and others to adopt a conservation plan that would seek funding for research and monitoring factors that influence the population. I urge NMFS to join the November 2006 request by the mayors of the city of Anchorage, the Matanuska-Susitna Borough, and the Kenai Peninsula to combine efforts to pursue funding for 3-5 years in order to fully study these whales. An ESA listing would divert the NMFS limited resources by requiring

Dr. William Hogarth

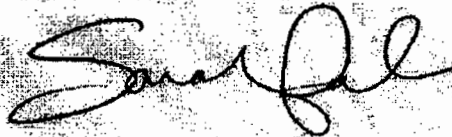
August 1, 2007

Page 2

every federal decision that permits, funds, or conducts any activity in the entire Cook Inlet watershed to undergo consultation reviews that do nothing to benefit the Cook Inlet beluga whales or our understanding of them.

I urge you to again find that a listing under ESA is unwarranted.

Sincerely,

A handwritten signature in black ink, appearing to read "Sarah Palin". The signature is fluid and cursive, with a prominent initial "S" and a trailing flourish.

Sarah Palin
Governor



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910
THE DIRECTOR

AUG 22 2007

The Honorable Sarah Palin
Governor of Alaska
P.O. Box 110001
Juneau, Alaska 99811-0001

Dear Governor Palin:

Thank you for your letter regarding the proposed rule to list the Cook Inlet beluga whale as endangered under the Endangered Species Act (ESA).

In addition to your letter, NOAA's National Marine Fisheries Service (NMFS) received oral comments from your office at several public hearings regarding this proposed rule. We will consider both your written comments and the oral testimony before issuing a final rule on this action.

Pursuant to Section 4 of the ESA, NMFS has 1 year from the date of publication of a proposed rule to make a final decision, so our decision is due by April 20, 2008. The Cook Inlet beluga whale will continue to be managed under the Marine Mammal Protection Act as a depleted species, and NMFS will provide all statutory protections afforded by the Act. These will include efforts to pursue funding to continue and expand the comprehensive research program for Cook Inlet beluga whales as outlined in our Draft Conservation Plan.

If you have further questions, please contact Eric Webster, Director of NOAA's Office of Legislative Affairs, at (202) 482-4981.

Sincerely,

William T. Hogarth, Ph.D.



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THE ASSISTANT ADMINISTRATOR
FOR FISHERIES



STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPARTMENT OF FISH AND GAME

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March 10, 2008

Kaja Brix
Assistant Regional Administrator
Protected Resources Division, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802

Re: Beluga prey studies in Cook Inlet

Ms. Brix:

The Alaska Department of Fish and Game appreciates the opportunity to work collaboratively with NMFS to develop proposals on prey species of Cook Inlet beluga whales (CIB). During our joint teleconference of January 29th agreement was reached among ADF&G and NMFS marine mammal and fisheries scientists on the conceptual approach for two studies that would provide a contribution towards CIB conservation. Specifically, we agreed that ADF&G would explore the development of proposals directed towards (1) reviewing/summarizing the available information on the distribution and abundance of beluga prey species in Cook Inlet and (2) a field study to examine prey distribution and abundance inside and outside of areas of concentrated use by belugas.

Relative to summarizing available information on prey species we will develop a proposal outlining the compilation of historic salmon escapement and harvest data. As for a field research study to examine prey inside and outside of areas of concentrated use of belugas, we will not be submitting a proposal at this time.

Any study to address the relationship between prey availability and the status of Cook Inlet beluga would need to be of a quantitative nature. That is, merely describing qualitatively whether or not beluga feed on a given prey and knowing the biomass of a few prey populations, while interesting from a purely descriptive standpoint, will do little to further decision support for conservation issues. Tracking changes in the entire prey base (including salmon, eulachon, walleye Pollock, invertebrates, etc.) in tandem with careful estimates of diet composition (proportion by weight of each prey species in the diet of belugas) for a minimum of ten years would be needed to address the question of whether beluga diets change as a function of fishery effects on their prey.

The key ecological phenomenon and question that needs to be addressed is exploitative competition. Unfortunately, exploitative competition is nearly impossible to demonstrate in natural environments. Most peer reviewed articles claiming such demonstrations almost always involve sessile organisms, such as plants or invertebrates or species amenable to field experimentation. It requires estimating availability of **all** prey and then determining which prey were selected and used by both predators. Getting at prey availability is arduous in Cook Inlet. For instance, the Department only enumerates salmon runs for selected streams. To fully estimate all salmon in Cook Inlet would require an Inlet-wide mark-recapture study with a hefty price tag per year. Costs of estimating biomass of all other prey species would further accumulate quickly.

But even assuming prey availability was trackable, prey use by beluga is problematic. Sample sizes for diet composition estimation will be a function of variability across individuals. At a minimum, at least 25 animals would need to be sampled for prey use. If opportunistic sampling of stranded whales were the only source, odds are against reaching minimum sample sizes. Furthermore, diet no doubt changes with time of year, and may vary significantly between even and odd years, so this sampling would need to be repeated several times per year, which is unlikely. Finally, it is not just prey that affects beluga feeding but also the underwater structure and water currents. For this reason it is important to comprehensively evaluate seasonal differences in beluga movements and preferred feeding environments.

A better approach might be to look for signals of exploitative competition. Limited prey would be manifested in slowed growth and reduced condition. This procedure would require a tissue sample at the very least. Not finding these tell tale signs would cast doubt on fishery effects being the culprit. However, if they are found, this alone would only suggest something is limiting prey availability. Attributing such a limitation to fishery effects will be difficult to demonstrate definitively because it would require the type of comprehensive multiyear study outlined above.

Given such considerations, it is apparent to us that prey studies need to be comprehensive and coordinated to provide any chance of developing useful data relating to prey availability and effects on beluga whales. Such a coordinated study would need to include at a minimum, a multi-year evaluation of growth and condition combined with an assessment of year-long diet and prey availability in the Inlet. Given this, and the limited resources available, the Department does not feel it can justify participation in field studies unlikely to generate useful information.

If federal funding for a more complete study is obtained, and a comprehensive evaluation program is designed and reviewed, the Department would certainly consider participating in the research project in the hope that it would result in useful data. In the interim, one element that your agency previously suggested is compilation of historic salmon escapement and harvest data. As stated above, we could assist the Service in this effort.

If you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. Lang".

Doug Vincent-Lang, ESA Coordinator
Alaska Department of Fish and Game

STATE OF ALASKA

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May 22, 2008

Ms. Kaja Brix
Assistant Regional Administrator
Protected Resources Division
National Marine Fisheries Service
Alaska Regional Office
Box 21668
Juneau, AK 99802

Re: Ice Seals: RIN 0648-AV36

Ms. Brix:

Attached is information from the State of Alaska regarding ice seals as noticed in Federal Register Vol. 73, No. 61 dated March 28, 2008.

As a trustee of Alaska's fish and wildlife resources, we are interested in working collaboratively with the National Marine Fisheries Service to assure the continued viability and conservation of Alaska's ice seal species. The Departments of Fish and Game, Natural Resources, and Environmental Conservation all have information that could inform the development of the status review on ice seals.

We are willing to discuss this information in more detail if you wish. Please coordinate any requests for information through me.

Sincerely,



Doug Vincent-Lang
ESA Coordinator, Alaska Department of Fish and Game

cc: Cora Crome, Ken Taylor, Brad Meyen, Doug Larsen, Bob Small

Comments to NMFS on request for information for the preparation of status reviews for ribbon, bearded, ringed¹, and spotted seals

Alaska Department of Fish and Game

The Alaska Department of Fish and Game, Arctic Marine Mammal Program (AMMP) conducts a bio-monitoring program that relies on measurements and samples from the Native Alaska subsistence seal harvest to provide essential information on the health and status of sea ice associated seals. The samples allow us to monitor, document, and evaluate changes in population status, species distribution, availability to subsistence hunters, and contaminant levels. The program works with villages from Hooper Bay in the Bering Sea to Kaktovik in the Beaufort Sea. Collections are ongoing and these data are in various stages of analyses and many are not currently available for incorporation in a status review. That said, the Department is willing to work with NMFS to determine how to prioritize these data analyses so that it can provide the most pertinent and important information as the status review develops. In addition, the Division of Subsistence routinely collects harvest and use data for all fish and wildlife resources, including ice seals, when it conducts a systematic household survey in a community.

Specifically, the Department has information pertaining to the following categories. If any of this information is of interest to you, we would welcome the opportunity to discuss it with you in further detail.

Abundance: The AMMP collects indices of abundance including 1) productivity, 2) age at first reproduction, and 3) information from hunters regarding abundance/availability.

Reproductive Success: The AMMP monitors productivity by examining female reproductive tracts which provide information about the proportion of females that are pregnant each year and at what age they first become pregnant. Our information does not allow us to look at whether or not those pregnancies are successful or if pups survive to adulthood.

Age Structure: The AMMP determines age for as many individuals as possible, but does not have information on what proportion of the harvest our samples comprise. Because our samples come from the harvest, they may not be representative of the population because of selection by hunters. The AMMP does have information on the age structure of the portion of the harvest that we sample.

¹ Note: in the Federal Register Notice the species name for ringed seal is listed as *fasciata*; it should be *hispidus*.

Distribution: The AMMP is a cooperator in a satellite telemetry study of ringed seals and has dive data and movements for 16 ringed seals and movement data only for another four ringed seals. These seals were tagged in the fall of 2007 in Kotzebue Sound. The program also has some information about species availability to hunters, which provides some information on seasonal distribution.

Habitat Selection: The AMMP hopes that the analysis of the movements and dive behavior of the tagged ringed seals will provide some insights on habitat use and selection. Some of those tags are still providing data and none of these data have been analyzed.

Food Habits: The AMMP collects stomachs from all four species of seals harvested and has extensive stomach content data for bearded, ringed, and spotted seals. The program also has data from the 1980s for retrospective comparisons of stomach contents to see if diet has changed. Unfortunately, ribbon seal stomachs are almost always empty and as a result the AMMP has very little to add to what is known for that species.

Population Density and Trends: The AMMP has no direct information on population size and trend, however age at first reproduction and age composition of the harvest may provide some insight into the current status of the populations.

Distinct Population Segments: The AMMP has collected genetics samples for approximately 500 of each ringed, bearded, and spotted seals, as well as 40 ribbon seals for use in genetic studies. These samples are being analyzed by Greg O'Corry-Crowe at Harbor Branch Oceanographic Institute, College of the Atlantic in Florida for stock structure using both mitochondria and microsatellite techniques.

Effects of Climate and Sea Ice Change on Distribution and Abundance and their Prey: Responses to the AMMP questionnaire says there has been no perceived change in abundance or distribution, however the time period seals are available to hunters is shorter. Information on how prey has changed through time, which may be related to climate change, is available from stomach contents. However there are other factors (e.g., regime shifts) that may be contributing as well. These data have not been analyzed.

Other Potential Threats: The AMMP has substantial information on contaminant levels for ice seals harvested in Alaska. The AMMP has published an analysis of polybrominated diphenyl ether (PBDEs) compounds (Quakenbush 2007) and have a paper in review on perfluorinated contaminants (Quakenbush and Citta, in review) in all four species. The AMMP also has data on concentrations of 19 selected metals in liver for 32 ringed seals, 38 bearded seals, 17 spotted seals, and nine ribbon seals. The AMMP also has data on concentrations of classic organochlorines (PCB, DDT, HCH, CHL)

in the blubber of 32 ringed, 33 bearded, 17 spotted, and nine ribbon seals and in the liver of 23 ringed, 20 bearded, 15 spotted, and eight ribbon seals.

Hunting Conservation Programs: The AMMP funded a study that was proposed and conducted by Kawerak, Inc., on the effective use of small caliber ammunition for the harvest of ice seals (Ahmasuk 2006) to provide hunters with information for improving hunting practices. At the request of representatives of the marine mammal hunting villages in the Y-K Delta), the AMMP also developed a Traditional Hunting Student Guide for ice seal hunting in the Yup'ik region. This student guide will be used by the Y-K School District to educate young hunters about ways to improve hunting skills and minimize the number of seals lost to sinking.

Subsistence Harvest Monitoring: The Division of Subsistence routinely collects harvest and use data for all fish and wildlife resources, including ice seals, when it conducts a systematic household survey in communities throughout western and northern Alaska. The results of these surveys are included in the Community Subsistence Information System (CSIS) (formerly the Community Profile Database (CPDB). This is available on the Division of Subsistence website. A search in the database by resource will provide a table of harvest numbers and other information from any survey we have conducted.

Since 1992, the Division has partnered with the Alaska Native Harbor Seal Commission to produce annual estimates of subsistence takes of harbor seals and sea lions (all years except 1999). Although these species are not ice seals, there is an overlap of the range of harbor seals and spotted seals in western Bristol Bay. The Division has developed a method (based on month of harvest) to separate subsistence takes of harbor and spotted seals in this area, and our annual technical reports include tables with estimated takes of spotted seals for western Bristol Bay. All of the following technical reports (one for each year from 1992 through 2005, except 1999) are available in pdf format under Articles and Publications at the division website: 229, 233, 236, 238, 241, 246, 250, 266, 273, 277, 291, 303, and 319 (the report for 2006, TP 339, is still in preparation). The report for 2005 (319) includes tables for each western Bristol Bay community with historic take estimates for spotted seals back to 1992.

Three other relevant Technical Papers of include , "The subsistence harvest of seals and sea lions by Alaska Natives in three communities of the Yukon-Kuskokwim Delta, Alaska, 1998 – 1999" (TP 257); "The subsistence harvest of seals and sea lions by Alaska Natives in the Norton Sound-Bering Strait Region, Alaska, 1996-1997" (TP 242),; and "The subsistence harvest of seals and sea lions by Alaska Natives in three communities of the Yukon-Kuskokwim Delta, Alaska, 1997-98" (TP 255). For information about these reports or their contents please contact Jim Fall.

Additional Division of Subsistence reports characterize customary and traditional hunting patterns of various species of marine mammals, including each species of ice seals, for a number of Arctic communities such as Kotzebue (TP 167:89-108), Nome (TP

148:36-40), Shishmaref (TP 112:82-84), Brevig Mission, Golovin, and Shishmaref where per capita harvests of marine mammals exceeded all other resource categories (TP 188), and Northern Bering Sea and Southern Chukchi Sea Communities (TP 4, TP 56).

Finally, the Division of Wildlife Conservation is developing a harvest monitoring program for ice seals.

Alaska Department of Environmental Conservation (ADEC)

Following is an overview of the ADEC's environmental monitoring and permitting in the Arctic. The ADEC's agency mission involves the permitting and authorization of actions relating to oil and gas development, oil spill prevention and response, pollutant discharges and other activities affecting the waters of the Arctic. The information organized and presented in the following categories:

- Water quality management
- Air quality management
- Regulation of solid waste disposal
- Oil spill prevention and response
- Contaminated sites
- Additional information

Water Quality Management: The Water Division regulates water quality for the State of Alaska through water quality and wastewater standards found in the Alaska Administrative Code at 18 AAC 70 and 18 AAC 72. These regulations provide specificity for the State of Alaska's implementation of the federal Clean Water Act. The water quality standards apply to both marine and fresh waters and protect water quality for a wide variety of uses, including growth and propagation of aquatic life, which includes marine mammals and their prey. The state's water and wastewater regulations are based on the general prohibition principle, such that no person may cause or contribute to a violation of the water quality standards in state waters and discharges to state waters must be authorized by a permit. The permits include wastewater discharge monitoring and reporting requirements to determine compliance.

For waters that are of naturally high quality, the water quality standards include an antidegradation provision that prohibits any degradation of water quality unless certain conditions are met and even then all uses still have to be protected. Alaska's water quality standards also apply to waters of the outer continental shelf adjacent to Alaska by virtue of the Alaska Coastal Management Program.

The Division's Non-Point Source Water Pollution Control Program regulates stormwater pollution of water bodies through review and approval of construction plans and stormwater pollution prevention plans from industrial sites.

Industrial Wastewater Discharges: At present, the following oil and gas facilities are located in or adjacent to Arctic waters:

- BP Exploration Northstar Facility
- BP Endicott Satellite Island
- Pioneer Oooguruk Project
- BP Milne Point (Kuparuk River)
- Prudhoe Bay (BP and various others)
- Conoco Phillips Kuparuk

There is also an additional project currently in the development and permitting stage:

- BP Liberty Project (drilled from the Endicott Satellite Island site)

Arctic oil and gas wastewater discharges: Arctic oil and gas wastewater discharges are mainly permitted through the EPA's NPDES Arctic General Permit. This permit covers discharges on the Outer Continental Shelf and state waters. ADEC issued a Certificate of Reasonable Assurance (401 Certification) for the EPA's NPDES Arctic General Permit in 2006. Water quality parameters of concern in ADEC's water quality certification were

- Hydrocarbons from drilling operations
- Increased sediment loading from drilling operations
- Increased metals loading from drilling muds

Many of the harmful effluents produced on the North Slope are transported and deep injected to Class 1 Underground Injection Control (UIC) wells under the EPA's Safe Drinking Water Act jurisdiction. Therefore, drilling wastes, some domestic wastes, and other effluents avoid discharge to surface marine or fresh water.

Water Quality Monitoring and Assessment: ADEC has no independent baseline water quality data for the Arctic Ocean. The Minerals Management Service has conducted baseline water quality studies in the area, through contracts with the University of Alaska, Fairbanks' Institute of Marine Science. In addition, the U.S. Army Corp of Engineers has conducted studies on contaminants in snow and ice in this area through the Cold Regions Research and Engineering Laboratory (CRREL) Alaska Projects Office in Fairbanks.

The January 24, 2006 *EPA Ocean Discharge Criteria Evaluation of the Arctic NPDES General Permit* report also provides critical baseline information and updates regarding water quality issues in the Beaufort and Chukchi Seas. The report identifies biologically sensitive areas and discusses the seasonal distribution of marine mammals, including ice seals in the biological resources section. The biological resources section also discusses ice seal critical areas or habitats in detail.

Air Quality Management: The Air Quality Division regulates air quality for the State of Alaska through the air quality standards found in the Alaska Administrative Code at 18 AAC 50 and the vehicle emission standards at 18 AAC 52. The State of Alaska has primary authority for implementation of the federal Clean Air Act on state lands and throughout the OCS by virtue of the Alaska Coastal Management Program which effectively extends state air quality standards and regulation offshore.

While the Air Quality Division permits individual facilities on the North Slope, the division does not monitor regional air quality nor is air quality monitoring data available from the EPA for the Outer Continental Shelf region. The Environmental Protection Agency (EPA) is responsible for issuing permits on the Outer Continental Shelf.

Regulation of Solid Waste Disposal: Under the general provisions of Subtitle D of the Resource Conservation and Recovery Act (RCRA), the Division of Environmental Health, Solid Waste Program has an approved program for regulation of solid waste disposal in Alaska. The state's solid waste management regulations, based on the federal standards in 40 C.F.R 257 and 40 C.F.R 258, are found in the Alaska Administrative Code at 18 AAC 60. These regulations make a general distinction between municipal and non-municipal disposal facilities and include requirements for the design, operation, closure, and monitoring of those facilities to minimize harm to human health and the environment. As with air and water quality, the State's solid waste disposal requirements apply to the OCS by virtue of the Alaska Coastal Management Program. The Solid Waste Program permits and regulates both municipal and non-municipal disposal facilities in the arctic region of Alaska. Non-municipal facilities are associated with the Oil & Gas industry and the Mining industry, and municipal facilities are found in every community. At present, every disposal facility on the North Slope is either permitted or authorized under a plan approval.

Oil and Gas Solid Waste Facilities: The Solid Waste Program regulates oil and gas drilling waste management facilities on the North Slope. Drilling waste is generated by oil and gas exploration and production activities. Drilling waste, which consists of drilling mud, cuttings, pigging waste, fluids, and other related wastes, is a solid waste that is excluded from regulation as a hazardous waste through 40 C.F.R 261.4(b)(5). However, drilling waste may include contaminants that pose a significant public health and environmental risk, and as such, drilling waste storage, treatment, and disposal facilities must be designed and operated to minimize the potential for contaminant release. The Solid Waste Program requires surface water monitoring at permanent North Slope oil and gas solid waste facilities and inspects these facilities annually.

On the North Slope, drilling waste is primarily disposed of by underground injection although management can involve surface storage of solid waste prior to injection.

The Solid Waste Program authorizes drilling waste management through several mechanisms, including individual solid waste permits, solid waste general permits, solid waste treatment permits, and temporary storage plan approvals.

Current authorizations and specific facilities on the North Slope include the following:

- Individual Solid Waste Permit – Drilling Waste Monofill
 - BP Milne Point Central Reserve Pit

- Solid Waste General Permits - Drilling Waste Long-Term Storage
 - BP CC2A Drilling Waste Storage Facility

- BP T Pad Drilling Waste Storage Facility
- BP W Pad Drilling Waste Storage Facility
- BP Endicott Drilling Waste Storage Facility
- ConocoPhillips Drill Site 1H Drilling Waste Storage Facility
- ConocoPhillips Central Processing Facility 1 Drilling Waste Storage Facility
- Solid Waste Treatment Permits – Grind and Inject Facilities
 - BP Drill Site 4 Grind and Inject Facility
 - BP Badami Grind and Inject Facility
 - BP Northstar Grind and Inject Facility
 - ConocoPhillips Alpine Grind and Inject Facility
 - Pioneer Ooguruk Grind and Inject Facility
- Solid Waste Plan Approvals - Drilling Waste Temporary Storage
 - The Solid Waste Program reviews and approves drilling waste temporary storage plans for twenty to twenty-five sites per year. This temporary storage is primarily in support of oil and gas exploration drilling. Temporary storage is normally for less than one year.

Municipal Solid Waste Facilities: Municipal solid waste landfills are subdivided into three classifications:

- Class I (greater than 20 tons per day)
 - The lone Class I landfill on the North Slope is the Oxbow Landfill at Prudhoe Bay. This landfill is designed as a freezeback landfill, which means that the overall intent is for the disposed wastes to become permanently frozen. The progress towards achieving freezeback is monitored by periodically measuring the temperature below, within, and around the waste pile.
- Class II (5 to 20 tons per day)
 - The only Class II landfill on the North Slope is located in Barrow. This landfill was opened in July 2007 and is located approximately six miles inland from the coast. Because this landfill is operated in conjunction with a Thermal Oxidation System incinerator, it receives only incinerator ash and inert wastes. A second landfill in Barrow is in the process of being permanently closed.
- Class III (less than 5 tons per day)
 - There are seven Class III landfills on the North Slope. The following landfills are located in Arctic coastal communities: Atqasuk, Kaktovik, Nuiqsut, Point Hope, Point Lay, and Wainwright.

The specific requirements for design, operation, monitoring, and closure of the landfill vary with the classification: the larger the landfill, the more stringent the requirements.

Class I and Class II landfills are inspected at least once per year; permitted Class III landfills are inspected at least once every five years.

Oil Spill Prevention and Response: The DEC Division of Spill Prevention and Response (SPAR) is responsible for protecting Alaska's land, waters and air from oil and hazardous substances spills. SPAR regulates spill prevention through review and approval of spill prevention plans for oil terminals, pipelines, tank vessels, barges, refineries, oil exploration facilities and oil production facilities. SPAR ensures response preparedness through the review and approval of oil discharge contingency plans, inspections, oil spill response exercises, oil spill response drills. Oil Spill contingency plans are required under Alaska Statute AS 46.04.030 and Alaska Administrative Code regulations at 18 AAC 75. Oil Spill Proof of Financial Responsibility is required under Alaska Statute AS 46.04.030. The State of Alaska requires oil spill contingency plans for the following facilities:

- Crude oil tankers
- Non-crude vessels and barges
- Offshore oil and gas exploration facilities
- Onshore oil and gas exploration facilities
- Crude oil transmission pipelines
- Oil flow lines and gathering lines
- Noncrude oil terminals (over 10,000 bbls)
- Nontank vessels (over 400 gross tons)

The DEC Spill Prevention and Response (SPAR) Division's mission is to prevent, respond and ensure the cleanup of unauthorized discharges of oil and hazardous substances. The Industry Preparedness Program (IPP) requires regulated facilities and vessels to develop state-approved oil spill response and contingency plans, to establish a facility-wide spill prevention program and to ensure that personnel, equipment and financial resources are available to respond to spills. In the event of a spill, the Prevention and Emergency Response Program (PERP) serves as the State's emergency responders to oil and hazardous substance spills and ensures that cleanup measures are implemented as soon as possible. A search of the ADEC oil spill database revealed a total of seven oil spills, six in the Beaufort Sea and one in the Chukchi Sea, primarily from oil production and exploration activities. Detailed information on historical oil spill is available in the department's latest report, *DEC 10-Year Statewide Summary: Oil and Hazardous Substances Spill Data*, and the *Summary of Oil and Hazardous Substances Spills by Subarea*, both of which are available on the program's web site.

Federal Oil Spill Oversight – Outer Continental Shelf: The State of Alaska has jurisdiction for oil spill prevention on state land and in state waters, but state spill prevention requirements are extended to the OCS by virtue of the Alaska Coastal Management Program. In addition, the federal government has jurisdiction for oil spill prevention and response in federal waters through the federal Oil Pollution Act (OPA) of 1990. This oversight is managed through the Minerals Management Service (MMS) through inspections, oil spill risk analysis and through an environmental evaluation and

permitting process. The U.S. Coast Guard is also involved in vessel inspections, oil transfer regulation and oil spill prevention, control and countermeasures.

Contaminated Sites: The DEC Contaminated Sites program oversees or conducts cleanup of contaminated sites based on their danger to public health and the environment. The contaminated sites cleanup process is governed by Alaska Statutes at Title 46 and Alaska Administrative Code regulations at 18 AAC 75 and 18 AAC 78. Cleanup processes overseen by a federal agency, such as those at formerly used defense sites are also governed by federal regulations.

The ADEC Contaminated Sites database contains information on five sites located adjacent to Arctic waters:

- Point Lonely – Nuiqsut, AK
- Umiat Test Wells – Nuiqsut, AK
- Collinson Point Intermediate DEW Line Station – Kaktovik, AK
- Barter Island DEW Line Station – Kaktovik, AK
- Saint Lawrence Island – Formerly Used Defense Sites

Additional Information: We suggest that a report prepared by Oasis Environmental for ADEC entitled "*North Slope Nearshore and Offshore Breakup Study Literature Search and Analysis of Conditions and Dates*" dated July 15, 2006 may be of interest. The report includes information on sea ice conditions in the Beaufort, Chukchi and Bering Sea regions.

In addition, the Minerals Management Service (MMS) has funded an ongoing study that looks at sea ice modeling in the landfast ice zone of the Beaufort and Chukchi Seas. The latest report from this study was produced at the Geophysical Institute at the University of Alaska, Fairbanks, and is entitled "*Mapping and Characterization of Recurring Spring Leads and Landfast Ice in the Beaufort and Chukchi Seas*" (Eicken, et al, 2006). The information in this report on large-scale sea-ice characteristics may be of interest your efforts.

REFERENCES

DEC Air Permits Permit Information, available at
<http://www.dec.state.ak.us/air/ap/mainair.htm>
DEC Contaminated Sites Database, available at
http://www.dec.state.ak.us/spar/csp/db_search.htm
DEC Solid Waste Sites, Northern Region, available at
<http://www.dec.state.ak.us/eh/sw/northern.htm>
DEC Wastewater Permits Database, available at
<http://www.dec.state.ak.us/ias/permitsearch/default.aspx>

DEC (2007) *DEC 10-Year Statewide Summary: Oil and Hazardous Substances Spill Data* (July 1, 1995 – June 30, 2007) available at <http://www.dec.state.ak.us/spar/perp/subreports.htm>

DEC (2007) *Summary of Oil and Hazardous Substance Spills by Subarea (July 1, 1995 – June 30, 2005)* available at http://www.dec.state.ak.us/spar/perp/docs/10year_rpt/10Yr_Subareas_FINAL.pdf

Eicken, et al, (2006). *Mapping and Characterization of Recurring Spring Leads and Landfast Ice in the Beaufort and Chukchi Seas*, available at http://mms.gina.alaska.edu/private/reports/MMS05-068_final.pdf

EPA (2006) *Ocean Discharge Criteria Evaluation of the Arctic NPDES General Permit for Oil and Gas Exploration (Permit No.: AKG280000, January 24, 2006,*

MMS (2007) *Chukchi Sea Planning Area Oil and Gas Lease Sale 193 – Activities in the Chukchi Sea* available at http://www.mms.gov/alaska/ref/EIS%20EA/Chukchi_DEIS_193/DEIS_193.htm

Oasis Environmental (2006) *North Slope Nearshore and Offshore Breakup Study Literature Search and Analysis of Conditions and Dates*, summary available at <http://www.dec.state.ak.us/spar/ipp/docs/IceTOC.pdf>

Alaska Department of Natural Resources (DNR)

The following is a summary of DNR regulatory authorities and a compilation of mitigation measures that pertain to Ice Seals or other marine mammals. This information is organized by DNR division.

OFFICE OF PROJECT MANAGEMENT & PERMITTING: The Office of Project Management and Permitting (OPMP) functions under AS 38.05.020(b)(9) which requires the Commissioner of DNR to coordinate permitting activities for all large resource development projects, and AS 27.05.010(b) which requires DNR to be the lead agency for permitting all large mine projects. OPMP's goal is to ensure that all aspects of a large project are considered during a single review and approval process. The OPMP is currently coordinating the permitting of mining, oil & gas, and transportation projects, including BP's Liberty project, BLM's planning for NPRA-NE, the Bullen Point infrastructure corridor permitting, and Shell Oil's OCS exploratory activities.

OPMP assigns a project manager to serve as the primary contact for a large project. The project manager coordinates the permitting activities of the state team, the Large Project Team, assigned to work on the project. The Large Project Team is an interagency group, coordinated by OPMP, which works cooperatively with project applicants and operators, federal resource agencies, and the Alaskan public to ensure

that projects are designed, operated and reclaimed in a manner consistent with the public interest. The project manager's primary responsibility is to ensure a coordinated process with minimum redundancy of efforts. This often involves tailoring the process to fit specific project needs.

The goal of the state's Large Project Team is to coordinate the timing and completion of the numerous permits. The team reviews all the complex technical documents generated during the process and provides coordinated comments. The team also coordinates stakeholder involvement and provides a single point of contact for the public. The team provides the public, agencies, and the applicant the opportunity to view the project as a whole.

The requirement for the federal authorizations usually triggers the requirement for an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). The State usually participates as a cooperating agency in the EIS process, and the team endeavors to dovetail the state's permitting process with the EIS process. For example, during the Pogo Mine process, the public Draft EIS included drafts of all the major state permits. This gave the public the opportunity to see how the state's management decisions could be implemented on the ground, and enabled them to comment on the project as a whole.

The Large Project Team also coordinates, to the extent possible, with local governments. For example, the team has been working closely with the City and Borough of Juneau throughout the permitting and EIS process for the Kensington Mine. The City's Conditional Use Permits are critical authorizations for the mine, and may place additional stipulations on the project.

DIVISION OF COASTAL AND OCEAN MANAGEMENT: The Division of Coastal and Ocean Management (DCOM) facilitates the implementation of various ice seal conservation measures at several distinct levels during land and resource planning processes as well as at the level of individual project planning and development. Below is a bulleted list of these responsibilities of the DCOM:

1. Pre-application assistance & meetings. The DCOM is tasked with arranging and scheduling meetings between a prospective developer and the agency personnel that would be reviewing, critiquing and, ultimately, writing permits to authorize a given development project. These meetings provide an invaluable opportunity for industry to meet face-to-face with agency scientists and resource managers. Oftentimes ice seal issues are brought to an applicant's attention at these meetings. Thus, when a developer is made aware of potential wildlife conflicts and/or potential adverse impacts of their planned project ahead of time, the finalized plan of operation or facility footprint is substantially modified before permit applications are even filed. At these meetings, prospective applicants are made aware, if they are not already, of the need to design and site facilities so as to be consistent with statewide standards and district enforceable policies.

Applicants are also made aware of the (oftentimes) many distinct special-interest groups that need to be “kept in the loop” for the planning/approval process. This list typically includes subsistence oversight groups, Native Tribes, Native Councils, commercial or recreational fishing interests, environmental groups, etc.

2. Requirements/Standards for what review materials need be submitted.

Applicants need to provide DCOM and review participants with:

- (1) completed Coastal Project Questionnaire;
- (2) map(s) identifying the location of the project and adjacent facilities, diagrams, technical data, and other relevant material;
- (3) description of any man-made structures or natural features that are at or near the project site;
- (4) an evaluation of how the proposed project is consistent with the state standards and with any applicable district enforceable policies, sufficient to support the consistency certification.

These materials are of paramount importance in assisting agency personnel as well as the public review a given project for its potential impacts to coastal uses and resources. It is partially with these materials that a review participant can suggest alternative measures that will improve a proposed development project. Similarly the requirement imposed by the coastal consistency review process for federal agencies to submit consistency evaluations along with draft plans (for example, OCS oil & gas leasing plans) enables a more thorough review and comment adjudication.

3. Public process/ public review. Most state & federal agency authorizations (permits) go through both public and agency review processes often coordinated by the DCOM. This fulfills many agencies responsibility for posting/distributing public notice. It also provides a key tool wherein USFWS, ADF&G, state agency biologists, the public and the coastal district, along with the public can raise attention to scientific, social and/or environmental concerns relative to ice seal habitats or ice seal population dynamics or health of a given proposed plan or project. Plan adoption and/or individual authorizations for a given project must, through the coastal consistency review process that is adjudicated by the DCOM, be deemed consistent with ACMP standards before said permit is issued or plan is adopted. Oftentimes the DCOM will have to negotiate and include specific alternative measures designed to minimize potentially adverse impacts to ice seals into a project description before it can be deemed consistent and permits can be written.
4. The DCOM assists coastal districts develop and adopt Program Plans and District Enforceable Policies. According to statewide standards of the ACMP as well as the local enforceable policies, the ACMP review process functions as a tool for adding restrictions or mitigating measures (in the form of Alternative Measures) to the authorizations that are issued.

5. The DCOM works to act as a facilitator to attempt to resolve conflicts among the resource agencies, an affected coastal resource district, &/or an applicant--before, during, or after a project is permitted.
6. Where the specific aspects of an activity that would otherwise be subject to authorization by the ADEC are not subject to that department's authorization because the activity is either a federal activity or is located on federal land or the OCS, the DEC can review, comment on, and/or add alternative measures to said activity **only** through the ACMP. Thus, the ACMP provides a very valuable role in its being the only venue for the state to comment on, allow, disallow or make modifications to certain federal actions or private activities located on federal land or the OCS. Obviously this leverage is of paramount importance in areas that also happen to be crucially important as habitat for ice seals.
7. Specific Statewide standards and North Slope Borough District enforceable policies that have bearing on conserving ice seals and ice seal habitat include:
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(1) The siting and approval of major energy facilities by districts and state agencies must be based, to the extent practicable, to minimize adverse environmental and social effects while satisfying industrial requirements;
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(2) The siting and approval of major energy facilities ... must be based, to the extent practicable, to be compatible with existing and subsequent adjacent uses and projected community needs;
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(11) The siting and approval of major energy facilities ... must ... minimize the probability, along shipping routes, of spills or other forms of contamination that would affect fishing grounds, spawning grounds, & other biologically productive or vulnerable habitats, including marine mammal rookeries and hauling out grounds...
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(12) The siting and approval of major energy facilities ... must ... allow for the free passage and movement of fish and wildlife with due consideration for historic migratory patterns;
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(13) Major energy facilities should be sited so that areas of particular ... environmental, or cultural value ... will be protected;
 - ▶ **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.

- ▶ **11 AAC 112.300. Habitats.** (b) (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;
- ▶ **11 AAC 112.300. Habitats.** (b) (2)(B) Estuaries 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;
- ▶ **11 AAC 112.300. Habitats.** (b) (5)(A) Rocky islands and sea cliffs must be managed to avoid, minimize, or mitigate significant adverse impacts to habitat used by coastal species (5) rocky islands and sea cliffs must be managed to avoid, minimize, or mitigate significant adverse impacts to habitat used by coastal species;
- ▶ **11 AAC 112.300. Habitats.** (b) (6)(C) barrier islands and lagoons must be managed to avoid, minimize, or mitigate significant adverse impacts from activities that would decrease the use of barrier islands by coastal species, including polar bears and nesting birds;

North Slope Borough Coastal Management Program Enforceable Policies

- ▶ 2.4.4(a) Vehicles, vessels, and aircraft that are likely to cause significant disturbance must avoid areas where species that are sensitive to noise or movement are concentrated at times when such species are concentrated. Concentrations may be seasonal or year-round and may be due to behavior (e.g., flocks or herds) or limited habitat (e.g., polar bear denning, seal haul-outs). Horizontal and vertical buffers will be required where appropriate. Concern for human safety will be given special consideration when applying this policy.

DIVISION OF OIL AND GAS: DO&G crafts mitigation measures and lessee advisories as part of its best interest finding process for the areawide lease sales. The measures become enforceable terms of every lease and are also included in the stipulations of every permit issued in the area. Two lease sales have the potential to impact ice seals: the North Slope Areawide and the Beaufort Sea Areawide.

The North Slope Areawide Lease Sale Mitigation Measures and Lessee Advisories currently require:

- The Lessee is advised that the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.) 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 for all

endangered, threatened and candidate species developed by the USFWS to ensure adequate protection.

- 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.

The Beaufort Sea Areawide Lease Sale Mitigation Measures and Lessee Advisories currently require:

- Seals: 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.
- Lessees are advised that they must comply with the provisions of the Marine Mammal Protection Act of 1972 as amended.
- Sensitive Areas: 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:
 - a. the Boulder Patch in Stefansson Sound, year round;
 - b. the Canning River Delta, January-December;
 - c. the Colville River Delta, January-December;
 - d. the Cross, Pole, Egg, and Thetis Islands, June-December;
 - e. the Flaxman Island waterfowl use and polar bear denning areas, including the Leffingwell Cabin national historic site located on Flaxman Island;
 - f. the Jones Island Group (Pingok, Spy, and Leavitt Islands) and Pole Island are known polar bear denning sites, November-April; and
 - g. the Sagavanirktok River delta, January-December.
 - h. Howe Island supports a snow goose nesting colony, May-August.

Additionally, the following Beaufort Sea Mitigation Measures and Lessee Advisories address bowhead whales:

- Whale Harvest Protection:
 - a. Permanent facility siting on Cross Island will be prohibited unless the lessee demonstrates to the satisfaction of the NSB, in consultation with the AEWC, that the development will not preclude reasonable access to whales as defined in NSBCMP Policy 2.4.3(d) and in NSBMC

19.79.050(d)(1) 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.

- b. Permanent facility siting in state waters within three miles of Cross Island will be prohibited unless the lessee demonstrates to the satisfaction of the director, in consultation with the NSB and the AEWC, that the development will not preclude reasonable access to whales as defined in NSBCMP Policy 2.4.3(d) and in NSBMC 19.79.050(d)(1) and as may be determined in a conflict avoidance agreement if required by the NSB.
 - c. 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 AEWC, that the development will not preclude reasonable access to whales as defined in NSBCMP Policy 2.4.3(d) and in NSBMC 19.79.050(d)(1) and as may be determined in a conflict avoidance agreement if required by the NSB.
- Any tract or portion thereof in the Beaufort Sea areawide sale area may be subject to the March 1990 Beaufort Sea Seasonal Drilling Policy in conjunction with the submission of a plan of operations permit application by the lessee. This measure will be reevaluated and updated periodically on the basis of experience and new information.
 - a. Exploratory Drilling From Bottom-founded Drilling Structures and Natural and Gravel Islands: Subject to condition c 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).² In the Eastern SWZ, drilling is prohibited upon commencement of the fall bowhead whale migration until whaling quotas have been met.
 - b. Exploratory Drilling Operations from Floating Drilling Structures: Subject to condition c, exploratory drilling below a predetermined threshold depth and other downhole 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.³

² 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.

³ 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

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.⁴ The following criteria will be used to evaluate these operations: 1) proximity of drilling operations to active or 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 the subsistence harvest protection mitigation measure.

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 the subsistence harvest protection mitigation measure.

"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.

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.

⁴ 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.

c. Exploratory Drilling in Broken Ice: Consistent with the May 15, 1984, "Tier 2" decision, lessees conducting drilling operations during periods of broken ice must:

- (1) participate in an oil spill research program;
- (2) be trained and qualified in accordance with Minerals Management Service standards pertaining to well-control equipment and techniques; and
- (3) have an oil spill contingency plan approved by the state which meets the requirements of the "Tier 2" decision, including requirements for in situ igniters, fire resistant boom, relief well plans, and decision process for igniting an uncontrolled release of oil.

- Geophysical Activity: Except as indicated, the mitigation measures listed above do not apply to geophysical exploration on state lands. Geophysical exploration activities are governed by 11 AAC 96. In conducting offshore geophysical surveys, neither the lessees nor their agents will use explosives in open water areas.

Lessees or nonlessee 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 community involvement and seasonal drilling 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 NSB, AEWC, and potentially affected subsistence communities for comment.

- Subsistence whaling: Subsistence whaling activities occur generally during the following periods:

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.

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.