BOEM
BUREAU OF OCEAN ENERGY MANAGEMENT

Page Number	Discipline	Ranking	Study Title
41	SE	1	Subsistence Mapping of Wainwright, Point Lay, and Point Hope
43	FE	2	Physical and Chemical Analyses of Crude and Refined Oils: Laboratory and Mesoscale Oil Weathering
45	MM	3	Data Interface Tools to Support Environmental Analyses: Interpretation of Existing Marine Mammal Data
47	HE	4	Genomics of Arctic Cod: A Sentinel Species in a Changing Environment
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51	PO/HE	6	Ecological Processes in Lower Cook Inlet and Kachemak Bay: A Partnership in Monitoring
53	HE	7	Benthic Invertebrate Habitats in Cook Inlet
55	MM	8	Polar Bear Habitat Use, Ecology, and Population Status in the Chukchi Sea
57	PO/SE	9	Integrated Seabed Surveys in the Arctic Ocean: Bathymetry, Archaeological Resources, and Ice Gouge Magnitude and Recurrence Rates
61	**MM**	**10**	**Baleen Whale Distribution, Abundance, and Ecology in Cook Inlet and Shelikof Strait**

AQ = Air Quality   FE = Fates & Effects   HE = Habitat & Ecology
IM = Information Management   MM = Marine Mammals & Protected Species
PO = Physical Oceanography   SE = Social & Economic Sciences

Alaska OCS Region   **Tentative Ranking: 10**

BOEM Information Need:
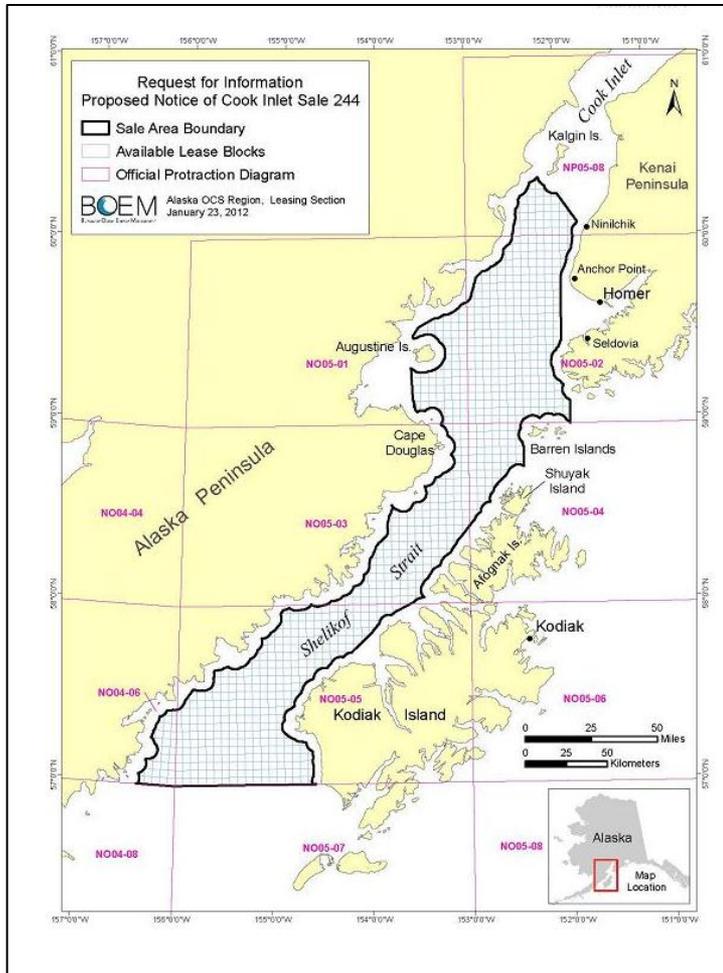
This proposed study will aid in:

➢ Designing temporal, spatial and/or area deferral mitigation for oil & gas activities associated with Proposed 2016 Lease Sale for Cook Inlet

➢ Monitoring effects of activities

➢ Estimating incidental take from activities (MMPA & ESA)

➢ Applying best available science to adaptively manage potential impacts of oil and gas on whales to reduce them to the lowest practicable level

Alaska OCS Region

Tentative Ranking: 10

BOEM Information Need:

➢ NEPA analyses, Chukchi and Beaufort Sea in 2016, 2017
➢ Endangered Species Act
➢ Marine Mammal Protection Act

➢ Year round baseline needed,

Date information Required:

➢ 2016 Cook Inlet Lease Sale, EIS analyses starting 2013

Background:

Relationship with Previous Work/Efforts

➢ Study was recommended from previous Cook Inlet Lease Sale information need analyses but not funded

➢ Builds on 2001-2006 temporally & spatially limited studies by others

Background:

Relationship with Concurrent/Future Efforts

➢ Integration with other BOEM Cook Inlet Studies for NEPA analyses including:

  ➢ Circulation Model Study

  ➢ Monitoring Ecological Process in Lower Cook Inlet & Kachemak Bay (as applicable)

  ➢ Characterization of Benthic Invertebrate Habitats in Cook Inlet

Study's Objectives:

➢ Document minimum abundance, and identify spatial, temporal, & functional use patterns in proposed Cook Inlet/Shelikof Strait Lease Sale Area, & adjacent "downstream" areas by individuals & populations of baleen whales (humpback, fin, North Pacific right, blue, sei, (EAS listed) and gray, minke (not currently listed)

➢ Investigate relationships between whale occurrence, distribution of prey & oceanographic conditions

➢ Assess potential overlap of important whale habitat with the planning area & OCS development ship traffic

<u>Methods:</u>

- Mooring arrays recording continuously in deep waters of lower Cook Inlet, Shelikof Strait, & nearby downstream areas to monitor seasonal acoustic activity (biological & human-related) & oceanographic parameters
- Aerial/ship surveys to document temporal, spatial & habitat use patterns
- Short term tags to explore fine-scale movements & feeding behavior in relation to prey species & acoustic environment
- Long-term satellite tags for movement and habitat use

Attachment 1
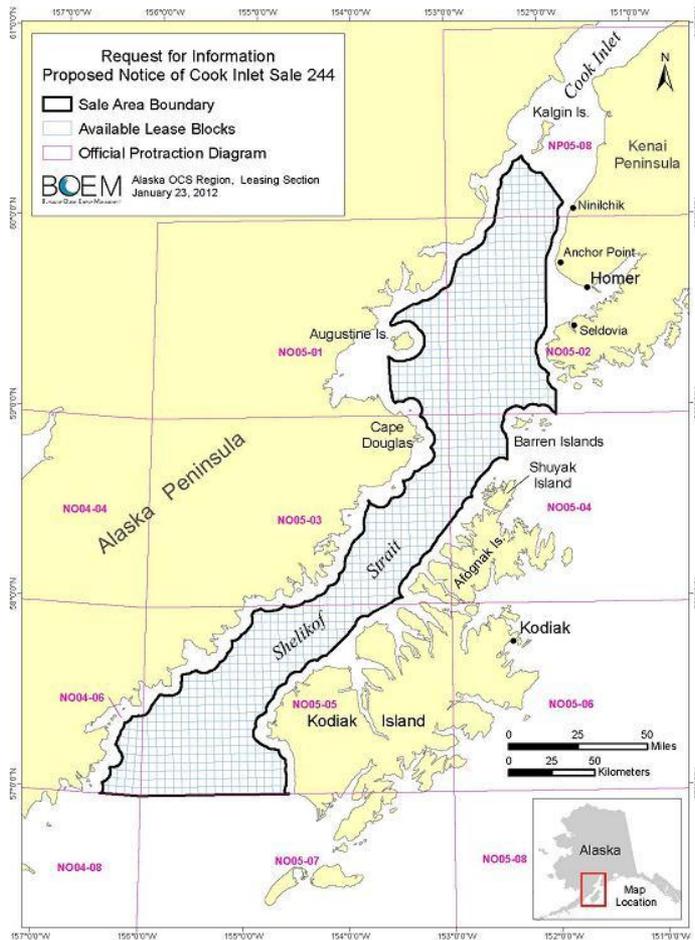
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