University of Alaska

# Coastal Marine Institute


## Program Administration
## 2008-2012

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## Final Report

April 2013

OCS Study BOEM 2013-0128

BOEM
Bureau of Ocean Energy Management

UAF
University of Alaska Fairbanks

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This project was funded in part by the U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM) through Cooperative Agreement M08AX12644 between BOEM, Alaska Outer Continental Shelf Region and the University of Alaska Fairbanks. This report, OCS Study BOEM 2013-0128, is available through the Coastal Marine Institute, select federal depository libraries, and electronically at:
http://www.boem.gov/Environmental-Stewardship/Environmental-Studies/Alaska-Region/Index.aspx.

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## Introduction

*History*

The Bureau of Ocean Energy Management (BOEM) administers the Outer Continental Shelf (OCS) natural gas, oil, and marine minerals program overseeing the safe and environmentally sound leasing, exploration, and production of these resources within our nation's offshore areas. The Environmental Studies Program (ESP) was formally directed in 1978, under Section 20 of the OCS Lands Act Amendments, to provide information in support of the decisions involved in the planning, leasing, and management of exploration, development, and production activities. The ESP research agenda is driven by the identification of specific issues, concerns, or information needs by federal resource managers partnering with state and local stakeholders. The Environmental Studies Program produces an annual studies plan of research priorities which focuses on the following broad issues associated with development of OCS gas, oil, and minerals:

- What are the fates and effects of potential OCS-related pollutants (e.g., oil, noise, drilling muds, and cuttings, products of fuel combustion) in the marine and coastal environment and the atmosphere?
- What biological resources (e.g., fish populations) exist and which resources are at risk? What is the nature and extent of the risk? What measures must be taken to allow extraction to take place?
- How do OCS activities affect people in terms of jobs and the economy? What are the direct and indirect effects on local culture? What are the psychological effects of the proposed OCS activities?

*Alaska Coastal Marine Institute Program Goals*

The Bureau of Ocean Energy Management has joined with states and universities to establish Coastal Marine Institutes. These Institutes provide a vehicle through which regional stakeholders can participate in research planning and information dissemination, as well as partner directly in research activities. Alaska's proximity to some of the major potential offshore oil and gas producing areas in the United States make it a priority choice for such partnership. Although BOEM and the State of Alaska have distinct roles in management of OCS resources, both require reliable scientific input to inform decision making and management processes, as do communities and other stakeholders potentially affected by OCS operations. To that end, the Alaska Coastal Marine Institute (CMI) was created by a Memorandum of Agreement (MOA) and related Cooperative Agreement (CA), between the University of Alaska and the Bureau of Ocean Energy Management (previously Minerals Management Service), in 1993 and extended

through renewed agreements every five years. The CMI is hosted by the University of Alaska Fairbanks which is uniquely suited to participate by virtue of its flagship status within the state and has nationally recognized marine and coastal expertise relevant to the broad range of OCS program information needs. The Alaska CMI program goals for 2008-2012, per MOA, were as follows:

1. Respond to BOEM, State and local scientific information needs and interests with local scientific expertise of national caliber in relevant disciplines and found at a major university in an active OCS region;
2. Broaden recognition and comprehension of study results through performance and presentation of findings by a highly credible local scientific research institution;
3. Improve existing local scientific capabilities and facilities for innovative scientific research relevant to OCS resource management issues;
4. Use the interdisciplinary environment of a research university to foster process oriented scientific studies, needed technologies and concepts, and syntheses of scientific information that will benefit environmental and resource management;
5. Achieve consensus between BOEM and the State of Alaska regarding the most important environmental research needs relevant to the OCS Program; and
6. Reduce the costs to the State of Alaska and BOEM of obtaining resource management information by co-funding information acquisition activities.

*Alaska Coastal Marine Institute Research Goals*

The intent of CMI-funded research is to identify and examine potential environmental, economic and social impacts of OCS related activities. The program research priorities are guided by ESP research needs and must be pertinent to the OCS oil and gas program or the marine minerals mining program. Research funded through the CMI is used to inform resource management strategies and decision making and it adds to the scientific knowledge base needed for safe and effective resource development activities in arctic and subarctic environments. Research is often applicable to other regional issues such as subsistence fisheries and northern shipping, as CMI-funded projects often address a combination of issues related to fisheries, biomonitoring, physical and chemical oceanography, and the fates of oil in the environment. The following framework issues were developed by the CMI to identify and bracket research areas to be addressed through the program:

- Scientific studies for better understanding marine, coastal, or human environments affected or potentially affected by offshore oil & gas or other mineral exploration and extraction on the outer continental shelf;

- Modeling studies of environmental, social, economic, or cultural processes related to OCS oil & gas activities in order to improve scientific predictive capabilities;

- Experimental studies for better understanding of environmental processes or the causes and effects of OCS activities;

- Projects which design or establish mechanisms or protocols for sharing of data or scientific information regarding marine or coastal resources or human activities to support prudent management of oil & gas and marine minerals resources; and

- Synthesis studies of scientific environmental or socioeconomic information relevant to the OCS oil & gas program. Projects funded through CMI are directed toward providing information which can be used by BOEM and the state for management decisions specifically relevant to BOEM mission responsibilities.

**Alaska Coastal Marine Institute Administrative Structure**

The Alaska Coastal Marine Institute was created through an administrative partnership between BOEM Alaska OCS Region and the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (SFOS) and both entities participated in administration and funding of the program. The federal side of the program received oversight from the Alaska OCS Region Chief of Environmental Sciences Management, Dee Williams, and the coordinating project manager. For the administrative project period 2008-2012, the CMI Director, program office and staff carrying out daily operations were housed at SFOS in Fairbanks, Alaska.

*Technical Steering Committee*

A Technical Steering Committee (TSC) was established with two members from BOEM, two members from the University of Alaska, and two members from the State of Alaska (State). The purpose of the TSC was to ensure that BOEM, UA, and the State were represented in the identification of OCS related issues, the selection of studies to address these issues and to be a conduit for information dissemination regarding funded projects. The members of the TSC had relevant technical scientific qualifications, as well as policy/program management capability and organizational standing sufficient to represent BOEM, UA, and State interests. The 2008-2012 TSC members included:

Current Members at Project Closing:

Dr. Dee Williams, Chief of Studies; BOEM Alaska OCS Region
Dr. Heather Crowley, CMI Project Officer; BOEM Alaska OCS Region
Dr. Rolf Gradinger, Associate Dean SFOS; CMI Director
Dr. Larry Hinzeman, Director; UAF International Arctic Research Center
Ms. Kimberly Kruse, Petroleum Land Manager; Alaska Department of Natural Resources

Prior TSC Members during Project Period:

Dr. Michael Castellini, Dean; SFOS (CMI Director)
Dr. Carol Lewis, Dean; School of Natural Resources
Dr. Douglas Woodby, Biologist; Alaska Department of Fish and Game
Ms. Kate Wedemeyer, CMI Project Officer; BOEM Alaska OCS region

*Administrative Project Objectives*

Bureau of Ocean Energy Management cooperative agreement M08AX12644 established the following objectives for the 2008-2012 Alaska CMI Administrative Project:

- Administration of annual solicitation/award cycles
- Communication and coordination with appropriate University and State department
- Assure that study proposals, expenditure, and deliverables meet CMI requirements.
- Provide post-award technical assistance, advice, guidance to recipients
- Coordinate the submission of project reports and deliverables
- Coordinate annual project reviews
- Serve as coordinating and corresponding body for the Technical Steering Committee

**2008-2012 Coastal Marine Institute Administrative Project Summary**

*Annual Award Cycles*

A proposal process was initiated each summer in 2008, 2009, 2011 and 2012, with a solicitation for project ideas that addressed one or more of the Alaska CMI Framework Issues. In 2010, funding shortfalls precluded an annual call for proposals. In 2012, a call for short Letters of Intent (LOI) was added as a precursor to a call for full length proposals. The calls for proposals and LOI were posted on the CMI website and sent electronically to researchers and appropriate offices at the University of Alaska, to various state and local agencies, and to relevant profit and non-profit corporations. Proposal submissions were reviewed externally (three peer reviews per project), by the TSC, and internally by BOEM staff. The CMI TSC met to select proposals subsequently forwarded to BOEM for funding.

Over the four award cycles completed between 2008 and 2012, the number of project submissions increased following initiation of the LOI process. Projects submissions were offered in several disciplines including physical oceanography, biological oceanography, remote sensing, invertebrate biology, outreach, fisheries and social science.

In addition to coordinating annual proposal/award cycles, CMI staff played an important role in pre-proposal advising and assisted researchers in concept and budget development. Due to

successful program promotion, half of the projects awarded were offered by investigators new to the CMI program.

*Technical Steering Committee Support*

The CMI TSC met annually in 2008-2012 to select new projects for funding and to hear project updates. The CMI administrative staff coordinated all communications required for the TSC to successfully accomplish their advisory role including routing proposals and reviews and arranging meetings.

*Annual Research Reviews*

Annual research reviews were held at the University of Alaska Fairbanks campus each year of the project. The annual research review events were widely publicized throughout the Alaska scientific community and presented in a public seminar format. The seminars were distance delivered, via video conference, to University affiliated sites in Kodiak, Juneau and Anchorage, and to the Anchorage BOEM offices in video conference and Webinar formats. Representatives from projects active at the time of review provided progress reports, including initial findings, and were available for questions from BOEM staff and the public. Attendance at the annual research reviews varied between 50 and 100 individuals. The annual research reviews provided an excellent opportunity for graduate students to practice conference presentations.

*Post-award Support*

The CMI staff spent significant time advising and coordinating researchers and University staff regarding administrative details involved in program funding. Common issues included cost share, project reporting, changes to project timelines, accounting setup, allowable expenditures, facility and administration costs, sub-award management and changes to scope of work. Staff coordinated communications within the University and with BOEM to ensure timely administrative progress in support of research objectives.

*Project Reporting/Deliverables*

The CMI administrative staff monitored and coordinated reporting efforts for individual research projects over the 2008-2012 cooperative agreement period. This included organizing annual seminar reviews, calling for quarterly reports and the production of CMI annual reports that included updates for all active projects for that given period.

The CMI published 19 research project final reports and 6 administrative reports during the project period. The CMI staff provided editorial and formatting support to polish end-stage draft

reports following BOEM review and researcher revision. Editorial support was significantly reduced by the end of the 2008-2012 cooperative agreement period for several reasons; 1) Resolution of delinquent reporting, 2) Increased quality expectations for researchers, 3) Change to easier layout and reporting format, 4) Improved software capability, and 5) Overall reduction in reporting volume. Additionally, reporting costs decreased as the number of reports printed for each project was dropped by 60% and replaced by electronic distribution.

*Administration Staffing Changes*

In July 2012, CMI Directorship transferred from SFOS Dean, Dr. Michael Castellini to SFOS Associate Dean, Dr. Rolf Gradinger. The School of Fisheries and Ocean Sciences employed a full time editor and part time program coordinator through November 2011 when the positions were combined to a single ¾ time position resulting in a significant cost savings to the project. This reduction was justified by a smaller queue of draft final reports requiring editing effort. However, loss of staff caused delay of ancillary projects including report archival, media transfer of old reports and images, and a planned website restructuring.

*Financial Summary*

The CMI Administrative Project (M08AX12644) received BOEM funding of $453,319 for the period of performance April 1, 2008 through May 15, 2013. Annual funding was received based on successful project progress and was awarded as presented in Table 1. Notably, no funding was added in fiscal year 2010 and reduced budget requests in 2011 and 2012 reflected the CMI administrative staffing restructure. For the course of the five year period of performance, the project was completed at 60% of the initial budget.

Table 1. Administrative project BOEM funding by federal fiscal year.

| *Federal Fiscal Year* | *BOEM Funding** |
|---|---|
| 2008 | $190,000 |
| 2009 | $145,435 |
| 2011 | $69,283 |
| 2012 | $48,601 |
| *Total* | *$453,319* |

**Includes 45.1% F&A*

The School of Fisheries and Ocean Sciences provided a 1:1 cost share on the project, primarily as salary and benefits. Overall, administrative expenditures were approximately 94% salary and benefits. Other expenditures included printing (under both Commodity and Service categories), meeting and seminar services, and office and computer supplies. Table 2 shows the anticipated allocation of direct expenditures to BOEM and cost share funds at project closing.

Table 2. Direct expenditures in support of CMI administration project.

| *Direct Expenditures* | *BOEM Funding* | *SFOS Cost Share* |
|---|---|---|
| Salary/Benefit | $295,146 | $290,062 |
| Travel | $779 | $186 |
| Commodities | $9,290 | $12,348 |
| Services | $7,203 | $9,822 |
| *Total* | *$312,418* | *$312,418* |

**Alaska Coastal Marine Institute Funded Research**

*Funded Projects*

During the project period, CMI funded 12 projects totaling $3,270,691 of BOEM funding and similar contributions through project cost-share budgets. This is down from 17 funded under the 2003-2007 administrative project, which was largely due to fluctuations in federal funding for the program. Additionally, the CMI administrative project managed six projects held over from the 2003-2007 project period. Five projects were still active at the end of the 2008-2012 administrative period.

Four of the 12 funded projects involved invertebrate or nearshore biology. A total of four projects in physical and chemical oceanography accounted for 65% of the CMI research project funding for the period. There were two fisheries related projects funded, and one each for social science and outreach projects. Figures 1 and 2 show the breakdown of 2008-2012 award funding by discipline and project. Table 3 lists projects funded.

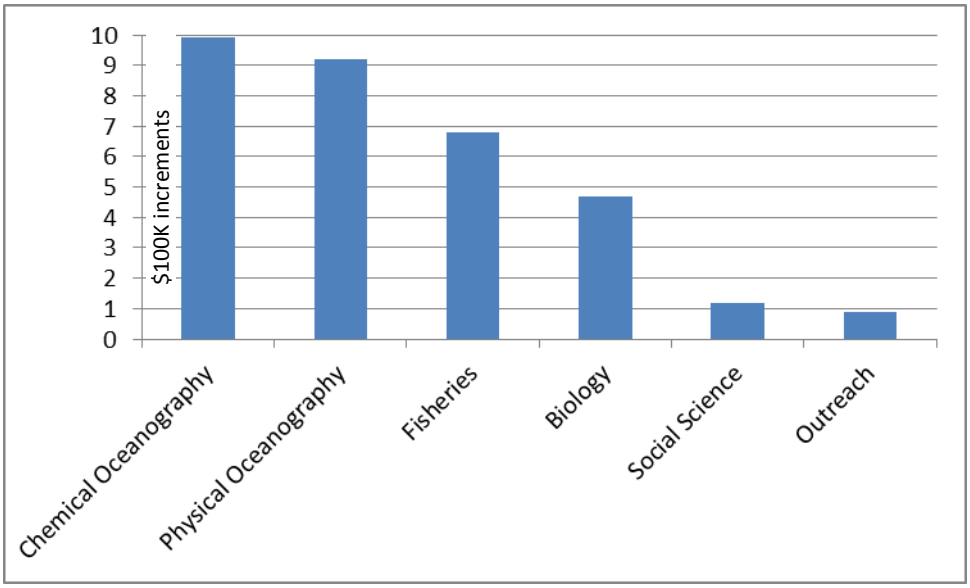


Figure 1. 2008-2012 CMI funding awarded by discipline.

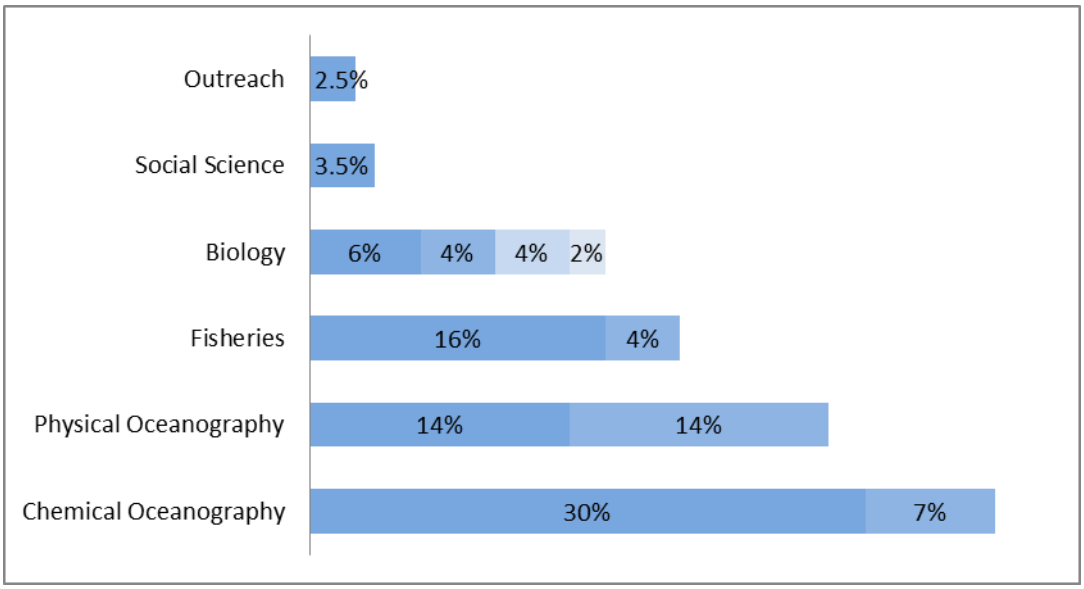


Figure 2. Percent of total of 2002-2012 CMI funding awarded per project by discipline.

Table 3. CMI funded research projects for federal fiscal years 2008-2012.

| Project Title | Investigator/Affiliation | BOEM Agreement | BOEM Funding |
|---|---|---|---|
| Recovery in a High Arctic Kelp Community | Brenda Konar, University of Alaska Fairbanks | M08AX12645 | $123,255 |
| Biogeochemical Assessment of the OCS Arctic Waters | Jeremy Mathis, University of Alaska Fairbanks | M08AX12760 | $756,704 |
| Subsistence Use and Knowledge of Beaufort Salmon Populations | Courtney Carothers, University of Alaska Fairbanks | M09AC15378 | $119,459 |
| Trophic Links: Forage Fish, Their Prey, and Ice Seals in the Northeast Chukchi Sea | Brenda Norcross/Lara Dehn, University of Alaska Fairbanks | M09AC15432 | $532,173 |
| Mapping and Characterization of Recurring Polynyas and Landfast Ice in the Chukchi and Beaufort Seas | Hajo Eicken, Andrew Mahoney University of Alaska Fairbanks | M09AC15191 | $461,405 |
| Population Connectivity and Larval Dispersal in Bering, Chukchi and Beaufort Sea Snow Crab Populations: Estimating Spatial Scales of Disturbance Impacts | Sarah Mincks-Hardy, University of Alaska Fairbanks | M09AC15379 | $119,787 |
| Epifaunal Communities in the Central Beaufort Sea | Brenda Konar, University of Alaska Fairbanks | M11AC00002 | $50,139 |
| Satellite-Tracked Drifter Measurements in the Northeast Chukchi Sea | Thomas Weingartner, University of Alaska Fairbanks | M11AC00001 | $459,892 |
| Population Assessment of Snow Crab, *Chionoecetes opilio*, in the Chukchi and Beaufort Seas Including Oil and Gas Lease Areas | Bodil Bluhm/Katrin Iken, University of Alaska Fairbanks | M11AC00003 | $181,019 |
| A Year in the Life of a Bowhead Whale | Steve Okkonen/Roger Topp, University of Alaska Fairbanks | M12AC00005 | $87,587 |
| Dispersal Patterns and Summer Ocean Distribution of Adult Dolly Varden from the Wulik River | Andrew Seitz, University of Alaska Fairbanks | M12AC00006 | $146,511 |
| Evaluating Chukchi Sea Trace Metals and Hydrocarbons Sourced from Nearby Coastal Rivers | Paul McCarthy, University of Alaska Fairbanks | M12AC00001 | $232,760 |
| *2008-2012 Total project funding* | | | *$3,270,691* |

*Cost Share*

A 1:1 cost share is required for all CMI funded projects. The administrative project cost share was provided through the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences. Projects funded in 2008-2012 had a variety of cost share partners and sources that included direct funding, donated goods and services and third party contributions (Table 4).

Table 4. Cost share partners for 2008-2012 CMI funded projects.

| | |
|---|---|
| American Chemical Society | Shell Alaska |
| Alaska Department of Environmental Conservation | Teck Alaska Incorporated |
| Alaska Department of Fish and Game | University of Alaska Museum |
| Alexandra Ravelo | UA Presidential Postdoctoral Fellowship |
| ConocoPhillips | UAF Geophysical Institute |
| Cooperative Institute for Alaska Research | UAF Graduate School |
| Japanese Marine Science and Technology Center | UAF Institute of Arctic Biology |
| Jessica Cross | UAF Institute of Marine Science |
| Olgoonik Fairweather, LLC | UAF School of Fisheries and Ocean Sciences |

*Student Support*

Eleven of the 12 CMI funded research projects supported one or more students. Fourteen graduate students and 16 undergraduate students fill a variety of roles ranging from laboratory work to executing complete Ph.D. projects. The 2008-2012 program student support neared $230,000 in stipends and wages with an additional $52,000 funding tuition and fees.

**2008-2012 Program Publications**


Castellini, M.A. (Director). 2008. University of Alaska Coastal Marine Institute Annual Report No. 14. OCS Study MMS 2008-014, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 117 p.

Castellini, M.A. (Director). 2008. University of Alaska Coastal Marine Institute Annual Report No. 15. OCS Study MMS 2009-044, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 57 p.

Castellini, M.A. (Director). 2010. University of Alaska Coastal Marine Institute Annual Report No. 16. OCS Study BOEMRE 2010-049, University of Alaska Fairbanks and USDOI, BOEMRE, Alaska OCS Region, 80 p.

Castellini, M.A. (Director). 2011. University of Alaska Coastal Marine Institute Annual Report No. 17. OCS Study BOEMRE 2011-029, University of Alaska Fairbanks and USDOI, BOEMRE, Alaska OCS Region, 79 p.

Castellini, M.A. (Director). 2012. University of Alaska Coastal Marine Institute Annual Report No. 18. OCS Study BOEM 2012-010, University of Alaska Fairbanks and USDOI, BOEM, 80 p.

Carothers, C., S. Cotton, and K. Moerlein. 2013. Subsistence Use and Knowledge of Salmon in Barrow and Nuiqsut, Alaska. Final Report. OCS Study BOEM 2013-0015, University of Alaska Fairbanks and USDOI, BOEM Alaska OCS Region, 52 p.

Foster, N.R., D. Lees, S.C. Lindstrom, S. Saupe. 2010. Evaluating a Potential Relict Arctic Invertebrate and Algal Community on the West Side of Cook Inlet. Final Report. OCS Study MMS 2010-005, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 75 p.

Gradinger, R. R. (Director). 2013. University of Alaska Coastal Marine Institute Annual Report No. 19. OCS Study BOEM 2013-0112, University of Alaska Fairbanks and USDOI, BOEM, 45 p.

Hardy, S.M., K. Iken, K. Hundertmark and G.T. Albrecht. 2011. Defining genetic structure in Alaskan populations of the snow crab, *Chionoecetes opilio*. Final Report. OCS Study BOEM 2011-060, University of Alaska Fairbanks and USDOI, BOEM Alaska OCS Region, 26 p.

Johnson, M.A. 2008. Water and Ice Dynamics in Cook Inlet. Final Report. OCS Study MMS 2008-061, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 106 p.

Konar, B. 2012. Recovery in a High Arctic Kelp Community. Final Report. OCS Study BOEM 2012-011, University of Alaska Fairbanks and USDOI, BOEM Alaska OCS Region, 24p.

Mahoney, A., H. Eicken, L. Shapiro, R. Gens, T. Heinrichs, F. Meyer, and A. Graves-Gaylord. 2012. Mapping and Characterization of Recurring Spring Leads and Landfast Ice in the Beaufort and Chukchi Seas. Final Report. OCS Study BOEM 2012-067, University of Alaska Fairbanks and USDOI, BOEM Alaska OCS Region, 154 p.

Naidu, A.S., J.J. Kelley, O.P. Smith, Z. Kowalik, W.J. Lee, M.C. Miller and T.M. Ravens. 2011. Assessment of the Direction and Rate of Alongshore Transport of Sand and Gravel in the Prudhoe Bay Region, North Arctic Alaska. Final Report. OCS Study BOEM 2011-038, University of Alaska Fairbanks and USDOI, BOEM, Alaska OCS Region, 29p

Naidu, A.S., J.J. Kelley, D. Misra, A. Blanchard and M.I. Venkatesan. 2011. Synthesis of Time-Interval Changes in Trace Metals and Hydrocarbons in Nearshore Sediments of the Alaska Beaufort Sea: A Statistical Analysis. Final Report. OCS Study BOEM 2011-031, University of Alaska Fairbanks and USDOI, BOEM, Alaska OCS Region, 60 p.

Norcross, B.L., B.A. Holladay, and C.W. Mecklenburg. 2013. Recent and Historical Distribution and Ecology of Demersal Fishes in the Chukchi Sea Planning Area. Final Report. OCS Study BOEM 2012-073, University of Alaska Fairbanks and USDOI, BOEM Alaska OCS Region, 210 p.

Okkonen, S.R., S. Pegau and S. Saupe. 2009. Seasonality of Boundary Conditions for Cook Inlet, Alaska. Final Report. OCS Study MMS 2009-041, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 59 p.

Olsson, P.Q., and H. Liu. 2009. High-Resolution Numerical Modeling of Near-Surface Weather Conditions over Alaska's Cook Inlet and Shelikof Strait. Final Report. OCS Study MMS 2007-043, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 52 p.

Powell, A., and S. Backensto. 2009. Common Ravens (*Corvus corax*) Nesting on Alaska's North Slope Oil Fields. Final Report. OCS Study MMS 2009-007, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 37 p.

Powell, A., A.R. Taylor and R.B. Lanctot. 2010. Pre-migratory Ecology and Physiology of Shorebirds Staging on Alaska's North Slope. Final Report. OCS Study MMS 2009-034, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 190 p.

Quakenbush, L. 2010. Satellite Tracking of Pacific Walruses: The Planning Phase. Final Report. OCS Study BOEMRE 2010-035, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, BOEMRE, 20 p.

Quakenbush, L., and H. Huntington. 2010. Traditional Knowledge Regarding Bowhead Whales in the Chukchi Sea near Wainwright, Alaska. Final Report. OCS Study MMS 2009-063, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 32 p.

Quakenbush, L., R. Shideler and G. York. 2009. Radio Frequency Identification Tags for Grizzly and Polar Bear Research. Final Report. OCS Study MMS 2009-004, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 19 p.

Quakenbush, L., R.S. Suydam, R. Acker, M. Knoche and J. Citta. 2009. Migration of King and Common Eiders Past Point Barrow, Alaska, during Summer/Fall 2002 through Spring 2004: Population Trends and Effects of Wind. Final Report. OCS Study MMS 2009-036, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 42 p.

Wang, J. 2010. Sea Ice-Ocean-Oilspill Modeling System (SIOMS) for the Nearshore Beaufort and Chukchi Seas: Parameterization and Improvement (Phase II). Final Report. OCS Study MMS 2008-021, University of Alaska Coastal Marine Institute, University of Alaska Fairbanks and USDOI, MMS, Alaska OCS Region, 86 p.

Weingartner, T.J., and J. Kasper. 2011. Idealized Modeling of Circulation under Landfast Ice. Final Report. OCS Study BOEM 2011-056, University of Alaska Fairbanks and USDOI, BOEM, Alaska OCS Region, 134 p.

## The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the sound use of our land and water resources, protecting our fish, wildlife and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island communities.

## The Bureau of Ocean Energy Management

The Bureau of Ocean Energy Management (BOEM) works to manage the exploration and development of the nation's offshore resources in a way that appropriately balances economic development, energy independence, and environmental protection through oil and gas leases, renewable energy development and environmental reviews and studies.