

BOEM ENVIRONMENTAL STUDIES PROGRAM: ONGOING STUDIES

Region: Alaska

Planning Area(s): Beaufort Sea

Title: Recovery in a High Arctic Kelp Community (AK-08-12-02)

BOEM Information Need(s) to be Addressed: Information from this study will be used by Alaska OCS Region staff to acquire a better understanding of how sessile communities recover after disturbances in the Boulder Patch, a high Arctic kelp community. This will be used in preparing future Beaufort Sea exploration and development EISs, and in reviewing oil-spill-contingency plans for OCS and coastal facilities. This study addresses aspects of USGS study recommendation 3.04.

Total Cost: \$123,000 plus Joint Funding **Period of Performance:** FY 2008-2012

Conducting Organization: CMI, UAF

Principal Investigator: Dr. Brenda Konar

BOEM Contact: [Kate Wedemeyer](#)

Description:

Background: The Boulder Patch kelp community in the Prudhoe Bay area of the Beaufort Sea is a sensitive habitat which has the potential of being impacted by oil and gas activities. Some rocks there were cleared in 2002 and have been monitored from 2002 to 2006. Because of the very slow natural recruitment observed then it is necessary to continue this monitoring for another four years to clarify the reasons for this slow recruitment, how the communities naturally recover from disturbances, the initial recruitment, and possibly the natural succession.

Objectives:

- Assess the timing of natural recruitment onto hard substrates.
- Assess the effect of grazers to the timing of recruitment.
- Assess the effect of sedimentation to the timing of recruitment.
- Assess the rate of vegetative re-growth of various sessile organism groups.
- Assess fish occurrence.

Methods: This project will be completed in the Boulder Patch at Dive Site 11 (DS-11) in Stefansson Sound, Alaska. This site has nearly complete rock and kelp cover, is in a water depth of 6-7 m, and is the logical location for this study because this is the location of previous recovery studies in the Boulder Patch. All cleared and uncleared boulders from the 2002 study will be monitored yearly. Two additional new experiments will also be part of this project to assess the effects of sedimentation on recruitment and recovery rates via vegetative re-growth.

Current Status: Ongoing

Final Report Due: September 2012

Publications Completed: None

Affiliated WWW Sites: <http://www.boem.gov/akstudies/>
<http://www.sfos.uaf.edu/cmi/>

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