

BOEM ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies

Region: Alaska

Planning Area(s): Beaufort Sea, Chukchi Sea

Title: Migration and Habitat Use by Threatened Spectacled Eiders in the Eastern Chukchi Near and Offshore Environment (AK-09-03)

BOEM Information Need(s) to be Addressed: Research focusing on the distribution and timing of habitat use by the threatened (ESA) Spectacled Eiders was identified as an information need at the COMIDA workshop held on Nov. 1-3, 2006. Lease sales are planned for the Chukchi Sea Planning Area in 2010 and 2012. This information will be used for ESA Section 7 consultations, NEPA analyses, Exploration Plans, DPPs and other documentation. The information obtained from this jointly-funded research will contribute in development of mitigation measures/strategies to reduce potential impacts.

Total Cost: \$1,200,000

Period of Performance: FY 2009-2014

Conducting Organization: USGS

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Description:

Background: Basic information on timing and duration of habitat use by Spectacled Eiders within the Chukchi Sea Planning Area (CSPA) and the Beaufort Sea Planning Area (BSPA) is necessary to better define parameters used to model the impacts of perturbations and ultimately population effects. Recent improvements in satellite telemetry have yielded some information on the distribution and movements of Long-tailed Ducks and King and Common Eiders, many of which stage, migrate or molt in the Eastern Chukchi Sea. Changing patterns of sea ice could shift some use to the BSPA. In 1996 the spectacled eider was listed by USFWS as threatened species. When the petition to list was submitted, studies began in 1993 to map and document the distribution, timing of migration, and wintering areas of the three populations. At that time, the molting, staging, and wintering areas of Spectacled Eiders in the Arctic and North Pacific Oceans were unknown. Subsequently, Ledyard Bay, Point Lay, and Peard Bay were identified as areas used by migrating, molting, and staging eiders that bred on the Indigirka River Delta, Russia; Yukon-Kuskokwim Delta, western Alaska; and the Prudhoe Bay region. Information on the timing and use of areas by Spectacled Eiders during fall migration, staging, and molting is now dated and limited because of small sample sizes. There is little information available about the timing of spring migration or locations of spring staging areas.

Objectives:

- Estimate the spatial distribution, demographic composition, timing of use, and residence times of male and female spectacled eiders in the Chukchi Sea Planning Area and the Beaufort Sea Planning Area.
- Evaluate the fidelity of individual Spectacled Eiders to areas within the eastern Chukchi Sea and western Beaufort Sea.

Methods: This study will use implantable satellite transmitters to document spatial distribution and timing of use by adult and juvenile Spectacled Eiders. Each tagged individual will supply two years of data from which assessments of individual and population affinity and variation will be made. Also using satellite telemetry, scientists will document both local and long-distance movements of individual Spectacled Eiders during migration; they will identify spring and autumn staging areas, and molting sites. After examining measures of bathymetry, weather, ice, and bird status, the project will develop models to represent factors influencing timing of movements and distribution of individual Spectacled Eiders during spring, summer (molt), and autumn.

Current Status: Ongoing

Final Report Due: September 2014

Publications Completed: None

Affiliated WWW Sites: <http://www.boem.gov/akstudies/>
<http://alaska.usgs.gov/science/biology/seaducks/spei/index.php>

Revised Date: December 2012

ESPIS: Environmental Studies Program Information System

All *completed* ESP studies can be found

here: http://www.data.boem.gov/homepg/data_center/other/espis/espisfront.asp