Sea Duck Joint Venture
Annual Project Summary for Endorsed Projects
FY 2005 – (October 1, 2004 to September 30, 2005)

Project Title (SDJV Project #69): Aerial Survey of Wintering Sea Ducks in Northern British Columbia

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Project Description: The proposed Nai Kun wind farm project is situated in a unique and expansive shallow water shelf off the northeast coast of Graham Island. This is the first grand scale wind farm of its kind on the west coast of North America. Good sea duck abundance and distribution information will be necessary for project planning, monitoring of effects, and developing an experimental design for future projects of this type.

Objective:

a. Intensively survey the shallow water shelf on the northeast coast of Graham Island to determine the distribution and abundance of sea ducks.

Preliminary Results: During the last five days of February 2005 we flew two replicates of the 26 transects, 780 km per replicate. Transects were located on each minute of latitude from 53^{O} 40' N to 54^{O} 5' N and extended from shore to 131^{O} 30' W longitude. The plane was flown at 35 meters altitude and the transect width was 200 meters on either side. Alternating transects were flown so that the plane was never closer than 2 nautical miles from the previously flown transect. The airport at Sand Spit worked well as a base of operations because of its close proximity to the study area. Jet fuel was readily available.

Total estimates by species were; Long-tailed Duck (4,765), Black Scoter (461), Surf Scoter (1,626), White-winged Scoter (12,181), Merganser (97), Loon (1,845). Severe glare was a factor for roughly 20 percent of the survey, although corrections for glare have not yet been attempted.

We saw numerous crab pot buoys indicating heavy fishing for crab. Our expanded estimate for crab pot buoys was 1,241. These highly visible subjects will help us evaluate the effects of glare on species of varying distinction. It was our impression that long-tailed ducks disappeared much more readily in the glare than did scoters or crab pot buoys.

Figure 1 shows the Nai Kun project area and the 26 transect lines. Figure 2 shows the locations of all white-winged scoter and long-tailed duck sightlings. The white-winged scoters were most concentrated in the northern portion of the study area within 12 km of shore. The long-tailed ducks were most abundant in the southern half of the study area at all distances from shore.

Project Status: This initial survey was successful and met the objectives. It provided a snap shot of the bird distributions at the end of February 2005. It did not provide information about other time periods during the winter. Additional winter surveys and migration surveys would be valuable in light of the expansive wind farm proposed for the region.

Figure 1.Nai Kun project area and 26 survey transect lines.

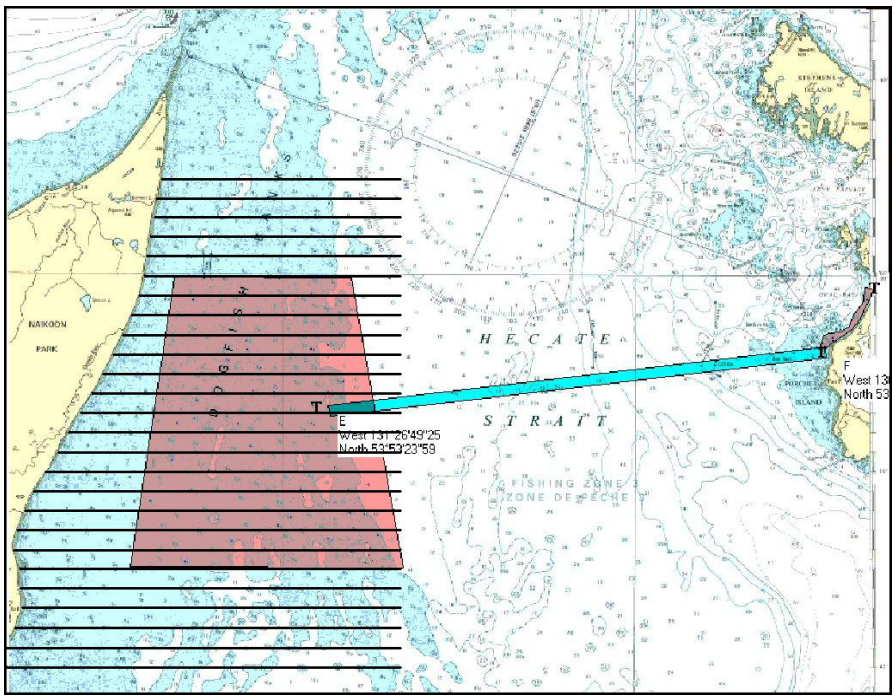

Figure 2. Two replicate surveys with the locations of white-winged scoters (blue x's) and long-tailed ducks (green flags).