

Sea Duck Joint Venture

Annual Project Summary September 24, 2014

Project Title: SDJV Project #140: Aerial surveys of Pacific Common Eiders in the central Canadian Arctic (year 1 of a 2 year study)

Principal Investigator(s):

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Partners:

NRCAN Polar Continental Shelf Program (PCSP)

Project Description:

A large proportion of the Pacific Common Eider population nests in central and western Canada in the Bathurst Inlet, Dolphin and Union Strait, Coronation Gulf, and Queen Maud Gulf areas. These eiders migrate through the Beaufort Sea during spring and fall migration, and winter in ice-free regions of the Bering Sea and Gulf of Alaska. Pacific Common Eiders are inadequately monitored throughout their range. The population estimates and trends for Canada are currently based on counts obtained about every 10 years during spring migration at Point Barrow, Alaska. Canadian Wildlife Service conducted breeding surveys for common eiders in the Bathurst Inlet of Nunavut in 2006-2008, but there is currently no regular survey to monitor population trends in Canada. Discovery of off-shore oil and gas reserves in two key spring staging areas as well as increasing resource development in Canadian Arctic breeding areas will likely result in increased human activity and may have potential adverse effects on this population. We are proposing to expand the surveys into the offshore islands of the Queen Maud Gulf region in order to provide more complete coverage of the breeding area and establish a long-term operational monitoring program to address the lack of current information on population trends.

Helicopter surveys using a Long Ranger were conducted in late June in order to count as many eiders in the Queen Maud Gulf survey area as possible. Surveys were flown at a speed of 80-90 mph at a height of 150-300 feet. The flight path followed open water along the coast, islands and sea ice. With the exception of Grant Point (at the eastern edge of the study area), each area was surveyed once and it took about 4 full days to cover the core study area as well as shorelines east and west of Cambridge Bay. The helicopter flew at a higher altitude and a slower speed when large groups of eiders were present to avoid disturbing birds and get a total count. To better spot birds on the water, the surveys were conducted during mid-day hours and when winds were calm or light. Two observers were used during the surveys, one in the front left seat and the other in the rear right seat of the helicopter. Observers recorded the type and number of all birds seen as well as the time of observation. The flight path of the aircraft was tracked and based on the time of observation, the approximate location of each observation will be determined.

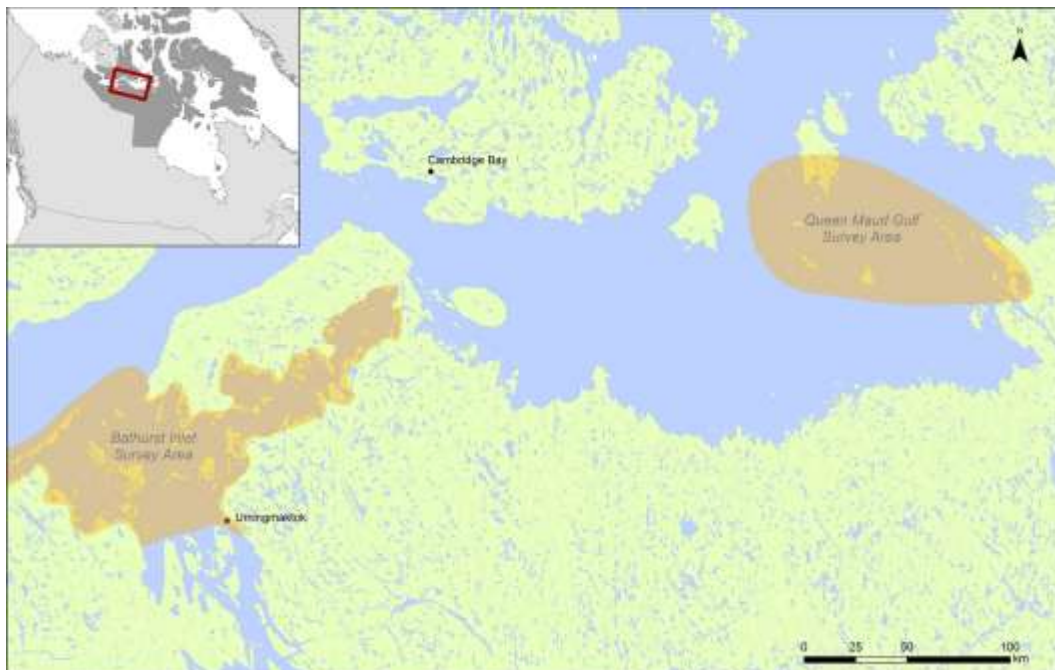
Objectives:

The objective of this project is to determine key breeding areas for common eiders in the Queen Maud Gulf region and to develop an operational, long-term monitoring program. Expanding surveys into this area will provide more complete coverage of the breeding range and better estimates of population size and trends to aid wildlife conservation and management decisions for the Pacific Common Eider in Canada. This addresses the SDJV priority to continue to develop survey techniques for effective monitoring of abundance and distribution of sea duck species and support exploratory surveys to fill gaps in our knowledge of sea duck distributions and relative abundance.

Preliminary Results *(include maps, photos, figures/tables as appropriate):*

Helicopter surveys for Pacific Common Eiders in the Queen Maud Gulf area began on June 23rd and were completed on June 29th, 2014. Spring was very late this year; there was very little open water around the islands the eiders nest on and the leads in the ice pack were very narrow. Cambridge Bay residents commented that spring was about 2 weeks later than normal. On June 26th, we resurveyed the same area that had been surveyed on June 23rd, and noticed a bit more open water but also 50% more eiders than had been observed during the initial survey. Preliminary results suggest that over 5,000 eiders were present in the Queen Maud Gulf study area this year, which is less than half the numbers observed in the same area in 1995, however, due to the late spring conditions, it is possible that not all of the eiders had arrived on the study area. During the surveys, 16 different species of birds were observed. The three most abundant species were Common Eiders (50% of all birds observed), Long-tailed ducks (30%), and King Eiders (6%).

Figure 1. Map showing overview of survey area. Only the Queen Maud Gulf area was surveyed in 2014.



Project Status

After the first day of surveys on June 23rd, we observed very little open water around islands and extremely narrow leads in the ice pack. We delayed the surveys for 2 days hoping that the sea ice would open a bit more during that time, however, we were unable to delay any longer to compensate for the late spring due to lack of flexibility with helicopter charter dates. Although spring was late and counts obtained may not be representative of a typical year, we were still able to survey the entire area of interest and determine key areas within the Queen Maud Gulf study area. We plan to survey both the Bathurst Inlet and the Queen Maud Gulf study areas in 2015 on a three year on, 3 year off rotational basis.

Project Funding Sources (US\$)

SDJV (USFWS) Contribution	Other U.S. federal contributions	U.S. non-federal contributions	Canadian federal contributions	Canadian non-federal contributions	Source of funding (name of agency or organization)
			70,105.00		Canadian Wildlife Service
60,000.00					SDJV
			49,200.00		PCSP

Total Expenditures by Category (SDJV plus all partner contributions; US\$). Complete only if project was funded by SDJV in FY14; total dollar amounts should match those in previous table.

ACTIVITY	BREEDING	MOLTING	MIGRATION	WINTERING	TOTAL
Surveys	179,305				179,305
Research					