

Sea Duck Joint Venture
Annual Project Summary for Endorsed Projects
FY 2004 – (October 1, 2003 to Sept 30, 2004)

Project Title: No. 39. Distribution and abundance of King Eiders, Long-tailed Ducks, and Canada Geese on Western Victoria Island. Year 1 of a 2 year study.

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Partners: Sea Duck Joint Venture; Canadian Wildlife Service; U.S. Fish and Wildlife Service; Arctic Goose Joint Venture; Central Flyway Council; Polar Continental Shelf Project; Inuvialuit Final Agreement

Project Description: Current North American waterfowl breeding population surveys do not adequately cover breeding grounds for King Eiders and Long-tailed Ducks within Canada. In recognition of this problem, as well as growing evidence that both species were in decline, breeding waterfowl surveys were conducted in a core area for King Eiders from 1992 to 1994 to establish a baseline for comparison in future years. This study replicates those surveys to allow comparisons among years and provide population trends for King Eiders, Long-tailed Ducks, Canada Geese, and other bird species nesting on western Victoria Island. This study will also spatially quantify bird densities, thus providing useful information on important areas and habitats. Changes in spatial distributions over time may also identify key areas of concern.

Transects flown on western Victoria Island in 1992-1994 were repeated in 2004, including a southern area that had only been surveyed in 1993 (Fig. 1). Between 18 and 28 June, a total of 93 transects were flown combining for a total distance of 4374 km (Table 1). Following methods used during previous surveys, counts were made from a Bell 206B helicopter flown at 30 m above ground and at a ground speed of 145 kph. Two observers, one located in the left front seat and the other in the rear right seat, recorded all birds within 200 m of their side of the aircraft. Population estimates for King Eiders and Canada Geese were calculated using the number of indicated birds whereas the population estimate for Long-tailed ducks was based on the observed number.

Concurrent waterfowl breeding population surveys targeting geese, but including King Eiders and Long-tailed Ducks were conducted at two other locations:

- mainland western Canadian Arctic from Shingle Point to Paulutuk, NWT, and
- south-central and southeastern Victoria Island, and Kent Peninsula, Nunavut.

Refer to Table 1 and Figure 1 for dates and coverage of these two additional surveys.

Objectives: The principle objectives of the study are to: 1) obtain population estimates for King Eiders, Long-tailed ducks, Canada Geese, and other birds nesting on western Victoria Island, 2) identify population trends for King Eiders, Long-tailed ducks and Canada Geese by comparing survey results with those obtained during previous surveys, and 3) acquire site-specific breeding densities for King Eiders, Long-tailed ducks and Canada Geese.

Results from the two concurrent sets of breeding population surveys will expand the scope of these objectives to include much of western and central arctic Canada.

Preliminary Results: The King Eider population estimate for western Victoria Island in 2004 was 23 218 (SE 6968), indicating about a 50% decline in number since 1992-94 (Figs. 2 and 3). There was an estimated 5810 (SE 4023) Long-tailed Ducks suggesting they also declined, although this is uncertain due to the low densities that occur on western Victoria Island. The estimated number of Canada Geese was 37 417 (SE 10 314) in 2004. This was very similar to numbers found in 1992-94. Highest densities of King Eiders were found within the Kagloryuak River valley and near Tahiryuak Lake. These areas held the highest densities of King Eiders in previous surveys as well. The highest densities of Canada Geese were found in southwestern Victoria Island and in the Kagloryuak River valley, which was also similar to past surveys.

Results from the two concurrent breeding waterfowl population surveys should be available by the March 2005 update.

Project Status: Spring thaw in 2004 was a few days later on Victoria Island than usual which might have affected the count of King Eiders and Long-tailed Ducks. However, preliminary analysis of proportion of birds in pairs versus flocks suggests timing of surveys was comparable to earlier surveys. A second year of aerial surveys in 2005 will help determine whether the counts obtained in 2004 are representative of the current number breeding on western Victoria Island. If the two years of counts vary greatly, a third year of surveys might be advisable.

The two concurrent AGJV surveys were conducted in June of 2004 as planned. There were no significant changes to study objectives, methodology or partnerships.

Project Funding Sources for FY 04:

SDJV (USFWS) Contribution	Other U.S. Federal contributions	U.S. non-federal contributions	Canadian federal contributions	Canadian non-federal contributions	Source of funding (agency or organization)
\$28,000					USFWS
	\$92,000				AGJV, CFC
			\$124,000		PCSP, IFA, CWS

Total Expenditures (SDJV plus partner contributions) by Category in FY 04:

ACTIVITY	BREEDING	MOLTING	MIGRATION	WINTERING	TOTAL
Banding					
Surveys	\$244,000				\$244,000
Research					
Communication					
Coordination					

Region	Size (km ²)	No. of transects	Distance surveyed (km)	Dates of survey
Victoria Island				
-Northwest	82 750	81	3320	21-28 June
-Southwest	22 104	12	1054	19-20 June
-South-central/southeast	21816	38	2238	13-18 June
Kent Peninsula	5925	14	600	12-15 June
ISR mainland	21323	61	2454	17-24 June

Table 1. Extent of coverage and dates for breeding waterfowl population surveys in western and central arctic Canada in 2004.

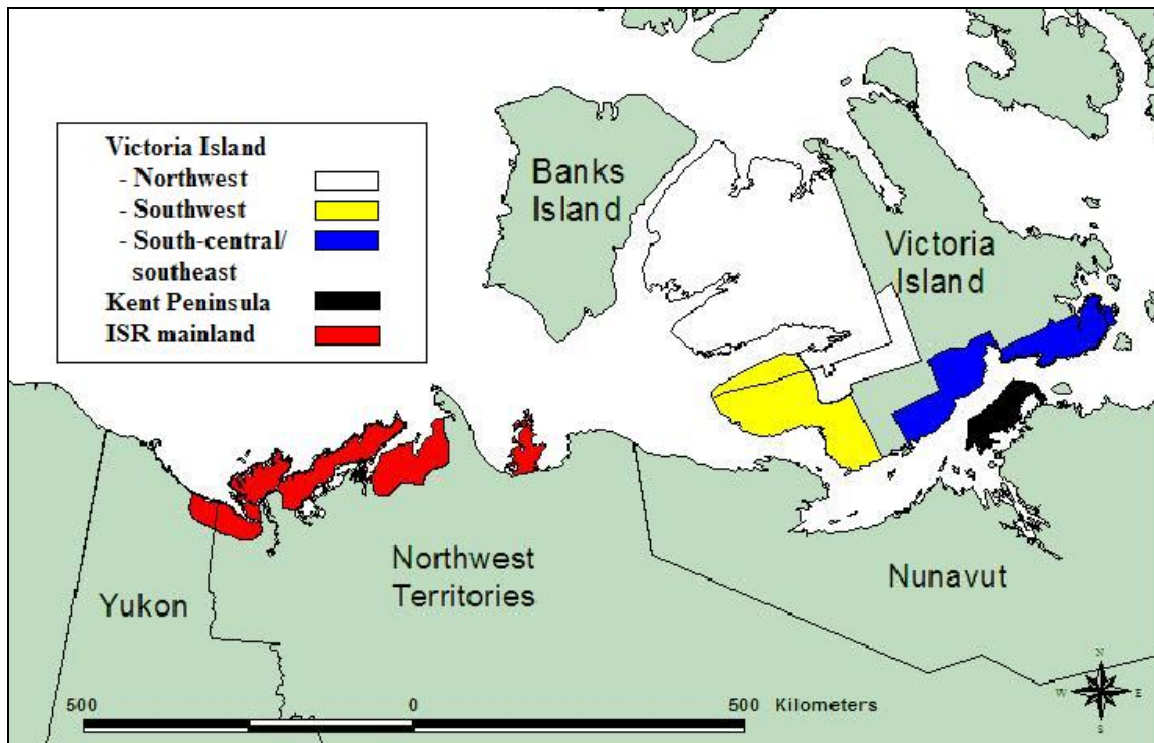


Figure 1. Map showing extent of coverage for breeding waterfowl population surveys in western and central arctic Canada in 2004.

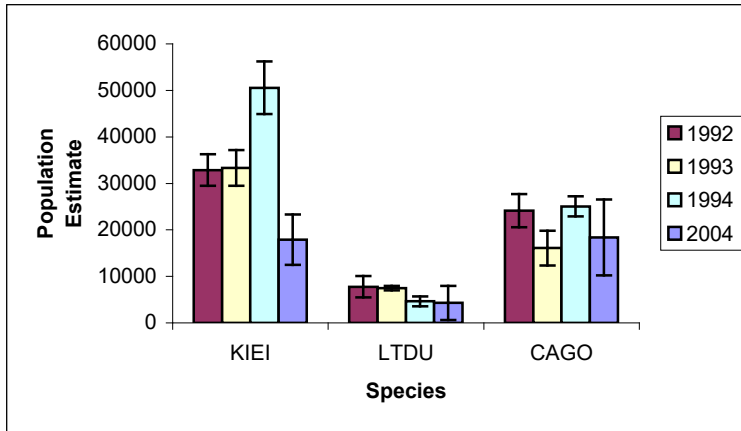


Figure 2. Estimated populations for King Eiders, Long-tailed Ducks, and Canada Geese on northwestern Victoria Island generated from aerial surveys completed in 2004, 1992, 1993, and 1994.

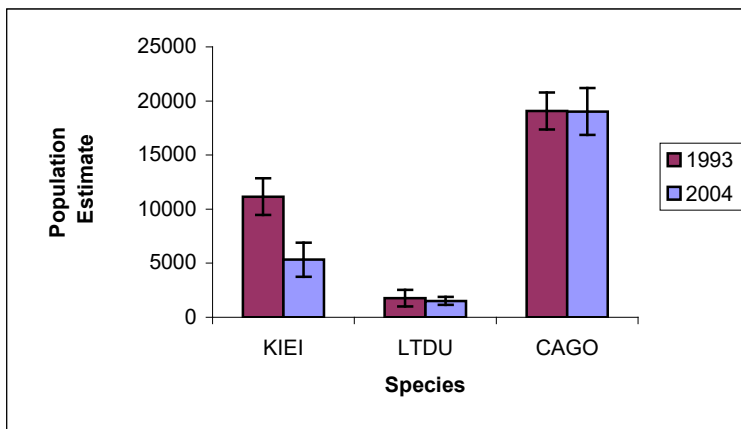


Figure 3. Estimated populations for King Eiders, Long-tailed Ducks, and Canada Geese on southwestern Victoria Island generated from aerial surveys completed in 2004 and 1993.