

# **AVIAN SURVEYS OF THE ALPINE WEST REGION, 2000**

## **FINAL REPORT**

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## TABLE OF CONTENTS

LIST OF FIGURES .....	i
LIST OF TABLES .....	i
INTRODUCTION .....	1
METHODS .....	1
RESULTS .....	4
CONCLUSIONS .....	6
LITERATURE CITED .....	6

### LIST OF FIGURES

Figure 1. Flight line of aerial survey and locations of nests observed in and around the Alpine West study area on 29 June 2000. ....	2
Figure 2. Ground-search areas and nests found in and around the Alpine West study area on 30 June 2000. ....	3

### LIST OF TABLES

Table 1. Bird and mammal species seen during aerial and ground surveys in the Alpine West study area, Alaska, 29-30 June 2000. ....	5
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## **INTRODUCTION**

PHILLIPS Alaska, Inc. currently is exploring for oil in the Colville River delta region in northern Alaska and, therefore, has a need to document baseline environmental conditions to support exploration and potential future development activities. In late June 2000, reconnaissance-level avian surveys were conducted in an ~31-km<sup>2</sup> (12 mi<sup>2</sup>) area west of the Nigliq (Nechelik) Channel of the Colville River, referred to here as Alpine West (Figure 1). The objectives of these surveys were to: (1) identify habitat that potentially could support nesting Spectacled Eiders (scientific names are given in Table 1); (2) locate nests of Spectacled Eiders and conspicuous birds, such as Tundra Swans and Brant; and (3) document areas with large concentrations of waterbirds.

## **METHODS**

On 29 June 2000, an aerial survey was flown with a pilot and one observer using a helicopter (Bell 206 Long Ranger). Because this survey was flown late in the nesting period, it was not possible to locate breeding pairs of Spectacled Eiders (i.e., the standard aerial survey technique for locating potential eider breeding areas). Hence, we only were able to identify habitats within the Alpine West study area that appeared to be suitable for nesting eiders based on our previous experience in the region.

The aerial survey was flown at an altitude of 50–70 m above ground level and at a speed of 60–100 km/h. A circular flight path was flown around large lakes and clusters of small lakes (Figure 1). In areas of few lakes, east-west transects at 0.8-km (0.5-mi) intervals were flown. All nests were recorded on 1:63,300 USGS topographic maps and all species seen in the survey area were noted. Survey time in the study area was ~1 hr.

On 30 June, a ground crew of 5 people was deployed to search for nests of eiders and other waterbirds in areas identified during the aerial survey as being most likely to support nesting Spectacled Eiders. The crew was dropped off by helicopter in the northwestern portion of the study area and then was moved ~1.5 hours later to an area in the southeast portion of the study area (Figure 2). Approximately 20 person-hours were spent searching for nests, but only a small portion (<10%) of the area was covered. Nest locations are approximate in some cases, because air photos or accurate maps upon which to record locations in the field were not available at the time of the survey.

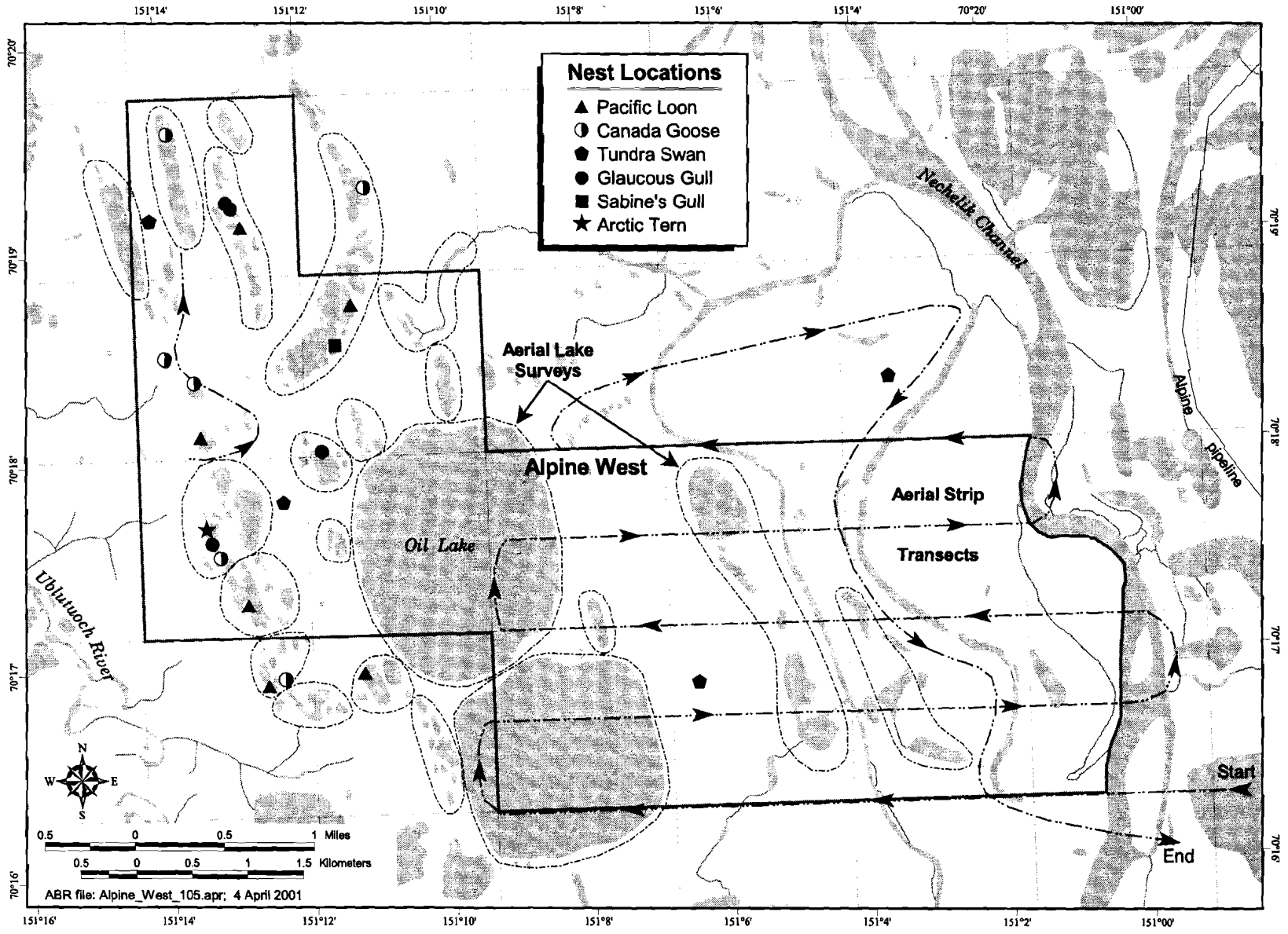


Figure 1. Flight line of aerial survey and locations of nests observed in and around the Alpine West study area on 29 June 2000.

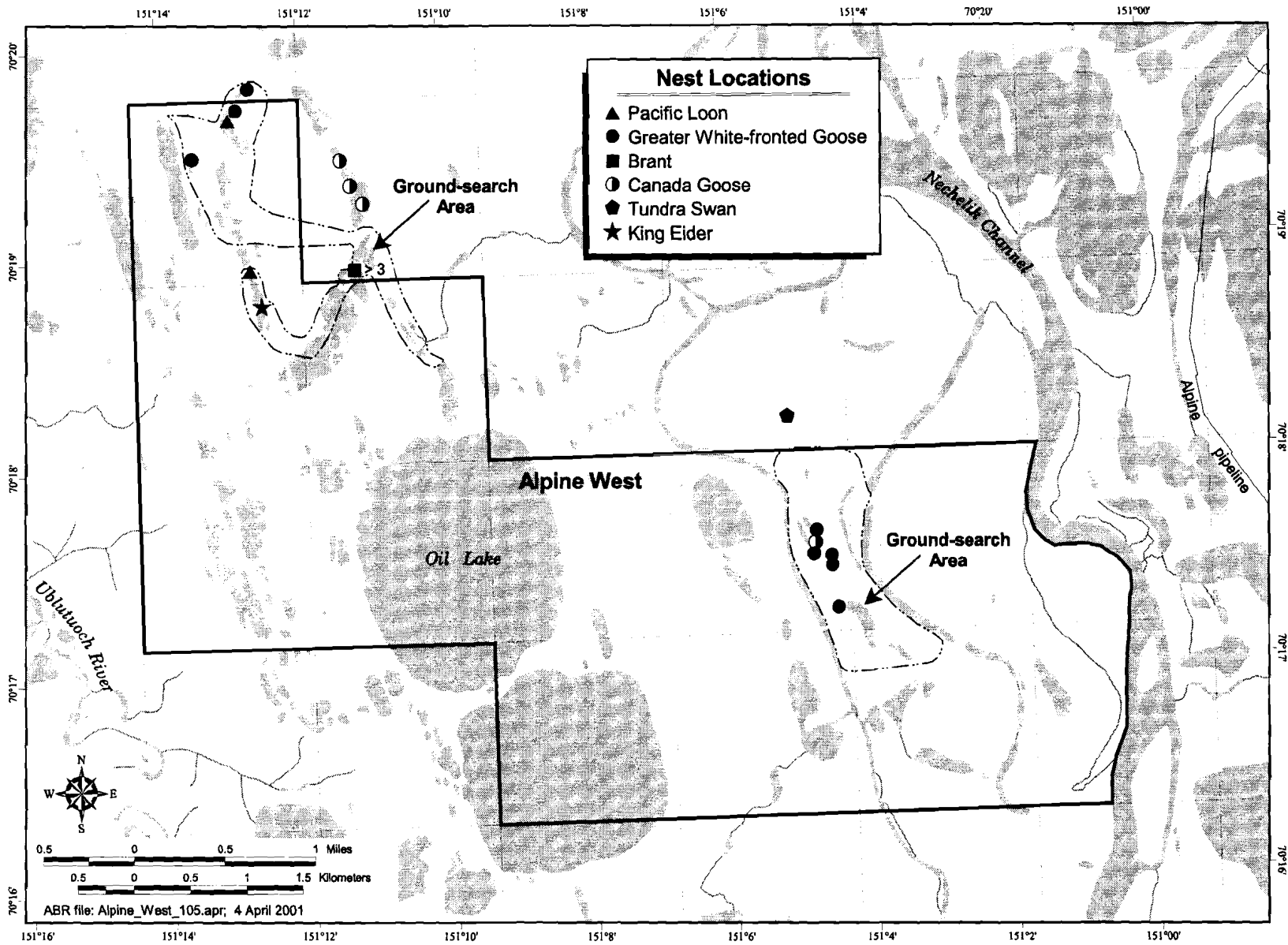


Figure 2. Ground-search areas and nests found in and around the Alpine West study area on 30 June 2000.

## **RESULTS**

The survey area is adjacent to the diverse and productive Colville River delta and has wetland and riparian habitats similar to that system. Habitats in the eastern portion of the Alpine West study area were mapped as part of the ecological investigations conducted to support oil development on the delta (see Jorgenson et al. 1997 and Johnson et al. 1996). Habitats recorded in the Alpine West area included: deep open lakes; basin wetland complexes; nonpatterned wet meadows; wet sedge-willow meadows; moist sedge shrub-meadows; riverine shrub; and riverine barrens.

Sixteen bird species were observed in the study area during the aerial survey (Table 1). Six of these species were observed attending nests, and 22 nests were identified, including Pacific Loon (6 nests), Canada Goose (6), Tundra Swan (4), and Glaucous Gull (4) (Table 1 and Figure 1). The best potential habitat for nesting Spectacled Eiders was identified in the areas subsequently searched by the ground crew (Figure 2).

Twenty-six bird species were observed in the study area during the ground survey (Table 1). Of these species, 10 species were found tending ~25 nests. Greater White-fronted Goose, Brant, and Canada Goose were the dominant breeding species in our limited survey (Table 1 and Figure 2). No Spectacled Eider nests were found, and no nonbreeding adult Spectacled Eiders were seen.

The most productive area in the study area for breeding birds was the basin wetland complex in the northwestern region of the study area, particularly the crescent-shaped string of lakes along the eastern and southern portion of this complex (Figures 1 and 2). This area has been surveyed in some years during aerial surveys of the Colville River delta, and a Brant colony with 5 nests was observed there in 1996 and 1998 (Johnson et al. 2000). Ten Canada Goose nests also were recorded in that same basin wetland complex in 1996 (Johnson et al. 1997). The ground-search area in the eastern portion of the study area was within the Colville River floodplain and was productive for Greater White-fronted Geese and Bar-tailed Godwits. Additional information on birds on the Colville River delta in 2000 can be found in Burgess et al. (2000) and Johnson et al. (2000).

Table 1. Bird and mammal species seen during aerial and ground surveys in the Alpine West study area, Alaska, 29-30 June 2000. Birds observed are denoted with ×; known breeders are denoted with a number indicating the number of nests found.

Common Name	Scientific Name	Aerial Survey	Ground Survey
Red-throated Loon	<i>Gavia stellata</i>	×	×
Pacific Loon	<i>Gavia pacifica</i>	<b>6</b>	<b>1</b>
Greater White-fronted Goose	<i>Anser albifrons</i>	×	<b>8</b>
Brant	<i>Branta bernicla</i>	×	<b>&gt;3</b>
Canada Goose	<i>Branta canadensis</i>	<b>6</b>	<b>4</b>
Tundra Swan	<i>Cygnus columbianus</i>	<b>4</b>	<b>1</b>
American Wigeon	<i>Anas americana</i>	×	
Northern Shoveler	<i>Anas clypeata</i>	×	×
Northern Pintail	<i>Anas acuta</i>	×	×
Green-winged Teal	<i>Anas crecca</i>		
Greater Scaup	<i>Aythya marila</i>	×	
King Eider	<i>Somateria spectabilis</i>		<b>1</b>
Surf Scoter	<i>Melanitta perspicillata</i>	×	
Long-tailed Duck (oldsquaw)	<i>Clangula hyemalis</i>	×	×
Golden Eagle	<i>Aquila chrysaetos</i>	×	
Willow Ptarmigan	<i>Lagopus lagopus</i>		×
Black-bellied Plover	<i>Pluvialis squatarola</i>		×
American Golden-Plover	<i>Pluvialis dominica</i>		×
Bar-tailed Godwit	<i>Limosa lapponica</i>		<b>2</b>
Semipalmated Sandpiper	<i>Calidris pusilla</i>		×
Pectoral Sandpiper	<i>Calidris melanotos</i>		×
Dunlin	<i>Calidris alpina</i>		×
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>		×
Red-necked Phalarope	<i>Phalaropus lobatus</i>		×
Red Phalarope	<i>Phalaropus fulicaria</i>		<b>1</b>
Parasitic Jaeger	<i>Stercorarius parasiticus</i>		×
Glaucous Gull	<i>Larus hyperboreus</i>	<b>4</b>	<b>1</b>
Sabine's Gull	<i>Xema sabini</i>	<b>1</b>	
Arctic Tern	<i>Sterna paradisaea</i>	<b>1</b>	<b>1</b>
Common Raven	<i>Corvus corax</i>		×
Savannah Sparrow	<i>Passerculus sandwichensis</i>		×
Lapland Longspur	<i>Calcarius lapponicus</i>		×
Common Redpoll	<i>Carduelis flammea</i>		×

## CONCLUSIONS

Although no nesting Spectacled Eiders were found, these surveys were inadequate to discount their presence because the aerial survey did not systematically cover the entire study area and was flown too late to detect breeding pairs. The ground survey also was limited in extent (<10% of the study area), so all potential eider habitat was not searched. Nevertheless, these reconnaissance-level surveys were adequate to identify the Alpine West study area as diverse and productive habitat for breeding birds.

If this area continues to be considered for exploration and development, we recommend conducting more extensive waterbird and habitat studies than were possible in 2000, including (1) breeding-pair surveys for Spectacled and King eiders, (2) nesting surveys for Tundra Swans, Brant, Canada Geese, and loons, and (3) intensive ground surveys of breeding birds in areas slated for development activity.

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