

CWS 119.11
Sackville

Aerial Waterfowl Survey of Hinds Lake, Newfoundland
A Proposed Hydro Electric Reservoir Site
October 5, 1976

Introduction

The primary purpose of the survey was to determine the fall waterfowl use of Hinds Lake, a proposed hydro electric reservoir. Other potential existing hydro sites were surveyed in less detail for comparative and orientation purposes. The King George IV Lake has been considered as a hydro reservoir but a decision to develop it has been

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appreciation of the development and tentative fall waterfowl values of the region was obtained.

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B.C. Johnson
Canadian Wildlife Service
St. John's, Newfoundland

Description of the Area

February, 1977

The lake is about 20 km (12.5 miles) east

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Introduction

The primary purpose of the survey was to determine the fall waterfowl use of Hinds Lake, a proposed hydro electric reservoir. Other potential existing hydro sites were surveyed in less detail for comparative and orientation purposes. The King George IV Lake has been considered as a hydro reservoir but a decision to develop it has been deferred to some later date. The Bay d'Espoir reservoir system was flown from east to west and an appreciation of the size and complexity of the development and tentative fall waterfowl values of the region was obtained.

There is practically no waterfowl data available for any of the areas surveyed. Only parts of two survey transects flown by CWS were in the Hinds Lake region. One survey was done in the spring of 1955 by L.M. Tuck and the other in the spring of 1968 by D.I. Gillespie. No specific waterfowl observations are noted on the portions of the survey lines near Hinds Lake.

Description of the Area

The lake is about 20 km (12.5 miles) east

of Grand Lake and 15 km (9.5 miles) northwest of Buchans (Figure 1). It is approximately 11 km (7 miles) long and 6 km (3.7 miles) wide and appears to be a typical sterile lake from a waterfowl viewpoint of the boreal forest region with a rocky shoreline devoid of emergent vegetation. I rate the Lake as a class 6 waterfowl production area using the decreasing value scale of 1-7 Canada Land Inventory system.

The area to be flooded north of the Lake is composed of several large ponds and several score small ponds surrounded by alpine barrens or more specifically patterned fen (pers.comm. Doyle Wells) typical of the Topsails region (Figure 2). The vegetation is meadow-like and dominated by sedges. The watertable is at the surface. The precise boundary to be flooded has not been determined, however at least 50 km² (20 sq. miles) of the fen would be covered to an undetermined depth. The small ponds within the fen appear shallow (.1 - .5 m), and appear devoid of either submergent or emergent vegetation.

Methods

The survey was flown in a Jet Ranger helicopter at an above-ground altitude of 100-200 feet. The flight originated at Bishops Falls at

0900 hours and terminated there at 1740 hours. Observers were Dr. V. McCauley, ecologist, Newfoundland and Labrador Hydro, Mr. Doyle Wells, ecologist, Newfoundland Forest Research Centre and myself. The weather was clear with light westerly winds and the temperature during the survey ranged from 5^o - 10^oC. The route flown is shown in Figure 3. The helicopter was provided by Newfoundland and Labrador Hydro and their support is gratefully acknowledged.

Three north to south transects were flown in the patterned fen region north of Hinds Lake and coverage was considered adequate. A complete circuit offshore of Hinds Lake was also flown.

Other areas of possible waterfowl value were briefly checked. These sites included the deltas at the southwest end of Lloyds Lake and the delta in King George IV Lake.

An orientation flight of the Bay d'Espoir reservoir system was also flown beginning at Burnt Pond in the west and continuing east to Granite Lake, Meelpaeg Lake, Crooked Lake, Great Burnt Lake, Cold Spring Pond, Godaleich Pond, Round Pond to Long Pond ending at the generating station at the Head Bay d'Espoir.

Waterfowl Observed - Hinds Lake

Three transects were flown over the fen area north of Hinds Lake and no waterfowl were observed. Five ducks, likely Black Ducks, were seen by Doyle Wells upon landing adjacent to the northeast portion of the Lake. One Common Loon was seen in a river draining into the southeast corner of the Lake. A complete circuit offshore of the Lake was flown and no waterfowl were seen.

Two biologists employed by Beak Consultants were conducting limnology studies in Hinds Lake at the time of the survey and they reported seeing 5 Canada Geese in a small fen pond 100 metres from their camp on the west side of the Lake and several mergansers at the mouths of streams entering the Lake within a week of our survey.

Waterfowl Observed - Delta of Lloyds Lake to Head Bay d'Espoir

The remainder of the survey was marked by a scarcity of migratory birds and the few observations are as follows:-

- 1) Seven mergansers in the Lloyds River - 2.5 km (1½ miles) north of King George IV Lake.
- 2) Six Canada Geese in fen pond adjacent to the Lloyds River 800 m (½ mile) north of King George IV Lake.

- 3) Seven mergansers in flowage between Crooked and Burnt Lakes.
- 4) Four Canada Geese in small pond adjacent to the West Salmon River.
- 5) One adult Bald Eagle 1.6 km (1 mile) west of Cold Spring Pond.

Discussion

The initial observations of the Hinds Lake site indicate it is likely poor breeding habitat for waterfowl with the exception of limited goose and merganser production.

I suspect there is a scarcity of invertebrates in the ponds which would severely limit their use as brood habitat for Black Ducks and Green-winged Teal, the most common dabbling ducks in Newfoundland. Ground investigations in spring and summer are required to quantitatively determine the value of the fen as waterfowl breeding habitat.

Flooding would destroy some potential goose habitat but likely not affect habitat of mergansers or other fish-eating species.

Recommendations

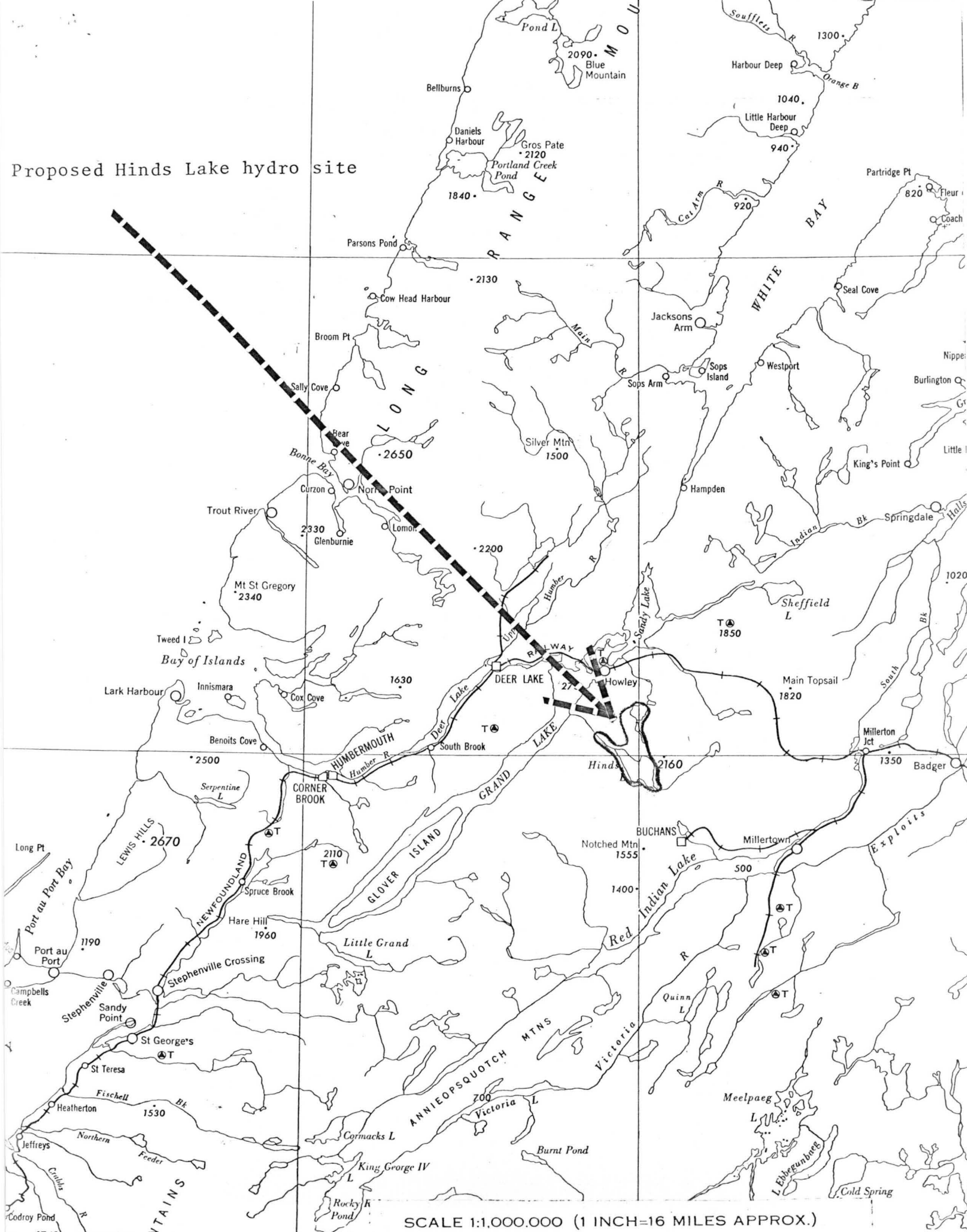
An aerial survey in mid-June complete with ground transects to sample available aquatic invertebrates in the patterned fen region north of Hinds Lake is required to quantitatively determine the value of the fen for waterfowl production.

Methods of sampling can be best determined by consultation with Dr. W. Whitman, CWS Sackville.

I estimate the survey and sampling can be done in 5 days or less.

Figure 1 Location of proposed Hinds Lake hydro site showing
the approximate extent of flooding

Proposed Hinds Lake hydro site



SCALE 1:1,000,000 (1 INCH=16 MILES APPROX.)

Figure 2 Topographic map (1:50,000) of the patterned fen
to be flooded.¹

1 The western boundary shown is not accurate as the
precise extent of flooding is unknown.

Scale 1:50,000 Echelle

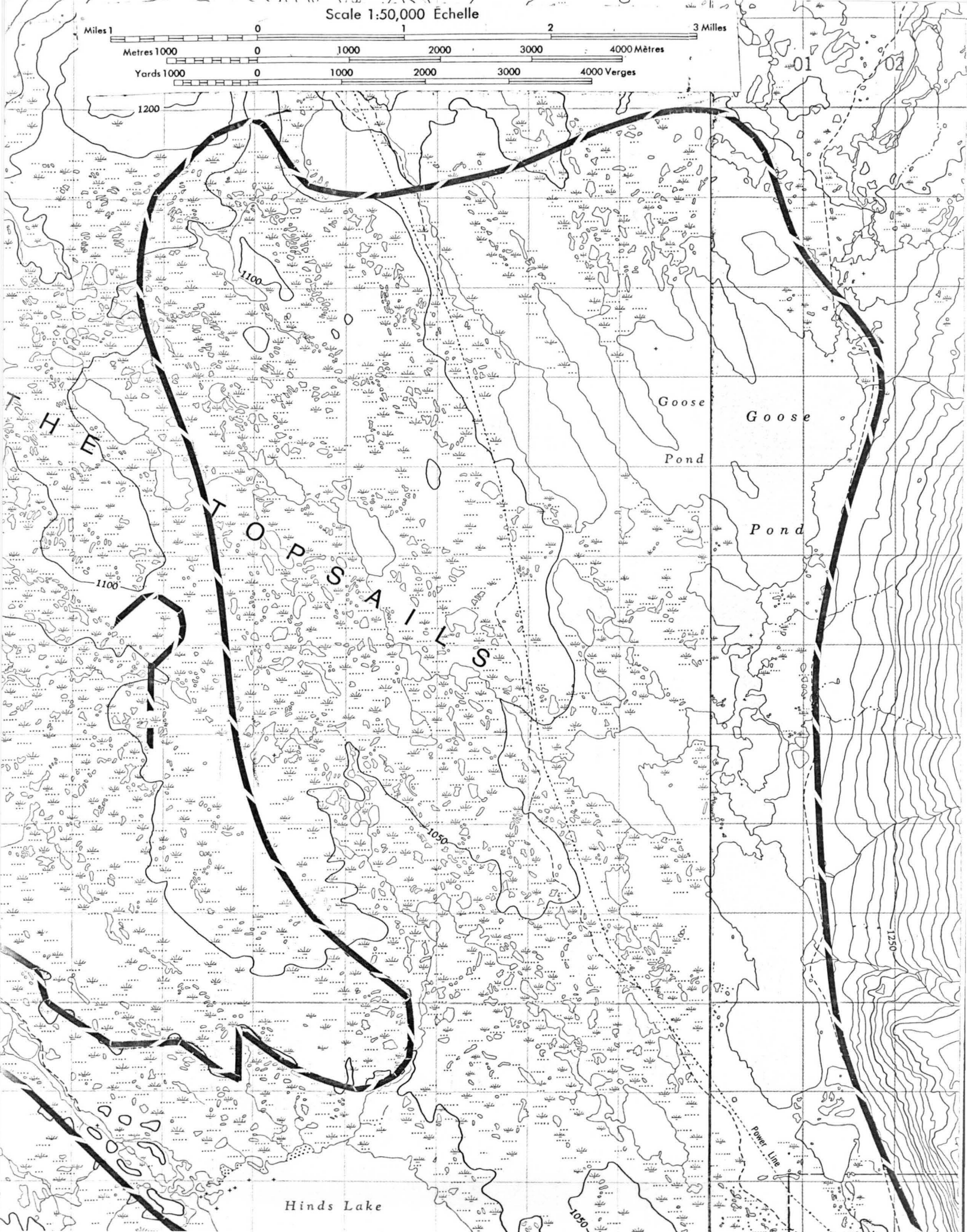
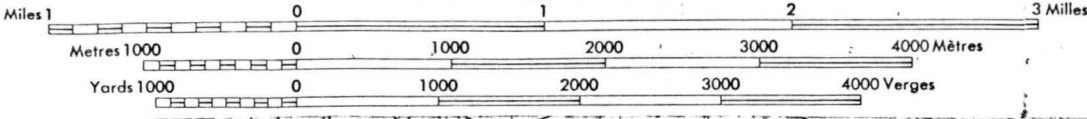
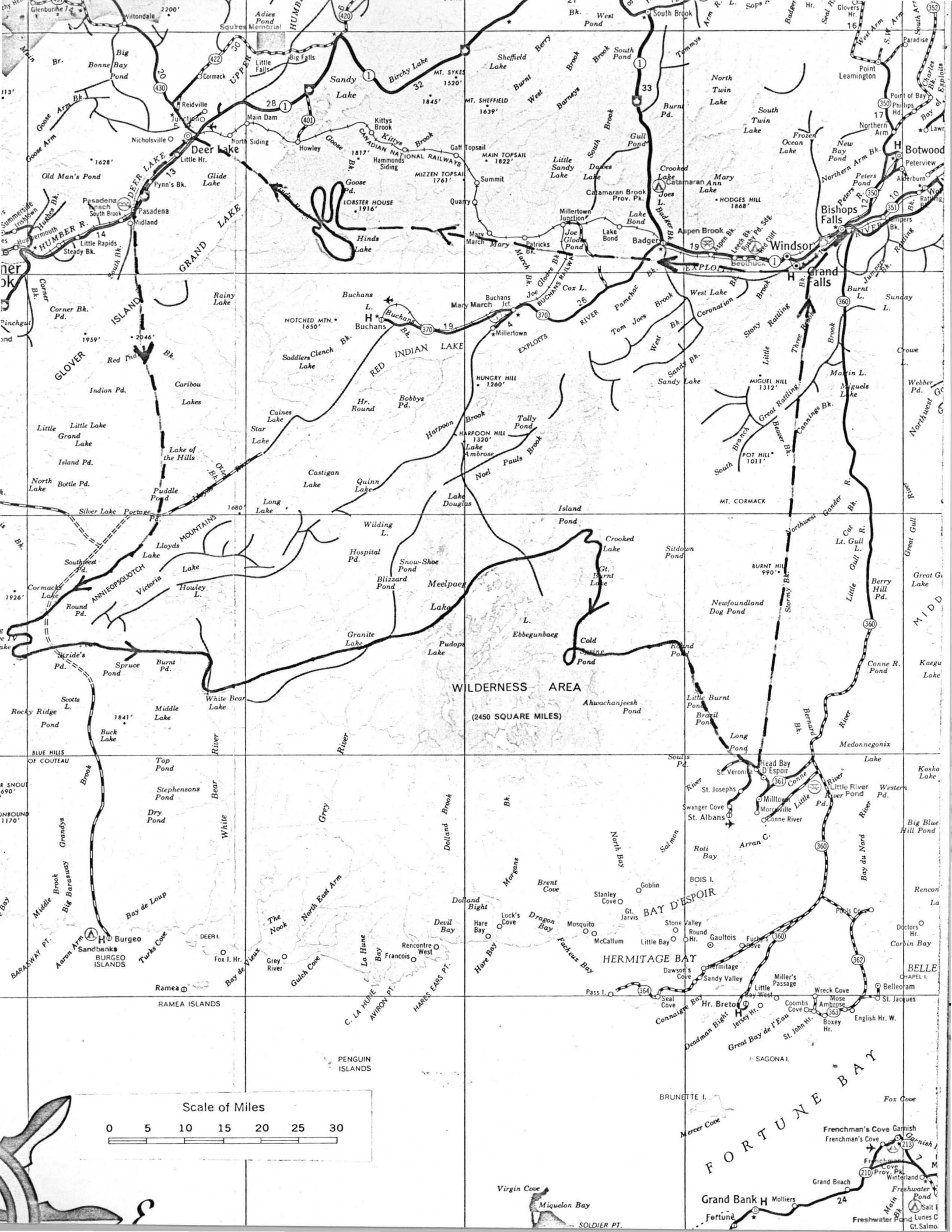
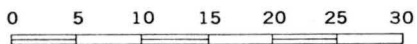


Figure 3 The waterfowl survey route flown on October 5,
1976. Portions of the route surveyed are
indicated by solid black lines.



Scale of Miles



Johnson, B. C.

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Name

Date