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**ASSESSMENT OF PRIORITY SITES FOR
THE ESTABLISHMENT OF A NETWORK OF CONSERVATION AREAS
BY THE CANADIAN WILDLIFE SERVICE**



Study undertaken for
the Canadian Wildlife Service,
Environment Canada

Contract No. ~~EE144-1-2283~~

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February 29, 1992

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Contributors to this study

This study was undertaken by the following ESAS team:

Dr. Nick Novakowski reviewed the site records, provided the site classification, and defined the latitude/longitude centroids for all sites;

Dr. Herman Dirschl coordinated the study, and was responsible for the compilation of the study report;

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Harold Dirschl carried out the coding of the data and their entry into Environment Canada's Conservation Areas Data Base.

ESAS is grateful to Gerry Lee of Canadian Wildlife Service Headquarters for his advice and assistance.

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EXECUTIVE SUMMARY

The Federal Government's "Green Plan" has established broad goals for the conservation of representative ecosystems in all parts of Canada. The Canadian Wildlife Service (CWS), which has statutory responsibility for the Migratory Birds Convention Act and the Canada Wildlife Act, is actively involved in the implementation of the Green Plan goals. In this context, the present exercise was intended to review various listings of significant migratory bird habitat sites, previously assembled by staff of each of the five CWS Regions; to assign priorities to individual sites according to their ecological significance; and to suggest designations for their future protection such as National Wildlife Areas, Migratory Bird Sanctuaries or Shorebird Reserves.

The assessment of the priority habitat sites was carried out by means of rating criteria, previously developed by CWS, and made available to the Contractor. In view of the wide disparity between the various regional presentations which formed the basis for this exercise, judgments had to be made to arrive at a common methodology for priority assessment. It is generally accepted that the Ecological Land Classification (ELC) represents the best available methodological approach for building a country-wide network of conservation areas. However, only the compilers from CWS Western & Northern Region had fully employed this system in establishing their site listings. In order to enable subsequent reference to the ELC system, latitude/longitude centroids were defined for each site.

The following paragraphs summarize the habitat site information that was reviewed in respect to provinces and territories, and the numbers and total extent of conservation areas proposed for designation.

British Columbia

38 areas suggested as National Wildlife Areas - 2,990 km²
2 areas suggested as Shorebird Reserves - 250 km²
2 areas suggested as Seabird Reserves - 70 km²

Northwest Territories

23 areas as National Wildlife Areas - 26,971 km²
5 areas as Migratory Bird Sanctuaries - 935 km²
1 area as a Shorebird Reserve - 2,178 km²
6 areas as Shorebird Reserves - 31 km²
9 existing Migratory Bird Sanctuaries - 102,450 km²

Yukon Territory

- 11 areas as Migratory Bird Sanctuaries - 16,398 km²
- 2 areas as National Wildlife Areas - 973 km²

Alberta

- 4 areas as National Wildlife Areas - 450 km²
- 9 areas as Migratory Bird Sanctuaries - 4,850 km²
- 3 areas as Shorebird Reserves - 400 km²

Saskatchewan

- 7 areas as National Wildlife Areas - 4,000 km²
- 3 areas as Migratory Bird Sanctuaries - 450 km²
- 3 areas as Shorebird Reserves - 800 km²

Manitoba

- 2 areas as National Wildlife Areas - 800 km²
- 3 areas as Migratory Bird Sanctuaries - 1,700 km²
- 3 areas as Shorebird Reserves - 336 km²

Ontario

- 10 areas as National Wildlife Areas - 216 km²
- 71 areas as Migratory Bird Sanctuaries - extent unknown
- 2 areas as Shorebird Reserves - extent unknown

Quebec

- 17 areas as National Wildlife Areas - 60 km²
- 2 areas as Migratory Bird Sanctuaries - 6 km²
- 3 areas as Shorebird Reserves - 6.5 km²

Atlantic Provinces

- 13 areas as Shorebird Reserves - extent unknown
- 6 existing National Wildlife Areas
- 2 existing Shorebird Reserves.

In carrying out this initial step in the process of developing a nation-wide listing of priority migratory bird habitat sites from rather disparate regional listings, the Contractor found that there are serious deficiencies in the habitat information currently available. The main difficulty is that most regional records have been assembled without reference to a coherent geographic or ecological system such as that provided by the Ecological Land Classification (ELC) scheme. However, the polar coordinates which were determined for each site record as part of this exercise, will readily enable the site records to be superimposed on the

hierarchical ELC units. Full assessment of the degree of representation of the spectrum of important habitat types within the national network of conservation areas can then be carried out.

An overview of the listings indicated that the identification of priority habitat areas across Canada remains spotty and regionally incomplete. Gaps are particularly apparent for Newfoundland and Labrador, northern Quebec, and central and northwestern Ontario. As relevant research has already been carried out in each of these regions of the country, it appears readily feasible to complete a nation-wide priority habitat record.

1.0 INTRODUCTION

The Federal Government's "Green Plan" has established broad goals for the conservation of representative ecosystems in all parts of Canada to ensure the maintenance of the ecological integrity of natural areas in the context of sustainable development. The Canadian Wildlife Service (CWS) with its mandated responsibility for the Migratory Birds Convention Act and the Canada Wildlife Act, is an active participant in the implementation of the Green Plan goals.

The purpose of this study was to review various listings of significant migratory bird habitat sites, previously assembled by staff of each of the five CWS Regions; to assign priorities to the sites according to their ecological significance; and to suggest appropriate designations for their future protection such as National Wildlife Areas, Migratory Bird Sanctuaries or Shorebird Reserves. In addition to waterfowl nesting, moulting and staging areas, important habitats for other species of concern to CWS such as colonial nesting birds, seabirds, and endangered species, were to be considered.

The assessment of the priority habitat sites was carried out by means of rating criteria, previously developed by CWS staff, and made available to the Contractor. All sites were coded for inclusion into the National Conservation Areas Data Base, according to the established format. In order to relate the reviewed sites to the ecoregion classification system employed by the State of the Environment (SOE) Branch of Environment Canada, latitude/longitude centroids were calculated for each site.

In view of the wide disparity between the various regional presentations which formed the basis for this exercise, it was necessary to make certain judgments in arriving at a common methodology for priority assessment. However, it should be obvious to the reader that, although all of the available documentation was reviewed in order to achieve a minimal level of registration to meet SOE standards, the work to date represents only the "tip of the iceberg", and is neither final in its judgments nor its conclusions.

The Ecological Land Classification (ELC) system is probably the best methodology to use in the identification of habitats requiring protection; the attempt made by Western & Northern Region to utilize this system is, therefore, to be applauded. However, priority assessment of habitat sites for inclusion into the national conservation area system requires greater precision than

is possible at the sub-ecoregion or ecodistrict level. The ELC must, therefore, be extended to the ecosite level to achieve the needed precision.

Other CWS Regions have used fairly precise site identification without benefit of the ELC. Undoubtedly, the process will evolve over time. Additionally, not all of the sites or areas presented could be prioritized. Those then were categorized as candidate sites or areas which must be revisited at a later point in time. Candidate sites have been entered in the data base without priority and without accompanying data except location.

2.0 RATING CRITERIA AND PROCEDURE USED

The main criteria used in the review and prioritization of candidate conservation areas were derived from two internal CWS documents, made available to the Contractor: Criteria for Establishing or Cancelling Migratory Bird Sanctuaries (Nov. 1988) and National Wildlife Areas System Plan (June 1989). In addition, the Contractor was aided by the following documents in the review and rating of habitat sites: Canada's Special Places in the North (1982), Canada's Ramsar Sites (1991), Potential Western Hemisphere Shorebird Reserve Network Sites for Migrant Shorebirds in Canada (1991), and Marine Ecological Areas Occasional Paper # 9 (1990).

Documentation was provided to the Contractor by Canadian Wildlife Service Headquarters, in the sequence they were submitted by each of the five CWS Regions. Since the material from the Pacific & Yukon Region and the Western & Northern Region was immediately available (as well as more complete) while the lists from the more easterly regions were not available until sometime later, the analysis was carried out sequentially from west to east.

Details on the procedure used in evaluating the information from each Region are provided at the beginning of the respective sections of this report. Data deficiencies and limitations are also outlined. Site references given in non-metric units have been converted to square-kilometres, and all locations have been identified by means of latitude/longitude centroids in order to facilitate input into the National Conservation Areas Data Base.

3.0 REGIONAL LISTINGS OF PRIORITY HABITAT SITES

3.1 Priority Migratory Bird Habitat in British Columbia

3.1.1 Priority Waterfowl Habitat Sites

The Pacific & Yukon Region of CWS has identified 38 sites within British Columbia which should be included in the system of conservation areas. These candidate areas consist of wetland and adjacent upland habitats throughout the province. Two of these areas (Lonesome Lake and Creston Valley) are already fully protected (Summers 1990), 13 remain completely unprotected, and the remainder are currently in the process of being assigned some form of habitat protection.

The protected and still unprotected areas cover 244.4 km² and 1738.3 km², respectively, which together represents an exceedingly small fraction of the Province's total land mass of 952,263 km². Each of these sites is significant in its own right but, for various reasons, some are more important than others. Thus a ranking system must be employed which enables the application of evaluative criteria such as use patterns (nesting, moulting, staging) and risk (natural predators, human disturbance). In addition, ELC criteria must be applied to ensure that the main ecological regions of British Columbia are represented in the inventory of proposed conservation areas.

The analysis, carried out according to the above criteria, resulted in the priority listing as presented on the following pages. Unfortunately, supporting information on waterfowl use and abundance is lacking in the compilations for British Columbia that were provided to the Consultant and could, therefore, not be considered.

Ecozone 3 - Pacific Maritime

- | | | | |
|-----|-----------|--|-----------------------------|
| #1. | Site 1 | Boundary Bay | |
| | Location: | 49 ⁰ 04 N, 122 ⁰ 45' W | Size: 201 km ² |
| #2. | Site 2 | Roberts Bank | |
| | Location: | 49 ⁰ 02 N, 123 ⁰ 07' W | Size: 162 km ² |
| #3. | Site 3 | Sturgeon Bank | |
| | Location: | 49 ⁰ 10 N, 123 ⁰ 15' W | Size: 78.66 km ² |
| #4. | Site 4 | South Arm, Marshes | |
| | Location: | 49 ⁰ 06 N, 123 ⁰ 05' W | Size: 8.5 km ² |
| #5. | Site 5 | Pitt Complex | |
| | Location: | 49 ⁰ 33 N, 122 ⁰ 33' W | Size: 81.5 km ² |

#6.	Site 6	Skeena Complex	Location: 54°00 N, 130°04 W	Size: 41 km ²
#7.	Site 7	Naden Harbour	Location: 54°00 N, 132°40 W	Size: 33 km ²
#8.	Site 8	Delkatla / Kumdis	Location: 54°00 N, 132°07 W	Size: 49 km ²
#9.	Site 9	Skidegate Channel	Location: 53°12 N, 132°02 W	Size: 73 km ²
#10.	Site 10	Comox Complex	Location: 49°39 N, 124°56 W	Size: 19 km ²
#11.	Site 11	Baynes Sound	Location: 49°26 N, 124°43 W	Size: 27.5 km ²
#12.	Site 12	Tofino Flats	Location: 49°12 N, 125°04 W	Size: 35 km ²
#13.	Site 13	Cowichan / Chemainus	Location: 48°45 N, 123°40 W	Size: 15 km ²
#14.	Site 14	Thompson Rivers	Location: 50°40 N, 120°20 W	Size: 64 km ²
#15.	Site 15	Douglas Plateau	Location: 50°15 N, 120°15 W	Size: 113 km ²
#16.	Site 16	Salmon Arm	Location: 50°44 N, 119°16 W	Size: 3.5 km ²
#17.	Site 17	Okanagan Valley / Shuswap River	Location: 49°50 N, 119°30 W	Size: 65 km ²
#18.	Site 18	Springhouse / Alkali Lake Complex	Location: 51°45 N, 122°10 W	Size: 34 km ²
#19.	Site 19	South Fraser Plateau	Location: 51°18 N, 121°30 W	Size: 132 km ²
#20.	Site 20	108 Mile House Complex	Location: 51°41 N, 121°20 W	Size: 50 km ²
#21.	Site 21	Jan Jose River Valley	Location: 51°55 N, 121°47 W	Size: 6 km ²
#22.	Site 22	Riske Creek Complex	Location: 51°57 N, 122°33 W	Size: 72 km ²

#23.	Site 23	Chilco Ranch	
	Location:	51°21' N, 124°07' W	Size: 11 km ²
#24.	Site 24	Chilcotin / Chilanko Complex	
	Location:	52°09' N, 124°06' W	Size: 37 km ²
#25.	Site 25	Stum Lake,	
	Location:	52°18' N, 123°01' W	Size: 13 km ²
#26.	Site 26	Towdystan, / Abuntlet Lakes	
	Location:	52°10' N, 125°09' W	Size: 26 km ²
#27.	Site 27	Lonesome Lake	
	Location:	52°16' N, 125°44' W	Size: 628 km ²
#28.	Site 28	Upper Columbia River Valley	
	Location:	51°13' N, 117°10' W	Size: 183 km ²
#29.	Site 29	Creston Valley	
	Location:	49°03' N, 116°38' W	Size: 84 km ²

Ecozone 4 - Montane Cordillera (Central Interior)

#30.	Site 30	Vanderhoof / Fraser, Lake Complex	
	Location:	53°59' N, 124°02' W	Size: 161 km ²
#31.	Site 31	Stuart River	
	Location:	54°28' N, 124°19' W	Size: 4 km ²
#32.	Site 32	Crooked River	
	Location:	54°12' N, 122°40' W	Size: 3 km ²

Ecozone 5 - Boreal Plains (Northern Interior)

#33.	Site 33	Liard River	
	Location:	59°00' N, 130°00' W	Size: 124 km ²
#34.	Site 34	Irene Lake and Torpid Creek	
	Location:	59°18' N, 124°29' W	Size: 33 km ²
#35.	Site 35	Triangle Lake Area,	
	Location:	59°59' N, 126°40' W	Size: 7 km ²
#36.	Site 36	Upper Teslin River,	
	Location:	59°40' N, 132°00' W	Size: 196 km ²
#37.	Site 37	Cecil Lake	
	Location:	56°20' N, 120°35' W	Size: 13 km ²
#38.	Site 38	Boudreau Lakes Complex	
	Location:	56°06' N, 120°48' W	Size: 38 km ²

3.1.2 Priority Shorebird Habitat Sites

(Assessment from Morrison et al., 1991)

1. Fraser River Delta
Location: 49°05' N, 123°10' W Size: 215 km²

Area supports 606,000 shorebirds primarily Western Sandpipers (100,000), Dunlin (126,000) and staging for the Western Sandpiper may reach 500,000 - 1,200,000 in spring and autumn.

Suggested Designation: International Shorebird Reserve

2. Tofino Flats / Chesterman Beach
Location: 49°07' N, 125°50' W Size: not given

Secondary to Fraser River Delta for Western Sandpiper (35,000) which is among the highest recorded on the West Coast.

Suggested Designation: International Shorebird Reserve

3.1.3 Priority Seabird Habitat Sites

Documentation on conservation needs for pelagic waterfowl is not available in a format that readily permits priority assessments to be made. However, recent publications by Kaiser and Forbes (1992) and Morgan et al. (1991), enabled limited deduction of conservation requirements for sea-birds. This analysis is briefly presented below.

Three marine areas are identified off the coast of British Columbia which warrant protection as sea-bird habitat:

- # 1. The Scott Islands Group, off the northwest tip of Vancouver Island - and Triangle Island in particular - provide the major nesting habitat for several burrow-nesting alcids, including Cassin's Auklet, Ancient Murrelet, Rhinoceros Auklet, and Tufted Puffin. In addition, the area represents the only known Pacific nesting location for the Thick-billed Murre and perhaps the Northern Fulmar. It appears obvious that the Scott Islands Group should receive serious consideration for inclusion in the conservation area system.

Suggested Designation: Seabird Reserve

- # 2. The Pine, Storm and Tree Islands Group off the northeastern tip of Vancouver Island, contains the two largest Rhinoceros Auklet colonies on the west coast. The islands are also major

nesting areas for Leach's Storm Petrel and the Fork-tailed Storm Petrel.

The area is already designated as "The Duke of Edinburgh Ecological Reserve" by the British Columbia Government.

Suggested Designation: Seabird Reserve

- # 3. Kunghit Island and the Kerouard Islands (off the southern tip of Moresby Island in the Queen Charlotte Islands Group) serve as nesting habitat for Cassin's Auklet, Ancient Murrelet, Rhinoceros Auklet, and Tufted Puffin. In addition, the area possesses a biologically interesting and diverse mammalian fauna that has evolved separately from the mainland (Cowan and Guiget 1965).

Suggested Designation: National Wildlife Area

Other considerations:

Most of the old growth forest stands which are still present in the Pacific Maritime Ecozone are at risk from clear-cutting. Among other conservation values, these forests provide tree-nesting habitat for the relatively uncommon Marbled Murrelet. A status report on this species, and recommendations for the protection of its habitat, is to be presented to COSEWIC in April 1992.

There are other species of national importance that are fully the responsibility of the provincial government, and whose habitat is not protected. Federal-provincial cost-sharing and co-management agreements offer a mechanism to ensure their protection. In addition to provincial crownlands, this mechanism can also be applied to native lands and military reserves. Species habitats which could be offered protection in this manner might include those for:

- the white Kermode bear of the Terrace area and Princess Royal Island (apparently a true-breeding mutant of the black bear)
- the White Pelican
- the Peale's Peregrine
- the Roosevelt elk
- the California bighorn
- the Spotted Owl.

- #2. Site 4 Lower Nisutlin River
 Location: 60°28 N, 131°45 W Size: 890 km²

Ducks - Mallards, Scaup, Wigeon, Goldeneye and
 Green-winged Teal
Geese - Canada Geese
 Approximately 110 birds species frequent the area.
 CSPN Site 17

Suggested Designation: The wide biological diversity of
 the area lends itself to designation as a Wildlife
 Management Area.

- #3. Site 34 Old Crow Flats
 Location: 67°50 N, 139°17' W Size: 7,106 km²

An area rich in waterfowl habitat.
Ducks- Up to one-half million ducks could be utilizing
 the area in any "average" year, consisting of mostly
 Scaup, Scoters, Oldsquaw, Canvasback, Goldeneye and
 Ringnecks, plus Green-winged Teal, Pintails and Wigeons.
 Some Geese and Swans
 Ramsar Site
 IBP Site

Suggested Designation: Migratory Bird Sanctuary

- #4. Site 7 Tagish Narrows
 Location: 60°17 N, 134°16' W Size: 31 km²

Major early spring staging area for waterfowl
 Trumpeter Swans
 Whistling Swans
 Ducks
 CSPN Site 13

Suggested Designation: Migratory Bird Sanctuary to
 provide protection primarily for the Trumpeter Swans.

- #5. Site 9 M'Clintock Bay
 Location: 60°33 N, 134°30' W Size: 39 km²

This is a short-duration early spring waterfowl staging
 area, but in contrast to the nearby Tagish Narrows site
 it is also used for fall staging. Because of regulated
 flooding of ponds there is some local production of ducks
 (Scaup and Scoters).
 CSPN Site 12

Suggested Designation: Migratory Bird Sanctuary and, if
 possible, contiguous with Tagish Narrows.

3.2.2. Second Order Priority Waterfowl Habitat Sites

- #1. Site 3 Dodo Lakes
 Location: 60°05' N, 129°15' W Size: 25 km²
 Diving ducks - significant numbers (moulting)
 Trumpeter Swans (breeding)
 Ducks and Swans (staging)
 CSPN Site 19
Suggested Designation: Migratory Bird Sanctuary
- #2. Site 22 Big Salmon / Sandy Lakes
 Location: 61°15' N, 133°15' W Size: 90 km²
 Ducks and Swans (breeding)
 Canada Geese (staging)
Suggested Designation: Migratory Bird Sanctuary, but more detail required.
- #3. Site 10 Upper Laberge Lake
 Location: 60°57' N, 135°05' W Size: 93 km²
 Extensive marshlands along lower Laberge Creek.
 5,000 Ducks and 150 Swans (staging)
 3,000 Ducks, 100 Geese, 360 Swans in the area of the delta on the Yukon River and the Laberge Creek marshes.
 CSPN Site 11
Suggested Designation: Migratory Bird Sanctuary
- #4. Site 28 Reid Lakes
 Location: 63°25' N, 137°10' W Size: 186 km²
 Good breeding area for ducks (no geese or swans recorded)
 A major moulting and early autumn staging area for ducks
 CSPN Site 27
Suggested Designation: Migratory Bird Sanctuary
- #5. Site 25 Von Wilczek Lakes
 Location: 62°42' N, 136°45' W Size: 65 km²
 4,000 Ducks - summer population
 A group of lakes well suited to duck production
 CSPN Site 24
Suggested Designation: Migratory Bird Sanctuary

- #6. Site 16 Pickhandle Lake
 Location: 61°55' N, 140°20' W Size: 83 km²

A dense complex of small lakes and potholes
 1,500 - 2,300 Ducks, Geese, Swans, Loons and Grebes
 Trumpeter Swans
 IBP Site
 CSPN Site 1

Suggested Designation: National Wildlife Area

3.2.3. Third Order Priority Waterfowl Habitat Sites

- #1. Site 6 Little Atlin Lake Outlet
 Location: 61°55' N, 140°20' W Size: 47 km²

Early open water areas used by early migrants
 Trumpeter Swans, Canada Geese, Canvasbacks, Scaup,
 Goldeneyes and Buffleheads
 One of the major early spring staging areas in the
 southern Yukon
 CSPN Site 15

Suggested Designation: Migratory Bird Sanctuary

- #2. Site 2 Teslin Lake
 Location: 60°30' N, 134°00' W Size: 50 km²

Ducks, Geese and Swans (staging)
 850 Ducks, 20 Geese and 1,600 Swans (spring counts)
 1,500 Ducks and 140 Swans (autumn counts)
 CSPN Site 16

Suggested Designation: Migratory Bird Sanctuary

3.3 Priority Migratory Bird Habitat in the Prairie Provinces

The priority listing developed by Poston et al. (1990) for the migratory bird habitat of the Prairie Provinces, specifically in regard to duck and goose production, moulting and staging habitat, recognizes three levels of importance. Those habitats which are considered to be of national importance, are classed as first (or highest) order priority, while habitat areas that are of regional or local importance are categorized as second and third order priority, respectively.

The method of evaluation and classification for prairie waterfowl habitat is based on the Ecological Land Classification (ELC) system. In this hierarchical scheme, Ecozones, as the geographically largest units, are divided into several or more Ecoregions. For the purpose of the migratory bird habitat listing, the ecoregions were further divided into "Habitat Subregions". It is these subregions which were then examined for their importance as waterfowl habitat, and classed according to the three-level priority scheme. It must be recognized, however, that not all subregions contain significant waterfowl habitat. In other cases, the priority evaluation deals with specific waterbodies whose preservation offers a more realistic goal than the protection of the subregion as a whole.

3.3.1. First Order Priority Waterfowl Habitat Sites

2.0 Mixed-Grass Prairie Ecoregion

- #1. 2.34 Sibbald Plains, AB/SK
 Location: 51°40' N, 109°37' W Size: 100 km²

Duck Habitat

Breeding areas - upland areas in the vicinity of all waterbodies

Moulting areas - Dewar Lake, Kiyiu Lake, White Heron Lake

Goose Habitat¹

Staging areas - Beaufield Marsh, Crookshank's Lake, Dewar Lake, Eyre Lake, Herrick Low Lake, Street Lake.

¹ All or part of the subregion is on the Mississippi Flyway. A portion of the subregion also forms a well-known goose hunting area. It is assumed, therefore, that the waterbodies used for staging and their immediate vicinities are protected, or "off-limits" to hunters.

Suggested Designation: National Wildlife Areas to conserve the waterbodies in the northeast and southeast sectors of the subregion.

- #2. 2.61 Old Wives Lake, SK
 Location: 50°10' N, 106°00' W Size: 600 km²

Duck Habitat

Nesting areas - no areas identified

Moulting areas - Old Wives Lake²

Staging areas - Old Wives Lake, Chaplin Lake

Ancillary Information:

1. Colonial birds (nesting) - 1N, 3R, 3L³
2. Colonial birds (non-breeding) - 1R
3. Threatened species (nesting) - 1N, 3L
4. Shorebirds (staging) - 1N, 1L

Suggested Designation: National Wildlife Area.

- #3. 2.75 Upper Qu'Appelle Plain, SK
 Location: 53°53' N, 102°26' W Size: 300 km²

Duck Habitat

Breeding areas - not listed

Moulting areas - Axe Lake, Bank Lake, Stalwart Lake
 Stalwart Marsh

Staging areas - Axe Lake, Bank Lake, Boulder Lake,
 Kutawagan Lake, Stalwart Marsh

Goose Habitat

Breeding areas - Stalwart Marsh, Kutawagan Lake

Moulting areas - nil

Staging areas - Eyebrow Lake, Axe Lake, Bank Lake

Ancillary Information:

1. Threatened species - 4L
2. Shorebird (staging) - 1R

² Poston et al. (1990) state that Old Wives Lake is now nearly dry but is expected to recover once moisture conditions on the prairies improve. This statement presupposes that there is a cyclical nature to the water regime. It is conceivable, however, that as a consequence of the "greenhouse effect" the entire Palliser Triangle will become untenable for arable farming in the longer term. This possibility is recognized by the Government of Saskatchewan as a planning horizon (W. Pepper pers. comm.).

³ Refers to the number of migratory bird species present, other than waterfowl, which are of national significance (N), regional significance (R), or local significance (L).

Suggested Designation: Migratory Bird Sanctuaries for the lakes listed above.

4.0 Parkland Ecoregion

- #4. 4.41 Ponass Lakes Plain, SK
 Location: 52°27 N, 103°58 W Size: 400 km²

Duck Habitat

Breeding areas - none listed

Moulting areas - Ranch Lake[†]

Staging areas - Foam Lake, Lenore Lake, Charron/Edouard Lakes, Houghton Lake, "Canola Project" Lake

Goose Habitat

Breeding areas - Charron/Edouard Lakes, Deadmoose Lake, Fishing Lake, Foam Lake, Houghton Lake, Mantrap/Flat Lakes, Ranch Lake, Saline Lake, "Kuroki Duck Factory" Lake.

Moulting areas - Foam Lake, Lenore Lake, Ponass Lake

Staging areas - Lenore Lake

Ancillary Information:

1. Colonial birds (breeding) - 3R, 1L
2. Colonial birds (non-breeding) - 1R, 1L
3. Shorebirds (staging) - 1N

Suggested Designation: National Wildlife Area at Ponass Lake and adjacent uplands.

Migratory Bird Sanctuary at Saline Lake.

- #5. 4.81 Shoal Lake Plain, MN
 Location: 50°27 N, 97°36 W Size: 400 km²

Duck Habitat

Breeding areas - none listed

Moulting areas - Shoal Lakes

Staging areas - local at Marchy Point

Goose Habitat

Breeding areas - Shoal Lakes, especially Marshy Point

Moulting areas - presumably in the same area

Staging areas - presumably elsewhere out of the subregion

Ancillary Information:

1. Colonial birds (breeding) - 4N, 2R, 5L
2. Threatened species - 1N
3. Shorebirds (staging) - 1N

Suggested Designation: Migratory Bird Sanctuary

[†] Ranch Lake is probably Ranch Slough in which CWS had an interest since the late 1960s under the direction of the late Nolan Perret.

7.0 Mid-Boreal Transition Ecoregion

- #6. 7.32 Interlake Plain, MN
 Location: 51°27' N, 99°00' W Size: 1600 km²

Duck Habitat

Breeding areas - Chatfield Lake, Dennis Lake, Russel Lake

Moulting areas - Dog Lake

Staging areas - Chatfield Lake and environs, Dennis Lake, Dog Lake, Pinemute Marsh, Lake Manitoba Narrows, and Long Island, Portage Bay, Oak Island Marsh and Watchhorn Bay on Lake Manitoba.

Goose Habitat

Breeding areas - Moosehorn Lake, Spruce Lake, Oak Lake, Lake Manitoba Narrows and Oak Island Marsh; (and of regional importance) Dennis Lake, Russel Lake, Dog Lake/Marshy Point, Pineimuta Lake; and (of local importance) Chatfield Lake and environs

Moulting areas - Dog Lake, Dennis Lake, Russel Lake, Chatfield Lake and environs

Staging areas - throughout all of the lakes and water-bodies above

Ancillary Information:

1. Colonial birds (breeding) - 4N, 4R, 1L

Suggested Designation: Migratory Bird Sanctuary in the central and south of the subregion.

National Wildlife Area for the high concentration of colonial birds at the north end of the subregion.

8.0 Mid-Boreal Mixed Woods Ecoregion

- #7. 8.18 Beaver River Plain, AB
 Location: 54°25' N, 110°42' W Size: 400 km²

Duck Habitat

Breeding areas - Forsyth Lake, Jessie Lake

Moulting areas - Harold Lake, Jessie Lake, Stebbing Lake

Staging areas - Manatokan Lake, local staging at Jessie, Berricki, Charlotte, Edward, Harold, and Maloney lakes.

Goose Habitat

Breeding areas - none listed

Moulting areas - none listed

Staging areas - Berricki Slough, Charlotte Lake, Edward Lake, Osborne Lake

Ancillary Information:

1. Colonial birds (breeding) - 4N, 9R, 3L
2. Colonial birds (non-breeding) - 2L

Suggested Designation: Migratory Bird Sanctuary

20.0 Mid-Boreal Lowlands Ecoregion

- #8. 20.05 Upper Saskatchewan Delta, SK
 Location: 53°44 N, 102°30 W Size: 900 km²

Duck Habitat

Breeding areas - Cumberland Delta

Moulting areas - Reader Lake, Redearth Lake, locally at Bloodsucker Lake, Egg Lake, North McGregor Lake, Wapisew Lake

Staging areas - of regional importance, Egg Lake, Kennedy Lake, Bourassa Lake, and local populations at Bewley Lake, Big Lake, Bloodsucker Lake, Meadow Lake, Nisku Lake, Pasquia Lake, Wapisew Lake, N. McGregor Lake

Goose Habitat

Breeding areas - Saskeram Marshes, Big Lake, N. McGregor Lake, Wapisew Lake

Moulting areas - Saskeram Marshes

Staging areas - all the lakes mentioned above

Suggested Designation: National Wildlife Area for the region of clustered lakes

- #9. 20.12 Winnipegosis Plain, MN,
 Location: 52°56 N, 100°30 W Size: 400 km²

Duck Habitat

Breeding areas - none listed

Moulting areas - none listed

Staging areas - Sagemace Bay and Swan Lake

Goose Habitat

Breeding area - Pelican Bay

Moulting areas - none listed

Staging area - Sagemace Bay

Ancillary Information:

1. Colonial birds (breeding) - 1N, 2R, 1L
2. Threatened Species - 1N

Suggested Designation: National Wildlife Area in the north-west sector of the subregion for colonial birds.

3.3.2. Second Order Priority Waterfowl Habitat Sites

The point rating system of Poston et al. (1990) refers to those habitats which score from 40 - 79 points as being more of a regional importance than a national importance. This appears reasonable but there are some anomalies. For example, 8.77 Zama Lake Plain is in the category of local importance yet the Hay-Zama Lakes area has been designated as a Ramsar Site (Gillespie et al, 1991), with approximately 200,000 geese and 200,000 ducks staging there during fall migration. In any event, there are obvious second order and third order priority habitats of regional

importance within the 40 - 79 point range. The second order habitats will be prioritized and evaluated as those nominally in the 60 - 79 point range.

8.0 Mid-Boreal Mixed-Woods Ecoregion

- #1. 8.69 Peace-Athabasca Delta, AB
 Location: 58°30 N, 111°30 W Size: 3600 km²

The delta is one of the most important waterfowl nesting, resting and feeding areas in North America (Gillespie et al, 1991). Up to 400,000 waterfowl rest and feed there during spring and over 1,000,000 during the fall migration. Duck production is high. As well, the Canada Goose breeds there and there is a large diversity of other avian species.

The major part of the delta is situated within Wood Buffalo National Park and even then, and although it is also considered a Ramsar Site, it is not sacrosanct. The delta area within W.B.N.P. is included in the Cree Band of Chipewyan Agreement. This Agreement with the Government of Canada creates a joint Wildlife Advisory Board. If this agreement is implemented, there will be no further need to make the Peace-Athabasca Delta a Migratory Bird Sanctuary as well.

Suggested Designation: Migratory Bird
 Sanctuary

- #3. 4.43 Quill Lakes Basin, SK
 Location: 51°54 N, 104°13 W Size: 1500 km²

The Quill Lakes (Big, Middle and Little), although not highly productive of ducks, are a major staging area for geese, ducks (produced in the surrounding smaller sloughs), Sandhill Cranes, and shorebirds.

Big Quill is the site of a colony of 500 pairs of White Pelicans and a major nesting place of the endangered Piping Plover (Gillespie et al, 1991).

Ramsar Site

Suggested Designation: National Wildlife Area

- #4. 7.07 Cooking Lake Upland, AB,
 Location: 53⁰10 N, 113⁰08 W Size: 200 km²

The Cooking Lake Upland comprises a number of lakes and sloughs which are contained within the Cooking Lake Forest Preserve. These were originally federal lands that were transferred to the province as a result of the Resources Transfer Agreement Act of 1930. Encroachment by city-dwellers holding small parcels of land is a major threat to the preserve.

The lakes and potholes of the Cooking Lake Upland have a good production of ducks. Cooking Lake is a major moulting area and Big Hay Lake serves as a major staging area. Geese breed chiefly on Miquelon Lake East, and a local populations of geese moult and stage on Ministik Lake.

Colonial birds of regional importance breed and nest in the area lake systems.

A compelling reason for safe-guarding the area is to maintain the natural ecosystems of the Uplands, and the integrity of the many lakes that make up the ecoregion. The land is not suitable for farming nor are the lakes of recreational value. If the various encroachments were removed, the area's waterfowl productivity would likely increase substantially.

Suggested Designation: Migratory Bird Sanctuary for Cooking Lake and Hastings Lake

- #5. 4.20 Beaverhill Lake Plain, AB
 Location: 53⁰24 N, 112⁰30 W Size: 200 km²

Beaverhill Lake, by its size, dominates the sub-ecoregion but the lake is now much smaller than it was in historical times. Abundant duck production occurs in the numerous sloughs north and south-east of the lake. There is also some local goose production. Beaverhill Lake as a major staging area for ducks, geese and swans and although the lake itself is largely unproductive the many wheat-fields particularly to the east of the lake provide excellent feeding-grounds. The lake harbours colonies of White Pelicans, Double-crested Cormorants as well as shorebirds.
 Ramsar Site.

Suggested Designation: In view of the fact that the lake is already protected as a Migratory Bird Sanctuary, and by the province as a "buffer-zone", it lends itself to being designated as a National Wildlife Area.

- #6. 4.30 South Saskatchewan River, Plain, SK
 Location: 52°11 N, 106°42 W Size: 100 km²

A combination of locally and regionally important duck breeding areas occur adjacent to the South Saskatchewan River; some breeding geese use Pelican Lake; a staging area for ducks at Duck Lake and for geese at Rice Lake, Strap Lake, Young Slough, and Bradwell National Wildlife Area.

The northern part of the subregion is important from an historical standpoint and the fact that this was the northernmost area of penetration of the plains bison in Saskatchewan (Gordon, 1979).

The area also has some colonial breeding and non-breeding populations, threatened species and important shorebird populations.

Suggested Designation: National Wildlife Area (perhaps involving an extension of the boundaries of the existing Bradwell National Wildlife Area on the east).

- #7. 4.13 Edgerton Plain, AB/SK
 Location: 53°00 N, 110°00 W Size: 200 km²

This subregion which straddles the border between Saskatchewan and Alberta, is dominated by a large waterbody, Manitou Lake. It is characterized by numerous smaller lakes to the southeast and southwest on the Saskatchewan side, and by a cluster of lakes to the northwest (the Baxter Lakes) on the Alberta side. Manitou Lake is strongly saline. It serves, in concert with Seagram Lake, as a major staging area for ducks and a minor goose breeding area. Seagram Lake is also the major goose staging area in the subregion.

In view of the myriad of lakes present, it is difficult to understand why this subregion is not a highly productive waterfowl habitat.

3.3.3. Third Order Priority Waterfowl Habitat Sites

- #1. 7.03 Buffalo Lake Plain, AB
 Location: 52°24 N, 112°50 W Size: not known

This is a small subregion dominated by Buffalo Lake with extensive small lakes to the north of the main lake. Buffalo Lake receives some use by staging ducks.

- #2. 2.20 Lake Newell Plain, AB
 Location: 50°25 N, 112°00 W Size: not known

Extensive lake system (7 major lakes) used primarily by staging ducks. San Francisco Lake is a major lake involved in goose breeding and local staging. Locally important for breeding and staging geese.

- #3. 4.79 Delta Marshes, MN
 Location: 50°00 N, 98°00 W Size: not known

Few ducks breed in the delta on the south shore of Lake Manitoba but are still plentiful in the adjacent sloughs. Canada Geese have been introduced and thrive. This is now a major staging area for geese. The area has primarily historic value.

- #4. 4.07 Castor Plain, AB
 Location: 52°00 N, 112°00 W Size: not known

Shooting Lake and Erskine Lake are the major waterbodies with breeding duck and goose populations, and staging habitat of regional and local significance.

- #5. 4.59 Souris River Plain, SK
 Location: 49°18 N, 102°50 W Size: not known

Although the production of ducks in this subregion has been small (less than 5,000), the new Rafferty Dam poses an opportunity to enhance waterfowl production (see EARP Panel Report #43), and to increase the number of staging geese. Another possibility exists for increasing duck production below the Rafferty Dam.

- #6. 8.19 Moostoos Upland, SK/AB
 Location: 55°00 N, 110°00 W Size: not known

Important mainly for colonial bird breeding throughout a fairly extensive lakes system to the west and east of Primrose Lake.

- #7. 2.39 Sounding Creek Plain, AB
 Location: 51°36 N, 111°15 W Size: not known

Regionally important as a goose staging area, particularly with reference to Antelope Lake, Grays Lake and Oldman Lake. The subregion is characterized by an extensive lake system and possesses a well-known goose hunting area. The area is also historic pronghorn antelope range which has only recently been re-occupied.

Suggested Designation: Migratory Bird Sanctuary for all of the above sites.

3.3.4 Priority Shorebird Habitat Sites

Assessment from Morrison et al. (1991) and Poston et al. (1990).

- Site 1 Old Wives Lake / Chaplin Lake, SK
 (See Subregion 2.61)

124,200 shorebirds of which 51,700 were Sanderlings (46% of total N.A. and S.A. population)
 Baird's Sandpipers - 29,900
 Piping Plovers

Suggested Designation: Reserve for Endangered Shorebirds

- Site 2 Quill Lakes, SK
 (See Subregion 4.43)

Approximately 214,900 shorebirds on 3 major lakes (Big Quill, Middle Quill, Little Quill)
 Chiefly Sanderlings but also Hudsonian Godwit, Marbled Godwit, Red Knot, Stilt Sandpiper, Yellowlegs, Least Sandpiper, Long-billed Dowitcher and Red-necked Phalarope. Big Quill Lake is the most important site for Piping Plover (11% of the Great Plains population).

Suggested Designation: Reserve for Endangered Shorebirds

Site 3 Alberta / Saskatchewan Border Region, AB/SK
(See Subregions 4.11, 4.12, 4.13)

A complex of 12 major lakes which hold approximately 150,000 shorebirds between them, including Sanderlings, Red-necked Phalaropes and Baird's Sandpipers. Second largest breeding population of Piping Plover in Alberta and Manito Lake, Sask. centre the complex.

Suggested Designation: Reserve for Endangered Shorebirds

Site 4 Oak Hammock Marsh, MN
Location: 49°40' N, 100°45' W Size: 36 km²

Significant numbers of White-rumped Sandpipers, Short-billed Dowitchers, Hudsonian Godwits and Yellowlegs.

Suggested Designation: Regional Shorebird Reserve

Site 5 Beaverhill Lake, AB
(See Subregion 4.20)

Approximately 23,500 shorebirds staging, chiefly Red-necked Phalaropes and Pectoral Sandpipers.

Suggested Designation: Regional Shorebird Reserve

Site 6 Hanna Area, AB
(See Subregion 2.39)

Five lakes important for Piping Plover breeding. About 42-57% of Alberta population found there.

Suggested Designation: Reserve for Endangered Shorebirds

Site 7 Nelson River / Hayes River, MN
Location: 57°01' N, 92°10' W Size: 100 km²

Spring and summer migration averages 10,750-16,165 shorebirds
Approximately 3,500 Red Knots
Hudsonian Godwit are also numerous

Suggested Designation: Regional Shorebird Reserve

Site 8 Churchill, MN
Location: 58°48' N, 94°05' W Size: 200 km²

Large breeding area for shorebirds
Migrant stop-over includes 6,000 Ruddy Turnstones - the largest concentration in Canada

Suggested Designation: Regional Shorebird Reserve

- #2. Site 27 Berlinguet Inlet ,
 Location: 71°15 N, 85°50 W Size: 11,141 km²

14,700 Greater Snow Geese - 7%
 Terns, Gulls, Fulmars, sea-ducks and Peregrine
 Falcons nest and feed within the area.
 The site encompasses the coastal zone and
 surrounding lowlands of Bernier Bay and
 Berlinguet Inlet and Southern Admiralty
 Inlet. It is a gently rolling coastal plain
 of very low relief. Compared to areas to the
 north, east and south, this is a relative
 oasis. The connection to Bernier Bay and
 thence to Prince Regent Inlet which forms part
 of the Northwater Channel through Lancaster
 Sound, provides access to a major sea mammal
 feeding area as well as polar bear hunting
 area. Caribou hunting of a major part of the
 Central Baffin Herd occurs to the east of
 Moffet Inlet.

Suggested Designation: National Wildlife Area

- #3. Site 43 Southeastern Mackenzie Mountains
 Location: 61°40 N, 123°30 W Size: 1,976 km²

Trumpeter Swans - 15%
 Dall's sheep and Woodland (Mountain) Caribou
 are major mammal species. Because woodland
 caribou populations are threatened elsewhere
 (Alberta), it is important to safeguard the
 species here.

Suggested Designation: National Wildlife Area

- #4. Site 38 Foxe Basin Islands
 Location: 68°00 N, 75°05 W Size: 3,000 km²

Includes Prince Charles Island, Air Force
 Island and the south-central shores of Foley
 Island.

1,800 Atlantic Brant - 1%
 Sabine's Gulls, Greater Snow Geese, eleven
 colonies of Arctic Terns, King Eiders,
 Oldsquaws.
 Shorebirds abundant
 CSPN Site 99

Suggested Designation: National Wildlife Area

- #5. Site 37 North Spicer Island
 Location: 68°33 N, 78°45 W Size: 341 km²
 Atlantic Brant - 1%
 Sabine's Gulls, Arctic Terns, Oldsquaws, Pacific Loons,
 Red-throated Loons
 CSPN Site 105
Suggested Designation: National Wildlife Area
- #6. Site 50 Jenny Lind Island
 Location: 68°43 N, 101°58 W Size: 335 km²
 33,000-50,000 Lesser Snow Geese - 2%
 900 Ross' Geese
 1,500 Canada Geese
 Diverse assemblage of shorebirds
 Small herd of Muskoxen
Suggested Designation: Migratory Bird Sanctuary
- 3.4.2. Second Order Priority Waterfowl Habitat Sites
- #1. Site 71 Northeast, Ungava Bay
 Location: 59°40 N, 65°30 W Size: 225 km²
 Northern Common Eider - 7%
 Three archipelagos in 3 separate sites on the northeast
 coast of Ungava Bay have a nesting population of about
 6,700 pairs
Suggested Designation: Migratory Bird Sanctuary
- #2. Site 73 Sleeper Islands
 Location: 57°30 N, 79°45 W Size: 226 km²
 Hudson Bay Common Eider - 14%
 There is an overwintering population around polynyas near
 Belcher Islands
 Arctic Terns, Glaucous Gulls and Herring Gulls
Suggested Designation: National Wildlife Area
- #3. Site 47 North Arm, Great Slave Lake
 Location: 62°19 N, 114°23 W Size: 1,129 km²
 154 pairs of Caspian Terns (breeding) - 1%
 Spring migration - site is ice free early
 10's of thousands of waterfowl congregate in spring
 20,500 Canada Geese
 12,000 Lesser and Greater Scaup
 Tundra Swans

IBP Site

Suggested Designation: National Wildlife Area

- #4. Site 18 Inglefield Mountain
Location: 77°20' N, 79°15' W Size: 14 km²

Ivory Gulls - 35%

Suggested Designation: Seabird Reserve

- #5. Site 38 Foxe Basin Islands
Location: 68°00' N, 75°05' W Size: 3,000 km²

Sabine's Gulls - 18%
King Eiders, Northern Common Eiders, Oldsquaws
Herring Gulls and shorebirds

Suggested Designation: National Wildlife Area

- #6. Site 68 Eider Islands
Location: 60°50' N, 69°20' W Size: 72 km²

4,100 N. Common Eiders (nesting) - 4%

Suggested Designation: National Wildlife Area

- #7. Site 72 Koktac Archipelago
Location: 59°15' N, 78°00' W Size: 530 km²

Islands off the east coast of Hudson Bay
Hudson Bay Common Eiders (overwintering population) - 5%
Arctic Tern, Glaucous and Herring Gulls

Suggested Designation: National Wildlife Area

- #8. Site 46 Northwest Point
Location: 61°43' N, 115°30' W Size: 1 km²

Caspian Terns (a small islet is the location of the
largest known colony in N.W.T.) - 1%
Includes one of the largest gulleries on Great Slave Lake

Suggested Designation: Seabird Reserve

- #9. Site 26 Northwestern Brodeur Peninsula
Location: 73°37' N, 87°45' W Size: 10 km²

Ivory Gulls - 24%

Suggested Designation: Seabird Reserve

- #10. Site 69 Plover and Payne Islands
 Location: 60°10 N, 69°30 W Size: 220 km²
 Northern Common Eider - 4%
Suggested Designation: Migratory Bird Sanctuary
- #11. Site 74 North Belcher Islands
 Location: 56°45 N, 79°40 W Size: 62 km²
 Hudson Bay Common Eider (mainly on Laddie and Split
 Islands) - 7%
 Arctic Terns, Glaucous and Herring Gulls
 CSPN Site 134.
Suggested Designation: National Wildlife Area
- #12. Site 17 Sydkap Ice Field
 Location: 76°23 N, 85°06 W Size: 1 km²
 Ivory Gulls - 12%
Suggested Designation: Migratory Bird Sanctuary
- #13. Site 70 Gyrfalcon Island
 Location: 59°06 N, 68°58 W Size: 150 km²
 Northern Common Eider - 4%
Suggested Designation: Migratory Bird Sanctuary
- #14. Site 75 Salikuit Islands
 Location: 56°22 N, 77°40 W Size: 65 km²
 Hudson Bay Common Eider - 2%
 Arctic Terns, Glaucous and Herring Gulls
Suggested Designation: National Wildlife Area
- #15. Site 19 Eastern Devon Island
 Location: 75°05 N, 80°50 W Size: 4 km²
 Ivory Gulls - 3%
Suggested Designation: Seabird Reserve
- #16. Site 63 Fraser Island
 Location: 63°29 N, 78°30 W Size: 35 km²
 Northern Common Eider - 3%
Suggested Designation: National Wildlife Area

#17. Site 58 Turton Island
 Location: 66°24 N, 82°55' W Size: 2 km²

Northern Common Eider - 2%

Suggested Designation: National Wildlife Area

3.4.3. Third Order Priority Waterfowl Habitat Sites

#1. Site 20 Coburg Island
 Location: 75°50 N, 79°25' W Size: 6 km²

At Cambridge Point approximately 30,000 Black-legged Kittiwakes nest along the cliffs - 16% (1/3 of N.W.T population)

King Eiders (staging)

160,000 pairs of Thick-billed Murres (third largest colony in N.W.T.) - 11%

polynyas present

White Whales, Narwhals and Bowhead Whales

Ringed Seals, Bearded Seals and Harp Seals

IBP Site

CSPN Site 130

Suggested Designation: National Wildlife Area

#2. Site 66 Hantzsch Island
 Location: 61°56 N, 65°01' W Size: 1 km²

50,000 pairs Thick-billed Murres - 3%

5,000 pairs Black-legged Kittiwakes - 2%

Some Glaucous Gulls

Nearby polynyas attract all of the marine mammals

IBP Site

Suggested Designation: National Wildlife Area for Flagship Island.

#3. Site 35 Cape Searle
 Location: 67°14 N, 62°28' W Size: 2 km²

Largest Northern Fulmar colony in Canada - 27%

Harp seals and Walrus, occasionally Polar Bears

IBP Site

Suggested Designation: National Wildlife Area

- #4. Site 67 Akpatok Island
 Location: 60°25 N, 68°08' W Site: 32 km²

Two large colonies of Thick-billed Murres at northern and southern ends consisting of 173,000 and 120,000 pairs respectively - 20%

Black Guillemots, Peregrine Falcons
 Gyrfalcons

Marine mammals and Polar Bears

IBP Site

CSPN Site 100

Suggested Designation: National Wildlife Area

- #5. Site 16 Skruis Point
 Location: 75°40 N, 88°43' W Size: 31 km²

Black Guillemots

Largest concentration in Canada - 1 to 3%

Marine mammals and Polar Bears

Suggested Designation: National Wildlife Area

- #6. Site 22 Hobhouse Inlet
 Location: 74°28 N, 86°50' W Size: 10 km²

75,000 pairs of Northern Fulmars - approx. 20%

The inlet faces Lancaster Sound and has a high productivity for White Whales, Narwhals, Ringed Seals, Harp Seals and Polar Bears

Must be viewed in conjunction with Cape Liddon (Site 21)

Suggested Designation: National Wildlife Area

- #7. Site 21 Cape Liddon
 Location: 74°37 N, 91°10' W Size: 3.5 km²

10,000 pairs of Northern Fulmars - 3%

Adjoining Radstock Bay is important for marine mammals and Polar Bears

CSPN Site 126

Note: If an amalgamation of Site 21 and Site 22 is not possible, then the area around Cape Liddon should be expanded to include Radstock Bay.

Suggested Designation: National Wildlife Area

- #8. Site 64 Digges Sound
 Location: 62°33 N, 77°35' W Size: 12 km²

180,000 pairs of Thick-billed Murres - 20%

A second colony of 107,000 pairs breeds at Cape Wolstenholme on the Ungava Peninsula directly to the east across Digges Sound

The only colony of Atlantic Puffins in N.W.T. is found on Dome Island

870 Black Guillemots are also present

Marine mammals and polar bears frequent the area

CSPN Site 98

Note: The obvious area of concern is much larger than the 12 km² denoted above and must include the Digges Islands, Dome Island and the mainland east of Digges Islands in spite of the divided jurisdictions.

Suggested Designation: National Wildlife Area

- #9. Site 36 Reid Bay
Location: 66°56' N, 61°46' W Size: 5 km²

200,000 pairs of Thick-billed Murres - 14%

10,000 pairs of Northern Fulmars - 3%

IBP Site

Suggested Designation: No designation possible because of the area's isolation. Perhaps suitable as a Migratory Bird Sanctuary providing no management is required.

- #10. Site 14 North Kent Islands
Location: 76°30' N, 89°40' W Size: 16 km²

May represent a large Black Guillemot breeding population

Some Northern Common Eiders present

Marine mammals common

IBP Site

Suggested Designation: National Wildlife Area (should include Calf Island)

- #11. Site 13 Baillie - Hamilton Island
Location: 75°45' N, 94°17' W Size: 1 km²

3,000 pairs of Black-legged Kittiwakes - 2%
at Washington Point

IBP Site

Suggested Designation: Seabird Reserve

3.4.4 Priority Shorebird Habitat Sites

#1. Site 25 Creswell Bay
 Location: 72°45' N, 93°40' W Size: 2,178 km²

Nearly 20,000 birds (mostly shorebirds) nest in the area
 King Eiders (nesting and staging)
 Oldsquaw (nesting and moulting)
 Northern Fulmars, Black-legged Kittiwakes forage in the
 area
 CSPN Site 112
 IBP Site

Suggested Designation: Shorebird Reserve

3.4.5 Re-evaluation of Existing Migratory Bird Sanctuaries

(from Appendices A-1 and A-2)

Note: These sites are presented in no order of
 priority.

Site 3 Anderson River Delta
 Location: 69°42' N, 129°00' W Size: 491 km²

Although the inner area along the banks of the Anderson
 River is now a Migratory Bird Sanctuary, an extension of
 the boundaries is justified, as is a change in status
 from Migratory Bird Sanctuary to National Wildlife Area.
 Outside of its obvious importance as a migratory
 waterfowl breeding, moulting and staging area, the
 high diversity of passerine species and shorebirds,
 and the possibility of the Sanctuary being a
 nesting site for the rare Eskimo Curlew, all lend
 justification to the creation of a National
 Wildlife Area. The presence of grizzly bear and
 barren-ground caribou are added justifications.
 IBP Site

Suggested Designation: National Wildlife Area

Site 6 Egg River,
 Location: 72°40' N, 123°30' W Size: 20,518 km²

The area of the Egg River Migratory Bird Sanctuary is
 included as 7(1)(b) lands in the lands selection process
 under the Inuvialuit Final Agreement.
 CSPN Site 120

Suggested Designation: No change in status is recommended
 but a new management regime may have to be installed to
 reflect the changed land ownership.

Site 30 South Bylot Island
 Location: 72⁰55 N, 79⁰30 W Size: 1,511 km²

This site is situated within the Bylot Island Migratory Bird Sanctuary. A threat to the Greater Snow Geese nesting sites is possible, if the site is to be included within the proposed Eclipse Sound - Bylot Island National Park. However, protection could be assured in the same manner as for the Whooping Crane nesting area within Wood Buffalo National Park.

CSPN Site 109

Suggested Designation: Change in management regime only

Site 39 Great Plain of Kouджуak
 Location: 66⁰10 N, 74⁰00 W Size: 12,931 km²

The Dewey Soper Migratory Bird Sanctuary appears to be an adequate designation for the site. The sanctuary adequately protects the nesting habitat of the Lesser Snow Goose with the exception of Garnet Bay and Cory Bay. This is the jewel in the crown of the migratory bird sanctuary system. The Bowman Bay Wildlife Sanctuary is an anomaly as a consequence of split jurisdictions. This unsatisfactory situation should perhaps be corrected by designating the entire complex as a National Wildlife Area.

Ramsar Site

IBP Site

Suggested Designation: National Wildlife Area

Site 51 Queen Maud Gulf
 Location: 67⁰00 N, 100⁰30 W Size: 53,925 km²

This is an important sanctuary for Ross' Geese and Lesser Snow Geese (15% of the National population), as well as for other waterfowl species.

The diversity of the avifauna and increased use of the area by muskoxen and as a calving area by caribou, leads to the conclusion that a change in status to a National Wildlife Area should be considered.

Ramsar Site

IBP Site

Suggested Designation: National Wildlife Area

Site 57 McConnell River
 Location: 60°50' N, 94°20' W Size: 4,940 km²

218,170 pairs of Lesser Snow Geese - 24%

Small Canada Geese

Sandhill Cranes

Large diversity - 111 other bird species

The McConnell River Migratory Bird Sanctuary occupies an area around the mouth of the river and the adjoining coastal lowlands. In view of the recent expansion of the goose nesting and feeding areas, and the presence of caribou and polar bear, enlargement of the site and designation as a National Wildlife Area is recommended.

Ramsar Site

IBP Site

Suggested Designation: National Wildlife Area

Site 59 Boas River
 Location: 63°45' N, 85°40' W Size: 5,402 km²

95,200 pairs of Lesser Snow Geese - 10%

Atlantic Brant

Canada Geese

Tundra Swans

Diversity - 30 or more bird species

Because of an existing polynya near Cape Kendall, polar bear and seven marine mammal species are present. The Harry Gibbons Migratory Bird Sanctuary remains central to the area but Cape Kendall and Ell Bay should be incorporated in order to encompass the areas with the greatest biological diversity.

IBP Site

Suggested Designation: National Wildlife Area

Site 60 East Bay
 Location: 64°10' N, 82°30' W Size: 2,506 km²

21,300 pairs of Lesser Snow Geese - 2%

11,000 pairs of Northern Common Eiders - 6%

Marine mammal use of the area is not extensive or diverse. Native Bay is an important habitat for feeding and brood rearing, hence another migratory bird sanctuary could be located there. However, it should not be contiguous with the East Bay Migratory Bird Sanctuary so as not to block access to the Bell Peninsula from Coral Harbour.

Suggested Designation: No change

Site 76 Twin Islands
 Location: 53°10' N, 81°20' W Size: 1,223 km²

250,000 Lesser Snow Geese (staging) - 14%
 Caspian Terns - 1%
 Eastern Canada Geese
 Important staging area for shorebirds
 Polar Bear denning site and summer retreat
 IBP Site
 CSPN Site 136

Suggested Designation: No change

Site 78 Akimiski Island
 Location: 53°10' N, 81°20' W Size: 1,223 km²

Caspian Terns - 1%
 Akimiski Island appears to be used by waterfowl and shorebirds for moulting and staging, and to a limited extent for breeding.

Suggested Designation: The Akimiski Island Migratory Bird Sanctuary should be extended to cover the whole island.

Site 7 Thomsen River
 Location: 74°00' N, 119°45' W Size: 142 km²

The present Banks Island Migratory Bird Sanctuary No. 2 is used principally as a moulting area by Lesser Snow Geese and by Black Brant.
 CSPN Site 121

Suggested Designation: No increase in size of the sanctuary is recommended but the Thomsen River area is within a proposed national park. The Canadian Parks Service must be made to realize that they will inherit a major wildlife management problem with the exploding muskox population on the Island and in the area.

Suggested Designation: National Wildlife Area encompassing Big Creek Marshes, Long Point Marshes, Turkey Point Marshes and Long Point Inner Bay.

- #3. Site 3 Oshawa Second Marsh
Location: 43°50 N, 78°48 W

Size: 4 km²

Largest remaining coastal wetland in the Greater Toronto area.

Importance to waterfowl - rehabilitation will enhance waterfowl production.

Suggested Designation: National Wildlife Area

- #4. Site 4 Rouge River Marshes
Location: 43°48 N, 79°07 W

Size: 8 km²

From Lake Ontario to Highway 401 and Highway 2.

Importance to waterfowl - rehabilitation may restore concentration of breeding waterfowl which have declined in past years.

Suggested Designation: National Wildlife Area

- #5. Site 5 Rondeau Bay Marshes
Location: 42°17 N, 81°52 W

Size: 20 km²

Highly significant coastal wetland system.

Importance to waterfowl - important waterfowl staging and production area.

Suggested Designation: National Wildlife Area

- #6. Site 6 Cootes Paradise (Western End Hamilton Harbour)
Location: 43°17 N, 79°54 W

Size: 8.4 km²

Diverse and productive coastal wetland.

Important breeding site for waterfowl. Large species diversity.

Suggested Designation: National Wildlife Area (in co-operation with the Royal Botanical Garden)

- #7. Site 7 Walpole Island and Lake St. Clair Wetlands

Location: 42°35 N, 82°33 W

Size: not known

Location: 42°27 N, 82°25 W

Size: not known

The Walpole Island wetlands are entirely managed by an Indian Band Council.

The Lake St. Clair wetlands are a designated National Wildlife Area of 2.44 km².

Importance to waterfowl - major production area in an extensive marsh system under threat.

Suggested Designation: National Wildlife Area for the balance of St. Clair Marshes, and a Co-operative Wildlife Management Area on Walpole Island with the agreement of the Band Council.

- #8. Site 8 Severn Sound
Location: 44⁰45 N, 79⁰44 W Size: not known

Most important wetlands in Southern Ontario. The area extends to: Penetanguishene Bay Marsh, Hogg Bay Marsh, Sturgeon Bay Marsh, Matchedash Bay, Wye Marsh. Importance to waterfowl - major waterfowl nesting area; high species diversity.

Suggested Designation: National Wildlife Areas for each bay, excluding the Wye Marsh.

- #9. Site 9 Point Pelee Marsh,
Location: 41⁰57 N, 82⁰30 W Size: 11.13 km²

The Marsh is situated in Point Pelee National Park. The Marentette Drainage scheme is threatening the Pelee Marsh. Importance to waterfowl - major waterfowl nesting area. High species diversity.

Suggested Designation: National Wildlife Area for 0.83 km² of the Merentette Drainage Scheme which will remain as wetlands.

3.5.2. Second Order Priority Waterfowl Habitat Sites

(Presented in no order of priority)

Lake Ontario Wetlands

- Site 1 Amherst Island Marshes (Sand Bay)
Location: 44⁰08 N, 76⁰45 W Size: not known

- Site 2 Bainsville Bay
Location: not known Size: not known

- Site 3 Barrier Beach
Location: not known Size: 0.09 km²

- Site 4 Bay of Quinte
Location: 44⁰07 N, 77⁰15 W Size: not known

Site 5	Carruther's Creek Marsh (Shoal Point Marsh)	
Location:	not known	Size: 0.14 km ²
Site 6	Cataraqui Marshes	
Location:	44°14 N, 76°30 W	Size: not known
Site 7	Cranberry Marsh	
Location:	not known	Size: not known
Site 8	Credit River Marsh	
Location:	43°33 N, 79°35 W	Size: 0.16 km ²
Site 9	Darlington Creek	
Location:	43°53 N, 78°42 W	Size: 0.01 km ²
Site 10	Duffins Creek Marsh	
Location:	43°50 N, 79°02 W	Size: 0.67 km ²
Site 11	Frenchman's Bay Marsh	
Location:	43°47 N, 79°04 W	Size: 0.63 km ²
Site 12	Humber River Marshes	
Location:	43°36 N, 79°28 W	Size: 0.2 km ²
Site 13	Little Cataraqui Marshes	
Location:	44°14 N, 76°32 W	Size: not known
Site 14	Lower Napanee River	
Location:	44°15 N, 77°00 W	Size: not known
Site 15	Lynde Shores	
Location:	43°51 N, 78°58 W	Size: not known
Site 16	Point Petre	
Location:	48°51 N, 77°09 W	Size: 0.09 km ²
Site 17	Presqu'île Bay Marsh	
Location:	44°00 N, 77°43 W	Size: 2.16 km ²
Site 18	Rattray Marsh	
Location:	43°31 N, 79°36 W	Size: not known
Site 19	Sandbanks Beach	
Location:	43°54 N, 77°16 W	Size: 0.08 km ²
Site 20	Sawguin Creek Marsh	
Location:	not known	Size: not known
Site 21	Sixteen Mile Creek Marsh	
Location:	43°11 N, 78°19 W	Size: 0.07 km ²

Site 22 Wesleyville Marsh ,
Location: 43°54 N, 78°24 W Size: not known

Site 23 West Lake Wetland ,
Location: 43°56 N, 77°15 W Size: not known

Site 24 Wolfe Island Complex
Location: 44°07 N, 76°28 W Size: not known

Bay of Quinte Wetlands

Site 1 Bald Head Beach ,
Location: 44°00 N, 77°36 W Size: not known

Site 2 Bald Head Island ,
Location: 44°01 N, 77°36 W Size: not known

Site 3 Big Bay Marsh ,
Location: 44°07 N, 77°18 W Size: not known

Site 4 Big Island Marsh ,
Location: 44°06 N, 77°13 W Size: not known

Site 5 Big Sand Bay ,
Location: 43°56 N, 76°55 W Size: not known

Site 6 Carrying Place
Location: not known Size: not known

Site 7 East Lake Outlet ,
Location: 43°54 N, 77°13 W Size: not known

Site 8 Fox Island ,
Location: 44°01 N, 77°36 W Size: not known

Site 9 Hay Bay Marshes (Little Creek, Wilton Creek)
Location: 44°05 N, 77°02 W Size: not known

Site 10 Huyck's Bay
Location: not known Size: not known

Site 11 Lower Napanee River
Location: 44°12 N, 77°01 W Size: not known

Site 12 Muscote Bay ,
Location: 44°06 N, 77°20 W Size: not known

Site 13 Pleasant Bay ,
Location: 43°57 N, 77°30 W Size: not known

Site 14	Point Anne Marsh	
Location:	44°09 N, 77°18 W	Size: not known
Site 15	Saguin Creek	
Location:	44°06 N, 77°21 W	Size: not known
Site 16	Twelve O'Clock Point	
Location:	44°03 N, 77°36 W	Size: not known
Site 17	Weller's Bay Wetland	
Location:	44°02 N, 77°35 W	Size: not known
Site 18	West Lake Wetland	
Location:	43°57 N, 77°15 W	Size: not known
<u>Lake Erie Wetlands</u>		
Site 1	Canard River Marsh	
Location:	42°10 N, 83°05 W	Size: not known
Site 2	Cedar Creek Marshes	
Location:	42°01 N, 82°47 W	Size: 4.47 km ²
Site 3	Detroit River Marshes	
Location:	42°14 N, 83°07 W	Size: not known
Site 4	Grand River Marshes	
Location:	42°51 N, 79°34 W	Size: 5.22 km ²
Site 5	Hillman Creek Marsh	
Location:	42°02 N, 82°29 W	Size: 2.67 km ²
Site 6	Iroquois Beach	
Location:	42°37 N, 80°50 W	Size: not known
Site 7	Mans Marsh	
Location:	not known	Size: not known
Site 8	Muddy Creek Marsh	
Location:	not known	Size: 0.08 km ²
Site 9	Nanticoke Creek Marsh	
Location:	42°48 N, 80°04 W	Size: 0.08 km ²
Site 10	Pelee Island Marshes	
Location:	41°46 N, 82°38 W	Size: not known
Site 11	Ruscom Shores	
Location:	42°18 N, 82°38 W	Size: not known

Site 12 Selkirk
Location: 42°48' N, 79°57' W Size: not known

Site 13 Sturgeon Creek
Location: not known Size: 0.17 km²

Site 14 Tremblay Beach
Location: 42°18' N, 82°31' W Size: not known

Site 15 Wheatley Creek Marshes
Location: 42°26' N, 82°05' W Size: 0.44 km²

Long Point Marshes

Site 1 Dedrich Creek
Location: not known Size: not known

Site 2 Peripheral Marshes
Location: not known Size: not known

Pelee Island Marshes

Site 1 Fish Point
Location: 41°43' N, 82°40' W Size: not known

Site 2 Lighthouse Point
Location: 41°49' N, 82°39' W Size: not known

Lake St. Clair Wetlands

Site 1 Bradley's Marsh
Location: 42°20' N, 82°26' W Size: not known

Site 2 Mitchell's Bay
Location: 42°28' N, 82°25' W Size: not known

Site 3 St. Clair, NWA
Location: 42°22' N, 82°25' W Size: not known

Site 4 St. Lukes Bay
Location: 42°25' N, 82°25' W Size: not known

Site 5 Thames River Marsh
Location: 42°19' N, 82°27' W Size: not known

Rondeau Bay Marshes

Site 1 Erieau Marshes
Location: 42°16' N, 81°55' W Size: not known

divided into three segments: (a) Lake St. Francis to Vercheres, (b) Contrecoeur to Lake St. Peter, and (c) River Corridor. Rare plants and fauna have been identified for each of these segments (Bouchard et al., 1983).

(a) Lake St. Francis to Vercheres

1. Lake of Two Mountains
Location: 45°24' N, 73°59' W Size: 1.0 km²
2. Lake St. Francis
Location a: 45°11' N, 74°14' W (Ste. Barbe Marsh) Size: 1.0 km²
Location b: 45°05' N, 74°26' W (Pointe aux Cedres) Size: 0.2 km²
3. Valleyfield Island Group
Location: 45°16' N, 74°11' W Size: 3.0 km²
4. Lake St. Louis
Location: 45°24' N, 73°54' W Size: 1.2 km²
5. Riviere des Prairies
Location: 45°42' N, 73°31' W Size: 0.4 km²
6. Boucherville Islands Group
Location: 45°36' N, 73°29' W Size: 1.0 km²
7. Repentigny Islands Group
Location: 45°42' N, 73°26' W Size: 2.0 km²
8. Vercheres Island Group
Location: 45°46' N, 73°24' W Size: 2.0 km²

(b) Contrecoeur to Lake St. Peter

1. Contrecoeur Islands Group
Location: 45°52' N, 74°16' W Size: 0.2 km²
2. Berthier - Sorel Islands Group
Location: 46°08' N, 73°02' W Size: 13.5 km²
3. Berthier - Sorel Islands Group (Sector of Bays)
Location: 46°06' N, 73°01' W Size: 9.0 km²
4. Moine Islands Group
Location: 46°06' N, 72°57' W Size: 4.0 km²
5. Bay Lavalliere
Location: 46°04' N, 72°58' W Size: 6.0 km²

(c) River Corridor

1. Bay of St. Augustin,
 Location: 46°44 N, 71°20' W Size: 2.0 km²

Suggested Designation: National Wildlife Areas (for each of the above sites in the St. Lawrence River Valley).

3.6.2 Priority Shorebird Habitat Sites

- Site 1 Iles de la Madeleine
 Location: 47°28 N, 60°45 W Size: not known

Tidal lagoons in which there are:
 6,000 Black-bellied Plovers
 10,000 White-rumped Sandpipers
 12,000 Semipalmated Sandpipers
 Only site in Quebec for Piping Plover

Suggested Designation: Reserve for Endangered Shorebirds.

- Site 2 Saguenay River Area
 Location: 48°08 N, 69°42 W Size: 0.2 km²

Mouth of river beaches plus two islands
 10,000 Black-bellied Plovers and other shorebirds, plus areas for colonial nesters

Suggested Designation: Regional Shorebird Reserve

- Site 3 Gentilly
 Location: 46°24 N, 72°16' W Size: 1.15 km²
 10,000 Semipalmated Plovers
 1,500 Lesser Yellowlegs

Suggested Designation: Regional Shorebird Reserve

3.7 Priority Migratory Bird Habitat in the Atlantic Provinces

The listings provided to the Contractor by CWS Atlantic Region did not permit sites to be prioritized. However, it was feasible to group the various sites identified into the following categories: (a) completions and extensions to existing National Wildlife Areas; (b) important wetlands needing protection; (c) priority shorebird habitat sites; and (d) potential Ramsar Sites.

The source documents consulted include Morrison et al. (1991), Brown et al. (1975) and Gillespie et al. (1991). These references provided some but not all the rationale required for the judgments as to conservation areas designations.

3.7.1 National Wildlife Areas (completions and extensions)

Site 1 Portobello Creek, N.B.
Location: not known Size: 21 km²

Requires a transfer of provincial Crown lands

Site 2 Port Joli, N.S.
Location: 43°52' N, 64°50' W Size: 0.5 km²

Additional protection of inter-tidal wetlands required

Site 3 Port Hebert, N.S.,
Location: 43°45' N, 64°55' W Size: 0.4 km²

Requires transfer of Provincial Crown Lands

Site 4 Shepody, N.B.
Location: 45°50' N, 64°32' W Size: 9.8 km²

Ramsar Site
Western Hemisphere Shorebird Reserve

Four key habitat sites should be added

Site 5 Tintamarre, N.B.,
Location: 45°52' N, 64°16' W Size: 20 km²

Coastal unit to be added

Site 6 Boot Island, N.S.,
Location: 45°07' N, 64°15' W Size: 1.5 km²

Ramsar Site
Western Hemisphere Shorebird Reserve

Should be extended to salt marshes, mudflats and beaches.

Site 6 Cook's Beach, N.S.
 Location: not known Size: not given

May support 20,000 shorebirds during the year

Suggested Designation: Regional Shorebird Reserve

Note: Maritime Piping Plover Sites

Some 200 breeding pairs of Piping Plover are scattered over the Atlantic coastline with four identified sites in New Brunswick, two in Nova Scotia and one in Prince Edward Island.

Suggested Designation: Ecological Sites might be designated in the absence of any large concentrations. National Wildlife Areas would be more appropriate where large concentrations are found. There are much larger concentrations elsewhere in Canada, in any case.

3.7.4 Potential Ramsar Sites

Site 1 Cumberland Basin, N.B.
 Location: 45°45 N, 64°25 W Size: not given

Site 2 Tabusintac, N.B.
 Location: 47°20 N, 65°02 W Size: not given

Site 3 Tracadie Lagoon, N.B.
 Location: 47°30 N, 64°55 W Size: not given

Site 4 Cobequid Bay, N.S.,
 Location: 45°25 N, 63°30 W Size: not given

Site 5 Yarmouth Salt Marshes, N.S.
 Location: 43°53 N, 66°10 W Size: not given

Site 6 St. Mary's Bay, N.S.
 Location: 44°30 N, 66°05 W Size: not given

3.7.5 Additional Suggested Sites in Labrador - geographical locations only

(Data from Goose Bay EIS - Chapter 4)

Site 1 Gannet Island
 7,200 Common Murres - 12%
 Atlantic Puffins

Suggested Designation: Seabird Reserve

Site 2 Groswater Bay - Table Bay

Black Duck staging
Atlantic Puffins - 25%
Razorbills -67%
Ring-billed Gulls
Black-legged Kittiwakes

Suggested Designation: Seabird Reserve

Site 3 Main Bight

Common Eiders - 14,000 pairs
Scoters (Surf, Black and White-winged)

Suggested Designation: National Wildlife Area

Site 4 Lake Melville

Black Duck nesting; spring and fall staging
Canada Goose staging

Suggested Designation: National Wildlife Area

Site 5 Snegamook Lake

Important nesting, moulting, and staging area
for Black Duck
Canada Goose staging

Suggested Designation: Migratory Bird Sanctuary

Site 6 Rigolet Groswater Bay

Canada Goose fall staging - 5,000

Suggested Designation: Migratory Bird Sanctuary

4.0 CONCLUSIONS

This study represents a first attempt at drawing together a rather disparate group of regional migratory bird habitat listings based on diverse criteria and methodologies. Its main purpose was to move, as much as possible, toward a national approach for the attainment of the goals and objectives for habitat protection and conservation explicit in the Green Plan. At the same time, the exercise was intended to provide a format for the inclusion of the habitat site listings in the SOE inventory.

Prioritization of the site records in the various regional listings could have been more readily accomplished through the use of Ecological Land Classification information at the Ecodistrict level. However, ELC information was available only for a minority of the listings provided to the Contractor. By means of the polar coordinates that have been defined for each site as part of this assignment, it will now be fairly straightforward to link the individual site records with the ELC map units already incorporated in the SOE data base.

An overview of the listings indicates that the identification of priority habitat areas across Canada to date has been somewhat spotty. In particular, it is apparent that more areas need to be listed in Newfoundland and Labrador (particularly on the Island and along the shores of the Joey Smallwood Reservoir); in Quebec (east shores of James Bay and Hudson Bay); and in the central and northwestern portions of Ontario. A considerable amount of relevant research has already been carried out in each of these regions of the country; this should permit the priority habitat record to be completed at a later stage.

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6.0 BASE DOCUMENTS REVIEWED

Pacific and Yukon Region

British Columbia

1. Critical Habitats for Migratory Birds in British Columbia.

Yukon Territory

1. Some Important Migratory Bird Habitats in the Yukon Territory.

Western and Northern Region

Prairie Provinces

1. Priority Migratory Bird Habitats of Canada's Prairie Provinces.

Northwest Territories

1. Key migratory bird terrestrial habitat sites in the Northwest Territories: Occasional Paper No. 71.

Ontario Region

1. Canadian Great Lakes Wetlands Conservation Action Plan-Demonstration Projects.

2. Priority Coastal and Near-Coastal Wetlands in the Lower Great Lakes.

Quebec Region

1. Priorites de conservation des habitats - Quebec.

Atlantic Region

1. Listing of Some Possible Candidate Sites for Habitat Protection in the Atlantic Region.

2. Goose Bay EIS. 1989. An Environmental Impact Statement on Military Flying Activities in Labrador and Quebec. Dept. of National Defence. Ottawa.

APPENDIX ADatabase Format

A nation-wide listing of priority habitat sites for future National Wildlife Areas, Migratory Bird Sanctuaries, Shorebird Reserves, and Seabird Reserves has been developed by the Consultant. This list has been coded and entered into a dBase IV file, using the format designed for Environment Canada's National Conservation Areas Data Base.

In order to record the level of priority (i.e. 1st, 2nd, or 3rd) for the establishment of a protected habitat site, an additional field was added to the National Conservation Areas Data Base called PRIORITY. Thus, an entry of 1, 2, or 3 in this field implies that the site is not yet protected; an entry of X implies that the site is protected.

The modified structure of the National Conservation Areas Data Base is as follows:

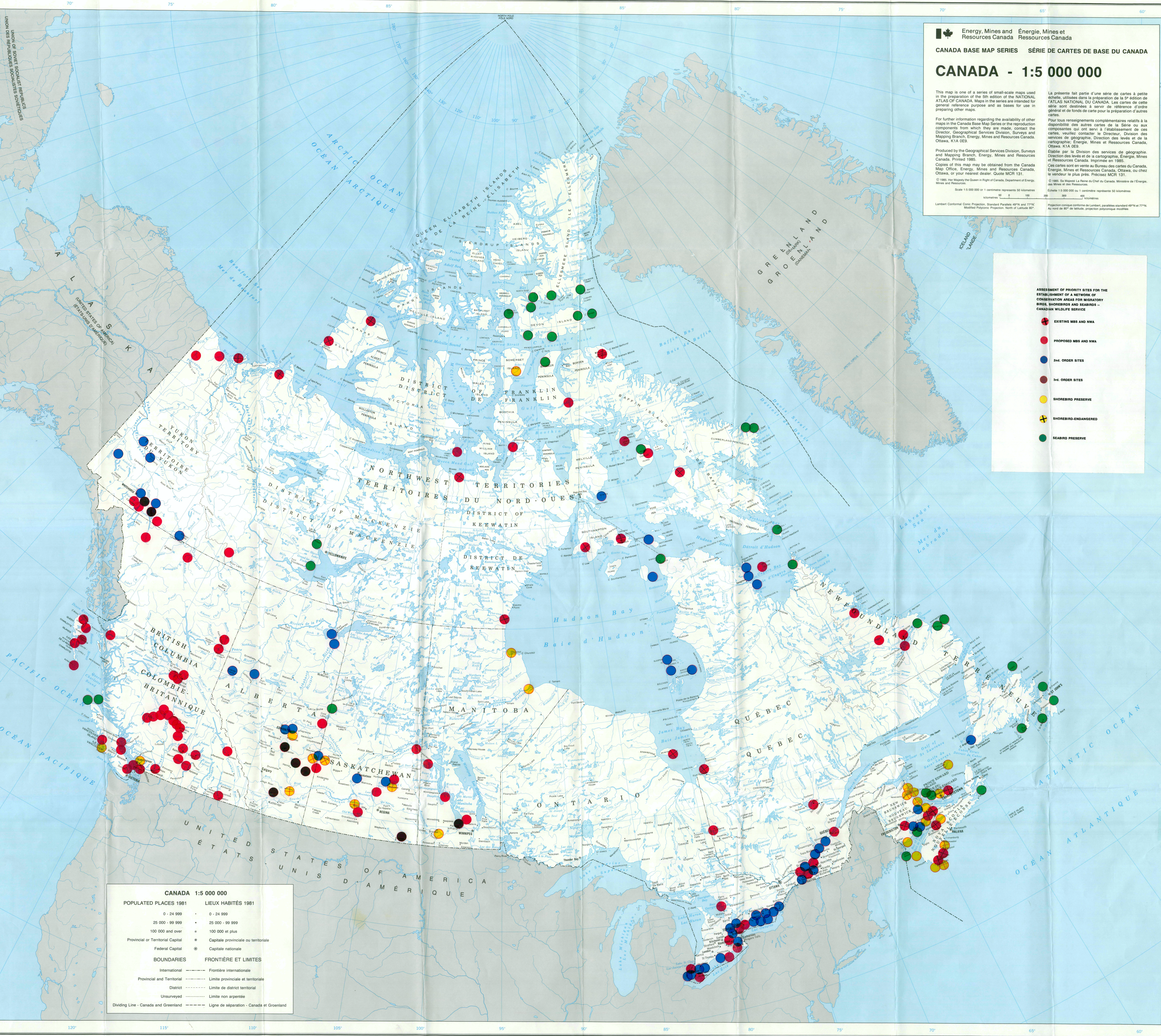
	<u>FIELD NAME</u>	<u>DESCRIPTION</u>	<u>SPACES</u>
1.	IDNO	Unique Reference Number	4
2.	PROV	Province/Territory	2
3.	NAME	Full Name of Site/Area	40
4.	JURIS	Jurisdiction	1
5.	LAT	Latitude	9
6.	LONG	Longitude	10
7.	SOURCE	Source of Location Data	1
8.	LEVEL1	Type of Area	3
9.	LEVEL2	Type of Area	3
10.	LEVEL3	Type of Area	3
11.	LPRO	Level of Legal Protection	1
12.	OLDIUCN	Previously Used IUCN Category	1
13.	NEWIUCN	New IUCN Category	1
14.	HECTARES	Area	8
15.	YEAREST	Year Established	4
16.	LEG1	Authorizing Legislation	4
17.	AGENCY1	Managing Agency	5
18.	LEG2	Authorizing Legislation	4
19.	AGENCY2	Managing Agency	5
20.	NATREG	Parks Canada Natural Region	2
21.	ECOREG	Ecoregion of Canada	3
22.	SPLIT	Multiple Record Indicator	1
23.	LINKFLG		4
24.	PRIORITY	Priority for Establishment	1

Since the List of Priority Habitat Sites represents, as yet, non-established sites, much of the above information (LPRO, YEAREST,

LEG1, AGENCY1, etc) is not applicable and has been filled in with "XXX" or "000" in accordance with the format of the National Conservation Areas Data Base.

The following descriptor codes for suggested designation and type of area were used in the LEVEL1, LEVEL2, and LEVEL3 fields, including several new codes:

<u>LEVEL1</u>	NWA	National Wildlife Area
	MBS	Migratory Bird Sanctuary
	N/M	NWA or MBS
	SBR	Shorebird Reserve
	RSR	Regional Shorebird Reserve
	ISR	International Shorebird Reserve
	ESR	Reserve for Endangered Shorebird
	WMA	Wildlife Management Area
	SBS	Sea Bird Reserve
<u>LEVEL2</u>	RAM	Ramsar Site
	IBP	International Biosphere Project Site
	CPN	CSPN Site (Canadian Special Places in the North).



Energy, Mines and Resources Canada / Énergie, Mines et Ressources Canada

CANADA BASE MAP SERIES / SÉRIE DE CARTES DE BASE DU CANADA

CANADA - 1:5 000 000

This map is one of a series of small-scale maps used in the preparation of the 5th edition of the NATIONAL ATLAS OF CANADA. Maps in the series are intended for general reference purpose and as bases for use in preparing other maps.

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Scale 1:5 000 000 or 1 centimètre represents 50 kilomètres / Échelle 1:5 000 000 ou 1 centimètre représente 50 kilomètres

Lambert Conformal Conic Projection, Standard Parallels 49°N and 77°N / Projection conique conforme de Lambert, parallèles standard 49°N et 77°N

ASSESSMENT OF PRIORITY SITES FOR THE ESTABLISHMENT OF A NETWORK OF CONSERVATION AREAS FOR MIGRATORY BIRDS, SHOREBIRDS AND SEABIRDS - CANADIAN WILDLIFE SERVICE

- EXISTING MBS AND NWA
- PROPOSED MBS AND NWA
- 2nd ORDER SITES
- 3rd ORDER SITES
- SHOREBIRD PRESERVE
- SHOREBIRD-ENDANGERED
- SEABIRD PRESERVE

CANADA 1:5 000 000

POPULATED PLACES 1981	LIEUX HABITÉS 1981
0 - 24 999	0 - 24 999
25 000 - 99 999	25 000 - 99 999
100 000 and over	100 000 et plus
Provincial or Territorial Capital	* Capitale provinciale ou territoriale
Federal Capital	⊙ Capitale nationale

BOUNDARIES	FRONTIÈRE ET LIMITES
International	Frontière internationale
Provincial and Territorial	Limite provinciale et territoriale
District	Limite de district territorial
Unsurveyed	Limite non arpentée
Dividing Line - Canada and Greenland	Ligne de séparation - Canada et Groenland