MANAGEMENT PLAN



WITLESS BAY ECOLOGICAL RESERVE





Parks and Natural Areas Division
Department of Environment and Conservation
Government of Newfoundland and Labrador





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FORWARD

In 1980, the <u>Wilderness and Ecological Reserves Act</u> was enacted to protect and preserve special and representative natural areas in Newfoundland and Labrador. Several areas of the Province have been set aside as Ecological Reserves under the Act. These areas contain representative or unique ecosystems, species, or naturally occurring phenomena. The objectives of establishing an Ecological Reserve as stated in Section 5 of the Act may be one or more of the following:

- To provide for scientific research and educational purposes in aspects of the natural environment;
- To preserve the habitat of an animal or plant species that is rare or endangered;
- To provide standards against which the effects of development in other areas may be measured;
- d. To provide an opportunity for study of the recovery of ecosystems from the effects of modification by human beings;
- e. To preserve rare botanical, zoological, geological or geographical characteristics;
- f. To preserve representatives of distinct ecosystems in the province; or
- g. To preserve organisms in their natural habitat to ensure the preservation of their gene pools.

INTRODUCTION

The coastal waters of Newfoundland and Labrador are some of the most productive in the world. This is largely due to the nutrient-rich Labrador Current which supports an impressive quantity and diversity of marine life, including seabirds. In addition, our coastline has a number of sites which are well suited as breeding seabird habitat. These two factors have resulted in Newfoundland and Labrador having some of the largest and most spectacular seabird colonies in the world. For example:

- Three of the six gannetries in the Northwest Atlantic are in Newfoundland and Labrador. Funk Island and Cape St. Mary's are the second and fourth largest gannetries in North America, respectively.
- More Leach's Storm-Petrels breed off Newfoundland and Labrador than anywhere else in the world. Baccalieu Island and the Witless Bay Islands are the largest and second largest Leach's Storm-Petrel breeding colonies in the world.
- A major proportion of the Northwest Atlantic populations of Common Murre and Atlantic Puffin breed on islands off our coast.

The Witless Bay Seabird Ecological Reserve consists of four important seabird colonies and includes the surrounding waters which the seabirds inhabit during the breeding season. Four islands make up the terrestrial component of the Reserve - Gull Island, Green Island, Great Island and Pee Pee Island. They provide breeding habitat for the largest Atlantic Puffin colony in North America and the world's second largest Leach's Storm Petrel colony. Thousands of other seabirds breed on these islands, including Herring Gulls, Great Black-backed Gulls, Black-legged Kittiwakes, Razorbills, Common Murres, Black Guillemots and the first known Northern Fulmars to breed in Newfoundland. In addition, the surrounding waters provide an important wintering area for Common Elders, King Elders, Thick-billed Murres and Dovekies.

The colonial breeding strategy adopted by seabirds has many advantages, but it also makes them highly vulnerable to a number of risks. Included are potential negative impacts of human presence, depletion of food stocks, interactions with fishing activities, and marine pollution.

This Reserve was originally designated as a Wildlife Reserve under the **Wildlife Act** in 1964 when it was administered by the Wildlife Division, Government of Newfoundland and Labrador. However in 1980, the **Wilderness and Ecological Reserves Act** was enacted and in 1983, the Witless Bay Seabird Sanctuary was established as a Seabird Ecological Reserve. It is now administered and managed by Parks and Natural Areas Division of the Department of Environment and Conservation. Canadian Wildlife Service has management responsibility for the birds within the Reserve under the **Migratory Birds Convention Act (1916).**

This Management Plan details the objectives of the Ecological Reserve and potential conflicts related to these objectives and land/water use issues. The Plan was produced by a Seabird Ecological Reserve Management Advisory comprised of representatives from Parks and Natural Areas Division, Wildlife Division, the Canadian Wildlife Service and the Wilderness and Ecological Reserves Advisory Council.

OBJECTIVES OF WITLESS BAY SEABIRD ECOLOGICAL RESERVE

The following objectives, listed in order of priority, explain the reasons why the Witless Bay Seabird Ecological Reserve was established and the fundamental basis on which management decisions are made:

- 1. To preserve internationally important seabird breeding and overwintering colonies that are essential to the maintenance of species diversity, composition and abundance at levels sufficient to ensure viable, long-term populations;
- To maintain the natural communities of the Reserve with their associated vistas, flora, and fauna in a condition no less pristine than at the time of Reserve establishment. (in 1983)
- 3. To foster scientific studies which ensure the achievement of the previous two objectives;
- 4. To provide the public with controlled opportunities to observe and learn about seabirds and the ecosystems of which they are part.

1.1 Location and Setting

The Witless Bay Seabird Ecological Reserve consists of a group of four islands; Gull Island (47° 16'N, 52° 46' W), Green Island (47°14'N, 52°47'W), Great Island (48° 11'N, 52° 46'W) and Pee Pee Island (47°11'N, 52° 50'W). Also included in the Reserve is one (1) kilometre of the surrounding marine waters in which breeding seabirds feed (Figure 1). The Reserve is located off the east coast of the Avalon Peninsula, between the fishing communities of Bay Bulls and Bauline.

1.2 Reserve Boundary

The old boundary for the Reserve was established by the Provincial Legislature in 1983. It included Gull Island, Green Island, Great Island and the adjoining ocean that was within Provincial jurisdiction (i.e. three (3) nautical miles). The current boundary includes Pee Pee Island, within the land area of the Reserve, because of its importance to breeding puffins (i.e. 1300 pairs). The marine component of the Reserve has been reduced to about one (1) km around each of the islands with a two (2) km corridor between Green and Great Islands. The boundary is shown in Figure 1 and a legal description appears in Appendix III.

1.3 Natural Features

1.3.1 Seabird Species and Nesting Sites

More than a million seabirds, of 10 different species, breed on the Witless Bay Islands. The birds are concentrated in a relatively small area and although there is some overlap, each species is adapted to specific nesting habitat. See Appendix I for population estimates.

The **Atlantic Puffin** (Sea Parrot, Baccalieu Bird*) and **Leach's Storm-Petrel** (Mother Carey's Chick, Carey Chicken) are the most abundant seabirds at the Witless Bay Reserve. The Reserve is the largest Atlantic Puffin colony in the western North Atlantic and the second largest Leach's Storm-Petrel colony in the world. Both Puffins and Storm-petrels are burrow nesters and breed on all four islands. Puffins tend to occupy the steep grassy slope areas of the islands. Storm-petrels occupy slopes with lesser gradient near the top of the islands and in the peaty ground in the spruce/fir forests of Gull and Green Islands. Storm-petrels are rarely seen during the day, returning to the colony only at night.

The Black-legged Kittiwake (Tickleace, Lady-bird) nests on small outcrops of the cliff face that are too small for other species to occupy. They generally have a clutch size of two, though 3 eggs are sometimes laid. The greatest population of this species occurs on Great Island, with large numbers also on Gull and Green Islands. Approximately 50% of the Kittiwakes in Newfoundland and Labrador breed in the Witless Bay Seabird Ecological Reserve.

Witless Bay Islands Seabird Ecological Reserve

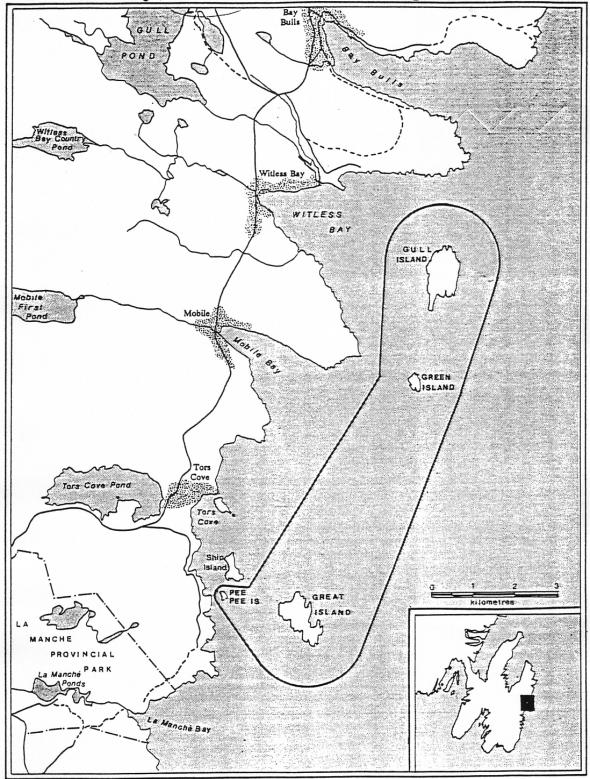


FIGURE 1 Witless Bay Seabird Ecological Reserve

Common Murres (Murres, Baccalieu Birds) occur on Gull, Green and Great Islands, laying a single egg on the bare rock of narrow cliff ledges. The population on Green Island comprises the second largest Common Murre colony in eastern North America. The related **Thick-billed Murre**, (Turr, Arctic Turr, Northern Turr), generally an Arctic breeder, occurs in small numbers on Green Island and Gull Island.

Black Guillemots (Sea-pigeons) and Razorbills (Tinkers) nest on Gull, Green and Great Islands and generally breed in lower densities than the other resident alcids (Murres and Puffins). Both species prefer sites on cliff ledges that provide cover, either between boulders or in crevices. Neither Black Guillemots nor Razorbills build a true nest. They nest on bare rock or on a loose arrangement of pebbles, feathers and pieces of vegetation. Guillemots breed much lower on the cliff face than Razorbills, often just above the high tide mark. The Guillemot lays 2 eggs while the Razorbill lays only one. Herring Gulls are found in several nesting habitats on the islands. They may be in isolated pairs on gently sloping grassy hills at the upper limits of the puffin range, or in dense colonies on flat grassy areas or rocky outcrops. Great Black-backed Gulls (Saddlebacks) use similar habitats and breed in close proximity to Herring Gulls. Both species build nests and lay 2-3 eggs.

Northern Fulmars (Noddies) have been found at a few locations on Great Island, and one site on Gull Island, the first known Newfoundland breeding sites (first recorded in 1978) for this species. They do not build nests, but lay a single egg on wide cliff ledges.

1.3.2 Non-breeding Marine Bird Distribution

The waters of the Witless Bay Seabird Ecological Reserve support thousands of marine birds from December to April. Annual concentrations vary, depending on ice conditions. As winter progresses, pack ice limits the feeding opportunities in the more northerly latitudes and consequently the birds move to the ice-free waters farther south. By April, wintering seabirds are generally at their greatest concentrations. Wintering seaducks include **Common Eider, King Eider and Scoters.** Eiders feed primarily in the waters off Green Island and Mobile Point in winter and large numbers move through the area in April during northern migration. King Eiders are found in lower numbers, peaking at about 1,000 in the area of the Reserve in spring. Provision of a refuge for eiders in the Reserve contributes to an objective of the **Newfoundland and Labrador Eider Management Plan:** to increase the wintering eider population in Newfoundland to 500,000 birds. The population has been in steady decline over the past ten years and is presently estimated at 230,000.

Several thousand **Thick-billed Murres** (Turrs) and **Dovekies** (Bullbirds) contribute a significant Alcidae component to the wintering seabird population. Other species found in smaller numbers include **Common Murre**, **Herring Gull**, **Great Black-backed Gull**, **Glaucous Gull**, **Iceland Gull**, and **Black-legged Kittiwake**.

1.3.3 Fauna

The macro fauna of the Witless Bay Islands is composed almost entirely of the seabirds that breed there. A variety of songbirds also use the area, including Mourning Warbler, Yellow-rumped Warbler, Dark-eyed Junco, Blackpoll Warbler, Ruby-crowned Kinglet, Golden-crowned Kinglet, American Robin, Grey-cheeked Thrush, Swamp Sparrow, White-throated Sparrow, and Fox Sparrow. Mammals are absent from the terrestrial portion of the Reserve, but during the capelin season the adjacent waters provide feeding grounds for several cetaceans. Included are Minke, Humpback, Fin and Pothead whales, as well as White-sided and White-beaked Dolphins and Harbour Porpoises. Harbour Seals may be seen occasionally during the winter months. Several fish species found in the Reserve waters include: Cod, Mackerel, Salmon, Plaice, Winter Flounder as well as Capelin.

1.3.4 Flora

The topography of Green Island and Pee Pee Island is characterized by grassy hummocks, covered with exposed peat, grasses and small flowering plants. The main flowering components found among the dominating grasses include **Sheep Sorrel**, **Red Raspberry**, **Common Chickweed**, and **Rough Cinquefoil**. The peripheral band from the cliffs to the forested area of Gull and Great Islands is made up of this same hummock habitat. Species composition is probably similar to that of Green and Pee Pee Island.

The interior of both Gull and Great Islands is covered with **Black Spruce/Balsam Fir.** In areas with an open canopy, **Skunk Current** dominates and is often found in association with such species as **Wood Fern, Cinnamon Fern, Bunchberry,** and **Skunk Current.** Wood Fern is prevalent in areas of regeneration, followed by **White Birch, Red Raspberry** and **Skunk Current.**

1.3.5 Climate

The Witless Bay Islands experience a modified maritime climate. The summer months are typically cool, with temperatures averaging between 11°C and 15°C. The frequent precipitation and fog create a very moist environment. Prevailing summer winds are moderate to strong west-southwesterlies.

1.3.6 Soils and Geology

The dominant soil type of the Witless Bay Islands is ferro-humic podzol. Bird guano has added significantly to the levels of nitrogen in the soil in the form of ammonium, nitrites and nitrates.

The geology of Gull Island and Green Island is dominated by a sedimentary sequence belonging to the Signal Hill Group. It consists of red and green sandstone, minor pebble conglomerates and mudstone of the Late Proterozoic. Great Island and Pee Pee Island are dominated by thin lenticular bedded, dark-grey sandstone and minor shale from the St. John's Group. Felsic to mafic volcaniclastics of the Harbour Main Group, overlaid by marine and terrestrial sediments of

the Conception Group, form a Precambrian basement to the units of the St. John's Group. In turn, the St. John's Group is overlaid by the Signal Hill Group.

1.3.7 Topography

Gull Island is the largest of the four islands (1.6 km X 0.8 km) and is oriented roughly in a north-south direction. Much of the central portion of the island is covered with an extensive Black Spruce/Balsam Fir forest. Major portions of the island's periphery consists of grassy, hummock slopes, giving way to steep cliffs. The peak elevation is 70 metres, occurring on the north end of the island. The south end is characterized by a rocky exposed protuberance, referred to as 'The Saddle'.

Green Island is a small island (0.5 km X 0.25 km) also oriented in an approximately north-south direction. It is characterized by steep rocky cliffs rising to a height of 54 metres. The top portion of the island is covered in grassy hummocks.

Great Island is only slightly smaller than Gull Island (1.4 km X 0.7 km) and is oriented in a north-west/south-east direction. It has the highest cliffs of all three islands, rising precipitously from the sea and reaching a maximum height of 83 metres on its northern side. This island is characterized by a number of deep coves and bays.

Pee Pee Island is the smallest of the four islands (210 m X 150 m). Most of the island has a hummock, grass-covered topography with steep sides rising to an elevation of 22 metres.

2.0 MANAGEMENT ISSUES AND ACTIONS

The management issues concerning Witless Bay Seabird Ecological Reserve arise from activities which threaten the seabirds and their habitat. It is the purpose of this Plan to outline these activities and establish appropriate actions to ensure that the objectives of the Reserve are met. The actions detailed in this management plan are enforceable upon the establishment of associated Regulations.

The Reserve area was given Ecological Reserve status primarily because of its provincial, national and international significance to seabirds. To reflect this significance, the management policy governing the regulations gives priority to the conservation of breeding seabirds and their habitats and is congruent in purpose to the preservation and protection objectives of the Wilderness and Ecological Reserves Act and Migratory Birds Convention Act.

2.1 Management and Administration

Parks and Natural Areas Division is responsible for the management and administration of the Reserve under the *Wilderness and Ecological Reserves Act (1980)*. The Canadian Wildlife Service shares in the responsibility for seabird protection in the Reserve through the regulations of the *Migratory Birds Convention Act of 1916*.

- A Seabird Ecological Reserves Advisory Committee (SERAC) will be established to advise Parks and Natural Areas Division concerning all Seabird Ecological Reserves, including the implementation of this Management Plan, access requests, and management issues as they arise. The Committee will be chaired by Parks and Natural Areas Division and include representatives of Wildlife Division and Canadian Wildlife Service. It will meet as required and not less than once per annum. Each year one meeting will be scheduled so as to facilitate timely evaluation of access requests.
- Provincial Parks Staff, Provincial Wildlife Conservation Officers, Canadian Wildlife Service Enforcement Co-ordinators and the RCMP have authority to enforce the Witless Bay Seabird Ecological Reserve regulations. The help of these agencies in the enforcement of the regulations will be activity solicited.

2.2 Fishing Activity and Marine Animal By-catch

Since the implementation of monofilament gill net use in the 1960's, the drowning of marine animals in those nets has become a serious problem. **Common Murres** and **Atlantic Puffins** are caught most frequently in the area of the Reserve; **Greater Shearwaters**, **Black Guillemots**, **Common Loons** and **Razorbills** are among the species caught less often.

Most net mortality of seabirds occurs during the 4-6 week period when capelin move inshore to spawn. Kill frequency decreases with distance from the colony and in some years this can be dramatic. In 1982, for example, 93% of all **Common Murres** drowned were within 3 km of the Witless Bay Seabird Ecological Reserve. The number of seabirds caught varies quite substantially from year to year and some years is alarmingly high. In the early 1970's, 13-20% of the Common Murre breeding population were drowned in gill nets each summer; and data from a sample of years (1951-1981) indicates that an average of 10.2% of the breeding population drown annually. Further effects on the population result because the deaths occur during the peak of the breeding season, and it is unlikely that an adult can successfully rear a chick without its mate. Because seabirds have evolved to withstand a yearly mortality rate of approximately only 10%, even net mortality figures in the order of 2-4% are significant. It is important to note that by-catch in gill nets is but one of a number of cumulative anthropogenic causes of mortality which include oil pollution, hunting, and reduction in food supply.

The mortality of seabirds in fishing gear is clearly contrary to the fundamental purpose of the Witless Bay Seabird Ecological Reserve. Furthermore, under the *Wilderness and Ecological Reserves Act*, fishing is not permitted within an Ecological Reserve unless provision is made for such an activity within the Regulations. The Reserve waters have been used as fishing grounds for decades, however, and are important to a number of fishermen in the area. Some balance is required, therefore, between protecting the seabirds and marine mammals that use the Reserve waters, and facilitating fishing activity in the area. Although this issue may seem irrelevant considering the various salmon and cod moratoriums currently in place, the actions outlined in this plan anticipate the reactivation of the fisheries in the future.

- There will be no restrictions placed on the commercial fisheries activity in the marine waters within the Reserve.
- Recreational fishing will be allowed in the marine waters of the Reserve subject to the restrictions of Section 2.4.
- Parks and Natural Areas Division will support initiatives of Canadian Wildlife Service and Department of Fisheries and Oceans toward long-term solutions for incidental by-catch. It is recommended that experimentation be undertaken on alternate fishing gear types with the intention of eliminating gear that catches marine animals. Public education initiatives will be pursued to help facilitate this transition.

2.3 Hunting

The Witless Bay Seabird Ecological Reserve is very important for wintering seaducks and Alcids, and hunting activity is incompatible with the seabird preservation objective of the Reserve.

- In accordance with the *Wilderness and Ecological Reserve Act*, hunting is prohibited in the Reserve.
- Firearms must be wrapped and cased while in the Reserve and its waters.

2.4 Boat Tour and Other Vessel Operations

The Reserve provides excellent opportunities to observe breeding seabirds and other marine life such as whales. Several tour boat operators have taken advantage of these opportunities and over 10,000 people have annually visited the Reserve in recent years. Additionally, recreational boaters and kayakers sometimes enter the Reserve.

There is a concern with the effect that vessels may have on the Reserve's wildlife. Both the distance at which boats approach the islands and their operations (e.g. speed, activities on board) may potentially impact breeding seabirds, in particular. For example, in areas where Common Murres breed, disturbance can cause fly-offs with resultant loss of eggs or chicks. It is necessary to institute guidelines that will minimize potential impacts on the Reserve's resources yet allows for a high quality experience for visitors. Nevertheless, ongoing tour boat operations have not caused any documented impact. Until completion of an impact study, permitted tour boat operations will, therefore, be exempted from the operating distances. (Operating distances are summarized in Table 1).

- Motorized boats will maintain a distance of 20 meters from the shoreline of Gull, Great and Pee Pee Islands from April 1 to September 1.
- Non-motorized boats will not be permitted within 15m of Gull, Great and Pee Pee Islands from April 1 to September 1.
- Motorized boats, including tour boats, but excluding operating fishing boats, must remain at least 100 m from Green Island from April1 to September 1.

Table 1.

Operating Distances for Vessels in Witless Bay Seabird Ecological Reserve
April 1 to September 1

_				
ISLAND	MOTORIZED	NON-MOTORIZED.		
Gull Island	20 metres	15 metres		
Green Island	100 metres	50 metres		
Great Island	20 metres	15 metres		
Pee Pee Island	20 metres	15 metres		

- Non-motorized boats must remain 50 m from Green Island from April 1 to September 1.
- Noise levels, originating from either the boat or from the people on board, are to be kept below a level which causes disturbance to the birds. Parks and Natural Areas Division will encourage and support studies which investigate disturbance factors.
- Tour boat operators will require a yearly permit from Parks and Natural Areas Division for each vessel they operate within the Reserve. Qualifications for the permit will include:
 - 1. compliance with Canadian Coast Guard safety regulations;
 - 2. demonstration of an up-to-date knowledge of the components of the reserve, including seabirds and marine mammals:
 - 3. adherence to a Tour boat Operator Code of Conduct, to be developed in cooperation between Parks and Natural Areas Division and the tourboat operators.
 - 4. attendance at an annual workshop to be organized by Parks and Natural Areas Division.
- The chasing and harassment of whales is prohibited by the Cetacean Protection Regulations under the Federal Fisheries Act. In association with these regulations, guidelines regarding tour boat operations and cetaceans have been developed.

2.5 Access

The Witless Bay Seabird Ecological Reserve boundary includes Gull, Green, Great and Pee Pee Islands and the Reserve waters surrounding the islands. There is presently a demand for access to the islands from interested members of the public, journalists, artists, photographers, film makers and research scientists. Although some of this activity may be desirable, human presence causes stress and sometimes death to the seabirds and is nearly always destructive to their habitat. Habitat destruction is of particular concern for the two burrowing species (Atlantic Puffin and Leach's Storm-Petrel), where walking often causes burrows to collapse and accelerates habitat erosion.

Unrestricted recreational use of Reserve waters, especially close to the colonies, may cause stress to the seabirds. Other marine uses of the Reserve are considered under separate sections of this document.

- General terrestrial access will only be permitted on Gull Island. Anyone desiring terrestrial access must first obtain a General Access Permit, issued by Parks and Natural Areas Division.
- General access permits will be issued on the condition that a qualified guide, approved by Parks and Natural Division, accompany the party.
- General Access Permits will be of 2 types: Day Permits will be issued to individuals primarily wishing to photograph or observe puffins. These permits will restrict activity to the rocky area immediately above the landing spot, just north of the research cabin. Special Permits will be issued to individuals whose work requires they have access to a greater portion of the island, or to overnight on the island. These permits will be issued only occasionally, and under special circumstances.
- Parks and Natural Areas Division, in consultation with the Seabird Management Advisory Committee will annually review and determine the number of permits to be issued.
- The number of **Research Permits** issued will be determined annually, and be guided by the Research Strategy and Action Plan (Section 2.7).
- Permit holders must have their permits on hand at all times while in the Reserve.
- Recreational boats are permitted in the Reserve under the conditions outlined in Section 2.4 (i-v).

2.6 Research and Monitoring

One of the objectives of the Witless Bay Seabird Ecological Reserve is to foster scientific studies which help ensure the achievement of two other higher level objectives:

- (a) To preserve internationally important seabird breeding and overwintering colonies that are essential to the maintenance of species diversity, composition, and abundance at levels sufficient to ensure viable, long-term populations;
- (b) To maintain the natural communities of the Reserve with their associated vistas, flora, and fauna in a condition no less pristine than at the time of Reserve establishment.

Actions

- A Research Strategy and Action Plan for the Reserve will be produced by Parks and Natural Areas Division drawing upon the expertise within SERAC.
- Research in the Reserve will be authorized by Research Permits from Parks and Natural Areas Division and from Canadian Wildlife Service, as appropriate.
- The research of highest priority will be that which addresses management issues with an emphasis on marine birds.
- In issuing Research Permits preference will be given to research activities identified in the Research Strategy and Action Plan.
- The killing of birds for scientific or other research purposes will not be permitted except in special circumstances where the desired information could not otherwise be obtained.

2.7 Ecological Integrity

It is essential that the ecological integrity of the Witless Bay Seabird Ecological Reserve be maintained. This necessitates the prohibition of a number of activities that would be detrimental to natural ecological processes.

- Except for scientific purposes covered by permits and except for fishing, there shall be no disturbance, damage or removal of any plant, animal or natural object from the Reserve.
- Ecosystems of the Reserve shall be allowed to follow natural succession unless deliberate management is required for the preservation of an indigenous plant or animal species.
- The use of motorized vehicles or equipment is prohibited in the terrestrial portion of the Reserve.

- Dumping, depositing or the emission of any substances is prohibited in the Reserve.
- Except for management purposes, open fires are not permitted in the Reserve.

2.8 Large Vessel Traffic

The waters off the east coast of the Avalon are part of a major shipping route and therefore, are subject to a substantial level of large vessel traffic. This vessel activity threatens seabirds by introducing oil pollution due to accidental spills and deliberate illegal bilge discharges. Depending on wind, tides and currents, spills occurring some distance from the Reserve can have as negative an impact as those occurring within the Reserve itself. Marine oil pollution is lethal to breeding and wintering seabirds.

Actions

- Parks and Natural Areas Division will participate in efforts to educate the public about the effects of oil pollution on seabirds.
- Tankers, freighters, draggers and all other large commercial vessels are prohibited from operating within Reserve waters.

2.9 Aircraft Activity

Aircraft travel near seabird colonies is disruptive to breeding birds. In order to ensure protection of the seabirds, aircraft activity must be restricted in the Reserve.

Actions

- Aircraft flying over the Reserve must maintain an altitude of at least 300 meters from April 1 to September 1.
- No aircraft is permitted to take off or land in the Reserve from April1 to September 1, inclusive.

2.10 Domestic Animals

Seabirds are extremely vulnerable to the presence of other animals at the breeding colony.

Actions

Domestic animals are prohibited from the Reserve.

2.11 Research Cabins

Existing cabins on Gull and Great Island are used by researchers and management personnel.

- Parks and Natural Areas Division will be responsible for maintenance of the cabin on Gull Island. Canadian Wildlife Service will maintain the cabin on Great Island.
- In accordance with the Wilderness and Ecological Reserves Act, repairs may be made to the existing structures. However, no additions may be made to the present structures.

Breeding Population (Pairs) of Seabirds at Witless Bay Seabird Ecological Reserve

	Gull Island	Green Island	Great Island	Pee Pee I	sland TOTAL
N. (1	•		00		00
Northern Fulmar	?	-	20	-	20
Leach's Storm-Petrel	530,000	+	250,000	+	780,000+
Herring Gull	3,850	300	2,700	75	6,925
Great Black-backed Gull	113	50	80	3	246
Black-legged Kittiwake	10,140	10,000	23,229	-	43,369
Common Murre	687	74,000	2,800	-	77,487
Thick-billed Murre	+	600	-	-	600+
Razorbill	60	170	120	-	350
Black Guillemot	15	+	+	?	15+
Atlantic Puffin	30,000*	9,300*	52,000*	1,300	91,300
Manx Shearwater	?	-	-	-	-
TOTAL	574,865	94,420	330,949	1,378	1,001,612+

Key:

⁻ absent; + present, but numbers unknown; ? possibly present

^{*} Cairns D.K., Montevecchi W.A., and Threlfall W. 1989. Researchers Guide to Newfoundland Seabird Colonies. Memorial University of Nfld.. Occasional Papers in Biology, NO. 14.

APPENDIX II - Selected References

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- 2. Montevecchi, W.A. and Leslie M. Tuck. 1987. <u>Newfoundland Birds: Exploitation. Study.</u> Conservation. Nuttall Ornithological Club. Cambridge, Mass.
- 3. Records kept by researchers in Gull Island cabin.
- 4. Piatt, J.F, D.N Nettleship and W. Threlfall. 1984. Net-mortality of Common Murres and Atlantic Puffins in Newfoundland, 1951-1981. in <u>Marine birds: their feeding ecology and commercial fisheries relationships.</u> Nettleship, D.N., Sanger, G.A., Springer, P.F. (eds). Proc. Pacific Seabird Group Symp., Seattle, Washington.
- 5. Piatt, J.F. and D.N. Nettleship. 1987. Incidental Catch of Marine birds and Mammals in Fishing Nets Off Newfoundland, Canada. <u>Marine Pollution Bulletin.</u> Vol 18, No. 6B, pp.344-349.

Legal Description Witless Bay Seabird Ecological Reserve

ALL that piece or parcel of land and territorial waters known as The Witless Bay Seabird Ecological Reserve, situated in the District of Ferryland, including Gull Island, Green Island, Great Island, Pee Pee Island and surrounding water bounded as follows:

BEGINNING at a point east of Gull Island and having calculated coordinates 367243.5m E. and 5235696.3m N:

THENCE following a left circular arc, having a radius of 1400 metres and a map scaled center of 365900m E and 523609m N, and arc length of 4773.9 metres, to a point having the calculated coordinates 364500.5m E and 5236128.1m N;

THENCE running S 1° 33' 39" W a distance of 2589.1 metres to a point having map scaled coordinates 364430m E and 5233540m N;

THENCE running S 29° 39' 04" W a distance of 6064.1 metres to a point having map scaled coordinates 261430m E and 5228270m N;

THENCE running N 85° 29' 42" W a distance of 564.1 metres to a point having calculated coordinates 360867.7m E and 5228314.3m N;

THENCE following a left circular arc, having a radius of 225 metres and a map scaled center of 360850m E and 5228090m N, an arc length of 510.9 metres, to a point having calculated coordinates of 360667.1m E and 5227959.0m N;

THENCE running S 35° 36' 06" E a distance of 1930.9 metres to a point having calculated coordinates 361791.1 m E and 5226389.0 m N;

THENCE following a left circular arc, having a radius of 1290 metres and a map scaled center of 362840m E and 5227140m N, an arc length of 2785.1 metres, to a point having calculated coordinates 364046.8m E and 5226684.I m N;

THENCE running N 20° 41' 47" E a distance of 6602.0 metres to a point having scaled coordinates 366380m E and 5232860m N;

THENCE running N 16° 55' 58" E a distance of 2964.8 metres to the point of beginning;

ALL coordinates, bearings and distances being referenced to the Universal Transverse Mercator Projection (zone 22) and the North American Datum of 1983.

Seabird Ecological Reserve Regulations under the Wilderness and Ecological Reserves Act (0. C. 97-246)

(Filed May 21. 1997)

Under the authority of sections 25 and 29 of the Wilderness and Ecological Reserves Act, the Lieutenant-Governor in Council makes the following regulations.

Dated at St. John's. May 13, 1997

John Cummings Deputy Clerk of the Executive Council

REGULATIONS

Analysis

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Section:		Section	on:
1.	Short title	7.	Operation of aircraft
2	Definitions	8.	Domestic animal
3.	Permits and licences	9.	Tour boat
4.	Fishing permitted	10.	Exception
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6.	Operation of boat		Schedule

Short title

1. These regulations may be cited as the Seabird Ecological Reserve Regulations.

Definitions

- **2.** In these regulations
- (a) "Act" means the Wilderness and Ecological Reserves Act:
- (b) "aircraft" means a machine for living and includes fixed or rotary winged airplanes. gliders and hang gliders:
- (c) animal" means a living thing, other than man, that is not a plant:
- (d) "bicycle" means a vehicle powered by pedals. gears or any non-motorized means of propulsion:
- (e) "camp" means a trailer, recreational vehicle, tent or shelter erected or used for any purpose:
- (f) commercial fishing" means fishing carried out under Licences issued by the Federal Department of Fisheries and Oceans:
- (g) "firearm" means a device whereby a missile is discharged by means of an explosive propellant or by means of compressed air or by a spring, and includes sporting guns, repeating guns. pump guns. set guns. swivel guns, punt guns, rifles, pistols and revolvers of every description, hunting bows and arrows of every description:
- (h) "hunt" means to chase. pursue, worry, follow after. or on the trail of. lie in wait for. or attempt to capture. kill, injure. or harass wildlife whether or not that wildlife is subsequently captured, killed, or injured:
- (i) "managen1ent plan" means the management plan for a declared Seabird Ecological Reserve on file with the managing agency:
- (j) "minister" means the minister appointed under the *Executive Council Act* to administer the Act:

- (k) "motorized boat' means a water craft equipped with a mechanical means of propulsion:
- (l) "motorized vehicle" means a motor car, motor truck, four wheel drive vehicle, all-terrain vehicle, tracked vehicle or any other motorized conveyance designed for on or off-road use:
- (m) "personal water craft" means jet-skis, sea-doos. wave-runners and the like but excludes ordinary motorized boats, kayaks and canoes:
- (n) "permit" means a permit issued and valid under these regulations:
- (o) "reserve" means a Seabird Ecological Reserve as established under the Act and listed in the attached Schedule:
- (p) "structure" means any man-made object intended to be permanent. semipermanent or temporary in nature and includes but is not limited to buildings, houses, cottages, cabins, wharves, docks, boat houses and slipways. trailers, mobile homes, tent platforms, camps shelters and recreational vehicles used for any purpose, but does not include semipermanent blinds, the upkeep and repair of existing structures, or signs erected under the authority of the management plan:
- (q) "tourboat" includes a boat which transports a person for any consideration: and
- (r) "wildlife" means art animal or plant.

Permits and licences

- **3.** (1) The minister, or a person authorized by the minister, may issue a permit or other written authorization that allows certain activities to he carried on in a reserve, subject to the restrictions imposed $h\sim$ these regulations and the Act.
- (2) A permit or written authorization shall be issued in accordance with the guidelines described in the management plan for a reserve
- (3) The activities referred to in subsection 3(1) may be limited by the conditions declared on the permit or in the written authorization.

- (4) Persons who are required to have permits to enter a reserve must have the permit in their possession at all times while in a reserve.
- (5) A person who enters a portion of a reserve shall comply with all restrictions set out in these regulations and posted signs.

Fishing permitted 4. (1) Commercial and recreational fishing in accordance with other applicable legislation is permitted within the marine waters of a reserve.

- (2) Angling in accordance with other applicable legislation is permitted.
- (3) Within the Baccalieu Island Ecological Reserve, berry picking is permitted except in areas of high concentration of seabirds breeding. where access permits are necessary.

Restrictions

- 5. Within a reserve, a person shall not
 - (a) pollute or obstruct a stream or other body of water:
 - (b) dispose of arty garbage:
 - (c) build or erect, or cause to have built or erected a structure, path or fence:
 - (d) hunt, remove, or disturb any wildlife:
 - (e) destroy, damage. remove, disturb or handle the home, den or nest of any wildlife species:
 - (f) be in possession of a firearm unless the firearm is securely wrapped and tied:
 - (g) destroy, damage, remove, disturb or handle the egg of any wild bird:
 - (h) destroy, damage, disturb or remove sand, soil, gravel, fossil plant, natural object, or a part of it:
 - (i) destroy, damage, or remove a sign or other government property:

- (j) operate or he in possession of any motorized vehicle on the terrestrial portion of a reserve:
- (k) light or maintain fires. open or contained in boats, except contained fires which are permitted in ships traveling through the marine portion of a reserve:
- (l) erect or maintain a camp. or otherwise carry on any camping activity:
- (m) apply any chemical to a reserve:
- (n) operate or be in possession of a personal water craft within a reserve:
- (o) operate or be in possession of a bicycle: and
- (p) display, post or broadcast an advertisement.
- Operation of boat **6.** (1) Within the marine portion of the Baccalicu Island and Cape St. Mary's Ecological Reserves, a person shall not
 - (a) operate a motorized boat within 100 meters of cliffs containing nesting birds from April 1 to October 30; and
 - (b) operate an unmotorized boat within 20 meters of cliffs containing nesting seabirds from April 1 to October 30:
 - (2) Within the Witless Bay Island Ecological Reserve, a person shall not
 - (a) operate a motorized boat within 20 meters of Gull. Great and Pee Pee Island from April 1 to September 1:
 - (b) operate an unmotorized boat, within 15 meters of Gull. Great and Pee Pee Island from April 1 to September 1:
 - (c) operate a motorized boat within 100 meters of Green island from April 1 to September 1: and
 - (d) operate an unmotorized boat within 50 meters of Green Island from April 1 to September 1:
 - (3) A person shall not within a Seabird Ecological Reserve

- (a) operate a dragger, tanker, freighter. barge. or a vessel longer than 20 meters: and
- (b) operate a boat in a manner that disturbs wildlife or allows noise from the boat or persons on board to disturb wildlife:

Operation of air-Craft

7. (1) A person shall not

- (a) operate an aircraft over the Cape St. Mary's and Baccalieu Island Reserves at an altitude less than 300 meters between the dates of April 1 and October 30: and
- (b) operate an aircraft over the Witless Bay Islanos Reserve at an altitude less than 300 meters between April 1 and September
- (2) Art aircraft shall not
- (a) take off or land in the Cape St. Mary's and Baccalicu Island Reserves between the dates of April 1 and October 30: and
- (b) take off or land in the Witless Bay Islands Reserve between the dates April 1 and September 1.

Domestic animal

- **8.** (1) Subject to subsections (2) and (3). a person shall not allow a domestic animal to enter a reserve.
 - (2) A person may enter a reserve with a dog ii
 - (a) the dog is a seeing eye dog specially trained for that purpose and is being used for that purpose: amid
 - (b) the seeing eye dog is kept under control at all times.
- (3). A person may keep sheep within the Cape St. Mary's Ecological Reserve in accordance with the management plan for the reserve.

Tour boat

- **9.** (1) A person shall not operate or cause to he operated a tour boat or guiding enterprise within a reserve unless the operator is in possession of a permit issued under section 3.
- (2) In addition to these regulations, the operator shall comply with conditions set out in the permit.

Exception

10. (1) A person engaged in the administration or management of Seabird Ecological Reserves in the normal course of his or her duties. is exempt from sections 5(d). (e). (0, (g), (h), (I), (k), (I) and (p). section 6(1). 6(2) & section 7.

- (2) Within the Cape St. Mary's Ecological Reserve, a person engaged in the administration and management of this reserve, in the normal course of his or her duties, is also exempt from paragraphs 5(J) and (0).
- (3) A person engaged in a scientific study approved by the Parks and Natural Areas Division and in possession of all requisite permits. may be exempted from paragraphs 5(d), (e), (I). (g), (It) and (I). subsections 6(1), (2) and section 7,
- (4) Commercial fishers while engaged in fishing arc exempt from paragraphs 5(d) and (h) and subsections 6(1) and (2) to the extent that it. is necessary for the proper conduct of this fishing activity.
- (5) Any person engaged in recreational fishing is exempt from paragraphs 5(d) and (h) to the extent that is necessary for the proper conduct of this activity.
- (6) Within the Baccalieu Island Ecological Reserve, any employee of the federal Department of Transport. or a person working on the behalf of that department.
 - (a) is exempt from paragraph 5(c) for the purpose to maintaining existing paths or structures associated with the operation amid maintenance of the facilities existing prior o provisional reserve establishment:
 - (b) is exempt from paragraph (d) for the purposes of cutting trees for boat building as outlined under the management plan of the reserve:
 - (c) is exempt from subsection 6(1) amid section 7 for the purpose of transporting persons or goods to and from the existing facilities, in accordance with the procedures outlined under the management plan of the reserve:

- (d) is exempt from subsection 8(1). in accordance with the conditions outlined under the management plan of the reserve.
- (6) Within the Baccalieu Island Ecological Reserve. any employee of the Federal Department of Environment. or a person working on the behalf of that department is exempt from sub Sections 6(1 amid (3) and section 7 for the purpose of transporting persons or goods to maintain the existing Department of Environment facilities, in accordance with procedures outlined under the management plan for the reserve.
 - (7) Within the Baccalicu Island Ecological Reserve.
 - (a) any person in the process of landing a boat in Ned Walsh's Cove or London Cove. is exempted from subsection 6(1) and
 - (b) any person is permitted to have a small open or contained fire on the designated landing sites of Ned Walsh's Cove and London Cove.
 - (8) At the Witless Bay Islands Ecological Reserve, a tour boat having a permit issued under section 9 is exempt from subsection 6(2). notwithstanding anything in the management plan to the contrary
 - (9) Any person in possession of a valid access permit is exempt from subsections 6(1) and (2) for the purpose of using a boat to land on the islands.

Application of Regulations

11. These regulations shall apply to the Seabird Ecological Reserves listed in the Schedule. except to the extent that they have been modified by the Order declaring a given Seabird Ecological Reserve in effect..

Schedule

- 1. Baccalieu Island Ecological Reserve.
- 2. Cape St. Mary's Ecological Reserve.
- 3. Witless Bay Islands Ecological Reserve