

**IMPORTANT BIRD
AREAS OF CANADA**



**LES ZONES IMPORTANTES
POUR LA CONSERVATION
DES OISEAUX AU CANADA**

**Presqu'île
Important Bird Area
Conservation Plan**

For the:

**Federation of Ontario Naturalists
Canadian Nature Federation
Bird Studies Canada**

by **Edward D. Chesky**

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Presqu'ile Important Bird Area Conservation Plan

Executive Summary

This conservation plan is a referenced guide for the protection and management of the Presqu'ile Important Bird Area (IBA). This is the first IBA Conservation plan to be completed in Ontario. It is the result of over one year of research, consultation, and public feedback. The Presqu'ile IBA Stewardship Steering Committee, a committee of local people with considerable interest in, and knowledge of the area and its birds, contributed significantly to the development of the Presqu'ile IBA Conservation Plan and will oversee its implementation. In the plan, background information on the area is presented, conservation targets are identified, threats to those targets are defined and strategies addressing the threats are proposed. This plan provides Presqu'ile Provincial Park, the main landowner on the peninsula and the key stakeholder, with clear and unambiguous direction for conserving the significance of Presqu'ile for birds at an important moment in the development of their own management plan.

The IBA program was developed by Bird Life International, a non-governmental organization dedicated to the protection of birds and their habitats in the world. The Canadian Nature Federation and Bird Studies Canada are Bird Life International's Canadian partners and are leading IBA implementation in Canada. The Federation of Ontario Naturalists is working with these groups to implement IBAs in Ontario.

The goal of the IBA program is to identify those sites that are exceptionally important for birds at some period during the year and to try to ensure the conservation of these areas through action in the local community. The origin of the program was the recognition of the need for a well-based, carefully thought-out approach to conservation, one that identifies the truly outstanding sites -- ones of significance both nationally and internationally.

Presqu'ile has been identified as a globally significant IBA because it has greater than one percent of the global or national populations of seven species, during least at one moment in their yearly cycles. These include three colonial species, Double-crested Cormorant, Ring-billed Gull, and Caspian Tern; two waterfowl, Brant and Greater Scaup; and two species of shorebird, Dunlin and Whimbrel. Presqu'ile is also significant for its breeding marshbirds and migrating landbirds.

Presqu'ile, is a large, boot-shaped barrier bar peninsula and island landform along the northern shore of Lake Ontario, approximately 135 kilometres east of Toronto. The peninsula points to the east, and two small islands, Gull and High Bluff, are located just off the "heel". The sand beach, dune system and marsh system join the main limestone island to the mainland. The peninsula shelters Presqu'ile Bay from Lake Ontario. The bay, beach, marshes, islands and woodlands are all of high significance for birds. The park itself is a popular camping and day-use destination. In addition to camping, beach recreation, wind surfing, boating, fishing and birding are popular pastimes. Numerous private cottages line a private road along the north shore of the peninsula.

It is proposed that the Presqu'ile IBA comprise all of Presqu'ile peninsula excluding the private lands, High Bluff and Gull Islands, all of the waters within approximately 200 metres of the shoreline and all of Presqu'ile Bay including the abutting marshes. The actions and strategies described in the plan are voluntary, and may apply only to public lands and waters, and private lands where the landowner chooses to participate in and support the plan. Since much of the

Presqu'ile IBA is within Presqu'ile Provincial Park, the park is the key stakeholder in the plan's implementation and success. The public in Brighton, the Township of Brighton and other nearby communities have also had opportunities to comment on an earlier version of this plan which has positive influenced the content of this plan.

The viability of IBA species and species groups depends on healthy, productive and well-managed habitats. These species and habitats are subject to stresses that influence their future viability. Twelve major stresses are identified in the plan, many of which are related to human activity or human-induced changes to the ecosystem. Stresses identified range from disturbance by a range of human activities to the presence and influence of exotic species in key habitats such as the marshes. The sources of each stress are identified, enabling this plan to focus strategic conservation actions and tasks where they may be most effective.

The "Action Plan" section begins with a vision statement, then proceeds with conservation goals and a series of actions organized for groups of species sharing common habitats, including colonial birds, waterfowl, shorebirds, marshbirds and landbirds. Thirty-nine actions are presented under the broad conservation categories of Protection, Management, Monitoring and Research, and Education.

The plan itself is a flexible document that should be reviewed and modified as information and situations change. It will be submitted to the Park Planner for Ontario Parks, Presqu'ile Provincial Park itself, the sponsoring organizations, members of the Stewardship Steering Committee, the local library and the local municipal offices.



Presqu'ile Important Bird Area Conservation Plan

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2. Introduction

In 1996, the Federation of Ontario Naturalists introduced *Towards Conserving the Birds of Ontario*, a guide describing the elements of a bird conservation strategy for Ontario. One element of this strategy is a site-based conservation program called “Important Bird Areas.”

This conservation plan is a guide for the protection and management of the Presqu’ile Important Bird Area (IBA). It is the result of research and consultation with people knowledgeable about Presqu’ile and its birds. A planning document is useful only if it has the ‘ownership’ of those involved in its implementation. The Steering Committee members for this plan not only share a common vision with regard to the natural heritage values of the area, but also possess considerable knowledge and expertise with regard to the issue, and have some influence over the management of the area’s resources. In many ways, this plan reflects their hopes and aspirations for the protection and management of bird habitat at Presqu’ile.

Since much of the Presqu’ile IBA is within Presqu’ile Provincial Park, the park is the key stakeholder in the plan’s implementation and success. While it is recognized that the park has its own planning process to follow and a myriad of management issues to consider, this plan will provide the park with clear and unambiguous directions for conserving the significance of Presqu’ile for birds.

Conservation planning is neither science nor art, but a blend of both. It involves setting goals and targets, managing resources and working with people to meet those targets. It requires careful monitoring of populations, habitats and other conditions that could affect the targeted populations, and using these data to inform decisions and actions in an iterative process.

The Nature Conservancy (TNC) ¹, has been at the forefront of conservation planning in North America. In 1996, TNC developed a planning process for their nature reserve system (TNC 1996). The approach chosen for the current undertaking borrows from the TNC approach, and involves the following steps (the first four of which are the focus of this document):

1. Describe conditions and context (background: geophysical, ecological, cultural).
2. Identify targets (IBA species and related species and their habitats) and goals (conserve populations and supporting habitats).
3. Identify stresses to populations (stresses and threats section).
4. Propose strategies to address source of stresses (conservation goals and strategies).
5. Assess and prioritize strategies (based on resources, urgency, confidence, etc.).
6. Monitor populations and conditions.
7. Implement plan.

¹ The Nature Conservancy is a large, non-profit conservation organization specializing in protecting and conserving nature and natural areas in the Americas.

3. IBA Criteria and Process

3.1 The IBA program

The goal of the IBA program is to identify those sites that are exceptionally important for birds at some period during the year and to try to ensure the conservation of these areas through action in the local community. The origin of the program was the recognition of the need for a well-based, carefully thought-out approach to conservation, one that identifies the truly outstanding sites -- ones of significance both nationally and internationally. The program may be applied at the sub-national scale as well, though this type of application has not yet occurred in Canada.

While the program at all stages is a voluntary one, the advantages of an IBA designation extend beyond those of conservation alone. There can be increased awareness of the true worth of the site among the local community, as well as spin-off benefits such as ecotourism.

The IBA program was developed by *Bird Life International*² a non-governmental organization dedicated to the protection of birds and their habitats in the world. The Canadian Nature Federation³ and Bird Studies Canada⁴ are Bird Life International's Canadian partners, and are leading IBA implementation in Canada. The Federation of Ontario Naturalists⁵ is working with these groups to implement IBAs in Ontario.

Establishing a site as an IBA recognizes its significance for birds internationally, and often enhances protection and conservation of significant species, populations and their habitats. To be considered as an IBA, a site must first be nominated by a member of the public. Data on the birds at the site must be available to support its significance. In 1996 a meeting was held in Toronto that involved many members of the birding, ornithological and resource management communities of Ontario to discuss bird conservation in Ontario. Part of the agenda was dedicated to recommending candidate IBA sites. This process has continued less formally since then and many sites have been recommended. As of July 1998, over 1,000 potential IBA sites have been identified in Canada, of which 124 are within Ontario. Of these sites, six within Ontario have sufficient information to be designated as IBAs at the time of writing: Point Pelee National Park, Rondeau Provincial Park, Long Point (Lake Erie), The Niagara River, Prince Edward Point and **Presqu'île**.

Bird Studies Canada is responsible for assessing the technical information on birds at each site and deciding if a site merits nomination. Once a site is nominated, ideally a management plan is developed and a local IBA stewardship committee assumes implementation.

² BirdLife International is a world-wide partnership of conservation organizations that work together to conserve all wild bird species and their habitats. BirdLife currently has national representation in over 100 countries around the world.

³ The Canadian Nature Federation (CNF) is a non-profit organization that advocates for the conservation and protection of nature in Canada. The CNF has member organizations across Canada in every province and is based in Ottawa.

⁴ Bird Studies Canada is a national non-profit organization dedicated to the study and conservation of wild birds in Canada.

⁵ The Federation of Ontario Naturalists (FON) is a non-profit organization that advocates for the conservation and protection of nature in Ontario. The FON represents the interests of dozens of naturalist clubs and thousands of members across the province.

To qualify as an Important Bird Area, a site must meet at least one of four criteria:

1. sites regularly holding significant numbers of an endangered, threatened or vulnerable species;
2. sites regularly holding an endemic species, or species with restricted ranges;
3. sites regularly holding an assemblage of species largely restricted to a biome;
4. sites where birds concentrate in significant numbers when breeding, in winter, or during migration.

3.2 Declaring Presqu'ile an IBA

The designation process in Canada is handled through the Canadian Nature Federation and Bird Studies Canada. Part of the process of designation of a site involves producing a conservation plan. This plan must identify key features that support designation of the site, critical habitats supporting the significant bird populations, a discussion of present and potential threats to the significant birds and their habitats, recommended strategies and tasks to direct protection efforts for the significant birds and their habitats, and recommendations regarding monitoring.

Key to the success of the IBA in meeting its conservation objective is participation in and ownership of the plan by local stakeholders. To assist with the development and implementation of an IBA conservation plan, the Presqu'ile IBA Stewardship Steering Committee has been established that includes members of the public who have considerable interest in and knowledge of the area and its birds. Their input into this document is substantial. Their task is two-fold:

- to promote the IBA concept to other members of the community, and
- to oversee the implementation of the IBA management plan with its monitoring and action components.

3.3 Stages of plan development and public feedback

An interim plan for the Presqu'ile IBA was circulated in March 1998, followed by a draft plan in July 1998. A final draft of the IBA management plan was presented to the community of Brighton in November of 1998, and January of 1999 at public meetings, and circulated within the community.

The initial meeting was hosted by the Presqu'ile Brighton Naturalists. Local officials from the Town of Brighton and the Township of Brighton requested a second public meeting. They offered to host this second meeting and also provided the chair. This second meeting was attended by over 120 people, the vast majority of whom opposed many aspects of the final draft plan. The main concerns that were expressed were as follows:

- Cormorants. Specifically a number of people in the crowd were opposed to protecting the Cormorant colony and attributed lower fish catches to Cormorant predation. Some people wanted the Cormorant colony to be significantly reduced or "wiped out" entirely.
- Restrictions on boat use. A number of participants in the meeting objected to recommendations regarding boat use which they interpreted as highly restrictive, and having the effect of keeping boats out of the bay. While a number of speakers opposed restrictions to boats or activities such as fishing, a number of them agreed that personal watercraft did pose a threat to the birds.
- Beach management. Some people felt that the beach was for bathing and traditional beach activities. They were opposed to proposals to add to sections of the beach that would be managed for shorebirds, or restrict access to parts of the beach.
- Mapping. Some people voiced opposition to the IBA boundaries proposed within the final draft. They felt that the boundaries implied restrictions of their use of Presqu'ile Bay and their right to navigate.

In addition to these comments, four people responded in writing following this meeting. These responses ranged from strong opposition to some of the recommendations, to strong support for the plan.

This version of the Presqu'ile Important Bird Area Conservation Plan has been fully revised, and specifically has revisited some of the issues that were raised at this meeting. It will be forwarded to the Park planner for consideration in the Presqu'ile Provincial Park Management Plan. At the

same time, it is an independent document that provides the Presqu'ile IBA Stewardship Steering Committee with direction. This plan should always be perceived as a working document that can be revised and modified as information and situations change.

4. Background: Geophysical, Ecological and Human

Site description and location

LAT/LONG: 435930N 0774300W and surrounding waters

Presqu'ile is located on the northeastern shoreline of Lake Ontario approximately 135 kilometres east of Toronto and 10 kilometres southwest of Trenton. It is the first of a series of large barrier bar peninsulas that are encountered along the northern shore of Lake Ontario as one travels east from Toronto. Barrier bar systems occurring farther to the east include one sheltering Weller Bay that connects to Bald Head Island, a series of bars on the southeastern shoreline of Prince Edward County that includes North Beach Provincial Park, and the sand bar systems of Sandbanks Provincial Park.

The boot-shaped Presqu'ile peninsula juts into Lake Ontario, with the foot of the boot pointing east. Physiographically, Presqu'ile peninsula is comprised of a limestone island (the boot) connected to the mainland by a barrier bar system called a tombolo. The western edge of the tombolo is an extensive sand beach, stretching several kilometres from the mainland to Owen Point and bordered by a dune system. Behind the dunes is a very rare ecosystem known as a "panne" -- essentially, a sand plain with conifer stands and prairie-like openings. A series of finger-like, vegetated sand bars extends eastward from the panne into a large marsh system that terminates in Presqu'ile Bay. Two limestone islands, Gull and High Bluff, are located just south-west of the heel. Gull Island has been historically linked by a sand bar to Owen Point. A lighthouse is located at the eastern tip of the peninsula.

Much of the peninsula itself is forested (see Figure 1). A cottonwood plain runs along the dunes adjacent to the main beach. It is replaced by the panne moving away from the lake and finally, a mixed white cedar, yellow birch, eastern hemlock woodland that covers the fingers. This latter woodland has a 'northern' flavour to it, and is the home to more typically northern species of breeding birds such as Red-breasted Nuthatch, Golden-crowned Kinglet and Yellow-rumped Warbler. Three main blocks of natural, mixed forest are the primary vegetation feature on the main section of the limestone "island". Pine plantations and old fields make up the bulk of the remaining habitat.

Much of the northern periphery of Presqu'ile Bay as it arcs eastward past Brighton to Shoal Point used to consist of marsh wetlands and swamp forests. Some of these natural habitats remain more or less intact, but most have been filled, drained or cleared to be replaced by cottages, housing and other development.

A very large population of white-tailed deer, estimated at between 225 and 250, roams the peninsula, causing significant damage to ground flora, regenerating trees and related parts of the forest ecosystem. Deer are omnipresent, accustomed to humans, and essentially without predators.

Barrier bar peninsulas are one of the most dynamic ecosystems known and Presqu'ile is surely no exception to this rule. For example, the beach on the west side of the peninsula is currently estimated to be growing at approximately one to two metres per year! The plant communities are also quite dynamic, as factors such as deer browsing, natural succession, erosion, intentional management, exotic species and natural phenomena such as ice and wind storms influence and shape them.

Figure 1. Forest Cover in the Presqu'ile Area



4.1 Cultural History

The Presqu'ile peninsula has a rich and complex cultural history. There has been no evidence found suggesting native occupation of the peninsula in a significant way (e.g., a village). However, much of the original forests of Presqu'ile were cleared by early settlers and squatters by the mid 1800s. Land clearing commenced a long period of farming. In 1871, the federal government took control of the peninsula. Jurisdiction over the management of Presqu'ile changed to the Presqu'ile Park Commission in 1922. Farming activity became limited to areas such as High Bluff Island and Calf Pasture, while recreational pursuits increased, including a golf course developed on the panne, hunting and large-scale beach use. Numerous cottages and homes were constructed along the Bayshore road, especially between Calf Pasture Point and the lighthouse. Presqu'ile became the fifth provincial park in Ontario in 1956. While some land on the point remains in private ownership, including approximately 115 residences and cottages along Bayshore Road, most of the peninsula -- 510 hectares -- is now part of the park, with an additional 427 hectares of surrounding waters, including Gull and High Bluff Island. Bird colonies have established themselves on the islands since the abandonment of farming.

4.2 Current Land Use

4.2.2 Presqu'ile Provincial Park

Presqu'ile is classified as a "natural environment" park by the Ministry of Natural Resources. Since its establishment, Presqu'ile has been a very popular park, attracting high numbers of visitors during the summer months. People visit the park to camp and for day-use. In addition to the campgrounds, beaches, nature trails and park roads, the park has two interpretive centres (one beside the Presqu'ile Point lighthouse and the other near the staff house), a store and a boat launch into Presqu'ile Bay.

Presqu'ile Provincial Park has been in the process of developing a management plan since 1979. This process has preoccupied park staff, local residents in Brighton and Northumberland County, and members of the broader Ontario public over much of this period. There have been surveys, public input sessions, delegations and the submission of alternative plans. Presqu'ile is managed by Ontario Parks, a branch of the Ministry of Natural Resources. Ontario Parks requires every park to develop a business plan as well. At the time of writing, the management plan process was nearing its final phase.

While the park is classified as "natural environment", this definition does not preclude recreational activities. For example, Presqu'ile's beaches are well used by well over 100,000 people each year. The park is also a popular camping destination. The 394 campsites within the park are often full. It also has a history of duck hunting which continues to this day and is one of the more controversial issues that has galvanised public opinion with regard to the preliminary management plan. At the same time, the park contains large expanses of natural habitat and boasts several significant environmental features, including globally significant ecosystems, nationally rare plants and, of course, its widely recognized significance for birds. Thousands of birders visit the park each year to observe birds in migration at what is considered one of the best birding locations in Ontario. Many issues resonate from the multi-use nature of the park, juxtaposed with its rich natural heritage.

4.2.3 Town of Brighton

Brighton is a community of approximately 4,500 located adjacent to the peninsula on the mainland. A review of the Official Plan of the Town of Brighton confirms that most of the shoreline zone is either in residential or marine commercial development, or it is slated for such development. Marinas exist on Harbour Street and in the community of Gosport. Significant amounts of marshland persist along the shoreline. Some of this has been filled for residential or commercial development. A commercial fishery is operated out of Gosport.

4.2.4 Township of Brighton

The parts of the township relevant to this plan include private lands on the peninsula and all township lands adjacent to Lake Ontario. These extend approximately two kilometres west of the foot of the peninsula and east from the Town of Brighton to about three kilometres east of Shoal Point. Residential development and cottages occur along most of the shoreline, although extensive wetlands exist near Woods Point, Stony Point, Shoal Point and the Murray Canal. Much of the area inland is in mixed agricultural use that includes cash crops, feedlots, orchards and pasture. A speedway is located about three kilometres east of Brighton near the lake.

4.3 Significance of Presqu'ile area for birds

Presqu'ile is a site of major ornithological significance along the Lake Ontario shoreline for breeding and migrating birds. The 130 breeding bird species found within the Presqu'ile square of the Breeding Bird Atlas is the third highest total of any atlas square in Ontario (Cadman et al. 1987). Included in this total are several colonial species nesting on Gull and High Bluff Islands. In addition, the marshes and wetlands support breeding waterfowl, at least two nationally vulnerable species (Black Tern and Least Bittern), and one endangered species (King Rail). Spring and fall migration of landbirds and waterbirds is spectacular. Waterfowl migration peaks in March and early April as tens of thousands of waterfowl use the waters and wetlands around Presqu'ile as staging grounds for their flight north. Passerine migration is heavy, as can be expected on any major peninsula jutting out into one of the Great Lakes. However, Presqu'ile is perhaps best known for the large numbers of shorebirds that stage along the beaches of the park. Ken Ross, Canadian shorebird expert and coordinator of the Ontario Shorebird Survey, describes Presqu'ile as "the shoreline site which routinely supports the most migrant shorebirds along the Canadian Great Lakes." (K. Ross 1998. pers. comm.)⁶.

Pending the completion of the park management plan are two bird-related international designations that underscore the international significance accorded the park and its surroundings for its role in sustaining the migration of large numbers of birds. Presqu'ile has been identified as a potential regional site of the Western Hemispheric Shorebird Reserve Network ⁷ and as a RAMSAR ⁸ site for the large number of waterfowl that stage in the bay.

4.4 Why an IBA?

Presqu'ile is an Important Bird Area because it has greater than one percent of the continental or national populations of seven species, at least at one moment in their yearly cycles (see chart below). Double-crested Cormorant, Ring-billed Gull, and Caspian Tern are all colonial species nesting in large numbers on Gull and High Bluff Islands. Brant migrate through the Presqu'ile area in mid to late May, along a fairly narrow flyway that links their Atlantic wintering range with their high-Arctic breeding range. During March and early April Greater Scaup stage in large numbers in both the inner bay and on the lake south of the peninsula. Dunlin is the most numerous shorebird on the Presqu'ile beaches, where it stages in May, often peaking towards the end of the month. Whimbrel can concentrate in large numbers towards the end of May.

⁶ See Appendix One.

⁷ The Western Hemispheric Shorebird Reserve Network is an international designation granted to the best and most important concentration points for shorebirds in all of the western hemisphere. The Canadian Wildlife Service is responsible for identifying and designating sites in Canada.

⁸ Canada is a signatory to the RAMSAR Convention. This convention designates globally significant wetlands.

Presqu'ile marshes also have significant assemblages of breeding birds, including the nationally vulnerable Black Tern and Least Bittern, and the nationally endangered King Rail. Data on numbers of bitterns and King Rail are unfortunately insufficient to include them in justifying IBA designation. Black Tern numbers are insufficient to qualify on their own for IBA consideration as well. However, subsequent studies on the local and regional populations of these species could demonstrate that the marshes and wetlands at and near Presqu'ile also merit inclusion in the IBA designation for reason of its breeding birds. The park is also considered by ornithologists and birders to be one of the most important focal points for landbird migration on the Great Lakes (C. Goodwin 1998, pers. comm.).

Table 1. Why Presqu'ile is an Important Bird Area

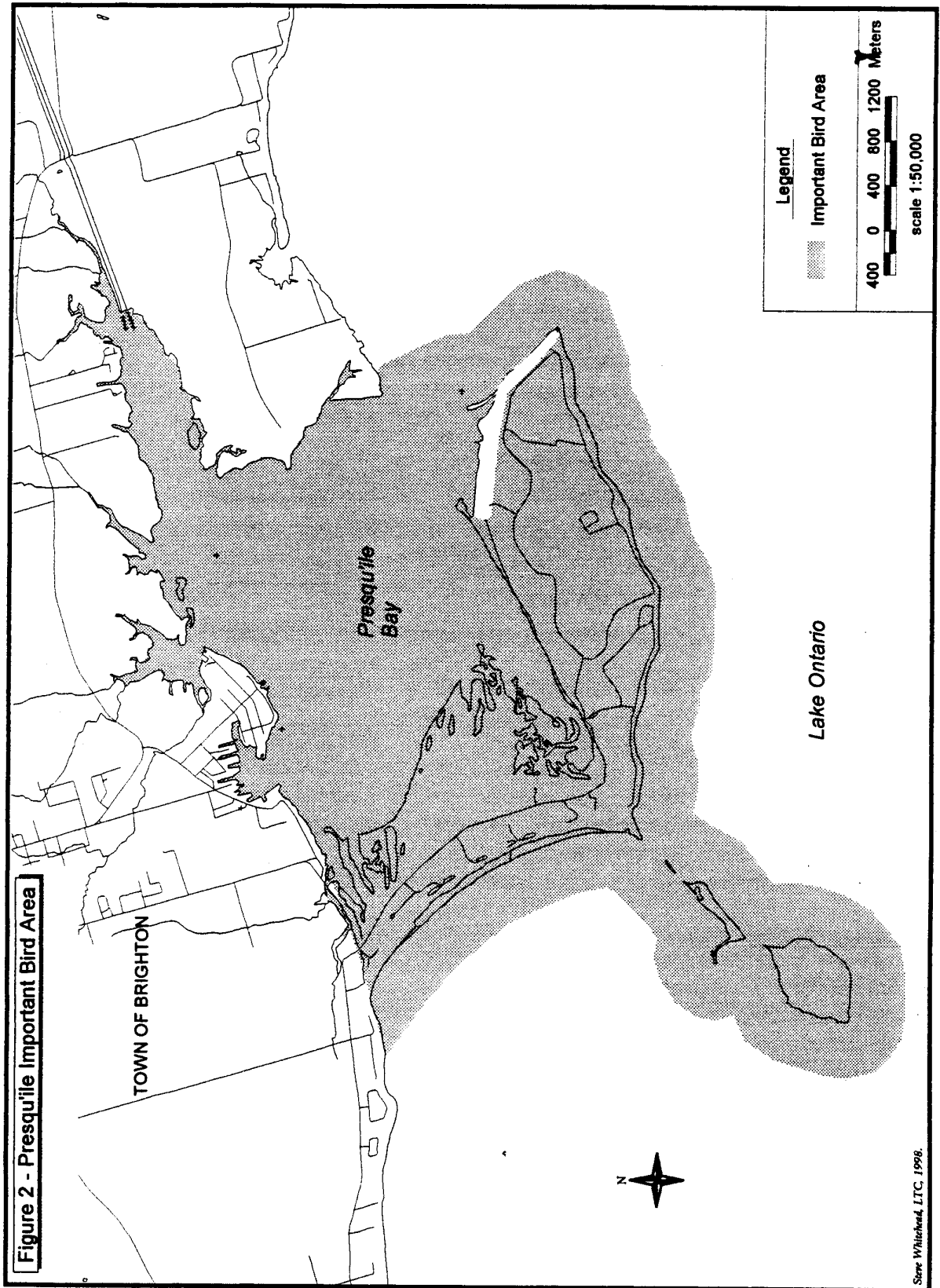
Species	Number ⁹ (daily max.)	Season	Habitat
*Double-crested Cormorant	6,099 pairs (1.7% of Can. pop.)	breeding	Gull Island, High Bluff Island
Brant	2,500 (max.) (1% to 2% of the Atlantic wintering pop.)	late May	open water: outer bay, off south shore including Gull and High Bluff Islands
Greater Scaup	10,500 (max.) (> 1% of the N.A. pop.)	March-April	inner and outer bay, off south shore
Dunlin	10,000 (max.) (1% to 10% of the central Can. pop.)	late May	beaches
Whimbrel	1,000 (max.) (>1% of N.Am. pop.)	late May	beaches
*Ring-billed Gull	69,417 pairs (7.8% N. Am. pop.)	breeding	Gull Island, High Bluff Island
*Caspian Tern	466 pairs (about 2.5% N.Am. pop.)	breeding	Gull Island

* colonial species

4.5 Boundaries of Presqu'ile Important Bird Area

It is recommended that the Presqu'ile Important Bird Area comprise all of Presqu'ile peninsula (excluding private lands), High Bluff and Gull Island, all of the waters within approximately 200 metres of the shoreline and all of Presqu'ile Bay including the abutting marshes, as shown in Figure 2. The actions and strategies described in Section 7 would apply only to public lands and waters, and private lands where the landowner chooses to participate in and support the plan. It is acknowledged that implementation of these strategies is linked to the fate of the management plan for Presqu'ile Provincial Park. The aquatic boundaries are intended only to illustrate the extent of the area that may support the significant populations of birds. In reality, the area that supports the aquatic and colonial birds is impossible to map accurately because it is related to the dynamic resources of Presqu'ile Bay as well as Lake Ontario.

⁹ numbers from the Canadian IBA Database.



5. Species Descriptions, Ecology and Local History

5.1. Colonial Nesting Species

Areas of significance:

High Bluff and Gull Islands and surrounding waters

High Bluff and Gull Islands, located off the heel of the tombolo, support very large and dynamic bird colonies comprising several species. This colony established itself after farming was abandoned earlier this century. Ring-billed Gulls and Double-crested Cormorants currently make up the balance of the island's bird biomass. They are joined by a significant population of Caspian Terns, and smaller populations of Common Terns, Herring Gulls, Great Black-backed Gulls, Black-crowned Night-Herons, Great Blue Herons, Great Egret¹⁰ and the occasional species of duck.

5.1.1. Double-crested Cormorant *Phalacrocorax auritus*

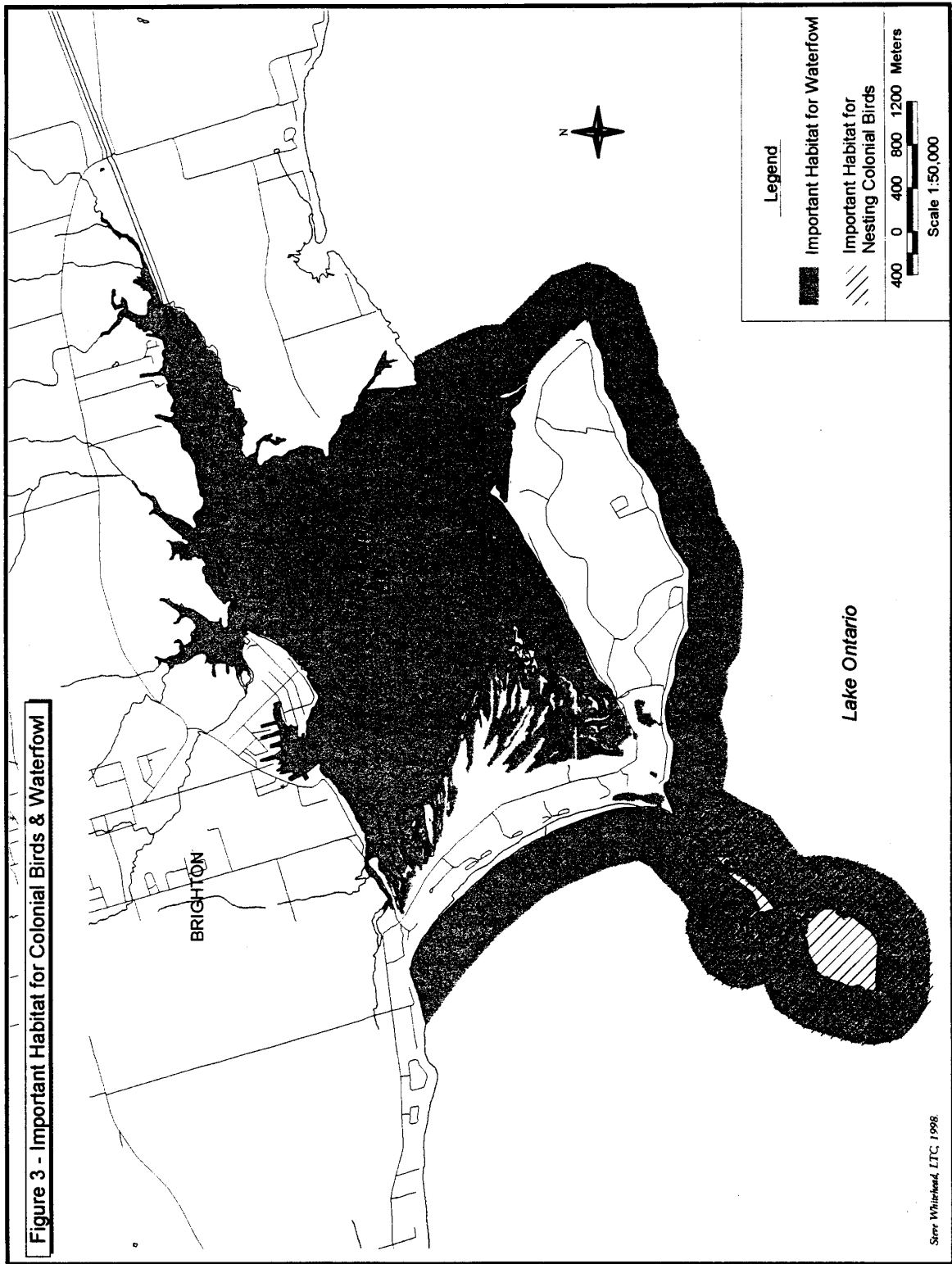
In North America, this species breeds from Newfoundland and the Maritime provinces to the Great Lakes, and west of Lake Superior throughout the great plains to coastal British Columbia and south to Arizona. It overwinters primarily in the Gulf of Mexico and the Mississippi delta. In Ontario, the Double-crested Cormorant is not protected under the Migratory Bird Convention Act but rather, under provincial legislation.

The Cormorant's presence in southern Ontario dates to the 1938 when the first nests were found at Scotch Bonnet Island, 13 kilometres southeast of the Presqu'île Provincial Park lighthouse. It became very common throughout the Great Lakes by the late 1940s and early 1950s. Suspected competition with commercial and sport fisheries led to government measures to reduce Cormorant populations. These actions caused a precipitous, 25-year decline in Cormorant populations that was greatly exacerbated by pesticide residues in the environment such as DDT and its metabolites. These compounds concentrate in fat deposits, eventually causing reproductive failure. Once DDT was banned, Cormorant populations rebounded. They increased nearly exponentially throughout the 1980s. In the early 1990s, there were signs of populations levelling off or declining.

However, recent evidence demonstrates a significance increase in Cormorants on Lake Ontario, with 1998 colony numbers up seven percent over the previous year (Weseloh 1998. pers. comm.). Cormorants are superbly adapted to catching fish. A perception persists, particularly among commercial and sport fishers, that Cormorants are reducing fish populations by eating the small size classes of many valued species. Scientific data from the Great Lakes suggest that Cormorants have minimal impact on Great Lakes fisheries, extracting mainly species of low economic value such as alewives. It is estimated that salmon and trout remove about 25 times the number of prey fish from Lake Ontario (OMNR, 1997: 11). Their impact on fish farms in some U.S. states has been more significant, leading the United States Fish and Wildlife Department (USFWS) to institute measures to reduce Cormorant populations (Weseloh and Collier 1994, USFWS 1998).

¹⁰ Nested for the first time in 1999.

Figure 3. Important Habitat for Colonial Birds and Waterfowl



Another concern about Cormorant populations is the impact that they have on trees at the colonies. They nest in trees or on the ground in dense colonies. Their acidic excrement kills ground vegetation and eventually trees, leading to erosion and possible long-term habitat damage (Weseloh and Collier 1994). There is a serious concern that Cormorants pose a major threat to the old Oak-Maple forest on High Bluff Island.

At Presqu'ile, nesting occurred for the first time in 1985, when 116 nests were located on Gull Island. By 1994, 3,196 nests were located on High Bluff Island and 819 on Gull Island. 1998 has been the biggest year yet, with 1,642 nests found on Gull Island and 5,057 on High Bluff Island, making this colony the second largest Cormorant colony in all of the Great Lakes (Weseloh, pers comm.). Both of these islands are limestone reefs, projecting above the water level. High Bluff Island has a fairly large stand of cedar and hardwood forest on its west side. Trees on Gull Island were killed off by the Black-crowned Night Heron colony in the 1960's and 1970's, and by the more recent Cormorant colony. Cormorants have become very abundant at Presqu'ile over the past decade. However, their population cannot continue growing forever. Some colonies lose up to 30 percent of the young to Newcastle disease ¹¹ (Ibid.). Other factors affecting Cormorant populations involve changes in fish populations and the aquatic ecosystem caused by zebra mussels and other exotic species. It is expected that Cormorant populations on the islands will eventually reach a plateau and perhaps decline in response to complex changes in the Lake Ontario ecosystem.

5.1.2. Ring-billed Gull *Larus delawarensis*

As with the previous species, Ring-billed Gull has adapted quickly to a changing environment and taken full advantage of anthropogenic artefacts such as garbage dumps, cash crops and fast food. This species breeds across central North America from the Maritimes to northern California. It overwinters in smaller numbers on the southern Great Lakes and mainly along the Atlantic and Pacific coasts of North America, central-southern United States into the Caribbean, and Central America. It was probably common in Ontario in the 19th century, but human depredation reduced populations to a few remote colonies by early in the 20th century (H. Blokpoel 1987). Since the 1960s Ring-billed Gull populations have sky-rocketed. It is protected under the Migratory Birds Convention Act.

Ring-billed Gull nest on the ground (and occasionally rooftops). They are omnivorous scavengers, able to exploit a wide range of food sources from dead fish to garbage dumps, grasshoppers, and other bird eggs and nestlings. Birds nests close together in large colonies. At Presqu'ile, nesting is thought to have occurred for the first time in 1948 on Gull Island and in 1979 on High Bluff Island. The local nesting population grew on Gull Island from 10 nests in 1948 to 37,000 nests in 1990, while High Bluff's populations went from 679 in 1979 to 32,000 in 1990 (LaForest 1993). Ring-billed Gull is likely the most common species at Presqu'ile and the island colonies together represent one of the largest in the Great Lakes. The Canadian Wildlife Service (CWS) monitors the gull colonies approximately every 10 years (Weseloh 1998. pers. comm.).

Ring-billed Gull is considered a nuisance species by many people because of its huge numbers and its habits described above.

¹¹ Newcastle disease is not known to spread from bird colonies to poultry operations.

5.1.3. Caspian Tern *Sterna caspia*

This large and elegant tern nests on all continents except South America and Antarctica. In Canada, it is mostly limited to breeding on large lakes and along ocean coasts. Its wintering habitat is generally south of North America. Caspian Tern hunts small fish by plunging into the water head-first in spectacular fashion. This species has a characteristic look in flight, with its long and pointed white wings, black cap and red bill, the bill usually pointed straight down as it patrols the off-shore waters in search of prey.

The Caspian Tern colony is along the border of a small body of water near the northeast end of Gull Island. First recorded breeding on Gull Island in 1959, it bred sporadically in very small numbers until the mid 1980s. In 1987, a survey of the bird colony discovered 36 nests. The colony increased to 102 nests by 1990 and 442 nests by 1998 making it the second largest colony of Caspian Terns on Lake Ontario and one of the largest on the Great Lakes (Ibid.).

5.2. Waterfowl

Areas of significance:

Inner Bay (see map), marshes and areas from Presqu'ile Point to Chatterton Point, off campground, adjacent to the north beach and around the islands

Many species of waterfowl congregate in impressive numbers in and around Presqu'ile Bay in spring, fall and winter. Huge rafts of mixed species, composed mainly of Greater Scaup, Redhead and Canvasback, populate the bay shortly after it opens up in the spring. Brant frequent the area around the islands for a brief period in late spring. Numerous diving species overwinter in large numbers off the south shore, including Common Goldeneye, Bufflehead and Oldsquaw.

Presqu'ile Bay is nutrient-rich because of the wetlands and marshes. This rich food supply is vital for waterfowl, while the marsh structure offers shelter. Redhead nest in the marshes of Presqu'ile - a rare natural occurrence in southern Ontario, known from only five other locations¹² --

Kingston, Long Point, St. Clair Marshes, Wye Marsh and Luther Marsh (Sandilands 1987).

Many other waterfowl concentrate in the marshes in impressive numbers.

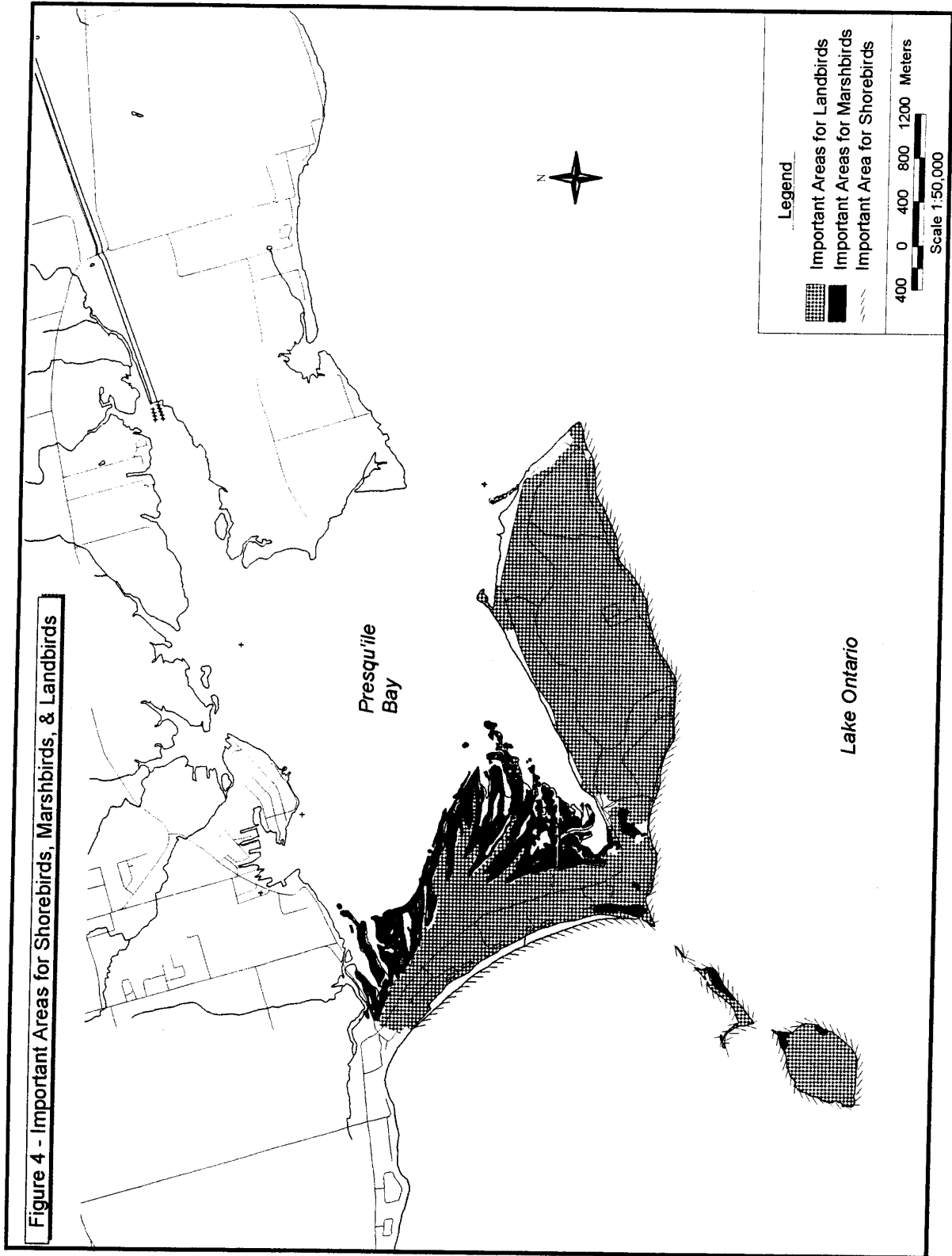
5.2.1. Brant *Branta bernicla*

This small, dark species of goose is circumpolar in range, breeding in arctic North America and Eurasia. In North America, it overwinters along the Atlantic and Pacific coasts. Eel grass (*Zostera*) is the favourite food of the Brant (Godfrey 1979).

Brant do not fly in the characteristic "V" of other geese, but in long, wavering lines. While Brant are regularly observed in Ontario each year, Presqu'ile is one of very few locations in southern Canada where these observations are regular and involve large numbers. Presqu'ile is one of very few stopovers between the Atlantic and the high Arctic for several hundred to as many as 3,000 Brant during the last week or two of May and the first days of June. Fall migration is less concentrated, occurring from early October to mid November, with numbers usually involving 30 birds or fewer (LaForest, 1993). Brant can be observed at many locations around the park and over the inner bay, but the most frequent sightings are from Sebastopol Point on Gull Island.

¹² Not including sewage lagoons

Figure 4. Important Areas for Shorebirds, Marshbirds and Landbirds



5.2.2. Greater Scaup *Aythya marila*

The Presqu'ile peninsula protects a large, inner bay to its north from open Lake Ontario to its south. These waters, along with the extensive marshes associated with Presqu'ile Bay, provide habitat for thousands of waterfowl every spring and fall. The most abundant species in the rafts of ducks is the Greater Scaup. It winters regularly on open water in the Great Lakes and mainly along the east and west coasts of North America. Those that winter on the Atlantic migrate through the Great Lakes en route to their breeding grounds in the sub-Arctic and Arctic. There is concern over this species because of consistently falling numbers on its breeding grounds (K. Ross 1998. pers. comm.).

Greater Scaup is a diving duck that feeds largely on aquatic plants, invertebrates and molluscs such as zebra mussels. Its numbers peak at several thousand on Presqu'ile Bay as soon as the ice goes out in the spring. The main concentration areas depends on many factors, but primarily the wind velocity and direction. As many as 10,500 were reported on March 15, 1995 (Wilcox 1997). The fall migration extends through October and November, and has peaked at 2,000 to 3,000 (LaForest 1993). In the fall, the birds tend to stay to the south of the peninsula.

5.3. Shorebirds

Areas of significance:

Beach 1 to Owen Point and Gull Island, limestone shelves around Gull and High Bluff Islands, and Chatterton Point

A large, low-wave energy beach, minimal disturbance and a smorgasbord of invertebrates make Presqu'ile the preferred resting place for shorebirds on the Ontario side of the Great Lakes, on their way to and from their breeding grounds. With as many as 20 species at a time, including regular visits from Whimbrel, Stilt Sandpiper, Hudsonian Godwit and Baird's Sandpiper to mention a few, Presqu'ile's beach also attracts significant numbers of birders. While Dunlin and Whimbrel are the only shorebirds in sufficiently high concentrations to merit IBA recognition, other species, including red knot and semipalmated sandpiper, can also be very numerous. Typical groundings of several thousand birds occur generally between May 20 and June 5, but do not occur every year. If the grounded flock stays more than a few hours, the stay would usually be at least a day or two. The fall migration is much less concentrated but still significant. The pattern of beach use is different from spring to summer/fall. Typically, the water levels are quite high in the spring. The birds spread out from Beach 1 to Owen Point, with the northern and central beach often having the greatest numbers. The birds often move up the beach towards the dunes to roost at night. In the summer and fall, the beach is typically much larger, and birds are more concentrated from Beach 4 to Owen Point.

5.3.1. Dunlin *Calidris alpina*

This small, droopy-billed sandpiper nests primarily in Arctic and subarctic regions in North America and Eurasia, including on tundra in extreme northern Ontario. In North America, Dunlin overwinter along coastal United States, British Columbia and Mexico.

Dunlin migrate through Ontario from late April to early June, and early September to early November. Dunlin are the most common shorebird among a large number of species using the beaches of Presqu'ile as a feeding and resting area between breeding and wintering grounds. The larger numbers occur in the spring, usually concentrating in late May. Spring groundings are caused by particular weather conditions associated with either large frontal systems with rain or cold fronts with north winds following a warm air mass; such groundings have brought down 7,000 to 10,000 individuals (LaForest 1993). These birds stay from a few hours to several days (D. McRae 1998. pers comm.). In the fall, the numbers rarely reach more than a few hundred. Dunlin and other shorebirds are quite sensitive to disturbance from people and other animals, especially during the spring flight.

5.3.2. Whimbrel *Numenius phaeopus*

This species also has a Holarctic breeding distribution that includes parts of northwestern Canada and Alaska. In Ontario, Whimbrel breed on the tundra along the south shore of Hudson Bay. The winter range for this species includes virtually all of the coasts of South America, with the highest concentrations on the north coast of Brazil, Surinam and southern Chile, north to the Atlantic, Pacific and Gulf coasts of the United States.

This large shorebird, with a distinctive, long down-curved bill, is a common spring migrant at Presqu'île during a fairly concentrated period in late May, and an occasional migrant in the fall. It is not unusual to observe several dozen Whimbrel at one time in the spring. A peak grounding, estimated to contain over 1,000 individuals, occurred on May 21, 1985. Whimbrel use the beaches and Gull Island as resting and feeding locations during stopovers. Its large size and long, curved bill permits foraging in deeper water than the smaller sandpipers. Like the previous species, Whimbrel are extremely sensitive to disturbance when feeding.

5.4. Marsh birds

Areas of significance:

Marshes in the park from Hennipen Point to Indian Point, Woodpile Marsh, and marshes and wetlands along the south shore of the mainland of Presqu'île Bay to Shoal Point

While insufficient data are currently available on numbers of individual species for inclusion in IBA criteria, Presqu'île does have or has had breeding populations of several significant marsh species including King Rail ¹³ (endangered in Canada), Least Bittern (threatened), and Black Tern (threatened). King Rail breeding was confirmed in 1986. Records of the species have been sporadic since that time, although its shy nature and difficulties in censusing it, make confirmation of its presence difficult. A fairly small population of Black Tern has regularly sustained itself in the marshes. This population may have ranged from over 100 in the 1940s to only a few pairs at present. Least Bittern is a regular summer resident in the marshes, although numbers have not been determined. In addition to these species, the marshes have breeding populations of Common Moorhen, American Coot, Sora and Virginia Rail, Pied-billed Grebe, American Bittern, Marsh Wren and several species of waterfowl including Redhead. Taken as a group, this community of species is highly significant when compared with those inhabiting other Great Lakes wetlands. While species breeding in the marshes may not individually meet the IBA criteria yet, the committee feels not only that marshes have a functional role in the integrity of the IBA, but also that the marshes should be considered as part of the IBA on their own merits.

¹³ The status of each of these species is according to COSEWIC, the Committee on the Status of Endangered Wildlife in Canada.

5.5. Landbirds

Areas of significance:

Presqu'ile Point and all forests and associated habitats to Chatterton Point including Jobes' Woods, the Calf Pasture and Calf Pasture Point; Owen Point and associated forest; the habitat east of the beach, including the panne and the fingers.

Many highly knowledgeable birders and ornithologists believe that Presqu'ile also merits consideration as an IBA because of its significance for migrating landbirds that use it as a stopover and concentration point during spring and fall migration (C. Goodwin, D. McRae, 1998 pers. comm.). Unfortunately, data to support this claim do not exist yet. Perhaps more significantly, a functional means to assess the significance of the landbird migration is still lacking. It has been suggested that estimates of density of migrants could be used, and rated against a background density number to identify focal points and attribute significance. Such estimates could be based on field observations or analysis of highly resolved radar images.

6. Opportunities

6.1 Priority setting

The purpose of this plan is to provide direction and guidance to the park and the conservation community with regard to birds. The IBA can serve as a focal point for conservation activities in Presqu'ile Park that involve the local birding and naturalist community. This community can use the IBA conservation plan to set conservation priorities and build off peoples' strengths. For example, the Presqu'ile IBA Steering Committee determined a need to learn more about the nature of the shorebird migration and use of the beaches. This provided a justification for funding a researcher to study shorebird use of the beach, with particular attention to feeding activity. The results of this work could be used to inform the Park on how the algae and the beach are managed.

6.2 Monitoring

The IBA has also focused monitoring activities within the park. For example, one member of the steering committee has established point count stations within the park to monitor how forest bird populations respond to changes in vegetative structure that are expected to follow any efforts to reduce the deer population. The IBA has also underlined the need to better understand and monitor the marshes in the IBA.

6.3 Conservation

Outside of the park, the IBA can assist conservation organizations like the Nature Conservancy of Canada in determining where to focus their conservation dollars. Securing lands near or adjacent to the park that are under the greatest threat from development would add among of park habitats for landbirds, waterbirds and marshbirds.

6.4 Ecotourism

Environment Canada recently released a report on the "Importance of nature to Canadians." This report revealed that Canadians spent approximately 11 billion dollars on nature activities over the year, an average of \$549 per person.¹⁴ Birding festivals in Point Pelee National Park provide a major infusion of money into the Leamington and Pelee economies amounting to over one million dollars per year. Many other parks have developed their own birding festivals. At Presqu'ile, the annual waterfowl weekend festival in late March and early April, which spans two weekends, attracted almost 9,000 visitors to the park.

The large concentrations of waterfowl and shorebirds occur in the "shoulder" seasons of the local tourism industry. Attracting people to observe these phenomena is a clear benefit to those involved in this sector of the local economy.

6.5 Other initiatives

Presqu'ile provincial park has also been nominated as a RAMSAR site and a Western Hemispheric Shorebird Reserve. The International Union for the Conservation of Nature (IUCN) oversees the RAMSAR Convention of which Canada is a signatory. This Convention designates globally significant wetlands. Long Point Bay, Lake St. Clair Marshes, Point Pelee and two sites on southern James Bay are also designated.

The Western Hemispheric Shorebird Reserve Network (WHSRN) is a concept adopted by the Association of International Fish and Wildlife Agencies and other governmental agencies and international organizations including the Canadian Wildlife Service, the U.S. Fish and Wildlife Service, The Nature Conservancy, BirdLife International and many other organizations. The goal of this conservation initiative is to protect key areas for shorebirds in the Americas. Presqu'ile is nominated as a site of regional importance. Both of these nominations are awaiting the completion of the Presqu'ile Provincial Park management plan.

¹⁴ Susanne Hiller, National Post, June 5, 1999. Page B2



7. Stresses and Threats to Species

7.1 The nature of stresses

The viability of IBA species and species groups depends on healthy, productive and well-managed habitats. These species and habitats are subject to stresses that influence their future viability. Many of these stresses are related to human activity or human-induced changes to the ecosystem, while some are related to the birds themselves. Untangling the complex relationship between species, habitats, things that can be controlled and things that are uncontrollable, is the challenge of conservation planning. This challenge is greatly complicated in the context of a very popular public park, where some of the most popular activities are stresses to the conservation targets. This chapter identifies the stresses and discusses each as it relates to the target species and groups of species. Stresses are presented alphabetically below the tables.

Table 2. Stresses on IBA species

Stress	Species D. C. Cormorant	Caspian Tern	Ring-billed Gull	Dunlin	Whimbrel	Greater Scaup	Brant
Competition		X					
Disturbance	X	X	X	X	X	X	X
Exotic species							
Loss of Habitat				X	X		
Microcontaminants	X	X					
Newcastle Disease	X						
Persecution	X	X	X				
Predation		X					

Table 3. Stresses on groups of species

Stress	Group of species Colonial birds	waterfowl	shorebirds	marshbirds	landbirds
Deer browse		X			X
Disturbance	X	X	X	X	
Exotic species		X		X	
Food Supply			X	X	
Fragmentation				X	X
Land bridge	X				
Loss of Habitat			X	X	X
Inundation of nests				X	

7.2 Competition

Colonial birds. Competition is a natural process in an ecosystem. However, competition for finite resources such as food or nesting locations by adventive or invasive species can have a negative impact on other species that may lack some biological advantage. Explosive populations of Ring-billed Gull and Double-crested Cormorant on Gull and High Bluff Island have created a scenario that potentially threatens other species in the island's colonial mosaic. For example, Cormorants are believed to have negatively impacted Night Heron populations elsewhere in the Great Lakes (OMNR, 1997: 14). Colonial bird excrement is very acidic and inevitably kills the trees on which they nest. If Cormorant nesting begins in the old-growth oak-maple forest of High Bluff Island could ultimately lead to permanent habitat damage. Ring-billed Gulls are known to prey on the eggs and young of Common Tern. Tern colonies have been known to decline as Ring-billed Gull colonies become established (Blokpoel, H. 1987).

7.3 Deer browse

Forest birds. Deer have reduced herbaceous vegetation and regenerating trees and shrubs, reducing the value of the lower forest habitat for species that forage or nest on or near the ground such as Ovenbird and Veery. Lack of herbaceous or seedling cover is a direct result of the large grazing pressures exerted by the over 200 deer.

7.4 Disturbance

All of the species are subject to disturbance from a range of sources included park users, recreational boaters, fishermen, and air craft. Many of these disturbances are relatively minor. However, with increasing numbers of people using the park and boating in the surrounding waters, the potential for disturbance will increase. Disturbances is considered below by groups of species.

7.4.1. Colonial species. The colony can be disturbed by unauthorized visits to the islands during critical nesting times. Such disturbances can lead to birds abandoning their nests and expose the eggs and young to predation. This is particularly true for tern populations as their young then can be preyed upon by Ring-billed Gulls and other avian predators. Disturbance of nesting birds also occurs if watercraft pass too close to the islands. Personal watercraft (i.e. Jet skis) appear to be the major concern in this respect because of their speed, noise, and the pattern of use. Occasionally aircraft from the air base at CFB Trenton and the Coastguard fly low over the islands. Low flights not only disturb the birds at the colonies, but also pose a direct risk to the aircraft. Banding of ducks on Gull Island in August, creates an unnecessary disturbance to the colony as well as shore birds using the island. This banding is undertaken by a private bander late each summer until two weeks prior to the hunting season. Ducks are attracted to baited traps from which they cannot extricate themselves, and are banded later in the day. Apparently, the bander makes every effort to band and release trapped birds the same day so that they do not stay in the trap over a prolonged period. This banding activity also gives people watching from the mainland, who can clearly see the bander approaching the islands by canoe, the impression that the islands are generally accessible to the public. Baiting ducks over several weeks may also condition them to the food source just prior to the hunting season, making them easy prey for hunters.

7.4.2. Waterfowl. Both unintentionally and intentionally, watercraft can disturb rafts of ducks and interrupt their feeding and resting patterns. In the last decade, the number of watercraft, particularly personal watercraft, has grown considerably. While most boaters respect waterfowl and avoid them, there are a few who have intentionally disrupted flocks. New federal legislation requiring operating permits for motor boats and personal watercraft including a minimum age requirement of 18, may reduce the number of disturbance incidents.

7.4.3. Shorebirds. Shorebirds are attracted to Presqu'ile because of the extensive beaches and the apparently rich food sources (see Appendix One). The beaches are also extremely popular for recreational use by people for swimming, playing games and walking. Over 100,000 people use the beach for such purposes each year. Fortunately, the timing of shorebird migration, minimises the potential for conflict, as the most intense part of the migration is prior to the period of heavy recreational use. However, during the spring and fall, when the beach recreation is less intense, beach walkers and some birders, who may try to flush a species or approach too closely, create unnecessary disturbances to feeding or resting shorebirds. With a possible trend to warmer springs, there may be pressure to access the beach earlier than previously, which could create a management dilemma. Disturbance during critical times may cause birds to leave the site prematurely, or prevent them from getting adequate food or rest. During years of low lake levels disturbance of shorebirds may be less an issue, as the natural beach has the best feeding areas, offers protection from disturbance and appears to attract the birds. However, over the past ten years, the general patterns is one of higher lake levels in the spring that completely inundate the natural beach, leaving the other beaches as the only resting and feeding habitats.

Hunting at Owen Point and on Gull Island causes disturbance to roosting and feeding shorebirds in the fall, and has occasionally resulted in shorebirds being shot. It also closes off large sections of the park to shorebird observation during hunt days.

Another disturbance issue for shorebirds is the use of the beach area for practice by the units from CFB Trenton. While practising at Presqu'île is an infrequent occurrence, it could affect shorebird patterns and beach habitat functions at critical times for these species.

7.5 Exotic (Non-native) Species

7.5.1. Waterfowl. Patterns of waterfowl distribution are changing because of zebra mussels. The mussels filter organic matter such as plankton and algae out of the lake, making the water clear and reducing food supplies for small fish, while at the same time increasing the depth of light penetration which in turn allows plants to grow deeper levels in the water column. While many ducks such as scaup, oldsquaw and scoters feed on the mussels, the increased clarity of the lake leaves little doubt of the mussels' impact on the lake ecosystem. For example, the amount of plankton likely influences duck foraging areas. Zebra mussels likely overwhelm other native species of molluscs.

7.5.2. Marshbirds. Increases in populations of Mute Swan and the Giant Canada Goose (the race that was introduced into southern Ontario since the 1950's), two very aggressive and dominant species, can have a negative impact on other marsh species such as Black Tern and Pied-billed Grebe. Mute Swan is of particular concern due to its size and eating habits. High concentrations of Mute Swans can overgraze an area causing a functional reduction in aquatic habitat (Ciaranca, M.A., C.C. Allin, and G. S. Jones, 1997). Populations in the Long Point area have already created "large holes" in the marsh vegetation (Petrie, pers. comm).

Carp have established populations in all of the Great Lakes. During their breeding season, Carp disturb sensitive marsh habitats and stir up sediment.

Exotic plant species are also having an impact on marshlands ecosystem function. Purple Loosestrife and European Frogbit are major concerns in the Presqu'île marshes. The latter can form dense mats that absorb solar energy at the surface, likely lowering water temperatures and perhaps lowering productivity of the marsh as well. The former is wide-spread in park marshes and wetlands. Both species reduce biological productivity of the habitats that they invade. They are extremely difficult, if not impossible to control, once they are established in an area.

7.6 Food Supply

7.6.1. Shorebirds. Migrant shorebirds feed on invertebrates living on and in the sand and vegetation occurring along the beach. The removal of algae, the base of the beach food web, reduces the nutrient level of the beach habitat. Park staff mechanically remove algae from the beach during the summer, from early June to mid August to accommodate beach recreation. The park has recently adopted the practice of storing the algae at one end of the beach in the summer and ploughing it into the sand along the waters edge in the fall, so that the nutrient value is not lost to the lake.¹⁵

7.6.2. Marshbirds. Black Tern populations have dropped precipitously over the past decade. While the reasons for the decline are unclear, it has been speculated that aquatic insects, the tern food supply, have also declined, perhaps in response to exotics in the water such as European Frogbit (McRae, pers comm, 1998). Terns egg dates are approximately one month later than they were over twenty years ago, which may reflect a lack of food (Ibid.).

7.7 Forest fragmentation

The fragmentation of natural forest blocks occurred historically when agriculture was part of the peninsula. While agricultural practices ceased long ago, many pastures and fields were planted in

¹⁵ In past years, the park disposed of algae in dump sites on the tombolo and used the algae to construct the berms around the marsh boardwalk parking lot.

conifers. The existing patchy forests on the peninsula reduces the amount of potential natural woodland habitat for forest birds.

7.8 Inundation of marsh nests

7.8.1. Marshbirds. Personal watercraft (e.g. jet skis) and other watercraft that enter the marsh channels are a serious concern, particularly with respect to inundating low-floating nests of many marsh species such as the Rails, Grebes, Coots, Black Terns, ducks, Moorhens and Bitterns.

7.8.2. Black Tern colony. The viability of Black Tern populations in the marsh continues to be a concern. It has been noted that the local terns now nest about one month later than they did in the 1970s and 1980s (McRae, pers. comm.). This could be because of lack of food resources -- perhaps a result of the frogbit's influence or perhaps something else.

7.9 Land-bridge

Colonial birds. Predation would be facilitated if the land-bridge between the islands and the mainland redevelops. Altered deposition patterns or lowering of lake levels could lead to a direct connection of Gull Island to the mainland, and High Bluff Island to Gull Island. If this occurs, predators such as mink, fox and raccoon would have easy access to the colonies.

7.10 Loss of habitat

Shorebirds, Marshbirds. Loss of beach habitat due to pressure for more beach recreation would seriously impact migrant shorebirds. Loss of wetland vegetation to development, as is the case along the north shore of Presqu'ile Bay, has had, and will continue to have a major negative impact on the marshbird community, along with other wetland-dependent biota such as fish and mammals.

7.11 Micro-contaminants

Colonial birds. Double-crested Cormorants and Caspian Terns are fish-eaters. Consequently, they tend to concentrate microcontaminants that pass through the food chain. These chemicals build up in upper level consumers, causing reproductive disorders and birth defects. Agricultural chemicals and industrial products and wastes have been implicated in other parts of the Great Lakes as the cause of these problems. While there are no point sources of contaminants in close proximity to the colonies, birds feed in a large territory that includes all of Presqu'ile Bay and extends at least as far as Belleville to the east and Cobourg to the west. They could also be exposed to these chemicals in their wintering ranges.

7.12 Newcastle disease

Cormorants. This disease has been identified among Cormorants. While it affects only a small percentage on the islands, the potential for spread of the disease to poultry concerns local poultry farmers. There have been no known cases of Newcastle disease jumping from a Cormorant colony to a poultry farm.

7.13 Persecution

7.13.1. Cormorants. Anti-Cormorant sentiment is very strong in the Brighton community where many people believe that Cormorants are reducing stocks of both commercial and sport fish, and therefore are a threat to the economic well-being of people involved in both of these fisheries. Requests to reduce Cormorant populations have come from anglers and commercial fishermen. This phenomenon is wide-spread in North America, where Cormorant expansions have been hypothetically linked to reductions in local fish stocks. Anti-Cormorant sentiments have been behind numerous acts of malicious destruction at Cormorant colonies. At Presqu'ile, there have been incidents of dead young Cormorants washing up on the beach in bags, and the destruction of nests and killing of both adults and young (Presqu'ile Brighton Naturalists, 1996). Recently, over

800 Cormorants were killed on Little Galloo Island on the American side of Lake Ontario¹⁶. Threats of similar actions are widespread in North America where Cormorant populations are expanding. Ironically, introduced sport fish (Salmon and trout) are estimated to remove about 25 times more smaller prey fish than Cormorants in the Lake Ontario basin (OMNR, 1997: 14).

7.13.2. Ring-billed Gulls. As with the Cormorants, Ring-billed Gulls are generally viewed negatively.

7.14 Source of Stresses.

In order to develop a conservation strategy aimed at the target species, the sources of stresses need to be identified. For example, the lack of vegetative cover in the woodlands is the stress preventing ground nesting birds from reproducing successfully. Deer, that browse the ground vegetation are the source of this stress. The strategies and tasks elaborated in the next section, are directed at the sources of stress. The following chart illustrates the relationship between the conservation targets (IBA species and groups of species), the stresses, and the source of the stresses.

¹⁶ Andrew Revkin, New York Times Service, Globe and Mail August 4, 1998. pg. A12

Table 4. Sources of Stress

Target Species and Groups	Stress	Source of stress
Terns, Night-Herons	Competition	Cormorants, Ring-billed Gulls
landbirds	Deer browse	Deer over-population, park policy
colonial, shorebirds, waterfowl	Disturbance	lack of awareness, competition for resource use (beach), attitudes
marshbirds, waterbirds	Exotic species	frogbit, purple loosestrife, mute swan, zebra mussels
shorebirds, marshbirds	Food Supply	algae management and beach use (park), unknown
landbirds	Fragmentation	road and housing development, plantations
marshbirds	Inundation of nests, disturbance	personal watercraft and motorboats in marsh channels
colonial birds	Land bridge	erosion, deposition, lake currents
shorebirds, marshbirds, landbirds	Loss of Habitat	recreation, building, storms
Cormorants, Terns	Microcontaminants	non-point (agriculture), wintering range
Cormorants	Newcastle Disease	colony density
Cormorants	Persecution	attitudes, lack of information, competition with fishermen
Terns	Predation	Ring-billed Gulls

8. The Action Plan

8.1 Vision Statement

The IBA stewardship steering committee has agreed on the following vision statement for Presqu'ile Important Bird Area.

- That protection, management and enhancement of the species and habitats supporting the rich array of bird life in Presqu'ile Important Bird Area, particularly IBA species and other species of conservation concern always remain a high priority;
- that informing people of the importance of Presqu'ile for birds and providing educational opportunities to learn about the species, their habitats and conservation issues affecting them remain a priority; and
- that bird conservation initiatives from this plan be carried out with due consideration for local interests and the need for the park to be managed for a balance of interests.

8.2. Goals and Strategic Actions

The following list of goals and strategic actions provides a framework for implementation of this conservation plan. The list should be viewed as a working list that can be added to as information changes and revised accordingly. It is possible that some of the actions described are currently being undertaken by another organization unbeknownst to the committee. If so, this plan is not intended to usurp these initiatives but rather, provide a mechanism to coordinate efforts.

The series of bulleted strategic actions and tasks are presented below under the broad conservation categories of Protection, Management, Monitoring and Research, and Education. To facilitate implementation, an organization or group that could be responsible for overseeing implementation of each action or strategy is suggested. As the effort and energy involved in implementing individual actions and strategies will vary greatly, it would be prudent for the steering committee to identify the most achievable actions and prioritize them. Actions and strategies that have been done, are being undertaken or require doing are also identified following the bullets, "done," "doing" and "needs doing". Groups with responsibilities identified in this document include: P = Presqu'ile Provincial Park, C = IBA Steering Committee, O = Other, CWS=Canadian Wildlife Service.

8.3 Colonial birds and island habitats

Goal To maintain the dynamic and important bird colonies on Gull and High Bluff Islands, enhance their protection from disturbance and conserve High Bluff island's mature woodland habitat.

Strategic Actions

Protection

- 8.3.1 Continue current access prohibitions to islands from March 10 to September 10. Signage on islands is in desperate need of improvement and should be replaced. (P) (needs doing)
- 8.3.2 Prohibit access to waters within 200 metres of Gull and High Bluff Islands during restriction period (P) needs doing.

Management

- 8.3.3 Continue agreement with CFB Trenton to prohibit low flights over the islands when the colonies are active, because of both hazards to aircraft of collisions with large birds and disturbance to the colony caused by such flights at critical times of the year. (P) (done)
- 8.3.4 Cease duck-banding activity on Gull Island. Review the rationale for continuation of this program, and if it considered necessary, other, less sensitive locations within the park,

such as parts of the marshes, could offer a more appropriate location. (P, CWS) (needs doing)

- 8.3.5 An action plan for managing the Double-crested Cormorants' population should be developed and revised annually in co-operation with the OMNR, the Canadian Wildlife Service, and authorities on the American side of Lake Ontario. The Park and OMNR should place a priority on protecting the mature oak-maple woodland on High Bluff Island and develop measures to prevent Cormorants from damaging this habitat. Any controls or culls of Cormorants should only be considered if scientifically justified and if the oak-maple forest on High-bluff Island is proven to be threatened. This should only be done in the most careful manner so that disturbance to other rarer species breeding on the island such as Common Terns, Black-crowned Night Herons is minimized. (P, CWS, C, O) (needs doing)

Monitoring and Research

- 8.3.6 Monitor the impact of Cormorants on the woodland on High Bluff Island. (P, CWS)(doing)
- 8.3.7 Continue CWS monitoring of the bird colonies. (CWS) (doing)
- 8.3.8 Investigate the impact of Cormorants on the local commercial and sport fisheries. (CWS, P, O) (needs doing)

Education

- 8.3.9 Promote public awareness of colony ecology and lake ecology through park bulletin by describing the nature of the colony, the ecological context of Cormorant population changes and the results of research on the impact of Cormorants on local fish stocks compared with other known factors such as sport fish and zebra mussels. (C, P) (needs doing)
- 8.3.10 Post signs on the islands, at the local boat launches and at the local marinas stating that the islands and the waters immediately around them are "no-visit zones" between March 10 and September 10. (P, C) (needs doing)

8.4 Waterfowl and habitat

Goal To ensure that the waters of Presqu'ile Bay and around the Park continue to provide sanctuary to staging waterfowl in the spring, fall and winter and to protect and enhance breeding habitat for waterfowl within the park.

Strategic Actions

Protection

Protection of waterfowl from disturbance is more an issue of public education than enforcement. Since waterfowl concentrate mainly on the open navigable expanses of water in Presqu'ile Bay, it is felt that the best strategy for protecting these birds from disturbance is through public awareness and education about the importance of this staging area for these species. This message can be delivered in the local media or through events such as the waterfowl weekends. Not enough is currently known about the resources that support the large numbers of staging birds.

Management

- 8.4.1 Waterfowl concentrations occur mainly in waters outside of the park. The marsh channels and openings do provide habitat for staging and nesting birds. These channels should be closed off to all watercraft during breeding season, and motorized watercraft during all seasons. (P) (needs doing)

Monitoring and Research

8.4.2 Regularly monitor and report waterfowl numbers in the winter, spring and fall. (C, P) (doing)

8.4.3 Investigate which resources support the waterfowl concentrations, and identify potential threats to these resources. (O) (needs doing)

Education

8.4.4 Develop an incentive system for boaters who are respectful of wildlife. (C,O) (needs doing)

8.4.5 Continue promoting the waterfowl weekends. Encourage park visitors during these weekends to be respectful of private property along the Bayshore Road (C, P) (doing)

8.5 Shorebirds and habitat

Goal To maintain and enhance shorebird habitat within the park and manage the beach to reduce disturbance to migrating birds during critical times of the year while respecting the multi-use nature of the beach.

Strategic Actions

Protection:

8.5.1 Zone Owen Point, the natural beach and Gull Island as nature reserve for migrant shorebirds. (P) (needs doing)

Management

8.5.2 Develop a beach management strategy to protect from disturbance significant shorebirds and shorebird habitat. This strategy would address the following issues: a) food resource use and management of algae, b) years of high lake levels when temporary spring closure of sections of the beach to protect grounded birds from disturbance may be necessary, including definition of a “grounding”, c) seasonal timing of closures and raking, and d) continue strict enforcement of “no dog” policy. This policy would respect the multi-use nature of the beach. (P, C, O) (needs doing)

8.5.3 Prohibit hunting on all of Owen Point and on Gull island, because of disturbance to shorebirds. Hunting at these locations not only disturbs and potentially threatens shorebirds and other species using these key habitats but also closes significant parts of the park to the public during hunt days. (P) (needs doing)

Monitoring and Research

8.5.4 Oversee the establishment of a regular shorebird monitoring program with the purposes of counting numbers of species, informing the park of groundings or concentrations, establishing a better understanding of distribution patterns, and monitoring the response of birds to management initiatives such as roping off sections of beach. (C) (needs doing)

8.5.5 Monitor the use of the beaches by people. (P) (needs doing)

8.5.6 Encourage ecological research on resource use by shorebirds through the University of Waterloo research station. Basic questions about what they are eating and how long they stay are important to answer. (C, P, O, CWS) (needs doing)

Education

8.5.7 Publish articles in the park bulletin and the local media about the value of the beaches to migrating shorebirds each spring and fall, and about the nature of the shorebird migration. (C, P) (doing)

- 8.5.8 Continue the good education and information effort with respect to shorebirds (e.g. articles in Park newsletter). (C, P) (doing)
- 8.5.9 Install signs with simple but effective messages to encourage greater compliance with beach management for shorebirds. This needs to be done thoughtfully as too many signs will likely produce a negative impact. (P) (needs doing)

8.6 Marsh birds and habitat

Goal To protect, conserve, enhance and restore marsh habitat within and outside of Presqu'ile Provincial Park and assess and monitor marsh bird populations.

Strategic Actions

Protection

- 8.6.1 Investigate, along with Ducks Unlimited, the Presqu'ile Brighton Naturalists, the Lower Trent Region Conservation Authority, the Nature Conservancy of Canada, the Ministry of Natural Resources and other appropriate organizations, opportunities to protect remnant wetlands along the shore of Presqu'ile Bay. (C, O)
- 8.6.2 Designate all of the marshes within Presqu'ile Provincial Park as nature reserves zones, and prohibit access to marsh channels by all watercraft from April 1 to August 1, and motorized watercraft during all seasons. Install anchored, floating signs at all critical entry points and channels to convey this regulation. (P) (needs doing)

Management

- 8.6.3 Develop a strategy to control populations of exotic species. (P, CWS, O) (needs doing)

Monitoring and Research

- 8.6.4 Conduct annual surveys in the IBA of secretive marsh birds such as rails and bitterns, as well as Black Terns. (C) (doing)
- 8.6.5 Encourage university faculties to promote graduate-level research on the impacts of exotic species on the marsh ecosystem and on investigation methods for their control. (C, P) (needs doing)

Education

- 8.6.6 Publish articles in the park bulletin and the local media which explain the impacts of exotic species on native flora and fauna of the marshes, and which promote respect for marsh birds and other wildlife. (C, P, O) (needs doing)

8.7. Landbirds

Goal To protect and enhance habitat for migrant, breeding and wintering landbirds within Presqu'ile Park and outside of the Park where opportunities exist.

Strategic Actions

Protection

- 8.7.1 Investigate opportunities to restore or secure natural habitat adjacent to Presqu'ile Bay that can be restored to natural cover. (C, O) (needs doing)

Management

- 8.7.2 Landbirds will benefit from restoration of the key habitats of Presqu'ile. This would include increasing the size and connectivity of the main areas of natural forest, managing

the calf pasture to remain in a relatively early successional stage, and reducing the impact of deer on the understorey of the forest. (P, C) (needs doing)

8.7.3 Reduce the local deer population. (P) (needs doing)

Monitoring

8.7.4 Develop (perhaps with Bird Studies Canada) means of evaluating the significance of landbird migration at Presqu'île. (C, O) (needs doing)

8.7.5 Continue fine-tuning a system of monitoring bird occurrences in Presqu'île Provincial Park. (C, P) (doing)

Education

8.7.6 Encourage and promote local birdathons and big days. (C, O) (needs doing)

8.7.7 Encourage a community partnership of local interest groups to promote a "Birders weekend" each spring, to promote the values of the park and bring tourist dollars to the region. (C, O) (needs doing)

8.8. Other initiatives related to IBA designation:

8.6.1 Develop data storage and access system that incorporates all bird records and research. This system should be managed co-operatively. (C, P)

8.6.2 Promote the IBA designation through public relations and media. (C)

9. Implementation

The IBA stewardship steering committee should prioritize strategic actions for each group of species, and determine the means and the resources required to implement them. This will require establishing a timeline and an agenda for action to accompany each group of species.

It is hoped that the park will incorporate these actions and strategies into its own management plan and zone stewardship plans. The IBA stewardship steering committee would welcome representation on the development of these zone stewardship plans.

Below is a sample table illustrating an approach to the next stage of this process.

9.1. Sample Planning Chart. Note: This is only an example illustration:

Target: Shorebirds						
Priority	Category	Strategy	Responsibility	Cost	Timing	Complexity
1	research	investigate impact of algae management on shorebird use	P, C	1K	1999	medium
2	manage	develop beach management strategy for shorebirds	P, C	?	1999	high
1	manage	develop action plan for groundings	P, C	?	1999	medium
2	educate	Create warning signs	P	.5 K	1999	low
2	research	investigate invertebrate populations on beach in relation to management and shorebird use	C, P	2.5 K	2000	high

9.2. Presqu'ile IBA Stewardship Steering Committee

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Guy Morrison¹⁹

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CWS reviewer - technical advice - colonial birds

¹⁷ observer status at present

¹⁸ not a members of the committee, but provides technical advice

¹⁹ not a members of the committee, but provides technical advice

²⁰ not a members of the committee, but provides technical advice

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Appendix A.

