IMPORTANT BIRD AREAS OF CANADA

LES ZONES IMPORTANTES POUR LA CONSERVATION DES OISEAUX AU CANADA

CANAVOY AREA BEACHES IMPORTANT BIRD AREA

Prince Edward Island, Canada

Conservation Concerns and Measures

October, 2000

In co-operation with:
The Island Nature Trust
Charlottetown, Prince Edward Island

A Natural Legacy 2000 program • Un programme de La nature en héritage 2000

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1 Introduction

Prince Edward Island is known for its numerous beaches. Tourism plays a vital role for many Island communities, and most of the recreational activities happen along the Island's beaches. At the same time, P.E.I. is also known for the endangered beach bird, the Piping Plover (*Charadrius melodious*). P.E.I. National Park was created with the purpose of protecting the species' habitat for future generations. As humans and Piping Plovers use beaches, there is some potential for conflict, which can result in a serious threat to Piping Plover numbers. However, this conflict can be avoided through educational programs, Piping Plover Guardian Programs, and better enforcement of laws.

The role of the Maritime Important Bird Areas Program, which commenced in 1999, is to provide interest groups such as the Island Nature Trust with tools to protect, conserve, or monitor sites of global or national importance in the three Maritime provinces (please refer to section 6, for more information on the Important Bird Areas Program). The main objective of the program is to provide tools and ideas for protecting bird species and their habitats. The program promotes conservation, encourages action, carries out education, and helps groups in developing their own approaches to bird conservation at sites that they are interested in. IBA conservation plans (documents that outline conservation concerns and measures at a site) are written with and for the group, and become a tool to be used to describe actions that can be taken at the site, which are feasible, realistic, and can be carried out in a sensible timeframe.

The IBA program is an international initiative co-ordinated by BirdLife International, a partnership of member-based organizations in over 100 countries seeking to identify and conserve sites important to all bird species worldwide. The Canadian BirdLife co-partners are the Canadian Nature Federation (CNF) and Bird Studies Canada (BSC). In the Maritime Provinces the Natural History Society of Prince Edward Island, the New Brunswick Federation of Naturalists, and the Federation of Nova Scotia Naturalists sponsor the Important Bird Areas Program.

The Canavoy Area Beaches IBA, Kings County, Prince Edward Island, has the highest numbers of Piping Plovers found outside Prince Edward Island National Park. This is very significant, as all other plover beaches outside the park in the province are scattered and hold small numbers of Piping Plovers. The area has been identified as a nationally significant Important Bird Area because of the presence of this endangered bird. It has received some attention from the Island Nature Trust over the last four years, which has kept a monitoring and protection program running during that time. The Island Nature Trust is a non-profit conservation group with a mandate of protecting and managing natural areas in Prince Edward Island.

A lot of work has gone into the recovery of the Piping Plover all across North America and successes have been reported from the US in particular and in the Maritimes where active programs have been on-going for a number of years. The work that has been done has also shown that the recovery of this species is possible, when people can agree to share their space in a non-destructive manner.

This document elaborates on some of the concerns that exist about Piping Plover survival in the Canavoy Area, and points to specific measures that can be carried out to ensure that humans and plovers can continue to enjoy P.E.I.'s beaches.

2 IBA Site Information

2.1 Site Description

The Canavoy and Area Beaches IBA (CAPE015) is located on the northern coastline of Prince Edward Island, between Savage Harbour and Greenwich, a 12-km stretch of coastline. The Important Bird Area includes five Piping Plover nesting beaches. The Greenwich adjunct to Prince Edward Island National Park is included in the IBA. There exists a management plan for Greenwich, so this document deals with the following beaches only: Savage Harbour, Canavoy, St. Peters Lake Run, and St. Peter's Harbour Beach.

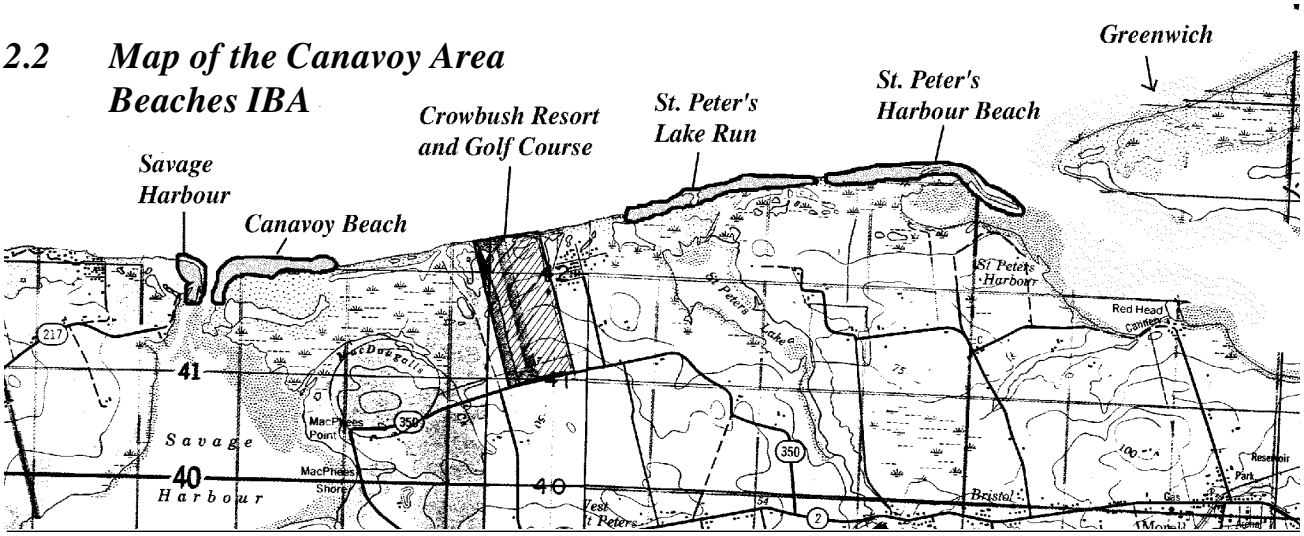
Savage Harbour is to the east of Pigots Point, and west of Canavoy. This area is less than one km and close to the community of Savage Harbour. Piping Plovers use a wash-over close to the channel for nesting, and mudflats in the back for feeding. A road along the marsh and onto the beach easily accesses the beach. This site has held between one to two pairs of Piping Plover over the last three years and is heavily disturbed by people.

Canavoy Beach is a sandy beach of about 3-km length with associated sandflats, a vegetated dune, and saltmarsh and mudflat areas behind. The vegetated dune is very well developed with Marram Grass (*Ammophilia breviligulata*) as a dominant species. The mudflats have filled in and saltmarshes are either developing or have already developed. The extreme west end of the beach terminates in a sea wall or breakwater, which forms the east side of a navigation channel from Savage Harbour and a small fishing wharf. The channel has daily boat traffic from May to November. The site has been identified because its holds significant numbers of Piping Plover. Four to six pairs nest about 1 km west of the nearest access point for a local landowner with horses and about 2 km west of the nearest access point for pedestrians. This area is characterised by some large wash-overs that are used by Piping Plovers, and by a wide stretch of beach.

St. Peter's Lake Run is located to the east of Canavoy and west of St. Peter's Harbour Beach. The area used by Piping Plovers is relatively small (1 km) and accessible from Lakeside cottages from the west. This beach is a flat wash-over, with numerous cottages that surround the site, and human disturbance is heavy. The site has held one pair of Piping Plovers for the last four years.

St. Peter's Harbour Beach is located across a channel from Greenwich National Park. Piping Plovers have not used the area since 1988, but in 2000, 3 pairs used this beach. Habitat includes a washout area which faces north and an old dredge spoil area south of the dunes, which faces a small wetland to the south.

2.2 Map of the Canavoy Area Beaches IBA



2.3 IBA Species Information

Piping Plover (*Charadrius melodus*)

In Canada, the Piping Plover was designated as Endangered in 1985 by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). COSEWIC determines the status of species based on scientific information (Bell 1978).

The international Piping Plover census in 1996 counted 5,913 breeding adults (Plissner and Haig, unpublished). The breeding range for the Atlantic Coast population includes beaches in the four Atlantic Provinces, the Magdalen Islands, St. Pierre et Miquelon, and along the American coast from Maine to South Carolina. During the 2000 survey, a total of 30 Piping Plovers was recorded - 16 at Canavoy, 2 at Savage Harbour, 2 at St. Peter's Lake Run, 6 at St. Peter's Harbour Beach, and 4 at Greenwich. Together these beaches supported 7 % of the Atlantic Canada population in 2000.

Please refer to section 6.1, IBA Species Account, for more detailed information about Piping Plovers.

2.4 Other Elements of High Conservation Value

The Canavoy site includes an extensive dune system that is rarely disrupted by vehicle tracks. The adjacent saltmarsh has high potential for shorebirds during migration and waterfowl. Further research would have to be carried out as to which nesting bird species are present. Adjacent mudflats are feeding areas for the Piping Plover but also for shorebirds during migration.

Several sandflats in the area have potential importance for feeding Piping Plover, such as the sandbar at St. Peter's Harbour. This sandbar is also important for migrating shorebirds in the fall.

Table 1 Piping Plover numbers for Canavoy and Area Beaches IBA, 1994 to 2000

Site	1987	1991	1994	1996	1997	1998	1999	2000
Canavoy	20	11	7	9	6	8	12	16
Savage Harbour W	-	2	0	0	2	2	2	2
St. Peters Lake Run	8	2	0	2	2	2	2	2
St. Peter's Harbour Beach	-	0	0	0	0	0	0	6
Greenwich	0	3	0	0	0	3	4	4
TOTAL	**28**	**18**	**7**	**11**	**10**	**15**	**20**	**30**

2.5 Land Ownership and Use

It is likely that Canavoy beach has never been deeded, or that much of the land has emerged recently (Rosemary Curley, pers. com.). The province owns all the land below mean high tide and to 3 miles out into the water. This includes the intertidal area where Piping Plover feed. Most of the actual nesting sites are probably within that stretch of shoreline claimed by the province. The other land is likely also provincial, but presently the title is unclear.

Accreted land at Savage Harbour West is partly due to dredge spoils dumped every few years at the site, although the spoils are removed overland by truck the winter following the dredging.

To the east, adjacent to the Canavoy Beach, there is the Savage Harbour Natural Area that was designated in 1989 under the Natural Areas Protection Act. The site is being managed to 'maximize wildlife (including plant) diversity, yet restrict human impact on the site.' The property includes beach and dunes 0.8 km east of the Canavoy Beach Piping Plover nesting area.

A stretch of private property lies between this Natural Area and land that is owned by the Links at Crowbush Cove Golf Course. This site is a well-developed golf course up to the dune. Further resort development is planned with a 140 room hotel / resort to open in the spring of 2001.

Further east, most of the land is privately owned with a large number of cottages at Lakeside. An access road ends at Lakeside within meters of the beach. Less than 1 km to the east of this access point lies St. Peter's Lake Run.

People walking the beach for recreational purposes use the Canavoy Beach only marginally. St. Peters Lake Run, Savage Harbour West, and St. Peter's Harbour Beach receive high amounts of recreational pressures, and cottage/resort development is increasing.

Some recreational trail rides occur at Canavoy. Vehicle disturbance is a problem at the other three sites. Savage Harbour West received some dredge spoils in 1999 that were dumped on an area commonly used by feeding Piping Plovers. Visitors often bring their pets to the beach, and let them roam free. The Island Nature Trust at all four sites carries out a Piping Plover Guardian Program.

3 Conservation Concerns

Human disturbance of nesting Piping Plover is one of the main causes for their decline (Flemming et al. 1988, Burger 1991). During nesting and while the chicks are still young, they are extremely vulnerable to disturbance. People or their uncontrolled pets can cause nests to be abandoned or young birds to be injured and die. Young have to feed constantly to gain the energy reserves needed for their fall migration south. Cairns (1982) found that chicks that failed to achieve 60% of the adult weight by day 12 of their life were unlikely to survive. Too much disturbance greatly reduces their chances of surviving (Burger 1987, Shaffer and Laporte 1992).

Storm tides, predators, crows, dogs, or inattentive humans sometimes destroy nests before the eggs hatch. When this happens, the plovers often re-nest close by. The young hatched from these late nesting efforts are not able to fly until late August, which probably reduces their migration survival rates.

The main potential impact to the entire area is certainly from recreational use, in particular pedestrian beach users, dogs not leashed, and horseback rides from the nearby trail ride business.

Vehicles such as ATV's on the beach can destroy nests and young (Strauss 1990, Melvin et al. 1994), and seriously disturb the birds (Cairns and McLaren 1980, Patterson et al. 1991). It is illegal to use vehicles on the beaches of Prince Edward Island, but permitted if the person has a purpose such as collecting sand for domestic use, Irish Moss, seaweed, or fishing gear washed up after a storm. Vehicles have not been a problem at Canavoy, but they are of serious concern at Savage Harbour West, St. Peter's Lake Run, and St. Peter's Harbour.

Further development at the Golf Course at Canavoy such as the building of a resort (which is planned to open in 2001) might have a negative impact on the nesting Piping Plovers because of increased human disturbance. It is likely that people from the resort will either walk on Canavoy Beach, or increase the number of trail rides to the Canavoy Beach to avoid crowds on the beach to the east.

Natural events such as high tides in the spring can flood large numbers of nests (Strauss 1990, Patterson et al. 1991, Shaffer et Laporte 1992). In some areas natural habitat changes such as vegetation growing in normally suitable nesting habitat can make beach areas unsuitable for nesting. Since so many beaches have recreational activities and human presence, finding alternate nesting areas is difficult for Piping Plovers. Developments such as cottages or campgrounds in coastal areas cause a decrease in habitat available to the birds for nesting and feeding.

Human presence on beaches may increase the numbers of natural enemies of the Piping Plover, such as foxes, skunks, racoons, crows, and gulls. Garbage left on beaches not only is unsightly; it also attracts predators that may then eat young birds or eggs (Strauss 1990).

The maintenance of the breakwater could have a negative impact if not carried out in accordance with the needs of the species in question (such as dredging or repairs after or before nesting season). However, a protocol is already in pace to avoid maintenance work during the nesting season, when the birds are most vulnerable. Dredging in Savage Harbour and the channel is carried out regularly and dredge spoils are dumped in a wetland (used by feeding plovers at Savage harbour West) after the fledged young have left for the season. The spoils are trucked out of the area in late autumn.

4 Conservation History

The Natural History Society of P.E.I. has started Piping Plover conservation activities in Prince Edward Island. In 1988, the Society initiated studies on the Piping Plover in the province. Population numbers of Piping Plover were monitored, and the types of disturbances were noted. A landowner contact program was carried out in the area, providing information to over 160 landowners. A number of recommendations were put forward at that time including greater public education, signage, further study, enforcement of Environment Protection Act, and volunteer guardians (MacEachern P. & S. Barrett. 1988). In the early 80's the Society was also involved in developing a filmstrip for educational purposes dealing with Piping Plover and carried out a management workshop in co-operation with CNF in 1988 in Charlottetown. Until 1991, they were actively involved in Piping Plover monitoring and conservation.

Since 1992 the Island Nature Trust has taken over this role and in addition has involved local people in their Piping Plover Guardian Program. The Piping Plover Guardian Program grew out of a need in all three Maritime Provinces to address the high level of human disturbance near Piping Plover breeding sites outside protected areas such as National Parks. This program in most areas of the Maritimes involves local volunteers, who become local Guardians that protect Piping Plovers through education and monitoring. Piping Plover are a factor that

government agencies and the public should be aware of, and therefore need to be taken into account when planning any development that could have an impact on the birds. Endangered species have a great appeal for birdwatchers, which come to look for the bird and who appreciate being shown an adult on the beach. The Island Nature Trust has also developed the Prince Edward Island Piping Plover Atlas for authorities that are involved with activities that might affect Piping Plover beaches. The Island Nature Trust has a long history of stewardship programs, landowner contact programs, and protecting P.E.I.'s natural areas. It is an active group that searches for funding constantly to carry out its mandate. Activities that ought to be carried out as identified in this document can be spearheaded and carried out by the Trust with the support of responsible government agencies. As well, the Trust's long-standing history has ensured them an important place in the management of the island's resources. Some nearby landowners are interested in the protection of the site. Their interest can be encouraged, broadened, and supported by programs sponsored by the Island Nature Trust and government departments.

The Canadian Wildlife Service keeps a database on Piping Plovers for Atlantic Canada. They are also involved in Piping Plover research and monitoring. They provide technical assistance to Piping Plover conservation programs such as the Piping Plover Guardian Program. A Recovery Plan for the Piping Plover exists in Atlantic Canada (Revised Canadian Piping Plover Recovery Plan, Draft, 1999), written by the Canadian Wildlife Service. Recovery Plans are drafted to ensure that work is undertaken towards the recovery of endangered wildlife in Canada. They are required once a species has been listed through COSEWIC. Some of the objectives for the recovery of the species are outlined below:

1. Prevent the further decline of the Atlantic Piping Plover population.

2. Increase Piping Plover population to 670 adults (335 pairs) which is approximately the estimated historical abundance.

3. Adopt and work towards implementing the goal of protecting a minimum of 65% of nesting plovers in Atlantic Canada with emphasis on protection of critical nesting beaches.

Below are some actions and tasks that are outlined in the Recovery Plan:

- Monitor population status and distribution (yearly, during International Census years)

- Protect and enhance habitat

- Develop and implement public information and education programs (minimising human disturbance, involvement of private landowners, use of symbolic fences, increase enforcement and education activities, etc.).

The Department of Fisheries, Aquaculture, and Environment manages the Savage Harbour Natural Area that was designated in 1989 to be managed, 'to maximize wildlife (including plant) diversity, yet restrict human impact on the site.' The 91.1 ha site includes a beach, dunes, brackish marsh, woodland and old field. The Prince Edward Island Wildlife Conservation Act includes provisions for the protection of wildlife from harassment and disturbance. The Natural Areas Protection Act provides for the establishment of protected areas in the province.

Prince Edward Island National Park to the west, and the Greenwich adjunct within the IBA to the east, both harbour Piping Plovers. The birds and their habitat are protected in the National Parks under the National Park Act, and specific management actions are undertaken to ensure their survival in the park (such as complete closure of sections of beaches). Prince Edward

Island's main tourism strategy focuses on the promotion of beaches and the golfing. Although people are particularly attracted to the recreational value of these areas, many visitors also come for the natural aspects. The National Park receives great numbers of visitors, and the estimated annual visitation of the new Greenwich National Park adjunct to P.E.I. National Park, is in the one hundred thousands. This shows clearly that visitors also appreciate the natural beauty and the natural history features of the island. Eco-tourism is a growing industry throughout Atlantic Canada, and bird watching is one of the fastest growing pastimes in North America. Prince Edward Island National Park has been identified in 2000 as one of the most endangered National Parks in Canada (Parks Canada Agency 2000). Parks have a tendency to become isolated protected areas. The surrounding beaches are extremely important to function as a buffer to ensure the viability of this park.

5 Conservation Measures

The following conservation measures have been developed with the Island Nature Trust, and in consultation with other individuals and groups, listed in Section 6.4. The objectives and actions as listed below are by no means exhaustive. An attempt has been made to provide some possible avenues for action to further the protection and conservation of Piping Plovers and their habitat.

Objective 1 **To continue a yearly monitoring of species and fledging success.**

Monitoring can give a clear indication how well a species is doing. It also helps to explain and clearly understand the dynamics of the population. Most of the Atlantic Provinces undertake surveys and a certain degree of monitoring. Fledgling success is an excellent indicator of the productivity of a species. It is estimated that 1.5 young raised and fledged per pair is needed to keep the population stable (Goosen et al, 2000).

Actions	Target date, Key contact
1. Yearly surveys and monitoring.	0n-going, Island Nature Trust (INT), P.E.I. National Park (PEINP)
2. Monitor fledging success.	0n-going, INT, PEINP
3. Participate in International Census.	0n-going, INT, PEINP

Objective 2 **To maintain and expand the Piping Plover Guardian Program.**

Over the last years in Atlantic Canada and the United States field studies have shown indicating that an active protection program with zones (symbolic fencing or low-lying fencing) and signs together with education of beach users actually can increase Piping Plover fledging success (Strauss 1990). This program is crucial to the survival of the species. It not only protects the birds during breeding; it is also non-invasive and non-confrontational. Guardians can either be trained volunteers or staff.

Actions	Target date, Key contact
1. Secure funding for a co-ordinator.	On-going, INT
2. Ensure Guardians are present at key times.	On-going, INT
3. Co-ordinate efforts throughout province.	On-going, INT, PEINP

Objective 3 **To maintain and expand a landowner contact program.**

Landowners can play a vital role either as voluntary Guardians or as supportive landowners. They also play a role in educating other landowners and putting peer pressure on neighbours who have not been willing to co-operate. Landowners often become very effective stewards of their land. Landowners adjacent to the site have not been contacted in reference to Piping Plover since 1988 (Nat. Hist. Soc. Seeds report). This contact took place in 2000 to encourage landowner participation in protecting Piping Plovers. This contact was particularly needed where heavy pedestrian and vehicle traffic has caused disturbance to nesting birds (Savage Harbour West and St. Peter's Lake Run). Local cottage owners have reported vehicular and other misuses of the beaches in the past. Over 470 landowners were contacted in person, by letter, or by telephone in 2000.

Actions	Target date, Key contact
1. Contact program for all adjacent landowners.	2000 / 2001, INT
2. Inform stakeholders of fragility of the habitat, and the symbolic fencing.	2000 / 200, INT
3. Inform Golf Course and resort owners.	Complete and on-going, INT
4. Undertake title searches to determine ownership.	2001, Fish & Wildlife Division
5. Press releases and public meetings to inform community.	By 2001, and on-going, INT & NHS

Objective 4 **To carry out education of the public, beach users, and potential developers.**

It is important to educate adults as well, particularly people that actually use these beaches. Most visitors do not know about the vulnerability of Piping Plovers to disturbance. Once made aware they usually co-operate very well with fenced off areas and tend to respect signs if there have been some previous education programs in the community. This type of education is very time consuming and intensive, but is particularly effective because it is conducted right in the habitat and can incorporate showing the birds directly to the visitors. People are at leisure when they visit the beach. They generally have time to listen.

Actions	Target date, Key contact
1. Organize school presentations.	0n-going on a casual basis, INT and volunteers
2. Encourage P.E.I. Department of Education to include PP in curriculum.	0n-going, INT
3. Organize visits to PP areas by groups.	0n-going, INT & NHS
4. Invite public to participate in monitoring.	0n-going, INT & NHS
5. Pamphlets	completed, INT
6. On-site education (Guardian Program).	0n-going, INT
7. Public Service Announcements - Hinterland's Who's Who.	Not aired presently, CWS
8. Developer need to be made aware of the Piping Plover.	On-going, INT Fish & Wildlife Division

Objective 5 **To continue and expand research in the wintering grounds.**

We have no clear understanding where birds winter that breed in Atlantic Canada. Nor do we know all the potential impacts that the species faces in the south and could endanger the survival of Piping Plover in their wintering habitat. Presently the Canadian Wildlife Service (Francois Shaffer, Québec CWS) is undertaking research in Cuba as to wintering populations. He has also banded plovers in the area and recaptured some of these birds on the Magdalen Islands. Continued research and expanding wintering studies to other areas will give biologists a clearer indication about plover movement and survival.

Actions	Target date, Key contact
1. Wintering areas - banding.	On-going, CWS
2. Encourage biologist to report wintering areas.	On-going, CWS
3. Lobby CWS to push for research on where wintering grounds actually are.	On-going, INT, other groups

Objective 6 **To enforce existing acts.**

Although education goes a long way, enforcement plays its role in ensuring that species and their habitat are not endangered. The Piping Plover is protected under the P.E.I. Wildlife Conservation Act and will likely be added to the endangered species list of P.E.I. in 2000. People who use vehicles on the beach need to have a solid reason, such as collection of Irish moss, or clam digging. Otherwise the use of ATV's is prohibited, and can be enforced under the provincial Environmental Protection Act.

Actions	Target date, Key contact
1. Prohibiting vehicles in critical Piping Plover habitats.	On-going, Fish & Wildlife Division; RCMP
2. Wildlife Conservation Act - List Piping Plover.	Planned for 2000, Fish & Wildlife Division
3. Migratory Bird Act.	Needed, CWS
4. Impact on Piping Plover needs to be incorporated into any EIA.	On-going, Fish & Wildlife Division

Objective 7 **To carry out and expand the Piping Plover banding program.**

It is difficult to understand the dynamics of population movements and survival of young without information on the movements of individual adults and young. CWS is presently undertaking banding of Piping Plovers in Atlantic Canada.

Actions	Target date, Key contact
1. Banding adults and young outside P.E.I. National Park	Not occurring, CWS
2. Aid in banding	Yearly, INT

Objective 8 **To designate certain sites as crucial habitat for Piping Plover.**

A designation of a site as Natural Area under the P.E.I. Natural Areas Protection Act, or as a Wildlife Management Area under the Wildlife Conservation Act would protect parcels of land under those acts, provide enforcement possibilities, enhance management plans and can ensure that future developments are forced to take impacts on the site into consideration. A formal designation could increase its profile and make conservation efforts more palatable. In order to do this a verification of landownership has to be done to see if the province really owns the land.

Actions	Target date, Key contact
1. Natural Area - assess feasibility; determine landownership	Recommended for 2001 / 2002, Fish & Wildlife Division

6 Background Information

6.1 IBA Species Account

Piping Plover (*Charadrius melodious*)

The Piping Plover is a sand-coloured, sparrow-sized shorebird that nests and feeds along sand and gravel beaches. The adult has yellow-orange legs, a black band across the forehead from eye to eye, and a black ring around the neck. It runs in short starts and stops. When still, the Piping Plover blends extremely well with open, sandy beach habitats. The bird's name is derived from its call notes, plaintive bell-like whistles that are often heard before the birds are seen.

In Eastern Canada, Piping Plovers breed exclusively on beaches along the seashore. They prefer flat beach areas with sand and cobble substrate above the high tide line. Areas used by nesting Piping Plovers generally have little vegetation, however occasionally nests will be built in Marram Grass (*Ammophilia breviligulata*).

Distribution and abundance:

The species is only found in North America. There are two distinct populations, Prairie and Atlantic, totalling 5 913 in 1999. The Plovers migrate south in late summer to winter in Cuba, the Bahamas, Mexico, and the United States along the Atlantic and Gulf of Mexico coasts. Little is known about Piping Plovers on their wintering grounds.

Life cycle

Piping Plover return to their nesting areas from mid-April to early May. They establish nesting territories and form pairs. The pair makes a depression in the sand, which they may line with small, white pieces of shell.

Usually four eggs are laid one - egg every other day. After about 28 days of incubation by both adults, the young hatch. Within hours, the downy young leave the nest and follow their

Table 1 Piping Plover Census Results 1989 to 2000

Province	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
New Brunswick	178	177	203	132	150	145	160	146	139	159	186	172
Newfoundland	8	10	7	15	14	17	24	27	35	27	32	27
Nova Scotia	120	120	113	54	50	82	71	79	96	76	78	64
Prince Edward Is	90	90	110	70	50	60	47	66	60	81	87	87
Quebec*	70	78	76	88	92	96	106	104	90	72	88	76
Saint P&M			4			2		6	2	5	4	2
Total	466	475	513	359	356	402	408	429	422	420	475	428

(Adapted from: Amirault, D. 1999 Annual Report: Status of the Piping Plover in Eastern Canada. Canadian Wildlife Service, Sackville, New Brunswick. Please note that data for years other than the International Census Years of 1991 and 1996 may be incomplete.)

parents in search of marine worms, shrimp-like creatures, and insects that they find in the sand. Both the eggs and young blend in so well with their surroundings that they might go unnoticed. When predators or other intruders come close, the young squat motionless on the sand while the parents attempt to attract the attention of the intruders, often by feigning a broken wing. Young are able to fly in about 30 days. Plovers often gather in-groups on undisturbed beaches before their southward migration. By the end of July the first Piping Plovers, usually adults, will leave for their wintering areas.

Feeding

Piping Plover feed on minuscule crustaceans, shore flies, and marine worms that they find along the sandy beach and the mud and sandflats, and in clumps of seaweed on the beach.

Table 2 2000 Piping Plover Population Figures for Canavoy Area Beaches IBA

Site	Pairs	Individuals	Fledged young
Savage Harbour	1	2	2
Canavoy	8	16	7
St Peter's Lake Run	1	2	3
St. Peter's Harb. Beach	3	6	2
Greenwich	2	4	0

6.2 The IBA Program

The IBA program is an international initiative co-ordinated by BirdLife International, a partnership of member-based organizations in over 100 countries seeking to identify and conserve sites important to all bird species worldwide. Through the protection of birds and habitats, they also promote the conservation of the world's biodiversity. There are currently IBA programs in Europe, Africa, the Middle East, Asia, and the Americas.

The Canadian BirdLife co-partners are the Canadian Nature Federation (CNF) and Bird Studies Canada (BSC). The Canadian IBA program is part of the Americas IBA program which includes the United States, Mexico, and 17 countries in Central and South America. In the Maritimes the Prince Edward Island Natural History Society, the New Brunswick Federation of Naturalists, and the Nova Scotia Federation of Naturalists sponsor the Important Bird Areas Program.

The goals of the Canadian IBA program are to:

- Identify a network of sites that conserve the natural diversity of Canadian bird species and are critical to the long-term viability of naturally occurring bird populations;

- Determine the type of protection or stewardship required for each site, and ensure the conservation of sites through partnerships of local stakeholders who develop and implement appropriate on-the-ground conservation plans; and

- Establish on-going local involvement in site protection and monitoring.

IBAs are identified under one or more of the following internationally agreed-upon categories:

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

6.3 Information on the Lead Organizations of the IBA Program

Natural History Society of Prince Edward Island

The Natural History Society of Prince Edward Island is a naturalist group that is particularly interested in natural history issues and conservation. They record natural events on the island, maintain a bird check list, offer bird identification courses, field trips, conduct bird counts and record unusual or rare sightings.

New Brunswick Federation of Naturalists

The New Brunswick Federation of Naturalists (NBFN) is a non-profit organization formed in 1972 to encourage the understanding of nature and the environment, and to focus concern for the natural heritage of New Brunswick. The NBFN represents the concerns of twelve local naturalist clubs throughout the province. That represents over eight thousand members. <http://personal.nbnet.nb.ca/maryspt/NBFN.html >.

Federation of Nova Scotia Naturalists

The Federation of Nova Scotia Naturalists (FNSN) furthers communication and co-operation among naturalists in Nova Scotia. The Federation promotes enjoyment and understanding, encourages the establishment of protected natural areas, defends the integrity of existing sanctuaries, promotes funding and research, and encourages and engages in the protection of endangered and threatened species and their habitats. < http://www.chebucto.ns.ca/Environment/FNSN/>.

BirdLife International:

A pioneer in its field, BirdLife International (BL) is the first non-government organization dedicated to promoting world-wide interest in and concern for the conservation of all birds and the special contribution they make to global biodiversity. BirdLife operates as a worldwide partnership with one or, in Canada's case, two lead organizations in each country. These organizations provide a link to on-the-ground conservation projects that involve local people with local expertise and knowledge. Since 1993, lead organizations from more than 40 countries have become full BirdLife partners.

For further information about the BirdLife International Program, check the following web site: <http://www.birdlife.net/>.

The Canadian Important Bird Areas Program has been undertaken by a partnership of two lead agencies. The Canadian Nature Federation and Bird Studies Canada are the Canadian BirdLife International partners.

The Canadian Nature Federation (CNF):

The Canadian Nature Federation is a national conservation organization with a mission to be Canada's voice for the protection of nature, its diversity, and the processes that sustain it. The CNF represents the naturalist community and

works closely with provincial, territorial and local affiliated naturalists organizations, to directly reach 100,000 Canadians. The strength of this grassroots naturalists' network allows working effectively and knowledgeably on national conservation issues that affect a diversity of ecosystems and human populations in Canada. The CNF also works in partnership with other environmental organizations, government and industry, wherever possible. The approach is open and co-operative while remaining firm in the goal of developing ecologically sound solutions to conservation problems. CNF's web site is <http://www.cnf.ca>.

Long Point Bird Observatory (LPBO) and Bird Studies Canada (BSC):

Founded in 1960 to monitor bird migration, the Long Point Bird Observatory was the first observatory of its type in North America and is still the only one with year-round staff in Canada. LPBO is committed to involving Canadians in the conservation of birds and their habitats. LPBO conducts its national and international programs through Bird Studies Canada.

Since its founding, LPBO's program has grown and developed considerably. Its principle focus is still bird population monitoring and research on bird migration but the Observatory now runs many other programs as well, including education and province-, nation- and continent-wide surveys of bird populations. Amongst these are the Canadian Lakes Loon Survey, Project FeederWatch and educational and site survey work in Latin America, Ivory Coast, and Malaysia. In addition, LPBO conducts research into other aspects of natural history and applied conservation management. The Observatory has a special interest in promoting the participation of amateurs and volunteers in research, believing that many people working together can accomplish a great deal more than could a few professionals working alone.

These philosophies made the CNF and LPBO/BSC the logical choice to become BirdLife International's Canadian partners in September 1993.

6.4 Information on Groups and Organizations

The Island Nature Trust runs the provincial Piping Plover Guardian Program. Through this program, staff of the Trust co-ordinate volunteers that census Piping Plover and maintain signs for Piping Plover nesting sites. Similar programs are run in all three Maritime Provinces, with varying success. The Island Nature Trust has a mandate of protecting and managing natural areas on Prince Edward Island and the species that inhabit them. The group employs a co-ordinator for the volunteer Piping Plover Guardian Program that is run in this province. The program looks after co-ordinating efforts of volunteers, early censuses, providing and placing signs, conducting training, and providing technical knowledge to the volunteers. Staff involved with the Nature Trust are also often involved in monitoring and protecting these sites.

The provincial Department of Fisheries, Aquaculture, and Environment is responsible for the Natural Areas Protection Act, for the Wildlife Conservation Act, and for any land below the high tide line. Beach use falls under their jurisdiction. The Environmental Protection Act prohibits the use of vehicles on beaches except in certain circumstances related to sand removal and the fishery. Endangered Species are protected under the Wildlife Conservation Act, and the Piping Plover will probably be listed later this year. The department also supports Piping Plover conservation efforts through contracts it has with the Island Nature Trust.

The Canadian Wildlife Service enforces the Migratory Bird Protection Act. Biologists from the agency are also carrying out research on

Piping Plover, such as banding of adults and young. The agency is also the lead group that looks after the recovery efforts for the species in Atlantic Canada. A banding program of Piping Plovers was started in 1998, and has been carried out on a yearly basis since then. There is no Canadian Wildlife Service office on Prince Edward Island. Therefore, biologists visit sporadically to conduct research.

In Atlantic Canada, a Piping Plover Recovery Team oversees recovery efforts for this species. At the same time, the Piping Plover Working Group gathers all the people that work on Piping Plovers in Atlantic Canada once a year to discuss progress, and possible ways of co-operation. Both groups are closely linked.

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The Links at Crowbush Cove Golf Course has been in existence a number of years and is presently building a resort / hotel with 140 units at their site.

6.5 Contacts

CWS, Sackville
Kevin Davidson
17 Waterfowl Lane,
P.O. Box 6227,
Sackville, NB, E4L 1G6
(506) 364-5044

Bird Studies Canada, Ontario
Steve Wilcox
P.O. Box 160
Port Rowan, ON , N0E 1M0
(519) 586-3531

Canadian Nature Federation
Christie Chute
Suite 606, 1 Nicholas
Ottawa, ON K1N 7B7
(613) 562-8208

Natural History Society of P.E.I.
Ray Cooke
8 Shamrock Drive,
Charlottetown PE., C1A 7S4
(902) 894-9695

Island Nature Trust
Jackie Waddell
PO Box 265
Charlottetown, PE, C1A 7K4
(902) 566-9150

Government of P.E.I.,
Fish and Wildlife Division
Rosemary Curley
P.O. Box 200,
Charlottetown, PE., C1A 7N8
(902) 368-4807

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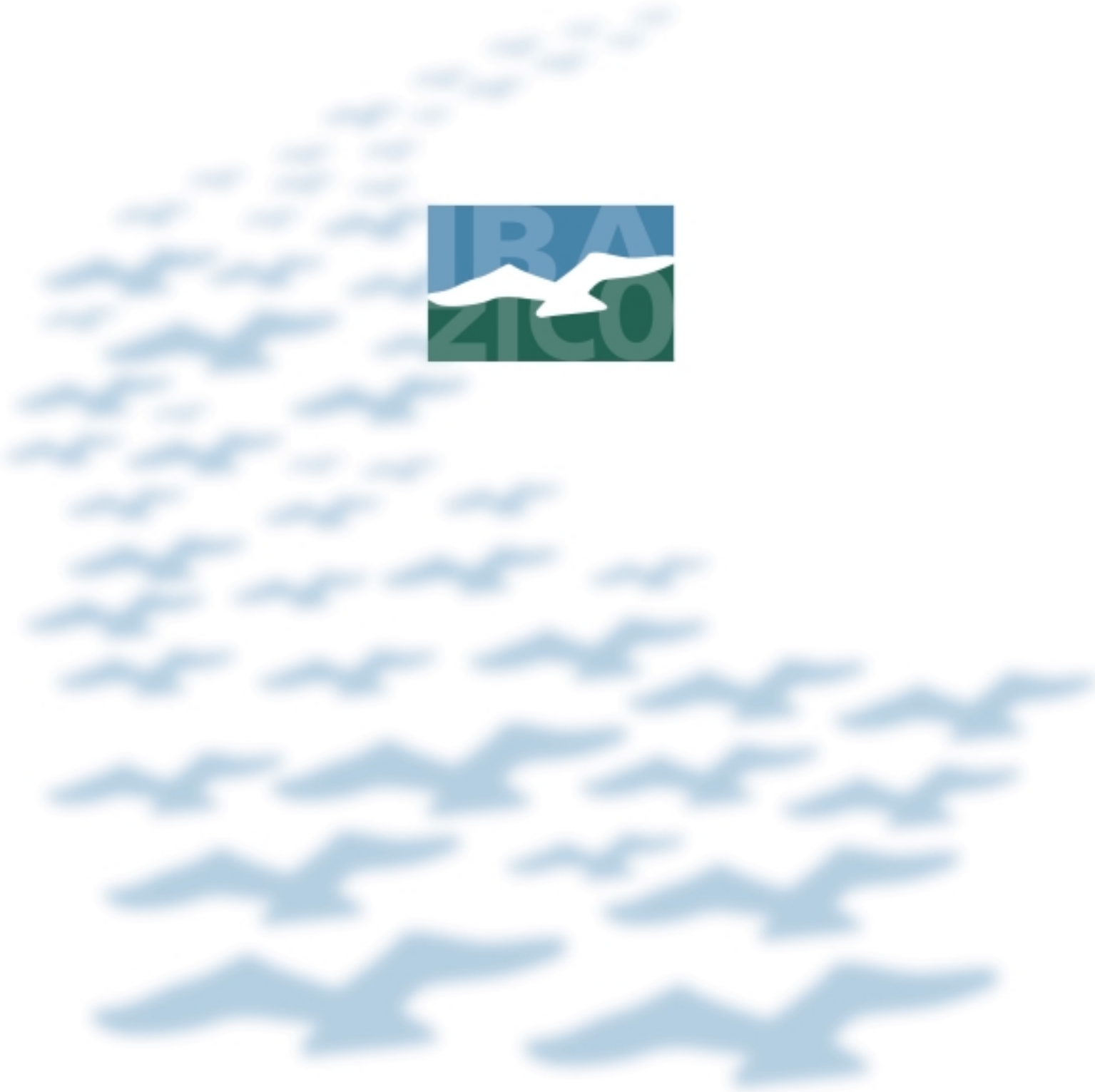
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