

Cabot Head Important Bird Area Conservation Plan

March, 2001

Written for the Cabot Head Important Bird Area Stakeholders

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Acknowledgements

The Important Bird Area (IBA) program is part of the Natural Legacy 2000 program, a nation-wide initiative to conserve wildlife and habitats on private and public lands. We gratefully acknowledge the financial support of the Government of Canada's Millennium Partnership program. We also gratefully acknowledge the financial support of the Charles Stewart Mott Foundation to Great Lakes Basin Important Bird Areas.

Canadian Nature Federation and Bird Studies Canada are the national partners of BirdLife International in Canada. The Federation of Ontario Naturalists is responsible for site conservation planning in Ontario IBAs.

I gratefully acknowledge the contribution of the following people and organizations to this conservation plan through their comments, review and participation in meetings:

(Steering Committee members):

Fred Binding, Frank Burrows, Cindy Cartright, Bill Crofts, Audrey Heagy, Ethan Meleg, Rod Steinacher, Norah Toth, Mark Wiercinski.

Other contributors: Ontario Parks, Bruce Peninsula National Park, Friends of Cabot Head and Heather G. Wilson.

Photographic credits

Page 8, Figure 3 - Red-necked Grebe, Jim Flynn

Page 11, Figure 4– A grebe's view of Cabot Head, 1996. Edward Cheskey

Page 30, Figure 5– The Cabot Head lighthouse 1996. Bakiss Laurent

Citation

Cheskey E. D. and W.G. Wilson 2001. *Cabot Head Important Bird Area Conservation Plan*. Can. Nature Fed., Bird Studies Can., Fed. of Ont. Naturalists. 32 pp.

1.0 Introduction

Midnight, late April 1987, we walked slowly along the small and winding gravel road linking Cabot Head to the rest of the Bruce Peninsula. Cow-like utterings filled the air; two of the uninitiated in the party craned their necks, peering into the blackness in search of a cattle pasture. The night sky was filled with stars, almost beyond belief. Several hours later, daybreak revealed the dark blue waters of Georgian Bay dotted with small but elegant silhouettes of Red-necked Grebes as far as the eye could see. Occasionally one of the hundreds of birds emitted a strange mooing sound, leaving no doubt who the musicians were the previous night.

The Red-necked Grebe chooses Cabot Head as one of few known stepping stones in its spring flight from the Atlantic to its breeding grounds, which lies primarily to the north and west of the Great Lakes. The presence of large numbers of Red-necked Grebe off Cabot Head in the spring is the central reason why Cabot Head is officially recognised as one of Canada's Important Bird Areas (IBA).

The Cabot Head IBA is located on the northeast headland of the Upper Bruce Peninsula in south central Ontario. Extending into Georgian Bay, this IBA includes both the terrestrial habitats of the cape and the offshore waters from Dyers Bay to approximately one kilometre west of Cabot Head. It supports a continentally significant population of Red-necked Grebe. Large numbers of White-winged Scoter, Long-tailed Duck (Oldsquaw), and Common Loon, a significant raptor and landbird migration, and the largest contiguous forest south of the Precambrian Shield in Ontario add to the significance of Cabot Head for birds. Its breath-taking landscape and physical, botanical and historical features make this truly one of the most outstanding sites in Ontario.

The first stakeholders meeting of the Cabot Head IBA was held in the unheated lighthouse keeper's house on November 6, 1999. Despite near freezing temperatures, the mood was warm, and the group laid out the basic tenets that have guided the Steering Committee's work ever since. The IBA Steering committee, made up of representatives from Ontario Parks, Bruce National Park, the Friends of Cabot Head, local naturalist clubs and other individuals, have held several meetings to further this plan, and determine how to monitor and protect the birds at Cabot Head. Audrey Heagy has led work at the Cabot Head research station, to test the sites' potential for migration monitoring. The steering committee has designed and executed a volunteer-based survey of the spring grebe migration through the IBA. In very little time, the accomplishments in this IBA are nothing short of remarkable!

The vision statement for the Cabot Head IBA is as follows:

The Cabot Head Important Bird Area will be conserved and managed to protect its significance for migratory and resident birds, respecting its outstanding biological, geological and aesthetic significance, and as a place where birds can be monitored, studied and enjoyed.

2.0 The Important Bird Area Program

The IBA program is an international initiative coordinated 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 programs which includes the United States, Mexico, and 17 countries in Central and South America. The Federation of Ontario Naturalists is responsible for implementing conservation planning for IBAs in Ontario.

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 ongoing local involvement in site protection and monitoring.

IBAs are identified by the presence of birds falling 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.

While the program at all stages is a voluntary one, the advantages of IBA recognition extend beyond those of conservation alone. For example, at Cabot Head, the IBA program has contributed to the efforts of several people to establish a Cabot Head Research Station of the Bruce Peninsula Bird Observatory.

In Ontario, the Federation of Ontario Naturalists is conducting community conservation planning in approximately 20 sites as of 2000. Community conservation planning means engaging the local community in the development and implementation of the conservation plan. Cabot Head has unique stewardship arrangements between the Friends of Cabot Head and Ontario Parks. The Friends have restored an automated light station, established a marine and natural history museum on site, and done a remarkable job of bringing value to this site. Ontario Parks is responsible for much of the land base in the area (Cabot Head Provincial Nature Reserve) and

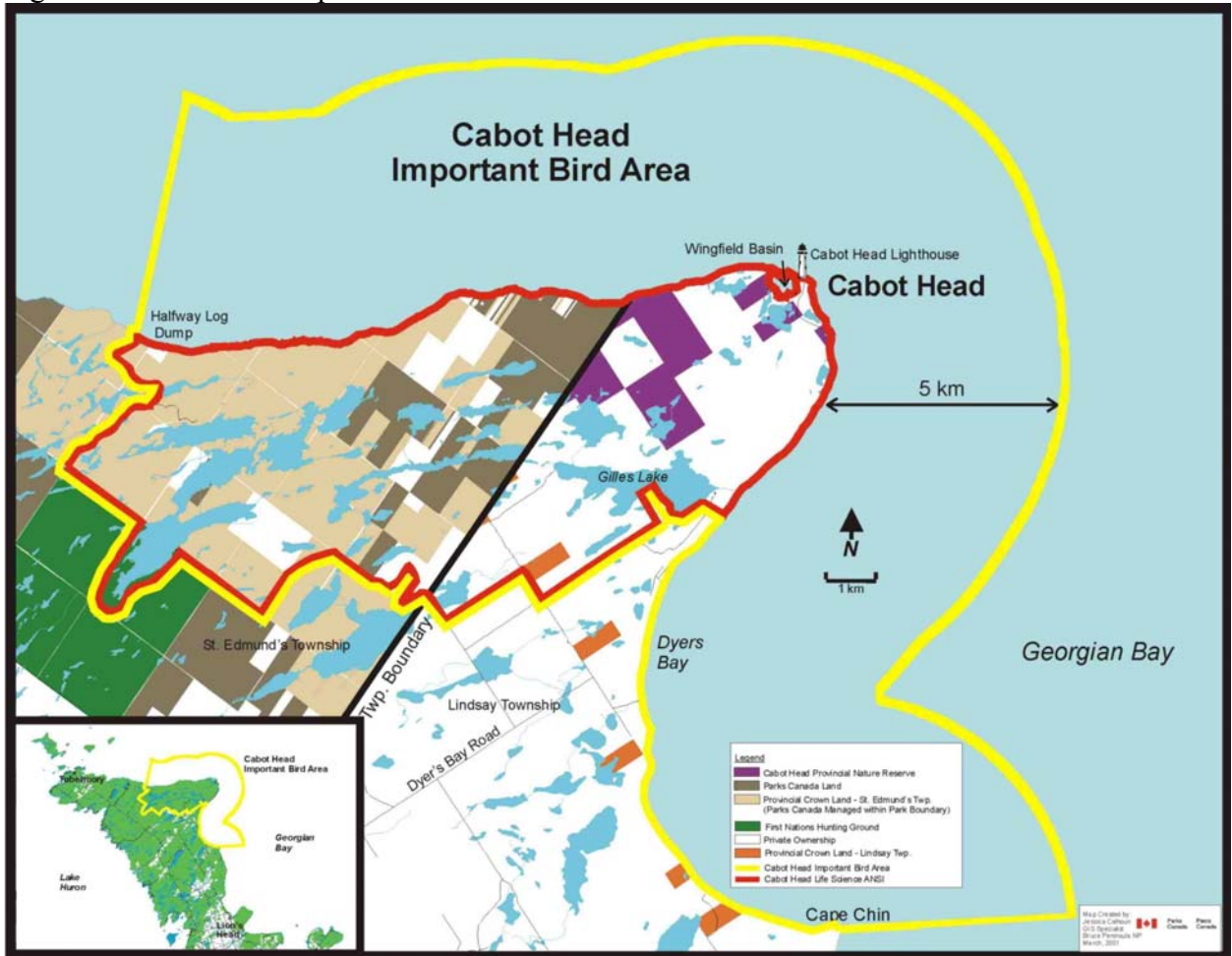
the IBA. Parks Canada has been an enthusiastic supporter of the IBA through their strong interest in monitoring populations of birds and other biota on the upper Bruce Peninsula.

3.0 IBA Site Information

Site: Cabot Head, CAON099C

Location: 45°15' N, 81°18' W

Figure 1 Cabot Head Important Bird Area



The Cabot Head IBA is located on the northeast headland of the upper Bruce Peninsula in south central Ontario. Extending into Georgian Bay, this IBA includes both the terrestrial habitats of the cape and the offshore waters from Dyers Bay to approximately one kilometre west of Cabot Head. The total area of significance is approximately 30 km² including offshore waters (see Figure 1). The closest communities are the hamlet of Dyer's Bay at the southern extension of the offshore part of the IBA, and the town of Tobermory, approximately 25 kilometres to the west. Tobermory is a port town that serves as the tourist centre of the upper peninsula.

In 1896, the Cabot Head Lighthouse and the lighthouse keeper's cottage were erected in response to increasing concern about shipping safety. By 1989, the lighthouse was fully automated. Today, the Friends of Cabot Head are restoring the original buildings and have established a museum and environmental resource centre in this century lighthouse.

The Cabot Head IBA site lies within the Manitoulin-Lake Simcoe Ecoregion of the Mixed Plains Ecozone (*The Green Lane*, 2000). Lying between two large bodies of water, Lake Huron and Georgian Bay, this IBA experiences a moderate climate relative to much of the ecozone (mean temperatures: July, 17.5°C; February, -7°C). There are more sunny days at Cabot Head than in other parts of southern Ontario, because weather systems are deflected by the large bodies of water. In winter, however, moisture-laden air off the lake and bay generates heavy cloud cover. The moisture extends the frost-free season in the fall but also extends cold periods longer into spring.

Dominating the natural area of this IBA is more than 20 kilometres of spectacular Georgian Bay shoreline and Niagara Escarpment cliffs that rise 70 to 100 metres above the bay. The associated shore terraces and extensive bedrock plain around Cabot Head are largely covered in post-fire successional broadleaf, mixed and conifer forests. Adding to the diverse habitat is a variety of wetlands and more than a dozen shallow lakes filling the numerous depressions on the bedrock plain. At the eastern tip of the upper peninsula is Wingfield Basin, a bowl-like indentation that creates a sheltered harbour with a narrow entrance deep enough to permit sailboats to enter.

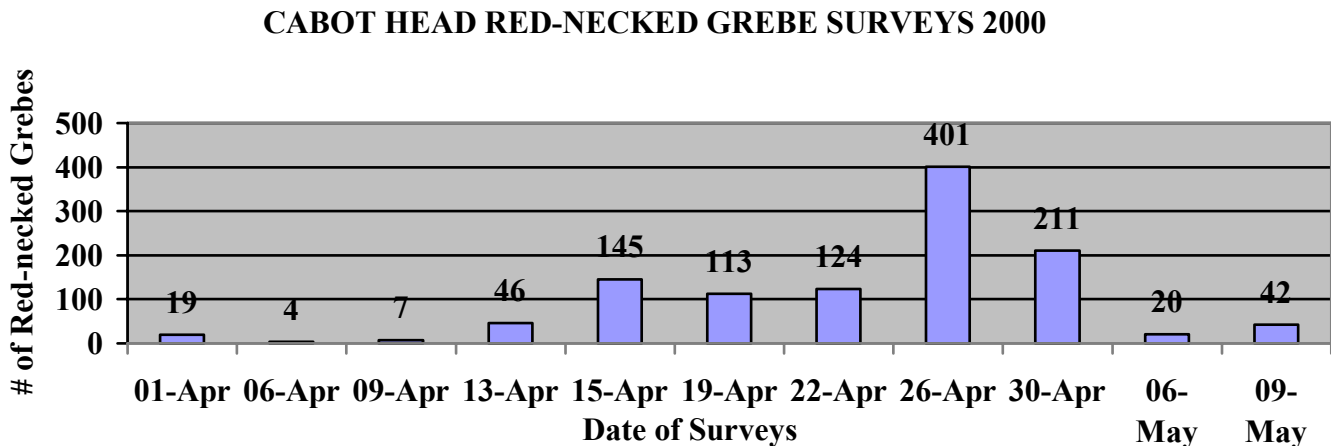
As the largest natural area in the Niagara Escarpment Plan Area, this site has been studied extensively (Ontario Ministry of Natural Resources, 1996; Riley, Jalava and Varga, 1996). Cabot Head provides the best representation in the Bruce Peninsula section of the Niagara Escarpment of a broad range of aquatic, wetland, terrestrial and primary community types. There are 158 vegetation community types present, containing at least 514 vascular plant species (including 10 nationally and provincially rare species – some of global significance). Other nationally and provincially threatened species at this site include the Eastern Massasauga Rattlesnake.

4.0 IBA Species Accounts

4.1 Why Cabot Head is an IBA

The offshore waters of Cabot Head IBA provide a significant stopover for Red-necked Grebes (*Podiceps grisegena*) during spring migration. During mid to late April, 200 to 400 Red-necked Grebes are regularly observed. As many as 800 have been estimated during one-day surveys. This suggests that the concentration off Cabot Head is of continental significance representing one percent of the estimated continental population. In spring 2000, a Red-necked Grebe survey was conducted from Dyers Bay to Cabot Head (Figure 2). (Heagy, unpublished report).

Figure 2. Grebe survey results for 2000



The maximum number observed at one time during the spring census was 401 on April 26, 2000. Given that the 2000 survey consisted of one-day events, the number of grebes stopping over at this IBA is likely much higher since turnover rates¹ during migration are unknown. The size of the North American Red-necked Grebe population is estimated to exceed 45 000 birds although no reliable population estimates are available (Stout and Nuechterlein, 1999). An eastern wintering population is estimated at no larger than 20 000 (Canadian IBA Database, 1999). Other water birds recorded in the offshore waters of this IBA include, Long-tailed Duck (*Clangula hyemalis*) (>3500) and White-winged Scoter (*Melanitta fusca*) (>1000).

¹ Turnover rate refers to the average length of stay of individual birds, and the rate at which birds leave from and arrive at Cabot Head. For example, if, on average, grebes stay a few days, each survey period may represent different individuals, and the total population of birds using Cabot Head could be a cumulative total of each sample (roughly one thousand birds based on Figure 2). On the other hand, if the average stay is much longer (e.g. two weeks) the total number of grebes congregating at Cabot Head would be much lower (perhaps 500 birds).

Cabot Head supports about 4900 ha of forest interior, which provides habitat for more than 30 forest-interior species and nine raptor species. In the study entitled *Woodland Heritage of Southern Ontario* (Larson et al. 1999) some breeding birds were identified as good indicators of upland forest habitats. These included area-sensitive forest species and species associated with large tracts of forest. Of the 35 woodlands surveyed across southern Ontario, the two forests with the highest number of indicator birds were Backus Woods and Cabot Head. With 32 indicator species each, these forest tracts were well above the mean number of 19 for the other forest surveyed.

Birders and ornithologists have long recognised Cabot Head as a concentration point for migrating raptors during the spring, and songbirds during both spring and fall migration. Observations made near Tobermory suggest that the peninsula is a migratory corridor for Sharp-shinned Hawk and Cooper’s Hawk on spring migration (Niagara Hawkwatch Newsletter No.10, 1995). Table 1 summarizes an intensive landbird monitoring program undertaken in 1998 to confirm anecdotal observations and records concerning migration at Cabot Head.

Table 1. Estimated numbers of migrants at Cabot Head, fall 1998.

| Species | Estimated number | Migration period |
|--|------------------|------------------|
| Broad-winged Hawk (<i>Buteo platypterus</i>) | >1000 | spring |
| Blue Jay (<i>Cyanocitta cristata</i>) | >8000 | spring |
| American Robin (<i>Turdus migratorius</i>) | >5000 | fall |
| Yellow-rumped Warbler (<i>Dendroica coronata</i>) | >2000 | spring and fall |
| Red-headed Woodpecker* (<i>Melanerpes erythrocephalus</i>) | 40 | fall |


*designated as a nationally vulnerable species

Figure 3. Red-necked Grebe



4.2 Natural History of the Red-necked Grebe

The natural history of the Red-necked Grebe is well documented by Stout and Nuechterlein (1999). Page and Cadman (1994) summarize its status in Ontario. As the largest grebe (40-50 centimetres) in eastern North America, its distinctive profile and appearance makes it easy to spot on open water: black crown, greyish white cheeks and throat, and chestnut red foreneck and upper breast. In flight, the profile of this grebe is distinctive: a long neck held level or slightly below the line of a rounded body. Long legs with large feet trail behind the body and are held level with or slightly below the body line. An aquatic bird, the Red-necked Grebe requires 50-60 metres of “runway” to launch itself into the air.

The Red-necked Grebe breeds primarily on inland bodies of freshwater, typically small, shallow lakes with emergent vegetation along the shoreline which, in turn, is often surrounded by forest (del Hoyo, 1992). Solitary pairs (although sometimes they breed in loose colonies) build a nest of aquatic plants that form a floating platform usually anchored to vegetation. An expert diver, the Red-necked Grebe feeds on both fish and aquatic arthropods. A unique feature of grebe digestion is that all species, including Red-necked Grebe, ingest their own feathers to aid in digestion and pellet formation (Ehrlich et al., 1986; St  and Nuechterlein, 1999).

The Red-necked Grebe is a holarctic species whose breeding range extends in North America from the treeline in Alaska, Yukon and Northwest Territories, east of the Coast Ranges of British Columbia, across much of the Prairie Provinces to northwestern Ontario and south to the northern tier of U.S. western states. Even within its breeding range its occurrence is sporadic and limited to suitable bodies of water. Nesting occurs locally and irregularly in Ontario and in the Abitibi Uplands of southwestern Quebec (ibid.; Page and Cadman, 1994). In Eurasia, the Red-necked Grebe breeds from Scandinavia and western Russia south to eastern Europe and Asia Minor, and from eastern Siberia south to Japan.

The North American population of Red-necked Grebe currently appears to be stable. Drainage of wetlands in the 20th century in the pothole region of the continent likely reduced the population in the southern portion of its breeding range. Decline in numbers has been documented along the fringes of its breeding range, e.g. southern Ontario (Austen et al., 1994). In Ontario, Red-necked Grebe is considered rare.

The winter distribution in North America extends along the Pacific coast especially in the waters south of Vancouver Island and along the Atlantic coast especially the Bay of Fundy. Although predominantly wintering on saltwater some evidence suggests that as many as a few thousand over-winter on the Great Lakes (Stout and Nuechterlein, 1999). Christmas Bird Count data demonstrates that this species has increased off the upper Bruce peninsula in early winter (Bruce Peninsula National Park CBC, 1978-99). In Eurasia, over-wintering occurs primarily along the coast of Norway and, on most of the large seas of Europe and Asia Minor, both coastal (e.g. Baltic) and inland ones (e.g. Black Sea). On the Pacific coast, over-wintering occurs from Kamchatka south to Korea.

4.2.1 Aspects of biology of potential relevance to conservation: Migration of the Red-necked Grebe

In North America, the Red-necked Grebe is appropriately described as a “western” species given its breeding distribution. Nevertheless, substantial numbers over-winter along the east coast of the continent, enough to warrant designating an eastern wintering population (Stout, 1995).

Although Red-necked Grebes migrate alone or usually in small flocks of two to six (range of flock size is two to 74), significant numbers concentrate in staging points along the coast. For example, during spring migration, 2000 have been recorded about the waters of Cape Cod, Massachusetts (Ehrlich et al. 1986). In Nova Scotia’s innumerable coves and inlets, 25 to 200 birds gather during both spring and fall migration. Some will over-winter as well (Burrows, 1988).

The Great Lakes provides important habitat during migration. The fall migration has been studied extensively by Stout (1995). Eastern Lake Superior and northern Lake Huron have been identified as critical concentration sites during the fall, and, in the case of Manitoulin Island, for moult.

Table 2. Fall numbers and location of moulting Red-necked Grebes in waters off Manitoulin Island

| Location | Date | Number Observed |
|---------------|-----------|-----------------|
| Quarry Bay | Fall 1994 | 300 |
| Owen Channel | Fall 1994 | 220 |
| North Channel | Fall 1996 | 2000 |

This report, however, will concentrate on the spring migration that brings Red-necked Grebes to Cabot Head in significant numbers. The migratory habits and routes taken by this species have not been easy to determine and understanding is far from complete. Migratory flights overland are strictly nocturnal thus hindering study. Daytime flights occur along ocean coastlines and on the Great Lakes. Much of what is known comes from meagre banding data, arrival and departure dates at sites frequented by bird observers, and grounding of migratory grebes by severe weather. Members of the eastern migratory population arrive on Lake Ontario from the east coast in April. Lake Ontario is an important staging area although the sizes of concentrations have declined since the 1940s in specific locations. Whether this was due to a decline in actual numbers or a change in migration pattern through Lake Ontario is uncertain. In April, known staging areas on the lake include the Kingston region (Page and Cadman, 1994) and Oshawa, where in spring 1997, 881 Red-necked Grebes were observed (Stout and Nuechterlein 1999).

From early April through mid May, Red-necked Grebes congregate off Cabot Head, perhaps a mid-point in their movements between wintering and breeding areas. The majority arrive during

the last two weeks of April (Figure 2). Likely, these grebes arrive overland on nocturnal flights. Circumstantial evidence for this nocturnal passage over southwestern Ontario is provided by bird records of regional naturalists. Annual sightings in April are made on lakes and reservoirs in this part of the province. For example, on April 12, 1997 and for subsequent days, a few hundred Red-necked Grebes in total were reported from lakes and reservoirs across southwestern Ontario, having been grounded by an overnight weather system that brought freezing rain and flurries to the region (Ted Cheskey, William Wilson pers. comm. 2000).

The total number of Red-necked Grebes that congregate off Cabot Head is not well known nor is the length of stay for individual grebes. A stopover site may seem unimportant given the relatively short length of time a migrant remains; however, such habitat is a vital link in the life history of any migratory species. The location, timing and duration of a stopover is dictated by the predictability of the conditions at the site – the availability of food, and, of increasing concern, the lack of disturbance so that feeding, preening and resting is possible. Between Cabot Head and the breeding grounds the spring migration route is also speculative. The fall migration between Lake Superior and Lake Huron is along a flight path over the St. Mary's River (IBA Database, 2000). Perhaps the spring migration follows the reverse route. From Lake Superior, eastern wintering birds migrate westward to breeding grounds in northwestern Ontario, Manitoba, parts of Saskatchewan and possibly the Northwest Territories (Stout and Nuechterlein, 1999).

Figure 4 A grebe's view of Cabot Head from off shore



5.0 Other Elements of High Conservation Value

The terrestrial portion of the Cabot Head IBA lies within the largest woodland, 50,000 hectares, along the entire Niagara Escarpment south of Manitoulin Island, and one of the largest in the Mixed Woodland Plains Ecozone. In addition to the area's importance to forest-dwelling birds, Cabot Head support a large diversity of mammals including many of area-sensitive species such as Black Bear, Lynx, Fisher and River Otter. Over 20 species of amphibians and reptiles have been recorded. As well as Eastern Massasauga Rattlesnake, they include the regionally rare Four-toed Salamander, Pickerel Frog, Mink Frog, Northern Ringneck Snake and locally significant Blue-spotted Salamander. Around Wingfield Basin alone, the numbers and variety of snake species – nine in total – is extraordinary (Riley et al.).

Cabot Head plays an important hydrological role in the upper Bruce Peninsula. The site encompasses several watersheds, almost 1000 hectares of open water, predominantly inland lakes and beaver ponds, over 90 kilometres of inland lakeshore and over 20 kilometres of Great Lakes shoreline.

Visitors may not always have the opportunity to observe the outstanding biodiversity of this IBA, but they will marvel at its landforms. The landforms are largely the product of glacial erosion and catastrophic floodwater under glacial ice. The results of selective erosion are three minor re-entrant valleys bordered and separated by four spectacular promontories which rise up as much as 104 metres above Georgian Bay. The cliffs of the escarpment stretch along the bay in this region for more than 20 kilometres. Both modern wave action and the wave action of glacial Lake Algonquin, a larger and higher forerunner of today's Lake Huron, have eroded these cliffs. The forces of wind and water, including ice, continue to break down the rock into rubble forming talus slopes as well as cobble beaches along the shoreline.

The shore terraces and bedrock plain around Cabot Head are both highly significant and fragile. The Wingfield terrace is the most significant – largest and least disturbed – shore terrace on the east side of the Bruce Peninsula, supporting some of the best open alvars in the Bruce Peninsula section of the Niagara Escarpment. The bedrock plain back from Cabot Head has noteworthy karst features i.e. solution pits and solution holes.

Within the IBA, old-growth stands of eastern white cedar along the cliff face has individual trees in excess of several hundred years old. These same cliffs support unusual life forms found rarely elsewhere in the world. As well as supporting conspicuous life forms such as Common Ravens, Turkey Vultures, swallows and bats, these cliffs support cryptoendolithic life. Discovered by Larson in 1992, green algae and fungi grow inside the cliff face, hence the term, cryptoendolithic meaning hidden-inside-rock. The Niagara Escarpment is one of a few places in the world where this phenomenon occurs.

6.0 Land Ownership and Use

6.1 Land ownership

The Cabot Head IBA site follows the terrestrial boundaries of the Cabot Head Area of Natural and Scientific Interest and includes additionally the nearshore and offshore waters from Cape Chin to a few kilometres west of High Dump (see Figure 1). The IBA encompasses the Cabot Head Provincial Nature Reserve. Management of the eastern portion of this reserve is the responsibility of Ontario Parks, Ontario Ministry of Natural Resources. The western portion (in former St. Edmunds Township) is managed by Bruce Peninsula National Park. This reserve is a part of the Niagara Escarpment Parks and Open Space System. Lands within the Nature Reserve, hence the IBA site, are both public and private and lie within the former Lindsay township, Bruce County. The land along the east half of Wingfield Basin and extending to the bay is federally owned. At present, the Coast Guard (Federal Department of Oceans and Fisheries) leases the 100-year-old Cabot Head lighthouse the lightkeeper's cottage and the associated lands to the Municipality of North Bruce. North Bruce has an agreement with the Friends of Cabot Head who are stewards of the site. The Friends of Cabot Head have restored the lighthouse and the lighthouse keeper's house to serve the community as a museum and environmental resource centre (Bill Crofts, pers. comm.). In Lindsay Township, approximately one quarter of the land within the Nature Reserve is provincially owned. The remaining privately owned lands would be acquired to protect significant features within the Nature Reserve and to facilitate management of the reserve. Lands will be acquired as opportunities arise, subject to the availability of funding.

Navigable waters within the IBA are under the jurisdiction of the Federal Government. Management of fishery within the lake is the responsibility of the Ministry of Natural Resources, in cooperation with the Federal Department of Fisheries and Oceans and the First Nation of Nawash.

6.2 Land and water use

6.2.1 Historical

The Bruce Peninsula has been occupied historically by the Odawa of Algonquin. Archaeological evidence dates the earliest human occupation of Cabot Head about 2500 years ago. Unsuitable for farming, the upper Bruce Peninsula remained a source of furs and game for fur traders well into the 19th century. When permanent settlers arrived in the latter third of that century, logging and fishing became the predominant activities. Millions of board feet of pine, maple, ash, elm and birch were harvested (Gillard and Tooke, 1975). By the beginning of the 20th century virtually all of the timber of the upper peninsula forests had been removed. The remaining slash and debris was a tinderbox for fires that swept the peninsula between 1907 and 1911. Within the Cabot Head IBA site there remains ruins of a shingle mill along the shores of Wingfield Basin.

Commercial fishermen established permanent stations here until fish stocks declined just before The Second World War (Armitage, 1994). Wingfield Basin is the only natural harbour along the

Georgian Bay shoreline north of Lion's Head. Remains of a wooden ocean-going tug, the Gargantua, and of a steam tug, Gertie C., lie at the bottom of the basin.

The Bruce Trail, established in 1967, formerly crossed through Cabot Head, along the south end of Wingfield Basin, and westward to Rocky Bay and High Dump. Since the late 1970s, the trail was re-routed away from Cabot Head at the request of private landowners.

6.2.2 Current

Today, a post-fire successional mixed forest continues to age and thrive. Protected almost in its entirety by the Cabot Head Nature Reserve and the Bruce Peninsula National Park, land use within Cabot Head IBA site is regulated by Ontario Parks and Parks Canada.

There are two areas of development within the IBA – the Cabot Head light station, and two cottages on Wingfield Basin. Parking and washroom facilities for the light station are located next to the Cabot Head Lighthouse and lightkeeper's cottage. The latter houses the Lindsay Township Heritage Room where artefacts of the mid-to-late 1800s are on display. A Marine Room describes nautical history from the first commercial fishing to trade and shipwrecks. The Environmental Room displays geological features and animals of the area. The Friends of Cabot Head maintain these displays and facilities. Cabot Head lighthouse is a popular destination for tourists. Approximately 10,000 people visit the station annually, mainly in July and August.

Two cottages, owned by Ontario Parks, are situated on the western side of Wingfield Basin within the Provincial Nature Reserve. Ontario Parks, in collaboration with the Friends of Cabot Head and the Bruce Peninsula Bird Observatory, has been restoring the cottages as research facilities, out-of-bounds to the general public. During the spring and fall of 2000, the Bruce Peninsula Bird Observatory operated out of one of the cottages and has established a migration monitoring facility with numerous net lanes to operate mist nets, and a banding laboratory in the pump house.

Dyers Bay is located 10 kilometres south of Cabot Head. Summer homes were first built along the bay in 1925. More recently, many of these homes have been converted to year-round residences. Dyers Bay has the only public boat launch within the IBA.

Recreational activities permitted within the portion of the IBA within the Provincial Nature Reserve include natural heritage appreciation, hiking, picnicking, cross-country skiing, snowshoeing, sport fishing, canoeing, boating and scuba diving. Hunting, rock climbing, mountain biking and off-road/all-terrain vehicles are not permitted in regulated portions of the Nature Reserve. These activities are to be discouraged on acquired Crown lands. Currently, logging roads are used occasionally by ATVs and snowmobiles. Provided natural values of the Nature Reserve are not placed at risk, snowmobiling is permitted only on existing trails. No new snowmobile trails, however, will be approved in the Nature Reserve or on acquired Crown lands.

No commercial forest management operations, fishing, bait fishing or trapping is permitted within the Nature Reserve. However, this does not apply to the waters of Georgian Bay or Wingfield Basin. Commercial fishing does occur within the IBA, mainly in the summer and fall. Commercial fishermen from Nawash First Nation catch Chub, Whitefish, and other species

along the shoreline from Cape Chin to Wingfield Basin. The fishery is managed by quota, and is open all year, though most fishing activity occurs in the late summer or fall (Dave Reid, pers. comm).

Boating is a very popular activity in the Cabot Head Area. Wingfield Basin, the only protected harbour along the north shore of the Bruce peninsula east of Tobermory, often has over 20 boats per night during the summer. Most vessels are sailboats, though other watercraft are present including motorboats, cruisers and personal watercraft. Sailboats use Wingfield Basin as a safe harbour during severe weather or big seas. The Coast Guard maintains the depth of the channel into Wingfield Basin to accommodate the draft of recreational boats. Sea kayakers use Cabot Head as a departure site or destination. Cargo freighters sail past Cabot Head on a regular basis on their way into or out of Georgian Bay.

7.0 Conservation Management Achieved at the IBA Site

The Cabot Head IBA lies within Cabot Head Provincial Nature Reserve and Bruce Peninsula National Park which protects the entire terrestrial component of the site. No protection exists for the offshore waters at the present time. Private lands lying within the park boundary have been designated as Areas of Natural and Scientific Interest (ANSI). As stated earlier, these private lands may become secured as an addition to the Provincial Nature Reserve. The Nature Reserve represents a core natural area in the Niagara Escarpment Plan (NEP). The Niagara Escarpment is a World Biosphere Reserve.

7.1 Several levels of protection exist for this IBA

Cabot Head IBA lies within The Niagara Escarpment Biosphere Reserve, which was designated in 1990, and has a total area of 190 654 hectares. Biosphere Reserves are an international network of sites that highlight the main global ecological systems and the human uses associated with these systems. The United Nations Educational, Scientific and Cultural Organization (UNESCO) under the Man and the Biosphere program (MAB) designate them. Biosphere Reserves do not have any legal protection status. The designation endorses the Niagara Escarpment Plan (NEP) and recognizes the Ontario government's commitment to maintain the escarpment as a substantially natural environment.

Cabot Head IBA lies within the Niagara Escarpment Plan Area. The NEP is a land use plan approved by the Ontario government in 1985. Defined by provincial legislation, the NEP ensures that any development that occurs is compatible with the natural environment and the Niagara Escarpment; adjacent lands are maintained as a continuous natural environment.

The Cabot Head IBA includes the Cabot Head Provincial Nature Reserve. The International Union for the Conservation of Nature (IUCN) has classified this reserve as a Strict Nature Reserve/Scientific Reserve. The IUCN is a world partnership of governments, their agencies and non-government organizations cooperating to conserve the integrity and diversity of nature and ensure that the utilization of natural resources is both equitable and ecologically sustainable.

Some lands within the Provincial Nature Reserve are designated as a provincially significant life science ANSI for the reason stated above. Areas of natural and scientific interest (ANSI) means areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education (Provincial Policy Statement definition). ANSIs play an important role in the protection of Ontario's natural heritage.

With the establishment of Fathom Five National Marine Park in 1987, Parks Canada initiated the development of a fisheries management plan for its waters, an area of water of 11,175 hectares. The main objective of the management plan is to provide for fish populations that are self-sustaining, naturally reproducing indigenous species, eg. Lake Trout, Lake Whitefish, Lake Herring. To implement the plan, Parks Canada acknowledges the need to work cooperatively on an equal basis with the Chippewas of Nawash First Nation and Ontario Ministry of Natural Resources. Since the study area for this management plan defines its eastern boundary as the nearshore waters off Cabot Head, the IBA stakeholders have significant interest in the plan. Another objective is to develop a forum for interested parties to participate in, and implement plan initiatives (<http://www.uoguelph.ca/~scrawfor/research/fathom5.htm> 1997).

8.0 IBA Stakeholder and First Nation Activity

8.1 First Nation Interests:

Chippewas of Nawash First Nation

Members of the Nawash First Nations fish commercially in the waters off the upper Bruce Peninsula, including within the IBA. The Cape Croker hunting ground, (IR 60B) is a reserve just to the west of the IBA, and south of Emmett Lake belonging to this First Nation. The Nawash First Nation band office is in Cape Croker.

Chippewas of Saugeen First Nation

This First Nation has a reserve hunting ground near the IBA, abutting the reserve of the Nawash of Cape Croker, (IR 60A). Their band office is near Southampton.

8.2 Stakeholders:

A large number of stakeholders have an interest within the area of this IBA. The following list and descriptions, though incomplete, are an attempt to briefly describe the stakeholders and their interests in the IBA.

Friends of Cabot Head

Through agreement with the municipality of North Bruce (who lease the lands and facilities at the Cabot Head light station from Federal Department of Fisheries and Oceans), the Friends of Cabot Head look after the Cabot Head Light Station and associated lands. The Friends also have an agreement with Ontario Parks to "provide interpretive, educational,

recreational and research-support services” to the visiting public at the Cabot Head Provincial Nature Reserve Park, including Wingfield Basin and the two cottages.

Bruce Peninsula National Park

Owned and operated by Parks Canada, Bruce National Park lies to the west of Cabot Head. The park has a large land base, including the Cypress Lake campground. The park includes some of the western terrestrial part of the IBA (see Figure 1), and is responsible for managing the northwestern portion of the Provincial Nature Reserve. Bruce National Park has a long term interest and responsibility in monitoring birds and other biota on the upper Bruce Peninsula, including off Cabot Head. The web address for the park is: http://parksCanada.pch.gc.ca/parks/ontario/bruce_peninsula/Bruce_peninsula_e.htm

Ontario Parks

This provincial government agency is responsible for management of all Ontario provincial parks, including the Cabot Head Provincial Nature Reserve, which includes the Cabot Head Research Station. Ontario Parks has an agreement with the Friends of Cabot Head to act as stewards of part of the provincial nature reserve. The Ontario Parks web address is: <http://www.ontarioparks.com/>

The Bruce Peninsula Bird Observatory

Incorporated in 2001 as a non-profit organization, the observatory’s focus is on monitoring, studying and protecting the birds of the Bruce Peninsula. Specific projects of the observatory are operating the Cabot Head migration monitoring station and overseeing the Red-necked Grebe Survey.

Canadian Coast Guard, Department of Fisheries and Oceans

The Coast Guard is responsible for operation of the automated lighthouse. The Coast Guard, an agency of the federal government, is owner of Cabot Head light station and the land around it. They lease this land to the municipality of North Bruce, who have an agreement with the Friends of Cabot Head to manage and care for the station (not including the automated light). The Coast Guard also maintains a channel to Wingfield Basin, the only protected body of water from Tobermory to Lion’s Head.

Municipality of North Bruce

The municipality is the 3rd tier of government (after federal and provincial), and has many areas of jurisdiction, including roads and services. As tourism contributes significantly to the economy of the northern Bruce Peninsula, the municipality also promotes tourism. North Bruce leases the Cabot Head light station from the Department of Fisheries and Oceans. The municipality has an agreement with the Friends of Cabot Head to act as stewards of this area and its facilities.

Private Landowners

Some of the land within the IBA, and Provincial Nature Reserve, is owned privately. Land use activities are regulated through provincial policies and regulations from the Niagara Escarpment Planning Area, the Provincial Nature Reserve and the ANSI.

Residents of Dyers Bay

Most of the residents of Dyers Bay are seasonal, while a minority lives in the hamlet year-round. Residents of Dyers Bay use the waters for a variety of recreational activities.

Commercial Fishermen

A small commercial fishery exists off the eastern and northern coast of the Bruce Peninsula. Boats come from Cape Croker (Nawash First Nation) and Tobermory.

Recreational Users of the site

A large number of people visit Cabot Head for recreational interests, including hikers, birders, naturalists, kayakers, boaters, hunters, people interested in the history and the lighthouse, fishermen, and more. In the year 2000, 11,000 to 12,000 people visited the Lighthouse Station (Crofts, 2001).

Research Community

Research on a wide range of subjects takes place in the Cabot Head area. A large number of organizations and agencies are involved in this, some of whom are: the University of Guelph, the University of Waterloo, the Ministry of Natural Resources and the EMAN program of the Man and the Biosphere program.

Niagara Escarpment Commission/Biosphere Reserve

All escarpment lands, including the terrestrial part of the IBA are within the mandate of the Niagara Escarpment Commission/ Biosphere Reserve. The Commission regulates the Niagara Escarpment Planning Area.

Ontario Bird Banding Association

This non-profit association of bird banders promotes bird banding in Ontario and supports banding activities including those of the Bruce Peninsula Bird Observatory.

Bruce Trail Association

The Bruce Trail Association includes several thousand members. It supports, manages and promotes the 750+ kilometre Bruce Trail, which follows the Niagara Escarpment from Tobermory to Queenston. The trail currently passes through the western portion of the IBA.

Naturalist Clubs

The Huron Fringe, Owen Sound Field Naturalists and Saugeen Field Naturalists, three clubs based out of the southern Bruce Peninsula, have a strong interest in appreciating, studying and protecting nature on the Bruce Peninsula, and have members who frequent the upper Bruce Peninsula, including Cabot Head.

9.0 Opportunities

Opportunities within the Cabot Head IBA site will be determined by the management plan developed by Ontario Parks for the Cabot Head Provincial Nature Reserve and are subject to the Provincial Parks Act. The extreme ecological significance of the site limits the types of activities that are promoted and appropriate. Conserving the natural integrity and character of Cabot Head is the primary goal of Ontario Parks. The Cabot Head lighthouse could also play a significant role in the IBA. Parks Canada, through the adjacent Bruce Peninsula National Park also has a research and monitoring interest in the IBA.

The spring concentration of Red-necked Grebe at Cabot Head presents an opportunity to monitor their migration and contribute to the understanding of the migration pattern of the eastern-wintering population. In spring 2000, the Cabot Head IBA Steering Committee conducted a survey to gather base line data for this IBA. Volunteer surveyors made observations twice weekly, weather permitting, from April 1 to mid-May (see Figure 2). It will be possible to monitor grebe, and other waterbird populations within the IBA during spring migration, through application of this survey on a regular basis.

The grebe migration and the IBA process provide an opportunity to exchange information with the First Nations active within the area about the grebe migration in relation to the fishery.

In August 1996, Ted Cheskey conducted some initial bird banding at the Cabot Head lighthouse. In 1998, Audrey Heagy established a bird banding station at Cabot Head for migration monitoring. This initial effort, and recognition of this site as a migratory stopover for a variety of birds, led to the nomination of Cabot Head as an Important Bird Area. In 2000, a consortium of groups and individuals under the IBA Steering Committee banner, including Ontario Parks, Friends of Cabot Head, Parks Canada, and Huron Fringe and Saugeen Field Naturalists, established the Cabot Head Research Station. Due in a large part to the excellent facilities that the restored cottage provides, the research station became operative in the same year. Under the direction of Heagy, volunteers banded passerines, small hawks and Northern Saw-whet Owls and undertook daily visible counts of grebes, loons, ducks, hawks and passerines during the spring and fall migration. From these beginnings, it is hoped that a permanent bird observatory can be established on site with full facilities to support monitoring and research.

In order to assist in the preparation of the Nature Reserve Management Plan, and to assist in the identification and protection of sensitive natural features in the local area, pre-approved research or inventory projects will be encouraged. Currently university and government agency researchers are undertaking population studies of Lakeside Daisy in the Cabot Head Provincial Nature Reserve. Cabot Head is one of the study sites for the Niagara Escarpment Ancient Tree Atlas Project.

The Niagara Escarpment attracts tourists from around the world, many of whom enjoy the escarpment by exploring the Bruce Trail and visiting Bruce Peninsula National Park. In 1999, for example, an estimated 410 000 people visited the Bruce Trail adding \$100 million to the local economies (Canadian Biosphere Reserves Association 1999). Presently, the Bruce Trail

passes through the western portion of the IBA. Discussion with stakeholders will determine if the Bruce Trail is to keep its present route, or be re-routed through Cabot Head.

Many birders make the upper Bruce Peninsula a destination. To encourage birdwatchers to visit the Bruce Peninsula, Bruce County Tourism offers monthly, on-line birding information. Both April and May listings invite birdwatchers to visit Cabot Head to observe and enjoy the concentrations of spring migrants that define this IBA. A daily listing of birds could be kept at the museum (as it was in August of 1996) during the peak migration period in April and May for interested birders and naturalists.

Friends of Cabot Head have established a museum and environmental resource centre in the Cabot Head lighthouse to inform tourists about the area's early history circa mid-to-late-1800s, nautical history and natural history. Guidelines in the Cabot Head Provincial Nature Reserve IMS recommend that interpretative panels be installed at the Cabot Head Museum in partnership with the Friends of Cabot Head. The goals of the IBA program, of Cabot Head IBA and accounts of its IBA species could be described on these panels to increase public awareness. There is also the potential to erect a plaque that officially recognises the IBA designation at an appropriate location within the IBA. There is already an interest and awareness of the grebe migration among some of the Dyers Bay residents. Cultivating this interest could lead to a greater role in reporting and stewardship.

There will be no marketing plan for the Cabot Head Provincial Nature Reserve. Classified as a Nature Reserve by Ontario Parks, such parks are not promoted aside from general information outlined in a fact sheet. Information will be publicly presented however as a component of information given in the Niagara Escarpment Parks and Open Space System Plan and within the Bruce Trail Reference.

Cooperation among naturalists, Friends of Cabot Head and park personnel, both provincial and federal, can ensure that this IBA provides a vital link along a migration corridor through the Great Lakes for the thousands of seasonal migrants passing on their way to and from breeding and wintering grounds. The research and education opportunities achieved by this cooperative effort will contribute to our knowledge of one of the marvels of the natural world, namely, migration.

10.0 Threats

10.1 Disturbance

Two central issues of concern to the IBA are related to disturbance. One is disturbance of staging Red-necked Grebes along the coastline, and the second is disturbance to the sensitive terrestrial habitats within the IBA.

While disturbance of grebes is a potential concern, the early timing of their migration reduces the likelihood of boating activity occurring in the area when the grebes are present in significant numbers. Grebes build up shortly after the ice leaves the bay, and stay, in varying numbers, until early to mid May. Very few recreational boaters have their vessels in the water this early. The only potential disturbance to rafting could be commercial fishermen, who may fish the waters after the ice is out of the bay. However, very few fishing boats are active in these waters, and this disturbance is negligible.

During spring, summer and fall, a large number of tourists visit the upper peninsula. Approximately 10 000 tourists drive the 10 kilometre gravel road between Dyers Bay and Cabot Head to visit the light station, take in the beauty or observe nature. The proposed management plan guidelines for the Provincial Nature Reserves developed and administered by Ontario Parks, aims to minimize human disturbance by recommending that visitor use remain at low levels to protect the high quality and sensitive shorelines, alvars and escarpment rims and cliffs. Intrusive recreational activities such as hunting, rock climbing, mountain biking and off-road/all-terrain vehicles are not permitted. Although snowmobiling continues on existing trails this activity is considered an existing, non-conforming one. No new trails will be approved in the Nature Reserve or on acquired Crown lands.

Human disturbance within the Nature Reserve, is restricted to informal activities including nature appreciation, hiking, picnicking, cross-country skiing, snowshoeing, sport fishing, canoeing, boating, scuba/skin diving. At present, the management plan describes participation in these activities as low level. Migratory species using the IBA site in spring and fall will likely be subject to only low level activity hence minimal disturbance. The location of activity or hiking trails (including any potential siting of the Bruce Trail through Cabot Head) should be well planned to eliminate/minimize disturbance of any sensitive breeding species.

10.2 Commercial fishing

Commercial fishing occurs along the coast of the eastern and northern Bruce Peninsula. Gill nets are used to capture chub, whitefish and other species off the shoreline from Cape Chin to Wingfield Basin. Gill nets that operate in April and May could potentially pose a threat to diving waterbirds including grebes, loons, scoters and Long-tailed Duck, the principal species observed off Cabot Head.

10.3 Chemical spills from shipping

While shipping activity through the area is relatively infrequent, freighters do occasionally pass through IBA waters. While the threat is remote, a large chemical or oil spill during April or May would be devastating for staging waterbirds.

10.4 Exotic species

Over the past few decades, the history of the aquatic ecosystem of the Great Lakes has been one of accidentally or deliberately introduced species. The colonisation of the Great Lakes by Sea Lamprey, the introduction and proliferation of Pacific salmon species, and, more recently, the massive invasion by Zebra mussels, are examples of accidental and intentional experiments that have irrevocably altered the ecology of the Great Lakes.

10.5 Lack of a formal mechanism to protect staging waterbirds

Of concern in this, and many other IBAs, is that there is no formal mechanism to protect staging waterbirds from the threats described above, particularly from disturbance. Species congregating off Cabot Head are formally protected in the Migratory Bird Convention Act. However protection rarely goes beyond the conceptual, particularly in situations such as disturbance of a flock of staging waterbirds. The impact of such disturbance on an individual's well-being is difficult to prove, though recent research at Long Point, on Lake Erie demonstrates that boat disturbance does have a negative impact on staging waterfowl (Knapton, 2000).

11.0 Conservation Action Plan

A fundamental premise of Important Bird Areas is that they are voluntary by nature. The objectives and strategies proposed below are intended as advice and guidelines for stakeholders only. This Action Plan should be viewed as a working document, to be periodically evaluated and revised.

While priority is suggested beside objectives and actions, it will be the responsibility of the stakeholders to establish priorities for actions. Implementation is dependent upon resources required for each action, their availability, stakeholder mandates, and in many cases it will be opportunity driven.

The organizations and groups suggested as leading certain actions are as follows:

| | |
|-----------------------------------|------|
| IBA steering committee | SC |
| Ontario Parks | OP |
| Bruce National Park | BNP |
| Bruce Peninsula Bird Observatory | BPBO |
| Friends of Cabot Head | FCH |
| Canadian Wildlife Service | CWS |
| Federation of Ontario Naturalists | FON |

11.1 Vision for the Cabot Head Important Bird Area

The Cabot Head Important Bird Area will be conserved and managed to protect its significance for migratory and resident birds, and as a place where birds can be monitored, studied and enjoyed.

11.2 Goals, Objectives, Actions and Priority²:

1. *Conserve the terrestrial and aquatic habitats of the Cabot Head IBA from degradation.*

- a) Encourage the Friends of Cabot Head, Ontario Parks and Parks Canada to continue to manage lands and waters within the IBA as an undeveloped and low-use nature reserve.
 - Letter to Ontario Parks from Steering Committee and FON to encourage these values. (Steering Committee, FON) (M) needed.
 - Incorporate this intent into mission statements for the Provincial Nature Reserve, Parks Canada and the Friends of Cabot Head. (OP, BNP, FCH) (M) needed
- b) Manage circulation of visitors to Cabot head by limiting footpaths and access points into the Provincial Nature Reserve.

² Goals are listed first, Objectives are listed below each goal, and actions below each objective are bulleted. Following the objective or action, the suggested group or person responsible for implementation is listed in brackets, followed by the suggested priority for the objective or action: H=high, M=moderate, L=low. This, in turn is followed by a comment as to implementation status: needed, ongoing and done.

- Discourage visitors from approaching the research station by installing a barrier and signage. (Ontario Parks, Friends) (H) needed

2. *Identify and mitigate threats to migrating Red-necked Grebes.*

- a) Collect information on early spring boating and fishing activity, during grebe surveys, to assess levels of disturbance to rafting grebes and other waterbirds.
 - Encourage grebe surveyors to keep accurate records of any boating activity during the grebe surveys, and report it along with the survey results for archiving. (SC, BPBO) (H) ongoing
 - Assess significance of the impact of boating or fishing activity on grebe activity at the end of the season, and produce a report on this aspect along with results from the grebe survey. (SC, BPBO) (H) needed
 - Share the results with Nawash First Nation, and any commercial fishermen known to fish the area. (SC) (H) needed
- b) Inform boaters about rafting grebes and waterfowl and the need to not disturb them.
 - Install a sign at the marina dock in Lions Head to “not disturb rafting waterbirds”, and distribute IBA pamphlets with this message. (SC, BNP) (M) needed
- c) Encourage Parks Canada and the Canadian Wildlife Service to consider designating the waters off Cabot Head (within the IBA) with a protected status.
 - Letter to Parks Canada and CWS official requesting that this objective be considered. (SC) (L) needed

3. *Determine the scope and magnitude of the Red-necked Grebe migration through Cabot Head*

- a) Organize and conduct annual spring surveys of the Red-necked Grebe migration through the IBA.
 - Encourage a member of BPBO to coordinate the grebe survey each year. (BPBO) (H) ongoing
 - Produce survey form to facilitate data collection (SC, BPBO, BNP) (H) done
 - Organize a team of volunteers to undertake surveys (BPBO, BNP) (H) ongoing
 - Collect and store data at a central location (BNP, BPBO) (H) ongoing
- b) Communicate grebe survey results to interested parties including local fishermen and marinas.
 - Send annual results of grebe survey to MNR fisheries office, Chippewa of Nawash fisheries contact and Federal Department of Fisheries office. (BPBO, BNP) (H) needed
 - Publish results of data as deemed necessary. (SC, BNP) (M) needed

4. *Establish a research facility at Cabot Head to house bird migration monitoring and research on birds and other aspects of Cabot Head’s natural and cultural history.*

- a) Use the cottages on the west side of Wingfield Basin, and the proximate land base to support seasonal migration monitoring, and other monitoring and research.

- Restore cottages so that they provide adequate shelter, space and logistical needs for a spring and fall migration monitoring field station. (OP, FCH, BPBO) (H) ongoing
 - Recruit volunteers to assist with building repairs (OP, FCH, BPBO) (H) ongoing
 - Undertake fund raising for capital and staffing requirements. (BPBO, FCH, OP) (H) ongoing
 - Assist with development of appropriate facility management policies, including restricted site access. (OP, FCH, BPBO) (H) ongoing
 - Establish permanent net lanes and other facilities to support migration monitoring. (BPBO, OP) (H) done
5. Foster the development of the Bruce Peninsula Bird Observatory as a local, charitable, non-profit association dedicated to the study of birds on the Bruce Peninsula, including the Cabot Head IBA. (All of the objectives below would be carried out by the Bruce Peninsula Bird Observatory)
- a) Recruit initial executive board for the BPBO. (H) done
 - b) Develop constitution and apply for registration and non-profit status. (H) done
 - c) Conduct annual fund raising to cover program expenses. (H) ongoing
 - d) Hire a migration program coordinator to lead and oversee migration monitoring activities. (BPBO) (H) ongoing
 - e) Develop core membership of volunteers to conduct bird banding, research and outreach at Cabot Head and elsewhere on the Bruce Peninsula. (M) needed
 - f) Continue landbird monitoring at Cabot Head to determine potential research and monitoring opportunities and protocols and to qualify for full membership in the Canadian Migration Monitoring Network. (H) ongoing
 - g) Develop an ongoing spring raptor monitoring and banding program at Cabot Head or elsewhere on the Bruce Peninsula to learn more about the spring migration routes of these species, especially Sharp-shinned Hawk and Northern Saw-whet Owl. (M) ongoing
6. Provide local residents and visitors with opportunities to learn about birds and the significance of Cabot Head IBA, while not overly promoting the area as an ecotourism destination.
- a) Provide the public with information and opportunities to learn about the Cabot Head IBA.
 - Produce a fact sheet on the Red-necked Grebe for distribution locally and to all stakeholders. (SC, BPBO) (M) needed
 - Hold a dedication ceremony for the IBA. (SC, FON, CNF) (M) - spring 2001
 - Erect/install a plaque commemorating the IBA at a suitable location. (SC, FON) (M) needed
 - Produce print materials on the birds of Cabot Head for distribution at the lighthouse. (BPBO) (M) needed
 - Hold periodic public banding demonstrations at the light station. (BPBO) (M) ongoing

b) Maintain low profile of Cabot Head as an ecotourism destination due to sensitive environment and limited capacity of site. (FCH, BPBO, OP, BNP) (H) ongoing

12.0 Evaluation

Planning in complex circumstances should include a system of evaluating progress, rethinking goals and objectives, and revising actions. This iterative approach to planning means not only that the plan is open to revision, but also that evaluation and revision are a fundamental part of the planning process. FON and its national partners are committed to supporting IBAs in plan implementation. Local stakeholders have already invested in the IBA, and have a stake in its success.

While the IBA Steering Committee may not continue in its present form, a mechanism to oversee implementation of these actions should be established. The Bruce Peninsula Bird Observatory³, along with other stakeholders, should encourage the implementation of this action plan.

An annual update on the conservation plan implementation would be of great value to the CNF, FON and BSC. As Cabot Head has joined the global family of IBAs, information on Cabot Head will be incorporated into BirdLife's global IBA database. This database will be used to report on conservation progress in IBAs. The information required is listed below.

- ❑ summary of general progress by the stakeholders group.
- ❑ update on actions, objectives and goals.
- ❑ changes in actions, objectives and goals. (explain why changes were needed)
- ❑ any changes in threats affecting the IBA species and site.
- ❑ copies of any media coverage or materials produced.
- ❑ an updated list of groups involved in the stakeholder group.
- ❑ successes and failures within the IBA.

³ The Bruce Peninsula Bird Observatory is being constituted at the time of publication of this conservation plan.

References

- Armitage, Andrew. 1994. *The Bruce Peninsula Explorer*. The Ginger Bread Press, Owen Sound, Ontario.
- Armstrong, E.R. "Red-necked Grebe" species account in Cadman, M.D., P.F.J. Eagles, and F.M. Helleiner (eds.), 1987. *Atlas of the Breeding Birds of Ontario*. University of Waterloo Press, Waterloo, Ontario.
- Austen, M.J.W., M. D. Cadman and R.D. James. 1994. *Ontario Birds at Risk: Status and Conservation Needs*. Federation of Ontario Naturalists and Long Point Bird Observatory Publishers. Toronto, Ontario.
- Bryan, Graham. 1997. "Bruce Peninsula – Old Haunts" pp 17-21 in *Seasons*. Vol 37, No 4. Federation of Ontario Naturalists. Toronto, Ontario.
- Brown, Lindsey. 1979. *The Bruce: a Guide*. The Mariner Chart Shop, Tobermory, Ontario.
- Bruce County Tourism: *Birding*. <http://www.brucecounty.on.ca/tourism/birding/htm> (May 2000).
- Bruce Peninsula*. <http://www.escarpment.org/Tourism/bruce.htm> (May 2000).
- Bruce Peninsula National Park*. http://parkscanada/pch.gc.ca/parks/ontario/bruce_peninsula/Bruce_peninsula_e.htm (May 2000).
- Burrows, Roger. 1998. *Birding in Atlantic Canada*. Vol 1. Nova Scotia. Jespersion Press Ltd., St. John's, Newfoundland.
- C-Map NT NA-B117.01 Georgian Bay: Cabot Head to McGregor Bay <http://c-map.com/quickref/cmapnt/nab11701.htm> (May 2000).
- Cabot Head Geology*. <http://adamite.igs.indiana.edu/indgeol/reference/compendium/html/comp3fac.htm> (May 2000).
- Cabot Head Light*. <http://www.ipl.org/exhibit/light/GL/CabotHead.html> (May 2000).
- Cabot Head Nature Reserve*. <http://www.ontarioparks.com/cabo.html> (May 2000).
- Cabot Head Provincial Park. <http://www.mnr.gov.on.ca/MNR/parks/cabo.html> (May 2000)
- Campbell, R. Wayne, N.K. Dawe, I. McTaggart-Cowan, J.M. Cooper, G.W.Kaiser and M.C.E. McNall. 1990. *The Birds of British Columbia*. Vol 1. Nonpasserines. Royal British Columbia Museum, Victoria, B.C.

Canadian IBA Database 1999. IBA Site Summary – Cabot Head, CAON099C. Bird Studies Canada/Canadian Nature Federation.

Christmas Bird Counts [Http://birdsource.tc.cornell.edu/cbcdata/](http://birdsource.tc.cornell.edu/cbcdata/)

Crawford, Stephen S. 1997 *Fathom Five National Marine Park Fisheries Management Program Development* <http://www.uoguelph.ca/~scrawfor/research/fathom5.htm>

Crofts, Bill. 2001. “Chairperson’s Report” *Friends of Cabot Head Newsletter – 2000*.

De Smet, Ken D. 1982. *Status Report on the Red-necked Grebe (Podiceps grisegena)*. Committee on the Status of Endangered Wildlife in Canada, Ottawa, Ontario.

De Smet, Ken D. “Golden Eagle” species account in Cadman, M.D., P.F.J. Eagles, and F.M. Helleiner (eds.), 1987. *Atlas of the Breeding Birds of Ontario*. University of Waterloo Press, Waterloo, Ontario.

del Hoyo, Josep, ed. 1992. *Handbook of the birds of the world*. Vol. 1-5. Lynx Edicions. Barcelona, Spain.

Dobbyn, Jon (Sandy). 1994. *Atlas of the Mammals of Ontario*. Federation of Ontario Naturalists, Toronto, Ontario.

Ehrlich, Paul R., Dobkin, David S. and Darryl Wheye. 1986. *The Birder’s Handbook: A Field Guide to the Natural History of North American Birds*. A Fireside Book published by Simon & Schuster, Inc. Toronto.

Forest and Rangeland Birds of the United States: Natural History and Habitat Use: Red-necked Grebe (Podiceps grisegena). <http://www.npwrc.usgs.gov/resource/1998/forest/species/podigris.htm> (May 2000).

Gillard, William and Thomas Tooke. 1975. *The Niagara Escarpment*. University of Toronto Press, Toronto, Ontario.

Knapton, R.W., S. A. Petrie and G. Herring. 2000. *Human Disturbance of Diving Ducks on Long Point Bay, Lake Erie*. Bird Studies Canada (In Press).

Lapointe, Jean. 1996. “Red-necked Grebe” pp 218-219 in J. Gauthier and Y. Aubry, eds. *The Breeding Birds of Quebec: Atlas of the Breeding Birds of Southern Quebec*. Association quebecoise des groupes d’ornithologues, Province of Quebec, Society for the Protection of Birds, Canadian Wildlife Service, Environment Canada, Quebec Region, Montreal, 1302 pp.

- Larson, B.M., J. L. Riley, E. A. Snell and H.G. Godschalk. 1999. *The Woodland Heritage of Southern Ontario; A Study of Ecological Change, Distribution and Significance*. Federation of Ontario Naturalists, Don Mills, Ontario.
- Niagara Peninsula Hawkwatch Newsletter*. February 1995. Newsletter No 10. Niagara Peninsula Hawkwatch.
- Nicholson, J.C. 1972. *The Birds of Manitoulin Island – A Species Accounts Summary*. Sudbury, Ontario.
- Ontario Ministry of Natural Resources. 1996. *Cabot Head Provincial Nature Reserve Interim Management Statement*.
- Ontario's Niagara Escarpment*. <http://www.escarpment.org/index.html> (May 2000).
- Page, A. M.E. and M.D. Cadman. 1994. *The Status of the Red-necked Grebe (Podiceps grisegena) in Ontario*. Prepared for Ontario Ministry of Natural Resources, Toronto, Ontario.
- Riley, J.L., J.V. Jalava and S.Varga. 1996. *Ecological Survey of the Niagara Escarpment Biosphere Reserve*. Vol 1, Significant Natural Areas. Ontario Ministry of Natural Resources, Southcentral Region and Ontario Heritage Foundation, Niagara Escarpment Heritage Protection and Land Stewardship Program.
- Robert, Michel. 1996. "Golden Eagle" pp 396-399 in J. Gauthier and Y. Aubry, eds. *The Breeding Birds of Quebec: Atlas of the Breeding Birds of Southern Quebec*. Association quebecoise des groupes d'ornithologues, Province of Quebec, Society for the Protection of Birds, Canadian Wildlife Service, Environment Canada, Quebec Region, Montreal, 1302 pp.
- Semenchuk, G.P. (ed.). 1992. *The Atlas of Breeding Birds of Alberta*. Federation of Alberta Naturalists, Edmonton, Alberta.
- Stout, B.E. 1995. *Fall Migration of Red-necked Grebes in the Great Lakes Region*. MSc thesis, North Dakota State University of Agriculture and Applied Science, Fargo, North Dakota.
- Stout, B.E. and G.L. Nuechterlein. 1999. "Red-necked Grebe (*Podiceps grisegena*)" in *The Birds of North America*, No. 465 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.
- The Green Lane, Environment Canada. 2000. *Narrative Descriptions of Terrestrial Ecozones and Ecoregions of Canada: Mixedwood Plains Ecoregion, Manitoulin-Lake Simcoe*. http://www.ec.gc.ca/soer-ree/English/Framework/NarDesc/canada_e.cfm (2000)
- The Northwind*: Winter 2000. Vol 15 No 1. Holiday Beach Migration Observatory.

Personal Communication

Edward Cheskey, 2000

Bill Croft, 2000

Dave Read, 2001

William Wilson, 2000

Figure 5. The Cabot Head light station

Appendix 1. IBA Program Partners

BirdLife International

A pioneer in its field, BirdLife International (BL) is the first non-government organisation dedicated to promoting worldwide interest in, and concern for, the conservation of all birds and the special contribution they make to global biodiversity. BL operates as a partnership of non-governmental conservation organisations, grouped together within geographic regions (e.g. Europe, Africa, Americas) for the purpose of planning and implementing regional programs. These organisations provide a link to on-the-ground conservation projects that involve local people with local expertise and knowledge. There are currently 20 countries involved in the Americas program throughout North, Central and South America. For further information about BirdLife International, check the following website: <<http://www.birdlife.net/>>.

The Canadian Important Bird Areas Program has been undertaken by a partnership of two lead organizations: 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 our provincial, territorial and local affiliated naturalists organizations to directly reach 100,000 Canadians. The strength of our grassroots naturalist network allows us to work 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. Our approach is open and cooperative while remaining firm in our goal of developing ecologically sound solutions to conservation problems. CNF's website is <http://www.cnf.ca>.

Bird Studies Canada (BSC)

The mission of Bird Studies Canada is to advance the understanding, appreciation and conservation of wild birds and their habitats, in Canada and elsewhere, through studies that engage the skills, enthusiasm and support of its members, volunteers, staff and the interested public. BSC believes that thousands of volunteers working together, with the guidance of a small group of professionals, can accomplish much more than could the two groups working independently. Current programs collectively involve over 10,000 volunteer participants from across Canada. BSC is recognized nation-wide as a leading and respected not-for-profit conservation organization dedicated to the study and understanding of wild birds and their habitats. BSC's website is <http://www.bsc-eoc.org/>.

Federation of Ontario Naturalists

The Federation of Ontario Naturalists (FON) protects Ontario's nature through research, education, and conservation action. FON champions wildlife, wetlands and woodlands, and preserves essential habitat through its own system of nature reserves. FON is a charitable organization representing 15,000 members and over 105 member groups across Ontario. FON's website is <<http://www.ontarionature.org>>.

Appendix Two Red-necked Grebe Survey Forms