

# *Proven Lake (Marsh)*

## *IMPORTANT BIRD AREA*



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**Citation.**

**Lindgren, C.J. 2001.** Proven Lake Important Bird Area Community Conservation Plan. Prepared for the Canadian Nature Federation, Bird Studies Canada, BirdLife International and the Manitoba Naturalists Society. Winnipeg, Manitoba. 32 pp.

**Preamble.**

This document is not intended to be static. It is hoped that the community groups involved will use this CCP to guide their conservation efforts and continue to add to sections of this document over time.

## **EXECUTIVE SUMMARY**

### **Proven Lake Important Bird Area**

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#### **The Important Bird Area Program**

The Canadian Important Bird Areas Program (IBA) was established by the Canadian Birdlife Partners, the Canadian Nature Federation and Bird Studies Canada, as part of an international effort to identify and conserve sites important to all bird species worldwide. Beginning in August 1999, the IBA program has been delivered in Manitoba by the Manitoba Naturalists Society.

#### **Goals of the Canadian IBA 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. To determine the type of protection or stewardship required for each site, and ensure the conservation of each site through partnerships with local stakeholder groups who develop and implement an on-the-ground community conservation plan.

#### **Proven Lake IBA**

Proven Lake is in southwestern Manitoba near the southeast corner of Riding Mountain National Park and just west of Provincial Highway #10. The IBA is just north of the Town of Erickson.

Proven Lake, also referred to as Proven Marsh, is a Manitoba Heritage Marsh and was declared a Wildlife

Management Area by the Government of Manitoba in 1986. The lake is about 2,003-ha in size containing some nesting islands. The majority of the Wildlife Management Area (WMA) consists of 650-ha wetland. Ducks Unlimited Canada has held a license to manage water levels since 1981. Waterfowl hunting has traditionally been the primary human use of the lake.

The designation of Proven Lake as an IBA and the development of a community conservation plan is needed to ensure the long-term protection of this important wetland habitat and the Black-crowned Night-Heron.

#### **Significant Bird Numbers**

Historically, Black-crowned Night-Herons have had a breeding colony at Proven Lake. In a 1966 survey, 200 nests were observed, and this is the same number of nests that were reported almost 30 years later in 1995. This nesting colony represents 4% of the estimated Canadian population for Black-crowned Night-Herons. Based upon numbers of Black-crowned Night-Herons Proven Lake is recognized as a nationally significant IBA.

Proven Lake also attracts large numbers of migrating birds in the spring and fall and is thus recognized as an important staging marsh, especially for waterfowl. Other bird species found nesting at Proven Lake have included large colonies of Eared Grebes (150 nests in 1996), and Franklin's Gulls (800

nests recorded in 1966) as well as Great Blue Herons and American Bitterns. Records from the 1970's show that up to 8,800 American Coots, and several thousand Mallards have been seen on the lake during fall migration. Canada Geese have recently begun to nest at Proven Lake.

### **Past Conservation Initiatives**

The Proven Lake Wildlife Viewing Project was an attempt to enhance birding opportunities, generate additional revenue for Erickson, and to foster awareness in the local community on the need to sustain wetland ecosystems for the use of future generations. The project was never completed. However, the present Proven Lake IBA Working Group may wish to visit portions of the original conceptual plan as their IBA activities progress.

### **Conservation Goals and Objectives**

The present IBA working group was formed to develop an IBA community conservation plan. It is not the intent of the present community group to in any way change or restrict traditional hunting activities within Proven Marsh.

**Education.** One objective of this CCP will be to increase community awareness of Proven Lake. This will be achieved by utilizing Proven Lake as a living classroom by ecology students from Erickson High School.

Local stakeholder groups including Ducks Unlimited Canada, Erickson Game and Fish Association, Manitoba Conservation and Riding Mountain National Park, will lend their expertise towards development and delivery of the

ecology course.

Elements of the ecology course may include students developing interpretative signage and undertaking bird surveys.

**Monitoring.** Additional objectives of this Community Conservation Plan include supporting ongoing management activities of Ducks Unlimited Canada (Brandon) as well as to support and encourage continued bird surveys conducted by Manitoba Conservation.

### **Contacts**

*Manitoba Important Bird Areas Community Conservation Planner*  
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*Onanole Game and Fish*  
Jean Rosset

*Town of Erickson, Councilor*  
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*Manitoba Conservation (Brandon)*  
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*Ducks Unlimited Canada (Brandon)*  
Dave Clayton - 1-204-729-3511

*Erickson High School*  
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Ken Manery (President) 1-204-636-7700

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## 1.0 Introduction

Originally known as Round Lake, Proven Lake was named after a homesteader by the name of James Proven. Proven Lake is located south of Riding Mountain National Park, north of the town of Erickson and the Rolling River Indian Reserve, and within the Rural Municipality (RM) of Harrison. The lake contains few wooded islands and is about 2,003 ha in size.

Proven Lake is a Manitoba Heritage Marsh and was declared a Wildlife Management Area in 1986. The majority of the Wildlife Management Area (WMA) consists of 650-ha wetland situated in the heart of some North America's most productive waterfowl breeding habitat. The lake is within the Little Saskatchewan River Watershed.

Nesting species include gulls, terns, grebes, and Black-crowned Night-Herons in addition to a great variety of ducks. Breeding Black-crowned Night-Herons are present in nationally significant numbers. The lake attracts large numbers of migrating birds in the spring and fall (source: Brochure: Land For Wildlife and People Manitoba's Wildlife Management Areas, Manitoba Natural Resources, no date).

## 2.0 The IBA Program

The IBA program is an international initiative coordinated by BirdLife International, a global partnership of over 100 countries

seeking to identify and protect sites important to the conservation of bird species worldwide. Through the protection of birds and habitats, IBA's also promote the conservation of the world's biodiversity. IBA programs are currently in place in Europe, Africa, the Middle East, Asia, and the Americas.

The Canadian IBA Program was initiated in 1996 by two Canadian environmental non-government organizations - Bird Studies Canada (BSC) and the Canadian Nature Federation (CNF). The Canadian IBA program forms part of the Americas IBA program which includes the United States, Mexico, and 17 countries in Central and South America.

The goals of the Canadian IBA program are to:

- identify a network of sites that illustrate and 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 between local stakeholder groups who develop and implement appropriate on-the-ground conservation plans; and
- establish ongoing local involvement in site protection and monitoring.

### *IBA Site Identification & Criteria*

IBA sites 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 biome.
- 4) Sites where birds congregate in significant numbers when breeding, in winter, or during migration.

### ***Important Bird Areas Funding***

In October 1998, the Government of Canada announced funding for the Natural Legacy 2000 project, a major initiative under the Canadian Millennium Partnership Program (CMPP). In total, \$10 million CDN were awarded to a consortium of four of Canada's largest nature conservation organizations - Canadian Nature Federation, World Wildlife Fund Canada, the Nature Conservancy of Canada and Ducks Unlimited Canada. A portion of the grant, \$1.25 million was awarded to the Canadian Nature Federation for the Canadian Birdlife International Partners to conduct the Important Bird Areas Program in Canada. In Manitoba, funding has been received from the Murphy Foundation (in 1999) and from the Sustainable Development Innovations Fund (in 2001).

For further information on the IBA Program contact:

[www.ibacanada.com](http://www.ibacanada.com)

## **2.1 IBA Manitoba**

The Manitoba Naturalists Society (MNS) is cooperating with the Canadian Nature Federation and Bird Studies Canada to deliver the conservation planning component of the Manitoba IBA program. The MNS is a non-profit organization made up of individuals who share a common concern for the well-being of Manitoba's nature. It was founded in 1920 for the popular and scientific study of nature.

The MNS believes that the chance to experience an undamaged environment in peace and tranquility is a joy and a privilege. It also believes in the importance of sound stewardship, the wise use of our natural resources, fostering an awareness and appreciation of the natural environment and an understanding of humanity's place therein.

The objectives of the MNS include:

- providing an association and a voice for those interested in natural history and the outdoors,
- to cooperate with individuals and organizations with similar objectives,
- to arrange educational and recreational programs and field trips to promote an understanding of the natural environment,
- to stimulate research and to record and preserve data and material in natural history and allied subjects,
- and to work for the preservation of our natural environment.

In 1996, a number of Manitoba birders gathered to begin identification of potential Manitoba IBA's. By 1999, over 100 locations were nominated for IBA status in Manitoba. In August of 1999, the MNS began IBA community conservation planning with the hiring of a conservation biologist. Shortly after, strategy meetings were held to further identify Manitoba IBA's with local community interest. Advice was solicited from groups including the Manitoba Naturalists Society (Avian Research Committee), Canadian Wildlife Service, Ducks Unlimited Canada, Manitoba Conservation, The

The Rolling River originates at the base of Riding Mountain National Park and at high water levels flows into Proven Lake. As river levels decrease, water flow reverses and water discharges from Proven Lake into Rolling River (Underwood McLellan 1984).

Nature Conservancy of Canada, Manitoba Habitat Heritage Corporation and local birders.

### 3.0 IBA Site Information

**Name:** Proven Lake  
**IBA site number:** CAMB028N  
**Central Coordinates (Lat/Lon):**  
 50° 31' 21.2" N; 99° 59' 18.4" W  
**NTS Sheet or other site map:**  
 62 K/9 & 62 J/12  
**Area:** 2,003 ha

Ducks Unlimited Canada operates a water control structure at the southeast corner of Proven Lake, controlling water flow between Proven Lake and the Rolling River.

### LandSat 5 image of Proven Lake



## 4.0 IBA Species Information

### 4.1 IBA Species

Proven Lake Marsh IBA was designated based on the nationally significant numbers of breeding Black-crowned Night-Herons. Approximately 200 nests were observed in 1966 and again in 1996 which represents about 4% of the Canadian population. At least 300 Black-crowned Night-Herons were observed in 1995 by Hatch, suggesting a sustained breeding population. However, it must be realized that two data points are not sufficient to ascertain any biological trends. More surveys are required. Observations of 300 or more Black-crowned Night Herons provided in a 1985 Ducks Unlimited Report generally support these numbers.

Additional observations indicate that large numbers of Eared Grebes (150 nests in 1996), and Franklin's Gulls (800 nests recorded in 1966) also nest at Proven Lake. Recently, Canada Geese have began nesting on Proven Lake (Jean Rosset, Ducks Unlimited Canada, personal communication October 2000).

Stilwell (1997) described Proven Lake as an ideal wetland where birders can observe Black-crowned Night-Herons. Stilwell (1997) also noted other species which may be observed at Proven Lake include Great-blue Herons, American Bitterns, grebes, gulls and hawks.

### 4.2 Black-crowned Night Heron

*Nycticorax nycticorax*

Unless otherwise references, life history information is taken from W.



Davis (1993). The Black-crowned Night-Heron is a rather stocky heron. It looks as if it is hunched over with its head usually tucked down into its shoulders. Its plumage is gray and white with a distinctive black cap and a pair of white plumes that extend from the back of the head. During the breeding season, the black feathers from the head and back emit a bluish-green gloss and the legs become red.

This bird is a nocturnal and noisy heron. While "day" herons and egrets are roosting during the night, the Black-crowned Night-Heron is up feeding on fish, frogs, crustaceans, small mammals and even the young of other colonial-nesting waterbirds. Their digestive acids are so strong that bones that are consumed simply dissolve in their stomachs.

Black-crowned Night Herons are colonial breeders and gregarious throughout the year usually among reeds in marshes, or up above the ground in trees. Their nests are seemingly

haphazard piles of reeds, sticks or twigs that may become very bulky over the years. Often, more than a dozen nests can be found in a single tree. Also roosts communal in the winter. Will nest with other herons. Male initially begins to build a new nest or refurbish an old one with 86% of birds using old nests. The males' twig ceremony gradually changes to nest building and may function to strengthen the pair bond.

Generally only 2-3 bluish-green eggs per clutch are laid between June and July. Eggs are laid in 2-day intervals, both parents incubate with eggs hatching in 23-26 days. After 2 weeks the young can leave the nest and after 3 weeks are often found clustered at top of a tree. One brood per year but will renest if first nest fails. Juvenile birds disperse widely in all directions after nesting, however, the northern populations have received much attention as it is in the opposite direction from normal migratory movements.

**Migration and Habitat.** This heron migrates in large flocks almost exclusively at night, resting during the daylight hours. Southward migration begins in late September or October following the Mississippi River system pathways. Birds begin to arrive in the northeast by the end of March. Birds prefer wetlands with equal proportions of water and vegetation. Use of habitats fluctuates accordingly to water levels. General habitats used by Black-crowned Night Herons includes swamps, streams, rivers, lakes, lagoons, canals, ponds and wet agricultural fields.

**Diet.** Main foods taken include leeches, earthworms, aquatic and

terrestrial insects, fish, lizards, rodents, snakes, eggs and plant material. It prefers to feed along shallow weedy pond margins and in marshes, primarily from evening to early morning but will feed during the day during the breeding season.

**Behavior.** Male chooses nest site and advertises for females. Pair formation begins with males performing "Snap Displays" in which they walk about in a crouch and lower extended head and neck with feathers of head and neck and back somewhat erect, and snap mandibles together. At the time of pair formation the legs of both sexes turn pink, back and head plumage has a glossy bluish-green sheen, lores become black. The white cranial plumes displayed during courtship aid in pair formation.

**Population Status.** Nesting individuals tend to be inconspicuous during aerial surveys, hence aerial surveys underestimate true numbers. No population data is available for all of North America as a whole. Little historic data exist for Manitoba (Koonz and Rakowski 1985). Drainage of wetlands may have caused some population declines due to loss of habitat.

In 1975 this species was listed on the National Audubon Society Blue List ("species which, in all or a significant part of their range, currently exhibit potentially dangerous, apparently non-cyclical population declines"), with Quebec and Ontario to the west coast also believed to be in population decline.



**Habitat Destruction.** Drainage of wetlands for development and agriculture, increased human disturbance, and usage of islands continues to threaten Black-crowned Night-Herons. Koonz and Rakowski (1985) also identified marsh drainage, pesticides, predators and human disturbance as the important limiting factors for this species.

In the past, Black-crowned Night Herons have been shot and trapped at fish hatcheries and hunted for food. Declines in many of its populations were probably attributable to the use of DDT. Black-crowned Night-Herons are high on the food chain and serve as excellent environmental indicators. They are being evaluated as an indicator of estuarine contamination by the U.S. Fish and Wildlife Service's National Contaminant Biomonitoring Program (Custer et al. 1991). Pesticide contamination (organochlorine) also has been demonstrated in eggs of Black-crowned Night-Herons.

### 4.3 Franklin's Gull

*Larus pipixcan*

Over 800 Franklin's Gull nests were recored at Proven Lake in 1966. These numbers do not meet IBA criteria but are nevertheless significant. Franklin's Gulls

nest in dense colonies, forage in flocks and commute to and from foraging sites (Kopachena 1987). It is a small, black hooded gull that nests in marshes of interior North America (Burger and Gochfeld 1994). "The Franklin's Gull depends on extensive prairie marshes for breeding, and entire colonies may shift from year to year depending on water levels. Once threatened by habitat loss due to large-scale drainage projects and the dust bowl years, this species has regained numbers with the creation of large wetlands, mainly on protected national wildlife refuges. Colony shifts continue to occur, however, influenced by drought and fluctuating water levels (Burger and Gochfeld 1994, p. 1)". Unless otherwise cited, the following life history information is from Burger and Gochfeld (1994).

#### **Historical Population Changes.**

Franklin's Gull requires large prairie marshes for nesting so depending on water levels colonies will shift nesting sites in favour of suitable sites. Many colonies disappeared entirely during the Dust Bowl years of the 1930s and these populations were not regained. Populations began increasing after the 1930s with the creation of wildlife refuges and protected areas of marshland. Many colonies have been destroyed as a result of wetland draining across the Canadian prairies. Franklin's Gulls are reported as a common breeder in southwestern Manitoba.

**Population Status.** North American population estimated at 500,000 birds. Some controversy over recent population trends. Based on U.S. Fish and Wildlife Service Breeding Bird Surveys, which reported a 7.4% annual decline or a 90% decline overall.

Negative trend is not consistent with reports from breeding colonies. Nesting habits of the Franklin's Gull which prefer remote, large marshes makes breeding birds difficult to survey. Main factors regulating populations are sufficient and suitable nesting habitats on large marshes. These marshes are vulnerable to drought, draining, and burning.

In Manitoba, Manitoba Conservation Data Centre (1996) ranks the Franklin's Gull as "apparently secure" with 5-6 main nesting colonies with 12,000 breeding pairs in 1994 (W. Koonz, personal communication, 2000).

#### **Habitat and Predators.**

Franklin's Gulls always nests over water on floating mats of vegetation, on muskrat houses or floating debris in inland freshwater marshes or lakes. Colonies are found in cattails (*Typha* spp.), bulrushes (*Scirpus* spp.), common reed (*Phragmites communis*) or other emergents. Nests are over water. Predators are mainly aerial or aquatic such as Mink (*Mustela vison*), Muskrat (*Ondatra zibethica*), Northern Harrier (*Circus cyaneus*), Great Horned Owl (*Bubo virginianus*), and Peregrine Falcons (*Falco peregrinus*).

**Food Habits.** Franklin's Gulls eats earthworms, grubs, insects, seeds, mice, fish, fish offal, crab, snails, and invertebrates. They usually forages in flocks in wet pastures. During the breeding season, feeds aerial on swarming insects and on water for aquatic insects as well as on the ground for earthworms and insects.

#### **Vocalizations and Behaviour.**

There has been considerable research on

Franklin's Gull vocalizations and behaviour. The vocal array includes an alarm call, long call, landing call, gakkering, and a mew call. Numerous displays have been identified such as wing-flapping, swoop and soar, threat, pursuit flights, upright, oblique, head-tossing, choking, and gakkering.

**Breeding.** Breeding is highly synchronous over a 21-d period. Arrives near breeding colonies in April (Dakotas and Minnesota). Subcolonies are formed around a series of epicentres which may later coalesce. Birds often nest on same water body year after year but will use a new colony site. Pair formation occurs prior to arrival at colony. Egg laying begins about 1-week after nest construction usually in early to mid-May in Minnesota. Eggs hatch late May to mid June. Clutch sizes range from two to four eggs with a modal size of three eggs.

**Conservation and Management.** Franklin's Gulls are sensitive to human disturbance early in the breeding cycle and will entirely desert a colony site with excessive exposure to humans. Nesting habitat degradation occurs during drainage of marshes or intentional drawdowns for management of waterfowl habitat. Gulls cause some degradation of habitat because of net contribution of nitrogen and phosphorus to immediate area of nesting. No management programs other than the Migratory Bird Convention Act. Maintaining large marshes and suitable water levels is main management technique.

## **5.0 Other Elements of High Conservation Value**

Within the surrounding area there are numerous lakes, wetlands and prairie potholes which have high conservation value. For example, Otter Lake attracts large numbers of migrating waterfowl and is a popular waterfowl hunting area. These areas represent significant breeding habitats for North America's waterfowl.

## **6.0 Land Ownership and Use**

The land within the wildlife management unit are Crown Lands that are protected from mining, logging and hydroelectric development. Lands around the lake are mainly private lands. Water levels in the lake serve as the property lines, so that when water levels increase, the amount of private lands decrease. This has resulted in conflicts over the control of water levels. For example, private landowners lose land when water levels are high that could otherwise be utilized for haying.

## **7.0 Conservation Management Achieved at the IBA Site**

### **7.1 Proven Lake Wildlife Viewing Project**

Proven Lake was recognized as a resource through which the local community and surrounding areas could potentially diversify their economies through sustainable ecotourism. It was estimated that if 3,000 people visited

Proven Lake in one year each spending \$50 in the local community over \$150,000 would accrue the area. The Proven Lake Wildlife Viewing Project (see Appendix III for conceptual plan) was an attempt to enhance opportunities for additional revenue generation and serve to educate the public on the need to sustain wild areas for the use of future generations. The proposed development plan was designed to support consumptive (hunting of waterfowl) and non-consumptive use of Proven Lake.

The goals of the proposal were to provide an attraction for tourists and special interest groups such as bird watchers and naturalists, while raising levels of environmental awareness on wetland ecosystems. The objectives were the develop a parking lot area, picnic area, washroom facilities, a viewing tower and interpretative signs on the east side of Proven Lake with road access to P.T.H. #10. An alternative access road on the south side of the marsh would have been developed to allow hunters access to islands and other areas of the marsh.

The project costs were estimated at \$25,000 in year one (1994), \$10,500 in year two and \$5,000 in year three. Funding sources included Manitoba Hydro, Ducks Unlimited, Shell Environmental Fund, Critical Wildlife Habitat program, Manitoba Telephone System, and the Environmental Innovations Fund. Local community groups consulted in this project were Erickson Chamber of Commerce (lead proponent); Department of Natural Resources; Department of Tourism (Watchable Wildlife Program); Critical Wildlife Habitat Program; Riding Mountain National Park; Whitemud

Watershed Conservation District; Department of Rural development; Rolling River First Nations; Local outfitters from Erickson and Onanole; and the Department of Highways and Transportation.

## 7.2 Wildlife Management Area

The Manitoba Wildlife Act provides for the designation of Crown lands as Wildlife Management Areas (WMA) for the better management, conservation and enhancement of the wildlife resource of the province.

The majority of the Proven Lake WMA consists of a 650-ha wetland situated in the heart of some of North America's most productive waterfowl breeding habitat. (Manitoba Conservation 2001).

## 7.3 Manitoba Heritage Marsh

Wetlands play a vital role in prairie soil, water and wildlife conservation. Manitoba's wetlands have been disappearing at an alarming rate. Paradoxically, their very productivity has contributed to their destruction. Farmers have been draining wetlands to increase production and accommodate larger machinery. On April 18, 1985, Manitoba Conservation partnered with Ducks Unlimited Canada, the Manitoba Naturalists Society, Wildlife Habitat Canada, and the Manitoba Wildlife Federation in an effort to designate, conserve, manage and develop some of the province's most significant marshes for the benefit of all Manitobans.

A Heritage Marsh is identified as a wetland with significant value for a diversity of wildlife, including waterfowl, shorebirds and furbearing animals and also provides important recreational, economic or educational benefits to people. Administration of the Heritage Marsh Program is the responsibility of Manitoba Conservation. The Manitoba Heritage Marsh Program offers new hope and security for our endangered wetlands and the diversity of wildlife they produce.

Proven Lake is a Manitoba Heritage Marsh based upon the following (Manitoba Conservation 2001):

- This 650 hectare wetland is within the Proven Lake WMA.
- This wetland is situated in the heart of North America's most productive waterfowl breeding habitat - the Prairie Potholes.
- Numerous species of waterfowl and colonial nesting birds breed here

## 8.0 IBA Stakeholder Group Activities

The Proven Lake IBA working group includes representatives from the Town of Erickson, Parks Canada (Riding Mountain National Park), Manitoba Conservation, Ducks Unlimited Canada, Biosphere Reserve, Onanole Fish and Game and Erickson High School.

Ducks Unlimited Canada has controlled water levels in Proven Lake 1981. Manitoba Conservation has been instrumental in designating Proven Lake as a Heritage Marsh.

## 9.0 Opportunities

### 9.1 Ecotourism

A study by Riding Mountain National Park in 1991 indicated that over 332,000 visits were made to the park each year. These users represent potential visitors for Proven Lake IBA which is only 10 miles from the park (Wasagaming). Bird watchers and other naturalists visit Riding Mountain National Park as a major viewing stop in Manitoba. Proven Lake IBA could provide an easily accessible birding site with alternative bird species for these ecotour groups. Proven Lake provides opportunities to view large numbers of waterfowl during spring and fall migrations that are not be found within the Riding Mountain National Park.

Currently, the local community of Erickson and surrounding communities who share the resource benefit very little, if at all, from the ecotourism expenditures in the area. The following information demonstrates ecotourism can diversify local economies.

The popularity of birding is growing according to research by Cordell et al. (1999):

- Birding is reported to be the fastest of all outdoor recreation activities tracked between 1980s and 1990s, it is moving toward attaining the status of America's most favored activities

- Participation in birding has grown from 12% in 1983 to 27% in more recent years.
- The highest percentage of birders (59.1%) bird in private areas with resort areas as the most frequent destination.
- Birders are a powerful force in helping secure and manage bird habitat, stewardship can be pursued through citizen science.

Scace et al. (1992) defined ecotourism as *"Ecotourism is an enlightening nature travel experience that contributes to conservation of the ecosystem while respecting the integrity of host communities"*.

Ecotourism is a significant component of the largest growth industry on Earth - tourism (Scace et al. 1992). Tourism worldwide is a \$250 billion dollar per year industry and growing dramatically (Scace et al. 1992), bird watching in Point Pelee National Park in Ontario generates \$6 million annually. Ecotourism can provide the economic justification to conserve areas that might otherwise not be protected. Bird watching is a significant component of ecotourism. Bird watching is conservatively estimated to be worth more than \$20 billion each year in North America. Proven Lake and the significance its avifauna is an identified ecotourist "product".

There is a need to market and coordinate ecotourism opportunities to benefit the local community of Erickson. Ecotourism can create jobs. The willingness of individuals to "pay substantially" for ecotourism

opportunities is high, as evident in the fees charged for 13-day birding tours from Winnipeg which average about \$2500 per person. Research indicates that the key concepts underlying ecotourist motivations are wilderness, wildlife, parks, learning, nature and physical activity (Eagles 1997).

"Ecotourism can generate badly needed revenue for local and regional economies, heightened local awareness of the importance of conservation, and create new incentives for governments and dwellers in and around appealing natural areas to preserve them" Scace et al. (1992, p. 11)

## 9.2 TransCanada Trail



The TransCanada Trail, along the south end of Proven Lake (50° 31 21.2" N; 99° 59 18.4" W), provides a slightly elevated area from which birders may observe Proven Lake (see above photo). There is opportunity to partner with the TransCanada Trail to foster wetland awareness and promote Proven Lake as a ecotourism destination.

## 9.3 Elkhorn Resort

The Elkhorn Resort attracts many visitors, many from Europe. There exists an opportunity to promote Proven Lake as an ecotour destination for visitors of Elkhorn Resort.

## 9.4 Education

This is an opportunity to use Proven Lake as a "living classroom" for use by students from the Erickson High School. Senior students from the Erickson Collegiate could incorporate field activities from the 40S biology course with research projects at Proven Lake. Using Proven Lake as their study area and the Black-crowned Night-Heron as the chosen species of interest students could:

- Identify components of the Proven Marsh ecosystem, and investigate the habitat and niche of the Black-crowned Night-Heron;
- Describe the effect of biotic factors - food supply, competition, predators, parasites, and disease on the population of Black-crowned Night-Heron;
- study community interactions - the Black-crowned Night-Heron is high in the food chain and will be affected by populations of other species lower in the food chain;
- identify and measure abiotic factors;
- identify and measure abiotic factors;

- identify topographical/geographical factors;
- perform a population survey;
- produce text and images for an educational sign.
- provide community presentations on their results.

Project partners such as Ducks Unlimited Canada, Manitoba Conservation, Erickson Game and Fish, and Riding Mountain National Park would provide both equipment and expertise to help develop and deliver the Proven Lake living classroom program.

Programs available that maybe of use:

**Marsh Monitoring Program.** Bird Studies Canada (Box 160, Rowan, Ontario). Established to aid the conservation and rehabilitation of marshes in Canada by studying population changes and habitat requirements of marsh birds and amphibians.

**Ducks Unlimited's Wetland Ecosystems III Educators Guide High School grades 9 to 12.** A 31-page student manual for grades nine to twelve. Six lesson plans including field trip activities for use at a local wetland. Subject areas include environmental impact, environmental solutions, biodiversity, sustainable development, wetland types, pollution and taxonomy. Download from [www.ducks.ca/edu/resource.html](http://www.ducks.ca/edu/resource.html)

### **9.5 Little Saskatchewan River Watershed Enhancement Project.**

There is opportunity to partner with the Little Saskatchewan River Watershed Stakeholder Committee which is comprised of representatives from local fish and game clubs, landowners and the government of Manitoba. Enhancement objectives include reducing nutrient and sediment loading along stream banks impacted by livestock and protecting fish and wildlife habitat. Enhancement of riparian habitats will benefit and support avian populations.

## **10.0 Threats**

### **10.1 Habitat Loss**

In natural areas surrounded by agricultural fields, modern agricultural practices, such as the use of herbicides and pesticides, can have detrimental effects on wildlife. The conversion of natural areas to agricultural lands also changes the amount of habitat available for wildlife, and can affect the functioning of the remaining natural areas. Marsh and wetland areas can dry up when too much water is diverted for agricultural irrigation or other purposes. These considerations exist as potential threats to the viability of this site as a significant habitat for a variety of nesting bird species and other wildlife.

### **10.2 Onanole Sewage Lagoon**

The Onanole Sewage Lagoon (Rural Municipality of Parks) is a potential threat to Proven Lake. It is presently comprised of holding cells

only, and is used by local cottages as a dumping site. The lagoon may potentially be used by the hamlet of Onanole and would then represent a threat Proven Lake.

### 10.3 Avian Botulism at Proven Lake

Botulism outbreaks are common and a natural occurrence at Proven Lake. Avian botulism results from "food poisoning" with a neurotoxin produced predominantly by the bacterium, *Clostridium botulinum* type C. The organism is a strict anaerobe which forms dormant spores in the presence of oxygen and other adverse environmental conditions. Spores of type C botulism are widely distributed in wetland sediments and in the tissues of aquatic insects, mollusks, and vertebrates. Despite the widespread distribution of type C botulism spores outbreaks of avian botulism are sporadic and unpredictable.

In 2000, it was estimated that between 4,000 and 5,000 birds died as a result of a botulism outbreak (Jean Rosset, Ducks Unlimited Canada, personal communication). The Double-crested Cormorant colonies on the west end of the natural rock island were impacted with all age groups of birds found dead in 2000. Dead American White Pelicans and Canada Geese were also found in 2000.

### 10.4 Exotic Invasive Species

Second only to habitat loss, invasive alien species such as Purple

Loosestrife (*Lythrum salicaria*) and Leafy Spurge (*Euphorbia esula*) present the greatest threat to the biological diversity of our natural ecosystems. Other aquatic exotic species of concern, not presently known to be in the IBA, include Eurasian water-milfoil (*Myriophyllum spicatum* L.) and Salt Cedar (*Tamarix ramosissima*). Purple Loosestrife, already found throughout southern Manitoba, also has the potential to invade the of numerous water bodies present in the IBA.

### 10.5 Pesticides

(Canadian Wildlife Service 2001)

Farming is a major landuse within the RM of Lakeview. The use of pesticides on farmland has further reduced the amount of safe habitat available for birds that already have to make do with fragmented habitat including small woodlots, hedgerows, shelterbelts, and farm ponds for nesting or feeding. Even habitats bordering agricultural fields can become a liability if pry items are inadvertently poisoned by insecticides. In forested habitats, herbicide use, such as in forestry, may cause ground-dwelling birds to lose the leafy cover that protects them from predators and bad weather. The potential for the herbicides to drift through the air and contaminate wetlands such as the Proven Marsh through water runoff is also a concern. There is a need to monitor the impacts of pesticides on bird habitats within the IBA.

## 11.0 Conservation Goals and Objectives

**Problem Statement:** There is little awareness of Proven Lake and its significance as an important ecological site within Manitoba. The local community of Erickson and surrounding areas are not aware of the ecological significance of Proven Lake.

**Main Objectives:**

- Use the Black-crowned Night-Heron as a key stone species for an on-going study of Proven Lake;
- Increase community awareness on the ecological significance of Proven Lake;
- Increase awareness within the local community on the roles wetlands play in our environment;
- Create partnerships among schools, community groups, and local conservation organizations.

The Proven Lake IBA working group has identified a number of areas of conservation interest and these are described below. Some threats such as drainage, and avian botulism, and pesticides should be addressed at a later point. The following conservation objectives are not ranked in any level of priority.

**11.1 Education**

| <i>Objective</i>  | <i>Action Required</i>  | <i>Key Partners</i>  |
|---|---|--|
| Increase community awareness of Proven Lake through the Erickson High School. | <p><b><i>IBA Marsh Monitoring Project</i></b></p> <p>This will be achieved by utilizing Proven Lake as a living classroom to be used by ecology students from Erickson High School.</p> <p>Elements of the ecology course may include students developing interpretative signage and undertaking in bird surveys.</p> | <p>Local stakeholder groups such as Ducks Unlimited Canada, Erickson Game and Fish Association, Manitoba Conservation and Riding Mountain National Park, will lend their expertise towards development of the ecology course.</p> <p>Stakeholders groups would become part of the ecology course demonstrating how they manage avian species and Proven Lake.</p> <p><b>Lead Agency: Erickson High School</b><br/> <b>Timeline: Finish Fall 2001</b></p> |

**11.2 Research**

| <i>Objective</i>                                      | <i>Action Required</i>  | <i>Key Partners</i>   |
|---|---|---|
| Conduct an survey of Bird Species using Proven Marsh. | <p>Assess Annual Population Trends of significant bird species using Proven Lake. This may be accomplished by students from Erickson High School.</p> | <ul style="list-style-type: none"> <li>• Erickson High School</li> <li>• Manitoba Conservation</li> <li>• Ducks Unlimited Canada</li> <li>• Erickson Fish and Game</li> </ul> <p><b>Lead Agency: Manitoba Conservation &amp; Erickson Ecology Course</b><br/> <b>Timeline: Begin 2001</b></p> |

|  |   |  |
|--|---|--|
| <p>Band Black-crowned Night Herons to determine migration routes and overwintering habitats.</p> | <p>Maybe accomplished by Erickson High School students under supervision of a project partner banding permit.</p> | <ul style="list-style-type: none"> <li>• Erickson High School</li> <li>• Manitoba Conservation</li> <li>• Ducks Unlimited Canada</li> <li>• Erickson Fish and Game</li> </ul> <p><b>Lead Agency: Erickson High School.</b><br/> <b>Timeline: Summer 2001</b></p> |
|--|---|--|

## 12.0 Evaluating Success

The Proven Lake IBA community conservation plan will be reviewed on an annual basis by the present working group comprised of community stakeholder groups.

### Acknowledgements

I wish to thank Ducks Unlimited for supplying in-kind office space and staff time. I thank to the Murphy Foundation and Sustainable Development Innovations Fund for providing project support and Bill Tedford (Ducks Unlimited Canada) provided Proven Lake Landsat 5 May 1986 image. Larry Bidlake is thanked for proving information and comments on past conservation projects. The IBA program is part of the Natural Legacy 2000 program, a nationwide initiative to conserve wildlife habitats on private and public lands. We gratefully acknowledge the financial support of the Government of Canada's Millennium Partnership Program.

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**Underwood McLellan Ltd. June 1984.** Rolling River/Proven Lake Flood Study.  
Ducks Unlimited Canada, Winnipeg, Manitoba.

**Appendix I: Contacts for Proven Lake IBA and CCP.**

| <i>Name</i>   | <i>Organization</i>  | <i>Contact Numbers</i>   |
|---|--|--|
| <b>Cory Lindgren</b><br>IBA Community<br>Conservation Planner | Manitoba IBA Program<br>Box 1160, Stonewall<br>Manitoba, R0C 2Z0                                       | Ph: 204-467-3269<br>Fx: 204-467-9028<br>c_lindgren@ducks.ca  |
| <b>Imeke Kerr,<br/>Councilor</b>                              | Town of Erickson<br>Box 103, Erickson<br>MB R0J 0P0  | Ph: 636-2982 (Home)<br>Library Ph: 636-2325<br><a href="mailto:Imekerkerr@hotmail.com">Imekerkerr@hotmail.com</a>                                    |
| <b>Heather Duncan<br/>Teacher</b>                             | Erickson High School<br>Erickson, Manitoba   | Ph: 204-636-2605<br>hed@mb.sympatico.ca  |
| <b>Ken Manery<br/>President</b>                               | Erickson Game and Fish<br>Association<br>Box 686<br>Erickson, R0J 0P0                                  | Ph: 204-636-7700   |
| <b>Jean Rosset</b>  | Onanole Game and Fish  | j_rosset@ducks.ca  |
| <b>Ken Kingdon</b>  | Parks Canada   | Ph: 848-7240<br><a href="mailto:Ken_Kingdon@pch.gc.ca">Ken_Kingdon@pch.gc.ca</a>   |
| <b>Larry Bidlake</b>  | Manitoba Conservation<br>Brandon-1129 Queens Ave<br>R7A 1L9  | 1-204-726-6296   |
| <b>John Whitaker</b>  | Chairperson<br>Riding Mountain Biosphere<br>Reserve and CBRA<br>Box 399, Erickson, Manitoba<br>R0J 0P0 | <b>Telephone</b> (1.204) 636 2595<br><b>Fax</b> (1.204) 636 2595<br><b>E-mail</b> <a href="mailto:jwhitaker@techplus.com">jwhitaker@techplus.com</a> |
|   |  |  |

|                            |  |  |
|----------------------------|--|--|
| <p><b>Dave Clayton</b></p> | <p>Ducks Unlimited<br/>Brandon, Manitoba</p> | <p>Ph: 204-729-3511<br/>d_clayton@ducks.ca</p> |
|----------------------------|--|--|

## Appendix II: IBA Canada Partners

### 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 partnership of non-governmental conservation organizations, grouped together within geographic regions (e.g. Europe, Africa, Americas) for the purpose of planning and implementing regional programs. These organizations 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 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 our provincial, territorial and local

affiliated naturalists organizations to directly reach 100,000 Canadians.

The strength of our grassroots naturalists' 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.

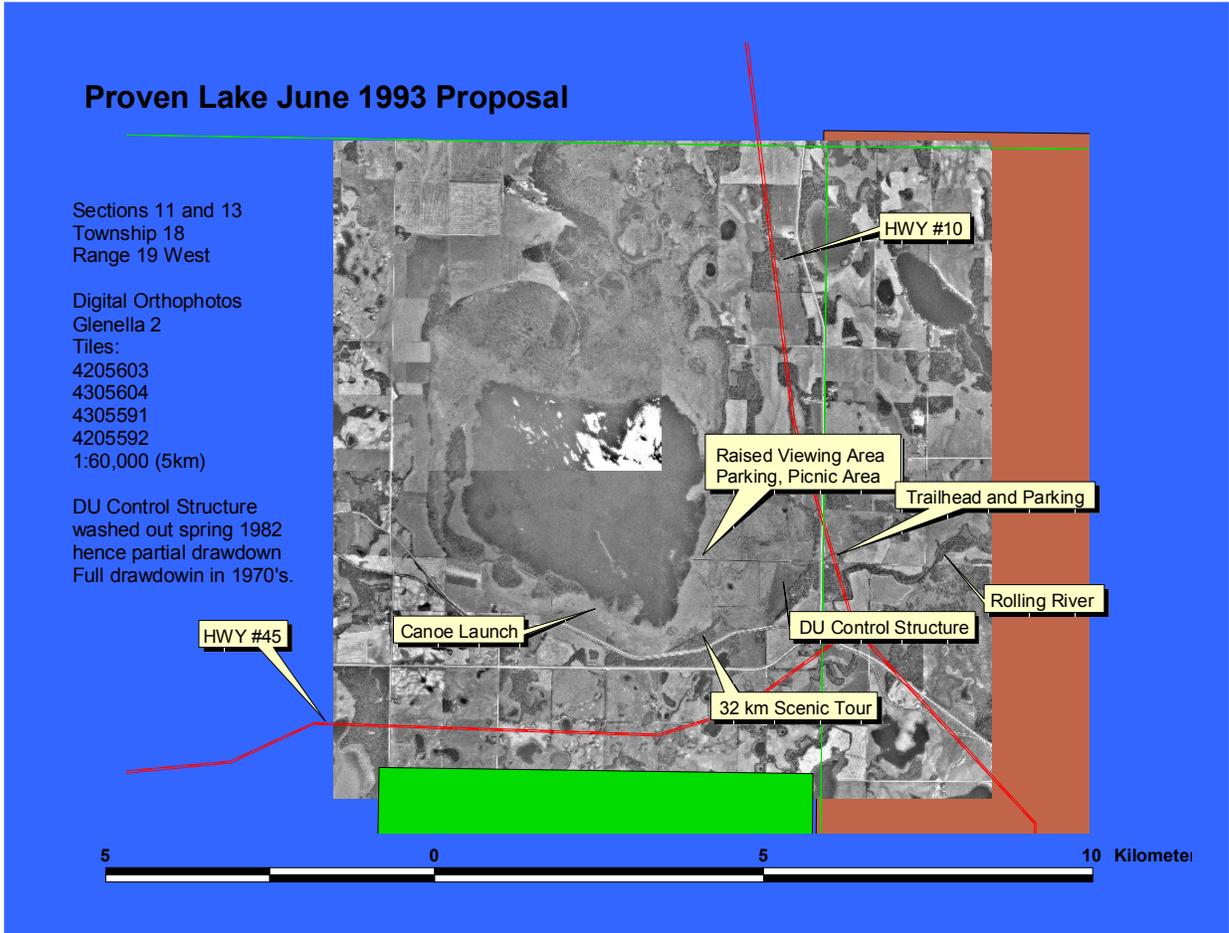
Our approach is open and cooperative while remaining firm in our goal of developing ecologically-sound solutions to conservation problems. CNF's web site is <<http://www.cnf.ca>.

### Bird Studies Canada (BSC)

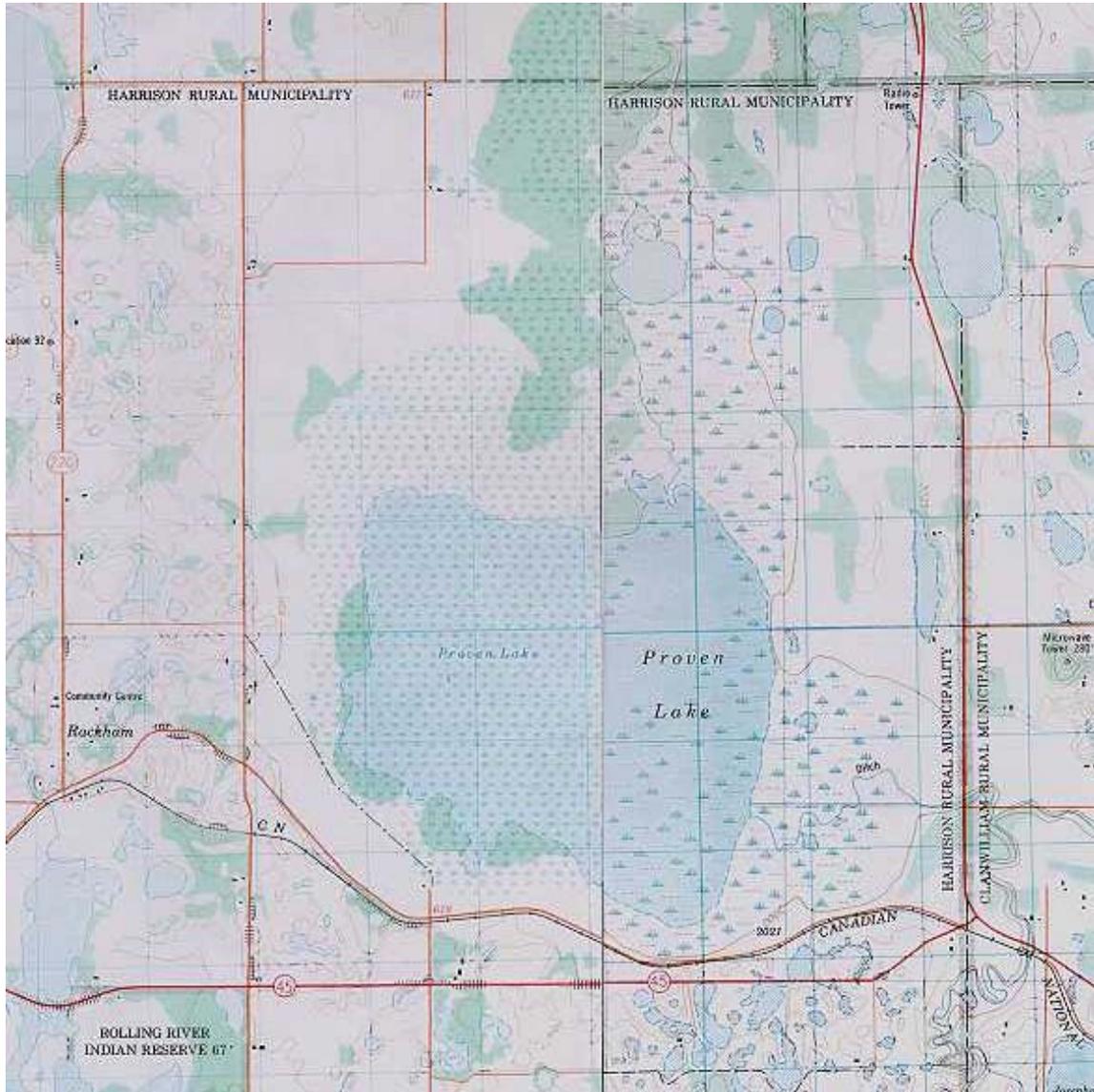
The mission of Bird Studies Canada is to advance the understanding, appreciation and conservation of wild birds and their habitats, in Canada and elsewhere, through studies that engage the skills, enthusiasm and support of its members, volunteers, staff and the interested public. Bird Studies Canada 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.

Bird Studies Canada 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. Bird Studies Canada's web site is <<http://www.bsc-eoc.org/>.

### Appendix III: June 1993 Conceptual Development Plans



## Appendix IV: Map of Proven Lake



**Appendix V: Historical Bird Records.**

| <b>Species</b>                | <b>Season</b> | <b>No. of birds Peak Day</b> | <b>References</b>         |
|-------------------------------|---------------|------------------------------|---------------------------|
| Black-crowned<br>Night- Heron | B             | 200 nests (1995)             | David Hatch               |
| Black-crowned<br>Night-Heron  | B             | 300+ (1982)                  | DU Report <sup>1</sup>    |
| Eared Grebe                   | B             | 150 nests (1996)             | David Hatch               |
| Franklin's Gull               | B             | 800 nests (1966)             | David Hatch               |
| Forester's Tern               | B             | n/a                          | B. Koonz (PC)             |
| Ring-billed Gull              | B             | n/a                          | B. Koonz (PC)             |
| Mallards                      | FM            | 1200 (Sept 4 1981)           | Sexton (1981)             |
| Mallards                      |               | 500                          | DU Report                 |
| Mallard                       | FM            | 2,480 (Oct 4 1973)           | Beacham & Brace<br>(1975) |
| Blue-wing Teal                | FM            | 500 (Sept. 4 1981)           | Sexton (1981)             |
| American Coot                 | FM            | 250 (Sept. 4 1981)           | Sexton (1981)             |
| American Coot                 |               | 2000 (1982)                  | DU Report                 |
| American Coot                 | FM            | 8,800 (Sept 13 1972)         | Beacham & Brace<br>(1975) |
| Canada Geese                  | FM            | 2 (Sept. 4 1981)             | Sexton (1981)             |

*Foot Notes:*

1. Ducks Unlimited Report signed by John Morgan, June 5, 1982. Night Herons were found in the southeast central portion of the basin.
2. (PC) Personal Communication
3. B (breeding); FM (fall migration).

## Appendix VI: Funding Opportunities

The following funding opportunities are available to assist with delivery of project objectives:

- **Important Bird Areas Community Action Fund.** Contact the Canadian Nature Federation. ([www.ibacanada.ca](http://www.ibacanada.ca))
  - **Manitoba Government Special Conservation Fund.** Set up to promote sustainable development at the community level. Finances conservation projects that local groups and organizations support and need in their communities, that sustain and enhance resource productivity and improve the quality of life of all Manitobans. Eligibility includes non-government conservation organizations capable of administering the funding such as: community groups and associations; school and youth groups; conservation groups; environmental groups. Funding is limited to \$25,000 per project per organization, per year. Cover only direct spending on projects, not administrative costs. Examples of projects include: conserving wetlands; tree planting and enhancement of woodlands; fish and wildlife habitat restoration and protection.
  - **Manitoba Government Sustainable Development Fund.** Ecosystem Conservation - Conservation of resources, preservation and maintenance of urban forests and ecosystems, initiatives to rehabilitate and revitalize degraded areas. Projects that help Manitobans make educated decisions and take action regarding the environment, such as education and awareness activities, training, research, seminars and forums. A project-funding cap of \$50,000 has been set, however, projects that require funding in excess of this amount may be considered. Applicants are encouraged to investigate alternative funding arrangements with other agencies for cash contributions or in-kind support. In-kind support can include donations of equipment, materials, office space, volunteer time and professional service. The SDIF will normally support one-time only grants. For further information: Sustainable Development Innovations Fund- c/o Manitoba Conservation - Pollution Prevention Branch - 123 Main Street, Suite 160 - Winnipeg MB R3C 1A5. Phone: (204) 945-8443 - Toll Free: 1-800-282-8069 ext 8443 - Fax: (204) 945-1211.
  - **Ducks Unlimited Canada. Institute for Wetlands and Waterfowl Research.**
- 
- **Wildlife Habitat Canada.** 7 Hinton Avenue North, Suite 200. Ottawa, ON K1Y 4P1 . Telephone: (613) 722-2090. Fax: (613) 722-3318 . Email: [reception@whc.org](mailto:reception@whc.org)
  - **Murphy Foundation (Winnipeg).**
  - **Environment Canada EcoAction 2000.** The EcoAction Community Funding Program is an Environment Canada program that provides financial support to

community groups for projects that have measurable, positive impacts on the environment. Non-profit groups and organizations are eligible to apply to the Funding Program. This includes, but is not limited to: community groups, environmental groups, aboriginal groups and First Nations councils, service clubs, associations and youth and seniors' organizations. Public awareness and capacity-building activities can only be funded if they are part of a project that produces measurable environmental results. Project examples - restoring a wetland, • restoring and conserving habitat through a variety of enhancement techniques, and persuading community members to protect environmentally sensitive areas. Funding is available up to a maximum of \$100 000; however, the average amount is \$25 000. Application deadlines - February 1<sup>st</sup> and October 1<sup>st</sup>

- **Mountain Equipment Co-op.** To provide financial assistance to Canadian environmental groups involved in activities concerned with environmental conservation and wilderness protection. The aim of the Environmental Project Grants is to help preserve the environment and educate the public about environmentally responsible use of the outdoors. Land acquisition grants will be up to an aggregate of \$100,000 annually. The grant range for projects is generally from \$2,000 to \$10,000. Application deadline - January 31, May 31 and September 30, annually. Approval notification usually takes up to 6 weeks.
- **Friends of the Environment Foundation Canada Fund.** Canada Trust. To fund projects that make a positive difference to the environment. Projects may be local, regional or national in scope. Not-for profit organizations. Projects that: help protect and preserve the Canadian environment; address a local, regional, or national environmental issue; have measurable results; involve and benefit the community, region, and country; and make a sustainable difference to the well-being of our environment. Funding ranges from \$10,000 to \$100,000. Projects are approved as a one-time grant and should not expect ongoing funding. Applications are reviewed on an annual basis. The deadline for 1998 applications was October 2, 1998. The Friends of the Environment Canada Fund Advisory Board will announce its decision by April 1998. A new deadline is set each year. Application forms are available by writing to the address below or from the website below. Contact Friends of the Environment Foundation Canada Fund. Canada Trust, 161 Bay Street, 33rd Floor, Toronto, Ontario, M5J 2T2. Tel.: 1-800-361-5333, Website: <http://www.fef.ca/index.html>
- **Manitoba Hydro (Winnipeg).** Brendan Carruthers 204-474-4934
- **Shell Environmental Fund.** Shell Canada. A national program to provide financial support for innovative, community-based, action-oriented projects that improve and protect the Canadian environment. \$5,000. Deadlines for applications are February 28 and September 15. Applicants must complete the Shell Environmental Fund application form, which can be obtained by writing to the address below. Contact: Nicole Belval, Shell Environmental Fund, 7101 Jean-Talon Street East, Suite 900 Anjou, Quebec Tel.: (514) 356-7036 Fax.: (514) 356-1662. Website: <http://www.shellcan.com>

- **Manitoba Rural Green Team.**
- **ENVIRONMENTAL PARTNERS FUND.** The Environmental Partners Fund provides up to 50% of eligible project cost, on a matching basis, to a maximum of \$200,000 over three years for new community-based activities that protect, preserve or restore the environment, or provide knowledge on environmental issues that enable people to take direct action. Canadian non-profit, non-governmental groups working at the community level are eligible. Applications must be submitted by June 1 and December 1 each year. Applications for projects with a total value not exceeding \$20,000 may be submitted throughout the year. Information and applications may be obtained from Environment Canada regional offices, or: Sonya Strasbourg Environment Canada Hull, Quebec (819) 994-4939; Fax 994-1245.
- **Friends of the Environment Foundation Community Fund.** The Friends of the Environment Foundation Community Fund considers projects that meet the following criteria: protects and preserves the Canadian environment; assists young Canadians in understanding and participating in environmental activities in local communities; enhances partnership among environmental organizations. Applications to the Community Fund are reviewed throughout the year. <http://www.canadatrust.com/>