

**COMMUNITY  
CONSERVATION PLAN**  
for the  
**Southwestern Manitoba  
Mixed-grass Prairie  
IMPORTANT BIRD AREA**

**A Grassland Bird Initiative for Southwestern Manitoba's -**

- **Poverty Plains**
- **Lyleton-Pierson Prairies**
- **Souris River Lowlands**

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**Preamble.**

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

The local community contact for the plan will be Murray Cameron (see contact list).

## Executive Summary

### Southwestern Manitoba Mixed-grass Prairie IBA Site

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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. In Manitoba, the IBA program is being delivered and administered by the Manitoba Naturalists Society. Conservation planning in Manitoba began in August of 1999.

#### The Southwestern Manitoba Mixed-grass Prairie

Native prairies are recognized by many as the most imperiled ecosystems worldwide. In this century much of the native prairie in Canada has been cultivated or otherwise irretrievably modified by agricultural activities, hence, the unique avian assemblages associated with these grasslands are also in danger. Grassland area bird populations have shown steeper, and more geographically widespread declines than any other guild of North American birds.

Mixed-grass prairie and improved grasslands in extreme southwestern Manitoba have accounted for the majority of recent endangered and threatened grassland bird records in Manitoba. The southwestern Manitoba mixed-grass prairie IBA will include three of the most significant of these areas in extreme southwestern Manitoba: the Poverty Plains, the Souris River

Lowlands and the Lyleton-Pierson Prairies.

**The Poverty Plains.** Sandy soils stretching from Pierson to Broomhill and associated with an ancient shoreline of glacial Lake Souris form what is locally known as the Poverty Plains. This area contains some of the most extensive grassland remnants in southern Manitoba. The Poverty Plains represent one of the highest priority grassland habitats in southwestern Manitoba for conservation of grassland species at risk. Extensive, open pastureland and haylands in this area are particularly important to the maintenance of species like the Ferruginous Hawk, Loggerhead Shrike, Baird's Sparrow, and Sprague's Pipit.

**Souris River Lowlands.** This is the second largest grassland complex in southwestern Manitoba incorporating grassland tracts along the Souris River Valley from Melita to the U.S. border. This area harbors healthy populations of grassland species like the Ferruginous Hawk and Baird's Sparrow and some of the most spectacular scenic vistas in southwestern Manitoba. It also has many unique archaeological finds such as teepee rings, buffalo jumps, Indian burial mounds and supports some of Canada's last known remaining Buffalograss stands.

**Lyleton-Pierson Prairies.** Grassland complexes west of Lyleton contain many of the best native mixed-grass prairie remnants in Manitoba. Grasslands in this area also support healthy numbers of several threatened grassland birds. This was one of the last

strongholds in Manitoba for the Burrowing Owl. In the 1930s and the 1940s, hundreds of miles of field shelterbelts were established to minimize soil erosion in two particularly sandy townships in the Lyleton-Pierson area. Most of these shelterbelts remain, supporting healthy populations of Loggerhead Shrikes and other southwestern Manitoba specialties.

When combined, grassland complexes in the Poverty Plains, Souris River Lowlands and the Lyleton-Pierson Prairies account for a large proportion of Manitoba's overall nesting populations of grassland birds. Surveys from 1987 to 2000 revealed that grassland areas within this IBA have accounted for 60% of the Baird's Sparrows, 57% of the Loggerhead Shrikes, 53% of the Ferruginous Hawks and Sprague's Pipit and 39% of the Burrowing Owls that were found in Manitoba.

### Significant Bird Species

The Southwestern Manitoba Mixed-grass Prairie is recognized as a Canadian Important Bird Area based upon numbers of Ferruginous Hawks and Loggerhead Shrikes. The IBA contains at least 1 or 2% of the Canadian population of these species (see Appendix 1). Several grassland birds that are at risk nationally or provincially have distributions that roughly parallel the extent of extensive grassland complexes in southwestern Manitoba. These include the:

- Ferruginous Hawk  
(*Buteo regalis*);
- Burrowing Owl  
(*Athene cunicularia*);
- Loggerhead Shrike

- (*Lanius ludovicianus excubitorides*);
- Baird's Sparrow  
(*Ammodramus bairdii*);
- Sprague's Pipit  
(*Anthus spragueii*).

These five species share a common problem - the loss or modification of critical grassland habitat. The **Ferruginous Hawk** is listed as an endangered species in Manitoba, but was recently down-listed nationally from threatened to vulnerable. After disappearing in Manitoba for nearly 60 years, it was rediscovered nesting near Lyleton in 1982. Numbers built up rapidly and stabilized at 50-55 pairs during the late 1980s and early 1990s. Nesting populations have declined to under 40 pairs in recent years.

Surveys since 1987 have revealed that the extreme southwest remains the last stronghold for the western subspecies (*excubitorides*) of the **Loggerhead Shrike** in Manitoba. This subspecies is considered threatened nationally and listed as endangered in Manitoba. Nesting populations in southwestern Manitoba peaked at over 300 pairs in the early 1990s. Since then, they have declined to just over 100 known nesting pairs.

### Other Bird Species

There are a diversity of grassland bird species found in the IBA which do not meet IBA population criteria but demand conservation attention based on their declining populations.

Nesting populations of **Burrowing Owls** in Canada have declined with the onset of modern

agricultural practices in the early to mid-1900's. As recently as the late 1980s, more than 30 pairs were known to nest in southwestern Manitoba. Listed as threatened in Canada during the mid-1980s, its national status was upgraded to endangered during the mid-1990s due to accelerated declines throughout its prairie range. In Manitoba, the species currently nests in only a handful of locations and is in danger of being extirpated.

The **Baird's Sparrow** and **Sprague's Pipit** have suffered population declines roughly proportional to the demise of native prairie in the Canadian Prairie provinces and Northern Great Plains. The Baird's Sparrow is listed as endangered in Manitoba and was listed as threatened nationally until research in the early 1990s showed larger than previously suspected populations in parts of the Canadian prairies. The Sprague's Pipit is also a native prairie specialist and was just recently added to Canada's threatened species list. Both species have a very small nesting range, restricted to the Northern Great Plains. Breeding Bird Surveys have shown alarming declines for both species since surveys began in the mid-1960s.

### **Past Conservation Efforts**

Past conservation efforts with private land owners have focused on short-term leases and relying on the goodwill of landowners to protect critical grasslands for endangered species and mixed-grass prairies. Ongoing initiatives ongoing to conserve grassland habitat include the Mixed-grass Prairie Preserve initiative and the Mixed-grass Prairie Stewardship

Program. Manitoba Conservation currently monitors populations of grassland birds in the IBA and has installed artificial nesting structure for Ferruginous Hawks in some areas.

### **Threats**

Threats to grassland birds in the IBA include chemical pollutants, loss of critical Mixed-grass Prairie habitat, the introduction of exotic alien weeds such as Leafy Spurge, grazing management, encroachment of woody vegetation, and the direct and indirect impacts of roads.

### **Conservation Goals and Objectives**

Based out of Melita, Manitoba, an IBA working group was formed to develop an IBA community conservation plan (CCP). The intent of this CCP will be to increase awareness of the bird species associated with the important grassland complexes in southwestern Manitoba and to promote the ecotourism potential of the area. Urban and rural landowners in the area stand to benefit from increasing ecotourism. Currently, an estimated 200-300 birders and nature enthusiasts from around the world annually visit towns and grassland areas associated with this IBA.

Awareness may be fostered through the following actions:

- development of an educational website and a self-guiding birding brochure;
- signs for the town of Melita advertising it as the "***Grassland Bird Capital of Manitoba***".

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## 1.0 Introduction

The declines of grassland birds since the mid 1960s can be explained in part by disappearing and the fragmentation of grasslands (Houston and Schmutz 1999). Grasslands in southwestern Manitoba have consistently accounted for a majority of the endangered grassland bird nesting sites in Manitoba. Grasslands in southwestern Manitoba are being lost and populations of grasslands birds in these areas are declining.

The Southwestern Manitoba Mixed-Grass Prairie Important Bird Area is comprised of three habitats known locally as The Poverty Plains, Souris River Lowlands and the Lyleton-Pierson Prairies. All three sites are within 20-km of each other but are not contiguous. Since all three areas are in the Mixed-grass Prairie ecosystem, generally support the same assemblages of grasslands birds, and have similar threats and management concerns, all three areas will be addressed within one IBA conservation plan.

### 1.1 The Poverty Plains

During the drought years of the 1930s farmers attempted to cultivate the sandy soils in the area but abandoned their attempts leaving the area with the nickname: Poverty Plains (Senecal 1999). The Poverty Plains are located between Broomhill and Pierson on an ancient beach ridge of glacial Lake Souris (Senecal 1999).

The Poverty Plains are the largest remaining grassland complex in

southwestern Manitoba. They extend from Pierson to west of Broomhill and are comprised of 53 sections in three townships (3-28, 4-28 and 5-28) that have suitable habitat for endangered grassland birds see Figure 1 and Appendix VI). The extensive, open pastureland and haylands in this area are particularly important to the maintenance of endangered grassland birds.

Poverty Plains supported 28% of the Ferruginous Hawks, 24% of the Baird's Sparrows, and 22% of the Loggerhead Shrikes in Manitoba during surveys conducted between 1987-1991 (see Appendix IV). The Poverty Plains may also be critical to the maintenance of satellite populations of these species in surrounding agricultural lands. Healthy Loggerhead Shrike populations immediately south (in the Lyleton shelterbelts) and immediately west (in primarily cultivated areas south of Tilston) may be dependent on the Poverty Plains for their continued survival. Few Burrowing Owls were found in these three townships comprising the Poverty Plains representing only 4% of the known nesting sites in Manitoba between 1987-1991.

### 1.2 Souris River Lowlands

This is the second largest grassland complex in southwestern Manitoba, comprised of 50 sections with suitable habitat, straddling five townships (1-26, 2-26, 3-26, 1-27, and 2-27). The area stretches from the U.S. border to just south of Melita (see Figure 1). Grasslands in these five townships accounted for 11% of the Ferruginous

Hawks, 10% of the Burrowing Owls, and 7% of the Baird's Sparrows recorded from 1987 to 1991. Loggerhead Shrikes were rarely recorded in this area and represented less than 1% of Manitoba's Loggerhead Shrike population

### 1.3 Lyleton-Pierson Prairies

Grasslands west of Lyleton have been identified as some of the best native Mixed-grass Prairie in Manitoba (see Figure 1). The Lyleton-Pierson area contains 31 sections in Townships 1-29 (west of Lyleton) and 2-29 (south of Pierson). These two townships accounted for 13% of the Burrowing Owls and Baird's Sparrows, 7% of the Ferruginous Hawks, and 6% of the Loggerhead Shrikes recorded in Manitoba from 1987-1991 (see Appendix IV).

## 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 (December 1999) and the Manitoba Sustainable Development Innovations Fund (March 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:

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

### 3.0 IBA Site Information

**Name:** Southwestern Manitoba Mixed-grass Prairie IBA

**IBA site number:** CAMB024

**Elements:** Poverty Plains  
Souris River Lowlands  
Lyleton-Pierson Prairies

**Total Area:** 20,904 ha

| IBA                             | No. of Sections | Estimated Area - ha |
|---------------------------------|-----------------|---------------------|
| <i>Poverty Plains</i>           | 53              | 8,268 ha            |
| <i>Souris River Lowlands</i>    | 50              | 7,800 ha            |
| <i>Lyleton-Pierson Prairies</i> | 31              | 4,836 ha            |

### 3.1 Towns

Melita is the largest town in the IBA area and is located approximately 33 km north of the US border, and 37 km east of the Saskatchewan border. Landuse in the Melita area includes producing grain, livestock, oil, and mined aggregates. Tourism and recreation, health and education play an ever increasing role in the community. Melita was incorporated as a village in 1902 and then as a town in 1906. Melita has since grown to a population of 1,152 (Melita 2001).

Surrounding the Poverty Plains are the towns of Pierson and Broomhill. Reston is found along PTH #2,

Pipestone can be found at the junction of PTH #2 and PTH #83 and Broomhill is located along PTH #345. Southwest of Melita in the Lyleton-Pierson area the main towns are Pierson along PTH #3 and Lyleton along PTH #251. Within the Souris River Lowlands region Coulter is located along PTH #251.

### 3.2 Glacial History and Soils

The following paragraphs describing the IBA area were taken from the Mixed-Grass Stewardship Program (2001) The southwestern region of Manitoba is a transition zone between the moist, tall grass prairie of the Red River Valley, and the drier mixed and short grass prairies of the more western grasslands of Saskatchewan, Alberta and the Northern Plains states. As a result, it is a richly diverse combination of plants from both communities. The area was affected by the scraping and gouging of the last glacier from 11,000 to 15,000 years ago, which caused the formation of many glacial end- moraines, which are now the Brandon, Tiger and Pembina Hills. It was the region that formed the shores of the huge Lake Agassiz. The lake covered all but the very western regions of the province. Several ancient beach heads are still evident along the north-easterly path of recession by the lake.

The Terrain in the IBA is generally flat and well drained. There are a variety of soil types within the region but primarily black Chernozem dominate. Mansell and Moore (1999) categorize the soils as Souris association which occurs from north of Oak Lake south to the United States border near Lyleton.

### 3.3 Paleoecology

As the glacier melted and Lake Agassiz moved slowly eastward about 15,000 years ago, spruce forests emerged. Between 10,000 and 11,000 years ago, the forests started to take on a more "mixed" appearance as oak and elm migrated into the region, reflecting a drier condition. Dramatic changes occurred in the vegetation from 10,000 to 3,000 years ago, with warmer and much drier conditions. Grasslands with scattered groves of deciduous trees moved in from the south and west, aided by more frequently occurring fires, while pine and birch moved in from the east.

### 3.4 Souris River

The Souris River is the largest river in the IBA. During glacial times, it was much larger than we see it today and carried torrents of water from as far away as the Rocky Mountains (as determined by archeological study). All of Manitoba's major rivers originate outside the province, but drain into Hudson Bay. It is for this reason that they served as important trade routes for First Nations people and early white traders such as the Hudson Bay Company and the Northwest Company. This is also part of the area that was described by Thomas Palliser (Palliser Triangle) and Henry Hind in the 1860's, as too dry for agricultural development.

### 3.5 Grassland Habitat

Little of the native grasslands remain in southern Manitoba - less than

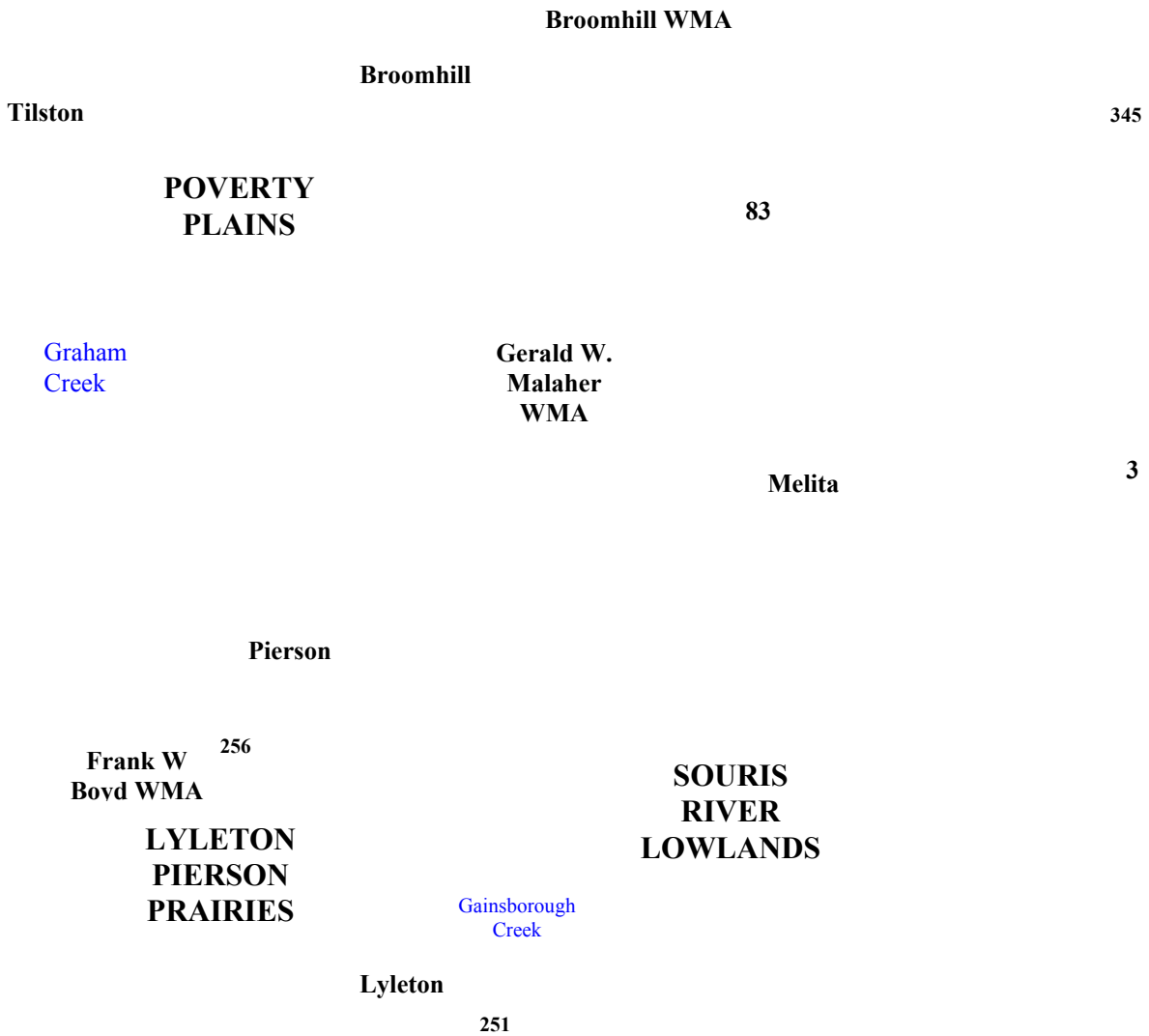
one percent of tall grass prairie; five percent of the fescue prairie and about 18 percent of the mixed-grass prairie. There are four large remaining remnant blocks of mixed-grass prairie - the Carberry Sandhills/ Shilo Plain; Oak Lake; the Archie/Ellice PFRA pasture in the Russell, and the "Poverty Plains", located near Melita in the southwest corner of the province.

Mansell and Moore (1999) reported that typical plant species in the Mixed-grass Prairie include Little Bluestem (*Andropogon scoparius*), Spear Grass (*Stipa comata*), Blue Grama (*Bouteloua gracilis*) and wildflowers such as Prairie Crocus (*Anemone patens*), Dotted Blazingstar (*Liatriis punctata*) and Lily (*Lilium philadelphicum*).

Over 30 native grass species are found in the southwest region including Awned Wheatgrass, Northern Wheatgrass, Slender Wheatgrass, Western Wheatgrass, Big Bluestem, Little Bluestem, Plains Rough Fescue, Sheep Fescue, Fringed Broom, Fringe Grass, Green Needle Grass, Porcupine Grass, Spear Grass, Hookers Oat Grass, Witch Grass and Sand Dropseed. For descriptions of these grasses visit the Mixed-grass Prairie website (Mixed-grass Prairie 2001).

Grasslands are recognized by many as the most imperiled ecosystem worldwide. Native North American grasslands that once extended from Canada into Mexico and from the foothills of the Rocky Mountains to western Indiana and Wisconsin have dramatically declined in area (Department of the Interior Grassland Bird Working Group 1996).

**Figure 1.** Map of Southwestern Manitoba Mixed-grass Prairie IBA.



The mixed-grass prairie ecosystems found in southwestern Manitoba represent unique habitats that should be preserved for future generations. The relative abundance of threatened and endangered grassland birds in the Poverty Plains suggests that this area represents a high priority, if not the most critical grassland habitat in southwestern Manitoba requiring protection.

### 3.6 Rural Municipalities (RM) and Conservation Districts

The Souris River Lowlands falls almost entirely within the RM of Arthur and in the Turtle Mountain Conservation District. The Turtle Mountain Conservation District is based out of Deloraine, Manitoba. The Poverty Plains falls within the RMs of Pipestone, and Albert, and in the West Souris River Conservation District. The Lyleton-Pierson Prairies are situated in the RM of Edward and within the West Souris Conservation District. The West Souris Conservation District is based out of Reston, Manitoba.

### 4.0 IBA Species Information

The Southwestern Manitoba Mixed-grass Prairie is recognized as a Canadian Important Bird Area based upon numbers of Ferruginous Hawks and Loggerhead Shrikes. The IBA contains at least 1 or 2% of the Canadian population of these species (see Appendix 1). The IBA may well be globally significant however no criteria are provided at this level. Current populations of Burrowing Owls do not meet IBA population criteria, however, historical numbers well exceed the

national threshold of 10 pairs. There is a need to establish IBA population criteria for other grassland species such as the Baird's Sparrow (see Appendix I).

| Species or groups meeting IBA criteria         | Season | Number           |
|--|--------|------------------|
| Ferruginous Hawk                               | B      | 38 (1999)        |
| Loggerhead Shrike (spp. <i>excubitorides</i> ) | B      | 100 pairs (1999) |

B = Breeding FM = Fall Migration SM = Spring Migration  
W = Winter S = Summer (non-breeding)

### 4.1 COSEWIC Status

(Canadian Wildlife Service 2001)

Since many of the grassland birds found in this IBA are considered species at risk, a short introduction to how Canada assesses their status is warranted.

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is responsible for assessing the status of wild species at risk in Canada. Established in 1978, COSEWIC comprises members from federal, provincial, and territorial government wildlife agencies, three national conservation organizations, and chairs of the scientific and traditional ecological knowledge subcommittees. Members of these groups are wildlife experts who assess scientific status reports on species suspected of being at risk and may then assign species to one of five categories:

- **EXTINCT** species no longer exist.
- **EXTIRPATED** species no longer exist in the wild in Canada, but they occur elsewhere.
- **ENDANGERED** species are facing imminent extinction or extirpation.

- **THREATENED** species are likely to become endangered in Canada if limiting factors are not reversed.
- **SPECIAL CONCERN (formerly "vulnerable")** species are of special concern because of characteristics that make them particularly sensitive to human activities or natural events.

## 4.2 Ferruginous Hawk

*(Buteo regalis)*

**Identification.** The Ferruginous Hawk is the largest hawk in North America. The female is about one-third larger than the male. Adults are heavy bodied with broad powerful wings. The male and female can be recognized most often as light-colored birds with rusty brown on the shoulders, back, rump and legs. The dark phase of the hawk is less common. The Ferruginous Hawk is one of our only hawks with legs feathered down to the toes. The tail is whitish and somewhat mottled. In flight, the legs look like a dark "V" against whitish underparts.

**Diet and Habitat.** The Ferruginous Hawk has the most specialized diet and habitat requirements of any North American prairie hawk. The Ferruginous Hawk requires large areas of open grassland such as those found in southwestern Manitoba. These areas support abundant prey items including ground squirrels, gophers and prairie dogs. Ferruginous Hawks require open, arid, prairie habitat which has largely lost due to the disappearance of bison, control of prairie fires, and cultivation (Burnett et al. 1989). Only where prairie grasslands remain does this hawk remain.

**Population Declines.** Since the beginning of the century, Ferruginous Hawk numbers have decreased dramatically through its historic range in western North America. Burnett et al. (1989) attributed population declines to hunting and loss of critical grassland habitats. Declines in the breeding range and populations of Ferruginous Hawk in prairie Canada have been well documented (Schmutz and Schmutz 1980, Houston and Bechard 1984, Schmutz 1984). It is estimated that the total Canadian population has declined from about 5,000 breeding pairs to 250-300 (Burnett et al. 1989). Ferruginous Hawk populations have stabilized or increased over the past 25 years, but are significantly lower than they once were. The breeding population in Canada is currently estimated at between 2000 and 4000 pairs. It is estimated that 50-55 pairs nested in southwestern Manitoba in 1999.

**COSEWIC.** The Committee on the Status of Endangered Wildlife in Canada listed the Ferruginous Hawk as threatened in 1980. The Ferruginous Hawk was down-listed to "vulnerable" in 1995.

**Historical Manitoba Distribution.** Although information on historical numbers and distribution in Manitoba are limited, the Ferruginous Hawk was once considered regular but uncommon in southwestern and south-central Manitoba from the Red River west (Thomspon 1891, Taverner 1937, Bechard 1981). Criddle (1920, 1929) considered it a common nesting species in the Aweme area (near Spruce Woods Provincial Park), but it was already "less

common that in 1890" due to settlement and the spread of agriculture.

After 1930, the species went unnoticed in Manitoba until they were reported in the southwest during the 1970's (Knapton 1979) and 1-3 nests were found from 1982 to 1985 (Ratcliff and Murray 1984, Ratcliff 1987a). Since 1987, surveys efforts have intensified to where 56 nesting pairs were found in the southwest during the 1990s (DeSmet and Conrad 1989a, 1990; DeSmet 1991). Given that the present distribution of Ferruginous Hawks in Manitoba is limited and only relict fragments of its former habitat exists, current numbers probable represent only a fraction of historic abundance.

**Threats.** Ferruginous Hawks and other raptors were once believed to be harmful birds and were shot under bounty regulations (up until 1958 in Alberta). Houston and Bechard (1984) believed that egg-collectors had a significant impact on populations, noting that over 20 egg sets were collected near Gainsborough, in extreme southeastern Saskatchewan, from 1925 to 1930. Habitat loss due to cultivation and fragmentation of native grassland, as well as loss of prairies to aspen regeneration following curtailment of prairie fires has also contributed to population declines.

**Management.** Grassland habitats in southwestern Manitoba are being lost. Maintenance of a stable population of Ferruginous Hawks requires the full use of available nesting habitat and protection of critical grassland habitats. Therefore, there is a real concern for its survival, and a great need to preserve its

critical grassland habitat and preferred nesting sites in southwestern Manitoba.

#### 4.3 Loggerhead Shrike

*(Lanius ludovicianus excubitorides)*  
Western Subspecies

The Loggerhead Shrike is about the size of a Robin, gray and black with a hooked bill and mask-like eye-stripe. It is a predatory songbird of the open countryside which has experienced widespread decline since 1960. It is a songbird that hunts like a small hawk preying on insects and other small animals including other birds (CWS 2001). Loggerhead Shrikes have been referred to as butcherbirds, because their habit of impaling prey on thorns reminded people of the way butchers hang meat. By this ingenious method, shrikes compensate for the lack of the talons with which birds of prey hold their catches while they bite off edible chunks (CWS 2001).

Loggerhead Shrikes are usually seen perched on utility wires, fenceposts, or dead branches protruding from the crowns of trees or shrubs. They fly with a fluttering, gliding motion showing large white patches on their wings and white stripes along the outside of the tail (CWS 2001). Loggerhead Shrikes that breed in Canada migrate to the southern United States and possibly Mexico for the winter (CWS 2001).

The Northern Shrike coloration and behavior is similar to the Loggerhead Shrike. If a shrike is observed between 1 May and 1 September in southern Canada, it is almost certainly a Loggerhead, because Northern Shrikes breed far to the north

in the broad transition zone between the boreal forest and the arctic tundra (CWS 2001). Loggerhead Shrikes that breed in Canada migrate to the southern United States and possibly Mexico for the winter.

**Breeding.** Loggerhead Shrikes have arrived as early as April 17 in Manitoba, with most arriving in early May (De Smet 1992). Egg-laying occurs in mid-May, and fledging takes place from late June into late July (De Smet 1992). Average clutch size is about 6 eggs. On average, about 4 young per successful nest survive to fledging. However, less than half of its nests are successful, with predation and cool and wet weather accounting for the losses.

The female begins incubation when the egg-laying is nearly complete. At this time she is fed by the male. Hatching occurs around the 16th day (CWS 2001).

Loggerhead Shrikes are territorial throughout the year. Males and females defend separate territories during the nonbreeding season. Breeding territories may range from about 0.7 ha to 18 ha in size.

**Habitat.** The preferred habitat of Loggerhead Shrikes is thought to include Caragana shelterbelts, willow thickets near wetlands, and thorny buffalo berry – all perceived to be incompatible with contemporary agricultural land management practices on the prairies (Burnett et al. 1989).

The Loggerhead Shrike's native Canadian territory had traditionally been southern Manitoba, Saskatchewan and

Alberta. While population declines are being observed in these regions, it has experienced rapid expansion into eastern Canada. It is believed that the conversion of forests into farmland led to the range expansion (Burnett et al. 1989).

**Population Declines.** Although the Loggerhead Shrike occurs throughout much of North America, Breeding Bird Survey and Christmas Bird Count data have demonstrated declines throughout its breeding and wintering range. Butcher and Lowe (1990) stated "Rarely does a species with this large a range show such a consistent widespread decline". CWS (2001) is not certain why the number of Loggerhead Shrikes in Canada has fallen in recent decades as Canadian populations hatch a large number of young per pair compared to populations breeding in the United States. However, losses after the fledglings leave the nest are difficult to determine. Mortality of shrikes during winter may be significant, especially for first-year birds. Long-term changes in land use on breeding and wintering ranges have probably contributed to the decline (CWS 2001).

The population in southwestern Manitoba represents one of the highest nesting densities of this species in Canada (De Smet and Conrad 1987). The breeding population was estimated to be 275 nesting pairs in 1990 and increased to 327 by 1993. Since then the population has decreased by almost 60% to 136 nesting pairs in 1996.

**Manitoba Distribution.** Loggerhead Shrikes were considered common to abundant throughout southern Manitoba during the late 1800's

and early 1900's (Thompson 1892,



Macoun and Macoun 1909).

Since then, the northern edge of their range has retracted and numbers have experienced pronounced declines (Cadman 1985). Extensive surveys since 1987 have revealed that the extreme southwest remains the last stronghold for the species in the province; of approximately 250 pairs found in the province annually, 85-90% occur in the extreme southwest (DeSmet and Conrad 1987, 1989b, 1990; DeSmet 1991). Even here, overall numbers have declined during the past five years, led by a decline in peripheral populations.

**Threats.** Since productivity appears adequate, a combination of limiting factors including habitat loss, increased predation, vehicular collisions, contaminants, post-fledging losses and problems on the wintering range probably account for the continuing decline. Burnett et al. (1989) suggested that loss of hawthorn hedgerows that provided protective nest cover, mortality as a result of increased highway traffic,

and toxic chemicals (organochlorine pesticides) are all human factors that have contributed to population declines.

**COSEWIC and Protection.** The prairie population of the Loggerhead Shrike was designated as threatened across Canada by COSEWIC in 1986 (Burnett et al. 1989). The Loggerhead Shrike is protected under the Migratory Birds Convention Act of 1917. In Manitoba, the species is declared endangered under the Endangered Species Act of 1994 (see section 7.3). This species seems to have been declining since the turn of the century; the greatest declines have occurred in the last 25 years.

**Management.** Private owners of land used by shrikes can help directly by protecting these sites, and members of the public can support the establishment of government-owned protected areas (CWS 2001). The preservation of grasslands, especially native prairie in western Canada, protects habitat not only for Loggerhead Shrikes but also for other rare grassland birds and mammals. In some areas there is adequate grassland but a lack of shrubs for nesting. There, patches of shrubs planted approximately 400 m apart would make the area habitable for shrikes. Research currently underway in Canada and the United States should provide new insights into the reasons for the decline of Loggerhead Shrikes and suggest additional ways to stabilize populations of this interesting bird species (CWS 2001).

#### 4.4 Burrowing Owl (*Athene cunicularia*)

Unless otherwise referenced, life history information for the Burrowing Owl was taken from Haug et al. (1993).

**Identification.** The Burrowing Owl is a brown and buffy-white owl, weighing approximately 150 g and standing stilt-like on sparsely feathered lower legs. Burrowing Owls occur only in the Americas. In North America, the northernmost populations are migratory. Mid-continent populations exhibit shorter distance dispersal, and in the southwestern United States, Florida and northern Mexico the owls are non-migratory.

**Habitat.** Burrowing Owls frequent dry, grassy and treeless plains where they are almost invariably associated with burrows mainly of badgers, prairie dogs or ground squirrels. The owls can grow tolerant of human activity and often nest near farms or on vacant ground in cities or towns.

**Diet.** Burrowing Owls are opportunistic feeders, but their main prey includes insects, small mammals and other birds. In prairie Canada, small mammals may be an important food source immediately upon arrival in April and through egg laying, at a time when insects are sparse and often inactive.

**Migration.** Prairie Burrowing Owls depart in October, apparently migrating at night during favorable weather. They may short-stop for one to several days, before they migrate on, eventually reaching their wintering grounds in Texas and presumably adjacent areas

in the United States and Mexico.

Burrowing Owls arrive in Manitoba in late April and depart in September. Banding studies suggest they overwinter in Texas. Owl families remain together near their home burrow until late August when males tend to disperse to alternate feeding/roosting grounds, followed by females and then by juveniles.

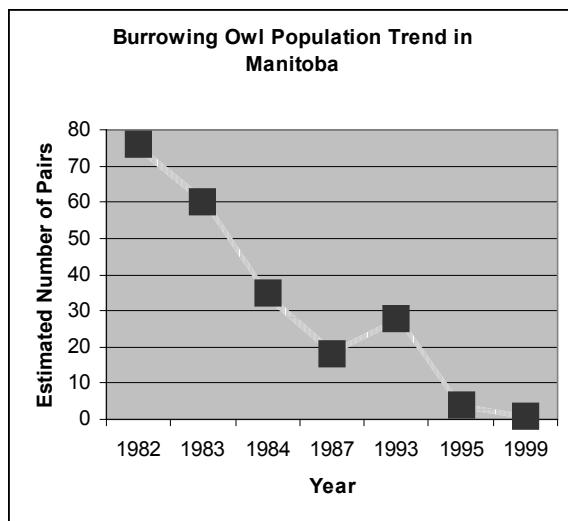
**Breeding.** Burrowing Owls are monogamous and both participate in the rearing of up to 12 young. They nest alone or in colonies and lay from six to eleven eggs. Female owls are the sole incubators and often line their nest with a thin layer of dried livestock dung. The male owl assists in rearing activities by bringing food consisting of mice, grasshoppers, beetles, snakes, frogs, carrion and ground squirrels

Nestlings emerge from their burrows in late June or early July. They stand on the burrow entrance in a tight group and wait to be fed by adults. Predators include other larger owls, hawks, badgers, skunks, foxes, weasels, cats and dogs.

**Historical Manitoba Populations.** Although data on historic numbers in Manitoba are limited, populations appear to have undergone continuous declines since the 1930's (Ratcliff 1986). Wedgwood (1978) estimated that 110 pairs nested in southern Manitoba. At that time, the species occurred as far east as Winnipeg and north to Riding Mountain National Park. Ratcliff (1986) documented a decline from 76 nesting pairs in 1982, to

35 pairs in 1984. By 1988 there were 28 nesting pairs. At the same time, peripheral populations were virtually eliminated and the range was reduced to the critical grassland habitats in southwestern Manitoba. Since 1987, surveys have been refined and expanded, yet nesting populations continue to decline (Haug and Churchwar 1988, DeSmet and Conrad 1990, DeSmet 1991). Despite reintroduction methods (see section 8.1) and protection of nesting sites, Burrowing Owl populations continued to decline in Manitoba from an estimated 28 nesting pairs in 1993 to 4 nesting pairs in 1995 (Manitoba Environment 1997). In 1999, three pairs were found in Manitoba and in 2000 no birds were reported.

**COSEWIC Status.** The Burrowing Owl was originally listed as threatened in Canada, but this was changed to endangered in the mid-1990s due to widespread and accelerated



declines. The Burrowing Owl is protected by provincial legislation in all

four western provinces, it has also been designated endangered in Manitoba.

**Threats.** Threats include habitat degradation, insecticides, inadvertent poisoning by Carbofuran (an insecticide to control grasshoppers), rodent extermination, vehicle collisions and predation (see section 10 for further discussion).

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*The decimation of rodents whose burrows provided nesting habitat and secondary poisoning from the use of insecticides have contributed in a major way to the decline of Burrowing Owl numbers. This owl was listed as Threatened in Canada in 1978 and Endangered in Manitoba in 1995.*

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Burrowing Owl mortality rates have been found to be very high. In a study of owl survival using radio-telemetry (Clayton and Schmutz 1999), owl mortality was 45% among adults and 55% among juveniles in the 5-month study period alone. Mortality rates were approximately the same in the two study areas in Alberta and Saskatchewan.

**Population Status.** The species is now absent or rare in regions where it was once common. An extensive survey in 1978 indicated dramatic population declines in the Burrowing Owl across Canada. The survey estimated 610 pairs in Alberta, 1,280 in Manitoba and 110 in Manitoba (Burnett et al. 1989).

Unless the trend is reversed, the Burrowing Owl will likely become extirpated from Manitoba within a few

years and from all of Canada within a few decades.

Burrowing Owl reproduction on the Canadian prairies may be too low to maintain the population, the outlook for this owl is not encouraging (Government of Canada 1996).

## 5.0 Other Elements of High Conservation Interest

### 5.1 Other Grassland Birds of Concern

Other bird species have been monitored on an incidental basis in the southwestern Manitoba since 1987. Concerns also focus around disappearance of their grassland habitat, these species include:

- Baird's Sparrows  
(*Ammodramus bairdii*)
- Sprague's Pipits  
(*Anthus spragueii*)
- Marbled Godwits  
(*Limosa fedoa*)
- Willets  
(*Catoptrophorus semipalmatus*)
- Upland Sandpipers  
(*Bartramia longicauda*)
- Say's Phoebes  
(*Sayornis saya*)
- Willow Flycatchers  
(*Empidonax trailii*)
- Lark Buntings  
(*Calamospiza melanocorys*)
- Grasshopper Sparrows  
(*Ammodramus savannarum*)
- Chestnut-collared Longspurs  
(*Calcarius ornatus*)

#### Baird's Sparrow

(*Ammodramus bairdii*)

Up to the 1930s the Baird's Sparrow (named in honor of Spencer Fullerton Baird, a 19<sup>th</sup> century ornithologist) was an abundant breeding resident of the mixed-grass prairie in southern Manitoba (Burnett et al. 1989). In the late 1800's, the Baird's was referred to as "one of the commonest birds ...of the prairies westward of Pembina Mountain to Moose River" (Thompson 1892).

**Habitat.** Baird's Sparrows are endemic to the northern Great Plains breeding from southern Alberta to southern Manitoba, and from northern and eastern Montana through western Minnesota (Dechant et al. 2001). Native prairie traditionally is regarded as optimal breeding habitat. However in Manitoba, Baird's Sparrow densities were high in pastures with 10-50% shrub cover and >50% shrub cover, but dense shrub patches were avoided (De Smet and Conrad 1991). Although it occasionally occurs in altered grasslands and cropland, its habitat preferences are generally considered to be restricted and unadaptable. Consequently, the species has suffered population declines proportional to the demise of native prairie in the Great Plains.

**Breeding.** Baird's Sparrows may arrive on the breeding grounds as early as late April, with the peak arrival occurring in early to mid-May. Nesting occurs from late May through mid-August (Dechant et al. 2001).

**COSEWIC Status.** The Baird's Sparrow was assigned national status as a Threatened species on the 1989 by

COSEWIC (Burnett et al. 1989). It is currently considered Endangered under the Manitoba Endangered Species Act, the Baird's Sparrow is in danger of becoming extirpated in Manitoba (Manitoba Conservation 2001).

A major study on the species was conducted in Winnipeg during the 1930's (Cartwright et al. 1937). The species is now considered extirpated in northern portions of its Manitoba range, sightings in the Winnipeg area and in southeastern Manitoba are scarce (Cleveland et al. 1980), and its distribution in southwestern Manitoba is considered "spotty" (Lane 1968). Surveys in southwestern Manitoba have been ongoing since 1985 (Ratcliff 1987b, DeSmet and Conrad 1989c, DeSmet 1991).

**Threats.** Its numbers have declined steadily as modern agriculture has advanced in prairie Canada resulting in loss of grassland habitats. Baird's Sparrows require the extremely specific habitats provided by the Mixed-grass Prairies in southwestern Manitoba. Large scale prairie farming converting grasslands to cultivated lands have eliminated substantial portions of the critical habitat required.

**Management.** Dechant et al. (2001) summarize suggested management strategies for Baird's Sparrows:

(1) protect native grasslands that support breeding populations of Baird's Sparrows and establish additional suitable grasslands where possible;

(2) prevent encroachment of woody vegetation;

(3) prescribed burning, mowing, and grazing can be used to maintain the early successional stage preferred by Baird's Sparrows, including moderate litter and low shrub cover;

(4) provide large tracts of grassland, with at least enough area to support multiple Baird's Sparrow territories;

(5) prescribed burns may be necessary to sustain Baird's Sparrow populations in the eastern part of its range in the mixed-grass prairie;

(6) prevent overgrazing in pastures utilized by Baird's Sparrows;

(7) graze using a deferred rotational system to ensure that only part of the range is grazed during the growing season and

(8) when re-seeding public lands, or private pasture and haylands, use native grasses where possible to benefit grassland birds.

### **Sprague's Pipit** (*Anthus spragueii*)

Robbins and Dale (1999) indicate that the Sprague's Pipit is one of the least known grassland birds because of its highly cryptic plumage and habitats. Records of the Sprague's Pipit's disappearance date back to the late 1800s when the pipit failed to appear in Minnesota. Today, the species is found in areas of grassland on the northern Great Plains, including prairie Canada, Montana and the Dakotas. At least 50% of the species' range lies in Canada. Unless otherwise reference, the following species information was taken from Robbins and Dale (1999).

The Sprague's Pipit is a small ground inhabiting passerine similar in appearance to the American Pipit

(*Anthus rubescens*). Pipits are distinguished from other grassland passerines by their slender shape, narrow bill and high pitched calls. Birds will usually flush from prairie habitats typically rising in undulating flight, often circling while giving diagnostic, single-syllable, squeaky "squick" sounds. The vocal array is limited to his one vocalization only during aerial displays that is repeated several times as the bird rise.

**Breeding Ecology.** Nests are constructed on the ground in open grasslands. Clutch initiation ranges from mid-May through July. Mean clutch size is 4.4 eggs and the incubation period is between 13-14 days. Breeds in Manitoba from the extreme southwestern corner to The Pas. It has since disappeared from areas north and east of Winnipeg.

**Population Status.** There are no historical estimates of population size for this species, but anecdotal accounts suggest that it was one of the most common grassland songbirds throughout much of its breeding range around the turn of the century. The species remains common in suitable habitat, particularly in parts of the Canadian prairies. However, Breeding Bird Survey data collected over the past 30 years show that populations are declining rapidly in many parts of the range. Declines and extirpations throughout the breeding range have been attributed to conversion of prairie to agriculture. The greatest declines have occurred on the Canadian prairies.

**COSEWIC Status and Protection.** In 1999, the Sprague's Pipit was designated as "Threatened" by the

Committee on the Status of Endangered Wildlife in Canada. The species is also protected from disturbance under provincial Wildlife Acts in Manitoba, but has not yet been designated under Manitoba's Endangered Species Act. In general, the majority of the bird's habitat occurs on private land, and therefore is afforded little protection from alteration and disturbance from human activities. However, large tracts of habitat occur on military reserves such as Canadian Forces Base at Shilo, Manitoba.

## 5.2 Manitoba Mixed-grass Prairie

Today it is estimated that less than 5% of Canada's native grasslands remain (Burnett et al. 1989). In southwestern Manitoba, significant tracts of mixed-grass prairie still exist. The mixed-grass prairie is a blend of the tall-grass prairie and the short grass prairie. Plants in the mixed-grass prairie are adapted to both the climate and moisture conditions. Cool season plants emerge in the spring then remain dormant during the summer while warm season plants have a unique metabolism that allows them to grow during hot summers without losing moisture (Manitoba Natural Resources 2001). It is reported that less than one quarter of the original 24 million hectares of mixed-grass prairie remains in Canada (Manitoba Natural Resources 2001).

The mixed-grass prairie and many of its plants and animals have been and continue to be lost. As early as the 1860s, settlers were having dramatic, long term effects on the prairies. By the 1880s plains bison, plains wolves and passenger pigeons had been eliminated

and many other species were diminishing rapidly. The prairie itself was being lost as homesteaders broke the sod to grow crops. The introduction of exotic or weed species, such as Leafy Spurge and Canada Thistle, encroachment by native shrubs and trees, and overgrazing by livestock have led to the degradation of thousands more hectares (Critical Wildlife Habitat Program 2001). Conservation programs are required to protect the remaining areas of mixed-grass prairie in southwestern Manitoba as it provides the critical habitat for a diversity of grassland birds. As the mixed-grass prairie disappears in Manitoba, so do the grassland birds they support.

### 5.3 Plants

**Buffalo Grass.** Manitoba's only remnants of native Buffalo Grass (*Buchloe dactyloides*) can be found in the Souris River Lowlands. Buffalo Grass is the only true indigenous warm season turf grass. Buffalo Grass is so named because it was a primary food source for the American Buffalo stretching across the Great Plains into the Mexican region and in most of Texas. Being a native grass it survives on some of the toughest areas and is drought resistant. Early settlers built their sod homes cut from the acres of Buffalo Grass growing on the plains. There is a need to conserve these last remaining Manitoba remnants.

**Western Spiderwort.** Western Spiderwort (*Tradescantia occidentalis*) was designated as "Threatened" by COSEWIC in 1992 and likewise under the Manitoba Endangered Species Act in 1994 (Manitoba Conservation 2001). In Manitoba, Western Spiderwort is known

to occur in southwestern Manitoba in the Routledge Sand Hills and in two sites in the Lauder Sandhills.

### 5.4 Fred Jensen Trophy Room

The Fred Jensen Trophy Room is essentially a museum in Melita that is open during the summer months and maintained by the town of Melita. It contains mostly African big game mounts but also contains specimens of some grassland birds such as the Burrowing Owl.

### 5.5 Newcomb's Hollow - Boundary Commission Trail

Newcomb's Hollow interpretive site in southwestern Manitoba features one the longest remnants of the Boundary Commission Trail left in existence. The Boundary Commission went out first to establish the United States/Canada border. The North-West Mounted Police followed a year later, trekking across southern Manitoba by way of the Boundary Commission trail.

The site features native oak savanna. Well over 50 species of native mixed-grass prairie as well as a relatively rare plant, Ground Plum (*Astragalus crassicaarpus*), can be found here. This is the site of the Turtle Head Creek Riparian Project. Near Turtle Head Creek some of the best preserved wagon ruts, remnants of the Boundary Commission Trail. The trail is also part of an old buffalo migration route.

The trails were also important for travel by land across the eastern prairie by the early settlers. However, upon arrival of the 'Iron Horse', these trails where no longer used by settlers. The

Boundary Commission Trail Association follows in the footsteps of the earlier generations. Each year in July, sections of the trail are re-enacted to draw attention and tourism to the area. The trail which stretches from Fort Dufferin (Emerson), Manitoba to Fort McLeod, Alberta, last passed through Melita in 1999 (Boundary Commission 2001).

### **5.6 Antler River Historical Society Museum**

The Antler River Historical Society Museum was opened in 1972. It replaced the 1905 eight room public elementary school on the corner of Summit and Ash Streets in Melita. The museum is the result of a town effort, with many groups and individuals volunteering their time and money. Wildlife exhibits include a mounted bird collection with over 200 specimens and a collection of several different bird eggs. The museum is open in July and August from 1:00 - 5:00, Tuesday to Saturday and from 1:00 - 4:00 on Sundays.

## **6.0 Land Ownership and Use**

### **6.1 Agriculture**

Agriculture is the largest industry in the area in southwestern Manitoba. There is a variety of farms - from mixed farming to specialized larger operations. Farms in the Melita area (and generally southwestern Manitoba) are larger than farms in most areas of Manitoba. There is grain farming to the south of Melita and mixed or straight cattle operations in the northern sandy lands. Melita is

known as the "Hub of the Southwest" and "Machinery City" due to its agricultural base and the services which it provides to the nearby farmers (Melita 2001).

Most of the smaller crown-owned grassland parcels in southwestern Manitoba have been leased to local landowners. Over the years, some have been cultivated while others are grazed. Private grasslands that remain uncultivated are often marginal areas that are too rocky, sandy, or otherwise unsuitable for crops. The remaining grasslands are threatened by the global trend away from small family farms to large intensive farming practices.

### **6.2 Oil Industry**

Melita is central to the Oil Fields in Southwest Manitoba, and because of this and many other services available in Melita, a number of companies have set up offices in Melita. Companies use Melita as their base when they are in our area working on Seismic and other Oil Field related operations (Melita 2001).

### **6.3 Wildlife Management Areas (WMAs)**

Wildlife Management Areas are protected areas of Crown land for public use owned by the provincial government. In the IBA area there are three WMAs.

The Broomhill WMA consists of 324 ha of Crown Land and is located 3.2 km east of Broomhill roughly between Pipestone and Melita (Parsons et al.

1994). The Broomhill WMA has supported good numbers of Baird's Sparrows, and Loggerhead Shrikes in the past (Parsons et. al 1994). Parsons et. al (1994) noted that grassland birds in the Broomhill WMA included Upland Sandpipers, Marbled Godwits, Sprague's Pipits, Willets as well as Baird's Sparrows. The Broomhill WMA supports one of the largest known concentrations of Baird's Sparrows in southwestern Manitoba and Loggerhead Shrikes nest among open shrubbery on the eastern portion of the WMA (Senecal 1999). Manitoba Conservation (ND) indicated the WMA contains mixed-grass prairie and is important habitat for Baird's Sparrow and Loggerhead Shrikes. Senecal (1999) notes that much of WMA has been disturbed by gravel mining.

The Gerald W. Malaher WMA is 61 ha in size and located just east of Melita towards the Poverty Plains. It was formerly cultivated land that proved unsuitable for agriculture. When the land was acquired by the province the Melita Cover Plot project was used to rehabilitate the land for wildlife purposes (Manitoba Conservation ND). The area is used by both grassland and forest birds.

The Pierson WMA is 264 ha in size located to the southwest of Pierson. It is comprised of two units - the Frank W. Boyd Unit and the Grainsborough Creek Unit, which are 32 km apart. The WMA is one of the only few sites in Manitoba for Say's Phoebes (Senecal 1999). Manitoba Conservation (ND) indicates the Gainsborough Creek Unit contains remnant mixed-grass prairie as well as riparian habitat along Gainsborough Creek. Several producing

oil wells can be found in the Frank W. Boyd Unit (Manitoba Conservation ND).

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

Past conservation efforts have focused on land leases and goodwill of landowners in protection of critical grasslands for endangered species and mixed-grass prairie habitat.

### **7.1 Mixed-grass Prairie Preserve**

In 1993, the Critical Wildlife Habitat Program (administered by Manitoba Conservation) and The Nature Conservancy of Canada purchased 130 ha of land southwest of the village of Broomhill, within the Poverty Plains (S 3-5-28) as start of an endangered species/mixed grass prairie preserve. Jackson Creek flows through the preserve. Senecal (1999) indicated that Ferruginous Hawks, Loggerhead Shrikes and Baird's Sparrow are commonly found in the preserve. The preserve is open to the public and it is a demonstration project illustrating the relationship between cattle and plant growth (Senecal 1999). Rest-rotation grazing and prescribed burns will be used to help maintain the native prairie mixtures, particularly in areas managed for Burrowing Owls and Ferruginous Hawks.

### **7.2 The Proposed Species At Risk Act**

The proposed Federal Government Species At Risk Act would have implications on land use and management in southwestern Manitoba.

For the most part, landowners are apprehensive and anxious as to how the proposed act may affect them directly. For example, many landowners would rather not let it be known that they have a species at risk on their land for fear of not being able to put the land into production.

The proposed Federal Species At Risk Act (SARA) has been developed to prevent wildlife species, including birds, from becoming extinct or lost from the wild and to secure their recovery. SARA is one part of a three-part strategy to protect species at risk. The three-part strategy involves building on the Accord for the Protection of Species At Risk; stewardship and incentive programs; and a new Species at Risk Act. The act will cover protection of both species and their habitat. Under the act, once a wildlife species has been listed as endangered or threatened, recovery strategies and action plans must be developed in partnership with appropriate groups.

### **7.3 The Manitoba Endangered Species Act.**

A level of grassland bird conservation is afforded through the Manitoba Endangered Species Act. Manitoba's Endangered Species Act of 1990, protects plant and animal species that are considered endangered or threatened within Manitoba. Under the Act:

- native species threatened with extinction are classified as "endangered";
- native species likely to become endangered or found in low numbers are classified as "threatened"; and

- a species is considered "vulnerable" if it is found in low numbers or restricted areas but is not yet threatened.

Vulnerable species are not protected under the Act (Critical Wildlife Habitat Program 2001).

The Manitoba Endangered Species Act is further described by Manitoba Conservation (2001). The purposes of the Manitoba Endangered Species Act are to ensure the protection and enhance the survival of threatened and endangered species in Manitoba; enable reintroduction of extirpated species into the province; and designate species as threatened, endangered, extirpated or extinct. A species is not protected until such time as it has been declared by regulation under the Act to be threatened, endangered, extirpated or extinct. Once a species has been declared by regulation as being threatened, endangered or extirpated, it is unlawful to kill, injure, possess, disturb or interfere with the species; destroy, disturb or interfere with the habitat of the species; or damage, destroy, obstruct or remove a natural resource on which the species depends for its life and propagation.

### **7.4 Mixed-grass Prairie Stewardship Program.**

This voluntary land stewardship program recognizes landowners who are concerned about their native prairie and interested in maintaining it in a healthy state. Landowners are identified through an ongoing inventory carried out by the Critical Wildlife Habitat Program, administered by Manitoba Conservation.

Once the plant inventory of the land is complete and reports have been sent to the landowners, they are contacted by a representative of the Mixed-grass Prairie Stewardship Program. During the home visit, an explanation of the inventory results is delivered as well as an introduction to the native prairie ecosystem. Management information such as rest-rotation grazing systems, weed and aspen control is also presented.

The project provides landowners with ongoing practical information on land and/or pasture management which helps enhance productivity and long-term health of native grass systems. A gate sign is placed at the site and a certificate of participation is presented to each landowner. They continue to receive a newsletter bi-annually and are invited to participate in any tours and workshops sponsored by the program. The Mixed-Grass Prairie Stewardship Program has an office at 29 Main Street, Box 508 in Carberry Manitoba (and a web site @ [www.escape.ca/~mxdgrass](http://www.escape.ca/~mxdgrass)).

## **8.0 IBA Stakeholder Group Activity**

### **8.1 Manitoba Conservation**

Manitoba Conservation has been active in the southwestern portion of Manitoba for a number of years. Up until 2000, Manitoba Conservation maintained an office based in southwestern Manitoba located in Melita. Manitoba Conservation is active in monitoring and managing grassland bird species in southwestern Manitoba through annual surveys of breeding

birds. In the past, artificial nesting structures for Ferruginous Hawks and artificial nesting burrows for Burrowing Owls have been employed by Manitoba Conservation within the IBA.

### **The Burrowing Owl Conservation Plan - Late 1980s**

The decline in Burrowing Owl Populations in Manitoba prompted World Wildlife Fund Canada and Manitoba Conservation to formulate a conservation plan. Surveys were conducted to monitor populations, landowners were contacted and efforts were made to raise public awareness of the plight of Burrowing Owls. With help from the governments of British Columbia and Saskatchewan, the next step was to reintroduce Burrowing Owls to parts of their former range. The first reintroduction's were carried out at Oak Hammock Marsh Wildlife Management Area in 1987 and 1988. A total of 28 owls were released at Oak Hammock Marsh. Another reintroduction involving 29 birds took place in 1988 near Lyleton in southwestern Manitoba (source: Manitoba's Burrowing Owl Recovery Program brochure).

## **9.0 Opportunities**

Wildlife and grassland birds are valued by Manitobans. Studies have indicated that 75% of all Canadians participate in non-consumptive use and enjoyment of wildlife. A 1987 survey (The Importance of Wildlife to Canadians in 1987, Filion et al. 1989) revealed that 84% of Manitobans stated that maintaining abundant Wildlife populations was important and 86% favored efforts to preserve endangered

species. Research indicates that the key concepts underlying ecotourist motivations are wilderness, wildlife, parks, learning, nature and physical activity (Eagles 1997) - all elements available in southwestern Manitoba.

### 9.1 Ecotourism

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. The grasslands of southwestern Manitoba and the significance its avifauna is an identified ecotourist "product". A number of birding ecotour groups currently visit the IBA site annually.

Currently, the local community of Melita and surrounding communities such as Pipestone, Lyleton and Souris who share the resource benefit very little, if at all, from the ecotourism expenditures in the area. For example, most ecotour groups

travel through the area but will seek accommodations in Brandon. The popularity of birding is growing according to research by Cordell et al. (1999) and presents an opportunity for southwestern Manitoba to diversify local economies. Cordell et al. (1999) report that:

- 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.

There is a need to market and coordinate ecotourism opportunities to benefit the local communities of Melita, Lyleton, Pipestone and Souris. Ecotourism can create jobs. The willingness of individuals to "pay substantially" for quality ecotourism opportunities is high, as evident in the fees charged for 13-day birding tours of southern Manitoba and Churchill from Winnipeg that average about \$2500 USD per person. The challenge is to have some of these monies remain in the local communities.

"Ecotourism can generate badly needed revenue for local and regional economies, heightened local awareness of the importance of conservation, and new incentives for governments

and dwellers in and around appealing natural areas to preserve them" (Scace et al. 1992, p. 11).

Birding opportunities in southwestern Manitoba can be further promoted by packaging 1-3 day trips into the area and incorporating other natural history and recreational opportunities into the tour. Services offered by local businesses such as accommodations (i.e. The Melita Inn) and bed and breakfasts could be promoted as affordable options to services available in larger centers such as Brandon and Winnipeg. Revenues may also be generated through user fees, donation boxes for landowners (which could be used to maintain habitat), or by having ecotour groups pay landowners directly for access to private lands.

## 9.2 Conservation Easements

There are opportunities for agencies such as the Canadian Nature Federation or Manitoba Naturalists Society to enter into conservation easements with private landowners in an effort to protect grassland birds and the mixed-grass prairie habitats.

The majority of the land in southwestern Manitoba is private land. Conservation easements or agreements provide a new tool available for habitat conservation. The following information on conservation agreements was taken from the Mixed-Grass Prairie Stewardship (2001).

Conservation agreements help in habitat conservation, while leaving the land and its management with the landowner. A conservation agreement is

a legal agreement between a property owner and a conservation agency to protect the integrity of the land by directing the type and amount of development on the property. The agreement is filed with the land's title for either a specified time or in perpetuity. Conditions of the agreement are tailored to the particular property.

Granting an easement can also yield tax savings. If the agreement is donated in perpetuity, Revenue Canada views it as a charitable gift. The grantor of the agreement receives a tax benefit which may be used at the time of donation or extended over five years. Either a landowner or a conservation agency can initiate discussions about a conservation agreement.

Agencies currently able to hold conservation agreements in Manitoba are Ducks Unlimited Canada, Nature Conservancy of Canada, Manitoba Habitat Heritage Corporation, Delta Waterfowl Foundation, Governments of Manitoba Municipalities, and the Manitoba Naturalists Society.

## 9.3 Educational Opportunities

The Southwestern Manitoba Mixed-grass Prairie IBA provides numerous opportunities to foster educational programs and general awareness of peril of grasslands and grassland birds in North America. One simple tool that could be used is the creation of a world wide web site containing pages on IBA and grassland bird species. Information on the significant bird species, when and where to observe, as well as information on rare bird sightings could be included. This information could be easily added

to the existing Town of Melita website (Melita 2001).

There are opportunities for educational programs focusing on bird ecology, wetlands and water quality to be delivered into local schools. Studies and projects by senior biology students would increase community awareness which would help lead to the further conservation of IBA and the significant bird species. Students could also become involved in monitoring bird populations at southwestern Manitoba. For example, students could be involved in maintaining and monitoring artificial nesting structures used by Ferruginous Hawks.

Programs available that maybe of use (although these programs are developed for wetlands ecosystems, elements of these programs could be adapted for use in grassland habitats):

**(1) 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 amphibian.

**(2) Ducks Unlimited's Wetland Ecosystems III Educators Guide High School grades 9 to 12.** A 31-page student manual for grades nine to twelve. Sex 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)

## 9.4 Breeding Birds as a Farm Product

The conventional strategy for conserving wildlife on farmland is to stop intensive activity and compensate the land owner for their production losses thereby restricting farmers in their farming practices (Musters et al. 2001). Musters et al. (2001) report that restricting farming operations does not foster commitment of farmers to nature conservation. Musters et al. (2001) suggest a new conservation strategy aimed at motivating farmers and private land owners to increase densities of grassland breeding birds by paying farmers for clutches found on their land.

Muster et al. (2001) identified several advantages of paying farmers for wildlife production on their land:

- (1) the conservation agency pays only for wildlife actually present of the farmers land;
- (2) when the intensity of farming is not affected there are no economic losses and the strategy generates extra income for the farmer;
- (3) farmers are stimulated to do what they do best: produce milk, meat, animals and wildlife becomes another product;
- (4) farmers are free to work as they choose;
- (5) farmers and conservationists are prompted to work together because of their common interest to increase wildlife production in rural areas; and
- (6) farmers will focus on the birds that need protection most if a high price is paid for a species at risk and a

lower price for a more common species.

Muster et al. (2001) concluded that in the Netherlands most of the farmers participating reacted enthusiastically and cooperated wholeheartedly with conservationists.

### 9.5 Environmental Tax Credits

Opportunities exist to provide environmental tax credits to private landowners who maintain land cover including native grasslands. A Manitoba pilot program is currently underway in the Rural Municipalities of Strathcona and Mountain North. Partners in the pilot program are Ducks Unlimited Canada, Prairie Farm Rehabilitation Administration, Manitoba Conservation and the Northwest Soil Management Association. The current program offers \$1 per acre tax credit on eligible lands which is applied towards municipal land tax bills.

Landowners in the IBA could approach their respective Rural Municipalities and request a similar tax credit program to conserve mixed-grass prairie habitats in southwestern Manitoba.

### 9.6 Conservation Reserve Program

Opportunities exist for a Canadian or Manitoba version of the United States Conservation Reserve Program (CRP). The program encourages farmers to plant long-term resource-conserving covers to improve soil, water, and wildlife resources. By this program, U.S. Department of

Agriculture (USDA), leases highly erodible cropland for 10 years if landowners established and maintained stands of perennial vegetation and agreed to leave the land idle for the length of the lease. The CRP has been demonstrated to be of particular benefit to migratory birds. To many birds, the perennial vegetation on those highly erodible acres means "home" in the form of added breeding habitat (Kantrud et al. 1993).

Koford (1999) reported that the CRP has dramatically increased the amount of grassland habitat in the late 1980s, particularly in the tall- and mixed-grass regions of the central United States. The restoration of large amounts of grassland would be expected to slow or reverse the declining population trend of grassland birds (Koford 1999).

### 9.7 Conservation Districts

The three grassland sites fall into either the West Souris or Turtle Mountain Conservation Districts. Presently, neither of these districts are partners on the IBA working group. Opportunities exist to include these two conservation districts within the working group.

## 10. Threats

### 10.1 Chemical Pollutants

Houston and Schmutz (1999) reported that after the widespread use of DDT, the Peregrine Falcon (*Falco peregrinus*) has disappeared from southern Alberta and that Merlin (*Falco*

*columbarius*) populations declined with the extensive use of Dieldrin in the late 1950s and early 1960s. The deleterious effects of the insecticide Carbofuran on Burrowing Owls is also well documented. Burnett et al. (1989) suggested toxic chemicals (organochlorine pesticides) have contributed to population declines of Loggerhead Shrikes.

The main landuse in the IBA is agriculture. 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 prey 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 grasslands through water runoff is also a concern.

## 10.2 Habitat Loss

The declines of grassland birds since the mid 1960s can be explained in part by disappearing and the fragmentation of grasslands particularly the Sprague's Pipit and Chestnut-collared Longspur (Houston and Schmutz 1999). Burnett et al. (1989) suggested that loss of hawthorn hedgerows that provided protective nest cover has contributed to population declines of Loggerhead Shrikes. It is critical that grasslands in the area be conserved for grassland birds.

Today it is estimated that less than 5% of Canada's native grasslands remain (Burnett et al. 1989). Overgrazing and conversion of prairie ecosystems to cropland has resulted in a dramatic decline in both breeding and wintering habitats of grassland birds. The deleterious impacts of agriculture on the mixed-grass prairie in southwestern Manitoba has been documented throughout this CCP and represents the most serious threat to grassland birds in southwestern Manitoba.

**Cultivation.** Mansell and Moore (1999) reported that in 1997 and 1998, the biggest threat to the mixed-grass prairie was cultivation. They noted that many pastures of mixed-grass prairie have been and will be broken up as a result of an increase in the value of the agricultural lands due to increased irrigation in the area.

**Grazing Management.** Mansell and Moore (1999) stated that inappropriate grazing management is one of the threats to the long-term survival of the mixed-grass prairie in southwestern Manitoba. Although private landowners usually provide adequate protection of grassland sites, some have been overgrazed and others have been mismanaged and are no longer suitable for the grassland bird species of concern. For example, some grassland sites have deteriorated because landowners no longer graze cattle on them. Some properties have been sold during the lease period and new landowners do not share the previous landowners concern for endangered grassland species. There is a need for longer term protection.

Loss of grassland habitat in southwestern Manitoba from agricultural

intensification has reduced the supply of suitable burrows (Burnett et al. 1989). In addition to habitat loss, two major habitat changes were apparently exerting a negative influence on Burrowing Owls. The owls rely on burrows in sparse vegetation for escape habitat. Burrowing mammals, notably prairie dogs, have been eliminated from large tracts of the Great Plains to the owls' detriment. Also, a reduction in prairie fires and fenced areas protecting trees from grazing has allowed trees to expand into what was formerly treeless plain. This has been favorable for avian predators that nest in trees and mammalian predators as concealing cover. These kinds of changes are widespread throughout the Great Plains ecosystem and impact the owls year-round and may be largely irreversible.

### 10.3 Exotic Species

Globalization has resulted in an accelerated rate of biota transfer between continents. Many of these alien introductions have had economic and ecological consequences. The introduction of exotic Eurasian plant species has had a negative effect on grassland bird populations (Robbins and Dale 1999). For example, in Manitoba, Sprague's Pipits were significantly more abundant in native prairies than in habitats with introduced vegetation.

Leafy Spurge (*Euphorbia esula*) infestations in southwestern Manitoba has the potential to impact several vulnerable species protected under Manitoba Protected Species Act including the Western Spiderwort, Baird's Sparrow and Small White Lady Slipper (Leafy Spurge Stakeholders

Group 1999). In a study conducted in Manitoba, Belcher and Wilson (1989) found leafy spurge to be one of three Eurasian invaders, along with Kentucky Blue Grass and Smooth Brome Grass. They quoted an experimental study that showed that disturbance by humans promotes the establishment of leafy spurge; 45 times more seeds established themselves on bare soil compared to undisturbed vegetation. Where any of the three alien species occurred in their study, coverage of native species was decreased, such that leafy spurge is considered "...a considerable threat not only to the economic use of prairie rangelands but also to its conservation as native vegetation." In Belcher and Wilson's study area, of 83 leafy spurge infested sites, 49 were centered on trails, fireguards and roads, and 30 on disturbances caused by track vehicles; only 4 sites were not associated with a visible soil disturbance. Leafy Spurge can also be found in the Broomhill WMA (Parsons et al 1994).

Mansell and Moore (1999) concluded that the most effective strategy to control invasive nonnatives is to decrease the amount of disturbed bare ground on a site and that once established, controlled burns, biological weed control and herbicides may be required to provide control.

### 10.4 Encroachment

Encroachment of wood invaders such as Trembling Aspen, Wolf Willow, and Western Snowberry coupled with the lack of wild fires and bison has contributed to the loss of Mixed-grass Prairie habitat (Mansell and Moore 1999). Robbins and Dale (1999) also

report that encroachment and overgrazing is occurring on the wintering range of grassland species such as the Sprague's Pipit resulting in reduced habitat (Robbins and Dale 1999). Management activities may include prescribed burns to simulate prairie wildfires, moderate grazing by livestock or mowing around aspen bluffs.

### 10.5 Roads

Roads and similar disturbances may seem benign on the surface, but can have considerable impact. For example vehicles on roads contribute to the demise of many juvenile Burrowing Owls each year. Roads have an impact well beyond their narrow breadth. The international journal *Conservation Biology* recently devoted eight articles to the ecological impacts of roads on terrestrial and aquatic ecosystems, including 1) increased mortality from road construction, 2) increased mortality from collision with vehicles, 3) modification of animal behavior, 4) alteration of the physical environment, 5) alteration of the chemical environment, 6) spread of exotic species and 7) increased alteration and use of habitat by humans (2000, Vol. 14, pages 16-94).

Vehicle collisions are a threat to Burrowing Owls in Saskatchewan, where grasslands existed in small patches and 90% of the land was cultivated, collision with vehicles attributed to about 50% of Burrowing Owl mortality.

## 11.0 Conservation Goals and Objectives

**Vision:** The Southwestern Manitoba Mixed-grass Prairie Important Bird Area will be conserved in perpetuity for its importance to the conservation of grassland bird species and the Mixed-grass Prairie that provide economic, ecological and educational benefits to the residents of southwestern Manitoba.

**Overall Goal:** Grasslands in southwestern Manitoba are being lost and populations of grasslands birds in these areas are declining. By developing an bird brochure and self-guided IBA birding trail through southwestern Manitoba, and by fostering awareness of the declining populations of grassland birds and the disappearing Mixed-grass Prairie habitats, the conservation of the area will be fostered. The IBA is ecologically significant within Manitoba, and within North America, for its grassland bird biodiversity and the Mixed-grass Prairie biome. It is critical that the Southwestern Manitoba Mixed-grass Prairie IBA be maintained as a naturally occurring bird habitat. Many of the identified threats such as pesticides, habitat loss to agriculture, exotic species, will not be addressed in this document and may be addressed by the working group in the future. The primary goal of the working group is to develop the IBA birding brochure and self-guided vehicle trial.

**11.1 Ecotourism**

| <i>Objective</i>   | <i>Rational</i>   | <i>How to Achieve Goals</i>  |
|--|---|--|
| <p>Create economic opportunities for landowners and local communities.</p> | <p>An estimated 200-500 birders and nature enthusiasts visit the extreme southwest annually.</p> <p>Tourism and ecotourism is the largest growth industry in the world.</p> | <ol style="list-style-type: none"> <li>1. Add web pages on the significant bird species (and the Mixed-grass Prairie) to the town of Melita web site to promote and advertise birding opportunities in extreme southwestern Manitoba.</li> <li>2. Develop a self-guided birding brochure listing bird species that may be observed and directing birders towards areas where these birds may be found. Road signs and trails would need to be developed.</li> <li>3. Contact existing ecotour operators and the Department of Tourism to promote opportunities for birding and other heritage sites.</li> </ol> <p><b>Lead Agency: Melita Working Group.</b><br/> <b>Timeline: Fall 2001</b></p> |

## 11.2 Conservation of Grassland Habitat

| <i>Concern</i>                               | <i>Suggested Conservation Action</i>  | <i>How to Achieve and Lead Agency to take Action</i>  |
|--|---|---|
| Loss of Mixed-grass Prairie habitat the IBA. | CCP should strive to support and contribute to creation of an Endangered Species/Mixed Grass Prairie Preserve | Form partnerships with Critical Wildlife Habitat Program and The Nature Conservancy of Canada.<br><br><b>Lead Agency: Melita Working Group.</b><br><b>Timeline: Fall 2001</b> |

## 11.3 Education and Awareness

| <i>Concern</i>  | <i>Suggested Conservation Action</i>  | <i>How to Achieve and Lead Agency to take Action</i>   |
|---|---|--|
| Overall loss of grassland bird species and mixed-grass prairie habitats in southwestern Manitoba.<br><br>Use the Burrowing Owl as an example species to foster awareness of species at risk, overall grassland habitat loss and general grassland bird species population declines. | Foster community education within the community and local schools.<br><br>Utilize the Saskatchewan Burrowing Owl Interpretive Centre as an educational tool. They are available to provide community and school presentations and would bring a live Burrowing Owl. | Schools and organizations that were contacted in April of 2001 expressing interest included Boissevain, Deloraine, Hartney, Melita, Pipestone, Weston, Rapid City, Douglas, Rivers, The Seton Center, and Ducks Unlimited's Greenwings in Brandon. Manitoba Conservation Districts in these areas were contacted and are willing to cover costs associated with bringing the SK educational program through their districts.<br><br><b>Lead Agency: Melita Working Group and MB Conservation.</b><br><b>Timeline: Fall 2001.</b> |

## **12.0 Evaluating Success**

The Southwestern Manitoba Mixed-Grass Prairie IBA community conservation plan will be reviewed on an annual basis by the present working group comprised of community stakeholder groups.

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## References

- Bechard, M.M. 1981.** Historical nest records of the Ferruginous Hawk in Manitoba. *Canadian Field Naturalist* 95:467-469.
- Boundary Commission. 2001.** Boundary Commission - NWMP Trail. Available on the World Wide Web: <http://www.mts.net/~tofmel/boundary.htm>. Viewed May 16, 2001.
- Burnett, J.A., C.T. Dauphine, S.H. McCrindle, and T. Mosquin. 1989.** On the Brink: Endangered Species in Canada. Western Producer Prairie Books. Saskatoon, Saskatchewan.
- Cadman, M.D. 1985.** Status report on the Loggerhead Shrike (*Lanius ludovicianus*) in Canada. Committee on the status of Endangered Wildlife in Canada. Ottawa. 97 pp.
- Canadian Wildlife Service. 2001.** Hinterlands Who's Who. Available on the World Wide Web <http://www.cws-scf.ec.gc.ca/hww-fap/endanger/endanger.html>. February 15, 2001.
- CWS (Canadian Wildlife Service). 2001.** Hinterlands Who's Who. Available on the World Wide Web. <http://www.cws-scf.ec.gc.ca/hww-fap/loggerhd/logger.html> Viewed May 2, 2001.
- Cartwright, B.W., T.M. Short, and R.D. Harris. 1937.** Baird's Sparrow. *Trans. Royal Can. Institute, Report No. 46*:153-198.
- Criddle, N. 1920.** Birds that are little known in Manitoba. *Canadian Field Naturalist* 35:133-134.
- Dechant, J. A., M. L. Sondreal, D. H. Johnson, L. D. Igl, J. A. C. M. Goldade, M. P. Nenneman, and B. R. Euliss. 2001.** Effects of management practices on grassland birds: Bairds Sparrow. Northern Prairie Wildlife Research Center, Jamestown, ND. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/literatr/grasbird/bairds/bairds.htm> (Version 17FEB2000).
- Department of the Interior Grassland Bird Working Group. 1996.** Declining Birds in Grassland Ecosystems: A Department of the Interior Conservation Strategy. December 11-12, 1996. Fort Collins, Colorado. <http://biology.usgs.gov/cro/grassbir.htm>
- De Smet, K.D. and M.P. Conrad. 1987.** The status of Loggerhead Shrike (*Lanius ludovicianus*) in Manitoba during the 1987. Manitoba Dept. Nat. Resources, Winnipeg. 21 pp.

- De Smet, K.D. and M.P. Conrad. 1989a.** Status, habitat needs and management of Ferruginous Hawks in Manitoba (1987-1988). Manitoba Dept. Nat. Resources, Winnipeg, 13 pp.
- De Smet, K.D. and M.P. Conrad. 1989b.** The Loggerhead Shrike in Manitoba, its status and habitat needs. Manitoba Dept. Nat. Resources, Winnipeg. 10 pp.
- De Smet, K.D. and M.P. Conrad. 1990.** Conservation efforts for threatened and endangered grassland birds in Manitoba 1989. Manitoba Dept. Nat. Resources, Winnipeg. 23 pp.
- De Smet, K.D. and M.P. Conrad. 1991.** Status and habitat needs of the Loggerhead Shrike in Manitoba. In: Holroyd, G.L. et al. Proceedings of the second endangered species and prairie conservation workshop. Prov. Mus. Alta., Natural History Occas. Paper No.. 15:243-245.
- De Smet, K.D. 1992.** Manitoba's Threatened and Endangered Grassland Birds; 1991 Update and Five-Year Summary. Manitoba Natural Resources Wildlife Branch. Manuscript Report No. 92-03. 77 pp.
- Filion, F.L. et al. 1989.** The Importance of Wildlife to Canadians in 1987. Canadian Wildlife Service.
- Government of Canada. 1996.** The State of Canada's Environment. Government of Canada. Ottawa. 1996.
- Houston, C.S. and M.J. Bechard. 1984.** Decline of the Ferruginous Hawk in Saskatchewan. *American Birds* 38:166-170.
- Houston, C.S and JK. Schmutz. 1999.** Changes in Bird Populations on Canadian Grasslands. *Studies in Avian Biology* 19:78-94.
- Kantrud, Harold A., Rolf R. Koford, Douglas H. Johnson, and Michael D. Schwartz. 1993.** The Conservation Reserve Program - Good for birds of many feathers. *North Dakota Outdoors* 56(2):14-17. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. [www.npwrc.usgs.gov/resource/othrdata/crp/crp.htm](http://www.npwrc.usgs.gov/resource/othrdata/crp/crp.htm) (Version 16JUL97).
- Knapton, R.W. 1979.** Birds of the Lyleton-Gainsborough region. Sask. Natural History Society, Publ. No. 10.
- Koford, Rolf R. 1999.** Density and Fledging Success of Grassland Birds in Conservation Reserve Program Fields in North Dakota and West-central Minnesota. *Studies in Avian Biology* 19:187-195. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. [www.npwrc.usgs.gov/resource/2000/denfled/denfled.htm](http://www.npwrc.usgs.gov/resource/2000/denfled/denfled.htm) (Version 02MAR2000).

- Lane, J. 1968.** Baird's Sparrow Account. In: A.C. Bent. Life Histories of North American Cardinals, Buntings, Towhees, Finches, Sparrows, and their allies. Smithsonian Inst. U.S. Natl. Mus. Bull. No. 237:215-218.
- Leafy Spurge Stakeholders Group. 1999.** Leafy Spurge Economic Impact Assessment Manitoba 1999. 33 pp.
- Macoun C. and M. Macoun. 1909.** Catalogue of Canadian birds. Geol.
- Manitoba Conservation. ND.** Land For Wildlife and People: Manitoba's Wildlife Management Areas.
- Manitoba Conservation. 2001.** The Endangered Species Act. Available on the World Wide Web. [http://www.gov.mb.ca/natres/wildlife/legislation/endangered\\_act.html](http://www.gov.mb.ca/natres/wildlife/legislation/endangered_act.html) Viewed May 2, 2001.
- Manitoba Environment. 1997.** State of the Environment Report for Manitoba 1997. Manitoba Environment.
- Manitoba Natural Resources. ND.** Manitoba's Burrowing Owl Recovery Program. Manitoba Natural Resources and World Wildlife Fund.
- Manitoba Natural Resources. 2001.** Manitoba's Prairie Conservation Action Plan 1996-2001. Manitoba Natural Resources. 32 pp.
- Melita. 2001.** Town of Melita Website. Available on the World Wide Web <http://www.mts.net/~tofmel/>. Viewed May 1 2001.
- Mansell, T and J. Moore. 1999.** Mixed-grass Prairie Inventory of Manitoba. Interim status report. Critical Wildlife Habitat Program and Manitoba Conservation. September 20<sup>th</sup> 1999. 135 pp.
- Mixed Grass Prairie Stewardship Program. 2001.** Available on the World Wide Web [www.escape.ca/~mxdgrass/stewardship.htm](http://www.escape.ca/~mxdgrass/stewardship.htm). February 15, 2001.
- Musters, C.J.M., Kruk, M., De Graff, H.J., and W.J. Ter Keurs. 2001.** Breeding Birds as a Farm Product. *Conservation Biology* 15(2):363-369.
- Parsons, R.J., Hohn, S.L., Davis, S. and K. D. De Smet. 1994.** Broomhill Wildlife Management Area Natural Resources Inventory. Manitoba Dept. of Nat. Resources Wildlife Branch. Endangered Species and Nongame. Technical Report No. 94-01. 35 pp.
- Radcliff, B.D. 1986.** Manitoba Burrowing Owl Survey, 1982-1984. *Blue Jay* 344:31-37.

**RENEW. 1990.** National Recovery Plan for the Burrowing Owl. Unpublished report prepared for the Recovery of Nationally Endangered Wildlife, 51 pp.

**Robbins, M.B. and B.C. Dale. 1999.** Sprague's Pipit (*Anthus spragueii*). In *The Birds of North America*, No. 439 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, PA.

**Schmutz, J.K. and S.M. Schmutz. 1980.** Status of the Ferruginous Hawk in Canada. COSEWIC.

**Schmutz, J.K. 1984.** Ferruginous and Swainson's Hawk abundance and distribution in relation to land use in southeastern Alberta. *J. Wildlife Management* 48:1180-1187.

**Senecal, C. 1999.** Pelicans to Polar Bears: watching wildlife in Manitoba. Heartland Publications. Winnipeg, Canada. 256 pp.

**Taverner, P.A. 1937.** The Birds of Canada. Can. Dept. Mines, Bulletin No. 72, 445 pp.

**Thompson, E.T. 1892.** The Birds of Manitoba. *Proc. U.S. Natl. Museum* 13:457-643.

## Appendix I: IBA Population Thresholds

Southwestern Manitoba Mixed-grass Prairie IBA

| Species   | Global  | Continental | National | Nos. Present                               |
|---|---------|-------------|----------|--|
| <i>Lanius ludovicianus excubitorides</i> ,<br>Loggerhead Shrike<br>(Western subspecies) | na      | na          | 50 birds | 250 pairs<br>(1987)<br>100 pairs<br>(1999) |
| <i>Athene cunicularia</i> ,<br>Burrowing Owl  | na      | na          | 10 pair  | 76 pairs<br>(1982)                         |
| <i>Buteo regalis</i> ,<br>Ferruginous Hawk  | 50 pair | na          | 25 pair  | 50-55 pairs<br>38 (1999)                   |
| Baird's Sparrow   | na      | na          | na       | Unknown                                    |

**Appendix II: List of CCP Contacts.**

| <i><b>Individual</b></i>                                    | <i><b>Organization</b></i>  | <i><b>Contact</b></i>  |
|---|---|--|
| <b>Cory Lindgren<br/>Community Conservation<br/>Planner</b> | Manitoba IBA<br>Box 1160, Stonewall<br>Manitoba, R0C 2Z0              | Ph: 204-467-3269<br>Fx: 204-467-9028<br>c_lindgren@ducks.ca  |
| <b>Ken De Smet<br/>Species At Risk Biologist</b>            | Manitoba Conservation   | Ph: 945-5439<br>Fx: 945-3077   |
| <b>Murray Cameron</b>                                       | Chamber of Commerce   | Ph: 204-522-3285<br>Fx: 204-522-3536<br>ccagencies@escape.ca   |
| <b>Foster Fournie</b>                                       | Antler River Historical<br>Museum                                     | Ph: 204-522-3825   |
| <b>Floyd Cheyne</b>   | Reeve RM Arthur<br>Box 635, Melita, R0M 1L0                           | Ph: 204-522-8284<br>Fx: 204-522-8706   |
| <b>Ted Wall</b>   | Town of Melita<br>Economic Development<br>Box 728, Melita             | Ph: 204-522-8333<br>Fx: 204-522-3838<br>Twall@berkshire.ca   |
| <b>Ralph Wang</b>   | RM of Edward<br>Box 104<br>Pierson, Manitoba<br>ROM 1S0               | Ph: 204-634-2465   |
| <b>Murray Lee</b>   | Melita Chamber of<br>Commerce (Melita Inn)<br>Box 270, Melita R0M 1L0 | <a href="mailto:Melitainn@escape.ca">Melitainn@escape.ca</a><br>Ph: 204-522-3999<br>Fx: 204-522-3140 |

## Appendix III: 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 nationwide 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 IV: Nesting Densities 1987-1991.

Number of nests, number of young/successful nests (Source: De Smet 1992). FH - Ferruginous Hawk. BO - Burrowing Owl. LS - Loggerhead Shrike.

### *Poverty Plains*

| Township       | 1987    | 1988    | 1989    | 1990    | 1991     |
|----------------|---------|---------|---------|---------|----------|
| <b>FH</b> 3-28 | 3 4/2   | 4 13/4  | 3 7/3   | 5 15/4  | 4 10/3   |
| <b>FH</b> 4-28 | 3 3/1   | 4 7/3   | 3 5/2   | 5 4/1   | 6 12/5   |
| <b>FH</b> 5-28 | 2 4/2   | 2 1/1   | 2 6/2   | 3 5/2   | 2 2/1    |
| <b>BO</b> 3-28 | 0       | 0       | 1 6/1   | 1 6/1   | 0        |
| <b>BO</b> 4-28 | 0       | 0       | 1 0     | 0       | 1 6/1    |
| <b>BO</b> 5-28 | 0       | 0       | 1 4/1   | 0       | 0        |
| <b>LS</b> 3-28 | 16      | 19 13/4 | 18 0/1  | 12 20/6 | 15 51/9  |
| <b>LS</b> 4-28 | 27 16/5 | 20 3/4  | 12 3/2  | 19 19/4 | 26 50/16 |
| <b>LS</b> 5-28 | 19 5/3  | 21 3/4  | 19 26/6 | 18 9/4  | 13 15/6  |

### *Lyleton-Pierson Prairie*

| Township       | 1987   | 1988   | 1989   | 1990     | 1991     |
|----------------|--------|--------|--------|----------|----------|
| <b>FH</b> 1-29 | 2 4/1  | 3 3/1  | 2 0    | 3 3/1    | 2 4/1    |
| <b>BO</b> 2-28 | 0      | 0      | 0      | 0        | 1 6/1    |
| <b>BO</b> 1-29 | 1 5/1  | 2(2) 0 | 1 3/1  | 2 12/2   | 1(3) 6/1 |
| <b>BO</b> 2-29 | 1 7/1  | 3 5/1  | 2 7/2  | 1(1) 2/1 | 1 4/1    |
| <b>LS</b> 1-29 | 13 4/2 | 9 4/1  | 7 0/1  | 7 18/5   | 6 15/5   |
| <b>LS</b> 2-29 | 7      | 9      | 8 13/2 | 6 20/2   | 6 12/7   |
| <b>LS</b> 2-28 | 15     | 21 5/2 | 19 7/1 | 29 57/16 | 29 76/16 |

## Appendix V: 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.**
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- **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/>

**Appendix VI: GIS image of southwestern Manitoba.**

