

*Woodland Caribou Signature Site*



*Background Information*

*January 2004*

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 Printed on recycled paper.

51800

(2.0k P.R. 18 01 04)

ISBN 0-7794-5198-8

## Executive Summary of Background Information

The Woodland Caribou Signature Site is a 536,569-hectare featured area consisting of one provincial park, four proposed park additions, a conservation reserve, an enhanced management area and two forest reserves.

The Woodland Caribou Signature Site is located in northwestern Ontario, approximately 30 kilometres west of the town of Red Lake and 90 kilometres north of the town of Kenora. The signature site was identified as one of nine featured areas within *Ontario's Living Legacy Land Use Strategy* (1999). These featured areas contain significant natural and cultural features and boast high-quality wilderness recreation opportunities that warrant special strategies.

The unique boreal ecosystem of Woodland Caribou Signature Site exhibits a variety of significant natural, cultural and recreational features. Influenced by the prairie climate, it is an area that displays a diverse community of plants and animals, some of which are provincially rare or at the northern limits of their range. It is home to the threatened woodland caribou, and provides critical summer and winter habitat for this species. The site is presently known for its excellent sport fishery and backcountry wilderness canoeing. While the majority of the signature site is an area protected from industrial activity, the Pipestone Bay-McIntosh Enhanced Management Area is used by the forestry and mining sectors as well as recreationists.

The signature site protects the headwaters of the Bloodvein, Gammon, Bird, and Sturgeon rivers. These waterways are the backbone of approximately 2000 kilometres of interconnected canoe routes found within the site. These river systems also represent the main travel routes that were once part of the historic fur trade between Lake Winnipeg and Red Lake.

The Woodland Caribou Signature Site, located at the centre of the Canadian Shield, consists of some of the oldest rocks on Earth. Dividing the site is the Wanipigow – Wallace Lakes Fault. This geologic

formation is situated at its eastern point in the enhanced management area and at its western point near Haggart Lake where it enters the Province of Manitoba. The site became ice-free for the last time approximately 10,000 years ago. Waters of glacial Lake Agassiz, that once covered this area, have had a major impact on the landscapes of the site, removing most of the glacial debris from the bedrock upland areas.

Cultural heritage values are found throughout the signature site. The site is a cultural landscape: a geographical area that has been modified, influenced or given special meaning by people. The First Nation communities of Grassy Narrows, Little Grand Rapids, Pikangikum and Wabaseemoong all have traditional use areas within the signature site and their people have given special meaning to this landscape. Cultural evidence consists of both pre- and post-contact sites. Aboriginal and treaty rights within the Woodland Caribou Signature Site will be respected. The site is located within Treaty 3 and Treaty 5.

A signature site strategy is being prepared for Woodland Caribou, which will guide the protection and management of resources, visitor use and overall development within the site. The strategy will set the direction for the entire geographic unit of the signature site, including protection, zoning, management and operations. It will be a dynamic tool, looking forward over a 20-year period.

The signature site strategy development process will incorporate full public consultation and will be developed by completing the following stages: preparation and release of the terms of reference and invitation to participate, review of background information, review of issues and alternatives, review of draft strategy and inspection of approved strategy.

This background information document summarizes resource information about the area that has been collected over a number of years. It will serve as a foundation for the evaluation of issues and alternatives, and will form part of the preliminary and approved strategy for the Woodland Caribou Signature Site.

## Résumé des renseignements généraux

La région caractéristique Woodland Caribou est un territoire d'une superficie de 536 569 hectares qui comprend un parc provincial, quatre annexes à des parcs existants, une réserve de conservation, une zone de gestion valorisée et deux réserves forestières. Cette région caractéristique est située dans le Nord-Ouest de l'Ontario, à une trentaine de kilomètres de Red Lake et à quelque 90 kilomètres au nord de Kenora. Woodland Caribou est l'une des dix régions caractéristiques reconnues dans le processus menant à la Stratégie d'aménagement des terres du *Patrimoine vital de l'Ontario* (1999). Ces territoires se distinguent par leurs caractéristiques naturelles et culturelles, qui s'y combinent à des possibilités particulières de loisirs et d'activités en arrière-pays.

La diversité de l'écosystème boréal unique de Woodland Caribou se manifeste sur les plans naturel, culturel et récréatif. Sous l'influence du climat des prairies, cette région présente tout d'abord une grande diversité végétale et faunique, dont certaines espèces sont rares au niveau de la province ou se trouvent à la limite nord de leur territoire. C'est le domaine du caribou des forêts, espèce d'intérêt particulier, qui y trouve ses habitats d'été et d'hiver. La région est déjà réputée pour ses excellentes possibilités de pêche sportive et de canotage sauvage. Bien que la majeure partie de la région caractéristique ait été placée à l'abri de l'activité industrielle, la zone de gestion valorisée Pipestone Bay-McIntosh offre des débouchés aux secteurs forestier et minier, ainsi qu'aux activités récréatives de plein air.

La région caractéristique abrite le cours supérieur des rivières Bloodvein, Gammon, Bird et Sturgeon. Ces voies nautiques forment les artères principales d'un réseau de plus de 2000 kilomètres d'itinéraires de canotage qui sillonne la région. Ces cours d'eau représentent aussi les voies de transport essentielles à l'ancien commerce des fourrures, qui est au cœur de l'histoire des lacs Winnipeg et Red.

La région caractéristique Woodland Caribou, située au centre du bouclier canadien, contient quelques unes des roches les plus anciennes sur terre. Le territoire s'étend de part et d'autre de la faille Wanipigow-Wallace. La partie la plus à l'est de cette formation géologique se situe dans la zone de gestion valorisée et, à l'ouest elle traverse la frontière Ontario-Québec près du lac Haggart. Ce terrain s'est libéré des glaces il y a environ 10 000 ans. Les eaux glaciaires du lac Agassiz ont eu une profonde influence sur la géomorphologie de la région en déblayant la majorité des dépôts glaciaires des hautes terres rocheuses.

Les valeurs du patrimoine culturel parsèment la région entière. Ces terres forment un paysage culturel, une contrée à laquelle de nombreux peuples ont imposé leur empreinte, leur influence et leur interprétation. Les collectivités des Premières nations de Grassy Narrows, de Little Grand Rapids, de Pigkangikum et de Wabaseemoong ont toutes apporté une application particulière à divers secteurs de la région caractéristique et leurs membres accordent un sens spécial à la terre. Les traces culturelles datent des époques précédant et suivant l'arrivée des Européens. On respectera les droits autochtones et issus de traités applicables dans la région caractéristique Woodland Caribou. La région s'étend sur les terres des traités 3 et 5.

Une stratégie d'aménagement de la région caractéristique est en cours d'élaboration pour Woodland Caribou. Elle guidera la protection et la gestion des ressources, l'accès des visiteurs et l'aménagement d'ensemble. La stratégie fournira l'orientation de la mise en œuvre des plans, y compris la protection, le zonage, la gestion et l'exploitation. Il s'agira d'un outil dynamique qui couvrira une période de vingt ans.

Le processus de planification de la région caractéristique incorporera une consultation publique et se déroulera suivant les étapes suivantes : élaboration et publication des paramètres et invitation à participer, examen des renseignements généraux, examen des problèmes et options, examen de l'ébauche de la stratégie et inspection de la stratégie approuvée.



## 1.0 Introduction

### 1.1 Lands For Life and Ontario's Living Legacy

The Woodland Caribou Signature Site was identified as one of nine featured areas under *Ontario's Living Legacy* during the *Lands for Life* planning process, between June 1997 and July 1998. Three round tables comprised of 12 to 14 individuals from diverse backgrounds were formed to represent three planning areas: the Boreal East, Boreal West and Great Lakes-St. Lawrence. The Woodland Caribou Signature Site (also referred to in this document as “the site”) is located within the Boreal West planning area.

The round tables carried out extensive public consultation in their planning areas and produced a series of broad recommendations, which were compiled to form a consolidated recommendations report. In March 1999, after careful deliberation of the round tables' recommendations, public comment, and input by interest groups and industry, the Ontario government released the Draft Land Use Strategy and the *Ontario Forest Accord*. In July 1999, *Ontario's Living Legacy Land Use Strategy* was approved after a review period during which 8,000 comments were received.

The work of the Boreal West round table resulted in several proposed additions to Woodland Caribou Provincial Park. The resulting area was designated as a signature site in recognition of its outstanding natural heritage values with significant tourism and recreation potential.

The planning process, which was initiated in December 2002, will result in a strategy for the signature site. The strategy, which is scheduled to be completed in 2006, will guide the development of the following:

- A park management plan for Woodland Caribou Provincial Park (also referred to as the “core park”) and approved *Ontario's Living Legacy* park additions,
- A resource management plan for the Eagle-Snowshoe Conservation Reserve, and
- A management direction for the Pipestone Bay-McIntosh Enhanced Management Area.

Milestones in the review process are:

- Public Invitation to Participate and Collection of Background Information: *December 2002*
- Public Review of Background Information: *Winter 2004*
- Public Review of Issues and Alternatives Document: *Fall/Winter 2005*
- Public Review of Draft Strategy: *Summer 2005*
- Public Inspection of Approved Strategy: *Fall 2005*



Aboriginal and Treaty Rights will not be affected in any way by this planning process. Notices regarding opportunities for public involvement in the planning process will be posted on the *Environmental Bill of Rights* electronic registry for a minimum of 45 days.

### 1.2 Environmental Bill of Rights

In accordance with the provisions of the *Environmental Bill of Rights* (EBR), the Ministry of Natural Resources prepared a Statement of Environmental Values (SEV). The SEV describes how the purposes of the *Environmental Bill of Rights* are to be considered whenever decisions are made which might significantly affect the environment. This includes decisions made as a result of the signature site strategy and associated resource management planning processes.

The primary purpose of the *Environmental Bill of Rights* is “to protect, conserve and, wherever reasonable, restore the integrity of the environment.” From the ministry’s perspective, that broad statement of purpose translates into four objectives in its Statement of Environmental Values:

- To ensure the long-term health of ecosystems by protecting and conserving our valuable soil, aquatic resources, forest and wildlife resources as well as their biological foundations.
- To ensure the continuing availability of natural resources for the long-term benefit of the people of Ontario.
- To protect natural heritage and biological features of provincial significance.
- To protect human life, the resource base and the physical property from the threats of forest fires, floods and erosion.

The ministry’s Statement of Environmental Values will be considered in the development of an approved strategy for the Woodland Caribou Signature Site.

### 1.3 Woodland Caribou Signature Site

The Woodland Caribou Signature Site is comprised of Woodland Caribou Provincial Park, four proposed park additions (Peisk, Anchor, Sydney/Rowdy, and Foley lakes), the Eagle-Snowshoe Conservation Reserve (CR), the Pipestone Bay-McIntosh Enhanced Management Area (EMA) and two forest reserves (Figure 1).

This rugged 536,569 hectare landscape, centered in the heart of the Canadian Shield, includes a mix of elongated lakes, sudden changes in elevation and massive bedrock outcrops carved out by glaciers during the late Wisconsinan period. Woodland Caribou Provincial Park is by far the largest component in the site (Table 1). Anchoring 84 per cent of the signature site, Woodland Caribou Provincial Park is the foundation that defines the character of the site, wilderness. The core park extends approximately 100 kilometres north to south and 64 kilometres east to west. It is roughly 30 kilometres west of the town of Red Lake and 90 kilometres north of the city of Kenora and is adjacent to the Ontario – Manitoba provincial boundary.

The site is surrounded by land designated as general use. Although the planning process for the signature site or its component parts will not make policy decisions about general use areas, these areas may be influenced by these decisions.

### 1.4 What is a Signature Site Strategy?

Each signature site is a unique geographic entity that contains a mix of land use designations and management approaches that collectively serves to profile or showcase *Ontario’s Living Legacy*. They have important natural and cultural heritage values to be protected and may have significant tourism and recreation potential that merits increased planning, management and promotion.

Signature sites can benefit from a strategy that outlines management direction and that also explores business opportunities for the development of areas with high tourism potential. Signature sites present opportunities

*Table 1: Components of the Woodland Caribou Signature Site*

<i>Site Name</i>	<i>ID #</i>	<i>Classification/Category</i>	<i>Area (Ha)</i>
Woodland Caribou Provincial Park	P2370e	Wilderness	450, 000
Proposed Park Additions	P2370	Wilderness	29, 788
Eagle-Snowshoe Conservation Reserve	C2405	N/A	34,548
Pipestone Bay-McIntosh Enhanced Management Area	E2359a	Remote Access	21,978
Forest Reserves	F2370	N/A	255
<b>Total area</b>			<b>536, 569</b>

to direct land use in unique landscapes in an integrated manner, considering a range of land uses, appropriate levels of protection and marketing and promotion opportunities. The signature sites concept allows teams to step away from the traditional way of managing separate land use designations - a park management plan for the park, a statement of conservation interest for the conservation reserve, general prescriptions for general use areas, etc. By considering all areas of a signature site together, the interrelationships can be identified and appropriate levels of protection and promotion of the entire signature site area can be established.

The signature site planning process is designed to encourage and incorporate public input, review and comment throughout the process.

Preparation of the Woodland Caribou Signature Site Strategy will adopt an ecological approach, recognizing that natural processes do not respect administrative boundaries. The strategy will consider existing land use and resource management intent and direction on adjacent lands. Some examples are: *Ontario's Living Legacy Land Use Strategy*, the 1999 Ontario Forest Accord, local forest management plans, regional fire management strategies, and fish and wildlife guidelines. In addition to discussing the natural, cultural and recreational features documented within the site, the strategy will also refer to less tangible, but equally

important values such as solitude and biodiversity.

The Woodland Caribou Signature Site Strategy will provide the following broad direction, to guide management decisions for natural resources and uses in the park, conservation reserve and the enhanced management area. It will:

- Establish a vision and guiding principles for the signature site.
- Establish management goals and objectives for natural resources within the signature site that are consistent with the overall vision.
- Identify significant features, values, uses and opportunities that may contribute to the area's protection, tourism and economic needs and should be considered in management planning .
- Provide clarity to and elaboration on the land use direction currently included in the *Ontario's Living Legacy Land Use Strategy*.
- Recommend approaches for promoting and marketing the signature site.
- Provide a framework to ensure that future management projects and activities will be assessed for *Environmental Assessment (EA) Act* compliance.

The strategy must consider existing commitments and direction relating to the site established through previous planning, legislation and policy. Existing commitments include, but may not be limited to:

- The core Woodland Caribou Provincial Park, regulated in 1983 as a wilderness class park.

- The proposed park additions as designated through the *Ontario's Living Legacy Land Use Strategy* as wilderness class park additions.
- Provincial parks policy defines the permitted uses for wilderness parks.
- Modifications in resource management practises in the EMA will be implemented with no impact on wood supply, and only in exceptional cases will wood costs be affected.
- Comprehensive long-term access planning is required in remote access category EMAs.
- Roads in the remote access category EMA will have use restrictions.

Following the direction provided in the strategy, a park management plan will be developed for Woodland Caribou Provincial Park and proposed park additions. A resource management plan will be developed for the Eagle-Snowshoe Conservation Reserve and a management direction for the Pipestone Bay-McIntosh Enhanced Management Area. The three planning documents will be prepared in accordance with the park management planning guidelines, the conservation reserves policy (PL3.03.05) and the framework for resource management planning in MNR (1986).

These plans will be developed within a single planning timeframe and process. Detailed management direction will be developed in these documents for the following components:

- Zoning for the Park
- Resource Stewardship, Operations and Development:
  - Natural Resources
    - Fisheries Management (e.g. angling, capacities)
    - Wildlife Management (e.g. caribou habitat, trapping, hunting, Bear Management Areas)
    - Land Management (e.g. boat caches, tourism facilities)
    - Forest Management (e.g. allocation, renewal)
  - Cultural Resources
    - First Nation values
    - Historical Sites
  - Recreation Resources (canoe routes, portages, campsites, shore lunch sites, trails, access points)

- Operations
  - Natural Heritage Education (e.g. interpretation, information services)
  - Research (e.g. wildlife, natural fire)
  - Recreation Management (e.g. motorized travel, carrying capacity)
  - Tourism Services (e.g. outfitting, remote tourism operations)
  - Marketing (e.g. partnerships)
- Development
  - Economic Development (e.g. area First Nations and communities)
  - Access Points (e.g. locations, facility requirements, and restrictions)
  - Roads (e.g. construction, use management, deactivation)
- Implementation Priorities for Stewardship, Operations and Development Policies
- Social and Economic Impact Analysis (e.g. job creation, infrastructure)
- Summaries of all Public Consultation

This background information document summarizes resource information about the area that has been collected over a number of years. It will serve as a foundation for the evaluation of issues and alternatives, and will form part of the preliminary and approved strategy for the Woodland Caribou Signature Site. Additional information is available in a series of technical reports, which are listed in Appendix A.

### ***1.5 Planning History***

Portions of the signature site and its resources have been under study and subsequent consideration for higher level protection since the 1940s. The original Woodland Caribou Provincial Park is one such example. Since that initial period, the proposed boundary of this protected area has changed numerous times and had been afforded various degrees of protection. The area was once considered for inclusion in the National Parks System and has, at various points in time, been referred to as the Caribou Game Preserve (1948), Irregular Lake Park Reserve (1967), Woodland Caribou Park Reserve (1972), and Atikaki Study Area (1974).

In 1983, following years of study and public consultation, the Minister of Natural Resources tabled

a series of land use guidelines for the province and ultimately created 155 new provincial parks. On June 7, 1983 Woodland Caribou Provincial Park was designated as a 450,000-hectare (1.2 million acre) wilderness park under the Provincial Parks Act by Ontario Regulation 343/83. A management planning process was initiated in 1984 but did not result in an approved management plan for the area. In 2000 an interim management statement was prepared that will guide direction until the signature site strategy is approved.

## ***1.6 Existing Land Use Designations***

Permitted uses vary among the five separate land designations of the signature site. For detailed accounts of permitted uses refer to Appendix B, which details policies as amended by *Ontario's Living Legacy Land Use Strategy*.

### ***1.6.1***

#### ***Woodland Caribou Provincial Park and Proposed Park Additions***

The goal of the Ontario provincial park system is to provide a variety of outdoor recreation opportunities, and to protect provincially significant natural, cultural, and recreational environments.

The provincial parks system provides a diversity of landscapes and experiences for the benefit of Ontario's residents and tourists. Objectives state in broad terms what is to be achieved through planning; these, in turn, guide park management with the implementation of approved management plans. The detailed objectives of the Ontario provincial park system are described in *Ontario Provincial Parks: Planning and Management Policies* (MNR, 1992).

Regulated in 1983, Woodland Caribou Provincial Park is a 450,000-hectare wilderness class park that represents a vast natural area, yet it is within easy access of northwestern Ontario, Manitoba and the midwestern United States. An interim management statement was approved for the park in 2000 and will continue to guide its direction until a park management plan is approved as part of the signature site strategy.

The four proposed park additions of Peisk, Anchor, Sydney/Rowdy, and Foley lakes will expand Woodland Caribou Provincial Park by 29,788 hectares and will provide protection and representation for a wide range of natural and cultural heritage values, as well as opportunities for wilderness recreation and remote tourism. The Sydney/Rowdy and Foley Lake additions may be the first additions to the park. Peisk and Anchor Lake additions currently form part of the Red Lake Forest as a Sustainable Forest Licence and regulation will occur when replacement wood supplies are found for the management unit.

### ***1.6.2***

#### ***Eagle-Snowshoe Conservation Reserve***

Conservation reserves are areas of Crown land set aside by regulation under the *Public Lands Act*. Detailed policies for conservation reserves are outlined in conservation reserves policy and procedure (1997). Conservation reserves protect Ontario's representative natural areas and special landscapes. Most recreational (e.g. hiking, skiing, remote-based tourism, nature appreciation, hunting) and non-industrial (e.g. fur harvesting, commercial fishing and bait harvesting) activities that have traditionally been enjoyed in the area will continue, provided that these uses do not negatively affect the natural features needing protection. Hunting and fishing are permitted within all new conservation reserves proposed through *Ontario's Living Legacy*.

Commercial timber harvesting, mining and commercial hydroelectric development are prohibited in conservation reserves. Conservation reserves are required to have a resource management plan or statement of conservation interest outlining specific management direction and targets.

The Eagle-Snowshoe Conservation Reserve (34,548 hectares) abuts Woodland Caribou Provincial Park to the southwest and includes significant caribou habitat and remote tourism development. The conservation reserve is situated within the Ministry of Natural Resources administrative district of Kenora and constitutes a remote wilderness area.



### 1.6.3

#### *Pipestone Bay-McIntosh Enhanced Management Area (EMA)*

Enhanced management area is a new land use category that has been established in order to provide more detailed land use direction in areas of special features or values. Typically, these are relatively large areas which provide the public and tourism operators with high-quality remote recreational experiences including hunting, fishing, canoeing and camping. Given the large size, remoteness, and relative absence of roads, these areas play a significant role in protecting wilderness values outside the parks and protected areas system.

EMAs may lead to modifications (e.g. timing, location, method, access) in resource management practises in order to recognize other land use values. These adjustments will be implemented with no impact on wood supply, and only in exceptional cases will wood costs be affected. A management direction will guide future land use in the EMA.

Remote access EMAs are intended to maintain the remote character of selected areas. The remote character will be retained by planning and establishing standards for the location and the use or abandonment of roads and trails in the forest management plan. Roads for industrial and commercial use are permitted;

however, their standards should be lower than those governing primary access roads. New roads must be planned through comprehensive long-term access planning that considers the values of the area. Some guidelines are:

- Roads should be constructed to the lowest standard possible.
- New roads/trails should be directed to existing corridors where possible.
- Layout should consider aesthetics.
- Design and construction should facilitate access controls and closure/rehabilitation.

The Pipestone Bay-McIntosh Enhanced Management Area (21,978 ha) is located on the eastern edge of Woodland Caribou Provincial Park and provides additional protection to headwaters of the Bloodvein River as well as other recreation and tourism values. Designated as a remote access EMA, any development in the area must consider the aforementioned values. Current activities in the EMA area include forestry, mining, tourism, trapping, hunting and fishing. The EMA also contains a historic water route linking Woodland Caribou Provincial Park and the Bloodvein River with the community of Red Lake via Pipestone Bay.

#### 1.6.4

##### *Forest Reserves*

Forest reserves are areas where protection of natural heritage and special landscapes is a priority, however some resource use can take place under appropriate conditions. This designation has been applied to a relatively small number of areas. Policies for forest reserves are similar to the policies for new conservation reserves, except that mining and related access will be allowed in a forest reserve. Commercial forest harvest, new hydroelectric power development, and peat extraction will not be allowed, but most other resource and recreational uses will be permitted, provided they are consistent with the values that are being protected.

Two forest reserves totaling 255 hectares are located at the northeast and southeast end of Douglas Lake, adjacent to the Foley Lake proposed park addition. The forest reserves in the Woodland Caribou Signature Site were initially identified for inclusion as park additions, but detailed examination determined that there were existing mining claims. These lands will be added to the park if and when existing mining claims are retired through normal processes. For the purposes of this document, the forest reserves will be included as part of the Foley Lake proposed park addition.

#### 1.6.5

##### *General Use Areas*

About 70 per cent of the *Ontario's Living Legacy* planning area has been placed in a general use designation. This designation includes all Crown lands not placed into a specific designation or EMA. A full range of resource and recreational uses can occur in general use areas. Management of general use areas will occur in the context of ecological sustainability. There is an extensive set of legislation, policy and guidelines that will support and direct management actions in general use areas.

Patent lands exist in the interior of the conservation reserve. These lands were patented between 1947 and 1956 as mining lands and are classed as general use, which permits a full range of resource and recreational uses. However, the location of these lands within the Eagle-Snowshoe Conservation Reserve limits their potential for development due to accessibility.



## 2.0 Regional Context

### 2.1 Overview

The rugged Canadian Shield of the 536,569 hectare Woodland Caribou Signature Site represents a typically glaciated landscape characterized by a mix of elongated lake systems, sudden changes in elevation, erratic drainage patterns, thin soils and massive bedrock outcrops. Part of the Nelson River drainage basin, all waters contained in the boreal highlands of the Woodland Caribou Signature Site flow into Hudson Bay via Lake Winnipeg and the Nelson River. This portion of the Arctic watershed is made up of three principal river systems, the Bloodvein River in the north, the Gammon River located centrally in the site and the Bird River in the south. The Ontario portion of the Bloodvein River, the headwaters of which are now contained within the Peisk Lake proposed park addition and the Pipestone-Bay McIntosh EMA, was designated as a Canadian Heritage River in 1998. In addition to the three major river systems there are approximately 2000 kilometres of high quality canoe routes within the signature site. The beautifully rugged terrain produces a pattern of small bedrock lakes linked by a series of short steep drops containing numerous rapids and falls. Water quality within the signature site is extremely good due to the fact that the majority of the rivers originate within protected boundaries.

Vegetation found within the signature site is generally representative of the Southern Boreal Forest Region; however, the hot, dry climate, thin soils and relative proximity to the prairies combine to produce a unique 'Prairie-Boreal' ecology. Associated flora and fauna can be found in abundance in the park along with many rare and significant species. The Woodland Caribou Signature Site is also located in an area that has one of the highest forest fire occurrence areas in Ontario and represents a dynamic ecology which can change dramatically in a very short period of time. In combination, these factors create a mosaic of diverse habitats that support a wide variety of wildlife species including black bear, moose, beaver, otter, marten,

fisher, great blue heron, osprey and bald eagle. The nationally "threatened" woodland caribou located within the signature site are one of Ontario's largest surviving herds south of the Hudson Bay Lowlands. Wolverine has also been observed in the site. It has been assigned a status of "special concern" nationally by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and is recommended for threatened status by the Committee on the Status of Species at Risk in Ontario.

The signature site contains some of the highest quality recreational fisheries in Ontario. Walleye, northern pike and lake trout are the most sought-after species and sustain a tourism industry that contributes significantly to the local and regional economies.

Commercial tourism activity such as sport fishing is supported by main base lodges within the signature site. In addition, outpost camps are distributed throughout the signature site, each exhibiting a wide range of use and visitation. There are also several private cottages and recreational camps within the boundaries of the signature site.

The cultural legacy of the Woodland Caribou Signature Site is rich and includes pictographs, archaeological sites, historic fur trading routes, and the remains of a European trading post. Pictograph sites located on the Bloodvein River may be of international significance.

### 2.2 Population Centres

The Woodland Caribou Signature Site is located within a one to two day drive of many major population centres including Winnipeg, Manitoba, Thunder Bay, Ontario and Minneapolis, Minnesota (Figure 2). There are no permanent residences or communities within the signature site boundaries. The Municipality of Red Lake, population 4,700, is the nearest human settlement at approximately 30 km east of the Woodland Caribou Signature Site. The next largest centre by road is Ear Falls, population 1,050, located approximately 70 km southeast of the site. The Pikangikum First Nation is located roughly 50 km by air from the northeast corner of the site. From the

*Table 2: Distances to major population centres*

<i>City</i>	<i>Straight Line Distance (km)</i>	<i>Road Distance (km)</i>	<i>Driving Time (hrs)</i>
Winnipeg	210	480	6
Thunder Bay	500	575	7
Minneapolis	700	785	10
Des Moines	1046	1215	15
Milwaukee	1020	1212	15
Chicago	1140	1310	16
Toronto	1415	1975	24

southern edge of the site, Wabaseemoong Independent First Nation and the Grassy Narrows First Nation are an equal distance at approximately 55-60 km southwest and southeast respectively.

The majority of backcountry users at the present time come from the mid-western United States, many of whom have canoed extensively in Quetico Provincial Park and the Boundary Waters Canoeing Area (BWCA). An increasing number of canoeists originate from Ontario and Manitoba.

### **2.3 First Nation Communities**

The Woodland Caribou Signature Site is located within Treaty 3 and Treaty 5 areas (Figure 3). The Ontario-based First Nations of Grassy Narrows, Pikangikum and Wabaseemoong and the Manitoba First Nation of Little Grand Rapids all have traditional use areas within the signature site. Lac Seul First Nation is also suggesting evidence of its ancient occupancy within the park and investigation is underway to validate the claim.

The majority of First Nations people within Treaties 3 and 5 live on reserves or settlements within their traditional use areas. According to Indian and Northern Affairs Canada (INAC, 2000), Pikangikum First Nation

has a total registered population of 1,971. The reserve is located 97 kilometres north of the town of Red Lake. Access to the community is by air or winter road only, although an all-weather road to the south shore of Pikangikum Lake is set to be operational by fall 2003.

The Wabaseemoong Independent First Nation has a total population of 1,595. Grassy Narrows First Nation has a total registered population of 1,169. Both reserves are located approximately 110 kilometres north and northeast of Kenora, respectively. An all-weather road is accessible from each reserve. Manitoba based First Nation Little Grand Rapids, is located approximately 300 km northeast of Winnipeg on the Berens River. The total registered population is 1,265 and year round road access to the community is unavailable. Lac Seul First Nation has a registered population of 2,555.

The four, possibly five First Nations communities consider themselves members of the Ojibway (Anishinaabe) Nation. There is a commitment in the *Ontario's Living Legacy Land Use Strategy* to consult with First Nations at the individual and treaty organization levels to seek opportunities for First Nations economic development.

*Table 3: Population of major markets for the Woodland Caribou Signature Site*

<i>Province/State/Region</i>	<i>Population</i>	<i>(Year)</i>
Northwestern Ontario (Thunder Bay and West)	234,771	(1992)
Manitoba	1,142,500	(2003)
Minnesota	4,919,479	(2001)
Wisconsin	5,363,675	(2000)
Illinois	12,419,293	(2000)
Iowa	2,926,324	(2000)
Indiana	6,080,485	(2000)

## **2.4 Manitoba**

The Woodland Caribou Signature Site shares approximately 96 km of its western border with the Province of Manitoba. Tourism developments based in Manitoba have access to and use Ontario's resources in this area. Along 70 kilometres of this shared border lie two of Manitoba's provincial parks, Nopiming and Atikaki. Since the establishment of these three parks, Woodland Caribou, Atikaki and Nopiming, the provincial governments of both provinces have worked cooperatively in the management of these areas. When considered together as one core area, this interprovincial complex represents over one million hectares of protected area.

In a joint submission to the Federal Provincial Parks Council in 2002, Manitoba Provincial Parks and Ontario Parks indicated their support for an interprovincial wilderness area. This proposed partnership would develop a plan for the marketing and management of shared natural resources and related tourism and recreation opportunities. In Ontario, the public will be consulted and public opinion collected at open house meetings during the Woodland Caribou Signature Site planning process to determine the outcome of this proposal.

Other existing interprovincial cooperation includes a 1988 Memorandum of Understanding to provide for the management of the fisheries resource. A boundary water agreement with Manitoba identifies provincial responsibilities for the management of shared lakes.

## **2.5 Access and Transportation Routes**

There is no direct road access to Woodland Caribou Provincial Park, though various forest roads do provide access to rivers, lakes and portages that lead into the park. Logging roads do exist in the park additions and EMA, though some presently have restricted access. Roads associated with logging outside of the Woodland Caribou Signature Site may have a significant impact on access opportunities as well as on wildlife populations. Roads are known to have a negative impact on wildlife and/or alter wildlife population dynamics by facilitating the influx of predators such as wolves to formerly remote or inaccessible regions (James et al., 2000). Disturbance by road traffic may also inhibit dispersal and genetic mixing in some species and can contribute to the inward spread of invasive species (Trombulak & Frissell, 2000).

Currently Leano Lake, accessed via Suffel or Longlegged Roads, is a favoured entry point by the

majority of registered backcountry users. In 2002, based on park permit sales, 43 per cent of visitors entered at this point. An additional 13 per cent used fly-in access while the remaining 44 per cent used a variety of other entry points.

The network of forest roads that surrounds the signature site is shown in Figure 2.

#### **2.4.1**

##### ***Pine Ridge Forest Access Road***

The Pine Ridge Forest Access Road is located in the Red Lake Forest Management Unit. Built in the mid 1980s, an extension of the Pine Ridge Road (currently a partially constructed right-of-way) exists and terminates within three km of Peisk Lake, near the headwaters of the Bloodvein River. The Pine Ridge Road for the most part is built over a mix of a sand, silt and clay base. The northeast section of the core park can be accessed at Olive Lake via the Chukuni River where it intersects with the Pine Ridge Road.

#### **2.4.2**

##### ***McIntosh Road***

The McIntosh Road extends south from the Pine Ridge Forest Access Road at km 50 and extends along the east side of McIntosh Lake in the EMA. A minor amendment to the 1993-2003 Red Lake Forest Management Plan was approved in 1999 that addressed the recent designation of the EMA. The amendment addressed special management concerns surrounding the historic Pipestone Bay-Lund Lake canoe route and placed restrictions on the use of McIntosh Road. Specifically, the use of the McIntosh Road to access Woodland Caribou Provincial Park is prohibited until access has been addressed as part of the Woodland Caribou Signature Site Strategy.

#### **2.4.3**

##### ***Suffel, Iriam and Longlegged Lake Roads***

Suffel Lake Forest Access Road begins approximately 10 km south and west of Red Lake near the town of Madsen and turns into the Iriam Road at km 31. Both the Suffel and Iriam Roads were built over and around exposed bedrock resulting in a sometimes narrow, sometimes shallow road base.

The Longlegged Lake Forest Access Road begins approximately 15 km west of Ear Falls at the terminus of Hwy 804. At km 60 it intersects with the Iriam Road. Suffel, Iriam and Longlegged Lake Roads are presently used to access Onnie Lake, Leano Lake and Johnson Lake. These areas lead to or form part of the headwaters of the Gammon and Sturgeon River systems.

#### **2.4.4**

##### ***South Pakwash Road***

This road provides access to the Whiskey Jack Forest from the city of Kenora and intersects with both the Longlegged and Iriam Roads at km 140. The South Pakwash Road has proven to be one of the main routes in moving fibre to the Kenora mill and as such has provided for a significant reduction in haul costs (MNR 1986).

#### **2.4.5**

##### ***Access from Manitoba***

Manitoba Highway 304 presently extends eastward to within 12 km of the provincial border at Wallace Lake, which is substantially developed with cottages and a provincial campground. From Wallace Lake access to the site is confined to canoe traffic via the Wanipigow River to the Haggart Lake/River area or to Carroll Lake via Obukowin Lake. The routes out of Wallace Lake are considered to be fairly difficult with numerous long and sparsely traveled portages. Highway 314 extends to within six km of the Ontario border at Beresford Lake at the southwest corner of the site. Access into Ontario from Beresford Lake is water only and gained through Garner Lake, which leads to the Haggart Lake area. The signature site can also be accessed via upstream travel on the Bird, Manigotagan, Gammon and Bloodvein River systems.

## 2.5 Surrounding Land Use

The Woodland Caribou Signature Site is within the Ministry of Natural Resources' Red Lake District, with the exception of the Eagle-Snowshoe Conservation Reserve, which is located within the Kenora District. The land surrounding the park is predominantly Crown land. Within the site there are several types of land dispositions present, these include land use permits, Crown leases, patented lands and mining claims.

The predominant economic activities in the area are tourism, forest management and mining. Other land uses include trapping, commercial fishing, wild rice harvesting, commercial bait fishing and mineral exploration, as well as Crown land recreation activities such as canoeing, hunting and fishing.

### 2.5.1

#### *Mining*

The Red Lake area is one of the richest gold producing areas in North America and has been extensively explored and developed since the 1920s. Over the past 70 years, 12 mines have come into production. Presently, there are two significant gold producing mines in the Red Lake area, both of which have a long and active history. A high-grade ore zone was discovered in 1995 at the Goldcorp Red Lake mine in Balmertown; this has resulted in a major re-construction and modernization of its operation. In 2002, underground exploration of the Campbell Mine has led to the discovery of additional gold reserves. The Red Lake volcanic belt is now the premier gold exploration area in North America (Lichtblau, 2003).

### 2.5.2

#### *Forestry*

The signature site is bordered by the Red Lake Forest Management Unit (FMU), the Whiskey Jack FMU and the Kenora FMU. Timber harvesting and forest management are the most visible adjacent land uses and may have the greatest potential impact on the signature site. Bordering the northeast corner of the site is a proposed forestry opportunity initiated by Pikangikum First Nation as part of the Northern Boreal Initiative.

### 2.5.3

#### *Manitoba*

##### 2.5.3.1 *Development*

Adjacent to the western boundary of the Woodland Caribou Signature Site is the Manitoba-Ontario interprovincial boundary (Figure 2). There are 70 lakes and several rivers that either straddle, or are part of a system that straddles the Ontario-Manitoba border. There are presently six commercial outpost camps and two private hunt and fish camps with direct access to Woodland Caribou Provincial Park. These facilities are located on Obukowin, Craven and Carroll lakes as well as on the Gammon and Bloodvein rivers. On most of these lakes the majority of fishing activity associated with these camps occurs on Ontario waters.

##### 2.5.3.2 *Atikaki Provincial Park*

The Manitoba Government established Atikaki Provincial Park in 1985. Atikaki (Saulteaux-Ojibway for 'land of the caribou') extends from the Ontario border west to Lake Winnipeg in the Bloodvein-Pigeon River area. Atikaki shares 70 kilometers of its border with the Woodland Caribou Signature Site, and together the two areas represent over 934,000 hectares of outstanding wilderness. Land use activities in Atikaki include commercial lodge/outpost operations, backcountry canoeing and hunting.

##### 2.5.3.3 *Nopiming Provincial Park*

Located adjacent to the Woodland Caribou Signature Site and south of Atikaki Provincial Park, Nopiming was established as a Natural Park by the Manitoba government in 1976 and shares approximately 36 km of its western border with the Eagle-Snowshoe CR and Woodland Caribou Provincial Park. Designed to facilitate a wide variety of recreational experiences from remote backcountry canoeing to serviced, road-accessible family camping, Nopiming is a popular starting point for canoe trips into the site and provides a number of route possibilities through the Bird, Garner and Manigotagan river systems. In accordance with zoning, permitted land uses in designated areas of Nopiming Provincial Park include hunting, mining, timber harvesting and commercial lodge/outpost operations.

It is possible that more people will visit the Woodland Caribou Signature Site as a result of developments associated with Atikaki and Nopiming Provincial Parks in Manitoba.

## **2.6 Land Tenure Within the Signature Site**

The existing development within the Woodland Caribou Signature Site can be divided into the following categories:

- Commercial Tourist Establishments
- Cottages and Private Resorts
- Resource Harvesting Developments
- Boat Caches
- Mining Forestry

### **2.6.1**

#### ***Commercial Tourist Establishments***

Commercial tourist establishments, as defined in the *Tourism Act*, include “any premises operated to provide sleeping accommodation for the travelling public but does not include camps operated by charitable corporations, summer camps, or clubs owned by its members and operated without gain or profit”.

In the Woodland Caribou Signature Site there are six lodges, and 24 outpost camps operating as commercial establishments (Figure 4). The core park is home to five lodges and 15 outpost camps. The Sydney-Rowdy Lake proposed park addition contains one lodge and one outpost camp. There are seven outpost camps and one lodge in the Eagle-Snowshoe Conservation Reserve.

The largest lodges in the core park of three American Plan Lodges is Sabourin Lake Lodge. Built in 1958, it consists of a main lodge with accommodation, dining facilities and cabins with a total capacity of 49 guests (Williams, 2002). The other lodges in the core park include Viking Island, which was built in 1948 on Douglas Lake and provides American Plan services for up to 24 guests (Carlson, 2000), and Carroll Lake Lodge, situated on Carroll Lake which can accommodate approximately 12 guests.

Sydney Lake Lodge is located in the Sydney-Rowdy Park Addition, was built in 1950 and offers housekeeping cabin facilities with a guest capacity of 43 (Fahlgren, 2002). The other housekeeping lodge (Gammon Lake Lodge) is situated on Gammon Lake and consists of three cabins with an approximate capacity of 24 guests. Lodges are located on either patent land or Crown Lease.

The majority of the commercial outpost camps in the site are located on the Bloodvein, Bird and Gammon river systems and have bed capacities ranging from four to 14. Tenure for all outpost camps is either by land use permit or Crown Lease and all are registered to licenced Ontario tourist operators. These outpost operations seldom provide guides or cooks and packages range from two- to seven-day trips depending on the operator. Prices vary depending on the operator, airfare and length of stay. Outposts are mostly used during the summer fishing season while some operators in the conservation reserve offer hunting opportunities.

Activities associated with commercial tourism establishments are fishing, boating and wildlife viewing.

### **2.6.2**

#### ***Cottages and Private Resorts***

Wamserville, located on Donald Lake in Woodland Caribou Provincial Park, is a private resort located on patent land. There are also seven private cottages and one private subdivision containing five cottage lots within the boundaries of the core park. These cottages are all located on patent lands. In the conservation reserve there are three cottage and private resort developments along the shores of Rickaby and Anderson lakes. Private cottages are normally occupied by the owners, immediate family and friends and occupation varies from a few weeks per year to more extended stays. The larger resorts are also used by clients throughout the summer fishing season and have an annual visitation rate representing several hundred-user days per year (MNR 1986).

There are numerous land use permits for private recreation camps and waterfront areas throughout the signature site. There are currently six private recreational camps in Woodland Caribou Provincial



Park and one on Rowdy Lake in the Sydney/Rowdy Lake proposed addition.

### 2.6.3

#### *Resource Harvesting*

Resource harvesting includes trapping, wild rice harvesting, commercial food fishing and commercial bait fishing. These are uses that have long been activities within the signature site. Trap cabins are the most common structure associated with resource harvesting. In addition to trap cabins distributed throughout the site there are a few shelters and storage sheds associated with some of the wild rice and bait fish licences.

##### 2.6.3.1 *Trapping*

Commercial fur harvesting has been carried out within the Woodland Caribou Signature Site for centuries. Thirty-six full or partial trap lines and 14 habitable trap cabins are distributed throughout the site. Trap cabins are built under a ‘letter of authority’ issued by the Ministry of Natural Resources. Regulations for cabins exist concerning size, location, distance from water, as well as use restrictions.

##### 2.6.3.2 *Wild Rice Harvesting*

Wild rice is the only plant commercially harvested from the Woodland Caribou Signature Site. There are 20 licenced areas within the signature site; however, many

of these have not been active since 1979. Harvesting of wild rice appears to be a supplementary income for most harvesters. Harvesting effort varies according to market prices. Most harvest areas are introduced stands of rice. The volume of rice available for harvest depends on weather and water levels. Harvesting is done by mechanical harvesters in most instances and occurs over a short period of time at the end of August.

##### 2.6.3.3 *Commercial Food Fishing*

Commercial food fishing in the Woodland Caribou Signature Site began in 1950. Licences were granted as air transport to the southern markets developed. In Woodland Caribou Provincial Park, 11 lakes were harvested for walleye, northern pike, whitefish, and lake trout. Most of these licences were inactive by the 1960s. In the conservation reserve, Snowshoe and Eagle lakes were harvested for walleye and northern pike. Testing for mercury contamination occurred in the conservation reserve in the early 1970s in response to the contamination of the English River by pulp mill effluent. This testing did indicate unnaturally high levels of mercury in Eagle and Snowshoe lakes. As a result the fishery was closed from 1972 to 1978 and re-opened in 1979 for the harvest of whitefish, which continued until 1989 when the last licence was relinquished.

Concerning the proposed park additions, Sydney Lake and Rowdy Lake were harvested commercially from 1950 to 1978. There has been no commercial food fishing in the Peisk or Anchor additions or on lakes within the enhanced management area. Currently no commercial fishing activities are taking place in the signature site.

##### 2.6.3.4 *Commercial Bait Fishing*

There are 34 bait harvest areas (BHAs) located within or partially within the Woodland Caribou Signature Site. BHAs are delineated by base map blocks of 241 square kilometres (100 square miles). The majority of baitfish are harvested from small pothole lakes using float planes during the open water season. There are presently a number of active licences in the core park; these are held collectively by 5 individuals. The conservation reserve contains five bait fish areas allocated to four individuals; the outpost camps within

the conservation reserve use the majority of the harvest and the remaining harvest is sold locally to bait fish shops in Kenora (MNR 2000). The enhanced management area contains all or part of four bait harvest areas, while the proposed park additions fall within nine.

#### 2.6.4

##### *Boats Cached*

Current policy requires that all boats cached on Crown land be registered under the northwest regional boat cache program. Boats approved under this program must display an identification number. There are three types of boats cached: commercial, resource harvester and recreation. Some boats are registered to commercial air carriers and are used for shorter trips. Other commercial boats are associated with outpost camps or lodges and may provide alternate experiences for guests on a longer stay. The Gammon River and the south sector have the highest concentration of boats cached. There are 136 commercial, 8 recreation, and 18 resource harvesting boats cached in the Woodland Caribou Signature Site. Table 4 outlines the distribution of boats cached in the Woodland Caribou Signature Site.

#### 2.6.5

##### *Mining*

Staking and exploration activity has occurred in the Bee Lake greenstone belt in the conservation reserve between Eagle Lake and the Manitoba Border, in the Longlegged Lake areas off the southeastern corner of the park, and in the EMA southwest of Pipestone Bay (Red Lake).

As a result of the *Ontario's Living Legacy* initiative, the proposed park additions are under interim protection and have been withdrawn from staking. Adjacent forest reserves contain four mining claims (covering 528 hectares) that were staked prior to the establishment of the signature site boundaries. These claims are in good standing and are currently being explored. They will remain in good standing as long as the requirements of the Mining Act are complied with. As the claims lapse they will be retired and will not be re-staked (Storey, 2002). At that time they will become available for regulation as park additions.

As of December 2002, the Eagle-Snowshoe Conservation Reserve had 20 patent mining claims, and the Enhanced Management Area had one patent claim and approximately 13 mining claims totaling 1,296 hectares. Claims located in the conservation reserve and enhanced management area are of uncertain mineral value due to limited exploration in this area (Storey, 2002). However, mineral potential based on geology and present mineral occurrences is high (Lichtblau, 2003).

*Table 4: Distribution of Boats Cached in the Woodland Caribou Signature Site*

	<i>Woodland Caribou Provincial Park</i>	<i>P2370 Park Additions</i>	<i>E2359 Pipestone-McIntosh EMA</i>	<i>C2405 Eagle-Snowshoe CR</i>
Commercial	104	25	4	3
Private/Residential	5	3	0	0
Resource Harvesting	14	4	0	0
<b>Total</b>	<b>123</b>	<b>32</b>	<b>4</b>	<b>3</b>

### **2.6.6**

#### ***Forestry***

Forest harvesting has occurred in the Red Lake area for many decades. Timber was often cut in the winter and piled onto waterways and dams were built to manipulate water levels in order to send the log booms downstream in the spring. Areas logged historically are often identifiable today as containing a high percentage of balsam fir as a result of particular conditions created after harvest (New, 2002).

The area surrounding Douglas Lake was selectively logged in the thirties and forties and most of the forest surrounding Pipestone Bay was harvested at one point in time. Between 1998 and 2002, the Red Lake Forest Management Company logged the portion of the EMA found south of Douglas Lake.

The forest management planning process continues to be an important vehicle for both the public and Ontario Parks to provide input regarding road location, mechanisms for protecting aesthetics and other park values.

Existing forest access roads in the EMA will continue to be accessible to recreational users, though some may contain travel or use restrictions. The role that existing forest access roads in the enhanced management area will play in terms of providing park access will be determined through the park management planning process.



### 3.0 Social and Economic Context

The communities of Red Lake and Ear Falls are among the most remote communities in Ontario that are accessible by all weather road, namely Highway 105, which meets the Trans-Canada Highway at Vermilion Bay between Dryden and Kenora.

In 1998, the Municipality of Red Lake was created with the amalgamation of the Township of Red Lake and the Township of Golden. The newly created municipality encompasses the communities of Red Lake, Madsen, Balmertown, Cochenour, McKenzie Island and Staratt-Olsen. The population of the Municipality of Red Lake is currently estimated at 4,700. According to census data, there has been a significant decline in the population of northwestern Ontario between 1996 and the present (Southcott, 2002); this is in stark contrast to trends in the rest of Ontario and Canada. While current projections indicate a slow decline in population over the next few years, it is difficult to predict future growth trends due to the boom-and-bust nature of resource-based communities like Red Lake.

The average household employment income in Red Lake in 1996 was \$54,588. The mining industry is the major employer and financial contributor to the Red Lake area, with three operating gold mines and several major and junior mining companies conducting active exploration programs in the area. In 1996, the mining sector in Red Lake employed close to eight hundred people.

Although there has been a significant increase in forest management activity in the Red Lake area, in 1996 only 65 residents of Red Lake were employed in logging and forestry. Government, including health and social services, is the second biggest employer in the area. The Municipality of Red Lake has also been a focal point for the region's growing tourism industry, with numerous main base lodges, outpost camps, and commercial campgrounds supplying their operations from Red Lake. As the area's main service center, Red Lake has a well developed commercial sector, including

business administration, retail, and accommodation services as well as government offices and an airport that also serves as an international port of entry.

The Ear Falls area went through a significant economic downturn in the 1980s with the closure of the South Bay mine in 1981 and the Griffith (Stelco) iron ore mine in 1986. The population of Ear Falls, which was approximately 2500 in the early 1980s, has subsequently declined to its current level of just over 1000. The average household income of \$47,063 for 1996 was below the provincial average of \$54,291.

Currently, the most significant primary employment sector in Ear Falls is forestry and logging. The construction of a sawmill by Weyerhaeuser in 1998 has added forestry-related employment opportunities in association with the processing facilities in Dryden and Kenora. Local residents also find employment at the two Ontario Power Generation stations on the English River and at a new Native Training Centre in the town of Ear Falls. According to the 1996 census, seventy one per cent of the labour force in Ear Falls was employed in the service sector.

First Nation's Peoples with traditional use areas in the signature site have historically derived much of their livelihood from resource-related activities. Today such activities are of minimal economic benefit due to low market prices for staple products such as fur and wild rice. The Northern Boreal Initiative is a community-based planning initiative undertaken by the Ministry of Natural Resources and several northern Ontario First Nation communities in 2001. It is to provide First Nations with a leading role in the development of new, sustainable commercial forestry opportunities in the boreal forest north of the *Ontario's Living Legacy* planning area. Economic development is the cornerstone of Northern Boreal Initiative as it pertains to northern First Nation communities, some of which are already in the remote-based tourism industry. Pikangikum First Nation is one community that is currently involved in detailed discussions with the Government of Ontario in this regard. The realization of a sustainable forestry licence will provide benefits to the community of Pikangikum and may have a major impact in the economy of the region. Consultation with

and support of First Nations is one of the priorities of *Ontario's Living Legacy*.

In 1996, spending associated with remote-based tourism supported 3,079 direct jobs in northwestern Ontario and generated \$97 million for the region (MNR, 1997). Expansion of the remote-based tourism sector in resource-dependent communities like Red Lake and Ear Falls may serve to cushion the impact of fluctuating market conditions in the forest and mining sector, though not entirely (MNR, 2003).

Over 100 businesses in the Red Lake area are associated with the tourism industry, which is divided into a large number of small firms that rely on other wholesale and retail businesses, transportation, construction and repair industries. Along with helping the local economy to diversify, the tourism industry is important for its indirect and induced effects on the local economy, hence decreasing the reliance on a few large companies which is characteristic of northern resource-dependent communities.

Eco-tourism, defined as “responsible travel to natural areas that conserves the environment and sustains the well-being of local people”, is the fastest-growing sector of the tourism industry in the world (IES, 2002). Due to the proximity of the Woodland Caribou Signature Site to the Red Lake area, it is believed that the growing popularity of ecotourism will contribute significantly to the local economy in years to come.

The Woodland Caribou Signature Site itself provides a wide range of tourism, recreation and economic benefits that are expected to increase with the development of a strategy for the signature site, an interprovincial partnership with Manitoba Parks and Natural Areas, and heightened visitation from backcountry users.

Indirect benefits associated with the signature site that may help make the region and local communities more attractive for business as well as tourists and residents include:

- protection of and contribution to ecological functions (water and soil production)
- protection of resource integrity (fish and wildlife populations and habitats)
- cultural value (wilderness provides inspiration for art, literature, and music)
- health effects from use of parks (mental, physical, spiritual benefits)
- educational benefits (young and old learning about our environment)
- scientific benefits (research in provincial parks)
- international responsibilities to protect natural settings, features and wildlife
- business location decisions (quality of life/business) and community cohesion



## 4.0 *Natural Environment and Resources*

### 4.1 *Climate*

The Woodland Caribou Signature Site is situated within the English River climatic region and is characterized by a continental climate with typically hot, dry summers and cold, clear winters. According to Crins' system of ecological land classification (Crins & Uhlig, 2000), the site is situated in the Boreal Shield Ecozone of Ecoregion 4S. The climate is controlled by three major continental air masses: the very cold arctic air mass located over the ice cap regions, the cold polar air mass located over the territories, and the dry prairie air mass originating in the foothills of the Canadian Rocky Mountains. Because of these influences and the proximity to Manitoba, the climate of the park tends to be closer to that of the prairies as opposed to the cooler and higher levels of precipitation character of the boreal forest. The prairie influence enhances desirability of recreation in the park, and contributes to a significant prairie vegetation influence.

Winters in the Woodland Caribou Signature Site are generally cold and clear with an average mean daily temperature in January of  $-20.4$  degrees Celsius. Average annual snowfall of 184 cm compacts into a mean ground snow depth of 44 cm. Reliable snow cover suitable for snowmobiling, dog sledding, and skiing generally extends from late November through March. The dominant wind direction in the winter is from the northwest.

During the summer months, Hudson Bay's influence on Ontario's weather pattern causes a NW-SE trending temperature gradient; the close proximity of the dry prairie air mass and the Great Lakes produces a significant increase in the mean annual precipitation from west to east. This prairie influence creates an average July daily temperature of 18.4 degrees Celsius, with a maximum of 16.5 hours of daylight. High summer is from May 31 to September 4. Swimming season normally extends from approximately July 3 to September 3, when mean surface water temperatures

exceed 18.3°C. Average annual precipitation is approximately 60.9 cm, the second lowest in Ontario, representing a small pocket of significantly lower rainfall than the majority of site Region 4S (Brunton 1986). Approximately two-thirds of the total precipitation falls from May to September.

### 4.2 *Earth Science*

The signature site encompasses a bedrock-controlled terrain that is typical of the Canadian Shield. Gently rolling to locally abrupt rock knolls form a plain which slopes gently to the west and the northwest. Fractures and faults in the bedrock create elongated lake systems joined by short drops, producing what is known as a "Canaux-et-Lacs" drainage pattern. The southernmost portions of the core park represent the greatest variability in topography. The highest point in the signature site, at 430 metres above sea level, occurs west of Kilburn Lake in the southern region. The lowest point in the signature site is the surface of Garner Lake at approximately 309 metres above sea level.

#### 4.2.1

##### *Bedrock Geology*

The Woodland Caribou Signature Site is located at the centre of the Canadian Shield. The Shield forms the foundation of North America and consists of some of the oldest rocks on Earth. Its rock is divided into provinces based on type, structure and age (Figure 5). The Woodland Caribou Signature Site is situated in the largest province of ancient Precambrian rock, the Superior Province. Rocks of the Superior Province were formed between 2.5 and 3.0 billion years ago and extend from Lake Winnipeg in Manitoba to Ungava Bay in Quebec.

Within the signature site are two subprovinces of the Canadian Shield. Volcanic and granitic rock of the Uchi Subprovince are found in the southeastern areas of the park and are a result of remnant blocks of volcanic rock being engulfed by upwellings of magma from below the earth's crust. The Berens River Subprovince is dominated by a variety of massive granites and layered equivalents called granitic gneisses. It contains a few narrow belts of volcanic and sedimentary rocks as well as more iron- and magnesium-rich varieties of granites

such as *diorites* and *gabbros*. Dividing these subprovinces is a large fault zone known as the Wanipigow-Wallace Lakes Fault. This zone of intense shearing and rock deformation extends from Lake Winnipeg through Donald Lake to Pipestone Bay and consists of well-layered rocks called mylonites.

Because of the minor extent and nature of mineral-bearing volcanic rocks within the signature site, the potential of finding economically viable mineral deposits is limited. However, exploration work is being performed on existing claims within the forest reserve and enhanced management area components of the signature site, as these areas represent a continuation of the world-renowned Red Lake volcanic belt.

#### 4.2.2

##### *Surficial Geology*

The land surface of the Woodland Caribou Signature Site was created over a 2.5 billion-year period by erosion. Over the last million years there have been four major glacial events. These glaciers advanced and stripped away existing flora and soil while gouging the underlying bedrock. The soils, glacial features and drainage patterns of the site are the result of the last glacial period, the Late Wisconsinan (Figure 6). This glacial period began 23,000 years ago. Ice affecting the signature site area advanced from two main centres of spreading; the Keewatin Ice Centre west of Hudson Bay and the Labrador Ice Centre in northern Quebec. Only features of the Labradoran glaciers are preserved in the park. These include glacial striae (bedrock scars), thin till deposits, and a major recessional moraine. Strong evidence of glacial Lake Agassiz exists from this period in the park, in the form of lacustrine deposits of sand, silt and clay, wave-cut beach terraces and large tracts of bare bedrock cleared of debris by lake action.

Glacial striae are shallow grooves or scratches gouged into the bedrock surface by rock fragments embedded in the base of the overriding glacier. The striae indicate the erosive power of the glaciers, as well as its direction of movement. Striae in the park are most commonly developed on the upstream slope of rock knolls and indicate a single glacial movement from the northeast.

Most of the signature site was free of ice for the last time between 11,700 and 10,800 years ago. As the glaciers melted, the debris embedded throughout the ice was deposited on the land surface as ground moraine. This glacial debris, or till, makes up the extensive Eagle-Finlayson Moraine at Indian House Lake. This moraine consists of a discontinuous double ridge of sand, gravel and boulders with extensive outwash sand deposits, and represents a major halt in the position of the retreating Labradoran glaciers. Other glacial remnants, in the form of till, and numerous small kame, cross-valley moraine and ground moraine deposits survive in discrete localities throughout the site.

Waters of glacial Lake Agassiz have had a major impact on the landscapes of the Woodland Caribou Signature Site. A glacial re-advance 9,900 years ago caused the lake to rise, completely submerging the park area by its waters. This submergence resulted in the removal of most debris from bedrock upland areas and the sorting of fine material from remaining deposits by the action of waves and currents. It also resulted in the deposition of lacustrine sands, silts and clays in deeper portions of the lake. These lacustrine deposits are predominant along the Bloodvein and Gammon River systems but also in Sydney Lake and the area around Wingiskus, Eden and Chase lakes (Eagle-Snowshoe CR).

Most of the *Ontario's Living Legacy* additions consist predominantly of bare bedrock knolls and ridges with a thin, patchy, discontinuous occurrence of this till, usually in the lee side of topographic promontories. The character of this meltout till is similar to that found in the core park area (Kor 1986). In the EMA the till is an unsorted, very stony, slightly silty, coarse-grained sand. The components of the till are lightly compacted and cemented, imparting a slightly blocky, friable fracture to the till. Rock fragments are predominantly granitic and metavolcanic. A more continuous mantle of meltout till, although still predominantly bedrock-controlled and with abundant rock exposures, occurs along the southeastern side of Sydney Lake and along the shores of Peisk Lake.



During lower stages of Lake Agassiz, the present pattern of lakes and rivers in the park area emerged, first as islands in the vast lake, then as fast-flowing rivers and broad lakes in a rocky landscape. Some deep bedrock troughs, particularly in the Young Lake area, provided routes for channelized meltwater flow.

#### 4.2.3

##### *Soils*

As a result of the signature site being completely submerged by the waters of glacial Lake Agassiz, large areas of bedrock were cleared of glacial debris (till). The southwestern and west-central areas of the core park are dominated by this wave-washed bedrock. The meagre soil that was left in these areas consists of pockets of sorted tills (mostly sands and gravels) and minor lacustrine sediments (silts and sands) as well as locally common glacial erratics and boulders fields.

Substantial deposits of uniform sand and gravel occur in the Wanipigow River and the Domain, Carroll and Hammerhead Lake areas. The largest of these deposits occurs as a broad sandy plain north of the Dutch River in the northeast sector of the park. Although the depth of these deposits probably exceeds 10 metres, numerous bedrock knolls commonly protrude from their flat surfaces.

The most substantial surficial materials occur along the Bloodvein and Gammon River systems. Lacustrine silts dominate these areas, with lesser deposits of sands and clays. These deep deposits rarely mask the underlying bedrock topography, which outcrops extensively throughout both river valleys. Wetlands and large lakes are abundant along both river systems due to imperfect drainage.

A number of small sand pockets occur in the northern part of the Anchor Lake proposed park addition and adjoining part of the EMA. Occasionally, large erratic boulders litter the upper surface. Neilson (1989) noted abandoned glacio-lacustrine beach scarps above the shorelines of the southern portions of Sydney Lake and in the areas around Wingiskus, Eden and Chase lakes (Eagle-Snowshoe CR). Since the draining of glacial Lake Agassiz from the area about 7500 to 7800 years ago (Bjorek 1985), innumerable small lakes and ponds were left behind in which organic sediments accumulated.

These are now represented by areas of swamp and forested bog, which are common throughout the park addition areas, with particularly extensive wetland development being evident in the area immediately north of Bee Lake in the conservation reserve, where

large areas of flooded terrain (wetlands) occur between rock uplands. It is probable that in these low-lying areas the organic deposits are situated on impermeable clay and silt of glaciolacustrine origin.

Soil development on all deposits is not extensive, with thin podzols predominating. The bare bedrock areas and lacustrine sand deposits are generally nutrient poor, resulting in limited vegetation diversity. Where finer-grained materials occur, drainage is generally poor, nutrients more abundant, and floral diversity greatly increased.

### **4.3 Life Science**

The flora and fauna of the Woodland Caribou Signature Site have developed subsequent to the drainage of glacial Lake Agassiz. The area was scoured and washed by ice and water to such an extent that little remained for the development of terrestrial plant and animal life. Bare bedrock knolls, plateaux and pockets of silt and clay are evidence of this glacial influence. More recently, however, natural disturbances such as fire, insects and windstorms have also had an impact on the terrestrial ecology of the site.

The Woodland Caribou Signature Site is entirely contained within the boreal forest of northern Ontario. The boreal forest region is typically a vast band of coniferous forest-dominated landscape that is characterized by a cool climate and a low level of biological productivity (MNR 1986). Warmer-than-normal microclimates occur on high, bare, exposed bedrock knolls and ridges, as well as on the coarse sands and gravels of the higher glacio-fluvial landforms, and on broad sand plains. Dry and very dry moisture regimes characterize these sites. Colder-than-normal microclimates are associated with swamps, low-lying basins and the steep north-facing slopes of the uplands. Typical boreal tree species such as jack pine, black spruce, balsam fir and trembling aspen dominate upland sites, while black spruce and tamarack characterize the wet, organic bedrock depressions. White spruce occurs intermittently on moist, south-facing slopes but is not abundant.

In addition to the boreal influence, the signature site is also significantly affected by its proximity to the interior plains of Canada's prairie provinces, resulting in a relatively dry, hot growing season associated with what is known as "prairie boreal" forest. Consequently, the incidence of naturally occurring forest fires here is the highest in Ontario.

#### **4.3.1**

##### ***Fire History***

Frequent, catastrophic fire is common in the upland forests of the signature site and the Prairie Boreal forest of Site District 4S-1. Despite their effects on the aesthetics of the area, large forest fires have been a feature of forest regeneration for thousands of years and are essential if the vegetation, and its dependent fauna, is to successfully continue.

Early successional forests are, on average, less than 100 years of age and will regenerate effectively only after mature forest cover has been burned. The flora of the park is comprised of species that do best in early successional boreal forests. In the absence of fire, nutrient cycles may be impeded by incomplete decomposition of litter and humus. Fire is an extremely rapid form of decomposition, releasing nutrients for plant growth, and allowing for germination of fire dependent, shade intolerant species such as jack pine. All boreal tree species have higher germination and seedling survival rate on exposed mineral soil. Fire may also alter, create, or temporarily destroy habitat for various wildlife species. Moose, beaver and rabbit thrive on the young saplings that regenerate following a burn. Caribou prefer mature forests, where lichen growth is optimal. Fire often destroys over-mature forests, but through the process of succession, results in future caribou habitat.

In the last 80 years approximately half of the signature site has been burned (Figure 7). Small, frequent fires are more common, although large fires account for the majority of burned area within the park. Forest fires have produced a mosaic pattern on the landscape, with large areas of immature jack pine and swaths of mature forest. The largest single forest fire event in the signature site occurred in 1986 (44,599 ha). The next two largest fire events occurred in 1983 (35,927 ha) and

1974 (23,435 ha). The 1980s were witness to the most extensive fire activity (85,568 ha), followed by the 1940s (83,720 ha) and the 1920s (73,905 ha). *Ontario's Living Legacy Land Use Strategy* describes a level of protection that balances the need for fire protection, the cost of fire suppression and the ecological role of fire in the ecosystem. The Ministry of Natural Resources practises fire suppression throughout the site, but this does not eliminate the occurrence of large-scale forest fires.

#### 4.3.2

##### *Disease and Insects*

The impact of spruce budworm within the signature site has been limited to the far eastern portion of the site, the extreme southwest portion of the conservation reserve, and the Sydney/Rowdy Lake proposed park addition. These areas experienced up to seven years of mortality and may be more susceptible to fire and blowdown in the years that follow.

In the last ten years, the forest tent caterpillar has had a minimal impact on the signature site due to the lack of hardwoods. The northern, eastern and southern areas of the site experienced moderate to severe defoliation in 1991.

#### 4.3.3

##### *Windthrow*

The majority of the signature site has experienced very little blowdown. Small, localized patches of blowdown can be found throughout the site. Large areas of blowdown occurred in the conservation reserve in 1993 and in the Olive Lake area, in the northeast corner of the core park, in 2002.

#### 4.3.4

##### *Vegetation*

The majority of plant species found in the signature site are characteristic of the boreal forest, although elements of other floristic regions are also evident. Species typical of the dry prairie regions make up the largest non-boreal floral element in the signature site and thus support the labelling of the forestlands as prairie-boreal. Small numbers of arctic and moist boreal/transition species are also evident.

Fourteen plants within the signature site are provincially rare and 124 are considered to be regionally significant (Figure 8). Two of the rare plants found in the site have not previously been known in Ontario. The prairie spikemoss (*Selaginella densa*) is found on many bare bedrock knolls in the core park and the conservation reserve while the ten-flowered showy goldenrod (*Solidago nemoralis* var. *decemflora*) is found near Aegean Lake in the core park. Interestingly, there are remarkably low numbers of introduced, non-native species. This fact offers strong evidence of the ecological integrity of the site area. All plants, including trees, are protected within provincial parks in Ontario.

##### 4.3.4.1 *Woodland Caribou Provincial Park*

Due to the immense size of Woodland Caribou Provincial Park, its flora is best summarized according to five categories of vegetation.

*Upland Intolerant Forest* – This is by far the predominant forest cover, consisting of shade intolerant, early successional forests in thin soil over bedrock, in lacustrine plains and (locally) in alluvial soil along rivers. Fire-dependent jack pine and jack pine-black spruce forests are abundant in the drier sites. Mixed forests of these species with trembling aspen, white birch and balsam fir are locally distributed in areas of deeper, more mesic soil, as are deciduous forests of white birch and trembling aspen. Mixed wood and deciduous forest is found mostly in the Bloodvein River watershed, along eastern Carroll Lake and around Kilburn Lake.

*Unforested Uplands* – Areas of regeneration following recent forest fires dominate this vegetation. The growth of jack pine seedlings is very lush in many such sites and is associated with a diverse and colourful herbaceous flora. Shrubbery composed of pine and spruce seedlings with juniper, green alder and several species of willow are predominant. Open rock areas with sparse herbaceous vegetation and lichen encrusted bedrock outcrops with little or no soil in forested areas are also common. This latter type is found throughout burns and pine forests in individual stands too small to illustrate.

*Lowland Intolerant Forest* – This vegetation is not fire dependent and is to a large extent quite fire resistant. It dominates wet, organic deposits in bedrock depressions and, to a lesser degree, wet sandy shores throughout the park. Black spruce and black spruce-tamarack forest is common, even remaining intact in recent burns. These sites are cold and subarctic in aspect. A few small stands of mixed intolerant lowland forest dominated by balsam poplar and balsam fir were noted at Aegean and Artery lakes, occurring on wet lakeshore sand deposits. These sites are more typically boreal in nature.

*Unforested Lowland* – A complex of wetland shrub and meadow vegetation types is found throughout the park in flooded bedrock depressions, along streams and rivers and on quiet lakeshore flats. It is made up of four major vegetation types:

(ra) Wetland Thicket

Speckled alder, dwarf birch, several willow species and other deciduous shrubs border most wetland areas, especially river shores and bog margins. Although abundant, it is found in individual stands too small to illustrate.

(sa) Wetland Meadow

Extensive fern-like meadows dominated by grasses and sedges occur locally on somewhat mineralized peatlands along quiet river shores throughout the park. Floristic diversity is quite low in these meadows which support a number of more typically southern and eastern peatland species.

(ta) Open Graminoid Bog

Open, thin mats of sphagnum moss dominated by sedges and other herbaceous plant species are found in association with many heath mats in discreet, small sites. A few rare cases of patterned bog mats are known in the Olive Lake area. The cold, wet conditions resulting in this type of wetland community are influenced by a north aspect.

(ua) Heath Mat

Acidic, organic mats of older, relatively drier peat dominated by leatherleaf, labrador tea and other ericaceous shrubs are typical of this common vegetation type in the park. It is often found in quaking bogs and is old and subarctic in character.

*Aquatic Vegetation* – A very complex set of associations of floating and submerged aquatic plants as well as emergent flora dominate quiet bays, stream margins and bogs throughout the signature site. Open water aquatics are very common and occur in all lakes and rivers in the signature site. Marshes occur locally on silt and sand in shallow water along streams and in lake bays in fresh water. Cat-tail, bur-reed and wild rice dominate marshes within the park. The latter is particularly common near Carroll and Indian House lakes.

*Significant Vegetation* – Plant communities recognized as significant in Woodland Caribou Provincial Park include unusually large and representative wild rice marshes, intolerant coniferous and mixed forest and intolerant deciduous forest. A number of significant plant species are also found in the core park, including the red pine, prairie rush, prairie spikemoss, parsley fern, poison ivy, prairie crocus, floating marsh-marigold and narrow-leaved sundew (Brunton 1986).

4.3.4.2 Sydney-Rowdy Lake Proposed Park Addition

The Sydney-Rowdy Lake proposed park addition consists of moderate to weakly broken granite bedrock associated with shallow sandy till, as well as frequent bare bedrock ridges. Lacustrine clays can be found in valleys and occasionally on flats.

Jack pine is the most common tree species found in the park addition. Thirty-three per cent of the addition is Upland Intolerant Forest of varying age classes due to forest fires and blowdown. Only 10 per cent of Sydney – Rowdy is comprised of mixedwoods and scattered hardwoods on upland sites, with jack pine, black spruce, trembling aspen and white birch. Tamarack and black spruce is found on low lying peatlands and black ash swamps occasionally interspersed with balsam fir are found scattered along the shore line, accounting for two per cent of the area. Open water covers 57 per cent of the park addition.

Significant flora in the addition includes two stands of bur oak, a small prairie community, a mature red pine stand, green ash, floating marsh marigold, nannyberry, poison ivy and prairie buttercup. A small white elm was also discovered just outside the boundary of the proposed addition.

#### 4.3.4.3 Anchor Lake – Peisk Lake – Foley Lake Park Additions

Bare granite bedrock that is moderate to weakly broken defines these additions. Shallow clays and sandy tills can be found in the valleys.

The forest cover for the additions reflects the impact of fire in the prairie boreal region. Sixty per cent of the area is sparse coniferous and deciduous forest cover as well as recently burned areas. Most of the area burned in 1974 and is now a regenerating jack pine forest with occasional stands of trembling aspen. The area is also rich in common juniper, pin cherry, drought resistant vascular plants and *Cladonia* spp. lichen, which are found on open bedrock knolls.

There are two significant landscape features associated with these additions. A large, patterned fen is located east of Anchor Lake, which is an uncommon feature in Site District 4S-1. A wild rice marsh in the Indian House River is part of the upper Bloodvein River watershed. The rice marshes have not been regularly harvested since the early 1990s.

#### 4.3.4.4 Eagle-Snowshoe Conservation Reserve

The Eagle-Snowshoe Conservation Reserve is an area of moderately to broken bedrock, and bare bedrock ridges that contain shallow sandy till along the slopes. The valleys contain shallow clays and deep peats. Sparse coniferous forest and regeneration from the 1983 burn dominates the landscape of the northern portion of the reserve, accounting for 40 per cent of the land base. Mature jack pine and black spruce with scattered balsam fir dominate the southern section, covering 17 per cent of the area. Ten percent of the area is comprised of trembling aspen and white birch occasionally mixed with balsam fir. Open water accounts for 26 per cent of the land base, while five per cent of the area is treed fen and bog.

Due to the close proximity to the prairies, a number of significant plant species have been identified in the reserve. Prairie communities and a bur oak savannah have been identified, and multiple occurrences of floating marsh marigold and prairie buttercup have also been noted.

#### 4.3.4.5 Pipestone-McIntosh Enhanced Management Area

The bedrock of the EMA is moderate to weakly broken, and lacustrine clays are found in most valleys.

Frequent fires have played a large role in the floristic features of the EMA. The fires of 1974 and 1986 burned large portions of the north and central areas, and are presently comprised of homogeneous young jack pine stands, interspersed with deciduous forest cover. There is little understory in this section of the EMA, although lichen and moss are abundant on the exposed bedrock and forest floor. Dense coniferous and mixed wood forests account for 15 per cent of the area, and are located in the southern section where the 1974 and 1986 fires did not penetrate.

Two red pine stands have been recorded on and near the shore of Pipestone Bay. These stands may represent the most northerly occurrence of red pine in Ontario.

#### 4.3.4.6 Representation

Representation of the diversity of land cover types found in the planning area was a major goal of the Lands for Life process. Protected areas contribute to the conservation of genetic and biological diversity and, as such, play an extremely important role in preserving *Ontario's Living Legacy*. The signature site represents 37 per cent of Site District 4S-1, providing representation to all land cover classes found therein. The site is over-represented in 'dense coniferous forest', 'sparse coniferous forest' and 'old cuts and burns', and under-represented in 'dense deciduous forest' and 'mixed forest – mainly deciduous' classes. Although the additions do not add any new land cover classes, they do contribute rare communities not found in the core park. The conservation reserve slightly increases the representation of open fen, treed fen, and treed bog land cover types.

### 4.3.5

#### Wildlife

The majority of fauna found in the signature site are typical of the boreal forest. No non-native species have been discovered, which attests to the ecological integrity of the site. Typical boreal species include large mammals such as woodland caribou, moose and black bear, as well as furbearers such as beaver, otter, mink,

muskrat, fisher, marten, weasel, lynx, fox and timber wolf. Sightings of wolverine and cougar have also been made in the signature site and surrounding area.

Bird species found in the signature site are also typical of the boreal forest and occasionally western species will be sighted during migration. Many bird species observed are probably migrants rather than local breeders. The bald eagle, an endangered species in Ontario, is abundant in all areas of the signature site. Sharp-tailed grouse have also been sighted in the EMA, and are considered to be regionally significant. There are also several unusual records, not typically common to the boreal forest. For example, white pelicans have been sighted on Simeon, Artery and Musclow lakes and two Forster's terns at Larus Lake may represent a breeding pair. Other bird species found in the signature site include the belted kingfisher, great blue heron, double-crested cormorant, osprey, great gray owl, merlin, common nighthawk, five species of woodpecker and a diverse array of waterfowl and passerines.

New northern range extensions of amphibians for green frog, snapping turtle and painted turtle have been recorded with the signature site. Mink and wood frogs also occur as do the red-sided and eastern subspecies of the common garter snake. Since this is the only area in which this overlap in ranges is known, it is a situation of bio-geographical interest. A Franklin's ground-squirrel colony has been confirmed near Carroll Lake.

#### *4.3.5.1 Woodland Caribou*

##### *Background*

The boreal populations of woodland caribou are listed as nationally "threatened" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The herds located within the signature site represent one of the largest concentrations in Ontario south of the Hudson Bay Lowlands. Since the turn of the century, human activities have continued to encroach on woodland caribou range, causing their numbers to decrease across Ontario. It was largely due to the discovery of the Irregular Lake herd in the 1940s that a protected area concept evolved; this ultimately led to the creation of Woodland Caribou Provincial Park in 1983. The addition of the Eagle-Snowshoe Conservation Reserve and the proposed park additions

in 1999 protected an additional 64,336 hectares of vital habitat for the woodland caribou.

In areas outside of but adjacent to the signature site current timber harvesting activities include the creation of a "caribou mosaic", where large harvest areas alternate with large uncut blocks to create large, even-aged old growth at the end of a specific rotation period. This mosaic is intended to emulate a fire-driven ecosystem in the boreal forest, where large disturbances simulate large forest fires. *The Caribou Guidelines for Forest Management* were designed to offer the woodland caribou a heightened degree of protection outside the signature site.

The current habitat mosaic found within park boundaries is a result of wildfire dynamics and fire suppression over the past 60 years. Maintaining a mosaic to provide for the continuance of caribou habitat will be a key factor in determining the vegetation management strategy for the park.

##### *Caribou Habitat*

Important woodland caribou habitat occurs in the signature site. Figure 9 shows the seasonal distribution of woodland caribou within the signature site based on sightings reported by both MNR and non-MNR personnel between the mid 1980's and 2002. These locations were identified by way of anecdotal sightings, caribou surveys (winter and summer) and GPS data from a caribou collaring project. Figure 9 is intended to show general seasonal use by caribou over the aforementioned time period.

The large concentration of points in the northeast portion of the signature site is a result of winter caribou surveys conducted in 2002. The two large clusters of points found in the centre and at the southern extremity of the site are a result of the collaring project. Bruce Ranta, wildlife biologist for the Kenora District, traced the seasonal movements of five caribou in the southern portion of the signature site from 1998-2000. Unfortunately, due to the small sample size, no strong conclusions could be made and relatively little is known about migratory behaviour at this time (Ranta 2002). One important observation included the movement by some of the collared caribou into the province of Manitoba.

Small clusters of points in the Sydney Lake area and just east of the signature site in the Underbrush Lake area are a combination of MNR calving surveys and sightings by local tourist operators. The remaining points found throughout the site result from anecdotal reports by both the public and MNR staff.

The large areas of the signature site that appear to be devoid of caribou may be a result of a number of factors; 1: widespread winter caribou surveys have not been performed in recent years, 2: the park receives a low level of use and therefore anecdotal sightings are not common and 3: natural disturbance patterns, namely fire, change the supply and location of preferred critical winter habitat.

Caribou are very solitary during the summer months. Female caribou select isolated islands or peninsulas in spring for calving, which may be an attempt to avoid predators.

Preferred winter caribou habitat consists of mature forest stands between 80 and 100 years of age, although stands between 40 to 100 years may suffice. Lichen growth is optimal in mature forests, as this is the primary food source for caribou in the winter. As readily available succulent plants and deciduous leaves form the summer diet, caribou distribution in this season does not appear to be affected by food distribution.

#### *Research*

Reports have been completed for the first and second field seasons of a proposed three-year species-at-risk study aimed at identifying areas of significant woodland caribou calving and nursery habitat within the Woodland Caribou Signature Site. Another purpose of the study is to attempt to determine if specific types and levels of recreational activity has an effect on calving or nursery habitat. Nursery habitat was documented in the 2001, 2002 and the 2003 field seasons. Calving habitat is difficult to identify, as evidence of birthing disappears quickly in comparison with lasting evidence deposited as animals continue to use a particular site over time. To date, nursery habitat has been documented at various densities on 21 lakes in the signature site (Figure 10). Additional data collected

during the 2003 field season included habitat assessment of previously identified nursery areas. The proposed fourth year of this species-at-risk project (2004) will survey bogs and fens as potential nursery areas and assess caribou site fidelity over time.

#### *4.3.5.2 Moose*

The Woodland Caribou Signature Site is enclosed within Wildlife Management Unit 2 and a small portion of Unit 3 in the Sydney Lake area. Large zones of uniform vegetation do not normally maintain large populations of moose. In this regard, the signature site area in general represents marginal habitat capable of supporting only isolated pockets of relatively high moose density.

The major zones of low moose density occur in even-aged jack pine stands considered to be prime caribou habitat. It would appear that the habitats of these species are mutually exclusive, however the signature site area as a whole appears capable of maintaining both ungulates. Range overlap with moose may expose woodland caribou to increased predation by wolves (Seip 1989). Distribution of both moose and caribou can be expected to change over time as natural disturbances continue to alter habitat conditions.



#### *4.3.5.3 Furbearers*

Fur harvesting has occurred within Woodland Caribou Signature Site for centuries and has contributed a great deal toward Ontario and Canadian heritage. Trapper harvest and income is largely dependent on market conditions, trapper effort and animal densities.

Trapping effort and fur production varies considerably from line to line and from year to year.

Most trappers maintain at least one cabin for access to their trapline. Use of these cabins is mainly restricted to fall and winter when most trapping activity takes place. Due to the size of the traplines, travel by snowmobile is essential to access the entire trapline. Trapping trails maintained in the winter months frequently act as portage routes between lakes for use by summer visitors.

Beaver and American marten are generally easily trapped relative to other furbearers. Beaver is under a quota system based on beaver lodge density. Other furbearers that have quotas are fisher and lynx. The fisher quota is based on the size of trapline; historical harvest information and population trends are used to set the lynx quota.

Information regarding other fur bearing animal populations is not well known. Species such as lynx follow regular density cycles closely tied to the natural prey population of snowshoe hare. Others, like the timber wolf, are associated with the status of moose and caribou populations. Under such dynamic natural changes, trappers must be aware of changing conditions on their traplines.

Trapping also has the potential to influence other wildlife populations. Wolf densities can affect woodland caribou populations, which are related to wolf trapping activity. Other management activities, such as fire suppression, have the potential to influence forest habitat; this will have implications for species that prefer or are dependent on specific forest conditions. Comparisons of fur production to changes in forest cover may provide opportunities to learn about other furbearer response to habitat conditions.

Economic return from trapping fluctuates between years due to market prices and trapper effort. Income from individual traplines varies considerably and represents only a supplementary income for most trappers. However, there is also legitimate cultural value to trapping as for many it represents a traditional land use activity.

#### *4.3.5.4 Wolverine*

The wolverine has been assigned a status of “special concern” nationally by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and is recommended for threatened status by the Committee on the Status of Species at Risk in Ontario (COSSARO). The Woodland Caribou Signature Site is within the current wolverine range and during the past 20 years wolverine have been observed at least eight times in or near the signature site. The site provides large amounts of suitable habitat and prey base (e.g. moose, woodland caribou) for this wide-ranging carnivore with an apparent aversion to human disturbance. The lack of logging and associated roads in most of the signature site minimizes disturbance and reduces the potential for trapping mortality. Recent funding for a study that includes radio-collaring animals northeast of Ear Falls was initiated in December 2002. Results from this study should uncover much about the ecology of the wolverine and may be applicable to wolverine population distribution in and around the signature site.

### **4.3.6**

#### ***Fisberies***

##### *4.3.6.1 Watersheds*

The Woodland Caribou Signature Site lies entirely within the Nelson River Drainage basin where all water flows into Hudson Bay via Lake Winnipeg and the Nelson River (Figure 11). Most headwaters are contained within the signature site boundaries, which provide a desirable situation where water flow originates from within a protected area and travels out. The only exceptions are Job Lake on the northern boundary of the Bloodvein River watershed, Obukowin Lake southwest of Carroll Lake on the Gammon River and in the Pineneedle/Sideous Lake areas where water flows into the Sturgeon River System through Sydney Lake in the proposed park addition. Water from these

lakes flows into the signature site, providing potential for outside land uses to affect water flow and quality within the site.

Water quality is excellent and suitable for all recreational uses in the Woodland Caribou Signature Site. Although the lake and stream water is generally potable, precautions such as boiling water for at least five minutes are advisable to minimize any risk of ingesting localized contamination by pathogens or parasites. Generally, lakes within the signature site have low buffering capacity and would be sensitive to acid precipitation; however, the park is removed from the direct influence of large sources of acid rain produced by emissions.

#### 4.3.6.2 *Lake Productivity*

Lake productivity is the ability of a lake to produce fish and other aquatic organisms and is related to the available nutrients and water depth. Nutrients normally enter a lake in the form of dissolved solids, which is dependent on the land area surrounding each lake. Rain and snow melt flow overland dissolving inorganic and organic substances from the soil, and eventually flow into lake and are assimilated, as on land, by plant growth. The productivity of a lake is determined by its ability to produce an optimum number of fish per hectare per year (kg/ha/yr). Productivity levels provide data to forecast the allowable annual harvest by species.

The productivity gradient within the signature site is closely correlated with the type and amount of glacial overburden. Glacial deposits of silt and clay are located in the northern portion along the Bloodvein River. As surface runoff passes through these deposits, greater concentrations of nutrients are available to these lakes. In contrast, the southern sectors, including the Gammon River, are comprised of bare bedrock with minimal surficial deposits and, as a result, nutrient levels are generally lower in this area. However, lacustrine sand, silt and clay deposits in the conservation reserve and the Sydney Lake proposed park addition contribute to increased productivity in these areas.

The other important requirement for primary productivity is light penetration, which is related to

water clarity and depth. Lake depths within the Bloodvein River watershed average 5.8 metres while lakes along the Gammon River system average 9.9 metres in depth. Lakes in the northern portion of the signature site are shallower than lakes in the south, suggesting that the northern lakes have a larger percentage of their bottom area exposed to light penetration. However, surveyed lakes along the Bird River system in the Eagle-Snowshoe Conservation Reserve are shallower on average than other lakes in the signature site, thus resulting in a higher primary productivity.

Within the Woodland Caribou Signature Site there is a general pattern of decreasing lake productivity from north to south (Figure 12). Productivity is relatively high along the Bloodvein River and decreases within the Gammon River watershed and in the southern sector; however, based on available data the conservation reserve exhibits slightly higher productivity on average (3.0 kg/ha/yr.) than the core park (2.3 kg/ha/yr.). This pattern of nutrient availability combined with differing water depths and surficial geology explains the pattern of productivity seen throughout the signature site. Productivity values for lakes within the signature site are lower when compared with other regional and provincial lakes. Average productivity for northwestern Ontario is 3.4 kg/ha/yr. whereas the average value for lakes within the site ranges from an average of 2.3 - 3.0 kg/ha/yr.

Approximately 40 per cent of the water surface area of Woodland Caribou Provincial Park has been investigated through the lake survey program. The 52 surveyed lakes account for a surface area of 51,227 hectares and include most of the larger and more heavily fished water bodies within the core park. Only six lakes have been surveyed in the conservation reserve, two in the Anchor Lake proposed park addition, two in the EMA and one in each of the remaining proposed park additions. Further study has been recommended in these areas.

#### 4.3.6.3 *Fish Communities*

The distribution of fish communities demonstrates a pattern closely tied to lake productivity (Figure 13). Overall, the lakes of the signature site represent a

diverse and largely intact aquatic resource. Walleye, northern pike and lake trout are the major fish species. Whitefish, cisco, sucker, burbot (ling) and yellow perch are also common throughout the signature site waters and can be found in virtually every lake. The only non-native fish species occurs in Sabourin Lake, where smallmouth bass were introduced in 1959. After 44 years, bass are occasionally angled from Barclay and Sabourin lakes, however they have not formed a significant portion of the fishery.

Along the Bloodvein River, where productivity values are relatively high, walleye and northern pike communities dominate. Toward the south, specifically along the Gammon River system where productivity begins to decrease, lake trout appear along with the walleye and northern pike. In the south sector, where productivity is lowest, walleye disappear from the majority of lakes and are replaced by lake trout-northern pike communities.

Lake trout-walleye-northern pike communities are common within the core park. In these lakes, particularly along the Gammon River, shallow bays are available to provide walleye habitat and the deep basins provide habitat for lake trout. Walleye begin to disappear from lakes when shallow productive areas form only a small percentage of total lake area (MNR 1986).

Headwater lake conditions are usually different than lakes further downstream. At the initial stages of water flow, nutrients entering a river system have not accumulated and as a result fish communities in headwater lakes are often different than those downstream. Examples of this would be the presence of lake trout in Bigshell, Olive and Musclow lakes within the Bloodvein River watershed and the absence of walleye from Upper Hatchet, Bunny and Leano lakes within the Gammon and Sturgeon watersheds.

Another fish species occurring naturally in the signature site within Woodland Caribou Provincial Park is muskellunge. Irregular Lake contains a fish community of northern pike and muskellunge found in no other lake in the signature site. This represents one of the most northerly extents of muskellunge range in Ontario.

Fish communities similar to those found in Woodland Caribou Provincial Park are also common in the Eagle-Snowshoe Conservation Reserve. Trophy-sized northern pike can be found between Eagle and Snowshoe lakes; this lake chain is also well known as an excellent walleye fishery. Toward the middle of the reserve, productivity begins to decrease and lake trout appear in Eden Lake. The surrounding lakes of Wingiskus, Bee, Rickaby and Anderson are predominantly northern pike.

#### *4.3.6.4 Facility-Based Tourist Outfitters*

At the present time lodges and outpost camps play host to the majority of anglers within the signature site. All but five developed tourism lakes contain walleye, suggesting it is the “bread and butter” fish species that sustains the facility-based tourist industry within the site. Visitation at camps on lakes without walleye is thought to be minimal or at best seasonal.

Angler effort is not always isolated to lakes where there are tourism facilities. Many operators encourage day trips to surrounding lakes in an attempt to limit harvest pressure on specific water bodies. In 1985, 41 per cent of the guests staying at commercial camps fished on lakes other than where their camp was located (Wepruk 1986). The sport fish harvest in the signature site attributed to guests at cottages and private resorts is thought to be considerably less than at commercial outpost camps.

#### *4.3.6.5 Commercial Boat Caches*

Boat caches are distributed throughout the Woodland Caribou Signature Site with concentrations highest in the core park along the Gammon River and in the southern section of the core park where the greatest number of lake trout lakes are located. Sydney Lake alone has 21 commercial boat caches, though there are relatively few in the conservation reserve, EMA and proposed park additions. Quantifying harvest by this user group is difficult because of the sometimes-sporadic nature of boat cache use. Use of commercial boat caches is usually of shorter duration. Some boat caches are used exclusively on a fly-in day use basis. This shorter trip duration often results in daily creel limits being removed more frequently, leading to higher rates of exploitation in some areas.

#### 4.3.6.6 *Distribution of Angler Harvest*

Woodland Caribou Provincial Park contains some of the finest walleye, northern pike and lake trout fishing in Ontario. Sport fishing is allowed in all areas of the site, although licence restrictions are in effect throughout the proposed Sydney-Rowdy park addition and the Eagle-Snowshoe Conservation Reserve. The majority of anglers within the signature site originate from the United States and contribute to a strong facility-based tourism industry in the area. Most anglers gain access through the lodges, outpost camps, private cottages and boat caches located in the signature site. The majority of angler harvest is located on the larger lake systems throughout the signature site.

Harvest estimates are only of value when they are described in terms of the capability of individual lakes to sustain use. Comparisons of harvest levels with sport fish productivity on a lake-by-lake basis describe a pattern of fisheries exploitation. Estimating harvest is a requirement when allocating or re-assessing the harvest potential of a waterbody.

Assumptions are made regarding the level of harvest associated with each type of use (e.g. lodge, outpost, boat cache). In the case of a lodge or outpost, the potential harvest is based on the number of beds (kg of fish harvested per bed) and the productivity of the lake (yield). For a remote boat cache opportunity, the potential harvest is assessed on a per boat basis (kg of fish harvested per boat) and the productivity of the lake. The productivity estimate of a lake is further divided by fish species. This is important when associating harvest levels with preferred target species such as walleye.

Although this method of calculation is commonly used, it is also recognized that with the advent of reduced possession limits, introduction of conservation licences, promotion of conservation limits by commercial operators as well as other conservation tactics, harvest estimates may not reflect reality in every case. For the purpose of this planning process, all developed lakes (i.e. those lakes with outposts, cottages, boat caches, etc.) have been assessed using the above method. Should results indicate a potential over-harvest situation, information will be collected to provide a

more accurate assessment. In the event that the final assessment confirms a fishery concern, tactics will be developed and employed to ensure the long-term sustainability of that fishery.

In general, based on the assessment criteria described above, most developed lakes along the Gammon River system and in the south sector describe angler harvests that exceed theoretical yields. This is not surprising as this area contains the highest concentration of development and is also the zone where lake productivity is lowest. Although the Bloodvein River system provides as many angler days as the south sector, the lake productivity and potential sport fish yield here is the highest in the core park. A recent recreational use survey confirms that most anglers target walleye as their preferred species. This information implies the need for more investigation to determine not only the sustainability of the Bloodvein River fishery, but all waters within the signature site. Harvest restrictions in the “trophy waters” area (Eagle-Snowshoe Conservation Reserve and Sydney-Rowdy proposed park addition) may result in a more sustainable fishery.

#### 4.3.6.7 *Fisheries Management*

A number of signature site lakes identified as experiencing heavy use still offer some of the best angling success in northwestern Ontario. The preceding section does little more than identify specific lakes where future fisheries management may be required to maintain or enhance a quality fishing experience. These lakes may require additional information before management decisions can be implemented.

Lakes experiencing high use may require further assessment to determine how the sport fish populations are responding to harvest stress. Little historical information is available. The most recent data set (1985) could act as a base from which to monitor fish populations over time. Fish samples were removed from 18 lakes throughout Woodland Caribou Provincial Park to document the status of resident populations. Data collected identified age structure of angler creels and lake populations, growth rates and age of the fish at maturity. Information from this indexing program, in conjunction with other collected

data could provide a solid base for the recommendation of management strategies. In addition, this base information may be compared with future research to monitor the success of fisheries management efforts.

High quality fisheries can be maintained through the use of techniques such as size limits, creel limits, bait restrictions and fish sanctuaries. Continued co-operation with the tourist industry in fisheries assessment and management will contribute to a healthy fishery.



## 5.0 Cultural Resources

Descendants of the First Nations people that use the signature site today have done so from time immemorial. The Woodland Caribou Signature Site constitutes a cultural landscape: “a geographical area that has been modified, influenced or given special cultural meaning by people” (Parks Canada, 1994).

The First Nation communities with traditional use area within the site have given special meaning to this landscape. They have their own names for places within the site. The pictographs that are found throughout the site are part of their cultural heritage. First Nations people are buried throughout the site. Other examples tell of how the land has been modified by these people as part of their day to day existence.

The First Nations people of the signature site share a vision that they have been placed here by the Creator to care for and protect their ancestral lands. Some places have greater significance than others; however, all lands are sacred.

The cultural heritage resources of the Woodland Caribou Signature Site are both abundant and significant, representing major expressions of the prehistoric hunter-gatherers of the boreal forest and Canadian Shield as well as their present descendants. The sheer density of undisturbed archaeological sites here reflects a high level of prehistoric occupation.

One way in which the cultural heritage of the signature site is displayed in the wilderness is through pictographs (rock art). This prehistoric art form is found throughout the site, most notably along the Bloodvein, Gammon, and Bird Rivers. At Artery Lake, there is a large site that may be of international significance. Rock art sites are often found on spectacular, vertical cliff faces at the water’s edge, adding an element of reverence and mystery to the area. Pictographs often contain human and animal figures, painted in bright red ochre (hematite) mixed probably with fish oil or animal grease. Found

throughout the Canadian Shield, these pictographs may date as far back as the Archaic Period (3000 BC) (Lytwyn, 1986).

Cultural heritage is also demonstrated through landscape modifications such as fish traps, channelling and planting of wild rice. These are more contemporary examples of the rich cultural values represented in the Woodland Caribou Signature Site.

### 5.1 The Archaic Peoples

Archaic campsites have been discovered on major waterways within the signature site. The Archaic peoples may have evolved from their Palaeo-Indian predecessors at about 3000 BC and continued the tradition of big game hunting but diversified their subsistence activities. Trading took place Shield Archaic groups, prairie hunters and Laurentian Archaic Peoples.

### 5.2 The Laurel Peoples

By about 200 BC, the changing climate, improved subsistence resources and influences from southern horticultural groups brought about changes in northwestern Ontario. The Laurel peoples were the first users of pottery in the area and the large number and size of sites indicate increased population and great social complexity. Campsites of the Laurel people are found virtually throughout the park, with some large enough to be classified as villages. Artifacts of fired clay, chipped and ground stone and cold-hammered native copper indicate new developments in technology. There are also strong indications that these peoples were harvesting the nutritious rice stands and had semi-permanent villages in the vicinity of fish-spawning grounds.

### 5.3 The Blackduck and Selkirk Peoples and other Woodland Cultures

Around AD 1000, another cultural change took place that saw a decline in the Laurel peoples. The Blackduck and Selkirk peoples moved into the area or were descendants of Laurel groups. They were also hunters, gatherers and fishermen and makers of pottery that was quite different in shape and decoration and of poorer

quality than Laurel pottery. Evidence shows that they probably lived in the same area and intermarried with other contemporary groups.

#### ***5.4 European Influence***

In the 17th century, trade goods such as firearms, glass beads, metal knives, axes and pots were introduced to the area by Native middlemen such as the Huron. As these glass beads replaced decorative porcupine quills and firearms replaced traditional bows and arrows, the Aboriginal technology began to change.

#### ***5.5 Fur Trade History***

Between the late 18th and early 19th century, the Bloodvein River was a prominent trade route linking the Albany River and Lake Winnipeg, and thus the centre for a period of intense fur trading. The Ojibway Indians who lived there were skilled hunters and trappers and the region produced an abundance of high quality furs. The Hudson's Bay Company (HBC) and North West Company (NWC) used the river as one of their many secondary trapping areas and waterways.

This period of development was followed by another critical period for the fur trade in the Bloodvein area. An intense three-way competition between the HBC, NWC and XY Companies ensued in the early 1800s, encouraging over-exploitation of furs, moose and caribou. By 1816, resources had been depleted and insufficient moose and caribou were available for winter meat such that native traders were subsisting on fish, rabbits and wild rice. In 1821, the HBC gained a monopoly on the fur trade by amalgamating with the NWC. The company streamlined its operation by closing down posts, introducing conservation measures and replaced the debt system with the ready barter system. These measures caused hardship for the Bloodvein Indians living and trading in the area, culminating in the band being given a small reserve at the mouth of the Bloodvein River.

#### ***5.6 The Railway Period (1871-1920)***

In 1880, the CPR was completed across northwestern Ontario. Thus, the existing fur trade industry experienced significant changes. Goods were unloaded at Dinorwic and Dryden and were then taken to fur trade posts by small steamer and freighter canoes. Despite this modernization, the lifestyle of most native populations changed little. Moose, caribou and furbearers made a resurgence and fishing was productive.

The early 20th century brought missionaries, geologists, miners, loggers and government agents, dramatically altering traditional native lifestyle and culture. Several extended family campsites and modern trading posts which were occupied throughout the area at this time were replaced by fixed reserves and government-built homes.

#### ***5.7 Recent History***

The discovery of gold in the Red Lake area (first in 1897 and again in 1925) caused the "Second Klondike" gold rush of 1926. Thousands of prospectors and geologists converged on the area, resulting in Red Lake having the busiest airport in the world in 1936. One such prospector was a Swede Arthur Carlson, who in 1948 built the first tourist camp on Douglas Lake in what is now Woodland Caribou Provincial Park. First Nations people were also involved in this new economy, working as guides and mine workers.

#### ***5.8 The Present***

Although history has altered the traditional lifestyle of the Ojibway people within the signature site, the First Nation communities that have traditional use areas within the site retain a close relationship with this boreal landscape. They continue to practise traditional activities on this landscape and take seriously the responsibility that has been given to them by the Creator, which is to take care of and nurture their lands for future generations.

## 6.0 Recreational Resources

### 6.1 Overview

The Woodland Caribou Signature Site's numerous large lakes, rivers, rapids and waterfalls, along with rolling hills, rock outcrops, glacial features, black spruce bog and muskeg, occasional steep cliffs and beaches, all combine to provide a rich diversity of rugged and scenic landscapes (Figure 14). These landscapes provide opportunities for high quality wilderness recreation and backcountry travel, including canoeing, swimming, and fishing. Many visitors use the services of the fly-in outpost camps and lodges located throughout the park and signature site.

The signature site provides ideal wilderness camping opportunities. There are currently no designated campsites within the site and thus visitors have the flexibility to choose and enjoy their own campsites, although most lakes offer several previously used sites. Current regulations maintain that nine is the maximum allowable party size within the core park area. Campsites are generally found on rock outcrops on points and islands, and thus can sustain a relatively high carrying capacity without deterioration. Cold water temperatures limit swimming to the high summer period, when water temperatures can exceed 20 degrees Celsius (70 degrees F).

The Woodland Caribou Signature Site contains some of the highest quality sport fisheries in Ontario, and fishing continues to be a very popular activity throughout the area and the livelihood of many fly-in tourism establishments. The most common species are walleye, lake trout, and northern pike, which are sought by canoeists and fly-in anglers alike.

There is considerable potential for hiking trail development within the site, particularly on the hills and ridges and along the shores of larger lakes. These trails could provide opportunities for various modes of backcountry travel, including activities such as hiking, backpacking, Nordic skiing and nature study.

### 6.2 Canoeing

The signature site offers a wide range of wilderness canoeing environments that are representative of the boreal forest. Woodland Caribou Provincial Park alone, the sixth largest provincial park in Ontario, provides approximately 2000 kilometres of canoe routes; this is comparable to Wabakimi and second only to Algonquin Park in terms of route possibilities (Figure 15).

The Ojibway people have traveled the waterways of the Woodland Caribou Signature Site for centuries, and most portages in the region have evolved from this traditional use. Two major historic river systems, the Gammon and the Bloodvein, dominate the park and are characterized by numerous irregularly shaped lakes. The extraordinary scenery of the site is created by the variety of jack pine bedrock shorelines, cliffs, cascading waterfalls and rapids, and rich spruce, pine and poplar shorelines. The hot dry summer climate of this area further enhances the pleasure of outdoor recreation.

Although the overall character of the signature site is subtle, it offers a provincially significant variety of environments for the traveler to experience.

One of the major assets of the park from a canoeing standpoint is the "Canaux-et-Lacs" drainage pattern. Essentially, this means a bedrock-controlled lake system joined by short quick drops containing falls or rapids. Consequently, the ease of travel is very high with relatively short portages averaging 200 - 300 meters in length.

### 6.3 Winter Activities

Currently, winter activity in the signature site is relegated to ice fishing, and to the mode of transportation used for access. Areas that receive ice-fishing activity include Bulging, Haggart, Sylvia, Peisk, Knox, Murdock, Hatchet, Page, Peterson and Crystal lakes. These lakes are reached via snowmobiles and local, privately owned aircraft. Travel by dog sled was once an important mode of transportation in the area. Recently this activity has seen an upswing in popularity in northwestern Ontario. Woodland Caribou Provincial



Park is currently being considered and evaluated by a tourist outfitter for the promotion of winter camping and dog sledding.

#### **6.4 Remote Tourism Industry**

Fly-in outpost camps and lodges are an important component of the present recreational landscape of the Woodland Caribou Signature Site. Commercial facilities normally operate from mid-May to early September, and the clientele, who primarily come to fish, are principally from the United States. Where outpost camps and lodges are found on canoe routes there is a potential for conflict among user groups. Canoeists may not be expecting to encounter motorboats, floatplanes, and buildings, while fly-in visitors may resent the unexpected presence of canoeing parties passing by or camping on lakes where they are staying. The challenge is to manage the area to accommodate both the lodge and outpost camp clientele and canoeists, so that conflicts between the two user groups can be minimized.

### **6.5 Recreational Components of the Woodland Caribou Signature Site**

A recreational resource assessment of the Woodland Caribou Signature Site was conducted in the summer of 2002. In order to effectively catalogue all recreational values in the site, it was divided into seven discrete components (Figure 16) according to the following rationale:

#### **6.5.1**

##### ***Northern***

This comprises the area within Woodland Caribou Provincial Park north of the Bloodvein River. The northern component is fairly remote and is mainly accessed through some combination of float plane and/or water travel. All lakes in the area besides Sabourin, which flows directly into the Bloodvein River, are separated from other parts of Woodland Caribou Provincial Park by portages. The northern component can be entered via the Bloodvein or Chukuni River systems, or from the Musclow River system to the north.

#### **6.5.2**

##### ***Bloodvein River***

The Bloodvein River, of which 106 km lies within Woodland Caribou Provincial Park, was designated as part of the Canadian Heritage River System in 1998. The headwaters will be protected as part of *Ontario's Living Legacy* within the Peisk Lake proposed park addition and the Pipestone Bay-McIntosh Enhanced Management Area. Waters of the Bloodvein flow west into Manitoba's Atikaki Provincial Park and on into Lake Winnipeg. Co-ordinated efforts by the provincial governments are aimed at protecting these waters. The Bloodvein region is roadless and has hundreds of small rapids, waterfalls, lakes, wild rice marshes and abundant fish and wildlife. This picturesque region is optimal for wilderness photography, as is the entire signature site. Not only do these features provide an excellent setting for fishing, but they also provide the adventure enthusiast with white-water canoeing, kayaking, and rafting opportunities.

The Bloodvein is the largest and most diverse waterway in the park since it is composed of larger lakes, wider river channels, and a number of falls and cataracts. As it

traverses the entire width of the park, it passes through a number of environments that are quite different than elsewhere in the park.

The deeper soils (silts, sands and clays) tend to cover the bedrock and produce a dense coniferous and mixed wood forest, particularly in the central and eastern sections. Rugged bedrock shorelines become more dominant towards the Barclay and Artery lake area.

The river drops more quickly in the eastern section and portages, which are fairly short and easy, are more numerous. In the section west of Larus Lake, large distances can be traveled with few portages. The main impediment to travel on the Bloodvein River is the potential for rougher water on larger lakes during periods of high winds.

The Bloodvein route is primarily linear and offers few opportunities for side trips. There are a number of outpost camps and some recreational cottages particularly in the eastern section of the Bloodvein. Guests of Sabourin Lake Lodge are able to travel the river from the outflow of Larus Lake to the rapids where Mary's Lake empties into Artery Lake.

This component comprises the Peisk Lake park addition and all other lakes along the Bloodvein River system including Knox, Murdock, Larus, Simeon, Sabourin, Mary's and Artery lakes. The Bloodvein is generally a busier waterway, with high levels of motorized traffic in all areas and a number of characteristics that distinguish it from the rest of the signature site, notably its designation as a Canadian Heritage River. Although some lakes in the area were not included as part of the Bloodvein Heritage River system in 1998, they are linked by open water to the Bloodvein River system and therefore fall into this category.

### 6.5.3

#### *Central*

The central component comprises all waters south of the Bloodvein River and north of the Gammon River. The area is characterized by a network of small lakes connected by portages and provides several linkages between the Gammon and Bloodvein River systems. It

also has potential for canoe route expansion. It can be accessed from outside of the park via Pipestone Bay (Red Lake) or via the Johnson Lake access point through Douglas and Hatchet lakes. A recreation inventory assessment was completed in 2001 on a section of the Anchor Lake proposed park addition (Indian House to Hatchet Lake).

### 6.5.4

#### *Gammon River*

This comprises all waters along the Gammon River system and includes Optic, Telescope, Embryo, Upper Hatchet, Hatchet and Douglas lakes. This river system experiences perhaps the highest level of motorized traffic in the signature site and provides a direct linkage with Manitoba at Carroll Lake. The headwaters of the Gammon River can be accessed from outside the signature site through Onnie Lake or via Johnson Lake. The Foley Lake park addition also provides an access possibility into Douglas Lake via Trout Bay (Red Lake). Lastly, the Gammon River can also be accessed from within the signature site via portage and canoe routes from the southern and central recreational areas. It must be noted that Douglas, Hatchet and Onnie lakes are not part of the Gammon River watershed.

### 6.5.5

#### *Southern*

The southern component includes the Sydney-Rowdy Lake park addition and all other lakes, creeks and rivers south of the Gammon River within Woodland Caribou Provincial Park. This is perhaps the most popular backcountry canoeing area due to the fact that it is accessible by road via Leano and Sideous lakes and that it provides a number of possible loop options that do not require the use of a float plane. Although boat caches (motorboats) appear frequently in this area, encounters with motorized vehicles are generally less common than elsewhere in the signature site. This is due to the seasonal nature of their use resulting from a focused early spring lake trout fishery.

### 6.5.6

#### *Eagle-Snowshoe Conservation Reserve*

This component includes all waters within the boundaries of the Eagle-Snowshoe Conservation Reserve. The area was established in 1999 and falls

within MNRs Kenora District. Hunting is a permitted use in the conservation reserve, unlike in Woodland Caribou Provincial Park. This component provides a linkage between Woodland Caribou Provincial Park and the province of Manitoba via the Bird, Manigotagan and Irregular river systems.

### **6.5.7**

#### ***Pipestone-McIntosh Enhanced Management Area (EMA)***

This area encompasses all waters contained within the Pipestone-McIntosh EMA. It is distinguished from the rest of the signature site in that it does not receive the same degree of protection. Unlike other portions of the site, forestry and mining are permitted uses in the EMA. As in the conservation reserve, hunting is also permitted. Designated as a Remote Access EMA, the main purpose of Pipestone-McIntosh Enhanced Management Area is to protect recreational values along strategic access routes; this includes the historic land/water trail connecting Woodland Caribou Provincial Park to the town of Red Lake via Pipestone Bay and Lund Lake. The EMA is the only component of the signature site containing a network of forest access roads.

## **6.6 Recreation Features/Aesthetics**

Recreation features are defined here as natural and cultural features that enhance a recreational experience. These features include such things as waterfalls, beaches, cliffs, sport fisheries, pictographs and overall aesthetic appeal. For the site as a whole, one of the most obvious features is the high number of attractive lakes with a very high quality sport fishery. Other obvious features are known pictograph sites scattered throughout the core park.

The amount of rugged bedrock and scattered jack pine shorelines, bays, points and islands increases steadily to the west. The result is a general improvement in aesthetic values from east to west.

In the northern recreation zone, the Sabourin River offers a small river experience with high vertical cliffs, clear lakes, excellent beaches on Bigshell Lake and rich marshlands. Aesthetic values are high throughout this trip from the bedrock, open jack pine shores of Olive

Lake to the mixed wood forests of Bigshell and Sabourin lakes. Musclow Lake, found in the northwest sector of this zone, offers a larger lake experience complete with excellent fishing, many secluded campsites, fine beaches and cultural records such as pictographs. Musclow is the largest lake in the site that has remained relatively undeveloped. Wild rice is found on the Musclow River.

The main features of the Bloodvein River include some of the best walleye fishing in northwestern Ontario, numerous archaeological sites and other historic values, a number of large waterfalls, cataracts and rapids and numerous opportunities to view moose.

The central recreation zone provides for various remote-fishing experiences for walleye, lake trout and northern pike. It is a transition zone from the lower productivity lakes in the south to the higher productivity lakes along the Bloodvein. Most lakes are small in size and allow the area to be viewed up close. Mature forests in this zone provide winter habitat for woodland caribou.

The Gammon River is a major waterway, the falls and rapids are more numerous and spectacular, and archaeological sites and beaches are more common. However, despite the greater relief, the larger lakes decrease the visual impact and do not equal the contrasts offered in the southern sector. The exception is Carroll Lake, which is one of the most attractive areas in the park. Excellent opportunities exist to view large wildlife like moose and caribou throughout the Gammon River system.



The southern recreation zone supports a number of recreation features including the highest concentration of cliffs and the very attractive steep bedrock and scattered jack pine shorelines in the park. Although not as rugged as areas to the north, the intimate enclosures offered by the many narrow lakes magnify the relief. The clear, deep and cold lakes that are specific to this area and the Gammon River provide for excellent lake trout fishing.

The Eagle-Snowshoe Conservation Reserve houses a series of lakes and river systems that provide a natural link between Nopiming Provincial Park in Manitoba and Woodland Caribou Provincial Park. Expanses of exposed bedrock provide ideal camping conditions and vast areas of recently burned forest offer an ecological perspective on life in the boreal forest. This is combined with the presence of regionally significant plant communities such as bur oak savannah and prairie communities. A unique sand spit on Bee Lake and a series of rapids and chutes on the Bird River descend into Chase Lake to provide scenic variety to travelling paddlers.

The Pipestone-Bay McIntosh Enhanced Management Area provides a road-accessible recreation area for users of all kinds including sport hunters, ATV (all-terrain vehicle) and snowmobile enthusiasts. A complex of tertiary roads provides innumerable possibilities to explore the area, and managed forests offer a different perspective on ecological processes in a human-altered landscape. Pipestone Bay (Red Lake) itself is a very deep oligotrophic basin supporting lake trout and the series of smaller lakes in the EMA offer opportunities to catch large northern pike. The EMA also supports headwater lakes of the Bloodvein River system and contains a regionally significant red pine community.

## 7.0 Market Analysis

The Woodland Caribou Signature Site caters to a mixed tourism market, which includes the wilderness canoeist and the fly-in resort/outpost guest. The main attractions of the site at this time are the high quality canoeing and fishing, as well as the sense of wilderness conveyed by the park.

The outpost camps and lodges within the signature site, collectively offer approximately 378 commercial beds. In general, parties of various sizes visit the lodges and outpost camps for stays of roughly a week in duration. The tourist season is relatively short, consisting of approximately four to five months in duration due to the site's geographic location. Most clients of commercial tourism camps are anglers and originate from the United States.

According to a study conducted by the Ministry of Economic Development, Trade and Tourism (1997), visitation rates of fly-in anglers in northern Ontario are highest during the months of June, July and August. Canoeists contend with a similarly short open water season and tend to spread their visitation out but currently focus on the late summer period. The vast majority of canoeists are also from the United States (85 per cent), however resident visitation has increased in recent years.

As wilderness becomes increasingly scarce, areas such as the Woodland Caribou Signature Site will become ever more popular and precious. The park must be managed to ensure use does not exceed its carrying capacity and to ensure the park's status as a world-class canoeing and recreation area is established. The park's expansion into a world-class protected area, with all the inherent publicity, has resulted in increased awareness and use of the park. Visitation by all types of users is expected to continue to increase.

The Woodland Caribou Provincial Park portion of the signature site can be expected to capture an increased share of the traditional wilderness canoeing market. This trend is indicated by a significant increase in inquiries since the park was first established in 1983, and again, as a result of the *Lands for Life* planning process and the subsequent *Ontario's Living Legacy* signature site identification. Currently, marketing of the park occurs through the Ontario Parks web site, sports shows, print media, tourist operator advertising, word of mouth, park canoe route map and newsletter/tabloid.

In 2002, a total of 757 campers visited the park from May to September. Of these, 78 per cent were from USA, 18 per cent were from Canada, and 0.3 per cent were foreign visitors. American visitors tended to originate from Minnesota, Wisconsin and Illinois, while the majority of Canadians visiting the park were from Ontario and Manitoba. The average party size was 3.2 and the average length of stay was 6.6 days. This visitation produced an accumulation of 4,745 camper nights in 2002. This demonstrates a strong increase in park use since 1992, when interior camper nights totalled 1224. Recent trends over the past two years have shown a decrease in visitation although no reason is apparent. It is expected that the planning process will identify more clearly the values of the backcountry user.

Based on a survey of 156 individuals, 74 per cent of visitors to Woodland Caribou Provincial Park reported having been to the park more than once; of this group the average number of visits reported per person was 10. This indicates that there may be a high degree of user fidelity over time. When all responses were taken into account, the average number of visits reported per person was seven.

*Table 5: Park Visitor Statistics, 1998-2002*

<i>Year</i>	<i>Total campers</i>	<i>Total camper nights</i>	<i>Camper Origin (%)</i>	<i>Average Party Size</i>	<i>Average length of stay</i>
1998	822	5350	US 88 CDN 11 FGN 1	3.5	6.8
1999	1060	5850	US 84 CDN 15 FGN 1	3.7	6
2000	1067	6493	US 89 CDN 10 FGN 1	3.6	6.5
2001	876	5910	US 80 CDN 16 FGN 0.5	3.4	6.3
2002	757	4745	US 78 CDN 18 FGN 0.3	3.2	6.6

### *7.1 General Visitation and Socio-Demographic Factors*

Demand for wilderness-related outdoor recreation activities in Ontario has substantially increased since 1981. However, contrary to the US situation, overall participation rates by Ontario residents have declined. In spite of this, future projections in Ontario indicate an increase in the participation of all pursuits over the next 20 to 26 years (MNR, 2003). Based on population growth and age-specific preferences, non-consumptive activities such as wildlife viewing are expected to increase in popularity, while more consumptive uses like hunting and fishing will continue to decline. The United States will in all likelihood continue to be a major market area for northwestern Ontario and specifically the Woodland Caribou Signature Site when it comes to wilderness canoeing and sport fishing. However, economic and political climate will continue to be dynamic factors affecting visitation.

## 8.0 Constraint and Capability Analysis

The protection of provincially significant natural and cultural features within the signature site is the primary concern of the strategy development process. Constraints and capabilities are important considerations, particularly in the designation of zones within provincial parks, which will allocate park land and water resources to their most appropriate use in order to achieve the provincial parks' system objectives of protection, heritage appreciation, recreation and tourism. An analysis of the constraints and capabilities imposed by features and values includes consideration of significant areas, sensitive areas and terrain impediments. Some areas can be readily identified as having constraints due to their requirement for protection, for example, rare plant habitat, and caribou calving and nursery areas. On a broad scale, the evaluation of the signature site for capabilities and constraints includes the following:

### Capabilities

- Terrain conducive to recreation
- Water accessibility for recreation
- Interconnecting waterways
- High quality sport fishing
- Landscape diversity
- Viewing opportunities (landscape/cultural features)

### Constraints

- Access limitations
- Sensitive caribou habitat
- Culturally sensitive sites
- User conflicts
- Social limitations
- Previously harvested areas (aesthetics and unfavourable public perception)
- Recently burned areas (aesthetics)
- Sensitive vegetation
- Intensity of possible use
- Terrain
- Water quality

## 8.1 Recreational Carrying Capacity

Recreational carrying capacity relates to the level of use an area can sustain while providing quality recreational experiences and protecting the environment. It is defined as “*the maximum degree of the highest type of recreational use which a wilderness area can receive consistent with its long-term preservation,*” and incorporates both ecological and social considerations. Determination of carrying capacity, and constraints and capabilities, is integral to the establishment of use targets and recreation management prescriptions such as designation of campsites, portages and zones, entry quotas, party size restrictions, can and bottle use restrictions, campfire restrictions and use of portable stove requirements.

In wilderness areas, recreational carrying capacity consists of the capability of the land base to sustain use without deterioration, and the social factors relating to park users' tolerance of encounters with others. Analyses of use and user expectations, for both commercial outposts and wilderness canoeists, is required to determine management policies for the area.

The physical carrying capacity includes such factors as soil depth and type, slope, ground cover, presence of bedrock and vegetation. In an area the size of the Woodland Caribou Signature Site, determining carrying capacity is challenged by the largely site-specific evaluation factors for physical capability. In general, the presence of bedrock outcrops at the shoreline increases the durability of these sites for recreational use. Most canoeists are attracted to spacious and open rocky sites, which are better suited to campfires than sites situated within tree cover, although some compaction of soils and mosses does occur at tent sites beyond the extent of the rock.

Wet sites with deeper soils support swampy vegetation types and are less suitable as campsites. The beaches in the site tend to have low, wet shorelines and are not as conducive to camping as are the higher, rockier sites.



A pattern of increasing carrying capacity is evident from east to west through the site. This is opposite to the ideal situation whereby the highest carrying capacity would be nearer to population centres and potential access areas.

The northern sector, including the Sabourin River from Olive to Sabourin Lake, ranges from high to moderate carrying capacity. Olive Lake supports a very large number of potential sites on thin sand and bare bedrock with jack pine while Bigshell Lake offers a number of deep, well-drained sand beach jack pine and poplar sites. This high rating drops to moderate on Thicketwood due to the silty sands and a fewer number of sites.

The Bloodvein River grades from low carrying capacity in the east to high in the west. Deeper lacustrine clays and steep dense shorelines dominate Peisk and Knox Lake resulting in the lowest carrying capacity in the park. This improves to moderate from Murdock to Larus Lake due to a much larger number of sites on shallow silty sands and bare bedrock.

The Simeon Lake area exhibits a moderately low carrying capacity resulting from a higher percentage of shallow, wet clay sites. Conversely, the area immediately to the west, Sabourin and Barclay lakes, have a very high carrying capacity. Sabourin Lake supports a high number of deep, well drained sand beach sites, while

Barclay Lake offers a number of well drained sandy and bedrock jack pine sites. Artery and Mary's Lake also have a large number of sites, but they vary between bare bedrock and shallow well-drained sand.

A detailed recreation resource inventory was conducted for the Indian House Watershed in 2000. This canoe route from Douglas to Indian House lakes through the Anchor Lake proposed park addition is characterized by jack pine forest and exposed bedrock outcrops. However, steep shorelines dominate the area, resulting in a moderately low carrying capacity.

The same pattern appears on the Gammon River as on the Bloodvein River, but for different reasons. Thin, moist till deposits of silt combined with few good camping opportunities from Douglas to Optic Lake limit the carrying capacity of that area to low. The Optic to Glenn Lake section is severely limited by steep bedrock shorelines while Hansen and Rostoul lakes offer a few potential campsites on shallow sands with a jack pine overstory producing a moderate carrying capacity. The Donald Lake area is an anomaly due to a small pocket of sensitive lacustrine clays. Clays are easily eroded and compacted and despite the large number of potential sites, the Donald Lake area supports only a moderately low carrying capacity. Carroll Lake, on the other hand, has the highest capacity of any lake in the park. A very high number of sites occur on well-drained shallow sands and sandy loams with a jack pine and poplar overstory.

The south sector exhibits a high carrying capacity. The exception is around Sydney and Kilburn lakes where the moderate rating reflects a small pocket of thin clay loams and clay sands. These soils grade into well drained shallow sands to the north and west which, combined with the large number of bare bedrock points, produce a high carrying capacity.

In general, the recreational carrying capacity of the Eagle-Snowshoe Conservation Reserve is lower than in the southern portion of the core park as a result of slightly deeper soils, overmature forest, steep shorelines and wetland areas. As the northern third of the Eagle-Snowshoe Conservation Reserve was burned by a large forest fire in 1983, exposed bedrock and regenerating

stands of jack pine dominate this area. High stand density and limited cover make this area largely unsuitable for camping. Some unburnt peninsulas and scattered sand deposits on rolling bedrock provide good camping opportunities in the northern half of Eagle Lake, but multi-age forest with heavy blowdown dominates the western side, resulting in a lower carrying capacity overall. Older spruce and jack pine surround Midway Lake though a number of weedy bays limit its potential. The eastern edge of Chase Lake is dominated by older forest and exposed bedrock; however, the southern shoreline is mainly dense, low-lying mixed wood forest. This trend continues into the west end, which is more suitable for camping but contains some steep, grassy bays. A steep, talus ridge from the tributary of Chase Lake to its northwest corner results in a low recreational carrying capacity overall for the lake. Deeper soils occur along the Bird River system and north to Bee Lake resulting in more lush vegetation but higher risk of soil compaction. Mixed wood forests are common in the unburnt portion of the conservation reserve but wetland habitat such as swamp and marsh limits recreational potential.

The signature site presently receives minimal but growing backcountry use and the majority of campsites and portages are in excellent condition. The only evidence of site deterioration occurs along the sensitive areas of the Gammon and Bloodvein routes where portages and day use areas are frequently used.

The sensitivity of cultural heritage and First Nations' values such as traditional use sites, burial sites, etc. will require special consideration to ensure that their protection is not compromised. First Nations communities and cultural heritage advisors will be consulted to develop appropriate policies.

The capability of an area to sustain wilderness use not only involves biophysical parameters and ecological considerations, but social factors as well. Perceptions of wilderness users are an integral component of an area's carrying capacity, and relate to what determines perceptions of crowding and congestion along canoe routes and at campsites. This includes expectations as to the type of experience sought, and the types of things that can impinge on the subjective experience of

wilderness, for example, aircraft landings, motorboats, large groups, and garbage.

Users of wilderness place a high value on solitude and prefer to have few contacts with other users, relatively isolated campsites, and increasing isolation as distance from the periphery increases (Stankey et al 1971). With increasing global urbanization, the demand for high quality wilderness experiences will increase.

Much of the Woodland Caribou Signature Site has a high social carrying capacity due to the large size of the park, the abundance of sizeable lakes with highly segmented shorelines and the presence of numerous islands, points and sheltered bays. Such landscapes can disperse large numbers of users without substantially detracting from the wilderness qualities of the experience.

The large size of the signature site and the limited development within it present fewer constraints to human activity from terrain/topographic considerations. However, the fragile boreal setting in some locations can be particularly susceptible to the environmental impacts of overuse. Site deterioration will occur, particularly in areas of shallow soils and fragile lichen and moss ground cover, which are subject to compaction.

As visitation increases, there may be congestion and overcrowding in some areas of the signature site, especially at some entry points and on popular canoe routes. This may warrant the need for entry/travel quotas in certain sectors. Visitor dissatisfaction may occur in response to increased encounters between canoeists and commercial fly-in operations. This may serve as a social constraint, which could warrant some temporal and/or spatial separation of canoeists and lodge/outpost visitors.

Camping and visitation restrictions in areas of critical caribou use and other locations of important caribou habitation may be needed to mitigate impacts of disturbance by users. If an outpost camp is in conflict with sensitive caribou habitat, then relocation may be necessary. There will also be restrictions on access to areas/sites with First Nations cultural significance.

## *8.2 Access and Dispersal*

The evaluation of access and visitor dispersal is essential to establishing entry points and determining visitor management strategies. The present pattern of road access concentrates most use in the central and southern portions of the site, the most common used points of entry being Leano Lake, Johnson Lake and Onnie Lake. The northern areas of the site are less frequently visited due to the distances involved. Access to the area by floatplane is increasing, however no destination trend has developed.



## 9.0 Summary – *Your Personal Invitation*

As someone with an interest in the long-term management of the Woodland Caribou Signature Site, you are invited to be involved in the planning process. We hope that the information presented in this document has increased your understanding of the site's resources, users and management issues. We welcome any comments, concerns or suggestions you might have regarding the contents of the document. Please take a few minutes to fill out the attached comment form.

The Ministry of Natural Resources is collecting comments and information regarding the Woodland Caribou Signature Site under the authority of the *Provincial Parks Act* to assist in making decisions and determining further public consultation needs. Comments and opinions will be kept on file for use during the plan review period and may be included in study documentation, which is made available for public review.

In 1994, the MNR finalized its Statement of Environmental Values (SEV) under the *Environmental Bill of Rights* (EBR). The SEV is a document that describes how the purposes of the EBR are to be considered whenever decisions that might significantly affect the environment are made in the Ministry. During the development of the strategy for the Woodland Caribou Signature Site, the Ministry considers its Statement of Environmental Values. The strategy will reflect the direction set out in the SEV and will further the objectives of managing resources on a sustainable basis.

Personal information will be protected in accordance with the *Freedom of Information and Protection of Privacy Act* (1987). However, this information may be used by the Ministry of Natural Resources to seek public input on other resource management surveys and projects.

Please direct all questions and comments to:

**Woodland Caribou Provincial Park**  
Ministry of Natural Resources  
227 Howey Street  
P.O. Box 5003  
Red Lake, Ontario  
P0V 2B0

Or leave your comments at the Red Lake or Kenora District Offices.

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