

Spanish River Valley
Signature Site



Background Information



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1.0 Introduction

The Spanish River Valley Signature Site has been identified as one of nine “featured areas” within the *Ontario’s Living Legacy Land Use Strategy (OLL-LUS)*. The region is noted for its outstanding scenery, recreational waterways and wildlife habitat. Its range of natural and recreational values, in association with significant tourism and recreation potential, merits increased planning and management for this featured area.

The Spanish River Valley Signature Site (**Figure 1**) is a 98,634-hectare area that is comprised of two provincial parks and three enhanced management areas (EMAs). These components are: the Spanish River Provincial Park, Biscotasi Lake Provincial Park and its OLL addition, plus the EMAs: Sinaminda and Kennedy Lake; Acheson Lake and Swann Lake. The signature site is approximately 80 kilometres to the northwest of Sudbury.

The Spanish River flows through a valley of rugged country that remained largely undeveloped until the Canadian Pacific Railway (CPR) was constructed in 1884. Since then a variety of commercial users have shared the land and water resources.

For the past few decades the river with its East and West branches, each bearing its own characteristics, has been recognized for its novice to intermediate white water canoeing opportunities. Over time, the signature site has also become a popular area to camp, hunt and fish, due to its relatively remote setting.

The river has played a vital role as a transportation route, a significant forest resource base, and an important source of hydroelectric power that spurred the development of the forestry and mining industries in the northeast at the turn of the 20th century.

The Spanish River flows through a deep north-south trending valley, which follows a bedrock-controlled fault system. There are extensive gravel deposits throughout the valley, which are evidence of post glacial meltwater drainage. The numerous rapids in the river are a combination of gravel shallows and bedrock outcrops that constrict the river’s flow. Vegetation is typical of the Boreal/Great Lakes — St. Lawrence transitional forest, the former dominating areas north of The Forks (confluence of the East and West branches of the Spanish River) and the latter present south of Pogamasing Lake.

In the upper reaches of the East Branch, there are a number of lakes connected by narrows, while on the West Branch, rapids and small falls are numerous. Below The Forks, the river has a series of more or less straight channels with some swift shallow rapids and bends. The CPR tracks can be seen at The Forks and again intermittently over the 20 kilometres to Pogamasing rail siding, crossing the river above Sheahan rail siding. Spanish Lake is a widening of the river, below, numerous swift rapids and bends lead to The Elbow. A bedrock ledge forms a two-metre drop in the river at the Graveyard Rapids. Below these, the river bends with a few shallow rapids but is generally calming to the top end of Agnew Lake.

The Spanish River is born at Biscotasi Lake, a large reservoir lake at the northern reaches of the signature site. Early in its history the region was noted for its natural resources, holding a unique position as the height of land between the Hudson Bay and Lake Huron commerce and travel watersheds. The townsit

of Biscotasing was once a thriving community, due to the transcontinental rail line passing through the territory. Currently, the community offers opportunities for remote tourism and is the gateway to the Spanish River. The topography is fairly gentle with a definite boreal forest aspect.

What's in a name?

Admiralty surveyor, H.W. Bayfield, has the distinction of naming the river on his map while in the area between 1819 and 1822, and he called it the Spanish (Lampel 1980). It seems highly unusual for the name Spanish to be associated with a river in Northeastern Ontario, the land of the Ojibwa. Legend has it that a French Jesuit Father encountered a Spanish speaking woman with children when traveling the region. Apparently, she had been a captive, the result of the spoils of war while the local tribe was south of the Great Lakes (OMNR 1985). Hence, “Espagnol”, the French term for Spanish. The word lends its name to the town of Espanola and the local native family, Espaniel. This family has roots in the Biscotasi region and an ancestor was “family” to Archie Belaney (Grey Owl) when he trapped the area in the 1910s (Smith 1990). The river was originally named Skiminitigan or Eskimanetigon, by Aboriginal people, and refers to the kingfisher bird that inhabits the river (Dalla Bona 2002).

1.1 A Strategy for the Spanish River Valley Signature Site

The intent of this initiative is to develop a resource management strategy that will provide for the protection of the Spanish River Valley ecosystem and its significant attributes, while allowing for compatible and appropriate tourism, recreation, and resource sector development. The core protected area of the Spanish River Valley Signature Site is comprised of lands and waters regulated as provincial parks. These include Spanish River Provincial Park, the addition to Biscotasi Lake Provincial Park, along with the previously regulated Biscotasi Lake Provincial Park, giving a total of 47,669 hectares of protected area.

Created as a result of *Ontario's Living Legacy*, an enhanced management area (EMA) is a new land use category. Established to provide more detailed land use direction in areas of special features or values, the Spanish River Valley Signature Site encompasses three EMAs — the Sinaminda & Kennedy Lake EMA, the Acheson Lake EMA and the Swann Lake EMA. **Table 1** outlines details of the specific components of the signature site.

Lastly, a forest reserve (F192), involving a number of parcels, associated with pre-existing mining land tenure are included in the Spanish River Valley Signature Site. The forest reserve is presently excluded from the provincial park landbase but are contiguous, meaning that it is the intent that these areas will be added to protected areas as mining claims or leases are retired through normal processes.

Collectively, the described areas are physically connected to each other, share related resources and values, and experience similar patterns of use. Due to this interconnecting nature, and their significance on the local and provincial level, the signature site will be managed in an integrated manner.

A strategy will be developed for the Spanish River Valley Signature Site as the managing document for the entire site, which will include park management plans for the regulated provincial parks and management directions for the EMAs. The strategy will

Table 1: Provincial Parks and EMAs in the Spanish River Valley Signature Site

<i>Title</i>	<i>Classification</i>	<i>Area (ha)</i>	<i>Year Regulated</i>
Biscotasi Lake Provincial Park	Recreation	1,204	1989
Biscotasi Lake Provincial Park Addition (P1572)	Natural Environment	11,079	Oct 2001
Spanish River Provincial Park (P192)	Waterway	35,386	Oct 2001
Sinaminda and Kennedy Lake EMA (E193r)	Recreation	34,461	N/A
Acheson Lake EMA (E204a)	Remote Access	8,627	N/A
Swann Lake EMA (E217a)	Remote Access	7,877	N/A
Total 98,634 ha			

include sufficient information upon which to support sound management decisions within the signature site. It will build on the *Ontario's Living Legacy Land Use Strategy* (1999), the District Land Use Guidelines (1983), the Spanish River Special Area Plan (1990) and the Biscotasi Local Area Land Use Strategy (1992). It will also work in concert with the Spanish River Watershed Water Management Plan (1993) and the Ontario Forest Accord (1999).

1.2 The Components of the Spanish River Valley Signature Site

1.2.1 Spanish River Provincial Park *(Regulated 2001)*

This 33,826-hectare waterway class park (P192) includes the upper portion of the Spanish River from Duke Lake on the East Branch, including the water body known as Eleventh Lake (Invergarry Township), and from the Biscotasi Lake outflow on the West Branch (Lillie Township). Once the branches converge at The Forks, the provincial park includes the main Spanish River channel down to the inlet of Agnew Lake in Dunlop Township. The main channel is approximately 95 kilometres, with the West and East branches as being 40 kilometres and 45 kilometres respectively. The waterway park is approximately 140 linear kilometres in length.

An *Interim Management Statement* (IMS) has been approved for the Spanish River Provincial Park and will guide its direction until a park management plan is completed. As stated in the *Land Use Strategy*, the

Spanish River Special Area Plan (SRSAP) will guide management activities for that portion of the provincial park that applies to the SRSAP including road access and river crossings, until a park management plan is approved.

1.2.2 Biscotasi Lake Provincial Park *(Regulated 1989 & 2001)*

When first created in 1989, this recreation class park, on the western shore of Biscotasi Lake was 1,204 hectares in size, and approximately 5 kilometres north of the community of Biscotasing. As a non-operating park, it has remained undeveloped and is not widely known. Earth and life science documents were completed (Noble 1991) and a cultural assessment was also done in 1991 (Adams & Errington).

Ontario's Living Legacy Land Use Strategy proposed an 11,079-hectare addition to Biscotasi Lake Provincial Park (P1572). It was regulated in October 2001, as a natural environment class park. An *Interim Management Statement* (IMS) has been approved for the revised Biscotasi Lake Provincial Park, superceding the 1999 approved IMS. This document will guide the park's direction until a park management plan is completed. The additional landbase will protect the historical significance of the area, namely areas of Aboriginal prehistory. In a modern history context, the notable conservationist Archie Belaney, or Grey Owl, spent his early years as a trapper and forest ranger in the region. Remote tourism has been the region's focus for more than a decade, and the area known as the Bisco Headwaters (of the Spanish) is currently managed under the *Biscotasi Local Area Land Use Strategy*.

Central Biscotasi Lake, which is the OLL addition, was a part of this Chapleau District Land Use Guideline amendment, and will be considered in this initiative. Access can be gained by boat or by float plane.

1.2.4 Enhanced Management Areas

Three enhanced management areas (EMAs) covering 50,965 hectares are associated with the Spanish River Valley Signature Site. Management of these areas will give careful consideration to their remote nature and resource-based tourism/recreation values. Resource management activities within EMAs will be compatible with protecting the recreational values of the Spanish River Provincial Park. To this end, it may be required to adjust the boundaries of the Acheson Lake and Swann Lake EMAs during this planning exercise, as stated in the *Land Use Strategy*.

Sinaminda and Kennedy Lake EMA (E193r), the largest EMA within the signature site, is blessed with rugged scenic topography. A high quality recreational area — canoeing, boating, fishing, and hunting are popular activities associated with private recreational camps and Crown land camping. A number of commercial outpost camps signify a thriving resource-based tourism industry. Forest management activity is also prominent in the area, along with traditional resource harvest of fur and baitfish. Portions of the EMA are currently managed for remote access/tourism.

Acheson Lake EMA (E204r) is a relatively remote area containing old growth red and white pine. Numerous micro watersheds feed the Spanish River. Forestry, recreational camps, hunting and trapping are the main activities. It harbors late winter moose habitat, and provides an excellent buffer for significant natural features contained in the Spanish River Provincial Park.

Swann Lake EMA (E217a) provides for good quality semi-remote hunting and fishing opportunities due to its relatively roadless nature. Portions of this area are currently managed as “limited access areas” under the *Northshore Forest Management Plan*. An adjustment to the Espanola District Land Use Guidelines (Amendment No. 95-0001) concurs with this land use intent. The amendment states that: “traditional uses

such as hiking, camping, canoeing, hunting, angling, trapping, wildlife viewing, etc, will be encouraged. Timber extraction, mineral exploration, mining, and aggregate extraction activities will be permitted providing that long term, all season or year-round public access is not improved”. The EMA includes an excellent moose population in the east half and stocked trout lakes in the lower west half.

1.3 Planning History

1.3.1 Early Planning

Both the Spanish River and Biscotasi Lake have received special resource management attention in the past, with the release of the *Spanish River Special Area Plan* (1990) and the *Biscotasi Local Area Land Use Strategy* (1992). Both were amendments to the Ministry of Natural Resources’ (MNR) District Land Use Guidelines (1983) of Chapleau, Gogama, Espanola and Sudbury.

Historically, the entire Spanish River has been subject to intense resource use, including transportation, forest extraction, hydroelectric production, and recreation. During the late 1960s the area was identified as a possible wild river park. Though never implemented, the wild river park proposal initiated the focus on recreation and future disposition of Crown land was curtailed. In the late 1970s, resource users were looking at the Spanish River for additional hydroelectric power (International Nickel Company of Canada; INCO) and for proposed forest harvest with associated river crossings (E.B. Eddy Forest Products Ltd.). At the same time, the Parks and Recreational Areas Branch of the MNR evaluated a substantial portion of Ontario’s waterways for provincial park purposes (OMNR 1980). Of all the Ontario rivers evaluated, the East Branch of the Spanish River ranked within the top 30.

Provincially, with growing public concern for responsible Crown land use and water management, in 1978, the MNR began a series of consultations that led to the *Northeast Strategic Land Use Plan* (1982). The Spanish River was identified as a provincial park candidate during the initial stages of this process but was

subsequently dropped as a result of further assessment as documented in the *Task Force Report on Park Systems Planning* (1981). The rationale was based on an established target of one waterway park per Hill's site district that was achieved by the existing Mississagi River Provincial Park. In the same report, Biscotasi Lake was retained as a candidate recreation class park. It moved forward in the system and was regulated as a provincial park in 1989.

The District Land Use Guidelines (DLUG) released in June of 1983 for Espanola, Sudbury, Chapleau and Gogama MNR Districts accorded a portion of the Spanish River with area management status in recognition of its recreational/heritage values and its potential for hydroelectric power generation. Further study was recommended. The Minister delegated the Ontario Provincial Parks Council to explore various management options, including the establishment of a waterway park, and recommend a preferred alternative. In 1984, after public consultation, the council recommended that the upper portion of the Spanish River from both the East and West branches to Agnew Lake become a distinct management unit. This mandated the MNR to prepare a plan to foster integrated resource management amongst the MNR districts and resource users. This was initiated in 1985 and culminated in a *Special Area Plan* released in 1990.

The council also recommended that in concert with INCO and E.B. Eddy, the MNR should take a lead to improve water management. This resulted in the *Spanish River Watershed Water Management Plan* (1993), which is currently under its own review.

1.3.2 Ontario's Living Legacy

The selection of the Spanish River Valley as one of nine signature sites under *Ontario's Living Legacy* (OLL) is based on work carried out during the *Lands for Life* planning process. Three citizens' Round Tables — the Boreal West, the Boreal East and Great Lakes-St. Lawrence; conducted the better part of this task, with public meetings from June 1997 to July 1998. The Spanish River Valley has the unique distinction of falling into the latter two round tables jurisdiction. To assist the round tables in their deliberations, Ontario Parks produced a document (1998) that advanced reasonable solutions for completing Ontario's system of

provincial parks. One recommendation was to establish the Spanish River as a new waterway park "to protect outstanding wilderness, natural, cultural and recreations values."

The *Lands for Life* consultation process was the most ambitious ever launched by the Ontario government, in terms of eliciting wide-spread public involvement through public meetings, community workshops, questionnaires, written submissions and e-mails.

In July 1998, the three round tables' draft recommendations were submitted to the Minister of Natural Resources and subsequently combined into a *Consolidated Recommendations Report*. When this was circulated for public comment in late 1998, over 12,000 responses were received. The provincial government and various other sectors met during the winter of 1999 to develop strategies for enhancing the recommendations of the round tables to better achieve the four objectives set out at the beginning of *Lands for Life*; one being the completion of the provincial parks system. It was at this stage that the Spanish River came to the forefront as a proposed protected area. A number of provincially significant areas identified under gap analysis (Crins 1996) were consolidated into one cohesive whole, under provincial park status.

The Premier announced the approval of the *Ontario's Living Legacy Land Use Strategy* in July 1999. A major part of the *Land Use Strategy* (LUS) was the establishment of 378 new protected areas, including Spanish River and Biscotasi Lake Addition, with enhanced management areas (EMAs) to complement management.

As part of the LUS, nine featured areas in Ontario known as signature sites were proposed. These special areas were identified as having significant natural heritage values, along with tourism and recreational potential, that merits an increased level of planning, management and promotion. The geographically dispersed signature sites support the overall strategic directions of the Ontario government's vision to develop Ontario's natural resources in a sustainable way to meet today's needs and to ensure these resources are available for future generations.

Ontario's Living Legacy Land Use Strategy defines some of the context and direction for decision-making of the core protected areas. For example, existing uses, such as private recreation camps and commercial outpost camps will be recognized. Hunting and fishing continues to be permitted. Commercial timber harvesting and commercial hydroelectric development are prohibited. In addition, mineral exploration, development and operations associated with pre-existing mining land tenure can continue. However, there will be no new mineral exploration and mining on untenured land within the provincial parks (G. Yule pers. comm.).

Public consultation for regulation of the provincial park boundaries was conducted in 2000. As of October 2001, and under the *Provincial Parks Act*, both parks have been regulated in Ontario Statutes, RSO 382/01 and 383/01. Life science, earth science, cultural heritage and recreation inventories currently being completed will contribute to the existing knowledge of the area values and patterns of use. This information will aid the project team in creating of an approved strategy by 2003-04.

1.4 Planning Schedule

The signature site initiative is a key part of *Ontario's Living Legacy*, which represents the largest-ever expansion of the parks and protected areas system in Ontario. The planning process for the Spanish River Valley Signature Site will take place over the next three years. **Table 2** lists significant milestones in the schedule for the planning process.

1.5 Planning Team

Preparation of the Spanish River Valley Signature Site Strategy is the responsibility of a multi-disciplinary team consisting of MNR staff from Ontario Parks and the three participating districts: Sudbury, Timmins and Chapleau. Additional assistance is being sought from the Ministry of Northern Development and Mines (MNDM).

Table 2: Planning Stages for the Spanish River Valley Signature Site

Invitation to Participate-Release of the Terms of Reference	Summer 2002
Review of the Background Information	Autumn 2002
Review of the Issues and Options	Winter 2003
Review of the Preliminary Management Strategy	Spring 2003
Review of the Recommended Management Strategy	Summer 2003
Release of the Approved Management Strategy	Autumn 2003



2.0 Regional Context

2.1 Overview

The Spanish River Valley Signature Site is located approximately 80 kilometres (straight line) northwest of Sudbury. It originates at Biscotasi Lake, part of a chain of lakes that form the headwaters of the Spanish River, just south of the height of land. Flowing southward, the Spanish River empties into the North Channel of Lake Huron at the town of Spanish. Agnew Lake, a man-made reservoir formed in 1920, effectively divides the upper and lower segments of the Spanish River.

The signature site, at 98,634 hectares, includes the upper portion of the Spanish River (both East and West branches) to Agnew Lake and the central portion of Biscotasi Lake. It also contains a substantial land base west of Pogamasing Lake to Sinaminda Lake, south to Kennedy Lake and portions of land near Acheson Lake and Kerr Lake. Hence its northern section is approximately 130 kilometres from Timmins and its southern section is approximately 15 kilometres north of Espanola. **Figure 2** places the signature site in a regional and provincial context.

The Spanish River Valley Signature Site lies within the Ministry of Natural Resources' districts of Sudbury, Timmins and Chapleau. The signature site encompasses all or portions of 36 townships. They include the following: Acheson, Alton, Arden, Athlone, Battersby, Bazett, Bigelow, Biscotasi, Breadner, Cavana, Chalet, Craig, Del Villano, Dennie, Dunlop, Gilbert, Hart, Hollinger, Hotte, Invergarry, Jasper, LaFleche, Lillie, Moncrieff, Morse, Moses, Ouellette, Porter, Rowat, Stralek, Solski, Smuts, Tofflemire, Venturi, Vernon, and Weeks. All the above townships fall in the territorial district of Sudbury except Del Villano and Hotte townships that fall in the territorial district of Sault Ste Marie.

2.2 Population Centres

There are no permanent communities or settlements within the signature site, though the area is heavily utilized by the forestry and mining sectors, and used by camp owners, hunters, anglers and general recreationists.

The users of the area come from a variety of communities that surround the signature site: Sudbury, Timmins, Sault Ste Marie, Espanola, Gogama, Cartier, Biscotasing, Massey and Webbwood, and the First Nation communities of Sagamok, Mattagami and Brunswick House. **Table 3** outlines profiles of these communities. With amalgamation, the new city of Greater Sudbury (est. pop. 165,242; 2001) is the largest urban centre in northeastern Ontario. It is a regional centre for industry, shopping, services, recreation and educational opportunities, and is serviced by both railway and highway to access the signature site. Gogama (est. pop. 475), Cartier (est. pop. 475) and Biscotasing (est. pop. 25) are unorganized communities. Gogama and Cartier have local services boards.

Table 3: Profiles of Selected Communities — 1996 Canada Census

<i>Community</i>	<i>Population 1991</i>	<i>Population 1996</i>	<i>Change in Population (%)</i>	<i>Average Income (\$)</i>
Ontario Totals	10,084,885	10,753,573	+6.6	27,309
Sudbury (Metro)	157,613	160,488	+1.8	26,088
Espanola	5,527	5,454	-1.3	25,252
Timmins	47,461	47,499	+0.1	25,871
Sault Ste Marie	81,476	80,054	-1.7	24,549
Unorganized (including Cartier Biscotasing, Gogama)	7,463	7,147	-4.2	23,141
Chapleau	3,077	2,934	-4.6	28,080
Webbwood	586	563	-4.3	20,614
Massey	1,186	1,171	+1.3	21,742
Sagamok	993*	N/A	-	-
Mattagami	116*	N/A	-	-
Brunswick House	114*	N/A	-	-

**On reserve population.*

The small communities of Biscotasing, Cartier and Webbwood provide the point of access to the area from the north, east and south respectively from the following roads: Sultan Industrial Road, Highway 144 and Highway 17.

2.3 Access / Transportation Routes

The signature site is known for its accessibility with opportunities for remoteness. It is roughly a 1.5 hour drive northwest of Sudbury on Highway 144 and less than a day's drive from the Greater Toronto Area, via Highway 69.

The Canadian Pacific Railway (CPR) has provided rail access to the Spanish River Valley since the mid 1880s. VIA Rail continues to service the area using a self-propelled Rail Diesel Car, referred to as the Budd car. Travelling from Sudbury to White River bisecting the Spanish River near Pogamasing Lake, this two-car service with cargo capacity operates every other day in each direction, east and west, allowing passengers the luxury of drop-off or pick-up anywhere along the line.

Favoured locations to access the Spanish River canoe route along the rail line are Biscotasing, Sinker Creek, The Forks, Sheahan, and Pogamasing. Camp owners, hunters and anglers use the same access points and various other “miles” along the line.

Highway 144, between Sudbury and Timmins provides a number of ways to access the northern portion of the signature site. A short access road, 84 kilometres north of Cartier off of Highway 144, provides access to Duke Lake on the East Branch of the Spanish River. Biscotasi Lake and the West Branch of the Spanish River can be accessed through the small village of Biscotasing via the Sultan Industrial Road (maintained by Domtar Inc.) at the junction of Highway 144 and 560 approximately 38 kilometres south of Gogama. One first travels west, then southeast on the Biscotasing Road for a total of 75 kilometres. An alternative approach to Biscotasing is from Chapleau (approximately 136 kilometres) along Highway 101 and Sultan Industrial Road.

Just west of Cartier, a gravel forest resource road, followed by old tote roads provides seasonal access to The Elbow just above the Graveyard Rapids on the Spanish River. This location is used as access to begin

or end shorter trips along the Spanish River. Commonly used roads and access points are outlined in **Figure 3**.

Travelling west of Sudbury on Highway 17 provides access to the southern portion at Agnew Lake via the Webbwood Road (also known as the West Branch or KVP Road), approximately 10 kilometres north. From this, the Sinaminda Lake area is accessed. The areas around Acheson and Kerr lakes are designated as remote and access will be limited to fulfill remote recreational opportunities.

Private and commercial floatplanes presently access most of the major water bodies within the signature site for angling and other recreational purposes. Currently two commercial operators provide fly-in services into the parks and surrounding areas. Access by floatplane can reduce the necessary vehicle shuttle on this linear canoe route.

2.4 First Nation Communities

The Spanish River Valley Signature Site is located within the Robinson-Huron Treaty Area. The Sagamok Anishinawbek, Mattagami First Nation and Brunswick House First Nation all have traditional use interest in the signature site area. Aboriginal and treaty rights will continue to be respected. The locations of the reserves are shown in **Figure 2**.

The Southeastern Ojibwa (Sagamok Anishinawbek) have occupied the area adjacent to the Spanish River prior to the 1840s. The Robinson-Huron Treaty, signed on September 9, 1850, was signed by Chiefs Namassin and Naoquagobbo on behalf of the Indian Bands near Spanish River and La Cloche and provided for a reserve on the banks of the Spanish River for these bands. The Spanish River reserve No. 5 was first surveyed in 1852-53 (ONAS 1992). The reserve, at 90.8 square kilometres, is south of Massey and approximately 75 kilometres east of Blind River on Highway 17 (Statistics Canada 1996). Indian & Northern Affairs Canada (INAC) has the registered band population at 2,115.

The Mattagami First Nation people are also descendants of the Southeastern Ojibwa. Prior to contact with the Europeans, the Ojibwa led a nomadic existence, relying on hunting, fishing and gathering for their subsistence. Fur trading posts were established in the Mattagami area in 1794 and 1813. The Mattagami people signed the James Bay Treaty of 1905 (Treaty No. 9) on July 7, 1906. The reserve (No. 71) was confirmed by Order-in-Council in February of 1907, and was first surveyed in the summer of 1909. Hydroelectric power development along the Mattagami River began in 1911, which flooded the reserve in the 1920s. In 1952, an additional 200 acres of land were added to the Mattagami reserve for the purpose of constructing a new town site (ONAS 1992). The reserve, at 44.6 square kilometres, is north of Gogama and approximately 70 kilometres south of Timmins (Statistics Canada 1996). Indian & Northern Affairs Canada (INAC) has the registered band population at 410.

The Brunswick House First Nation people have a history similar to the Mattagami First Nation; the band formed due to their association with certain fur trading posts, in this case New Brunswick House posts at Brunswick and Missinaibi lakes. The James Bay Treaty of 1905 (Treaty No. 9) was signed with the Band on July 25, 1906, and a reserve created in February 1907. The establishment of the Chapleau Crown Game Preserve in 1925 surrounded the original reserve, and closed these lands to hunting and trapping. In 1947, the reserve I.R. No. 76A moved to a tract of land in Mountbatten Township. It was again moved closer to Chapleau (now I.R. No. 76B) in 1973 (ONAS 1992). The reserve at 2.55 square kilometres is approximately 6 kilometres east of Chapleau (Statistics Canada 1996). Indian & Northern Affairs Canada (INAC) has the registered band population at 584.

2.5 Land Tenure within the Signature Site

There are a variety of land tenure types within the signature site. Crown land dominates the signature site. Patent land is excluded from the provincial parks, as well as existing mining claims and leases. **Figure 4** outlines current land disposition and development.

2.5.1 Biscotasi Lake

Biscotasi Lake Provincial Park contains three Land Use Permits (LUPs); of which two are private and one is commercial, and three parcels of patented land. There are no trapper's cabins contained in the park. INCO holds a Licence of Occupation (LO #8802; c.1920) for the flooding rights of the Bisco chain of Lakes (Biscotasi, Ramsey, Indian, Bardney, Frechette). They have three control dams located within the park — two at the outlet to the West Branch of the Spanish River and one at the outlet of the Dead River.

2.5.2 Spanish River

Spanish River Provincial Park contains 26 Land Use Permits, 5 trapper's cabins and numerous areas of patented land. All patent properties containing cottages are located on Pogamasing Lake (11) with the exception of one patent property on Kennedy Lake. One tourist establishment operates eight outpost camps authorized by LUPs. Domtar Inc. holds a Licence of Occupation (LO #9112; c.1943) for the flooding rights to Pogamasing Lake. This dam is located on the east side by Dead Horse Bay of Pogamasing Lake. INCO holds a Water Power Lease Agreement No. 1412 to allow for the flooding of Agnew Lake.

The CPR has portions of a right-of-way (unpatented) adjacent to Spanish River Provincial Park. A CPR line bridge crosses the Spanish River above Sheahan rail siding.

In the late 1970s, INCO conducted a feasibility study to determine the opportunity for additional hydroelectric power on the Spanish River. In order to proceed with the study, they requested and were granted a Withdrawal Order (original W11/80 and revised W4/82), under the *Mining Act*, of land in nine townships (48,862 acres; 19,774 hectares); a boundary well beyond the current protected area. The Withdrawal Order prevented any prospecting and staking in the area, and though it did not restrict disposition of Crown land, the Ministry of Natural Resources (MNR) curtailed this activity during its application. The MNR currently seeks to rescind this Withdrawal Order.

Currently, a forest reserve (of seven parcels) adjacent to the park (see Figure 1) signifies active mining claims or leasehold mining patents. Of significance is an active aggregate permit issued in 2000 to Agricultural Mineral Prospectors Inc., to extract carbonatite, an inorganic natural fertilizer. The location is near The Elbow of the Spanish River, in Tofflemire and Venturi townships, adjacent to the south side of the park boundary.

2.5.3 Sinaminda and Kennedy Lake EMA

As an area of high quality recreation, development has been kept to a minimum to allow for an optimum semi-remote recreational experience. Patent land is limited to two parcels, one on Piano Lake and the other on Little Pogamasing Lake. There are relatively few Land Use Permits for recreation camps and outpost camps. One remote tourist operator has two outpost camps catering to an angling clientele. These are located on Alton and Mile lakes. LUPs for recreation camps (8) are located on the following lakes: Piano, Big Squaw, Bagpipe, Squirrel, Dennie, Little Pogamasing and Sinaminda. There is one trap cabin near the west shore of Sinaminda Lake. Domtar Inc. holds a Licence of Occupation (LO #6428; c.1925) for the flooding right to Sinaminda Lake. This dam is located at the south end, with improvements made in 1948. There was a water control dam at Kennedy Lake (LO #6429; c. 1949) but it has since expired (1964) and currently a rock weir maintains the natural water level.

2.5.4 Acheson Lake EMA and Swann Lake EMA

As areas designated for remote access, these two EMAs share similar characteristics. No commercial outpost camps are located in these EMAs, and only two LUP recreation camps are located on Acheson Lake. There is no other development present.

2.6 Existing Land Use and Development

Development is minimal in the signature site and is usually associated with recreational activities. Since the implementation of the *Spanish River Special Area Plan* (1990), Crown land disposition was not considered desirable or appropriate within the special area. Current land use activities include trapping, baitfish

harvesting, hunting, angling, remote commercial tourism, timber harvesting and mineral exploration. At the downstream end of Agnew Lake, there are four substantial hydroelectric generating complexes. In addition some 21 control dams are located throughout the watershed that impacts the signature site. Two bridges built in 1992 and 1993, for forest harvest activities, exist on the West and East branches respectively. The commitment by the forest company was that the East Branch bridge would not be permanent. More recently the company has applied to establish the temporary crossing as a permanent bridge. The MNR will be seeking resolution of this issue during the signature site strategy development. Other existing facilities are limited to numerous campsites, landing areas and launch ramps that have been developed by traditional users.

Most of the current recreational use within the signature site is considered backcountry recreation. Primary users within the recreational and tourism sector include:

- backcountry canoeists;
- private camps and cottages;
- lodges and outpost camps;
- anglers and hunters; and,
- commercial fly-in operators.

Seasonal angling, hunting and destination camping has been the activity of choice in this region for many years. Central Biscotasi Lake is readily accessible by motor boat using the main access point at the Biscotasing townsite. It receives extensive weekend use for overnight camping from the local and regional population. Biscotasi Lake is also the starting point for the West Branch canoe route of the Spanish River. Over time, campsites were established on Biscotasi Lake, scattered amongst the islands and shoreline. Fifteen (15) campsites have been recently documented, providing an array of camping opportunities. Tourism establishments use the lake for day-use angling and accommodation at outpost camps. Winter fishing is limited because of the condition of the ice, a result of the water drawdown of the lake for reservoir purposes.

The river has been used for recreational purposes since the 1930s with increasing popularity as an intermediate whitewater canoe route. Backcountry campsites have developed over time along the river; there are

approximately 40 known sites (Stoneman 2001). Angling and hunting generally occur in association with LUP recreation camps or commercial outpost camps that are located on portions of the river, and the following lakes: Spanish, Duke, First, Expanse, Pogamasing, Kennedy, and Acheson. In addition there are patent lands on Pogamasing and Kennedy lakes, one of which is a tourist lodge. Developments in association with these cottages are boat caches, portages, and winter snowmobile trails to access property and recreation areas.

Duke Lake is a Ministry of Natural Resources-controlled access point, providing entry to the East Branch canoe route of the Spanish River. It contains a parking lot and outdoor privy.

Due to past timber harvesting there are many abandoned logging roads that abut or are contained within both provincial parks. Some of these are currently used for all-terrain-vehicle (ATV) and snowmobile travel. There are no provincially designated TOP (Trans Ontario Provincial) snowmobile trails within the parks, nor authorized ATV trails. Commercial fly-in operators provide a service for canoeists, outpost camp and cottage users to access properties on the larger lakes and canoe route trailhead. There are no officially designated aircraft landings.

Lands adjacent to the protected area remain important to the forest industry, and commitments to existing access for forest harvesting will be maintained. Forestry activities in these adjacent areas will be carried out, with consideration for the values inside the signature site.

To date, traditional long-term use has created some environmental impacts, particularly at island and river campsites, landings and access points. One intent of the strategy is to manage visitor use and ensure that operations are sustainable in an environmentally, socially and economically acceptable manner. In general, physical development within the signature site has tended to be cyclical, and dependent on resource markets. Due to the lack of intense development, remnants of earlier activities and current activities do not detract from the largely unspoiled character of the river and surrounding area.



3.0 Social and Economic Context

The employment base in the region is dependent on the primary resource sector, specifically the forest and mining industry. Traditionally the signature site is a resource hinterland providing employment through forestry, mineral exploration, trapping and resource-based tourism. Transportation, utilities, and supply/services are another economic sector.

Since the Spanish River Valley Signature Site is a newly protected area, with few established facilities, it is difficult to determine its potential impacts and benefits to the surrounding communities. However, it has been an area of Crown land recreation for years, and there is a certain level of remote tourism, local hunting and fishing, and outfitting related to canoeing. A 1991 study of the “Economic Impacts of the Tourism Industry: The Upper and Lower Spanish Forests” (Ministry of Tourism and Recreation), concluded that a significant economic benefit is brought to the region and the province along with valuable environmental and social benefits by the tourism industry in the Spanish Forest. It is expected that the promotion of the signature site will only strengthen this statement.

In general, approximately 60 per cent of recreationists who use the area come from local areas (within 3 hours), with the remainder arriving from elsewhere, including the United States. The majority of the canoeists and a significant number of hunters come from the Greater Toronto Area, whereas anglers are generally local people.

Ontario Parks recently commissioned a three year project entitled “*A Study of the Social and Economic Benefits Associated with the Nine OLL Signature Sites*”. The Spanish River Valley Signature Site is involved as a case study for the project. The consultant is in the process of collecting information. Interviews with community leaders, businesses large and small, associated with the signature site will provide valuable information on the social and economic impact of the signature site. In conjunction, a recreational use survey is in the process of being distributed. Once correlated, the survey results will identify the benefits associated with recreational activities such as canoeing, camping, angling and hunting. This public input will also aid in determining future management options.



4.0 Inventory and Evaluation of Natural Resources

4.1 Climate

Lying at latitudes between 46.4°N and 47.4°N, the majority of the Spanish River Valley Signature Site is situated within the Height of Land climatic region (Chapman & Thomas 1968), and is described as modified continental. It is characterized by long, cold winters and short, warm summers. In winter, cool polar air masses produce dry, clear weather. In summer, a succession of air masses cross the area, with warm, humid air from the south, alternating with cooler, drier air from the north.

The average January temperature is from -17°C to -12°C from north to south, while the average temperature in July is 19°C. Annual precipitation is approximately 872 mm of which 267mm fall as snow. The mean annual number of frost-free days is approximately 172, though there can be from 5-14 days difference in seasons moving from the north to south. The number of degree-days above 5°C, signaling the growing season, is 1,680 and normally starts about April 25 and ends approximately October 25 (Environment Canada 2001).

Initial freeze-up of lakes usually occurs the third week in November, with initial break up the third week in April. The typical water temperature at mid-summer is 20-22°C, and the high (mean temperature above 18°C) summer season lasts for approximately 105 days (Crowe, McKay & Baker 1977).

The river itself tends to modify the local climate giving moister conditions with frequent fog episodes and a cooling effect that is most noticeable in spring and early summer when the water is still warming up. The valley has a funneling effect on the wind flow to the point where prevailing winds are channeled up or down river.

4.2 Bedrock Geology

The Spanish River Valley Signature Site lies within the Abitibi Subprovince of the Superior Province in the Precambrian Canadian Shield, also known as the Abitibi Uplands. The signature site bedrock geology characteristics are outlined in **Figure 5**. The Superior Province is the largest Archean craton in the world; linear, fault-bounded subprovinces characterize it, each with distinct rock types, structures, ages and metamorphic conditions (Thurston 1991). The Abitibi subprovince is a granite-greenstone-gneiss complex that developed some 2.8 and 2.6 billion years ago. Most of the area is underlain by gneiss and granitoid intrusions with localized areas of metavolcanic and metasedimentary rock (Crins 1996).

The signature site occurs within the Ramsey-Algoma granitoid complex, with the Ramsey Gneiss Domain occurring mainly to the north of The Forks and the Algoma Gneiss Domain southward. The Ramsey Gneiss, though containing mainly granodiorite-granite gneiss (metamorphic rocks), also hosts enclaves of supracrustal rocks of volcanic origin, namely the Biscotasing metavolcanic domain. The Algoma Gneiss is underlain by felsic intrusive rocks of Archean age that is occasionally interrupted by small outliers of Huronian metasediments, especially near Geneva Creek. Widespread Nipissing-type diabase intrude the Archean and Huronian sequences, namely between The Knuckle and Agnes River in south Tofflemire Township (Geowest 2001).

The Benny Greenstone Belt outcrops through the Algoma Gneiss Domain between Cliff Rapids and Mogo Creek in Craig Township. A greenstone belt is an elongated area of metavolcanic rock with minor volumes of metasedimentary rocks that form linear to irregular patterns separated by elliptical granitic complexes. Two Assemblages occur, the Bluewater and Geneva. The Bluewater Assemblage overlies the Geneva Assemblage and is composed primarily of iron-rich basalt. The Geneva Assemblage to the south consists mainly of volcanic rocks known as andesite and rhyolite.

Located by The Elbow in Tofflemire Township, the Spanish River Carbonatite Complex is a relatively rare igneous intrusive of magma origin that occurs in a fault zone. The Spanish River pipe deposit was formed under the same high temperature and pressure that produce similar alkaline kimberlite pipes. It is under these extreme conditions that the unique nascent (primary) calcite was formed, along with zones rich in biotite, apatite, and magnetite. This Carbonatite Complex is one of only three deposits in the world promising such quality in the necessary content of natural fertilizer (Agricultural Mineral Prospectors Inc. no date).

The watercourses of the signature site follow a number of well-defined fault lines, which give the waterbodies the characteristic narrow north to south trending shape of Kennedy Lake, Bluewater Lake and the Spanish River.

4.3 Surficial Geology

During the Pleistocene Epoch, all of Ontario was covered by a succession of ice sheets separated by interglacial periods. The last glacial advance, referred to as the Classical Wisconsinan Stage, receded from the region about 11,000 years ago with the ice margins withdrawing in a general north-northeast direction. During the ice retreat, the Spanish River valley and its tributaries, as well as most other North Shore river valleys, were used as conduits and channels to drain away glacial meltwaters. Glacial Lake Ostrom formed along the retreating ice front north of Biscotasi Lake. A thin, discontinuous cover of till was deposited

throughout the area by glacial ice (Barnett 1991). Surficial geology characteristics of the signature site are portrayed in **Figure 6**.

Much of the signature site has a mantle of relatively undifferentiated ground moraine composed of boulders, sand and gravel. In fact 79 per cent of the protected area of the signature site is ground moraine, which was deposited by the retreating glacier. It is often interrupted by surface bedrock exposures. The other main landform is valley train deposit at 19 per cent. This resulted in sand and gravel deposited by a large meltwater river from the retreating glacier (North-South Environmental Inc. 2001).

With so much of the signature site consisting of valley train outwash material, it is speculated that during deglaciation, the Spanish River valley, including the East Branch was ice-dammed several times, causing a system of progressively northward-forming ice-dammed lakes. The “sausage-links” character (small spits on opposing banks constricting the river) of the East Branch lakes support this hypothesis, as does the predominance of fine-grained glaciolacustrine sediments and broad plains of subdued topography within the bedrock walls of the main valley. These represent small glacial ponds or lakes impounded by the bedrock cliffs. When this ice dam broke or disintegrated, the waters ponded in the small lakes were released catastrophically downstream, creating extensive channelization in the downstream sediments, as evident in the river’s entrance to Agnew Lake (Geowest 2001).

Boulder lag deposits are found on lower slopes, chiefly between elevation 300 to 335 metres near Graveyard Rapids and Wakonassin River. It is speculated that these were deposited during runoff of glacial meltwaters through the valley.

Deltas are a significant feature of the Spanish River, located at the confluence of the Agnes, Reynolds and Wakonassin rivers with the Spanish River. Traditionally formed when glacial ponds occupied the Spanish River valley, glacial meltwaters from the melting ice created deltaic deposits where these streams entered the ponds.

The best developed of these, a small perched (or abandoned) delta, occurs at the mouth of Agnes River by Cedar Rapids. Noble and Phillips (1988) had originally identified the Agnes-Spanish River confluence as an ice-contact delta. However, it is now thought that these deposits are more likely fluvial deltas deposited as the ice retreated to an ice margin position just upstream beyond The Elbow. At 380 metres in elevation, this feature represents the highest level of this glacial pond, as neither lake deposits nor other deltaic deposits occur upstream of this location (Kor, per. comm.). The Wakonassin River delta was formed in a similar way as the Agnes, that being the result of ponded meltwaters.

A stream flowing between a valley slope and the margin of glacial ice forms an ice contact delta. The deltaic feature at Reynolds Creek exhibits the characteristics of an ice contact delta: numerous terraces, high scarp faces and kame features along with a major slump feature (adjacent to Spanish River).

Only a small portion of the Path Creek delta feature is captured in the signature site. Described as a perched, kettled, ice-contact delta formed in a high-meltwater situation, it was subsequently incised by meltwaters flowing down the Path Creek valley (Noble 1988).

Other noted features include eskers and kame deposits. Eskers are found along the East Branch of the Spanish River, between Tenth and Duke Lake, and the south end of Expanse Lake. An esker is also located on the west side of the valley where Geneva Creek enters the Spanish River. Kame deposits, which are glaciofluvial deposits, characterized by steep side slopes of 50-70 per cent with stratified sands and gravels are noted near Paddy's Bay of Pogamasing Lake and near Reynolds Creek.

Sand, gravel and cobble beaches occur throughout the signature site. Of note is the presence of a clay beach, and barrier beach on Pogamasing Lake (North-South 2001).

A rare feature in this part of Ontario is an extensive levee, recurved spit, and baymouth bar system associated with the Bannerman Creek delta, where the creek

meets the Spanish River in Moncrieff Township. Characteristic backwater environments have developed between the levee, which rise 1-1.5 metres above the high water mark, and the upland areas to the east (Geowest 2001).

Remarkably, the Spanish River exhibits three different types of river channel morphology, including straight, meandering and braided; the latter two most uncommon on the Canadian Shield (Geowest 2001). For the most part, the river is strongly defined by a bedrock-controlled channel. The major exception to this is The Inch Worm, a strongly meandering segment of the West Branch just north of The Forks. Small braided segments are found south of Wakonassin River. Both are characteristics of an aged river.

During deglaciation, the melting ice front deposited several east-west trending moraines across Northern Ontario. The Cartier I Moraine (Boissonneau 1968) to the north of Biscotasi Lake is one such area of eastward-trending till and outwash. Biscotasi Lake shoreline is composed of pink granitic bedrock outcrops, thick outwash material and lacustrine deposits. Numerous islands of a wide range of sizes are present throughout Biscotasi Lake. Sand beaches are present on the leeward side of most of the islands, with the windward side predominately composed of rock barrens (North-South 2001).

4.4 Topography

The topography of the Spanish River valley is strongly influenced by both bedrock geology and glacial history. Elevations range from 404 metres on Biscotasi Lake to 262 metres on Agnew Lake, a drop of 142 metres over approximately 135 kilometres. From Duke Lake on the Eastern Branch to Expanse Lake, elevations range from 378 metres to 373 metres over a distance of 45 kilometres. Upland elevations reach a height of 477 metres east of Pogamasing Lake.

Surface expression is highly variable. Adjacent to Biscotasi Lake, topography is quite subdued with gently undulating topography dominating with a few bedrock bluffs. The East Branch of the Spanish River

is characterized by strongly to very steeply sloping rock bluffs with occasional low-angle fans. Topography within the main Spanish River (including the West Branch) is quite variable with broad, level fluvial and glaciofluvial terraces and benches being common along with hummocky and conical glaciofluvial deposits. Bedrock bluffs are common where the river is constricted. Eagle Rock, at the mouth of Agnew Lake, is one such example (Geowest 2001).

4.5 Soils

Sand is the most prevalent material class in the signature site occurring as a shallow mantle of sandy or silty sand till over bedrock with local areas of deep sand. Clay is generally located in areas of former glacial lakes, but there are no extensive areas of clay in the signature site. Organic deposits are generally restricted to river and lake fringe areas on flat plains where flooding or impeded drainage conditions occur (North-South 2001).

The characteristic shallow till overburden, a result of glaciation over underlying granitic rocks of Precambrian age, has inherited varying degrees of fertility, from poor to moderate. The soil profile is typically a humo-ferric podzol of the Brunisolic order. Well drained sandy and gravelly soils of glaciofluvial and fluvial origin, relating to the upper levels of glacial Lake Algonquin (terraces), contribute to the pine sites of the signature site (Rowe 1972).

Cumulic Regosols have developed on active floodplain environments where annual flooding deposits alluvium. These soils vary from well to imperfectly drained and are characterized by buried horizons enriched with organic materials (Geowest 2001).

4.6 Watershed

The Spanish River, the largest watershed draining into Lake Huron, is shown in **Figure 7**. The total surface area covered by the Spanish River is 13,500 square kilometres. The Agnes, Wakonassin, Snake, Aux Sables and Vermilion rivers and Bannerman (Moncrieff) Creek are the main tributaries. Of this

area, about 7,670 square kilometres are located upstream of the Agnew Lake outlet (Harris 1989). This is the portion of the watershed that impacts the signature site. The entire Spanish River is 260 kilometres in length, with 13 water-controlled lakes on the system. Although not all of these lakes are contained within the signature site, they do have a profound influence on the hydrology, water quality and flow regime of the lakes and rivers within the signature site. There is neither water quality data nor any current restrictions on the consumption of fish from the portion of the Spanish River within the signature site (J. Brinsmead pers. comm.).

The Spanish River headwater lakes are Biscotasi, Ramsey, Indian, Bardney (Canoe), Frechette, Mozabong, Three Corner and Onaping. Biscotasi Lake is 404 metres above sea level and Agnew lake is 262 metres above sea level, giving a drop of 142 metres over 135 kilometres or just over 1.0 metre per kilometre. In fact, the main height of land separating the Great Lakes and Hudson Bay drainages lies just north of the signature site near Biscotasi Lake (OMNR 1985).

Numerous dams in the watershed control water levels. These were developed to ensure sufficient flows for producing hydroelectric power at four dam locations below Agnew Lake: High Falls, Big Eddy, Nairn Falls and Espanola. Peak flows at High Falls dam occur in May, ranging from 850 to 1275 cubic metres per second (cms). Low flows recorded at High Falls occur in August in the order of 14 to 28 cms. INCO has determined that an average discharge rate of approximately 75 cms from Agnew Lake creates optimal conditions for hydroelectric power production on the system (Harris 1989).

Of significance, are the fluctuating water levels of the signature site, especially on Biscotasi Lake. Water levels on this lake are maintained at 3.5 metres, except during the winter months when the water levels are drawn down to 2 metres. The fluctuating water levels are creating erosion problems on the lake, and combined with recreational use, the terrestrial and wetland shoreline habitat and species richness are impacted (North-South 2001). As is true of many man-made lakes, naturally occurring elemental mercury forms

complexes with the excessive amounts of decaying organic material in Biscotasi Lake to create elevated levels of biologically available mercury. To this end, it is recommended that human consumption of larger sport fish be restricted due to mercury contamination. This is also true for a number of the other reservoir lakes in the system (see the *Guide to Eating Ontario Sport Fish* published biannually by MOE for information about specific lakes).

Management of the watershed is directed by the *Spanish River Watershed Water Management Plan* (1993), written in cooperation between the Ministry of Natural Resources and two companies: INCO Ltd. and Domtar Inc. The plan outlined a set of rule curves (i.e. min/max reservoir levels) that are operational guidelines to complement hydro production and effluent assimilation. In addition, as an aid for the recreational user, INCO Ltd. was requested to provide water level information upon request. The main objective of the plan was to coordinate and meet all user requirements by managing the resource using the following principles:

- flood damage reduction;
- fisheries habitat protection;
- existing hydroelectric power generation;
- low flow augmentation;
- lake level regulation on storage lakes for cottage owners; and,
- flow regulation for recreational use.

Generally, the reservoir lakes in the upper portion of the watershed are drawn down in the fall to increase the available storage for the spring runoff. Once spring arrives, the upper lakes are used to store water, although a large amount of the runoff is allowed to pass downstream to alleviate local flooding problems. Of the six reservoir lakes that comprise the Upper Lakes, only Biscotasi Lake is located within the signature site (the remaining lakes are Frechette, Bardney, Ramsey, Indian and Mozhabong). Discharge from the unregulated tributaries of the Spanish River is sufficient to maintain optimal flow until July, after which water is drawn from the Upper Lakes through the system, as it is needed. Finally, the lakes are drawn down in the fall in preparation for the next year (J. Brinsmead pers. comm.).

Pogamasing, Sinaminda and Onaping lakes are controlled lakes that discharge through their tributaries (Pogamasing Creek, Agnes River and Bannerman Creek respectively) to the main branch of the Spanish River. Only Pogamasing and Sinaminda lakes are within the signature site. With areas of 16 square kilometres and 22 square kilometres respectively, water levels on the lakes are managed for the resident lake trout populations, as well as hydroelectric production (Harris 1989). Similar to Biscotasi Lake, the fluctuating water levels are creating erosion problems on Pogamasing Lake. Neither lake has a record of any significant pollution or contamination problems (J. Brinsmead pers. comm.).

The managed release of water over the summer months actually supplements low summer flows, giving the Spanish River higher than normal summer water levels (Harris 1989). Generally, this benefits summer recreational activities such as canoeing. Conversely, pending the timing of dam open and closings, these structures can seriously affect fish spawning habitat in the head water lakes.

4.7 Vegetative Communities

4.7.1 Forests

The Spanish River Valley Signature Site is uniquely located within both the Boreal and the Great Lakes-St. Lawrence (GLSL) Forest Region (Rowe 1972). The northern portion of the signature site is contained within the Missinaibi-Cabonga Forest Section (B.7). As described by Rowe (1972), the species composition is generally Boreal but contains certain species from the GLSL Forest Region as scattered individuals or as isolated patches. The southern portion of the signature site is contained within the Timagami Forest Section (L.9). Conversely, Rowe (1972) describes this diffuse transitional area as GLSL in character with eastern white pine, along with scattered white birch and white spruce as the main associates. Tolerant hardwoods have a scattered appearance in the area.

Hills' (1969) site regions (now referred to as eco-regions), represent areas wherein there is a specific relationship between climate, landform and vegeta-

tion, and hence areas are ecologically defined. The signature site lies within the ecoregion 4E and ecodistrict 4E-3 (Mississagi Ecodistrict).

The Spanish River Valley Signature Site essentially provides a representative cross-section, north to south, of ecodistrict 4E-3. The northern Boreal Forest component includes stands of black spruce and Jack pine, in lowland bogs and dry uplands, respectively. The Great Lakes-St. Lawrence Forest component is represented by mixed stands containing varying proportion of white pine, red pine and red maple. Sugar maple can occur on warmer sites such as southern hillcrests. There is limited occurrence of several tree species that are at the northern edge of their range, including eastern hemlock, red oak, bur oak and American beech (North-South 2001).

Forests cover approximately 75 per cent of the signature site's provincial parks, and are generally in the range of 50-100 years old. Boreal forest species, mainly white birch, trembling aspen, Jack pine and black spruce comprise 73 per cent of the forested area.

Species with Great Lakes-St. Lawrence affinities mainly sugar maple, white spruce and white pine and red pine, comprise approximately 27 per cent of the forest (North-South 2001). In the *Spanish Forest Management Plan 2000-2020*, the forest composition of 1910, 1952, and 1999 were compared. In 1910, there was an increased proportion of Jack pine, white pine, red pine, cedar and larch compared to today, but the spruce component has remained constant, with the hardwood working groups increasing substantially. In 1952, the level of forest utilization was much lower with limited mechanization and fire suppression. In this comparison, the conifer-working group has decreased from 63 per cent in 1952 to 58 per cent in 2000. Many of the forest stands are of mixed species compositions, the result of intensive logging activity.

The most significant terrestrial vegetation of the signature site's provincial parks is the old-growth pine forests, which currently cover over 2,000 hectares. As mature pine stands continue to age, the overall representation of old-growth pine could reach 8,000 hectares by the year 2020 (E. Morris pers. comm.).

Table 4: Old-Growth Features Described in the Spanish River Valley

<i>Feature Name</i>	<i>Designation</i>	<i>Description</i>
Agnes River Old Pine	Provincially Significant (Crins 1996)	Old pine in association with intolerant hardwoods on valley train (landform unit IVd-3); watershed feeding the Agnes River.
Craig/Tofflemire Old Pine	Provincially Significant (Crins 1996)	Best representation of old white pine in association with other conifers on moderately broken end moraine (landform unit IIa-1).
Spanish River Valley and Old Pine	Provincially Significant (Crins 1996)	Diverse forest types associated with the landform unit IVd-3; vegetation communities dominated by 120+ white pine and/or red pine, corridor function.
Spanish River-Tremblay Lake Forest	Regionally Significant (Crins 1996)	Old-growth (120+ yrs) white pine, other medium aged forest, barren and scattered Jack pine stands on landform unit IVd-3, corridor function.
Eagle Rock/Spanish River Corridor	Regionally Significant (Crins 1996)	High forest diversity and age class diversity on landform units IVd-3; IIa-1 and Ia-4. Diversity of aquatic and wetland habitats.

Old growth has been defined as red and white pine associations of at least 121 years old, and a minimum 30 per cent stand composition (OMNR 1994). The Agnes River Old Pine, Craig/Tofflemire Old Pine, Spanish River Valley and Old Pine were all identified as provincially significant old-growth pine forests by Crins (1996). These and other significant vegetative features are shown in **Figure 8**. Provincially significant biological features contain the best representatives of all landform/vegetation associations known to occur in the site district (Crins 1996). Landform units (also referred to as biophysical units) were developed by Noble in the 1980s as a means of systematically identifying significant areas and are well described in the gap analysis documentation done by Crins (1996). The old growth features of the signature site are outlined in **Table 4**. Despite recent life science inventories by Noble (1991) and North-South Environmental Inc. (2001), old-growth pine communities of the signature site require more field investigation to describe the full range of seasonal and non-vascular plants (E. Morris pers. comm.).

At the turn of the century, white pine was removed from the forests surrounding Biscotasi Lake. Hence, large portions of this forest are 70-90 years of age and old-growth poplar (80+ years) predominates. Compared to old-growth conifer, old-growth aspen is relatively species-rich. One unique feature in the Biscotasi Lake Provincial Park is a forest stand of 100+ year old mixed-white cedar.

4.7.2 Wetlands

North-South Environmental Inc. (2001) discerned that wetlands of the signature site's provincial parks, occupied only 2 per cent of the landscape (open water occupied 20 per cent). However, they contain the largest proportion of the plant species biodiversity, and for this reason the extensive aquatic habitat and large wetland complex of central Biscotasi Lake was identified as provincially significant (Crins 1996). Biscotasi Lake Provincial Park contains over 300 kilometres of shoreline. The open wetlands (fens and cattail marshes) associated with the lake's shore cover over 280 hectares (E. Morris pers. comm.). The largest wetland (109 hectares) in the signature site, composed of fen, marsh, spruce/tamarack bog, is located on Biscotasi

Lake. The wetlands were deemed significant because of their disproportionately high species richness and large size. Being relatively shallow, Biscotasi Lake supports abundant aquatic habitat (North-South 2001).

North-South Environmental Inc. (2001) proposed that three sections of the Spanish River were regionally significant riverside wetlands (**Figure 8**).

- The first area is known as The Inchworm on the West Branch, north of The Forks. The area is a collection of oxbows with a high diversity of wetland and aquatic habitats, including fen, marsh, and low shrub fen, in a relatively small area.
- The second wetland complex is a silver maple swamp, riverside fen and graminoid marsh occurring immediately north of Spanish Lake, in the delta at the mouth of Bannerman Creek. This range of habitat produces a very high diversity of species.
- The third is an area of southern wetland vegetation including hardwood swamps and delta marshes, located at the mouth of the Wakonassin River and Coreaux Creek. High interspersion of marsh, open water and open silver maple swamp vegetation provide high quality nesting habitat.

Wetlands, besides being centers of high biodiversity, provide important ground water recharge and discharge sites. They help to control flooding, protect shorelines from erosion, and improve water quality.

4.7.3 Shores

Two vegetation types related to shores were found exclusively in individual locales. A soil bluff was found only on Biscotasi Lake, and a clay beach was found only on Pogamasing Lake. North-South Environmental Inc. (2001) suggested that the cobble, sands and silt-clay shorelines of the Spanish River and Pogamasing Lake be considered regionally significant. Species richness of the vascular plants was high in these sites, while abundance of non-native species was low, suggesting a pristine habitat.

4.7.4 Rock Barren/Cliff

Plants of the rock barren vegetative community must be capable of tolerating the extremes of environmental conditions. The community is comprised mainly of

lichens and mosses, with vascular plants occurring in crevices and pockets where soil and moisture tend to accumulate. Rock barrens on Biscotasi Lake and the East Branch of the Spanish River tended to be disturbed, as they are used as campsites. These sites had a larger component of non-native species. On sites that were relatively undisturbed, the main plant species were of a dry, open successional nature, such as poverty oat grass, pearly everlasting and fireweed.

4.8 Flora

Field surveys by North-South Environmental Inc. (2001), described 27 different plant communities, with 17 upland types (mainly forest), and 10 wetland types. Total number of species found were 367, of which 58 were moss and lichen species and 309 were vascular plants. Of interest are a few regionally significant species of vascular plants and mosses (listed below). During the fieldwork, 117 species were recorded that were not previously reported in site district 4E-3. Total number of species found in forests, wetlands, rock barren/cliffs and beaches are listed in **Table 5**. Also listed are the numbers of species that are exclusive to each habitat.

A variety of vascular plants occur in the signature site. These plants are typical of the transition forest between the Boreal Forest Region and the Great Lakes-St. Lawrence Forest Region. There are no vascular plants disjunct from extreme northern (arctic) or southern (Carolinian) locations. Some of the more common vascular plants include fireweed, rose pogonia, purple fringed orchid, large-leaved aster, wild sarsaparilla, rose twisted stalk, goldthread, wild lily-of-the-valley, star flower, pink lady slipper and

swamp-candles. Commonly occurring shrubs are mountain maple, chokecherry, beaked hazel, wild prickly rose, cranberry, blueberry, bog-laurel, leather-leaf, sweet gale, bunchberry, wintergreen and raspberry. In the most extreme southern portion of the signature site, a few species characteristic of more southern parts of the province were found: alternate-leaved dogwood, peduncled sedge, barren strawberry and round-leaved hepatica.

A number of rare lichens, vascular and non-vascular plants were observed during fieldwork. The most significant of these, is a rare hair cap moss *Atrichum undulatum*. This record represented a major extension to its range. Other rare plant species included a yellow-eyed grass (*Xyris montana*), water awlwort (*Subularia aquatica*), and two mosses *Aulaconmium androgynum* and *Spangnum quinquefarium*.

Only eight non-native plant species, out of a total of 367 species (2.5 per cent) were documented during fieldwork (North-South 2001). The low level of non-native species invasion indicates the relatively undisturbed nature of the signature site. Non-native plants are associated with the railway, abandoned logging camps and current campsites along the Spanish River.

4.9 Forest Fire History

Fire is a dominant factor in forest history and is a major force behind species associations across the landscape. Wildfire provides many benefits to the forest and wildlife. Forest fires in the Spanish River Valley Signature Site were responsible for the establishment and maintenance of most of the pine stands, and assisted in the continuation of red oak, yellow

Table 5: Plant Species Diversity by Vegetation Type in the Spanish River Valley

<i>Plant Community</i>	<i>Total Number of Species</i>	<i>Number of Species Exclusive to the Habitat</i>	<i>Portion of Species Exclusive to the Habitat</i>
Forest	157	80	51%
Wetland	225	118	52%
Rock Barren/Cliff	54	8	15%
Beach	97	24	25%

birch and other shade tolerant hardwoods within the Great Lakes-St. Lawrence forest region of the signature site. White pine, red pine, hemlock, white spruce and the tolerant hardwoods probably existed at much higher percentages in pre-European times than in the present. Human activity through logging, land clearing and fire suppression has altered the forest development and composition since the late 1800s (Domtar 2000).

The signature site is located within an area that is generally considered a high fire hazard. A severe lightning belt extends through the area from the southwest to northeast. While there have always been fires from natural causes, the incidence of human caused fires increased sharply as the result of the construction of the Canadian Pacific Railway (CPR). Most of the mature Jack pine and white pine stands in the signature site were the result of fire caused by railroad development and lightning fires between 1880 and 1930 (Domtar 2000).

The implementation of an active fire suppression program has greatly diminished the influence of wildfires in the area since the 1950s. Prior to active fire suppression, the annual area burned was large and the average fire cycle was from 50-100 years. Under early suppression techniques in the area, the average fire cycle translates to 286 years. Currently, with very effective suppression, the average fire cycle has approached 2,981 years. This has increased the amount of older forest stands on the landscape with an understory of balsam fir (Domtar 2000).

In 1891 and 1896, history accounts (L&F 1964, 1967) mention two huge forest fires, along the CPR, that ranged from Pogamasing to Biscotasing to Woman River (southeast of Chapleau). The aftermath of these fires resulted in the government establishing patrols on Crown land not held under timber licence (which had been patrolled cooperatively with timber companies since 1885). The Mississagi-Chapleau forest fire of 1948, which burned over 110,000 hectares, only marginally reached the signature site. Most fires that had an influence on the signature site forest stands were smaller fires at the turn of the 20th century to 1920s (L&F1964).

4.10 Wildlife

4.10.1 Mammals

About 50 species of mammalian wildlife have been identified as having their range within the area of the Spanish River Valley Signature Site (North-South 2001). The area supports a diversity of wildlife species that depend on a mosaic of forest habitats, provided by the transitional nature of the two forest regions. The area contains species common to the Boreal Forest and to some extent the Great Lakes-St. Lawrence Forest. Larger mammals include but are not limited to moose, black bear, timber wolf, lynx, coyote, and red fox. Smaller mammals include pine marten, otter, fisher, mink, weasel, raccoon, skunk, snowshoe hare, eastern chipmunk and red squirrel. Common wetland mammals include beaver, and muskrat. Value maps (OMNR 2000) indicate portions of the river south of The Forks as late wintering habitat for moose. Many small lakes in the area are mapped as aquatic feeding habitat for moose.

Most species provide opportunities for recreation (hunting and viewing) and commercial activities (tourist outfitting and trapping). The consumptive harvest of game species including bear, deer, moose and small game, such as hare and grouse, is regulated by the Ministry of Natural Resources. Large game harvest allocation is based on Wildlife Management Units (WMU). The Spanish River Valley Signature Site is within the boundaries of WMU 37, 38 and 39 (**Figure 9**). The moose population and harvest is regularly monitored. The highest population estimate for moose in WMU 38 was recorded in the mid-1980s at 3,910 animals. However, harvest levels in the late 1980s and early 1990s were above sustainable levels, which led to the decline of the current population. Moose managers claim a harvest of 10-12 per cent annually will sustain the population (C. Selinger pers. comm.).

4.10.2 Herptafauna

No studies have been completed to confirm the existence of reptile and amphibian species. However, 25 species are known to have their range within the area, 15 of which are at the northern edge of their range in ecodistrict 4E-3. The four-toed salamander

(*Hemidactylum scutatum*), considered to be rare in Ontario has been reported in the vicinity of the signature site (North-South 2001).

4.10.3 Birds

The Spanish River valley is utilized by a variety of birds both for nesting and during migration. During migration, there is ample stopover habitat for passerines in the signature site. Breeding bird species that have been identified as occurring in the vicinity total approximately 133 (North-South 2001). Most birds nest widely in the habitats afforded in the deciduous, coniferous and mixed forest including forest edge. About a quarter of these species can be considered wetland-dependent, nesting in dense marsh vegetation or in low shrubs or riparian thickets. Birds commonly seen are common loon, gray jay, red breasted nuthatch, black-capped and boreal chickadee, common raven, great blue heron, pileated woodpecker and two species of grouse — ruffed and spruce. Duck species are plentiful and include mallard, wood duck, common goldeneye, common and hooded merganser. Raptors sighted have included bald eagle, osprey, red tailed hawk, and merlin. Owls include the boreal, barred and great grey.

The only species of special concern with identified habitat within the Spanish River Valley Signature Site is the bald eagle (*Haliaeetus leucocephalus*). Bald eagles have been known to nest on Biscotasi (North-South 2001), Pogamasing and Alton (OMNR 2000) lakes. The bald eagle nests in super-canopy trees, usually in white and red pine, or trembling aspen. Bald eagles are regularly sighted on Biscotasi, Pogamasing and Sinaminda lakes (S. Swiatek; S. Kutchaw; R. White pers. comm.).

The peregrine falcon (*Falco peregrinus anatum*) is classified as endangered in Ontario and across Canada. Recovery efforts have shown increasing success with reports of peregrines nesting in Ontario. Their nests are simple scrapes located on sheltered ledges on remote high cliffs facing large, open vistas where the peregrines can scan the skies for birds while hunting. There have been a few peregrine falcon sightings within the signature site that have been reported to the Peregrine Falcon Registry, however, these sightings

are not confirmed. A recent flight over the surrounding terrain suggests marginal habitat for the species (B. Radcliff pers. comm.).

There are known osprey nests in the signature site. Osprey tend to select large, dominant super-canopy trees with dead or dying tops in close proximity to lakes or rivers for nest construction.

There are known heron rookeries in the signature site. Herons nest in colonies normally associated with wetland habitats characterized by the presence of scattered dead or dying trees.

4.11 Fisheries

Ministry of Natural Resources surveyed watercourses are classified as either cold water or warm water systems. Known water systems for the waterbodies in the signature site are shown in **Figure 10**. A cold water fish community is defined by the presence of lake trout, brook trout, splake, and/or rainbow trout. Other possible species include whitefish species, lake herring (cisco), slimy sculpins and mottled sculpins. Common warm water species include walleye (pickerel), northern pike, smallmouth bass, and yellow perch. Sucker species and cyprinids (minnows) are common members of both cold and warm water communities. Known lake trout lakes of the signature site include: Pogamasing, Little Pogamasing, Sinaminda, Kennedy, Squirrel, McGuey, Kerr, Crazy, Acheson, “S”, Bluewater, Piano, Winnie, Dennie, Little Dennie, Bagpipe, Telephone, Big and Little Squaw (DLUG 1983).

Two of the larger lakes in the signature site are Pogamasing (1,587 hectares) and Sinaminda (1,108 hectares). Due to their relative ease of access and level of development (camps), these lakes are popular among anglers. The Pogamasing fishery has been well stocked in the past with lake trout, brook trout, walleye and smallmouth bass; whereas the Sinaminda trout population is natural. However, it has been suggested that the water drawdown by the dam is affecting the lake trout spawning shoals on Sinaminda Lake. Pogamasing Lake, accessed by rail in summer and snowmachine in winter, receives moderately heavy

fishing pressure. There has been a noticeable decline of the fishery over the years, hence a Fall Walleye Index Netting project is scheduled for fall of 2002 (K. Scott pers. comm.).

Additional lakes that have been stocked (mostly with trout species) include Kennedy, Kerr, McGuey, Charles, and “S”.

The Spanish River, though termed a warm water body, is blessed with cold water stream tributaries and associated lakes. This is due to the geologic/topographic shifts of the valley where rugged terrain and limited overburden characterize the landscape providing for excellent drainage and a multitude of clear cold lakes and rivers. Further north, the geography is more undulating with heavy till and outwash deposits providing shallower and more nutrient rich water bodies supporting significant warm water fisheries such as those found in Biscotasi Lake.

There is lake survey information (OMNR 1980) for the “numbered” lakes of Spanish River’s East Branch. Fish species included walleye, lake whitefish, northern pike, burbot, yellow perch and sucker species. Because it is a river system no lakes have been stocked. The lakes, which range in size from 15 to 200 hectares, share similar characteristics and disturbances/impacts from past logging and fishing pressure. Known walleye spawning sites occur on Expanse, Eleventh, Sixth, Ninth and Duke lakes. Other lakes in the signature site that exhibit excellent warm-water walleye and northern pike fishery are Mile, Alton and Gildden lakes.

The fisheries vary in sensitivity throughout the signature site. The Gogama District Fisheries Management Plan (1989) refers to habitat degradation (spawning sites) and exploitation of quality walleye lakes receiving high fishing pressure on the Duke Lake chain (East Branch). Similarly, in the Chapleau District Fisheries Management Plan (1989) the Biscotasi chain of lakes (including Indian and Ramsey) were identified as waterbodies suffering from the reduction of critical fish habitat and with having harvest levels that exceed the biological capability of their fisheries to replenish themselves.

The many-armed Biscotasi Lake is the largest waterbody in the signature site. At a total size of 6,579 hectares, the lake has a highly impacted fishery. Known fish communities include walleye, yellow perch, northern pike, lake whitefish, white sucker, burbot, Iowa darter, blacknose shiner, fathead minnow and *Catostomus* species. The lake has been researched over many years. Lake survey information goes back to 1963, its first creel survey was in 1972, and stocking of walleye occurred as early as 1948, followed by further stocking in 1956 and 1985. In the early 1990s, a series of angler surveys and biological studies on the Biscotasi chain of lakes showed that fishing pressure was affecting the health of the fishery (Draycott 1992). As a result of past studies, a slot size limit regulation was decided on and was implemented in 1994. Data collected from recent (1999 & 2000) Fall Walleye Index Netting surveys indicates low relative abundance and poor recruitment rates. Low numbers of large fish, few old fish, slow growth rates and imbalance in the sex structure of the fishery are attributed to this decline putting the current walleye fishery at risk (D. Ballak pers. comm.).

The Northeast Region of the Ministry of Natural Resources has implemented new limit and size restriction regulations on walleye and northern pike. These new Ontario Fishing Regulations apply in the signature site.



5.0 Inventory and Evaluation of Cultural Resources

5.1 Prehistoric Period

The Spanish River Valley is important both prehistorically and historically, although the archaeological record of human presence is incomplete. Archaeologists have divided the prehistory of Northern Ontario into the following temporal/cultural sequences: Late Palaeo, Shield Archaic, Initial Woodland, and Terminal Woodland. Not all periods are well represented in the Spanish River Valley.

Palaeo-Indian sites (circa 7,000 to 5,000 BC) have been found in Northern Ontario. These sites are associated with relic shorelines of glacial lakes and are characterized by sophisticated chipped stone tools, including lanceolate points for spears and large stone knives. Regional sites are located along the former shore of Lake Huron in the Manitoulin/Killarney area. The earliest known occupation near the signature site is in Venturi Township approximately 7,670 years ago (Hanks 1980). This indicates a possible Late Palaeo connection.

The people of Shield Archaic's (circa 5,000 to 500 BC) culture appear to have descended from the Palaeo-Indian people and were indigenous to the Boreal forest of Ontario's Shield country. Perhaps the most important development of the Archaic culture is the use of native copper, from deposits located around Lake Superior, to make tools and personal ornaments. This established a trading regime between the upper Great Lakes regions and groups to the south, east and west. Archaic sites are known to exist along the Spanish River/Biscotasi Lake area, and are generally associated with elevated glacial lake levels.

Adams & Errington (1991) confirms this penetration of early Shield Archaic people into the headwaters of the Spanish and Mississagi rivers. Significantly, these sites are not quarries but appear to be domestic campsites. The extensive bodies of water appear to have acted as a focal point for regional native settlement.

The Woodland Period is characterized by the introduction of pottery. The Laurel culture of the Initial Woodland Period (circa 500 BC to AD 900) made small, conical jars with distinctive impressed decorations. Seasonal gatherings of these people for trading and social purposes began to occur, resulting in the appearance of larger settlements at prime fishing locations. The La Cloche settlement near the mouth of the Spanish River is one such regional location.

Replacement of the Laurel pottery by the Blackduck and Selkirk pottery styles marks the beginning of the Terminal Woodland Period (AD 900 to 1700), which lasted until the time of European contact. Rock art, known as pictographs, are thought to be associated with this period. There is a known pictograph site within the Spanish River Valley Signature Site.

Archeological work in the area shows the following pattern of occupation. The river was a transit zone, whereby the adjacent lakes such as Pogamasing, Fox, and Sinaminda, were seasonal habitation areas for trapping, hunting and fishing, accessed from the traditional canoe route. In the summer, Aboriginal groups traveled down the river to tribal meeting places on the shores of Lake Huron. The inhabitants of the signature site prior to historic contact were probably the

ancestors of the Algonkian speaking Ojibwa groups (OMNR 1985).

A unique travel corridor

The historical significance of the Spanish River as a transportation route is well known. The Aboriginal peoples used the river for travel and trade, as did the voyageurs and fur traders who followed during the 18th century. The valley was the convenient route for the Canadian Pacific Railway (CPR) for its transcontinental line. The river served as a highway for timber drives until the late 1960s. Today it continues to serve as a travel corridor for canoeists that follow along the path of this past heritage (OMNR 1985).

Sagamok Anishinawbek at the mouth of the Spanish River at Lake Huron, as well as the Mattagami and Brunswick House First Nation on the Mattagami River and Duck Lake (Chapleau) respectively, are all Ojibwa communities that continue to have a presence in the signature site.

5.2 Historic Period

An 1815 reference in the journal of the Fort Mattagami Post refers to the Bishkitising Band of Indians, presumably located in the Biscotasi Lake area. This identifies a group of people that used the headwaters of the Spanish and Mississagi rivers as the focal point of their seasonal food procurement cycle (Adams & Errington 1991). Typically, most 19th century trade centres, were established in the area because of the presence of an existing native community. Biscotasi Post, along with LaCloche Post (on Lake Huron) was no exception.

The Spanish River has local and regional significance in the history of the early fur trade. A Northwest Company post was established on Great La Cloche Island in 1790 but was subsequently moved to east of the Spanish River on the north shore of Lake Huron. It was taken over by the Hudson's Bay Company in 1821. Posts were established in the 1880s on Biscotasi Lake and Pogamasing Lake to service this secondary corridor of the fur trade between James Bay and Lake

Huron, but were closed in the early 1900s with the dwindling of the fur resource.

The origins of Biscotasing

Biscotasing Post was established in the early 1880s just prior to the construction of the CPR line in 1884. Originally known as Biskatasing, this Aboriginal word refers to an "optical illusion". T.C. Rae was the first Chief Trader at the post and the last was Henry Francis Woodsworth. It operated until 1927 when fire completely destroyed the premises (Crichton 1975).

There was a substantial Indian settlement at Biscotasing prior to the construction of the CPR. These Indians traded at Flying Post on the Ground Hog River to the north and Green Lake Post to the south, but when Biscotasing became assessible by railroad, it became the centre of trade (Crichton 1975). An influx of non-native people gravitated to the area, and the community of Biscotasing burgeoned, putting pressure on the trapping trade that led to its eventual collapse.

The CPR was constructed through the valley in 1884. The arrival of rail resulted in a number of communities springing up to service the construction crews and utilizing the timber resource for rail ties. However, all were temporary, and no major European settlement developed in the area, though Biscotasing served as a major rail section stop until the late 1950s. Freight still regularly travels this section, and VIA Rail operates the local Budd car service to supply local communities and recreationalists embarking on canoe trips and seasonal camps.

Originally, the logging interest in the Biscotasi area was for white pine logs, as noted by a mill established by the O'Neill Brothers shortly after the railway was completed. The first decades of the 20th century were brisk for the logging industry. Biscotasing had a population of 250 at this time. Prosperity lasted until the beginning of the First World War when much of the town had been burned by fire in 1913. The Hudson's Bay Post was rebuilt but fell to fire a second time in 1927, which also caused the closure of the mill (Adams & Errington 1991).

Numerous logging camps were based along the Spanish River and railroad as early as 1890, but were moved every few years as the cutting operations removed the timber. The Spanish River was not an ideal river on which to drive logs. It was often shallow, and with its rapids and erratic jogs, made log jams both inevitable and difficult to break. However, the Spanish River drains a very large watershed. Lakes were dammed in the late 19th century to provide additional reserve capacity. Many and varied types of dams were built to store and regulate water on the Spanish River and its tributaries. The Agnes and Wakonassin rivers were more extensively dammed, since their flow was not as strong and as constant as the Spanish River. The river was part of a log drive until the last run in 1967 (Lampel 1980).

The development of Ontario's fire suppression organization began following the disastrous fires of 1911 and 1916 (Matheson and Haileybury respectively), and the lands encompassed by the signature site were patrolled under the Sudbury Inspectorate. To protect the Mississagi Forest Reserve, to the west of the signature site, a chief ranger headquarters was established at Bark Lake in 1904. In 1906, a base was established in Biscotasing, which consisted of a warehouse with a small office at one end. The base evolved into a headquarters in 1917, with the addition of an office, sleeping quarters and kitchen, followed by a workshop and garage in 1949. Numerous patrol cabins were built in the 1920-30s, with the East Spanish River cabin built in 1921. An air base was added to the Biscotasing headquarters in 1925. It closed in 1950, and eventually sold to a tourist operator, M.U. Bates of Metagama, in 1959 (L&F 1964). In 1967, the base became a seasonal operation until 1973 when all operations were transferred to Chapleau.

Road corridors adjacent to the signature site began with Highway 17 (the Trans-Canada) accessing the south end via logging roads. The link between Timmins and Sudbury began as a bush road to Cartier in 1935 and developed into Highway 144 by 1964. Timmins was linked to Chapleau via Highway 101 in 1962, and Biscotasing was connected to the Highway 129 in the late 1950s.

During the early part of this century, Biscotasing was home to one of Canada's most intriguing figures. Grey Owl (Archie Belaney) lived in the Biscotasi region both before and after serving his country in the First World War. He divided his time between trapping during the winter and patrolling as a forest ranger in the Mississagi Forest Reserve during the summer.

5.3 Archeological / Heritage Sites within the Signature Site

As a result of previous studies, most notably the main channel of the Spanish River (Hanks 1980) and Biscotasi Lake (Pollock & Dingee 1974; Adams & Errington 1991), there are a number of identified heritage sites within the signature site. Less is known of the lands covered by the enhanced management areas (EMAs), though there is one registered site in the Sinaminda and Kennedy Lake EMA. Cultural heritage values can be broken into different categories including cultural landscapes, structural remains, archeological remains, and traditional use sites.

The two most notable sites of significance and common knowledge in the signature site are the Ninth Lake pictographs and Eagle Rock (a cliff near the inlet to Agnew Lake); both of cultural significance to the Aboriginal peoples. Other possible traditional use areas are associated with portages connecting major bodies of water, such as Kennedy, Franklin, Sinaminda, and Pogamasing lakes.

Most archeological sites cited by Hanks (1983) are of early Shield Archaic association. He describes the 335 metres contour, as associated with a possible beach of a high stage of glacial Lake Algonquin. The southern half of the signature site would have been the mouth of a long fjord with hundreds of small islands scattered to the south. A precontact (pre-European) site, located on Spanish Lake, just north of the most northerly reach of the 335 metre contour line suggest that Archaic sites may be found on these beach ridges (Dalla Bona 2002).

One precontact site, located near the signature site, excavated by Hanks (1980) and radiocarbon dated to at least 7,670 +/- 120 BP (before present), could potentially be one of the most important archaeological finds in northeastern Ontario. Red ochre and biface tools of graywacke flakes were noted. The presence of red ochre or iron hematite usually indicates religious activities such as burial of the dead, or body painting, which may have taken place at this site (Dalla Bona 2002).

The locals just say Pog

“It may be spelled Pogamasing on your maps but the correct pronunciation is Ubmawasing. The phrase does not translate easily but has to do with wind and water and arriving.” — Casper Solomon, Ojibwa. Another interpretation of this Ojibwa word has its meaning as “where water flows over gravel” (Reid & Grand, 1985).

John McBean, a HBC Chief Factor for Lake Huron, had this lake called “Pingasbcaushing” on his 1827 map of canoe routes between La Cloche and the height of land (Hanks 1980).

Pogamasing Lake has precontact and fur trade era sites. Kingston’s Island is associated (though unproven) with a 1880s Hudson’s Bay Post. From 1929-40, W.B. Plaunt operated a lumbering camp at Pogamasing Lake. When the operation ended, the patriarch purchased the 12-hectare site, turning it into a recreational property for the family, incorporating the original cookhouse/bunkhouse (Cottage Life 2001). Camp 100 at Sheahan, was a tree planting camp operated by KVP Company during the 1920-40s.

A number of esker complexes exist in the Spanish River Valley, notably by Bluewater and Expanse lakes. Eskers are presumed by archaeologist to be associated with native travel ways, as they often provide long corridors of easy travel through the bush by game animals.

There remains evidence of the many logging camps and related infrastructure, such as crib dams, bridges, tote roads from the 1880s to 1960 on the Spanish River. Many are identified in Hanks’ 1983 report *The Archaeology of the Spanish River — INCO Metals Company*.

In that archeological report (Hanks 1983), a sportsman’s deer hunting camp (circa 1930) was identified on the Spanish River just north of Agnew Lake. Lodges developed on Agnew, Fox and Pogamasing lakes, with their clients using the river.

Adams & Errington (1991) in the *Cultural Resources Inventory for Biscotasi Lake Provincial Park* cited 14 archeological sites in the central portion of Biscotasi Lake — a few within the existing park and the rest now contained in the OLL addition. Unfortunately, the damming of Biscotasi Lake has had a large impact on the condition of the archaeological sites, the majority being in poor condition. Of importance on Biscotasi Lake are a number of sites representative of the early and late phase of the Shield Archaic period of occupation.



6.0 Inventory and Evaluation of Recreational Resources

6.1 Canoeing

The Spanish River has a semi-wilderness setting due to its excellent scenery, outstanding natural heritage features, a significant cultural heritage tradition of travel, and has no extensive development except a CPR railway corridor. Tie this in with a novice to intermediate level white water river within the accessible zone of the Greater Toronto Area, and you have one of the more popular river canoe routes in Ontario. It is a favoured route for intermediate-advanced canoeists in the spring, but has appeal to general recreation canoeists during summer and early fall.

The two branches of the Spanish River offer different experiences. The West Branch is more rugged, with rapids and falls whereas the East Branch is a series of narrow lakes joined by swifts. The East Branch accounts for 70 per cent of inquires about the river and the West Branch 30 per cent. As a result of the Canadian Pacific Railway (CPR), and its Budd car service, the river is accessible for shorter trips from Sinker Creek, The Forks, plus Sheahan and Pogamasing rail sidings. A gravel access road allows for access to The Elbow, to terminate a northern trip or begin a southern trip. The

Paddling the Spanish: An exhilarating canoe trip

The popularity of the canoe route can be summed up in the following terms (OMNR 1985):

Accessible — *Located in the central part of the province, it is within a day's drive of large populations. A number of access points via road, rail or plane allows for weekend trips.*

Challenging — *There is a full range of canoeing conditions from flatwater to a healthy current, from swifts to Class III whitewater over a space of 2-10 day trips.*

Near-Wilderness — *Though disturbance of the natural system is evident, the landbase has recovered from early logging, with remnants of old growth white and red pine.*

Safe — *With the exception of Graveyard Rapids and some minor falls on the West Branch, the whitewater sections are forgiving to the less experienced, with portages accompanying most rapids.*

Scenic — *The incised valley system provides a feeling of seclusion and affords the canoeist with a variety of landscapes from steep rock knobs and ridges to wetlands and meandering channels.*

overall length and variety of access allows for two to ten day trips (OMNR 1985).

The drop in elevation of approximately 1.0 metre per kilometre creates ideal conditions for white water canoeing (5.0 m/km is difficult canoeing). Water flow as little as 14 cubic metres per second (cms) is lowest in August, and walking/lining canoes may be necessary in certain sections. Maximum flow of 850 cms in May and possibly in the fall creates the necessity to portage appropriate rapids. In addition, the high summer season (temperatures above 18°C) is 105 days long, suitable temperatures for water contact recreation (Crowe et. al. 1977).

There are a number of local tourist outfitters that cater to the canoeist: PaddleSafe Adventures, Spanish River Outfitters, Sundog Outfitters, White Wolf Wilderness Expeditions, and Wild Women Expeditions. Also, a

few tourism companies based in Southern Ontario offer trips on the Spanish River (J. Martindale pers. comm.).

To reach the West Branch outlet of the Spanish River, it is necessary to canoe Biscotasi Lake. However, there is opportunity for day trip canoeing on this lake in conjunction with accommodation at outpost camps or destination camping on the islands.

The two formal access points — Duke Lake and The Elbow — allow for camping to accommodate canoeists, if necessary, prior to the start of a trip. At one point in time, Duke Lake Access allowed for general Crown land camping for up to 21 consecutive days. Families would camp there on an extended basis for general outdoor recreation and angling. This was canceled in the early 1990s to allow one night's accommodation only (S. Andrews pers. comm.). Currently, The Elbow allows for non-transient Crown land camping, which occurs primarily on weekends.

Biscotasi Lake is also the headwaters of other canoe routes: the Sakatawi and Upper Mississagi River. Two rivers, the Wakonassin and Agnes are routes leading into the Spanish River. There is some lake travel routes possible between Sinaminda, Pogamasing, Little Pogamasing, Dennie, Gilden, Kennedy and Bluewater lakes. The Sakatawi route connects Biscotasi Lake to Horwood Lake, over the height of land. Due to its limited accessibility, poor portage maintenance and several lengthy portages, it is infrequently used. The Mississagi River route connects Biscotasi Lake to Aubrey Falls via the waterway provincial park of the same name. The route is very popular due to the cultural history of the area, reasonable accessibility, fishing and aesthetics. The Wakonassin River route, which runs south from Hotte Township to the Spanish River, has a number of good access points along its route as it parallels the West Branch and Old West Branch Roads. The Agnes River route, which runs from Sinaminda Lake to the Spanish River, also has several access points along its length (Domtar 2000). Currently, there are no regular patrols or maintenance of the above described routes.

Refer to **Figure 3** for location of canoe routes, and points of access, from rail or road.

6.2 Remote Tourism

With the advent of fly-in operations to remote locations for fishing, remote tourism gained momentum. In the 1940s, commercial outpost camps were established on Biscotasi Lake and the Spanish River. More tourist operators led to additional development. A number of lakes in the enhanced management areas (EMAs) are designated remote tourism lakes: Alton, Squirrel, Pogamasing, Little Pogamasing, Piano, Gilden, Mile and “S”. Within the parks, Kennedy, Acheson, Spanish and Franklin were selected as existing or potential tourism lakes (OMNR 1983).

Lodges and campgrounds developed on Agnew, Fox, Pogamasing, Little Pogamasing and Biscotasi lakes, with clients using the Spanish River and the Biscotasi chain of lakes mainly for angling and hunting. On a small scale, house boating, in conjunction with tourist establishments, occurs on Biscotasi Lake. Resource-based tourism establishments that use the resources of the signature site are: Agnew Lake Lodge, Biscotasing Sportsman's Lodge, Blakes's Wilderness Outpost Camps, Butchart's Camps, Fox Lake Lodge, Grey Owl Camps, Lauzon Aviation Co. Ltd., Little Pogamasing Lodge, North Star Outfitters, Northern Trails Outpost Camps, Ritchie's End of Trail Lodge, Shooting Star Camps, and Sudbury Aviation Ltd. (OMNR 2001).

Resource-based tourism has traditionally revolved around the provision of angling and game hunting experiences. Recently, there has been some movement within the industry towards a more ecotourism-adventure experience, with opportunities for wildlife viewing and custom outfitted adventure trips. The Biscotasi chain of lakes and the Spanish River is particularly rich in cultural heritage.

6.3 Other Recreational Uses

The development of highways, discretionary income and leisure time brought an increasing number of hunters, anglers, canoeists and tourists to the Spanish River area in the 1950s.

Crown land camping had been a popular activity at Duke Lake and The Elbow (see above), though this has diminished. Weekend camping/angling is popular on Biscotasi Lake, and to a limited extent on Pogamasing Lake. Activity specific camping (i.e. hunting) occurs on portions of the river but is limited due to accessibility. However, in regions of the signature site that are road accessible, semi-permanent hunt camps are occupied annually. Crown land camping occurs in numerous locations in the EMAs where there are access points to lakes, namely Sinaminda but also Agnes River (S. Andrews; D. Lefebvre; B. White pers. comm.).

During the mid 1980s, a small whitewater rafting business operated on the Spanish River between The Elbow and Cedar Rapids, capitalizing on the whitewater at the Graveyard Rapids. The business closed after a few years of operation (OMNR 1985).

The Spanish River Valley Signature Site is an area rich in sport fishing opportunities. Despite its close proximity to a major urban centre, the signature site still holds a number of healthy fish populations, and this can be attributed to its limited access. The Spanish River contains healthy populations of both warm and cold water species dominated by walleye, northern pike and, to a limited extent, smallmouth bass. Trophy brook trout do reside in the deeper cold water sections of the river offering anglers excellent experiences. Brook trout angling opportunities are known in Charles and “S” lakes, plus Path, Nitro and Geneva creeks (K. Scott pers. comm.).

Heavy fishing pressure occurs on some of the lakes (predominately Biscotasi), with Bluewater being one of the most common for winter anglers. Fly-in fishing occurs on lakes with outpost camps during the open water fishing season. Generally, the remote access limits the pressures of winter ice fishing on these lakes (D. Ballak; K. Scott pers. comm.).

Hunting, primarily for moose, continues to be an important recreational activity throughout the signature site. The amount of hunting pressure an area receives depends on the ease of access. The EMAs within the signature site can contribute to sustaining the local moose population by restricting access. In

doing so, it is hoped that the healthy moose population in the EMAs will expand into more accessible areas in order to maintain and enhance the hunting opportunities (T. Lehman pers. comm.). The majority of the Land Use Permit (LUP) recreation camps in the signature site are used primarily as hunt camps. The vast majority of private recreation camp holdings were authorized during the 1950s-70s.

Motorboating is popular on most, if not all the major lakes in the signature site, notably: Biscotasi, Pogamasing, Little Pogamasing, Kennedy, Piano, Alton, Mile, Dennie, Squirrel, Sinaminda, and Acheson. A number of these lakes are designated for remote tourism, and motor boats have been cached for clients or to access remote LUPs.

Sections of the Spanish River are not suitable for motorboats due to the rapids, shallow sections, sand bars and other obstructions. On the calmer sections, boats are used mainly for angling or accessing recreational camps or commercial outpost camps. Due to limited access (road, trail, rail), boat caches are numerous. In general, the use of motorboats on the Spanish River is not in conflict with the canoeing activity (OMNR 1985).

There are no designated hiking trails established within the signature site. The valley complex is comparatively narrow with frequent obstacles such as rock outcrops and wetlands, and as such does not provide good opportunities for recreational hiking. However, some old logging tote roads are utilized by foot, but more likely by all-terrain-vehicles (ATVs), to access the river and lakes. Recently, some tourist outfitters, interested in diversifying, have expressed an interest in trail development.

Winter trails and portages are normally used by trappers and property owners who snowmobile in to access their trapline and/or property. Good snow for winter sports exists from December to early April, and the lakes provide for excellent ice fishing (D. Lefebvre; B. White pers. comm.). However, the Spanish River freezes over poorly and is subject to weak and unsafe ice conditions. Similar conditions exist on Biscotasi Lake due to the extreme water level changes in the winter caused by the annual water management regime of the lake (D. Ballak pers. comm.).



7.0 Inventory and Evaluation of Commercial Resources

7.1 Forest Resource Use

The forest industry has had a major presence in the valley since the 1880s with the construction of the CPR, as it made accessible for the first time the extensive forests of this region. Much of the area has been subjected to intense logging activity over the past 50 - 100 years. Initially production was for the supply of construction material needed by the railways and for white and red pine square or waney timbers headed to mills in Michigan and later to mills all along Georgian Bay. By the turn of the 20th century, square timber operation was in the decline and there was a gradual increase for other products such as pulpwood and mining timbers (Thorpe undated). One of the oldest companies was The Spanish River Lumber Co., who gained a charter in 1882 to take out saw logs for the manufacture of lumber, lathe and other wood products. They erected a mill on Aird Island out in Georgian Bay, six kilometres from the mouth of the Spanish River. The peak of their production occurred from the 1914 to 1924.

Big wood or what? A definition for waney timber

No small timber in the Spanish Forest. Huge white pine logs, in excess of 20 feet, but more frequently 40+ feet were harvested in the winter. Waney timbers were the prime sections of the tree bole squared off to remove the bark. This form of timber allowed for the greatest flexibility in processing the final products including masts. The timbers were moved by sled to rivers and driven downstreams to central booms. There are accounts of these large timbers being formed into large rafts and floated to mills along the Great Lakes, some as far away as Sarnia and the Michigan shoreline (T. Lehman pers. comm.).

Logging from about 1880 to the depression era (1929-30) depleted a large volume of the local white and red pine forests. For example, during 1910-1924 Graves Bigwood and Co., a large American lumber company, harvested 963,000,000 (board) feet of white and red pine sawlogs from Vernon Township alone. Timber harvesting supplied 12 large sawmills, all operating within a radius of 50 miles of the mouth of the Spanish River (Thorpe undated).

In 1905, Booth and Shannon, later known as Pratt and Shanacy, commenced operations in the Biscotasing - Woman River area, building a manufacturing mill at Biscotasing. Between 1905 and 1922 approximately 44,000,000 (board) feet of red and white pine logs were produced by this operation.

Many workers were required to work the bush operations. In the early 1910s, it was not unusual to see 2,000 loggers each season at both Webbwood and Massey, and 1,200 loggers at Nairn Centre. Additional workforce was needed for the river drive, sorting logs at the booms, towing rafts, as well as for the mills themselves (Thorpe undated).

Following the construction of the groundwood mill in Espanola, pulpwood operations commenced. Between 1901 and 1930, the Spanish River Pulp and Paper Mills Inc. produced over a million cords of spruce and

balsam pulpwood, and over a million axe-made Jack pine railway ties from their concession area. In 1929, the town of Espanola had a population of 1,600, the majority working at the mill producing 100,000 tons of newsprint annually (Thorpe undated). The industry fell on hard times during the depression and the mill ceased operations in 1930. During the years from 1940-43 of the Second World War, Espanola became one of the major German prisoner camps in Canada, with many of the neighboring lumber camps used as internment camps.

Large timber holdings in the vicinity of Pogamasing Lake were known as the “The Old Charlton Limits.” Originally operated by J.T. Charlton Co., 15.5 million (board) feet of white and red pine were cut off the limits from 1903-08. Cleveland and Sarnia Co. acquired the limits and operated in the area from 1920-25, floating spruce logs and white pine waney timber down the Spanish River to Georgian Bay and then rafted to Sarnia. In 1929, W.B. Plaunt of Sudbury acquired these limits and operated a mill at Sheahan CPR station (then known as Wye), which terminated in 1940 (L&F 1964).

The early technology of driving logs necessitated augmenting low flows on the main branch of the Spanish River. Storage structures were developed in the head-water areas in the late 1880s. The Sable and Spanish Boom and Slide Co. and the Upper Spanish River Improvement Co. controlled these structures and held the rights to the river log drive. At the turn of the century, the mining industry created a huge demand for hydroelectric power, and with the building of High Falls generating station, INCO assumed control of the dams along the Spanish River. When the Espanola mill was constructed, there was additional need for hydroelectric power, which led to the development of the Big Eddy dam. By the 1920s, all river drives on the Spanish River depended directly on the cooperation of INCO, which severely impacted forestry activities until the development of mechanized logging and the hauling of timber by rail or trucks.

In 1945, the Kalamazo Vegetable Parchment (KVP) Company of Michigan reopened the Espanola mill, renovating it as a Kraft mill and the need for Jack pine

pulp multiplied. To supply the mill, KVP acquired the Spanish River, Vermilion River and Onaping River Concessions. By 1947, 19 camps employing 1,200 men operated along the Spanish River, using the river as a means of transporting the logs to mill (Domtar 2000). In 1950, the mill required 200,000 cords of pulpwood annually and the mill supported a community of 3,000.

Changes in logging technology and increased road construction resulted in the demise of the river log drive in 1967. Today, mainly trucks transport wood to the mills. In the early years, many logging camps dotted the river, then in the 1950-60s, there were large live-in camps. Now no permanent work camps exist.

The Spanish River Valley Signature Site is contained within two Sustainable Forest Licences (SFLs). Firstly, Domtar Inc. is the licence holder of the Spanish Forest Management Unit, an amalgamation of the Upper and Lower Spanish Forest, formerly held by E.B. Eddy Forest Products Ltd. This forest surrounds the majority of the signature site.

The 1.2 million hectare Spanish Forest was initially licensed under a Timber Concession Agreement between the Minister of Lands and Forests and the Kalamazo Vegetable Parchment (KVP) Company signed in 1944. KVP eventually sold the mill to The Brown Corp. in 1966. In 1969, George Weston Ltd. purchased all Canadian operations of Brown Corp. and operated the facility under the name of E.B. Eddy Forest Products Ltd. until Domtar Inc. purchased the facility in 1998. Domtar Inc. mills in Espanola (pulp), Nairn Centre (Spruce-Pine-Fir lumber), Timmins (SPF lumber), Chapleau (SPF lumber) and Sault Ste. Marie (hardwood veneer) are the main recipients of wood from this unit. To a lesser extent, mills in Cochrane, Englehart, Thessalon and Ostrum also receive wood (Domtar 2000).

In 1980, E.B. Eddy had the distinction of being first signatories to Forest Management Agreements (FMAs), one for the Lower Spanish Forest (#500500) and the Upper Spanish Forest (#500400). FMAs transferred responsibility for forest management and silviculture to the forest industry. It was at this time that two river crossings, both in Cavana Township

where conceived as necessary for future timber harvest. In 1984, the Ontario Provincial Parks Council, which recommended that a resource plan be written to resolve management issues involving the Spanish River area, approved the bridges in principle. The planning process became the public forum to determine the location of the two bridges. With the approval of the *Spanish River Special Area Plan* in 1990, timber harvest was deferred until approval of the *Class EA for Timber Management* (which occurred in 1994) and no forest management would occur until March 31, 1995.

Secondly, Northshore Forest Inc. is the licence holder of the Northshore Forest Management Unit, situated in the lower south portion of the signature site, namely the townships of Weeks, Bigelow, Vernon, Dunlop, and Porter. Northshore Forest is an amalgamation of a large portion of the former Mississagi Management Unit and the Spanish Forest Crown Unit. The company consists of four shareholders, being: Domtar Inc., Midway Lumber Mills Ltd., St. Mary's Paper Ltd., and North Shore Independent Forestry Association Inc. (Domtar 2000a).

There are 31 independent licencees that carry out harvesting operations on the unit through Overlapping Forest Resource Licences granted by the Crown. Mills that receive wood from this unit are located in Espanola, Nairn Centre, Sault Ste. Marie, Thessalon and Blind River.

As a large portion of the Northshore Forest contains forest cover with a red and white pine component, objectives for old-growth conservation has been developed within the context provided by *A Conservation Strategy for Old Growth Red and White Pine Forest Ecosystems for Ontario* (1994). One of the current objectives is to increase the proportion of old growth in the unit from the current 7.9 per cent level to 17.1 per cent by 2020.

During the *Lands for Life* process, both Domtar Inc. and Northshore Forest Inc. were preparing long-term forest management plans (FMPs). In anticipation of future protected areas, high potential areas were removed from the modeling landbase before Strategic

Forest Management Model calculations were done. Similarly, the enhanced management areas (EMAs) were considered in terms of access location and access restrictions. The policy intents of *Ontario's Living Legacy Land Use Strategy* (OLL-LUS) have been incorporated in the current 2000-2020 FMPs, though some adjustments may be necessary based on the signature site strategy outcome.

Within the current FMPs, harvest allocations and renewal operations are occurring adjacent to the protected areas and within the EMAs. No forest harvest will occur in the core protected areas, and adjacent forest management will be conducted in a manner that will assist in protection of the values of the signature site's provincial parks (OMNR 1999). Under the current Spanish FMP, the Spanish River is an area of concern (AOC) with conditions of no access roads and harvest timing restrictions within 400 metres of the water's edge. Past timber harvest depletions (1985-1999) have concentrated in the townships of Bigelow and Vernon (Northshore Forest) and for Domtar, the townships of Smuts, Battersby, Athlone, Breadner, Cavana, Chalet, Craig, Stralak, Venturi, Hart and Moncrieff (P. Leale; T. Lehman per. comm.).

7.2 Fisheries Resource Use

The District Fisheries Management Plans were prepared to provide specific direction on how the fisheries resource is to be managed. The Spanish River Valley is unique in that it contains a large portion of known lake trout lakes. Numerous inland lakes, rivers and streams support brook trout and rainbow trout populations. The Spanish River and other warm water systems contain northern pike, walleye, smallmouth bass, lake whitefish and yellow perch.

The abundance and variety of aquatic habitats present support a diversity of fish species and community types that provide recreational opportunities, including remote and drive-in angling. Although there is no commercial fishery, commercial opportunities in terms of tourism outfitting and baitfish harvesting occur.

7.3 Mineral Resource Use

Although there is intensive mining development only 100 kilometres to the east in the Sudbury Basin, the Spanish River Valley has no historical significance and little local significance from a mineral development perspective. There is some high mineral potential in the northern part of the Biscotasi Lake basin, and there has been a long history of mineral exploration activity in Stralak, Craig and Tofflemire townships. This exploration led to the discovery of the Spanish River Carbonatite Complex (G. Yule pers. comm.).

The sand and gravel outwash units found in the major river valleys, such as the Spanish River, have good aggregate potential. Access roads are quite easily constructed within the blanket sand (aeolian) deposits, but the potential for erosion is high once the vegetation has been disturbed (Domtar 2000).

There is an active aggregate permit on mining leases to quarry a carbonatite volcanic pipe, an inorganic fertilizer, near The Elbow on the Spanish River (Tofflemire and Venturi townships). Agricultural Mineral Prospectors Inc. acquired the property in 1992 and operates the surface deposit. Carbonatites are relatively rare igneous intrusives of magma origin, and hence the calcium carbonate contained is exceptionally pure (AMP Inc. no date). The complex contains calcite (agricultural lime), apatite (rock phosphate), biotite (parent greensand), vermiculite (clay mineral) and other trace elements. It contains no radioactive, deleterious or toxic elements.

Just what is carbonatite? A natural organic fertilizer!

Also known as igneous limestone, carbonatite, is a blend of minerals, which are commonly used by commercial organic farmers as a natural fertilizer and soil amendment. The Spanish River Carbonatite (SRC) is directly mined from a volcanic deposit. It is the most reactive calcium carbonate available, readily dissolving under atmospheric conditions. This characteristic makes it an excellent buffer to acid rain, and makes nitrogen and sulfur available as a plant nutrient (AMP Inc. no date).

7.4 Water Resource Use

The water resources of the Spanish River have a long and often contentious past due to the needs of multiple user groups. The Spanish River has been a managed watercourse for over 100 years. Water control structures were put in place in the Biscotasi lake region as early as the 1880s to assist in the log drive. The first reservoirs were used to store the logs as they were cut, and the retained water would be released in the spring to assist in flushing the logs downstream (J. Brinsmead pers. comm.).

The mining history of the region began in earnest following 1883 when copper was discovered near the present day site of Sudbury, during the construction of the Canadian Pacific Railway (CPR). The explosion in mining activity at Sudbury required a large amount of hydroelectric power to extract, refine and ship the ore, and local companies looked to the region's waterways for cheap sources of electricity.

INCO has been involved in hydroelectric production on the Spanish River since their first project, High Falls dam, began in 1904. In subsequent years, their subsidiary the Huronian Power Company built Nairn Falls dam (1916) and Big Eddy dam (1920) on the Spanish River and Lorne Falls dam on the Vermilion River. Big Eddy dam, which is 50 metres in height and the highest dam in Canada at the time, raised the water level of the river by 30 metres. It created a reservoir 40-kilometres long, which is now known as Agnew Lake.

Important water control structures within the signature site are dams on Biscotasi, Pogamasing and Sinaminda lakes. Biscotasi has the largest watershed of these lakes at 560 square kilometres and water is discharged downstream from three dams, known as Bisco dams #1, #2 and #3, which were originally constructed in 1887. Bisco #1 was reconstructed in 1917 and renovated extensively in 1957 and 1959. The other two Bisco dams were reconstructed in 1936. Built in 1925, the Pogamasing dam controls a 225 square kilometres watershed, which flows east into the Spanish River. Domtar Inc. controls the lake's level for their hydroelectric operations at Espanola. The watershed of

Sinaminda Lake encompasses 190 square kilometres. A single dam, located at the south end of the lake, controls the flow into the Agnes River. Controlled by Domtar Inc. and originally constructed in 1916, the dam was replaced in 1948 with a wood crib structure.

By 1920s, hydroelectric production came into direct conflict with the river log drive on the Spanish River. INCO had gained control of the majority of the dams originally owned by the lumber companies, converting operational priorities from the previous log driving interests to headwater flow control (OMNR 1985).

Log driving on the river became less important from the 1940s to the 1960s as more economical methods of transporting logs to market developed. Later, issues between the forestry and mining sectors were renewed with forest industry requiring water for pollution abatement (Harris 1989).

Based on INCO's production levels in the early 1970s and escalating energy costs through the purchase of power from Ontario Hydro, the company launched a feasibility study to develop additional power facilities. Lands in nine townships between Spanish and Agnew lakes were withdrawn from prospecting, staking, sale or lease during the study. The resulting report recommended two sites for possible development. However, a change in the economic picture of the early 1980s, combined with increased energy efficiency at the plants, resulted in INCO dropping its plans to pursue the power proposals (Harris 1989).

The Sudbury District Land Use Guidelines (DLUG 1983) also identified the Spanish River as a potentially valuable source of hydroelectric power. It stated that future decisions on the river's use should not preclude the development of its energy potential when it becomes desirable economically. However, a new user group — the recreational canoeist and angler — began to demand additional consideration on the river's use. To preserve recreational opportunities and protect the natural environment of the watershed, a moratorium on new hydroelectric facilities came into being with the *Spanish River Special Area Plan* (1990). With the regulation of the Spanish River Provincial Park in 2001, no additional commercial hydroelectric power will be developed.

7.5 Resource Harvesting Use

Trapping is a significant activity within the signature site. Twenty-five traplines of varying size with six trap cabins are associated with the signature site (**Figure 9**). The primary species of economic importance are beaver and marten, though additional furbearers such as mink, otter, muskrat, fisher and lynx are trapped. Occasionally red fox, raccoon, red squirrel, weasel, coyote and timber wolf are harvested. Individual quotas are set by trapline area for beaver, marten, fisher and lynx.

Baitfish harvesting, like trapping has a long tradition, and most townships in the signature site are regularly allocated for this activity. Baitfish harvesting services the popular angling industry. Of the 36 townships associated with the signature site, 23 are currently allocated, with 14 licensed harvesters.

Similarly, bear management areas (BMAs) have been established to monitor and regulate the bear hunt in Ontario by non-residents. Allocated to licensed tourist establishments, BMAs are active in the signature site area, with 20 authorized blocks of varying sizes. There are areas within the signature site where commercial bear hunting is not allowed.



8.0 Market Analysis of the Signature Site

Tourism has become a key component in the Ontario economy. The tourism impacts in Ontario are substantial. Information published by the Government indicates that in 1999 overall visitor expenditures in Ontario reached \$13.1 billion and visitor spending provided employment for 346,000 people (T. Manning pers. comm.). Even more spectacular is the trend to overnight outdoor activity. Of Ontario's 39.8 million overnight visitors in 1999, 40 per cent participated in outdoor activities. Outdoor enthusiasts not only stayed longer (average four nights) they also spent more. They stayed in an array of accommodations, from commercial cabins, lodges, and bed and breakfasts to private cottages and campsites. American and international visitors cited shopping and sightseeing as additional activities.

Resource-based activities account for 50 per cent of the total overnight visitors to Northern Ontario. Popular activities include hunting, and, angling, visiting national or provincial parks, camping and water-based sports, and, in the winter, snow-based sports. In economic terms, anglers and hunters spend an average \$206 per person visit, followed by park users at \$177, and visitors engaged in winter sports at \$109 (T. Manning pers. comm.).

The Spanish River Valley Signature Site currently caters to a mixed tourism market, which include back-country canoeists and remote outpost guests. The main attractions of the signature site are river canoeing, high quality fishing, wildlife viewing and opportunities for a wilderness experience in a relatively remote setting.

The Spanish River canoe route is described in the *Canoe Routes of Ontario* (OMNR 1982), and in other government publications (OMNR Sudbury & Gogama). Private industry publications such as Chrismar's Adventure Map Series: The Spanish River (1999, 2001) and descriptions in numerous publications: *Canoeing Ontario's Rivers* (Reid and Foster, 1985), *Up a Creek: a paddler's guide to Ontario* (Callan 1996) provide additional promotion. There are many links on the Internet to the Spanish River, offering descriptions of the canoe routes and listing the services of tourist outfitters who provide tripping opportunities.

In northeastern Ontario, the Spanish River is the fastest river available for white water canoeing with a drop rate of 1.0m/km. Compare this to the Mississagi River at 0.1 m/km, the Mattawa River at 0.3 m/km and the French River at 0.06 m/km (OMNR 1983). Its appeal as a moving river in an incredible setting of towering white pine and valley cliffs, makes it very marketable.

In addition, the Biscotasi/Sinaminda/Pogamasing/Kennedy lake region has endless canoeing potential, especially in the context of cross-country canoe tripping. Known as trips of discovery, these long (more than 30 days) trips emphasize themes of watersheds, ancient forests and communities, where the canoe is the vehicle and the land and water is the road (Henderson & Wheeler 1994). Similarly, the McGuffins (1997) journeyed a broad band of historical waterways, which included the Spanish River watershed from the Ottawa River to Lake Superior, in support of the White Pine Ancient Forest.

There are no up-to-date surveys on the pattern of use on the river, but the *Spanish River Special Area Plan* (1985) estimated approximately 250-300 groups per year. Current use would suggest a much larger figure. During the 2001 season, Spanish River Outfitters had approximately 250 groups (V. Balazs pers. comm.). Usual party size ranges from four to eight and average

Getting there is half the fun — VIA Rail Budd Car

A flag-stop train, the Budd car has been riding the rails from Sudbury to White River for years, passing right through the heart of the Spanish River valley. The Budd car is self-contained; the engine is part of the car, and named for the Budd Rail Car Co. who made the day-liners in the late 1950s. People can get on and off the line at any point, hence used by all sorts of people: canoeists, camp owners, outfitters, hunters, and anglers. For some, the service is essential, as it is the only means of getting supplies or reaching their camps. The two car train: one passenger, one baggage, can accommodate canoes, snowmachines, bagged moose or other cargo. The ride is full of surprises, with the atmosphere and scenery unbeatable (CBC Radio 2001).

length of stay is four nights, though this can vary from one to nine nights. Organized recreational and educational groups may have larger group sizes, from 15-20. The peak season is from June to August with more experienced canoeists using the shoulder season of May and September when water levels are high (Ontario Parks 2001).

During the 1980s the level of use was considered moderate; human contact was considered a certainty over the course of a trip, though not necessarily daily. There was no evidence of competition for campsites or overcrowding (OMNR 1985). Currently, tourist outfitters are noticing a marked increase in demand for outfitting/rental/shuttle services and hence, an assessment of client use and campsites may be necessary. Information required for analysis is currently being collected (Ontario Parks 2001, Stoneman 2001). A three year project entitled “*A Study of the Social and Economic Benefits Associated with the Nine OLL Signature Sites*”, has been commissioned. To complement the study a recreational survey was distributed to users of the Spanish River and Biscotasi Provincial Parks this past summer, and will continue next season. Survey analysis will provide important demographic and population information to better understand the signature sites recreational use. Future management will be

directed to prevent degradation of the river ecosystem. To this end, future use will not exceed the physical capability for canoes/motorboats on the river and lakes.

With the promotion of the Spanish River Valley Signature Site, the region will benefit from increased knowledge of the backcountry opportunities available, not only on the Spanish River but connecting routes such as the Mississagi, Wakonassin and Agnes rivers. There may be consideration to additional route development west and south of Pogamasing Lake, with destination camping and canoeing on Pogamasing Lake and within Biscotasi Lake Provincial Park.

Most clients of the commercial tourism camps are sport fishermen, with some hunting parties in the fall. Increasingly, more families are attending these locations as retreats, where one enjoys the ambience of the environment (Ontario Parks 2001). It is apparent that the tourism market is changing. There is a definite trend towards ecotourism, with an adventure and cultural component. Over the next 5-10 years, pre-retirement and retirement individuals will be spending some of their discretionary income on travel. These travelers are generally older, healthier, better travelled, and seeking more value. They want high environmental standards and authentic engaging experiences, where they learn about the local culture and heritage. These back-to-nature experiences may involve both soft and hard adventure activities, and generally involve 3-4 day get-aways compared to weeklong holidays. Most importantly, travellers want value, comfort, and hassle free arrangements (T. Manning pers. comm).

The Spanish River Valley Signature Site is well positioned to attract visitors who have an outdoor and/or cultural interest. Its exceptional scenery and waterways are unique to Ontario and can provide visitors with authentic experiences. It is rich in flora and fauna, and cultural history. Based on the choice of accommodation, the traveller's experience can be a soft or hard style adventure. Each of these tourism sectors has a strong potential market. As the signature site strategy develops, it will be important to analyze which product sectors can be developed in harmony with each other while protecting the integrity of the area.



9.0 Issues and Opportunities

A number of specific issues need to be addressed in the management strategy for the Spanish River Valley Signature Site. The following list is by no means complete and is subject to public and stakeholder review. As the process continues, issues will be added or redefined. Some of the issues are unique to Waterway or Natural Environment class parks, while others arise from past activities prior to park establishment that do not conform to policy as outlined in *Ontario Provincial Parks: Planning and Management Policies* (OMNR 1992) or *Ontario's Living Legacy Land Use Strategy* (OMNR 1999).

Presently, the signature site's provincial parks are non-operational in status. Future phase-in of these parks to operational status will enable Ontario Parks to fulfill its objectives of protection, heritage appreciation, recreation and tourism. This will also offer economic and social opportunities, which may contribute to local communities.

Note: these issues are not ranked by order of significance.

Aboriginal Communities

Local Aboriginal communities have a number of interests, namely resource/economic development, in portions of the signature site. Aboriginal and treaty rights on Crown lands are protected by the Constitution of Canada. Engaging in meaningful, information-sharing dialogue will ensure that objectives of both parties are understood while developing the signature site strategy.

Access to Protected Areas

There is a need to integrate the variety of access occurring within the Spanish River Valley, which include but are not limited to:

- Unplanned road and rail access to and within park boundaries.
- Mechanized (ATV and snowmobile) off-road and road travel within park boundaries.
- Private and commercial aircraft access within park boundaries.
- Uncontrolled boat caches within park boundaries.
- Existing road access through the signature site for resource harvest use.
- First Nation communities exercising their traditional and Aboriginal treaty rights to access traditional use areas.
- Access to pre-existing mining tenure.

There are a few access points within the Spanish River Valley Signature Site, which currently have limited or no facilities such as parking, docking, waste disposal or washrooms. There is a need to address access point use and management on these sites within the parks and on Crown land, and to limit unplanned access points, if they interfere with the protection of park values.

There is a need to establish a program to remove and rehabilitate the network of abandoned logging roads to maintain a level of semi-remoteness for a quality canoeing experience. This may include existing river crossings. Access requirements will balance park values, with regard for other resource-based commercial user needs.

Adjacent Land Uses and Activities

Forest management activities are ongoing in the enhanced management areas (EMAs) and adjacent Crown lands. Issues may arise between the public and forestry industry with regard to modifying harvest operations in order to achieve protection values associated with the parks (e.g. viewscapes, timing, buffers).

The Spanish River Valley Signature Site functions as an ecological corridor from Biscotasi Lake towards Lake Huron. How the drawdown of water, for hydro-electric production, effects the valley ecosystem is not well understood, especially in terms of the fishery resource. The review of the *Spanish River Watershed Water Management Plan* should address some of these concerns. Conflict has arisen in the past over water levels necessary for water recreation (e.g. canoeing and angling) and over water storage for hydro production and pollution abatement downstream.

Existing land use tenure will continue and traditional means of access will be permitted in the protected areas. Regular communication with these stakeholders will reduce issues from surfacing.

Conversely, management of park related values on adjacent lands and waters may create issues with traditional Crown land recreational use. Addressing this concern with a recreation strategy for the signature site should seek to create the necessary balance. Full and meaningful consultation with all stakeholders will minimize competing land use.

Protection of Resources

The resource manager has a number of survey tools with which to develop a view of the mammals, birds, amphibians and reptiles populations. This information exists for various pockets of the signature site, but it is not comprehensive, nor is there any long-term monitoring for the stated animals. The lack of information makes management difficult. Therefore, research and monitoring priorities must be set to identify, assess and appropriately manage the natural heritage resources of the Spanish River valley. With increased knowledge, it may be necessary to adjust boundaries to protect appropriate natural heritage features.

Recreational angling is a huge sport in the Spanish River valley. Managers are aware that the quality of the fishery on Biscotasi Lake and a portion of the East Branch of the Spanish River is deteriorating. It is important that the quality of the fishery remains high by controlling angling pressure. Anglers may have issues with the need to protect the fishery.

The Spanish River valley has a diversity of cultural heritage values. Cooperation between the First Nations communities and other area communities will ensure the protection of these cultural heritage values.

The actual number of campsites within the signature site and their level of use is poorly understood, which implies that the impacts of current use is unknown (e.g. garbage, erosion, soil compaction, destruction of vegetation, disturbance to wildlife etc.). The level of campsite management may cause issues among existing users.

Protection objectives are met through appropriate zoning designations within the class of park; namely Waterway for Spanish River Provincial Park and Natural Environment for Biscotasi Lake Provincial Park. Issues may arise between traditional users and restrictions based on park policy.

Area Social and Economic Opportunities, Benefits and Impacts

There are opportunities for potential partnerships and business agreements with First Nation communities, area communities and businesses in the operation and management of the signature site.

There are opportunities for enhanced signature site related tourism by marketing the Spanish River valley as a diverse land base for a host of tourism activities including the means of arriving at the destination (e.g. VIA Rail Budd car).

To this end, the ability to provide a consistent high-end quality experience is of utmost importance. However, the use of the Spanish River Valley Signature Site must be balanced against the need for resource protection and long term sustainability.

Visitor Management and Customer Service

There is a need to provide information and educate the public on the Spanish River valley's natural and cultural heritage and to have a compliance program that ensures protection of park values. A comprehensive recreational use assessment is necessary in order to apply appropriate management techniques of visitor distribution, entry, registration, and fee collection. Visitor safety is paramount and is achievable through standards for backcountry operation and the application of best practices for low-impact backcountry travel.

There is a need for integration with recreational use/travel patterns between the protected areas and the adjacent EMAs and Crown lands.

Your Personal Invitation

As someone interested in the long-term management of Ontario's provincial parks and Crown lands, you are invited to participate in the development of the signature site strategy. Any comments or suggestions regarding this background information document or any other aspects of the planning process are welcome. Please take the opportunity to submit your comments to the Spanish River Valley Signature Site Project Manager at the address listed on the front page.



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Figure 1: Reference Map of the Spanish River Valley Signature Site

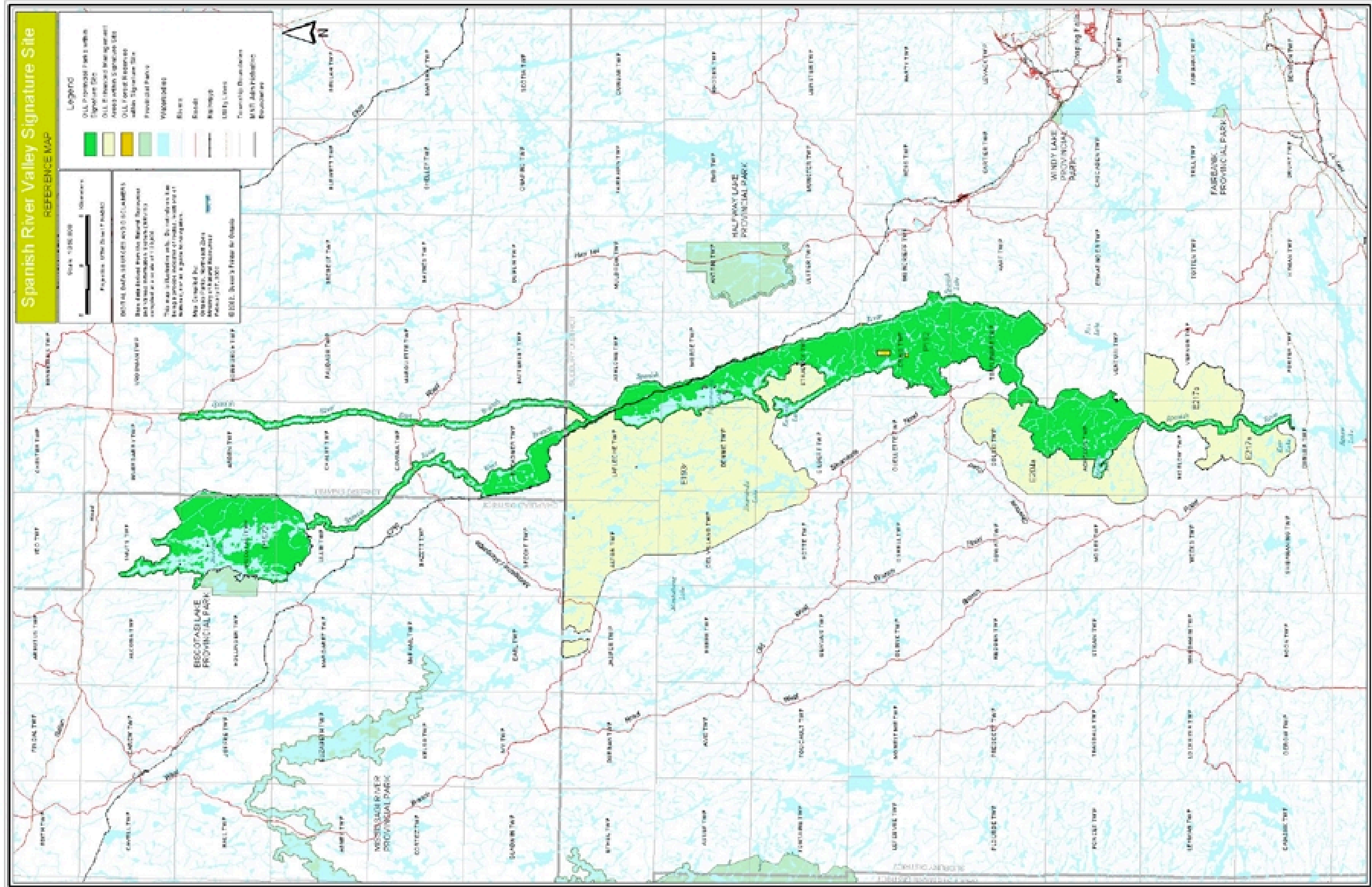


Figure 2: Regional and Provincial Context

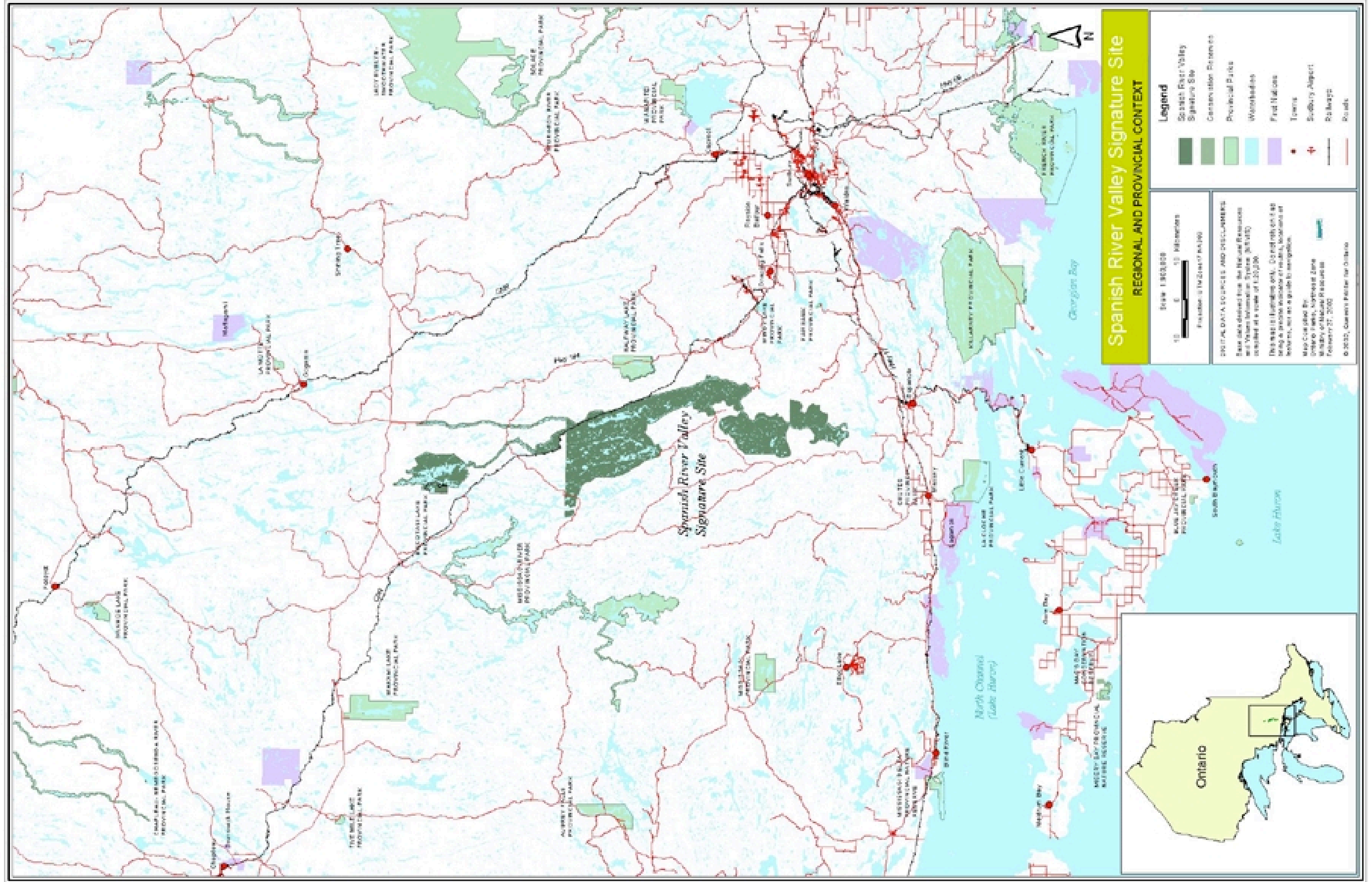


Figure 3: Roads, Access Points and Canoe Routes

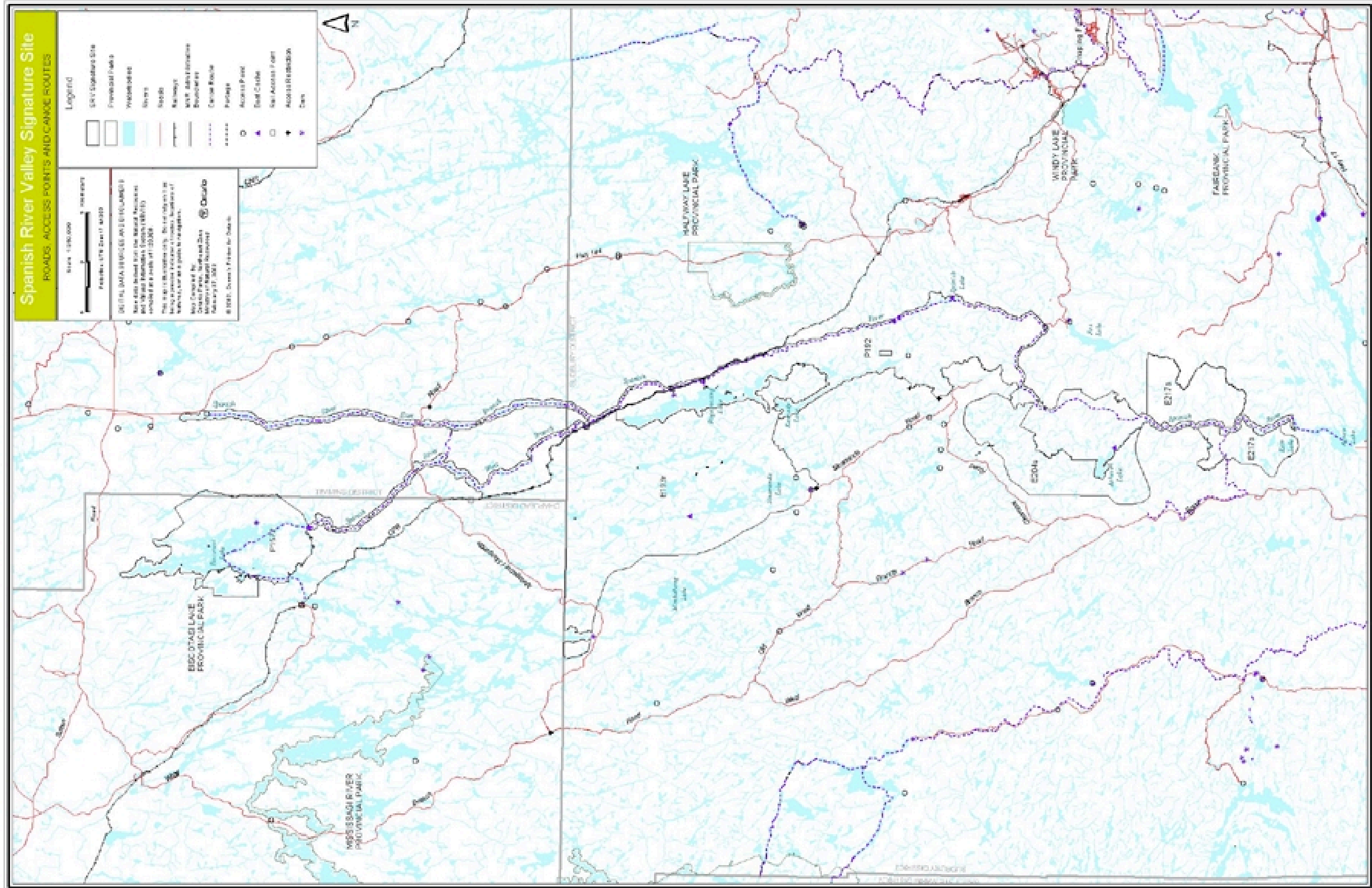


Figure 5: Bedrock Geology

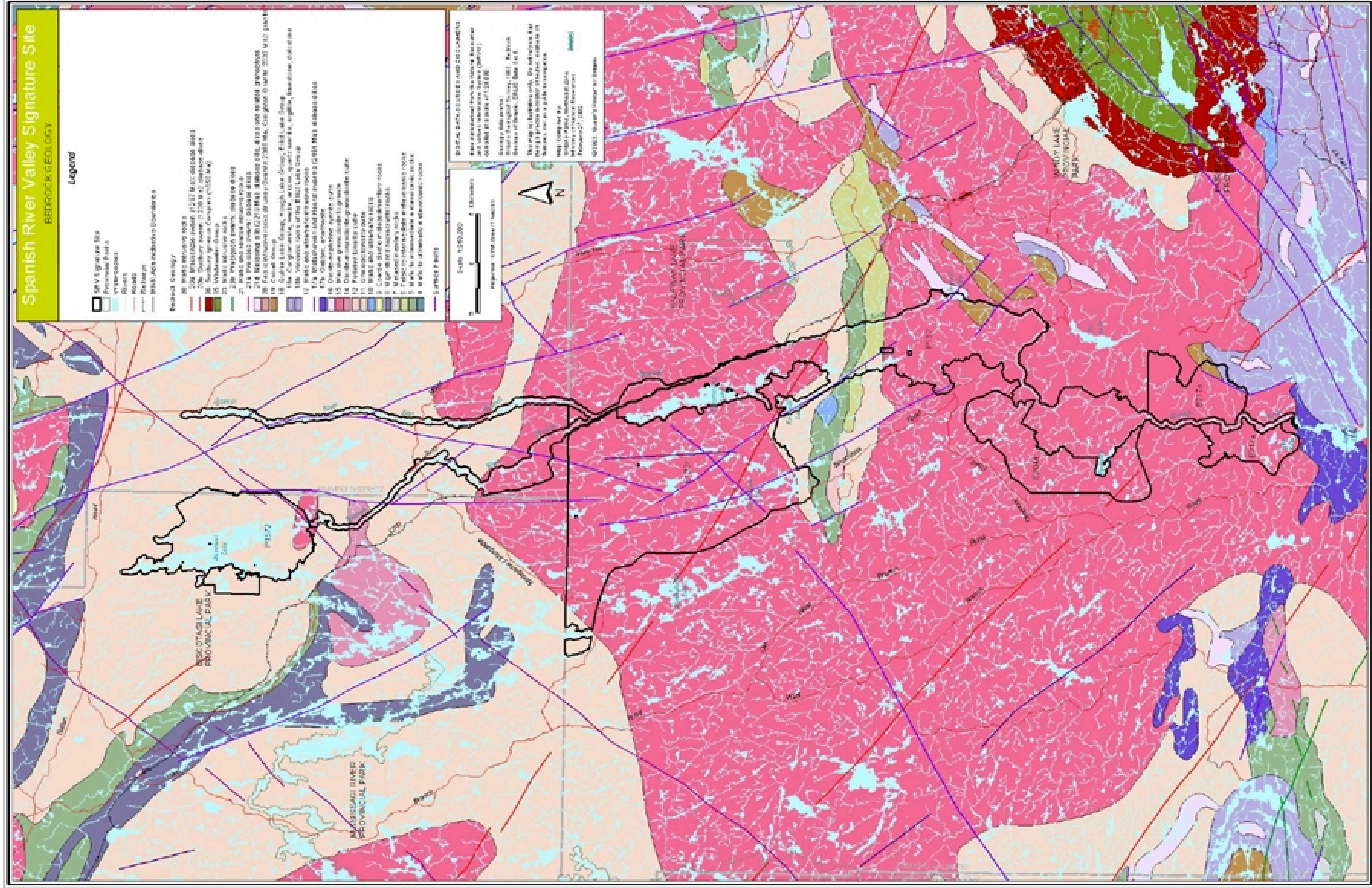


Figure 9: Wildlife Management Units, Traplines and Trap Cabins

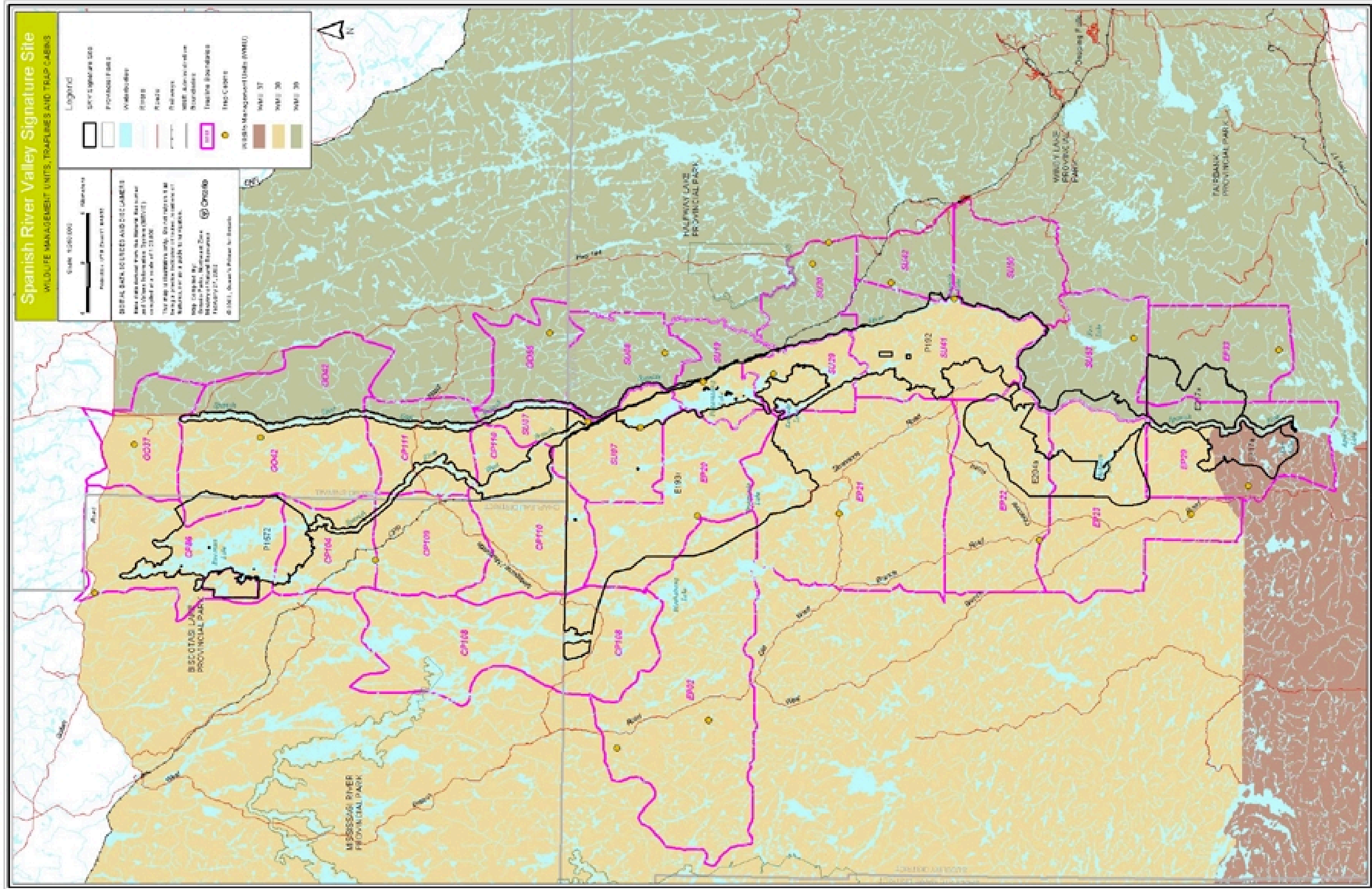


Figure 10: Thermal Water Classification of Waterbodies

