

Fisher Bay Park Reserve

Areas of Ecological Significance Study



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Canadian Parks and Wilderness Society

Submitted by:



CENTRE FOR INDIGENOUS ENVIRONMENTAL RESOURCES

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CIER, the Centre for Indigenous Environmental Resources, is a national First Nation-directed environmental non-profit organisation. We offer research, advisory, and education and training services to Indigenous communities, governments and private companies in four inter-related topic areas: forests, climate change, water, and sustainability.

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1.0 INTRODUCTION

Fisher Bay, its islands, and surrounding land are both culturally and ecologically important. The Fisher Bay Park Reserve (also known as the Ochiwasahow Park Reserve) was created in 1999 as a result of being nominated for protection by the Fisher River Cree Nation. On November 1st 2005, the Manitoba Government announced an up to 5-year extension to the consultation process that will determine the final boundaries and designation of the protected area.

Fisher River Cree Nation and the Canadian Parks and Wilderness Society (CPAWS), Manitoba chapter, have teamed up for the purpose of ensuring that a portion of this First Nation's traditional territory becomes permanently protected from industrial activities such as logging and mining while securing potential for sustainable community-driven economic ventures such as eco-tourism (Thiessen, personal communication, May 2006). Note that whenever names are referred to followed by 'personal communication', their specific contact information can be found in Appendix B.

The purpose of this report is to support CPAWS and Fisher River Cree Nation in mapping new boundaries of the Fisher Bay Park Reserve based on best ecological and cultural considerations and in developing protected area purpose statements to present to affected First Nations, stakeholders, general public, and the Manitoba Government. The objective is to provide a summary of existing data on areas of ecological significance in the Fisher Bay Park Reserve area. The area of study for this report is shown in the map in Appendix A (when the term 'Fisher Bay Park Reserve Area' is referred to in the report, it is referring to the area shown on this map). The study focus was on areas immediately outside the Government of Manitoba boundaries (dark green line), and areas within the Fisher River Cree Nation cultural boundaries (light green lines) (Appendix A).

The report is broken down into four sections: Enduring Features, Water Bodies and Watersheds, Wildlife, and Forests. Each section describes the existing scientific data on that topic for the Fisher Bay Park Reserve Area, and also describes the sources of the information.

This report focuses exclusively on areas of ecological significance.

2.0 SUMMARY OF FINDINGS

The overall finding was that scientific data regarding ecological areas of significance are lacking for the Fisher Bay Park Reserve Area. However, many important ecological areas emerged from this study. Many of the enduring features within Manitoba's natural regions of mid-boreal lowlands and the Interlake plain were determined by Manitoba Conservation to be at least partially captured within the legislated park reserve boundaries. An analysis of forest areas surrounding the park reserve revealed rare vegetation types, and some areas of old growth forest were identified. Little information was discovered regarding ecological significance of watersheds in the Fisher Bay Park Reserve Area, this requires further investigation. Regarding wildlife, many rare species are potentially in the area, including birds, fish, and plants. Of particular importance are limestone caves providing habitat for bats. This study also identified Matheson Island and Ebb and Flow Lake as important ecological areas, providing habitat for moose, birds, and fish.

3.0 ENDURING FEATURES

Manitoba is divided into twelve different natural regions. Each region is a broad area that shares similarities in geography, climate, and vegetation (Appendix C). The Fisher Bay Park Reserve is located at the boundary of two Natural Regions in Manitoba: Natural Region 5A – Mid Boreal Lowlands and Natural Region 5B – Interlake Plain (Appendix C). This indicates that the Fisher Bay Park Reserve and surrounding area has the potential to be physically and biologically diverse (Wilson, personal communication, May 2006).

An enduring feature is defined as a combination of soils, geology, climate and landforms that influence biodiversity (i.e. more or less permanent features that effect the kinds of plants and animals that live there). An enduring feature can range from a few hectares to over a million hectares in size. Representing enduring features in protected areas is a method of protecting biodiversity in each of Manitoba's natural regions (MB Conservation, 2001-2003).

Within a natural region, enduring features can be **common** (5 or more separate areas of a particular type of enduring feature within a natural region, or the particular enduring feature makes up a large portion of the natural region), **rare** (2 to 4 separate areas of a particular type of enduring feature concentrated in 1 or 2 localized geographic areas within a natural region), or **single** (only 1 separate area, that may be large or small, of a particular type of enduring feature within a natural region) (MB Conservation, 2006).

There are also representation categories for enduring features within a natural region. Enduring features are either **not captured** within existing protected areas at all; **partially captured** (only minor parts are included in boundaries of existing protected areas); **moderately captured** (a significant portion is included within the boundaries of existing protected areas); and **adequately captured** (a sufficient portion is included within the boundaries of existing protected areas, enough to maintain ecological processes) (MB Conservation, 2006).

3.1 ENDURING FEATURES IN THE FISHER BAY PARK RESERVE AREA

Most of the enduring features in the Fisher Bay Park Reserve Area are *common* within Natural Regions 5A and 5B, although some are only *partially captured* within the legislated park reserve boundaries. For example:

- The enduring feature called DB/D or Deep Basin/Dark Grey Chernozem is determined to be *common* within Natural Region 5B, but is only *partially captured* (Appendix C - Natural Region 5B). This enduring feature occurs in the proposed West Addition to the park reserve, around Goldeye Lake.
- The enduring feature called T1/D or Glacial Till derived from Palaeozoic Rocks/Dark Grey Chernozem is determined to be *common* within Natural Region 5B, but is only *partially captured* (Appendix C - Natural Region 5B). This enduring feature occurs west of the park reserve, at the base of St. Andrew Lake.

One enduring feature partially within the park reserve is 'rare' within Natural Region 5A:

- The enduring feature called OD/X11 or Organic Deposits/Organic Fibrisol (fibric sphagnum) (Appendix C - Natural Region 5A) is determined to be *adequately captured*,

however, it is a *rare* enduring feature within Natural Region 5A. This enduring feature occurs in the proposed east addition to the park reserve.

Please note that there may be more enduring features of significance than the ones listed above, and that those listed should be further verified by experts in the field such as staff at Manitoba Conservation. Yvonne Beaubien of Manitoba Parks and Natural Areas also noted that although updated enduring features information was provided to CIER by Manitoba Conservation, the only maps that were available for distribution (Appendix C - Natural Region 5A map, and Natural Region 5B map) are 2003 data and some labelling or description of enduring features may have changed since then (Beaubien, personal communication, May 2006).

4.0 FORESTS

4.1 FOREST 'AREA SUMMARIES'

CIER contacted James Ehnes of ECOSTEM Ltd in Winnipeg. J. Ehnes agreed to provide 'area summaries' (description of the land cover, land type, vegetation type, habitat type and tree age class) of the Fisher Bay Park Reserve Area using the Provincial Forest Resource Inventory (FRI) data. The FRI data is derived from looking at aerial photos of the land. A portion of this analysis identifies regionally rare vegetation types, but J. Ehnes noted that additional analyses would be needed to complete a study called a 'biodiversity conservation gap analysis' to locate areas in need of protection with greater certainty. Also, verifying the data on the land should eventually be carried out in order to confirm any results presented here.

J. Ehnes included some words of caution when looking at the data: a) the FRI data focuses on commercial value of the forest and so doesn't represent non-commercial ecosystem diversity very well on its own. For example, it is likely that there is older forest in wetlands where tree volume is too low to be considered commercial (i.e. this older forest wouldn't show up in the FRI data); b) the age of the FRI data is 1992; c) when selecting boundaries for conservation areas it is important to note that the vegetation types are not static and that wildfires (past fires in the area were 1976 and 1989) can change the landscape and should be considered.

The analysis is separated into the following categories: 1) Addition East = the proposed addition to the east of the legislated park reserve, as produced by the Band Council of Fisher

River Cree Nation; 2) Addition West = the proposed addition to the west of the legislated park reserve, as produced by the Band Council of Fisher River Cree Nation; 3) Region Outside park reserve = the comparison area minus the park reserve and proposed East and West Additions; 4) Region = the comparison area used to determine whether a vegetation or habitat type is regionally rare or uncommon. It is an area large enough to capture the natural shifting mosaic (e.g. wildfire) and has similar background factors that influence vegetation and soil composition and dynamics. The Region is approximately 370,000 hectares (Appendix D, Map D1).

Proposed East Addition

The broad habitat type of the proposed East Addition is largely made up of treed wetland and conifer forest (Appendix D, Map D2). The land cover of the proposed East Addition is mostly made up sparsely treed wetlands (27 %), conifer forest (22 %), and hardwood forest (20 %) (Appendix D). The land type of this area is mainly peatland (34 %), mineral soil (26 %), and wet bog (13 %) (Appendix D). This analysis also shows that the East Addition has more forest of an older age class (Appendix D, Map D3, Map D4).

Vegetation types that are rare to uncommon in the Region and are more prevalent in the East Addition than elsewhere in the Region are (Appendix D, Map D5):

- Balsam poplar/Conifer mixedwood forest (1 % in the proposed East Addition)
- Tamarack/Spruce > 70 % forest (1 % in the proposed East Addition)
(Note: Tamarack/Spruce > 70 % forest = greater than 70 % of the commercially valuable tree stems are Tamarack/Spruce).
- Black spruce/Balsam fir mixedwood forest (2 % in the proposed East Addition)
- White spruce/Conifer mixedwood forest (2 % in the proposed East Addition)
- Balsam fir/Spruce > 70 % forest (2 % in the proposed East Addition)
- Black spruce/Tamarack > 70 % forest (2 % in the proposed East Addition)
- Tamarack sparsely treed (5 % in the proposed East Addition)

Significance

The East Addition has the highest peatland area. The East Addition also has substantially more peaty mineral soil than the other park blocks and comparison Region as a whole (Ehnes, personal communication, May 2006). This may indicate that more of these land types located in the East Addition would be valuable to include in the park reserve.

The proposed East Addition has substantially more conifer forest than the other park blocks and the comparison Region as a whole, maybe because there are more peatlands there (Ehnes, personal communication, May 2006). This may indicate that more conifer forest, located in the East Addition, would be worth including in the park reserve. Older growth forest may be valuable as habitat.

Proposed West Addition

The broad habitat type of the proposed West Addition is hardwood forest on mineral soil and sparsely treed wetland (Appendix D, Map D2). The land cover of this area is largely made up of hardwood forest (34 %), sparsely treed wetlands (23 %), and wetlands without trees (15 %) (Appendix D). The land type of this area is mainly mineral soil (34 %), peatland (25 %), and wet bog (13 %) (Appendix D).

Vegetation types that are rare to uncommon in the Region and are more prevalent in the West Addition than elsewhere in the Region are (Appendix D, Map D5):

- Tamarack > 70 % forest (1 % in the proposed West Addition)
(Note: Tamarack > 70 % forest = greater than 70 % of the commercially valuable tree stems are tamarack).
- Wet meadow (10 % in the proposed West Addition)

Significance

The regionally rare to uncommon vegetation types are significant. This analysis also shows that the West Addition has more than double the percentage (31 %) of area in young commercial forest than the other park blocks and comparison Region as a whole (Appendix D, Maps D3 and D4). This may be an important factor to be aware of in discussions regarding expanded boundaries of the park reserve.

4.2 OLD GROWTH

A meeting was held with Jacques Tardif of the Centre for Forest Interdisciplinary Research (C-FIR) at the University of Winnipeg. J. Tardif specializes in forest ecology, particularly dendrochronology (the study of tree rings to determine age and growing conditions). J. Tardif was able to provide some comments (while looking at a 1:190000 Covertypemap of management units 40 & 41 showing cutting classes 4 & 5 - which are the oldest age classes recorded for the Forest Resource Inventory) about the forest surrounding the Fisher Bay Park Reserve. The numbered comments are recorded below and correspond with numbered areas identified on the Covertypemap (provided by Manitoba Conservation, Forestry Branch) that is attached to the report (Appendix E).

- 1) Old growth jack pine on dry sites may be ecologically significant. These patches may have survived fire and would create diversity on the landscape.
- 2) Old growth spruce forest would occur here. The peninsula (between Fisher Bay and Washow Bay) is not very elevated, and is mainly wet, and is therefore conducive to old growth spruce forest.
- 3) Old growth spruce and aspen provide connectivity between different tree species and would create habitat diversity.
- 4) Old growth aspen and younger aspen provide connectivity between younger and older forest. This allows continuity across the landscape and may provide corridors for the movement of wildlife.
- 5) Old growth tamarack may be ecologically significant because it is relatively rare across the landscape.

- 6) Old growth aspen on the edge of Moose Lake may be ecologically significant because of the transition between mature forest and aquatic habitat.

J. Tardif cautioned that for the purposes of the FRI, cutting class is based on tree height: the taller the patch of trees, the higher the cutting class (Appendix F). In general, taller trees are assumed to be older, however, this is not always true. For example, a very old bur oak tree may be much shorter than a young aspen tree. It is important to keep this in mind, and all forest patches identified as old growth based on FRI cutting class should be examined on the ground, to determine if they are indeed old growth. It is also important to remember that a forest patch that is designated old growth will not always remain as it is, it will change with disturbances such as fire, or as a result of succession (new trees taking the place of the old ones) (Tardif, personal communication, May 2006).

J. Tardif and his C-FIR researcher team want to study the forest in the Fisher Bay area in upcoming years, possibly next year, as part of a study of old growth forest in Manitoba. The C-FIR team is studying tree growth as it relates to climate change, conducting a comparison of past tree growth to present tree growth. For their research, they look for older live trees as well as snags (dead trees) in order to examine the tree rings that would show what growing conditions were like in the past. Another goal of the C-FIR research is to record the actual ages of forest stands, as it may not be possible to tell actual ages from FRI data alone.

5.0 WATER BODIES AND WATERSHEDS

CIER contacted Alexandra Bourne of Manitoba Conservation Water Stewardship. A. Bourne deals with water quality and has some historical data on water quality for the Fisher River and for Lake Winnipeg near Matheson Island, however wasn't familiar enough with the area to identify any specific water bodies or watersheds of importance in the Fisher Bay Park Reserve Area. A. Bourne recommended contacting Sarah Coughlin, manager of the Eastern Interlake Conservation District for more information about the area (Bourne, personal communication, May 2006).

CIER followed up by contacting S. Coughlin of the Eastern Interlake Conservation District (EICD). The EICD is divided into sub-districts, and the Fisher Bay area is included in one of these sub-districts. However, S. Coughlin indicated that there has not been a watershed management plan developed or implemented for the Fisher Bay area. EICD is currently developing an Integrated Watershed Management Plan (that combines scientific and local knowledge) for an area south of Fisher Bay including the Icelandic River and Washow Bay Creek. Unfortunately, results of this management plan will not be available for at least two years. S. Coughlin wasn't able to comment on importance of watersheds or water bodies in the Fisher Bay Park Reserve Area, but invited those interested to attend the EICD's sub-district meetings to discuss the need for more information on the Fisher Bay area. EICD may develop other Integrated Watershed Management Plans in the future that could include the Fisher Bay Park Reserve Area and so should be kept in mind as a contact (Coughlin, personal communication, May 2006)

Other Contacts

CIER also contacted Dr. Gordon Goldsborough, associate professor at the University of Manitoba, Botany Department (specializing in aquatic ecology) and Director of Delta Marsh Field Station. Dr. Goldsborough was unable to respond prior to the time of writing. For future reference, he may be an appropriate contact regarding the value of watersheds and water bodies in the area (Appendix B).

6.0 WILDLIFE

CIER visited the Manitoba Conservation Data Centre (MB CDC) and a list of rare species occurrences for the Fisher Bay Park Reserve Area was provided (Appendix G). The approximate area that MB CDC used to search for rare species is outlined on a map of the Fisher Bay Park Reserve (Appendix G – Rare Species Search Area Map).

A rare species "occurrence" may be a GPS point, a herbarium record, or may be composed of different individual observations (Firlotte, personal communication, May 2006). The species are ranked on the basis of their global (G) and province-wide (S) status according to a standardized procedure used by all Conservation Data Centres and Natural Heritage Programs (Appendix G).

Commonly used ranks and codes as defined by MB CDC referred to in this report are in the following tables (additional ranks and codes can be found in Appendix G).

Table 1 a) MB CDC Rank Definitions

Rank	Definition
1	Very rare throughout its range or in the province (5 or fewer occurrences, or very few remaining individuals). May be especially vulnerable to extirpation.
2	Rare throughout its range or in the province (6 to 20 occurrences). May be vulnerable to extirpation.
3	Uncommon throughout its range or in the province (21 to 100 occurrences).
4	Widespread, abundant, and apparently secure throughout its range or in the province, with many occurrences, but the element is of long-term concern (> 100 occurrences).
5	Demonstrably widespread, abundant, and secure throughout its range or in the province, and essentially irradicable under present conditions.

Table 1 b) MB CDC Code Definitions

Code	Definition
B	Breeding status of a migratory species. Example: S1B, SZN – breeding occurrences for the species are ranked S1 (critically imperilled) in the province, nonbreeding occurrences are not ranked in the province.
N	Non-breeding status of a migratory species.
?	Inexact or uncertain; for numeric ranks, denotes inexactness.

6.1 BAT CAVES

The Lake St. George Caves Ecological Reserve, outside of the Fisher Bay Park Reserve boundary, just east of the road to Public Road Plan No. 18675 is of ecological significance in the area (Hernandez, personal communication, May 2006) (Appendix H). The Ecological Reserve was established in March of 1997 and contains nine caves in Ordovician Limestone, home to little brown bats (*Myotis lucifugus*) and northern long-eared bats (*Myotis septentrionalis*). *Myotis*

Lucifugus is listed by the MB CDC as S2N (Non-breeding occurrences: rare throughout its range or in the province and vulnerable to extirpation), and S5B (Breeding occurrences: are widespread or secure throughout its range or in the province) (Table 1, Appendix G). The ecological reserve contains the St. George Bat Cave, which is the largest bat hibernacula (where bats hibernate in the winter months) in the province, if not across Canada, providing habitat for over 35,000 bats (Monson, personal communication, May 2006).

Kim Monson of the geography department at the University of Winnipeg, also a member of the Speleological Society of Manitoba, who has explored the area west of the park reserve, indicated that the whole Fisher Bay Park Reserve Area is underlain by Ordovician dolomites and therefore it is highly likely that bat hibernacula occur throughout this area. To further explain, karst topography (the underlying limestone) is exposed when the depth of deposits on top of the Ordovician dolomites are shallow. Cracks or sinkholes in the limestone can create bat hibernacula or snake dens. Karst topography is unique in this region of Canada (McRitchie and Monson, 2000).

K. Monson notes that the cave areas have been disturbed in the past by logging, fire, and general human disturbance. Of significance to protection of the area is that:

- 1) The limestone is porous, usually with an overburden of gravel and sand, which means that any contaminants will quickly move down to the ground water and into the rivers and lakes in the area (Monson, personal communication, May 2006).
- 2) The karst topography is fragile and any heavy equipment, such as that used for logging, may collapse the roofs of bat hibernacula, opening the caves and disturbing the bats within. It is important to note that bats are loyal to their caves, coming back to the same caves year after year and therefore it is important not to disturb the caves to preserve the bat population (Monson, personal communication, May 2006).
- 3) It is particularly important not to disturb bats when they are hibernating in their caves over the winter, as studies show bats may lose as much as 25 % of their body weight during hibernation, and disturbing them causes extra waking from their deep sleep, which increases weight loss and possibly results in mortality (McRitchie and Monson, 2000).

6.2 WOODLAND CARIBOU AND OTHER MAMMALS

The MB CDC listed the occurrence of woodland caribou (*Rangifer tarandus caribou*) (MB CDC status: S4) in the Fisher Bay Park Reserve Area (Table 1, Appendix G). However, woodland caribou sightings in the area are rare. Over the last ten years there have only been a few reports of single animals seen east of the Fisher Bay Park Reserve on the stretch of road from Biscuit Harbour to Matheson Island. These animals likely came across from the east side of Lake Winnipeg where the Atikaki-Berens woodland caribou herd resides. More prominent and important in the area would be moose and wolves, and there are also some elk in the area (Crighton, personal communication, May 2006). The Fisher River First Nation Tourism Opportunities Study (1997) map identifies moose habitat, with important areas outside of the legislated Fisher Bay Park Reserve boundaries being Matheson Island and an area southeast of Ebb and Flow Lake.

6.3 BIRDS

The Fisher Bay Park Reserve Report done by Manitoba Conservation describes the locations of waterfowl as:

“The area around Fisher Bay from the south end and proceeding eastward is not deemed to be important as nesting areas for waterfowl (Flood, 1983), but is a major migration stop for ducks, Canada Geese and other waterfowl. The area around the mouth of the Bay does have some waterfowl production potential, as well as an area just on the southeast corner of the bay (Flood, 1983). The many small islands, shoals and reefs probably provide nesting habitat for colonial waterbirds.” (Gill, 2005).

The ‘Fisher River First Nation Tourism Opportunities Study’ maps (1997) identify waterfowl habitat and staging areas. Significant Waterfowl Habitat and Staging areas which fall outside of the current Fisher Bay Park Reserve boundaries include Matheson Island (study identified waterbird colony here – gulls) and area surrounding Ebb and Flow Lake; the base of Fisher Bay; and the suite of lakes west of the park reserve including Lake St. Andrew (study identified waterbird colony here – double crested cormorants) and Lake St. George.

Birds on the MB CDC rare species list included American white pelican, double-crested cormorant, gulls, herons, terns, and piping plover. Aside from the double-crested cormorant (MB CDC status: S4B) and piping plover (MB CDC status: S2B), the other categories of birds were not designated (Table 1, Appendix G).

American white pelicans, double-crested cormorants, gull, and tern species often nest on low, sparsely vegetated islands in Lake Winnipeg. Although these birds are locally abundant, they may be vulnerable to disturbance from human activities during the nesting season (Manitoba Naturalists Society, 2003). Small islands, perhaps surrounding Matheson Island, or within the larger lakes surrounding the park reserve, may provide habitat for waterbird colonies and should be protected from human disturbance.

Bald Eagles

Matheson Island is also an area where American bald eagles stop along their migration routes. A company called 'Bald Eagle Island Tours' takes tourists out to see bald eagles stopping on or near Matheson Island to feed on fish as they migrate south in late September and October (www.eaglewatching.com, 2005).

Least Bittern

The least bittern (*Ixobrychus exilis*) is a small (no larger than a Mourning dove) and secretive heron (Manitoba Naturalists Society, 2003). The least bittern is designated under the Species at Risk Act (SARA) as Threatened. CIER spoke with Ron Bazin, wildlife biologist at the Canadian Wildlife Service, who said there have been occurrences of least bittern west of Hodgson and as far north as Gypsumville. Therefore, it is likely that the least bittern may be in the Fisher Bay Park Reserve Area provided there is suitable habitat, as these birds are very specific about the habitat they choose. Suitable habitat may be wetland with dense cattail growth or partly treed wetland, and the particular depth of water in the wetlands is also important (Bazin, personal communication, June 2006) (see Appendix B for contact information). It would be worth investigating these types of habitats (potentially located using the forest 'area summary' analysis in this report e.g. 'sparsely treed wetland' areas) to determine if least bittern occurs in the Fisher Bay Park Reserve Area.

Piping Plover

The Manitoba CDC list occurrences of rare species in the Fisher Bay Park Reserve Area included the piping plover (*Charadrius melodus*) (MB CDC status: S2B – breeding occurrences rare throughout its range or in the province, may be vulnerable to extirpation) (Table 1, Appendix G). CIER contacted Neil Sylvestre, the Piping Plover Program Coordinator for the province of Manitoba. N. Sylvestre said that piping plovers require wide sandy beaches and lay their eggs in depressions of larger-sized pebbles. He indicated that when the water is high, habitat (sandy beach area) is limited. N. Sylvestre reported that numbers of piping plovers are currently very low in Manitoba and as a result of his field surveys in the last year only 9 birds were recorded. Some birds have been recorded on the Egg Islands and Barren Island in Lake Winnipeg, but none that he knows of in the Fisher Bay Park Reserve Area. N. Sylvestre was interested in learning more about the area and possibly investigating the presence of suitable piping plover habitat in the area. The conclusion is that further studies need to be conducted in the Fisher Bay area to locate piping plovers and their habitat.

Bird Checklists

R. Thiessen of CPAWS located the 'Fisher River Cree Nation Annual Bird Sightings' list compiled by Aileen Urquhart (Appendix I). The list contains weekly bird sightings from the fall of 1994 to the spring of 1999. This list was not reviewed for the purposes of this report but is contained in Appendix I and may provide useful information because it is specific to the Fisher Bay area (see Appendix B for contact information).

Checklists of birds can also be found on the Manitoba Museum of Man and Nature – Bird and Birder Page at: <http://www.virtualmuseum.ca/Exhibitions/Birds/MMMN/English/index.html>. This includes checklists of birds at Hecla Island southeast of Fisher Bay and an Interlake District area southwest of Fisher Bay. These areas would have similar habitats to the Fisher Bay area and may provide additional data on birds likely to be in the area.

Other Contacts

CIER also contacted Rudolf Koes, member of the Manitoba Naturalists society and co-author of 'The Birds of Manitoba'. R. Koes indicated that most active birders in Manitoba, including

himself, were not familiar with the Fisher Bay Park Reserve Area. However, he did suggest that birder George Holland of the Manitoba Avian Research Committee took part in a survey of the bird-life of Lake Winnipeg in the 80s or 90s and may be able to offer some information. R. Koes indicated he would forward an enquiry regarding the Fisher Bay Park Reserve Area to G. Holland (see Appendix B for contact information).

Ken De Smet of Manitoba Conservation, Wildlife Branch is another good contact for bird species in Manitoba (Duncan, personal communication, 2006). CIER contacted Ken De Smet, however, he was away conducting fieldwork at the time of enquiry (Appendix B).

6.4 FISH

The Fisher Bay Park Reserve Report by Manitoba Parks and Natural Areas indicated that: “*the main species that migrate up the Fisher River from Fisher Bay to spawn are walleye, northern pike and mullet (Flood, 1983). Historically, whitefish were also caught in the bay, but rarely nearer than Tamarack Island (Dowling, 1989).*” (Gill, 2005).

Rare Fish Species

Manitoba CDC reported three rare fish species occurrences in the Fisher Bay Park Reserve Area; these are the Shortjaw Cisco (*Coregonus zenithicus*), the Chestnut Lamprey (*Ichthyomyzon castaneus*), and the Silver Chub (*Macrhybopsis storerina*) (Appendix G). Under the Species at Risk Act (SARA) and as designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC): Shortjaw Cisco is Threatened, Chestnut Lamprey and Silver Chub are Special Concern.

Dr. Ken Stewart, Senior Scholar at the University of Manitoba where he taught zoology for 34 years, and author of the book *The Freshwater Fishes of Manitoba* was contacted. He provided comments on the habitats and likelihood of occurrence in the Fisher Bay Park Reserve Area of the three rare fish species and other fish species potentially in the area as follows (Stewart, personal communication, May 2006):

Shortjaw Cisco (*Coregonus zenithicus*)

MB CDC status: S3 (Uncommon) (Table 1, Appendix G)

SARA and COSEWIC: Threatened

Occurs in Lake Winnipeg only. Lives near bottom in deeper water, so likely no nearer than “the Narrows” (east of Matheson Island).

Chestnut Lamprey (*Ichthyomyzon castaneus*):

MB CDC status: S3-S4 (Uncommon-widespread) (Table 1, Appendix G)

SARA and COSEWIC: Special Concern

There is a record of chestnut lamprey from the Bloodvein River, across the lake from the Fisher Bay Park Reserve. Chestnut lamprey is likely also in Fisher Bay and its tributaries, but there are no samples from this area. Survey collecting should be done.

Silver Chub (*Macrhybopsis storerina*):

MB CDC status: S3 (Uncommon) (Table 1, Appendix G)

SARA and COSEWIC: Special Concern

From Lake Winnipeg as far north as Grindstone Point. Not common in Lake Winnipeg.

Other Fish Species of Note

Silver Lamprey (*Ichthyomyzon unicuspis*):

MB CDC status: S3 (Uncommon) (Stewart and Watkinson, 2004)

We have no records of the silver lamprey (*I. unicuspis*) from Lake Winnipeg or its tributaries, other than the Winnipeg and Red rivers. However, it should be in Lake Winnipeg, which is another case for survey collecting.

Weed shiner (*Notropis texanus*):

MB CDC status: S4 (Widespread) (Stewart and Watkinson, 2004)

Manitoba is the only province in which the weed shiner occurs (Stewart and Watkinson, 2004). The weed shiner goes north to the Berens River on the east side of Lake Winnipeg, but have been found only as far north as the Icelandic River on the west side. The weed shiner is a likely candidate for being in Fisher Bay and its tributaries. Look for the weed shiner in protected, weedy waters.

River shiner (*Notropis blennius*):

MB CDC status: S3 (Uncommon) (Stewart and Watkinson, 2004)

Has been found at Pine Dock. Should be in the Fisher Bay Park Reserve.

Spoonhead sculpin (*Cottus ricei*):

MB CDC status: S3 (Uncommon) (Stewart and Watkinson, 2004)

Has been found just south of Pine Dock. This is Manitoba's most rare and least known freshwater sculpin. It seems to like open, gravel to cobble & boulder beaches, with wave exposure. Just about anywhere it is found is new knowledge in Manitoba.

Invasive Fish

Other fish to watch for in the Fisher Bay and its tributaries, although not for reasons of protection, include rainbow smelt (*Osmerus mordax*) and white bass (*Morone chrysops*). Both are invasive exotics whose spread needs to be monitored (Stewart, personal communication, May 2006).

Lake Sturgeon (*Acipenser fulvescens*)

Lake sturgeon is a fish species that was not on the MB CDC list of rare species for the Fisher Bay Park Reserve Area, but one that is of ecological significance and may be in the area. Lake sturgeon (western populations) have no current designation under the Species at Risk Act (SARA), but have been recommended by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as Endangered.

CIER contacted T.A. Dick, professor at the department of Zoology at the University of Manitoba, and co-author of the COSEWIC status report on lake sturgeon. T.A. Dick indicated that there is no absolute current data for the Fisher Bay Park Reserve Area for lake sturgeon. Lake sturgeon have been extirpated from much of their range due to over-fishing, although they were plentiful in Lake Winnipeg in the past. Lake sturgeon are generally located in riverine lake systems, and are currently in the Pigeon and Barren River systems, but are not currently spawning in the Fisher River. However, lake sturgeon are likely in areas in the upper part of Fisher Bay around Tamarack Island and are also known to occur in areas adjacent to the park reserve boundaries (Appendix J). Another area where sturgeon may be found is Ebb and Flow Lake because the west winds would push water, as well as small fish and invertebrates, in from

Lake Winnipeg and this would be a good spot for sturgeon to feed (Dick, personal communication, May 2006).

Other Contacts

William Franzin of the Department of Fisheries and Oceans was contacted, but indicated that there was a lack of data on Fisher Bay and area. Warren Coughlin (Manitoba Conservation, Gimli) was also contacted but said there was no information, aside from commercial fishing data, on that specific area (Appendix B). Other potential contacts are Walt Lysack (Manitoba Conservation, Winnipeg) and Ken Campbell, previously Fisheries Manager at the Gimli Fisheries Branch office, now a commercial fisherman.

6.5 PLANTS

The Manitoba CDC reported four rare plant species occurrences in the Fisher Bay Park Reserve Area: these are Swamp-pink also called Grass-pink (*Calopogon pulchellus* or *C. tuberosus*), Fox sedge (*Carex vulpinoidea*), Water Star-grass, also called Grassleaf Mud-plantain (*Heteranthera dubia*), and Round-leaved Bog Orchid, also called Large Roundleaf Orchid (*Platanthera orbiculata*) (Appendix G). These rare plant species occurrences were recorded in the Fisher Bay Park Reserve Area roughly northeast of Moose Lake (Firlotte, personal communication, May 2006).

CIER contacted Elizabeth Punter, Assistant Curator at the University of Manitoba Department of Botany Herbarium, who gave the following information about the habitat and flowering times of these rare plants:

Swamp-pink or Grass-pink (*Calopogon pulchellus* or *C. tuberosus*)

MB CDC status: S2 (Rare – may be vulnerable to extirpation) (Table 1, Appendix G)

Habitat: Coniferous bogs and fens, under open canopy of black spruce (*Picea mariana*), larch or tamarack (*Larix laricina*), or eastern white cedar (*Thuja occidentalis*).

Flowering time: Early to late July.

Range in Manitoba: Southeastern MB, north to Grindstone.

Fox sedge (*Carex vulpinoidea*)

MB CDC status: S3? (Uncommon, ranking uncertain) (Table 1, Appendix G)

Habitat: Creek beds, alluvial silt, shorelines, floodplains (including disturbed areas), ditches, wet meadows (habitats that are seasonally saturated or inundated soils in open areas, but might be found in treed areas in canopy openings).

Flowering time: Late June.

Range in Manitoba: Southern half of Manitoba

Water Star-grass or Grassleaf Mud-plantain (*Heteranthera dubia*)

MB CDC status: S2 (Rare – may be vulnerable to extirpation) (Table 1, Appendix G)

Habitat: Shallow water, mudflats.

Range in Manitoba: Southeastern Manitoba, north to Pine Dock.

Round-leaved Bog Orchid or Large Roundleaf Orchid (*Platanthera orbiculata*)

MB CDC status: S3 (Uncommon) (Table 1, Appendix G)

Habitat: Medium wet to wet coniferous forest (usually old growth (at least 60 years old) with somewhat sparse shrub layer.

Flowering time: Mid-June to mid-July

Range in Manitoba: Southern half of the province except the extreme southwestern corner.

L. Punter also noted that, in general, the limestone outcrops of the Fisher Bay Park Reserve Area as well as the wetlands associated with limestone are potential habitat for the rare plant species associated with these habitats.

Upon the advice of Dr. Richard Staniforth, Professor of Plant Ecology at the University of Winnipeg's Department of Biology, CIER also contacted Lorne Heshka, co-author of the book 'Orchids of Manitoba: A Field Guide'. L. Heshka relayed that he had seen *Calopogon tuberosus* at Hecla in a wet sphagnum bog and believes that it occurs along Prov. Hwy 234 across from Hecla/Grindstone. He also observed *Platanthera orbiculata* at Hecla Island, and at Long Point on Lake Winnipeg and at Paint Lake near Thompson: the habitat at Hecla and Long Point was moist coniferous, and at Paint Lake it was dry mixed forest. L. Heshka indicated that similar habitats found in the Fisher Bay Park Reserve Area may contain these plants. L. Heshka provided two lists: one of the orchids he has observed in the area just south of Hodgson

(Interlake Forestry Centre) and on Hecla Island (east of Fisher Bay); the second list indicates probable occurrence of the orchids in the Fisher Bay Park Reserve Area (Appendix K).

A study was done of rare plants on islands in Lake Winnipeg, and one observation was that species that are provincially rare have been reported more often on islands in Lake Winnipeg than on the mainland (Staniforth and Tardif, 2000). This indicates that it may be worth investigating the islands outside of the legislated Fisher Bay Park Reserve boundaries (e.g. Matheson Island and the smaller islands surrounding it) for the presence of rare plant species.

7.0 OTHER AREAS OF CONSIDERATION

CIER visited Manitoba Conservation and spoke with Rick Wilson, Head of Park System Planning, Manitoba Parks and Natural Areas. R. Wilson pointed out that both forestry and mining industries have an interest in the Fisher Bay Park Reserve Area. Of note is when the legislated Fisher Bay Park reserve boundaries were being negotiated, the mining industry and government expressed interest in an area roughly beneath the three small lakes at the base of Ebb and Flow Lake, immediately west of Moose Creek (Appendix A). A plane flying over the area that has a magnetic field sensing device may be used to locate areas of mineral interest. Maps (of colour-shaded relief magnetics) created by the Manitoba Land Initiative further assist in locating such areas (Wilson, personal communication, May 2006). This would be an area to be aware of in regards to any future Fisher Bay Park Reserve boundary negotiations.

Also of note is an area surrounding the shores of Goldeye Lake in the proposed West Addition. This area was nominated as an area of special interest (ASI). An ASI is a site on Provincial Crown Land nominated for formal protection by the government (Hernandez, personal communication, May 2006). CIER contacted the Manitoba Conservation Gimli Regional Office and it was indicated that the site was nominated for cultural (not ecological) reasons. This area is not currently on Manitoba's Protected Areas Initiative list of ASIs and has no current protection. If the value of this area is not already clear to Fisher River Cree Nation, it may be worth investigating further.

8.0 CONCLUSIONS: AREAS OF ECOLOGICAL SIGNIFICANCE

As a result of conducting research for this report, areas of ecological significance were identified for the land immediately outside the Government of Manitoba Fisher Bay Park Reserve boundaries, and within the Fisher River Cree Nation cultural boundaries (See following list and Appendix L- Map of Areas of Ecological Significance). These are the areas of ecological significance that are recommended for consideration when determining boundaries of the Fisher Bay Park Reserve. Please be aware that other areas of ecological significance besides the ones identified in this report may be present in the Fisher Bay Park Reserve Area.

- 1) **Rare Vegetation Types** resulting from the 'area summaries' analysis done by Ecostem Ltd. (Appendix D, Map D5). Although a full study to locate areas of diversity (i.e. 'biodiversity conservation gap analysis') is recommended, these rare vegetation types are important areas to consider.
Refer to report section: Forests – Forest 'Area Summaries'
- 2) **Old Growth Forest Areas** (as identified on the large covertime map attached to this report). The proposed East Addition to the park reserve appears to have some significant old growth habitat.
Refer to report section: Forests – Old Growth.
- 3) **Bat Cave Area**. The Lake St. George Ecological Reserve caves west of the legislated park reserve boundary and other caves in the karst topography of the Fisher Bay Park Reserve Area provide important habitat for hibernating bats and possibly snake dens
Refer to report section: Wildlife – Bat Caves.
- 4) **Ebb and Flow Lake**. This lake immediately to the east of the legislated park reserve boundary is ecologically important as habitat for a variety of animals. It was identified as moose habitat, and an important waterfowl staging area. The lake was also identified as potential lake sturgeon habitat.

Refer to report sections: Wildlife - Woodland Caribou and Other Mammals, Wildlife – Birds, and Wildlife - Fish.

- 5) **Matheson Island.** This island to the east of the legislated park reserve boundary is ecologically important, valuable as habitat for many animals. It was identified as moose habitat. The island is an important waterfowl staging area, including a gull colony, as well as being a stop for migrating bald eagles. The island may also be potential rare plant habitat.

Refer to report sections: Wildlife -- Woodland Caribou and Other Mammals, Wildlife – Birds, and Wildlife - Plants.

- 6) **Area of Lakes including Lake St. George and Lake St. Andrew.** This whole area of lakes to the west of the legislated park reserve boundary provides important waterfowl habitat, including a double-crested cormorant colony at the south end of Lake St. Andrew.

Refer to report section: Wildlife – Birds.

- 7) **Areas of Rare Plant Occurrences.** Rare plants listed by MB CDC occurred in the general area east of Moose Lake, including Deer Lake (Important: this is only a general area, it is unknown where the plants occurred specifically, or when the data was collected). Rare plants listed may occur in other areas of the proposed East Addition. For example, *Calopogon pulchellus* and *Platanthera orbiculata* in wet conifer areas, *Carex vulpinoidea* in the wet meadows of the proposed West Addition, or rare plants in general on the islands in Fisher Bay and surrounding lakes.

Refer to report section: Wildlife – Plants.

9.0 REFERENCES

9.1 ENDURING FEATURES

Manitoba Conservation, 2005. Manitoba's Protected Areas Initiative website, http://www.gov.mb.ca/conservation/pai/pai_material.html.

Manitoba Conservation, An Action Plan for Manitoba's Network of Protected Areas – January 1 2000, - January 1 2003.

Manitoba Conservation. 2006. Enduring Features Landunit Occurrence Definitions (Common, Rare, Single) – DRAFT.

9.2 FORESTS

Forest 'Area Summary' Data references:

Note: This material is DRAFT - produced by ECOSTEM Ltd. for discussion purposes.

VEGETATION data: Manitoba Conservation, Provincial Forest Resource Inventory.

SURFACE MATERIALS data:

Fulton, R.J., compiler. 1995: Surficial materials of Canada, Geological Survey of Canada, Map 1880A, scale 1:5,000,000.

Soil Landscapes of Canada, Version 3.0, National Soil DataBase, Agriculture and Agri-Food Canada.

WATERSHEDS data: Manitoba Department of Conservation, Water Resources Branch.

COMPARISON REGION SIZE & BOUNDARIES: ECOSTEM Ltd., 2006.

9.3 WILDLIFE

Mammals

Map: Fisher River First Nation - Tourism Opportunities Study – Moose and Caribou Habitats (1997)

Bat Caves

From files of Manitoba Conservation, Ecological Reserves Program, Parks and Natural Areas Branch. 1997. Ecological Reserve: Lake St. George Caves Ecological Reserve.

McRitchie, W.D. and Monson, K.M. (2000). Caves & Karst in Manitoba's Interlake Region from surveys conducted by the Speleological Society of Manitoba. Imprint Winnipeg: Speleological Society of Manitoba.

Birds

Map: Fisher River First Nation - Tourism Opportunities Study – Waterfowl Habitat and Staging Areas (1997)

Gill C., 2005. Fisher Bay Park Reserve Report (Third Draft). Parks and Natural Areas.

Manitoba Naturalists Society, 2003. The Birds of Manitoba – Manitoba Avian Research Committee. 504 pp.

<http://www.eaglewatching.com>, Copyright 2005 EC Web Marketing.

Fish

Gill C., 2005. Fisher Bay Park Reserve Report (Third Draft), Parks and Natural Areas.

Stewart and Watkinson, 2004. The Freshwater Fishes of Manitoba. Pp 276.

Plants

Staniforth. Richard J., and Jacques Tardif. 2000. Rare plants from islands in Lake Winnipeg, Manitoba. Canadian Field-Naturalist 114(3): 501-502.

10.0 LIST OF APPENDICES

Appendix A: Fisher Bay Park Reserve Boundary Map

Appendix B: Personal Communication Contact Information

Appendix C:

- Natural Regions of Manitoba Map
- Natural Region 5A – Mid Boreal Lowlands Enduring Features Map
- Natural Region 5B – Interlake Plain Enduring Features Map

Appendix D: Forest Area Summary Data:

- Map D1 - Region Map
- Map D2 – Broad Habitat Type Map
- Broad Habitat Type Analysis
- Land Cover Analysis
- Land Type Analysis
- Map D3 - Age Class Map
- Map D4 – Age Class > 100 Years Map
- Age Class Analysis
- Map D5 – Rare Vegetation Type Map
- Rare Vegetation Type Analysis

Appendix E: Covertypes Map Showing Old Growth Forest

Appendix F: Guide For Use of Forest Inventory Maps: Cutting Class and Species Composition

Appendix G:

- Manitoba Conservation Data Centre List of Rare Species
- Rare Species Search Area Map
- Conservation Data Centre Species Ranking System

Appendix H: Description of Lake St. George Caves Ecological Reserve from Files of Manitoba Conservation, Ecological Reserves Program, Parks and Natural Areas Branch, 1997.

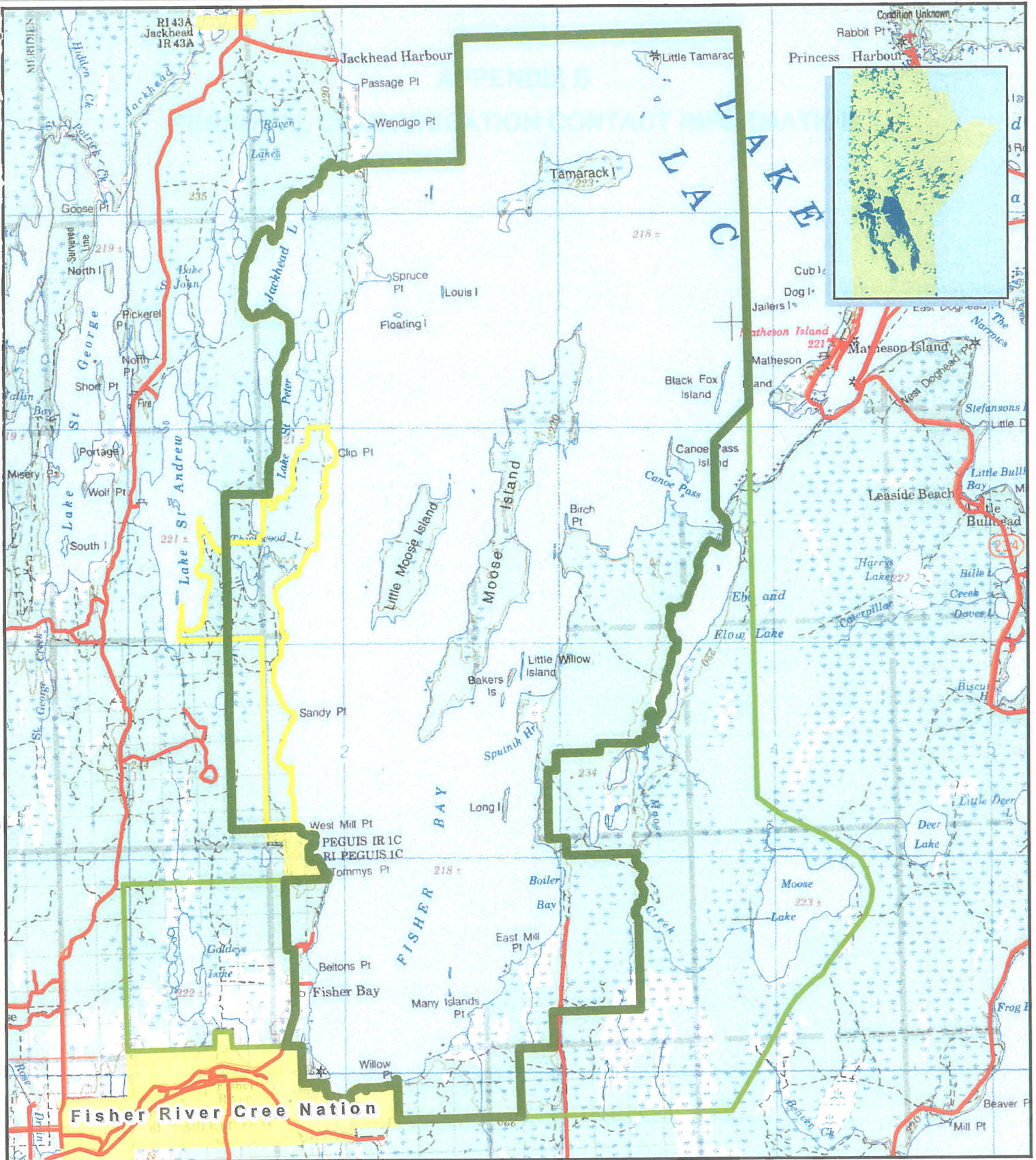
Appendix I: Fisher River Cree Nation Annual Bird Sightings

Appendix J: Map of Potential Sturgeon Habitat in the Fisher Bay Park Reserve Area

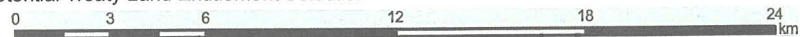
Appendix K: Observations of Orchids in the Manitoba Interlake by Lorne Heshka

Appendix L: Map of Areas of Ecological Significance

• Ochiwasahow Park Reserve •



Proposed Additions to the Fisher Bay Park Reserve Boundary as Produced by the Band Council of Fisher River Cree Nation
 Present Fisher Bay Park Reserve Boundary as Produced by the Government Of Manitoba
 Peguis First Nation Potential Treaty Land Entitlement Selection



Map Base: 1:250,000 Hecla Sheet 062P. 1976. Natural Resources Canada
 Data Sources: MLI, GeoGratis, NTDB

APPENDIX B
PERSONAL COMMUNICATION CONTACT INFORMATION

Contact Information For Fisher Bay Park Reserve Areas of Ecological Significance Study

Section of Report	Name	Organization	Phone	E-mail
Introduction	Theissen, Ron	Canadian Parks and Wilderness Society	204-949-0782 or 204-453-6346	rwth@shaw.ca
Enduring Features	Beaubien, Yvonne	Manitoba Conservation Parks and Natural Areas	204-945-5159	ybeaubien@gov.mb.ca
Enduring Features	Wilson, Rick	Manitoba Conservation Parks and Natural Areas	204-945-4365	rwilson@gov.mb.ca
Forests	Ehnes, James	Ecostem Ltd.	204-772-7204	james.ehnes@ecostem.com
Forests	Tardif, Jacques	University of Winnipeg Centre for Forest Interdisciplinary Research	204-786-9475	j.tardif@uwinnipeg.ca
Water Bodies	Bourne, Alexandra	Manitoba Conservation Water Stewardship	204-945-7095	abourne@gov.mb.ca
Water Bodies	Coughlin, Sarah	Eastern Interlake Conservation District	204-642-7578	scoughlin.eicd@mts.net
Water Bodies	Goldsborough, Gordon	University of Manitoba Botany Department Director of Delta Marsh Field Station	204-474-7469	ggoldsb@cc.umanitoba.ca
Wildlife	Crighton, Vince	Manitoba Conservation Wildlife and Ecosystem Protection Branch	204-945-6815	vcrighton@gov.mb.ca
Wildlife	Duncan, Jim	Manitoba Conservation Data Centre	204-945-7465	jduncan@gov.mb.ca
Wildlife	Firlotte, Nicole	Manitoba Conservation Data Centre	204-945-7743	nfirlotte@gov.mb.ca
Wildlife	Hernandez, Helios	Manitoba Conservation Parks and Natural Areas	204-945-4148	hhernandez@gov.mb.ca

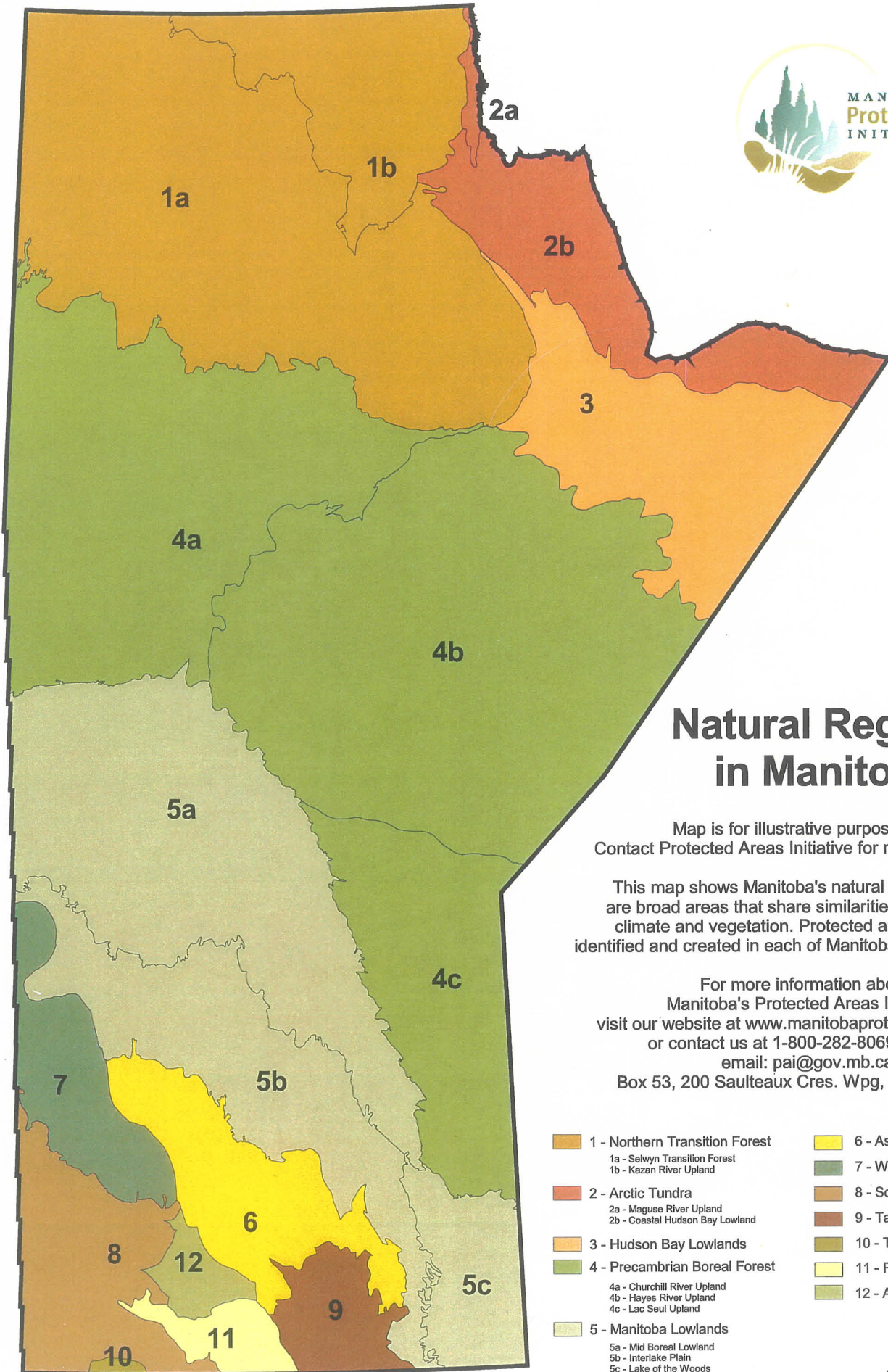
Section of Report	Name	Organization	Phone	E-mail
Wildlife (Bats)	Monson, Kim	University of Winnipeg Geography Department	204-786-9485	k.monson@uwinnipeg.ca
Wildlife (Birds)	Bazin, Ron	Canadian Wildlife Service (Winnipeg)	204-984-0863	ron.bazin@ec.gc.ca
Wildlife (Birds)	De Smet, Ken	Manitoba Conservation Data Centre	204-945-5439	kdesmet@gov.mb.ca
Wildlife (Birds)	Holland, George	Manitoba Avian Research Committee		hollandg@icenter.net
Wildlife (Birds)	Koes, Rudolf	Manitoba Naturalists Society	204-661-0763	rcoes@mts.net
Wildlife (Birds)	Sylvestre, Neil	Manitoba Conservation Piping Plover Program Coordinator	204-945-6817	nsylvestre@gov.mb.ca
Wildlife (Birds)	Urquhart, Aileen	St. Andrew's United Church in Sioux Lookout, ON	807-737-3131 or 807-737-2785	standrews@tbaytel.net
Wildlife (Fish)	Coughlin, Warren	Manitoba Conservation Gimli Fisheries Branch	204-642-6099	wcoughlin@gov.mb.ca
Wildlife (Fish)	Dick, Terry	University of Manitoba Department of Zoology	204-474-9896	tadick@cc.umanitoba.ca
Wildlife (Fish)	Franzin, William	Fisheries and Oceans Canada Central & Arctic Region	204-983-5082	franzinw@dfo-mpo.gc.ca
Wildlife (Fish)	Stewart, Ken	University of Manitoba Senior Scholar (Department of Zoology) Co-author of the book: Freshwater Fishes of Manitoba	204-269-3997	kstwr@mts.net
Wildlife (Plants)	Heshka, Lorne	Co-author of the book: Orchids of Manitoba: A Field Guide	204-663-6850	lheshka@mts.net
Wildlife (Plants)	Punter, Elizabeth	University of Manitoba Department of Botany Herbarium	204-474-9208	punterec@cc.umanitoba.ca
Wildlife (Plants)	Staniforth, Richard	University of Winnipeg Biology Department	204-786-9433	r.staniforth@uwinnipeg.ca

APPENDIX C

NATURAL REGIONS OF MANITOBA MAP

**NATURAL REGION 5A – MID BOREAL LOWLANDS
ENDURING FEATURES MAP**

**NATURAL REGION 5B – INTERLAKE PLAIN
ENDURING FEATURES MAP**



Natural Regions in Manitoba

Map is for illustrative purpose only.
Contact Protected Areas Initiative for more information.

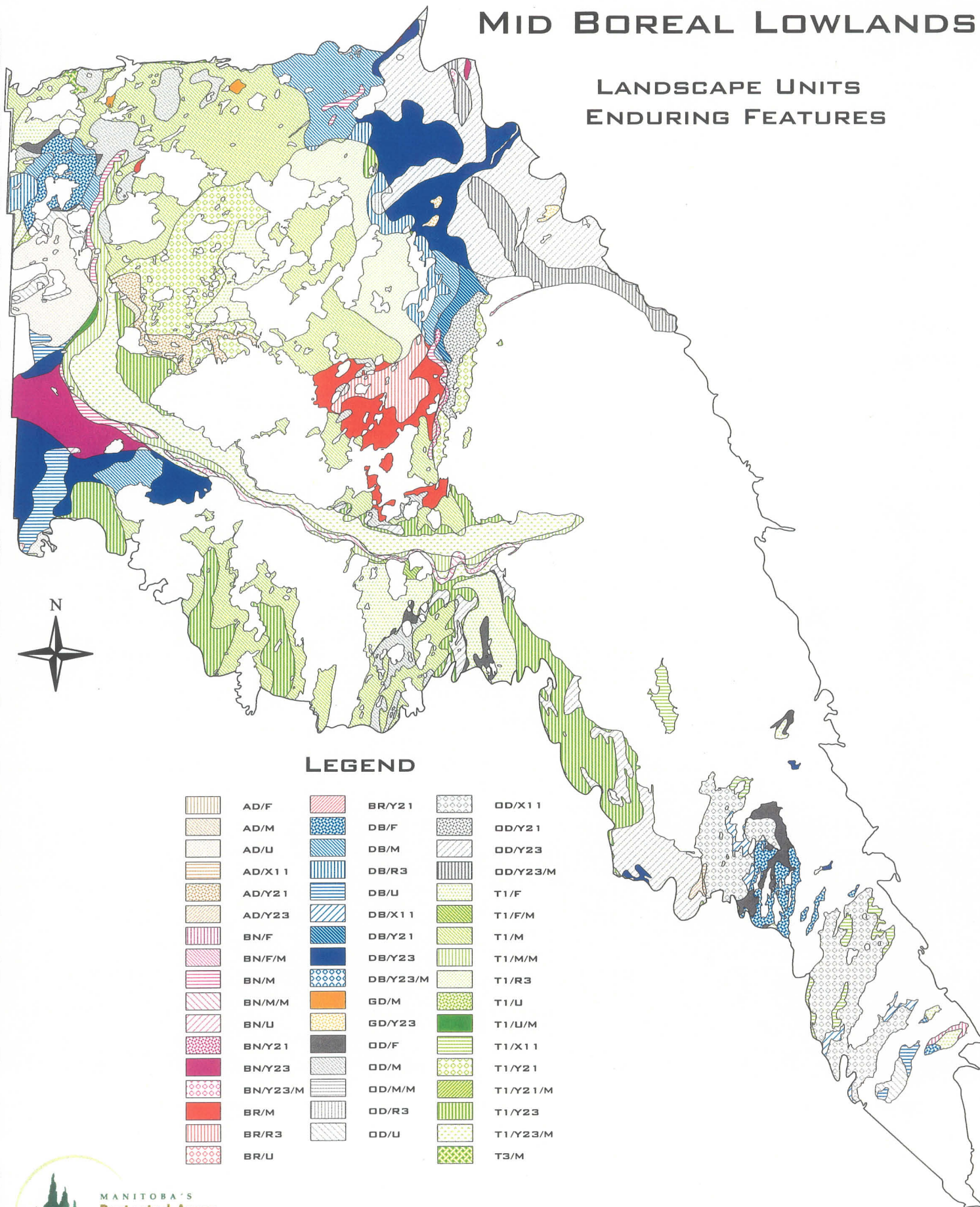
This map shows Manitoba's natural regions, which are broad areas that share similarities in geography, climate and vegetation. Protected areas are being identified and created in each of Manitoba's natural regions.

For more information about
Manitoba's Protected Areas Initiative
visit our website at www.manitobaprotectedareas.com
or contact us at 1-800-282-8069 ext 4040
email: pai@gov.mb.ca
Box 53, 200 Saulteaux Cres. Wpg, MB, R3J 3W3

- | | |
|---|--------------------------|
| 1 - Northern Transition Forest
1a - Selwyn Transition Forest
1b - Kazan River Upland | 6 - Aspen/Oak Parklands |
| 2 - Arctic Tundra
2a - Maguse River Upland
2b - Coastal Hudson Bay Lowland | 7 - Western Uplands |
| 3 - Hudson Bay Lowlands | 8 - Souris Till Plain |
| 4 - Precambrian Boreal Forest
4a - Churchill River Upland
4b - Hayes River Upland
4c - Lac Seul Upland | 9 - Tall Grass Prairie |
| 5 - Manitoba Lowlands
5a - Mid Boreal Lowland
5b - Interlake Plain
5c - Lake of the Woods | 10 - Turtle Mountain |
| | 11 - Pembina/Tiger Hills |
| | 12 - Assiniboine Delta |

NATURAL REGION 5A MID BOREAL LOWLANDS

LANDSCAPE UNITS ENDURING FEATURES



LEGEND

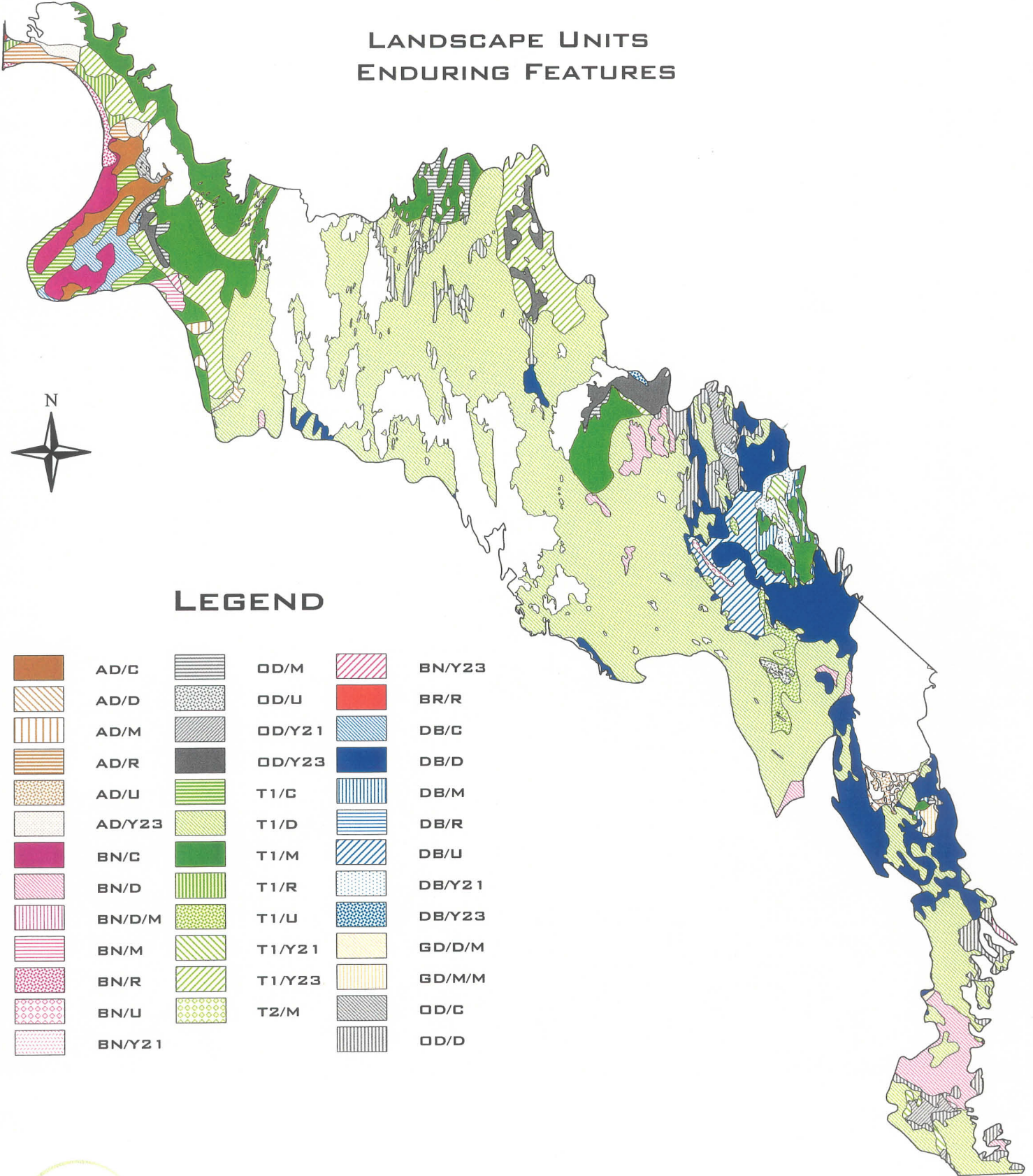
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	AD/M		DB/F		OD/Y21
	AD/U		DB/M		OD/Y23
	AD/X11		DB/R3		OD/Y23/M
	AD/Y21		DB/U		T1/F
	AD/Y23		DB/X11		T1/F/M
	BN/F		DB/Y21		T1/M
	BN/F/M		DB/Y23		T1/M/M
	BN/M		DB/Y23/M		T1/R3
	BN/M/M		GD/M		T1/U
	BN/U		GD/Y23		T1/U/M
	BN/Y21		OD/F		T1/X11
	BN/Y23		OD/M		T1/Y21
	BN/Y23/M		OD/M/M		T1/Y21/M
	BR/M		OD/R3		T1/Y23
	BR/R3		OD/U		T1/Y23/M
	BR/U				T3/M



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DATE: MAY 30 2003

NATURAL REGION 5B INTERLAKE PLAIN

LANDSCAPE UNITS ENDURING FEATURES



LEGEND

	AD/C		OD/M		BN/Y23
	AD/D		OD/U		BR/R
	AD/M		OD/Y21		DB/C
	AD/R		OD/Y23		DB/D
	AD/U		T1/C		DB/M
	AD/Y23		T1/D		DB/R
	BN/C		T1/M		DB/U
	BN/D		T1/R		DB/Y21
	BN/D/M		T1/U		DB/Y23
	BN/M		T1/Y21		GD/D/M
	BN/R		T1/Y23		GD/M/M
	BN/U		T2/M		OD/C
	BN/Y21				OD/D



20 0 20 40 KILOMETERS



COMPILED BY: CHRIS KULLMAN
DATE: MAY 30 2003

**APPENDIX D
FOREST 'AREA SUMMARY' ANALYSIS*:**

MAP D1 - REGION MAP

MAP D2 – BROAD HABITAT TYPE MAP

BROAD HABITAT TYPE ANALYSIS

LAND COVER ANALYSIS

LAND TYPE ANALYSIS

MAP D3 - AGE CLASS MAP

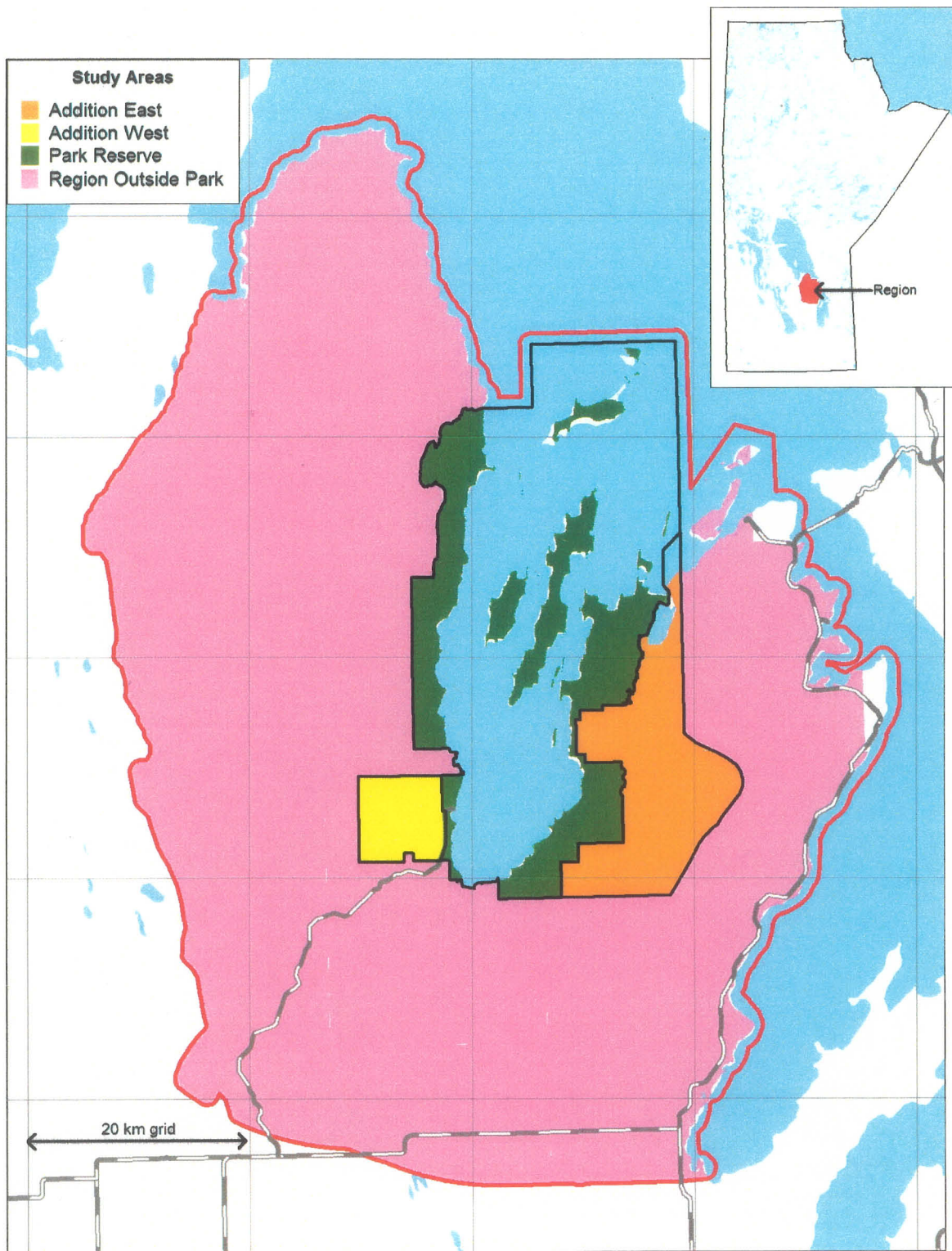
MAP D4 – AGE CLASS > 100 YEARS

AGE CLASS ANALYSIS

MAP D5 – RARE VEGETATION TYPE MAP

RARE VEGETATION TYPE ANALYSIS

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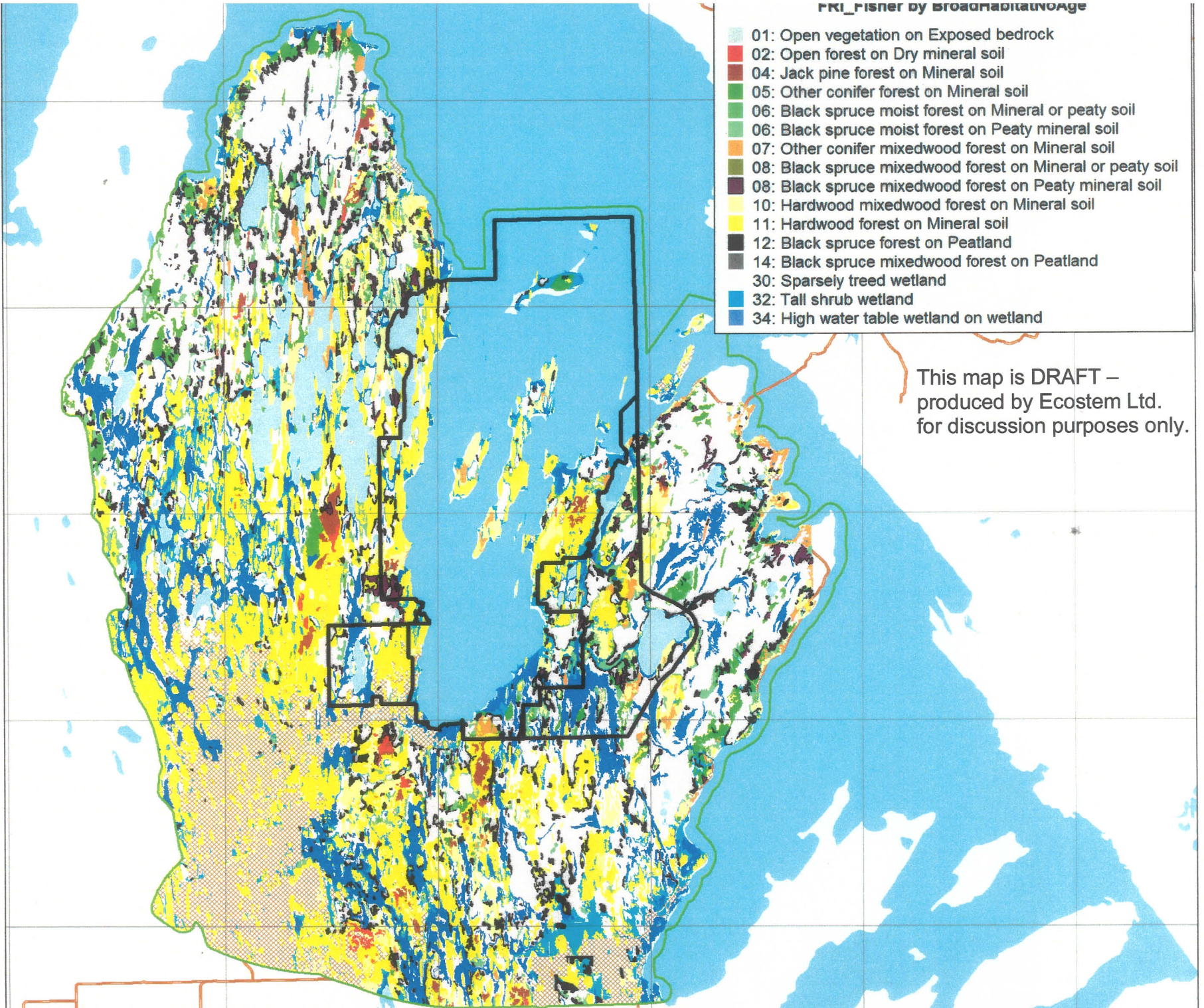
MAP D1 – REGION MAP

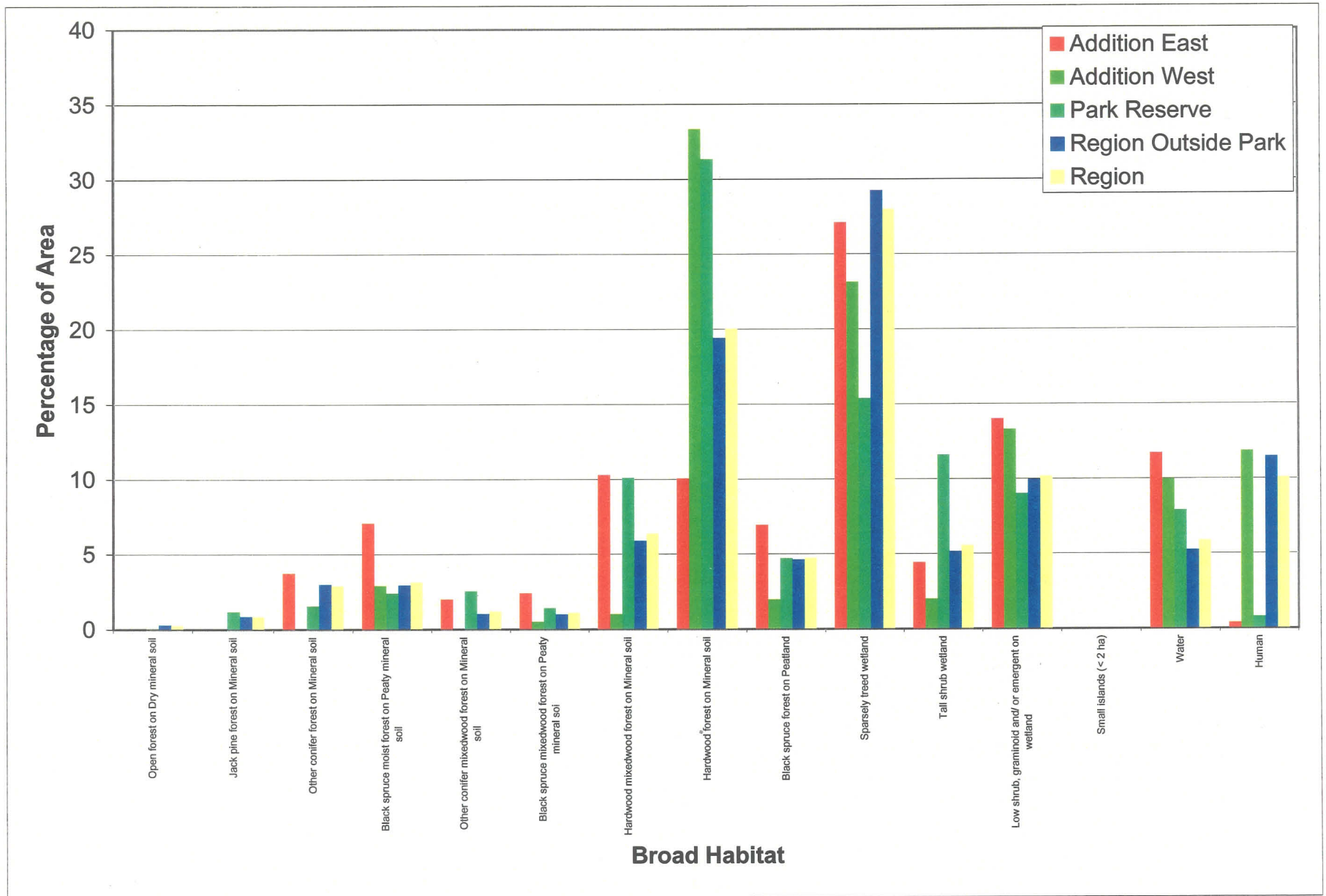
PKI_Fisher by BroadHabitatType

- 01: Open vegetation on Exposed bedrock
- 02: Open forest on Dry mineral soil
- 04: Jack pine forest on Mineral soil
- 05: Other conifer forest on Mineral soil
- 06: Black spruce moist forest on Mineral or peaty soil
- 06: Black spruce moist forest on Peaty mineral soil
- 07: Other conifer mixedwood forest on Mineral soil
- 08: Black spruce mixedwood forest on Mineral or peaty soil
- 08: Black spruce mixedwood forest on Peaty mineral soil
- 10: Hardwood mixedwood forest on Mineral soil
- 11: Hardwood forest on Mineral soil
- 12: Black spruce forest on Peatland
- 14: Black spruce mixedwood forest on Peatland
- 30: Sparsely treed wetland
- 32: Tall shrub wetland
- 34: High water table wetland on wetland

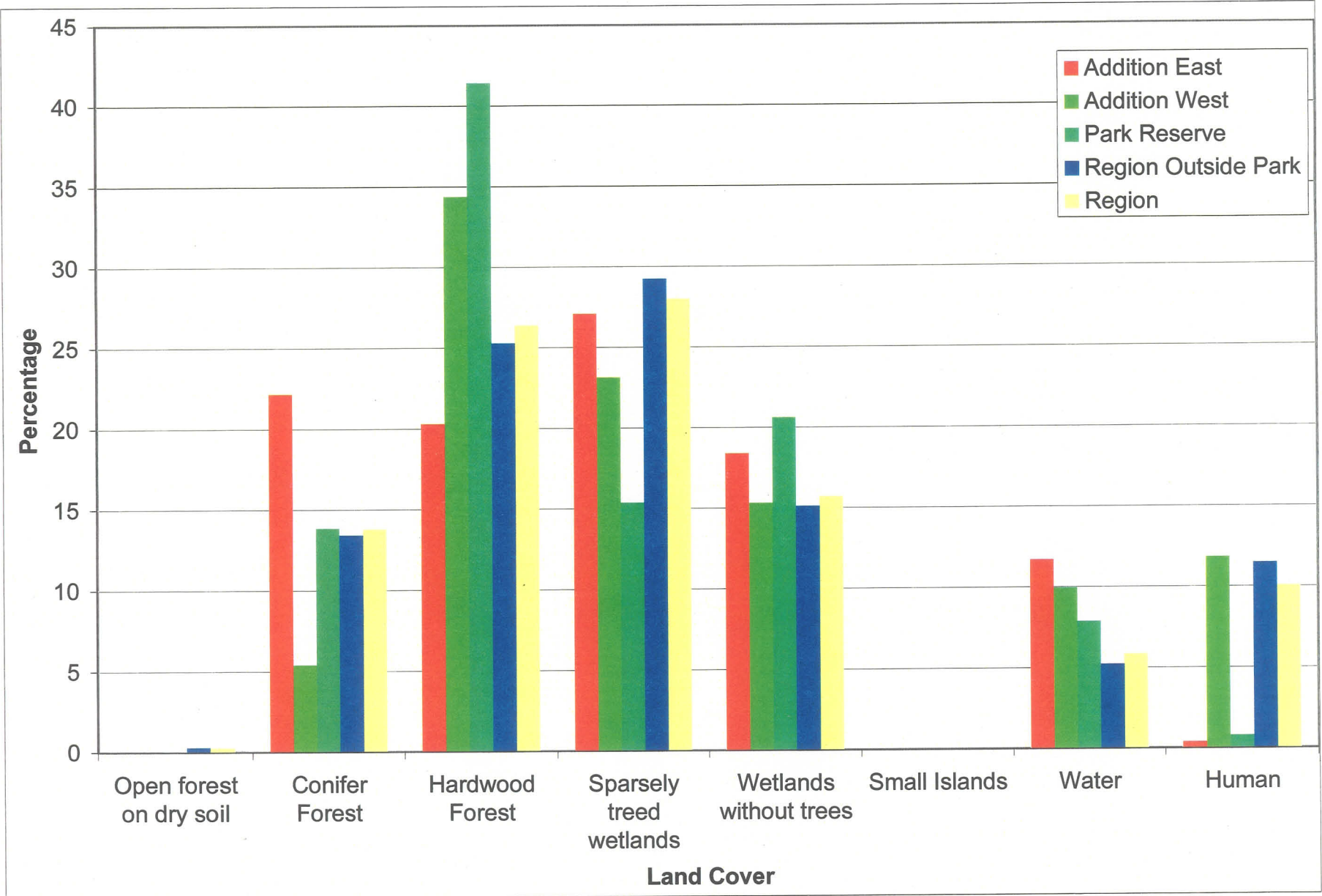
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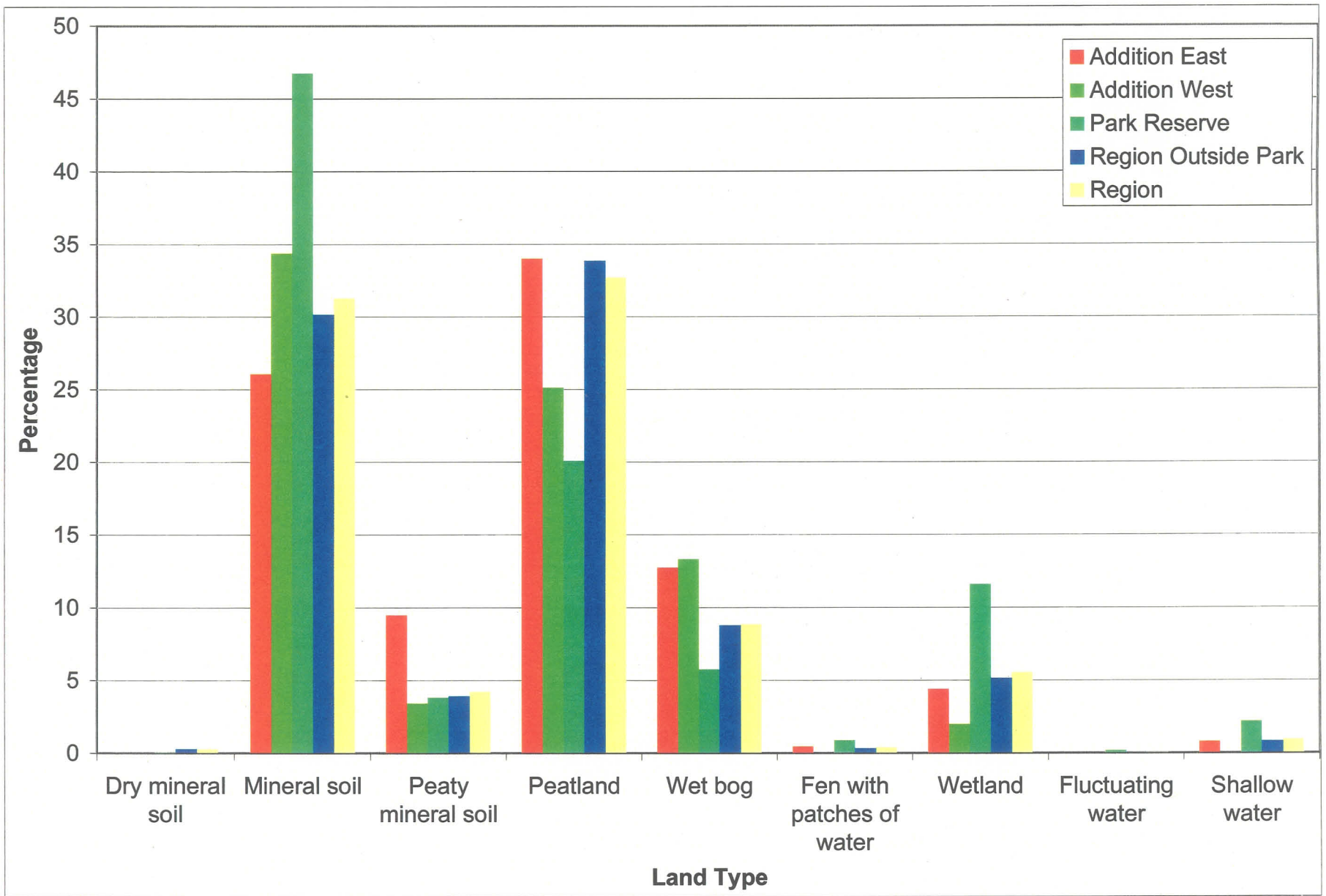
MAP D2 – BROAD HABITAT TYPE MAP

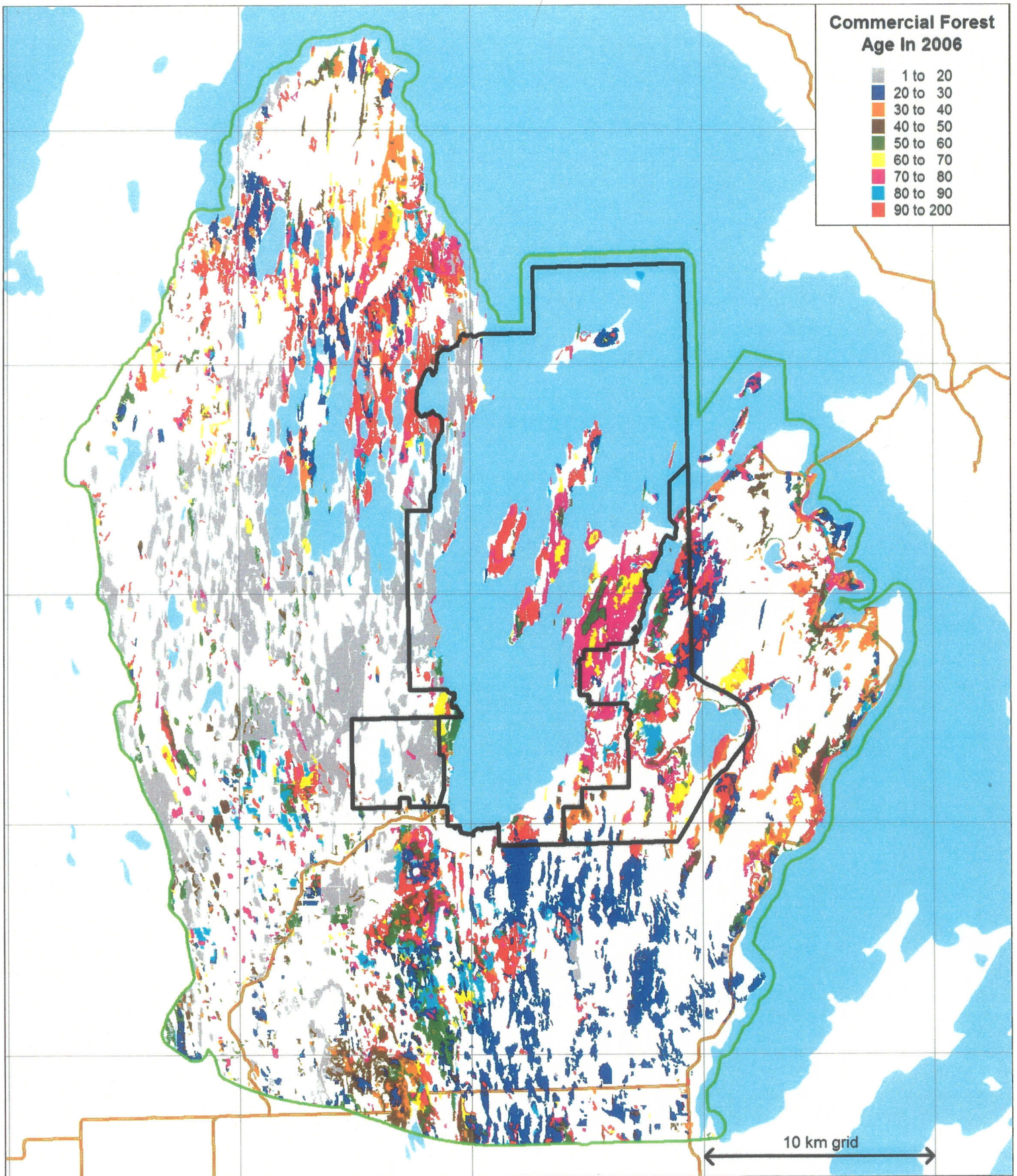




BROAD HABITAT TYPE ANALYSIS

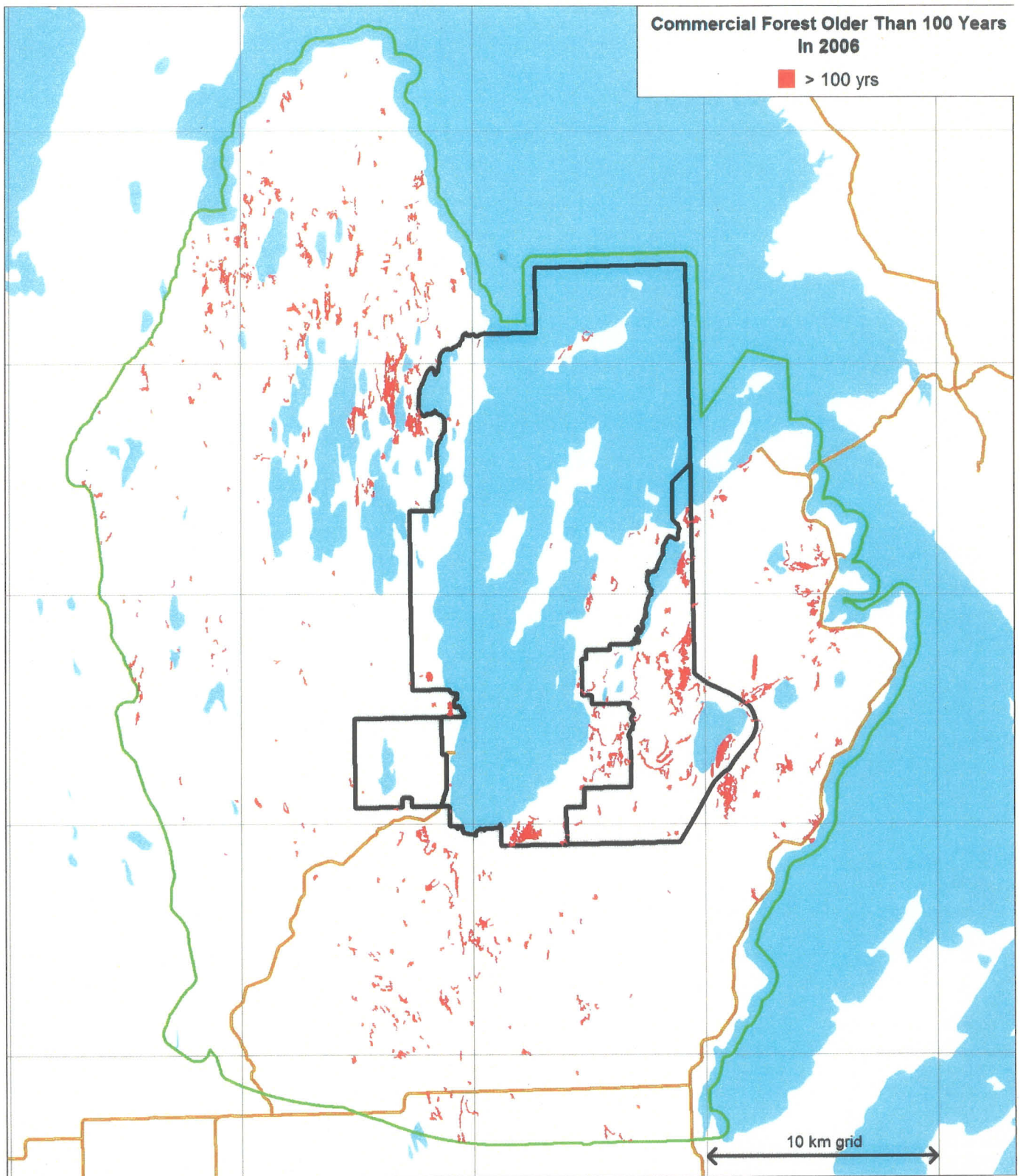






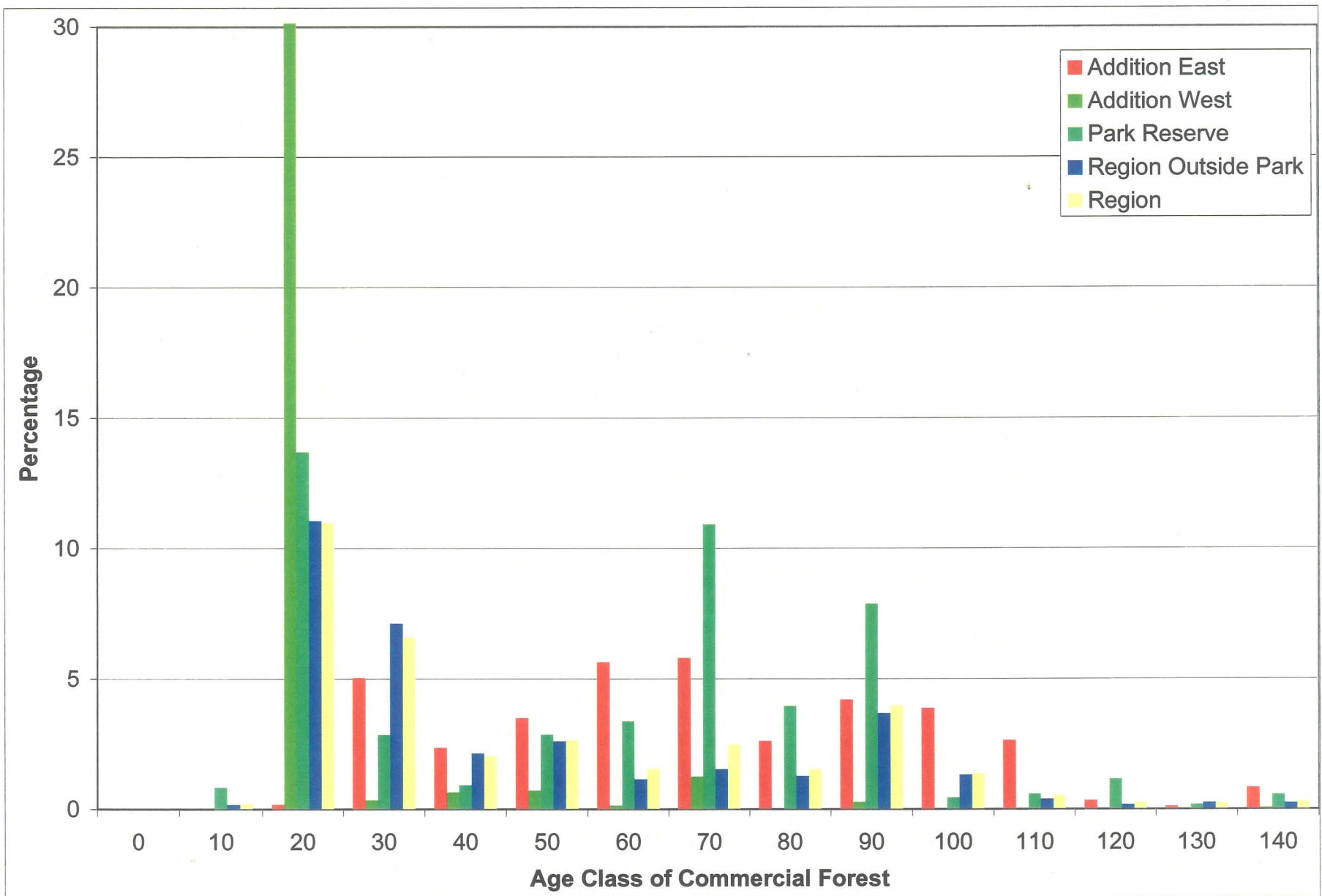
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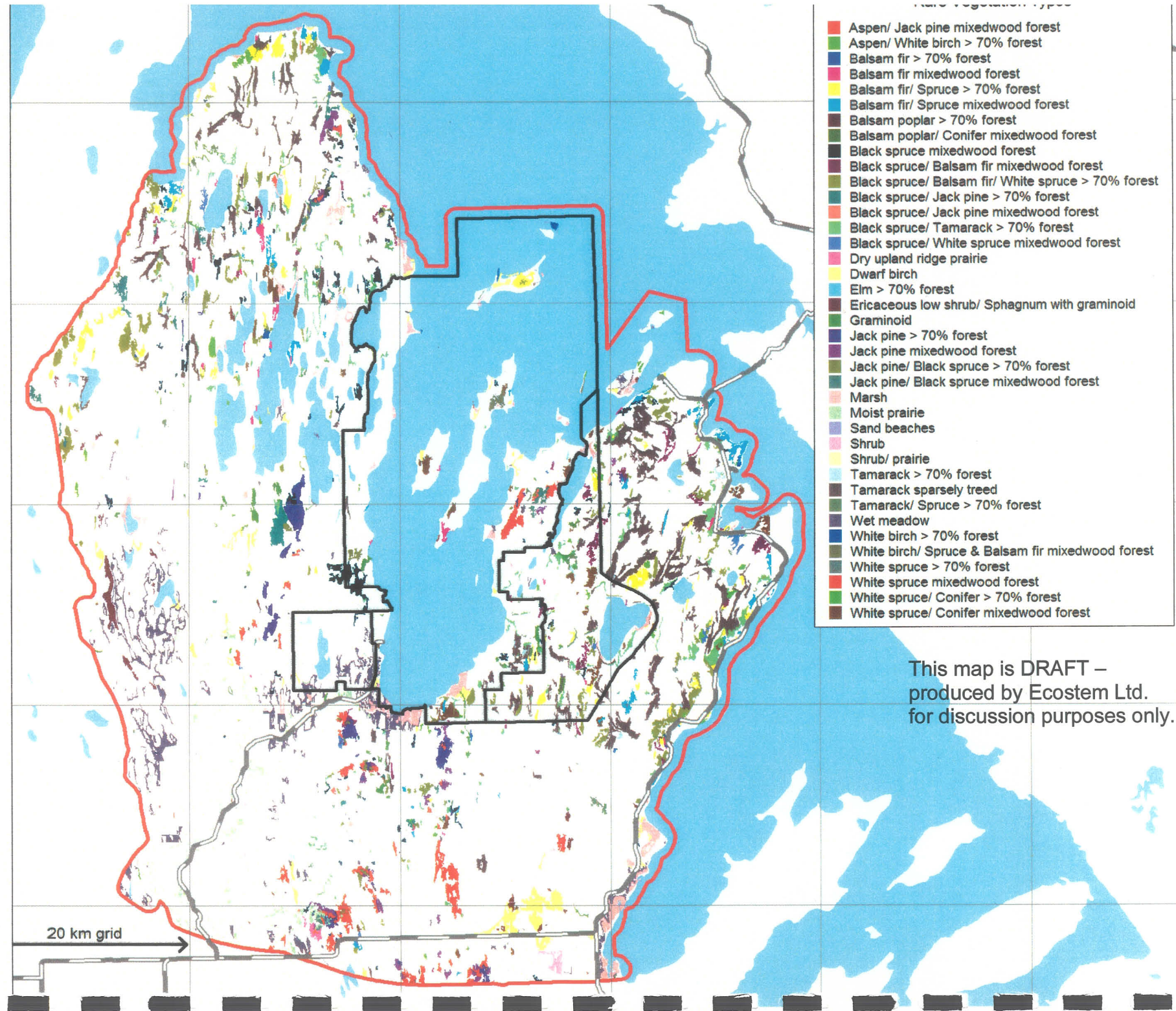
MAP D3 – AGE CLASS MAP



This map is DRAFT – produced by Ecostem Ltd. for discussion purposes only.

MAP D4 – AGE CLASS > 100 YEARS





MAP D5 – RARE VEGETATION TYPE MAP

Fisher Bay Region - Rare Vegetation Types Identified Within Broad Habitat Types

Area (ha)		Study Area					Grand Total
BroadHabitatNoAge	Vegetation	Addition East	Addition West	Park Reserve	Region Outside Park		
02: Open forest on Dry mineral soil	Jack pine > 70% forest			14	592	606	
	Jack pine mixedwood forest				94	94	
	Jack pine/ Black spruce > 70% forest				173	173	
	Jack pine/ Black spruce mixedwood forest				73	73	
04: Jack pine forest on Mineral soil	Jack pine > 70% forest				1,329	1,329	
	Jack pine mixedwood forest			51	847	898	
	Jack pine/ Black spruce > 70% forest	4		104	479	587	
	Jack pine/ Black spruce mixedwood forest			178	61	239	
05: Other conifer forest on Mineral soil	Balsam fir > 70% forest				76	76	
	Balsam fir/ Spruce > 70% forest	306		207	2,188	2,701	
	Black spruce/ Balsam fir/ White spruce > 70% forest	295		168	4,421	4,884	
	Black spruce/ Jack pine > 70% forest				1,317	1,317	
	Black spruce/ Tamarack > 70% forest	88		45	735	868	
	White spruce > 70% forest				28	28	
	White spruce/ Conifer > 70% forest	73		16	715	804	
06: Black spruce moist forest on Peaty mineral soil	Black spruce > 70% forest	1,363	171	636	9,225	11,395	
	Tamarack > 70% forest	25			27	52	
	Tamarack/ Spruce > 70% forest	53		36	46	135	
07: Other conifer mixedwood forest on Mineral soil	Balsam fir mixedwood forest	16		85	434	535	
	Balsam fir/ Spruce mixedwood			101	1,950	2,051	

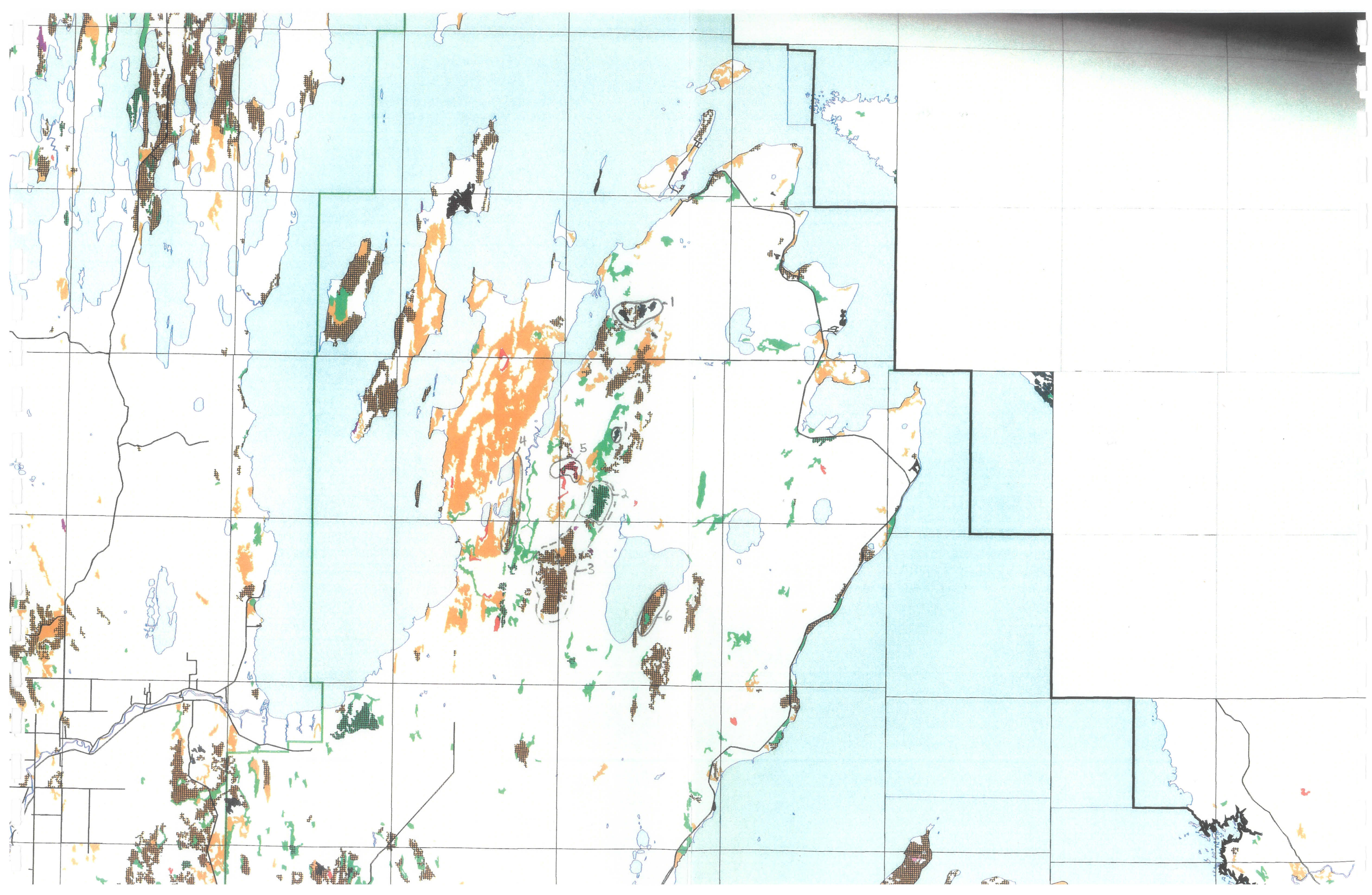
RARE VEGETATION TYPE ANALYSIS

	forest					
	White spruce mixedwood forest				32	32
	White spruce/ Conifer mixedwood forest	392		528	847	1,767
08: Black spruce mixedwood forest on Peaty mineral soil	Black spruce mixedwood forest	90	30	339	1,869	2,328
	Black spruce/ Balsam fir mixedwood forest	377		55	871	1,303
	Black spruce/ Jack pine mixedwood forest				57	57
	Black spruce/ White spruce mixedwood forest	23		6	358	387
10: Hardwood mixedwood forest on Mineral soil	Aspen/ Conifer mixedwood forest	1,918	60	2,195	16,315	20,488
	Aspen/ Jack pine mixedwood forest			455	2,302	2,757
	Balsam poplar/ Conifer mixedwood forest	174		5	30	209
	White birch/ Spruce & Balsam fir mixedwood forest			166	11	177
11: Hardwood forest on Mineral soil	Aspen > 70% forest	2,012	1,956	8,680	61,116	73,764
	Aspen/ White birch > 70% forest	13		11	50	74
	Balsam poplar > 70% forest	19		14	262	295
	Elm > 70% forest				3	3
	White birch > 70% forest			59	37	96
12: Black spruce forest on Peatland	Black spruce > 70% forest	1,005	76	1,057	12,288	14,426
	Black spruce/ Tamarack > 70% forest	313	6	142	1,738	2,199
	Tamarack > 70% forest	11	34	64	178	287
	Tamarack/ Spruce > 70% forest	81		54	407	542
30: Sparsely treed wetland	Black spruce sparsely treed	4,595	1,357	3,900	83,945	93,797
	Tamarack sparsely treed	922		397	8,688	10,007
32: Tall shrub wetland	Dwarf birch		12	468	2,115	2,595

	Shrub	10			228	238
	Shrub/ prairie				5	5
	Willow	887	105	2,775	13,970	17,737
34: Low shrub, graminoid and/ or emergent on wetland	Ericaceous low shrub/ Sphagnum	2,596	781	1,610	27,227	32,214
	Ericaceous low shrub/ Sphagnum with graminoid				605	605
	Graminoid	92		246	1,024	1,362
	Marsh	161		611	2,618	3,390
	Mud/ salt flats			27	1	28
	Sand beaches			24	90	114
40: Small islands (< 2 ha)	Small islands (less than 2 ha.)			4	5	9
40: Water	Water	2,383	584	2,203	16,535	21,705
50: Human	Abandoned cultivated land				175	175
	Airstrips				12	12
	Cropland - cultivated				5,601	5,601
	Drainage ditches		1		449	450
	Dry upland ridge prairie			5	126	131
	Dugouts/ water holes			1	24	25
	Fence lines (community pastures), fire guards			7	84	91
	Gravel pits/ mine sites		3	1	376	380
	Hayland - cultivated		91		6,519	6,610
	Land clearing in progress				643	643
	Moist prairie	15	7	6	1,237	1,265
	Pastureland - domestic animals				11,542	11,542
	Recreational sites				7	7
	Roads/ railroads	3	20	9	2,136	2,168
	Shelter belts				12	12
	Townsites/ residential sites			36	1,867	1,903
	Wet meadow	61	572	160	5,535	6,328
Grand Total		20,376	5,866	27,961	316,982	371,185

APPENDIX E
COVERTYPE MAP SHOWING OLD GROWTH FOREST

Please refer to the large Covertypes Map accompanying this report.



APPENDIX F
EXCERPT FROM GUIDE FOR USE OF FOREST INVENTORY MAPS:
CUTTING CLASS AND SPECIES COMPOSITION

PROVINCE OF MANITOBA

DEPARTMENT OF NATURAL RESOURCES

FORESTRY BRANCH

FOREST INVENTORY

PROVINCIAL
FOREST INVENTORY

GUIDE FOR USE OF FOREST INVENTORY MAPS

4. Cutting Class

Cutting class is based on size, vigour, state of development and maturity of a stand for harvesting purposes.

- a) Class 0 - Forest land not restocked following fire, cutting, windfall or other major disturbances (hence, potentially productive land). Some reproduction or scattered residual trees (with net merchantable volume less than 20m^3 per hectare) may be present.
- b) Class 1 - Stands which have been restocked either naturally or artificially. There may be scattered residual trees present as in Cutting Class 0. To be in Cutting Class 1 the average height of the stand must be less than 3 metres (3m).
- c) Class 2 - Advanced young growth of post size, with some merchantable volume. The average height of the stand must be over 3 metres in order to be in this cutting class.
- d) Class 3 - Immature stands with merchantable volume growing at or near their maximum rate, which definitely should not be cut. The average height of the stand should be over 10 metres and the average diameter should be over 9.0 centimetres (9.0cm) at D.b.h. (1.3m).
- e) Class 4 - Mature stands which may be cut as they have reached rotation age (± 10 years on Site 1 or ± 20 years on Site 2).
- f) Class 5 - Overmature stands, which should be given priority in cutting.

IV. SPECIES COMPOSITION

The species composition of a stand is based on the comparison of the tree count (basal area) for each species to the total tree count (basal area) of the stand, expressed as a percentage. Species composition is calculated to the nearest 1/10 percent for species group determination purposes and then rounded to the nearest 10 percent before entering the species composition as an introductory portion of the type aggregate. The above procedure is for cruised stands only, the majority of stands information is derived from photo-interpretation.

The following species and abbreviations are used with the species composition:

<u>Species</u>	<u>Symbol</u>	<u>Species</u>	<u>Symbol</u>
White Pine	WP	Balsam Poplar	BA
Red Pine	RP	Eastern Cottonwood	CO
Jack Pine	JP	Willow	W
Scots Pine	SP	White Birch	WB
Black Spruce	BS	Hackberry	HB
White Spruce	WS	Basswood	B
Balsam Fir	BF	Manitoba Maple	MM
Tamarack Larch	TL	Ash	AS
Eastern Cedar	EC	White Elm	E
Trembling Aspen	TA	Hop Hornbeam	HH
Large Tooth Aspen	LA	Bur Oak	BO

An example of a type aggregate written in full:

96-1-5-4	B06 E2 AS2
9 - cover type:	Hardwood 'H' < 25% S
6 - subtype:	Bur Oak
1 - site 1	
5 - cutting class 5 - overmature	
4 - crown closure 71% and over	
B06 - Bur Oak	60%
E2 - Elm	20%
AS2 - Ash	<u>20%</u>
Total	100%

APPENDIX G

MANITOBA CONSERVATION DATA CENTRE LIST OF RARE SPECIES

RARE SPECIES SEARCH AREA MAP

CONSERVATION DATA CENTRE SPECIES RANKING SYSTEM

Manitoba Conservation Data Centre List of Rare Species For the Fisher Bay Park Reserve Area

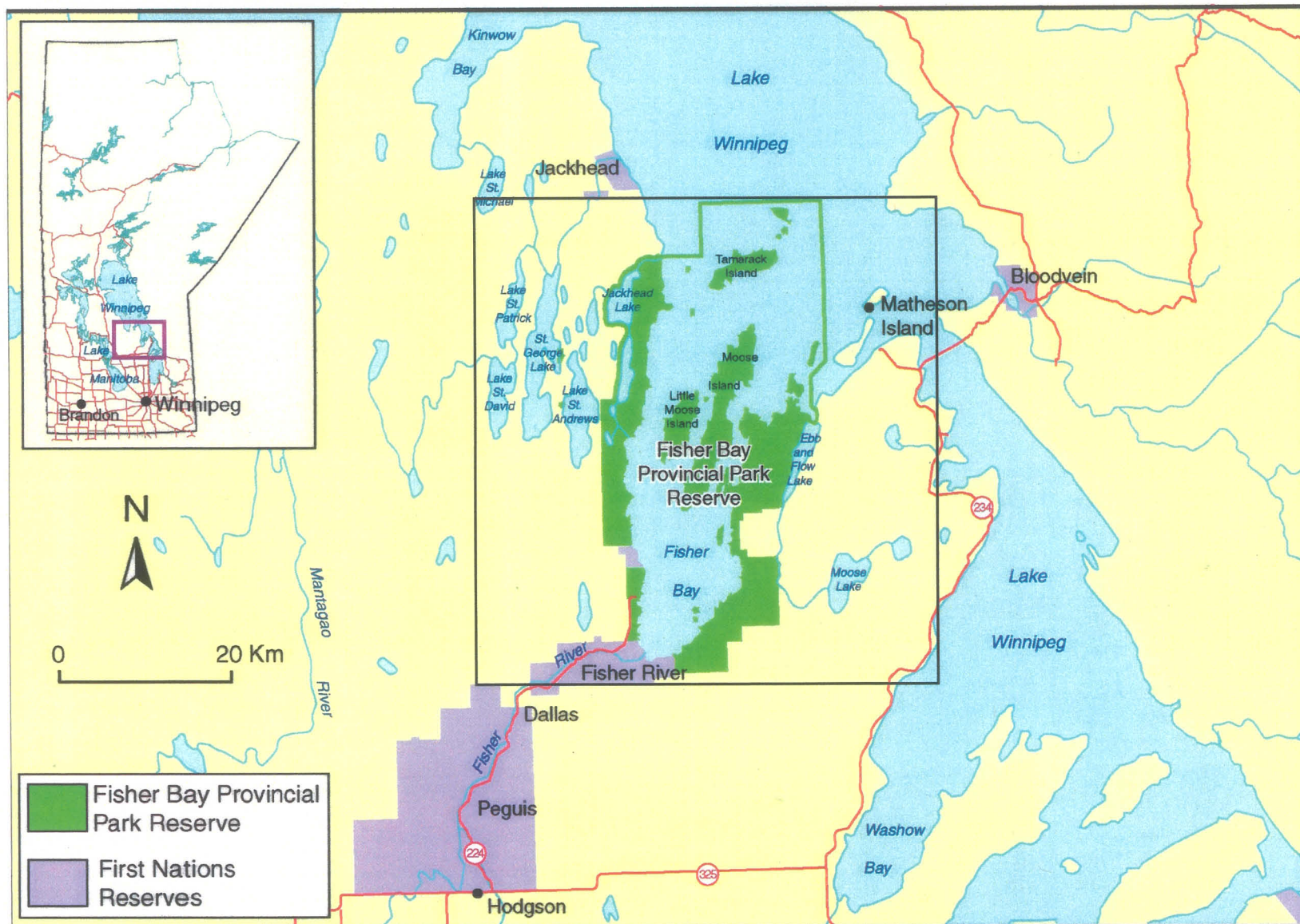
PROVINCIAL SCIENTIFIC NAME	PROVINCIAL COMMON NAME	GLOBAL SCIENTIFIC NAME	GLOBAL COMMON NAME	G_RANK	S_RANK
American white pelican	American White Pelican	American white pelican	American White Pelican	GNR	SNR
Calopogon pulchellus	Swamp-pink	Calopogon tuberosus	Tuberous Grass-pink	G5	S2
Carex vulpinoidea	Fox Sedge	Carex vulpinoidea	Fox Sedge	G5	S3?
Charadrius melodus	Piping Plover	Charadrius melodus	Piping Plover	G3	S2B
Coregonus zenithicus	Shortjaw Cisco	Coregonus zenithicus	Shortjaw Cisco	G3	S3
Phalacrocorax auritus	Double-crested Cormorant	Phalacrocorax auritus	Double-crested Cormorant	G5	S4B
Gulls	Gulls	Gulls	Gulls	GNR	SNR
Hérons	Hérons	Hérons	Hérons	GNR	SNR
Heteranthera dubia	Water Star-grass	Heteranthera dubia	Grassleaf Mud-plantain	G5	S2
Ichthyomyzon castaneus	Chestnut Lamprey	Ichthyomyzon castaneus	Chestnut Lamprey	G4	S3S4
Macrhybopsis storeriana	Silver Chub	Macrhybopsis storeriana	Silver Chub	G5	S3
Myotis lucifugus	Little Brown Myotis	Myotis lucifugus	Little Brown Bat	G5	S2N,S5B
Platanthera orbiculata	Round-leaved Bog Orchid	Platanthera orbiculata	Large Roundleaf Orchid	G5	S3
Rangifer tarandus caribou	Caribou	Rangifer tarandus caribou	Woodland Caribou	G5T4	S4
Snake hibernacula	Snake Hibernacula	Snake hibernacula		GNR	SNR
Terns	Terns	Terns	Terns	GNR	SNR

*The table includes scientific and common names, as well as the global (GRank) and provincial (SRank) rankings for each species. Further information on these ranking systems can be found on the following pages.

*Also see Letter from Manitoba CDC accompanying the above table.

Reference: Manitoba Conservation Data Centre; Wildlife and Ecosystem Protection Branch, Manitoba Conservation.

Map shows area (black box) used by Manitoba Conservation to search for rare species.





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Conservation Data Centre



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- [Newsletters and Publications Newsletter](#)
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MBCDC Species of Conservation Concern

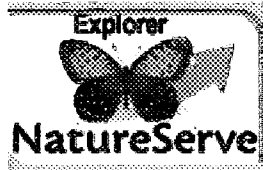
The term "species of conservation concern" includes species that are rare, disjunct, or at risk throughout their range or in Manitoba and in need of further research. The term also encompasses species that are listed under the Manitoba Endangered Species Act (MBESA), or that have a special designation by the Committee On the Status of Endangered Wildlife In Canada (COSEWIC).

Conservation Data Centre Ranks (Global and Provincial)

Species are evaluated and ranked by the Conservation Data Centre on the basis of their range-wide (global - G) status, and their province-wide (subnational - S) status according to a standardized procedure used by all Conservation Data Centres and Natural Heritage Programs. These ranks are used to determine protection and data collection priorities, and are revised as new information becomes available.

For each level of distribution—global and provincial—species are assigned a numeric rank ranging from 1 (very rare) to 5 (demonstrably secure). This reflects the species' relative endangerment and is based primarily on the number of occurrences of that species globally or within the province. However, other information, such as date of collection, degree of habitat threat, geographic distribution patterns and population size and trends, is considered when assigning a rank. The number of occurrences listed below are suggestions, not absolute criteria.

For example, the Green Frog (*Rana clamitans*) is ranked G5, S2. That is, globally the species is abundant and secure, while in Manitoba it is rare and may be vulnerable to extirpation.



Rank	Definition
1	Very rare throughout its range or in the province (5 or fewer occurrences, or very few remaining individuals). May be especially vulnerable to extirpation.
2	Rare throughout its range or in the province (6 to 20 occurrences). May be vulnerable to extirpation.
3	Uncommon throughout its range or in the province (21 to 100 occurrences).
4	Widespread, abundant, and apparently secure throughout its range or in the province, with many occurrences, but the element is of long-term concern (> 100 occurrences).

5	Demonstrably widespread, abundant, and secure throughout its range or in the province, and essentially irradicable under present conditions.
U	Possibly in peril, but status uncertain; more information needed.
H	Historically known; may be rediscovered.
X	Believed to be extinct; historical records only, continue search.

Other Heritage Codes

Code	Definition
G#G# S#S#	Numeric range rank: A range between two of the numeric ranks. Denotes range of uncertainty about the exact rarity of the species.

Subrank

Code	Definition
T	Rank for subspecific taxon (subspecies, variety, or population); appended to the global rank for the full species, e.g. G4T3.

Qualifiers

Code	Definition
B	Breeding status of a migratory species. Example: S1B,SZN - breeding occurrences for the species are ranked S1 (critically imperilled) in the province, nonbreeding occurrences are not ranked in the province.
N	Non-breeding status of a migratory species. Example: S1B,SZN - breeding occurrences for the species are ranked S1 (critically imperilled) in the province, nonbreeding occurrences are not ranked in the province.
Q	Taxonomic questions or problems involved, more information needed; appended to the global rank.
T	Rank for subspecific taxon (subspecies, variety, or population); appended to the global rank for the full species.
#	A modifier to SX or SH; the species has been reintroduced but the population is not yet established.
?	Inexact or uncertain; for numeric ranks, denotes inexactness.

Although the Manitoba Conservation Data Centre maintains high standards of data quality control, it makes no warranty as to the fitness of the information for any purpose, or that the information is necessarily accurate or complete.

The Data User is advised that the Biodiversity Conservation Database maintained by the Data Centre is continually growing as new information is acquired and records are added or updated.

Manitoba Conservation Data Centre
Box 24, 200 Saulteaux Crescent
Winnipeg, Manitoba R3J 3W3
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Fax: (204) 945-3077

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APPENDIX H
DESCRIPTION OF LAKE ST. GEORGE CAVES
ECOLOGICAL RESERVE - FROM FILES OF MANITOBA
CONSERVATION, ECOLOGICAL RESERVES PROGRAM,
PARKS AND NATURAL AREAS BRANCH, 1997.

ECOLOGICAL RESERVE

Province/Territory: Manitoba

Name: Lake St. George Caves Ecological Reserve

Location: Those portions of Sections 28 & 29, Township 30, Range 1 East shown on Director of Survey Plan 19773.

Latitude - 51° 36' N; Longitude - 97° 25' W; NTS Map Sheet - 62 P/11, Lake St. Andrew

Total Area: 49 ha

Ecosystem(s) Represented:

mixed boreal forest on limestone with caves; some caves are used by bats; one cave is a major hibernaculum for overwintering bats.

Eco-description:

soils: Chitek and Fairford loams; both are extremely calcareous, medium texture glacial tills.

topography: flat to gently undulating.

vegetation: regenerating jack pine (*Pinus banksiana*) forest burned in 1989. Supports newly grown birch (*Betula papyrifera*), trembling aspen (*Populus tremuloides*), raspberry (*Rubus idaeus*), choke cherry (*Prunus virginiana*) and prickly wild rose (*Rosa acicularis*).

aquatic habitat: nil

fauna: little brown myotis (*Myotis lucifugus*) and northern myotis (*Myotis septentrionalis*) bats; typical boreal forest fauna.

Outstanding Features:

Nine caves in Ordovician Limestone occur within the reserve. One cave is the largest known bat hibernaculum in the province, providing habitat for 5000 to 10,000 bats. Two other caves are also used by bats. As a group, the caves also contain unique geologic features including calcite crystals, geodes, goethite, "flowstone drapery" and "soda straws".

Degree of Disturbance:

The area was burned in 1989. At least 2 dead-timber salvage operations were subsequently undertaken in the area. Although not approved, some salvage occurred on top of and around some caves, but no damage to the hibernacula has been observed.

Susceptibility to Disturbance:

An active gravel pit is located about 450 m southeast of the bat hibernaculum in L. S. 4 of Section 28-30-1E. The location of the caves is well known, thus making them susceptible to unapproved use and vandalism. The principal bat cave has a grate over the opening.

Protective Status:

degree - rigorous
legislation - Ecological Reserves Act
agency - Manitoba Natural Resources
date established - March 15, 1997
IUCN Category = Ia

Management Agency:

Manitoba Natural Resources
Parks and Natural Areas Branch
Box 53, 200 Saulteaux Crescent
Winnipeg, Manitoba
R3J 3W3

Management Strategy:

Although a grate has been placed at the mouth of the principal bat cave, it should be upgraded.

Uses Allowed: Passive travel over the surface on foot is permitted at any time. Access to the caves requires a permit. Access to the caves is prohibited at times when the bats occupy it. Research on the bats in the reserve requires both wildlife and ecological reserve research permits.

Access: Jackhead Road north from Dallas

Actual Uses and Research: Over the years, there have been ongoing studies of the bat population. The caves were mapped by the Speleological Society of Manitoba.

Selected References:

Asmundson, Jeffrey D. and Ronald A. Larche. 1996. Bat Hibernacula Management Guidelines. Wildlife Branch, Manitoba Natural Resources. 31pp.

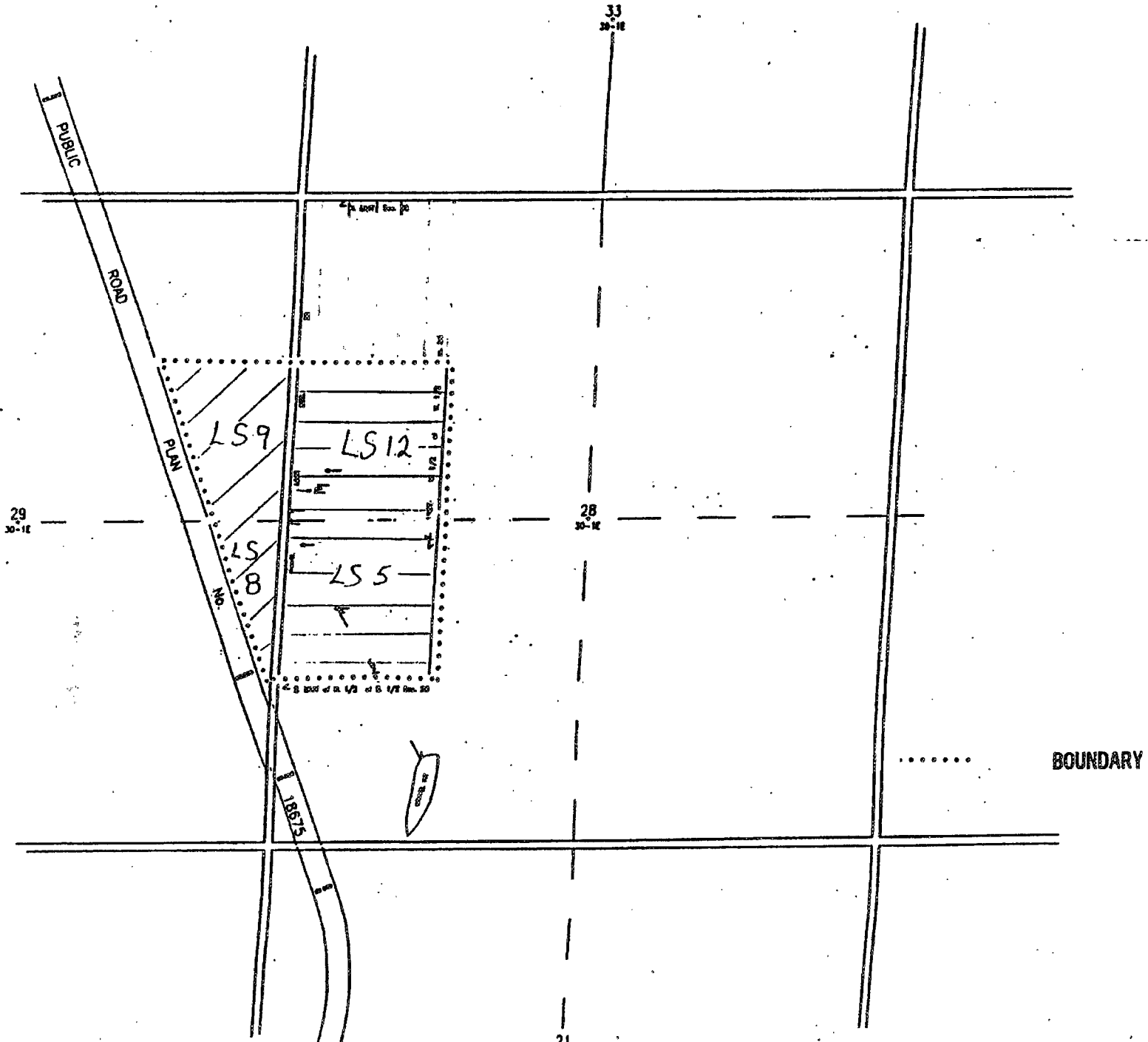
Speleological Society of Manitoba. 1991. Caves in Manitoba's Interlake. Winnipeg. 150pp.

Date Prepared: November 1996

Date Updated: March 1997

LAKE ST. GEORGE CAVES ECOLOGICAL RESERVE

METRIC



APPENDIX I
FISHER RIVER CREE NATION ANNUAL BIRD SIGHTINGS

Notes

Aileen A Urquhart

39 Second Ave N, Sioux Lookout, Ontario, P8T 1H2

807-737-2785

The data is compiled from weekly sightings from fall 1994 to spring 1999, during which time I was the United Church minister at the United Church in Fisher River. I usually had 3 or 4 feeders (3 black sun-flower, 1 mixed bird seed) around the manse, one suet feeder, and in the summer, 2 Niger feeders and 2 hummingbird nectar feeders

Each box in the chart represents a week

X = bird sighted in vicinity of the United Church in Fisher River and the river crossing area

O = bird sighted elsewhere in Fisher River Cree Nation (or as located)

h = call or song heard only

Location:

Peguis Reserve

Dallas

Hodgson

Kackhead (JKHD)

West Interlake - Eriksdale, Lundar area, Hwy 6

Some birds were not sighted every year

- Great Egret - one sighting only, 21 May 1995
- Great Grey Owls - 5-6 birds in Fisher River during winter of 1996-97
- Northern Hawk Owl - 4-5 birds during winter of 1996-97
- Black-capped Chickadees did not come to feed in summer months but could be heard in surrounding bush
- Juncos - often quite large flocks, 15-20. April 6 1998, there were ca 120 in the yard!
- Snow Buntings - usually every winter along roadsides in Interlake. Winter 1997-98 there was a huge flock in the field behind AKA Midway in Peguis. Occasionally in church yard. Winter 1999, there were between 10 and 33 in the church yard.

- Common Redpolls in winter of 1996 (13-15 birds, and in 1999 (only 8-9 birds
- Hoary Redpoll - 1 bird in flock of Common in winter 1996
- There were no Merlins at first. They moved in to the trees south of the church in spring 1997 (lured by the copious supply of small birds - often seen chasing goldfinches through the trees)

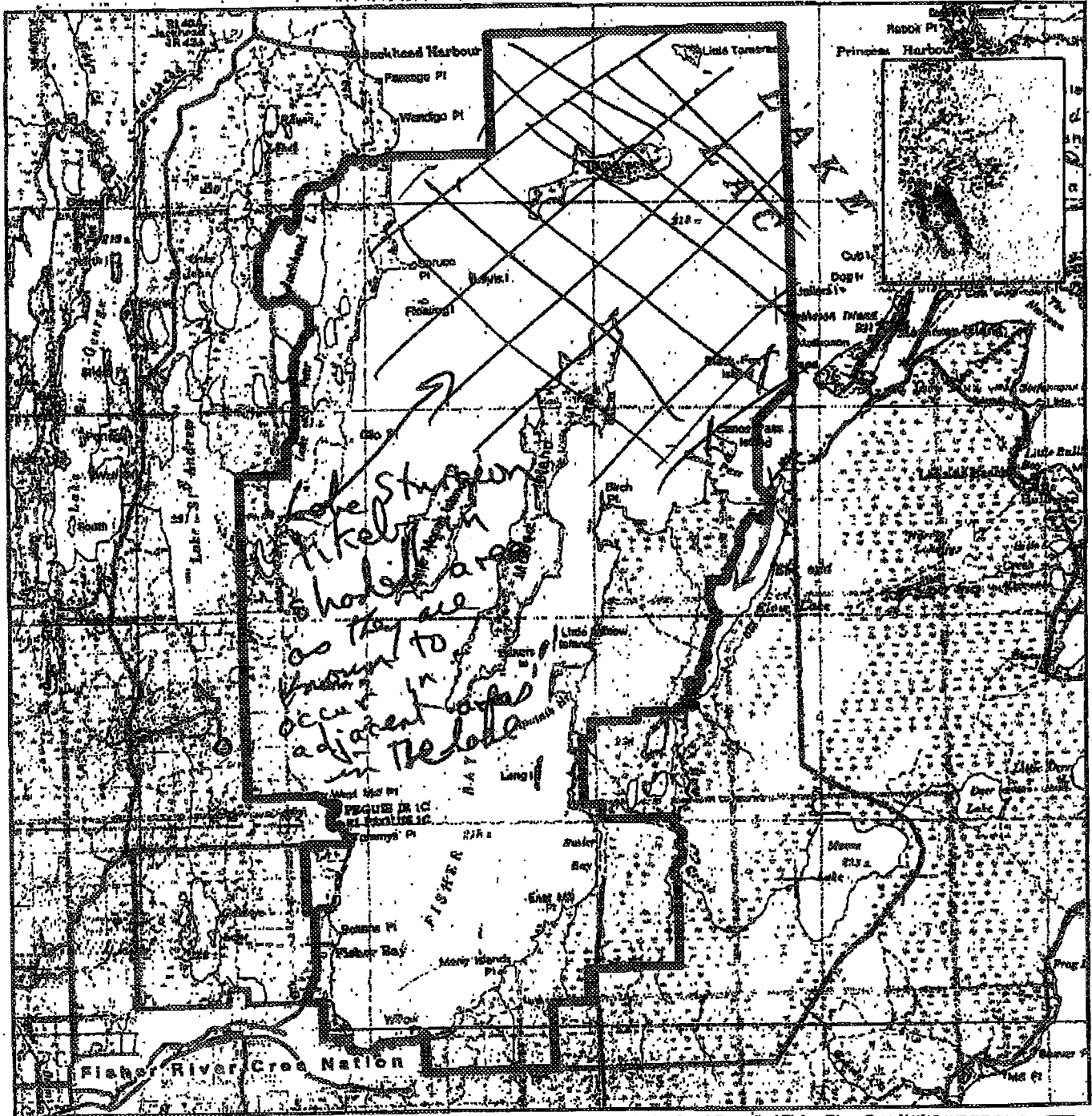
APPENDIX J
MAP OF POTENTIAL STURGEON HABITAT
IN THE FISHER BAY PARK RESERVE AREA

FROM : CIER

Documented LS
re: Dauphin River
in Sturgeon Bay
FAX NO. : 204-956-1895

May. 17 2006 02:03PM P2
Blood vein & Pigeon R
on east side of S river

• Ochiwasahow Park Reserve •



Proposed Additions to the Fisher Bay Park Reserve Boundary as Produced by the Band Council of Fisher River Cree Nation
 Present Fisher Bay Park Reserve Boundary as Produced by the Government of Manitoba
 Peguie First Nation Potential Treaty Land Entitlement Selection

Map Base: 1:200,000 Media Sheet 082P, 1976, Natural Resources Canada
 Data Sources: MLI, GeoGratis, NTOS

Map represents proposed additions to the Fisher Bay Park Reserve Boundary as discussed at the 02/2006 meeting of the Fisher River Cree Nation and Ochiwasahow Park and Wilderness Society. Map for internal use only.

APPENDIX K
OBSERVATIONS OF ORCHIDS IN THE MANITOBA INTERLAKE
BY LORNE HESHKA

Fisher Bay Park Reserve

Provided are two lists:

- List #1 - includes orchids I have observed in the area just south of Hogson (Interlake Forestry Centre) and on Hecla Island which is East of Fisher Bay.
- List #2 - created by extrapolation from surrounding areas indicating probable occurrence at the Fisher Bay Area.

List #1 - Orchids observed at the Interlake Forestry Centre (IFC) and Hecla Island (HI)

Amerorchis rotundifolia (HI)
Calopogon tuberosus (HI)
Calypso bulbosa (HI and IFC)
Corallorhiza striata (HI and IFC)
Corallorhiza trifida (HI)
Cypripedium arietinum (IFC)
Cypripedium parviflorum var *makasin* (HI & HIC)
Cypripedium parviflorum var *pubescens* (HI)
Cypripedium reginae (HI)
Goodyera repens (HI & HIC)
Malaxis unifolia (HI)
Platanthera aquilonis (HI)
Platanthera huronensis (HI)
Platanthera hookeri (HI)
Platanthera orbiculata (HI)
Platanthera obtusata (HI)

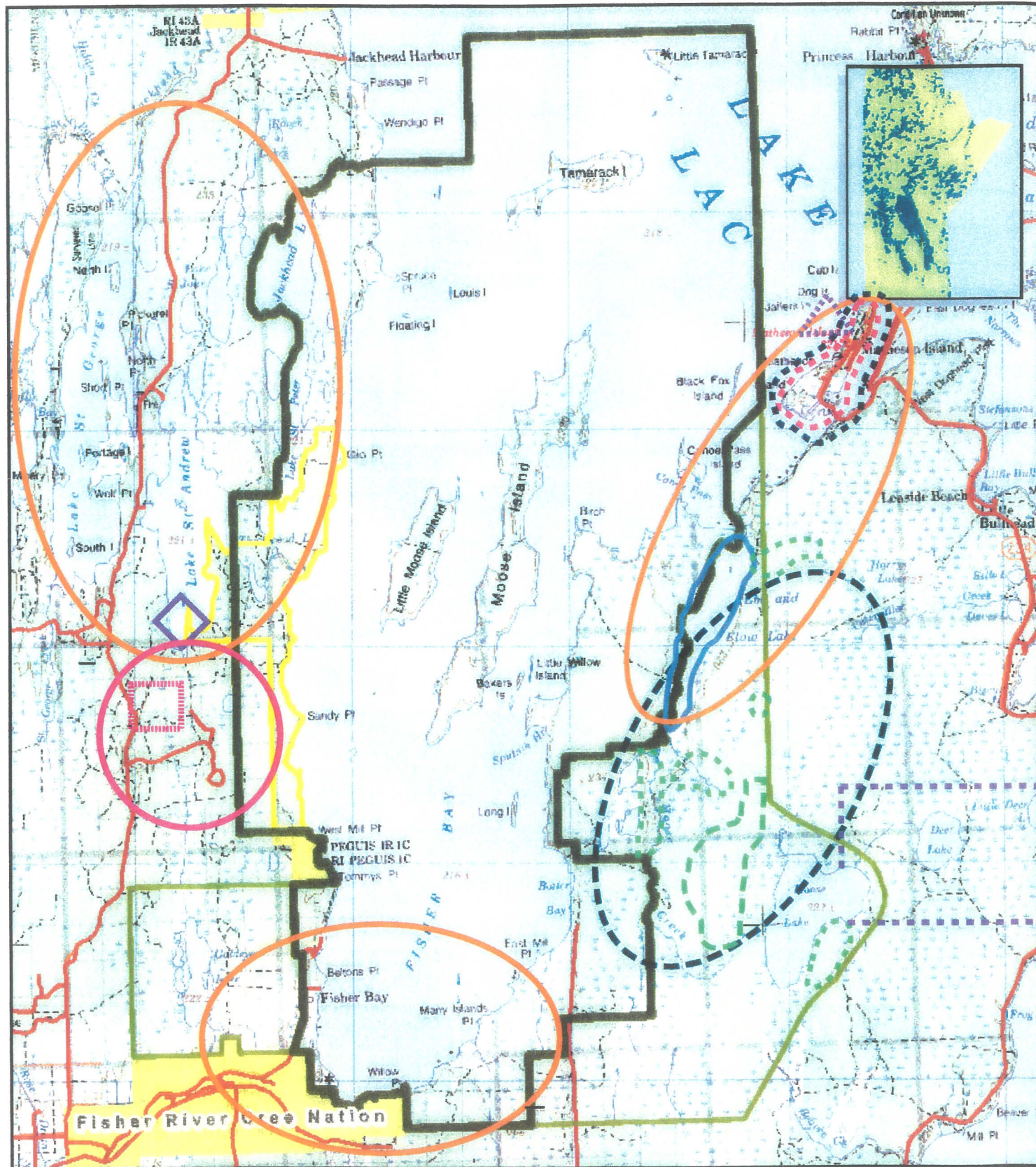
List #2 - Based on personal observations and Herbarium collected specimens from surrounding similar regions, the following orchids most likely occur in the Fisher Bay area. (Listed are only those that may have a probability of occurrence). Probability of occurrence indicated as : high, medium or low.











Amerorchis rotundifolia - high
Calopogon tuberosus - low
Calypso bulbosa - high
Coeloglossum viride - medium
Corallorhiza maculata - high
Corallorhiza striata - high
Corallorhiza trifida - high
Cypripedium arietinum - high
Cypripedium parviflorum var *makasin* - high

Cypripedium parviflorum var *pubescens* - high
Cypripedium reginae - high
Goodyera repens - high
Liparis loeselii - low
Listera cordata - high
Malaxis monophyllus var *brachypoda* - medium
Malaxis unifolia - low
Platanthera aquilonis - high
Platanthera dilatata - medium
Platanthera huronensis - high
Platanthera hookeri - low
Platanthera orbiculata - high
Platanthera obtusata - high
Spiranthes romanzoffiana - high

APPENDIX L
MAP OF AREAS OF ECOLOGICAL SIGNIFICANCE
IN THE FISHER BAY PARK RESERVE AREA

• Ochiwasahow Park Reserve •



-  waterfowl
-  cormorant
-  bat habitat
-  ecological reserve
-  rare plant occurrences
-  old growth
-  moose
-  gulls
-  Ebb and Flow Lake
-  Matheson Island

DRAFT

DRAFT

Proposed Additions to the Fisher Bay Park Reserve Boundary as Produced by the Band Council of Fisher River Cree Nation
 Present Fisher Bay Park Reserve Boundary as Produced by the Government of Manitoba
 Peguis First Nation Potential Treaty Land Entitlement Selection

Map Base: 1:250,000 Hecla Sheet 062P, 1976. Natural Resources Canada
 Data Sources: MLI, GeoGratis, NTDB

Map represents proposed alterations to the Fisher Bay Park Reserve Boundary as discussed at the 02/20/22 meeting of the Fisher River Cree Nation and Canadian Parks and Wilderness Society. Map for internal use only.