PASQUIA/PORCUPINE
INTEGRATED FOREST LAND USE PLAN
MANAGEMENT PLAN

June 1998

DEDICATION

This report is dedicated to the memory of

Roy Korpess
Keith Gorham
Fred Shawaga
and
Vic Begrand

who participated in plan development but passed away before it was completed.

ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

The Pasquia/Porcupine Integrated Forest Land Use Plan covers nearly 20,000 square kilometers, including the Porcupine Hills, the Pasquia Hills and part of the Cumberland House area. This plan will be a framework for resource management and use within the planning area. The plan will also provide direction for processes that will be ongoing throughout plan implementation: recommendations for public involvement; options for resolving conflict among resource users; and strategies for monitoring and evaluating plan effectiveness and revising the plan.

The plan is based on the principles of Integrated Resource Management (IRM). This means that planning decisions are made based on the health of the whole ecosystem, including soil, water, plants, animals, and peoples' activities, to meet a variety of objectives. IRM allows for a broad range of resource uses, and gives all affected parties the opportunity to be informed and involved in management planning. The Land Use Plan is an evolving tool to guide activities within the planning area; as such, revisions to the plan may be made to accommodate new information.

This document, the core of the land use plan itself, sets out:
1) the goal, principles and objectives of the plan;
2) the Land Use Management Areas that will guide activities on the land base, and
3) the strategies that will help to reach the goal and objectives, and resolve related issues.
Implementation strategies for monitoring and evaluating the plan, continuing public involvement and resolving disputes are also discussed.

Two supporting documents, ***Background*** *for plan development* and ***Appendices***, are also available.

Guidelines for indicating how activities or developments will occur in certain areas within the planning area are essential for management of the land and it's resources. Specific guidelines have not been developed or identified in this land use plan, but their development will be part of the initial stages of implementing the plan**.**

The ***goal***, ***principles*** and ***objectives*** make up the plan foundation. The goal provides overall direction — what the final result of plan implementation should be. Principles are basic beliefs that guide conduct and help determine the appropriate management decision. Objectives give more specific direction — definite targets that will contribute to meeting the plan goal.

The plan goal is:
To manage the use of land and the renewable and non-renewable resources of the planning area on an integrated and environmentally sound basis to ensure ecological, economic, social and cultural benefits for present and future generations.

The plan principles are to:

- consider all values when making management decisions. Values may include, but are not limited to, ecological, social, economic, cultural, and spiritual.
- promote the needs and wishes of the people and communities living in and adjacent to the planning area and, in general, the people of Saskatchewan.
- respect the interests of Aboriginal people, including existing Aboriginal and Treaty rights.
- respect the rights of all stakeholders.
- recognize and be consistent with applicable legislation, policies and legal contractual obligations of the government.
- support land and resource uses which are sustainable - environmentally, economically and socially.
- respect traditional uses.
- maintain the ecological integrity (health) of the area's ecosystems by making sure that:
  - renewable resource uses are sustainable;
  - non-renewable resource uses are environmentally sound;
  - native biological diversity is maintained;
  - negative effects from all uses are minimized;
  - areas that have been degraded, are restored.
- change and adapt, as required, to meet management goals and objectives.

Plan objectives are to:

- apply principles of Integrated Resource Management to all resource management activities in the planning area.
- develop clear land use guidelines that allow for controlled, orderly development. These guidelines will specify:
  - what uses are allowed;
  - where these uses are allowed;
  - development limits; and
- identify additional planning, study or research needs.
- develop standards to review and evaluate existing and future land uses.
- identify and maintain ecologically representative or unique landscapes, and important cultural, heritage and recreational sites.
- provide guidelines for public input into land use planning decisions, ensuring fair and respectful discussions and accommodating differences in traditions, knowledge, culture and values.
- provide mechanisms to minimize and resolve conflicts among users.
- establish procedures to monitor, evaluate and revise the land use plan on a regular basis, or when new circumstances or information are available that warrant plan revision.
- encourage use of local goods, services and businesses.

Land Use Management Areas indicate zones where certain activities may or may not take place. This is intended to minimize conflicts between non-compatible users, and to ensure that where activities occur, the health of the ecosystem is maintained. The plan recommends three Land Use Management Areas:

- *The Resource Protection Area* (9% of planning area), to protect the ecosystem and its important or distinct features. These areas will act as benchmarks against other areas where development is allowed. The greatest level of land use restriction will apply to this area with minimal or no disturbance allowed.

- *The Sensitive Resource Area*, (25% of planning area), to identify and conserve areas sensitive to disturbance or development. These areas could include sites such as erosion prone slopes, wetlands and bogs. Certain restrictions may be applied on development over and above those normally imposed through current government regulatory processes in order to conserve specific important or distinct features and to avoid creating more conflict.

- *The Resource Management Area* (66% of planning area), to allow for sustainable integrated development. The management of this area supports integrated land uses and accommodates new ventures that are environmentally sound.

Land Use Strategies identify issues and the Plan's recommendations to deal with the issues. The strategies are organized according to resource use. Each strategy provides a summary of land use in the planning area, guiding principles for decision-making about land use, an overview of related land use issues, and recommendations. Recommendations are of two types: guidelines and actions. Guidelines give ongoing direction for a situation; actions are definite steps that need to be taken.

- The **Strategy for Protection and Sustainable Management of Forest Ecosystems** identifies and addresses the need for adaptive management issues, constraints that will be needed for the Representative Areas Network (RAN), and guidelines for roads and other linear developments.

- The **Forest Resource Use and Protection Strategy** discusses issues and solutions related to harvesting, renewal and use of timber and other forest products, and protection of forest resources from fire, insects and disease.

- The **Fish and Wildlife Strategy** makes recommendations for fish and wildlife management actions that will ensure sustainable allocations and preserve habitat and healthy ecosystems.

- The **Grazing Strategy** proposes solutions for resolving conflicts between grazers and other forest users, lessening impacts of grazing on the forest ecosystem, and identifying opportunities for sustainable grazing in the forest.

- The **Land Dispositions Strategies** include a number of different disposition types.
  - For recreation cabins, proposed areas for further cabin development are identified, along with options for dealing with temporary hunting cabins and the need for appropriate buffer zones around cabins.
  - The discussion on trapper's cabins includes a possible solution for trapping cabins that are used for recreational purposes.
  - Guidelines are presented for new commercial developments, waste disposal sites, and sawmill sites, to ensure that developments occur within sustainable limits.
  - Discussion on mining and quarrying issues provides actions to deal with issues related to mining development - access, compensation for loss of access, need for environmental guidelines and rehabilitation, and conflict.

- The **Snowmobile and Other All Terrain Vehicles Strategy** deals with problems arising from the use of snowmobiles and other ATVs, such as impacts on the forest ecosystem, conflicts on trails, and effects of timber harvesting along trails.

- The **Traditional Aboriginal Use Strategy** discusses options for ensuring that needs and concerns of aboriginal users are recognized in the plan.

- The **Water Management and Protection Strategy** proposes actions to ensure protection of water supplies and sensitive water management areas within the planning area.

- The **Economic and Community Health Strategy** develops possible ways of improving overall economic and community health for all area residents.

The ***Implementation Strategies*** are those that should be followed in order for resource management agencies to start implementing the plan. Monitoring and evaluation of the plan are essential to see that resource management goals are achieved, and to be able to change and update the plan effectively. The Monitoring and Evaluation Strategy sets out guidelines and recommendations to ensure this.

- The **Public Involvement Strategy** makes recommendations for setting up an effective public involvement process in the Pasquia/Porcupine area on an ongoing basis.

- The **Dispute Resolution Strategy** recommends potential alternatives for resolving disputes that may arise during plan implementation.

Chapter 1 BACKGROUND FOR PLAN DEVELOPMENT: A SUMMARY

The Land Use Plan covers nearly 20,000 square kilometers, including the Pasquia Hills, the Porcupine Hills and part of the Cumberland area (see Figure 1-1). A little more than half of the planning area is forested. The non-forested lands primarily consist of water and wetlands. The plan applies only to Crown lands within the planning area, not to privately owned lands or Indian reserves within the planning boundaries.

This area was selected because it is the area under negotiation for a Forest Management Agreement (FMA). Industrial timber harvesting operations will have a major effect on all resource uses in the area. The planning area also accommodates a wide variety of resource and land-based uses such as roads, mineral exploration, power lines, railroads, cabins, recreation sites, water control structures, etc.

The resources of the area have a wide range of values — ecological, aesthetic, cultural, spiritual, scientific and economic — to the region and to the entire province. Most area communities depend heavily on agriculture and resource-based industries (such as timber harvesting, outfitting, etc.) for their economic well-being.

Large areas within the planning area are considered significant because of the natural character of the vegetation, the diversity of species and vegetation types, and the presence of rare plants. Almost 400 species of plants have been recorded in the planning area. The planning area is also home to five species of big game — moose, elk, white-tailed deer, black bear and woodland caribou — and supports a large population of a variety of small mammals, birds, amphibians, reptiles and fish. These animals are key in the functioning of a healthy ecosystem.

The planning area contains seven major watersheds: Saskatchewan, Carrot, Pasquia, Overflowing, Upper Red Deer, Red Deer-Armit, and Swan Rivers. Water is an important resource in the planning area, and is a vital part of a healthy forest ecosystem.

Both government and non-government people contributed their knowledge and advice to the land use plan. Nine government departments joined a land use planning team. In the public sector, a Forest Management Advisory Committee (FMAC) was formed to represent users and communities within the planning area. Every reasonable effort was made to involve the public as early as possible and throughout the planning process — from the decision to begin the integrated land use plan in April of 1995, through the information gathering and goal setting stage, meetings with the FMAC, development of the draft land use plan, and its public review. This was followed by plan revision and approval by the Government of Saskatchewan, and finally implementation.

PLANNING AREA

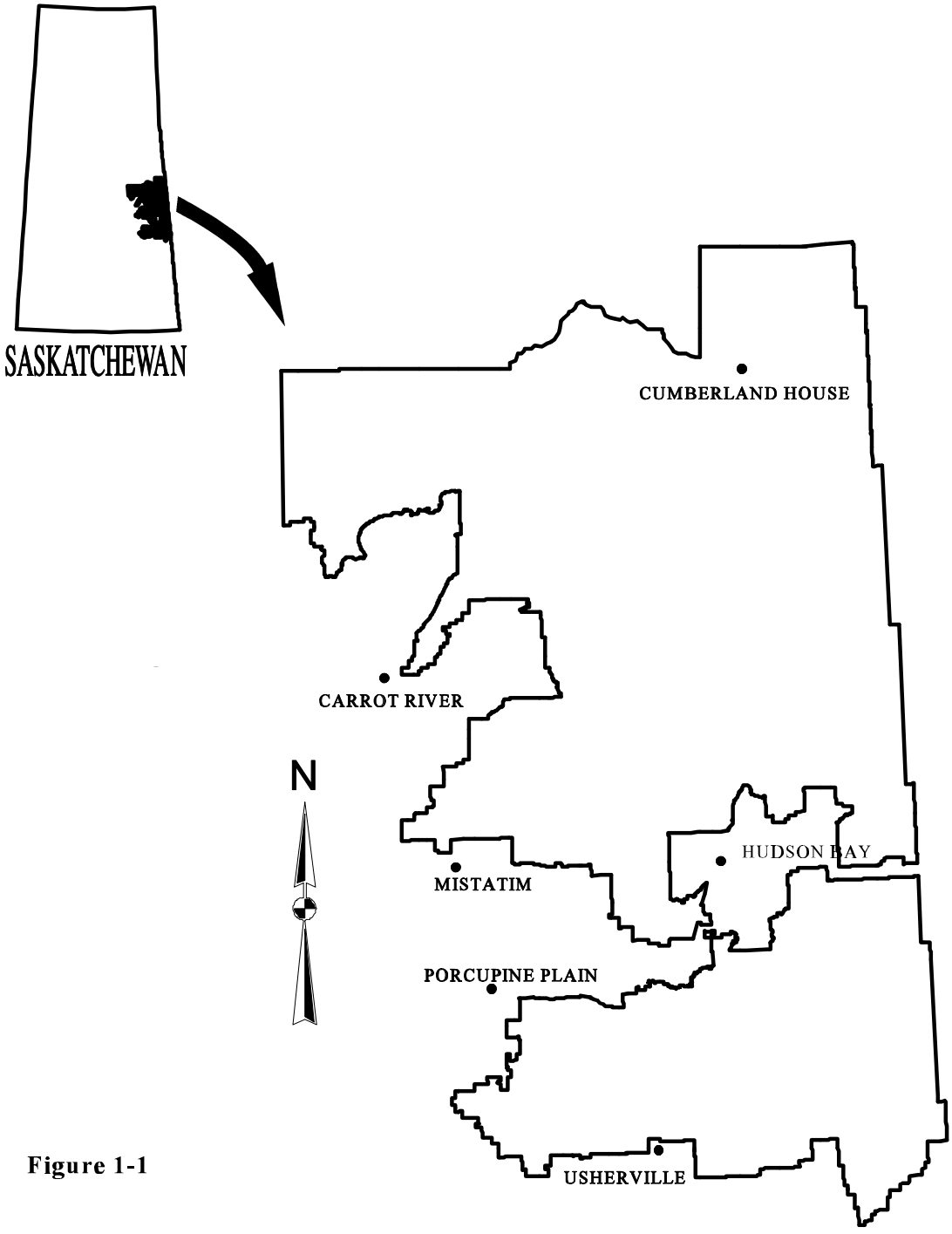

Figure 1-1

All land use planning takes place within existing administrative structures and constraints. Various federal and provincial legislation exists which directly or indirectly affects lands and resources. As well, a number of agreements, plans and strategies which have been developed in recent years by various levels of government, are relevant to land and resource management. Local zoning bylaws and administrative partnerships also affect resource and land use in the area.

Several provincial government departments and agencies are involved with resource management and land use. These include: Saskatchewan Environment and Resource Management; Agriculture and Food; Energy and Mines; Highways and Transportation; Municipal Government; Northern Affairs; SaskWater Corporation; Tourism Saskatchewan; Saskatchewan Wetland Conservation Corporation; SaskPower. Some federal agencies also have a role.

All developments proposed within land use planning must consider environmental sensibilities. The land use plan will not replace the need for environmental assessments of resource developments. Environmental Assessment Branch is responsible for ensuring that all plans for future development activities are fully evaluated before commitments to proceed are made.

Saskatchewan has a goal of conserving native biological diversity and natural resources by protecting and managing a network of areas representing the full range of native ecological systems. Sites within the Pasquia/Porcupine planning area have been selected to contribute to this Representative Areas Network (RAN).

The signing of treaties marked the beginning of dramatic changes for Aboriginal peoples; lifestyle, language, education, economics and land use were all affected. Today, many Aboriginal people gain support from the land by hunting, fishing, trapping, outfitting, forest harvesting, berry picking, gathering medicinal plants, and traditional and ceremonial pursuits. Many traditional pursuits are protected by the treaties and aboriginal rights and, therefore, are unaffected by the land use plan. Any information about specific areas or uses was incorporated in the land use plan.

There is a wealth of information available about the Pasquia/Porcupine Planning area and as much of it as possible was considered as planning proceeded. However, information gathering, indeed planning itself, is an ongoing process; there are many gaps in the data yet to be filled. The plan must remain flexible, to accommodate new knowledge and changing conditions.

Chapter 2 GOAL, PRINCIPLES AND OBJECTIVES

The goal, principles and objectives make up the foundation of the plan. The goal provides overall direction for the plan - what the result of plan implementation should be. Principles are basic beliefs that guide what we do and help us to make the best land or resource management decisions. Objectives give more specific direction -- definite targets that, if reached, will help us to meet the plan goal. Principles and objectives are not listed in any order of priority.

Plan Goal

Our goal is to develop and implement a land use plan to manage use of land and renewable and non-renewable resources of the planning area on an integrated and environmentally sound basis to ensure ecological, economic, social and cultural benefits for present and future generations.

Plan Principles

The Integrated Forest Land Use Plan will:

- consider all values when making management decisions. Values include but are not limited to, ecological, social, economic, cultural and spiritual.

- promote the needs and wishes of the people and communities living in and adjacent to the planning area and, in general, the people of Saskatchewan.

- respect the interests of Aboriginal people, including existing Aboriginal and Treaty rights.

- respect the rights of all stakeholders.

- recognize and be consistent with applicable legislation, policies and legal contractual obligations of the government.

- support land and resource uses which are sustainable — environmentally, economically and socially.

- respect traditional resource uses.

- maintain the ecological integrity (health) of the area's ecosystems by making sure that:
  - renewable resource uses are sustainable,
  - non-renewable resource uses are environmentally sound,
  - native biological diversity is maintained,
  - negative effects from all uses are minimized,

- C areas that have been degraded, are restored.

- ! change and adapt, as needed, to meet management goals and objectives.

Plan Objectives

The plan will:

- ! apply principles of Integrated Resource Management to all resource management activities in the planning area.

- ! develop clear land use guidelines that allow for controlled, orderly development. These will specify:
  - C what uses are allowed,
  - C where these uses are allowed,
  - C development limits.

- ! identify additional planning, study or research needs.

- ! develop standards to review and evaluate existing and future land uses.

- ! identify and maintain ecologically representative or unique landscapes, and important cultural, heritage and recreational sites.

- ! provide guidelines for public input into land use planning decisions, ensuring fair and respectful discussions and accommodating differences in traditions, knowledge, culture and values.

- ! provide mechanisms to minimize and resolve conflicts among users.

- ! establish procedures to monitor, evaluate and revise the land use plan on a regular basis, or when new circumstances or information are available that warrant plan revision.

- ! encourage use of local goods, services and businesses.

Chapter 3 LAND USE MANAGEMENT AREAS

Land use activities in the planning area are governed by: 1) local zoning bylaws and 2) land use management areas. Communities in the planning area, and rural municipalities whose boundaries extend into the planning area, have zoning bylaws which may affect proposed uses and plan recommendations. Management areas are zones, defined by this land use plan, indicating where certain activities may or may not take place. The zoning is intended to minimize conflicts between non-compatible users and to ensure that, where activities occur, ecosystem health is maintained.

In addition to the bylaws and management areas, there are a number of administrative partnerships that must also be recognized. Administrative areas include Cumberland House area, Sipanok area, James Smith Partnership area, and the Town and Rural Municipality of Hudson Bay Partnership area (see Chapters 4 and 5 in Background document and Figure 3-2 in this document). Anyone proposing developments within Administrative Partnership areas must be aware of these arrangements and be prepared to involve the affected parties in their proposals. Copies of the individual arrangements may be obtained from Public Involvement and Aboriginal Affairs, SERM, 3211 Albert St., Regina, SK., S4S 5W6.

As stated in the Plan Goal, land and resources of the planning area must be managed on an integrated and environmentally sound basis. To achieve this goal, and to accommodate as many uses and values of the land and resources as possible, it is important not to allocate 100% of the resource or area for a particular use. Uses or values must be identified and decisions made about which are compatible and which are not.

Three types of management areas have been designated within the planning area:

The Resource Protection Area (9% of planning area) is intended to protect important and distinct areas that can act as benchmarks (ie: points of reference for comparison) for other areas where development and activities are allowed.

The Sensitive Resource Area (25% of planning area) identifies areas that are sensitive to development, such as wetlands and erosion-prone slopes. Recreation sites have also been included this category.

The Resource Management Area (66% of planning area) allows for sustainable integrated development.

These land use management areas are shown in Figure 3-1, Land Use Management Areas. Table 3-1 lists allowed uses in each management area. Chapter 4, Land Use Strategies, gives further direction for activities within all management areas. Direction will also be given in approved management plans (examples: park management plans, 20 year forest management

PASQUIA - PORCUPINE
LAND USE MANAGEMENT AREAS

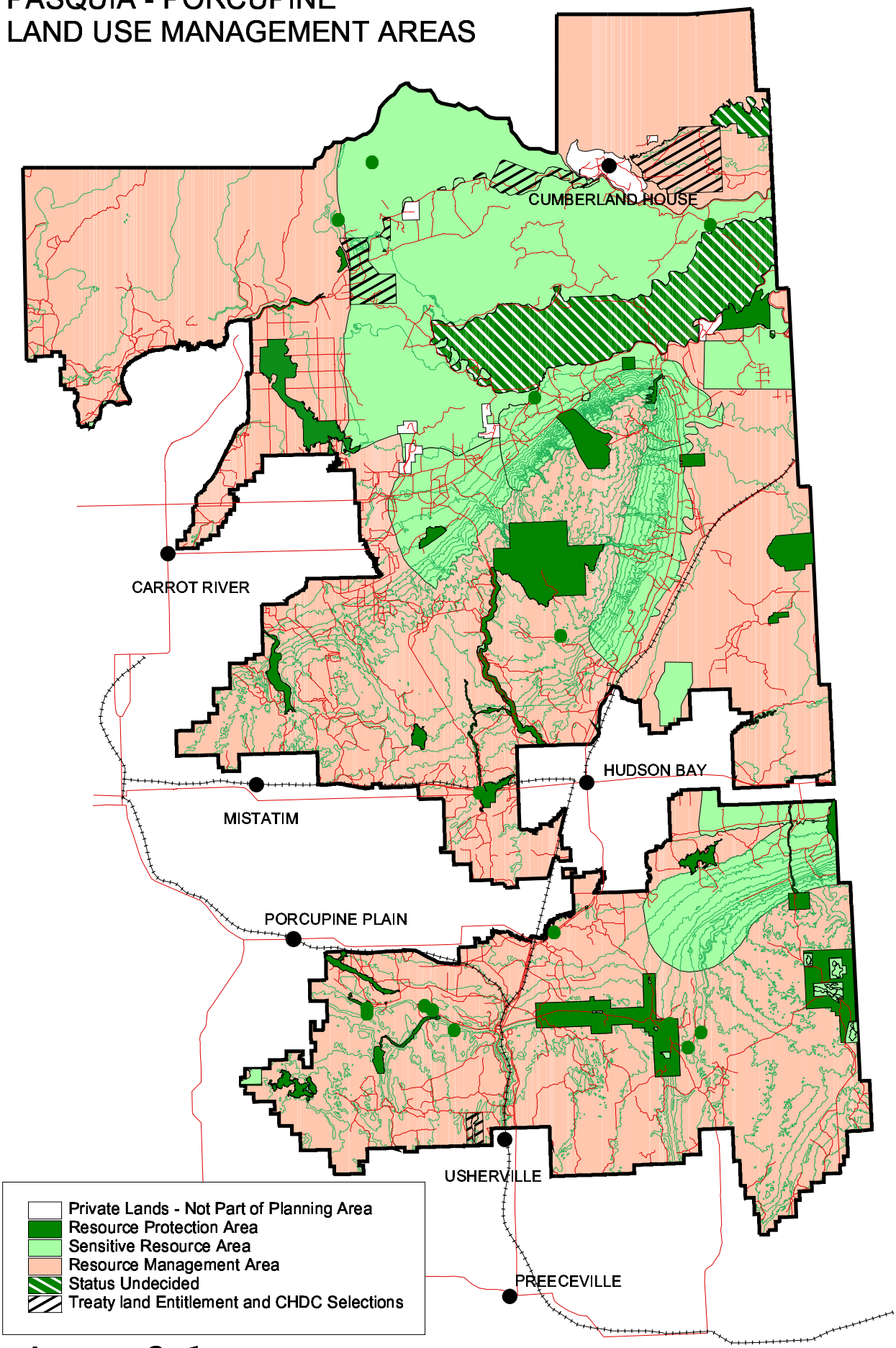

Figure 3-1

Table 3-1

Allowed Land Uses Within Management Areas.

Pasquia - Porcupine Land Use Management Areas (Figure 3-2)

Land Use Development	Resource Protection Areas (Figure 3-3)						Sensitive Resource Area (Figure 3-4)							Resource Management Area (Figure 3-5)
	Representative Areas Network (RAN)				Ceremonial Areas	Burial/ Sensitive Heritage Sites	Water Related					Campbell Beach Area	Recreation Sites	
	Park Wilderness	Protected Areas	SERM Reserves	New Ran Areas			Pasquia Slopes	Cumberland Delta	Helldiver Lake Area	Leaf Lake Area	Stream Buffers			Other Areas Not Previously Zoned
1. Commercial	NP	NP	NP	NP	NP	NP	P4				NP	P4	P3	P
2. Industrial	NP	NP	NP	NP	NP	NP	P4				NP	P4	NP	P
3. Residential	NP	NP	NP4	NP	NP	NP	NP				NP	NP	NP	P5
4. Tourism and Recreation														
· cabin development	NP	NP	NP	NP	NP	NP	P5				NP	P5	P3	P5
· public facilities (e.g. campgrounds)	NP	NP	P3	NP	NP	NP	P4				P4	P4	P3	P
· motorized vehicular trails	NP1	NP1	NP1	NP1	NP	NP	P4				P4	P4	P3	P
· recreation trail development	NP1	NP1	NP1	NP1	NP	NP	P4				P4	P4	P3	P
5. Mineral/Resource Exploration/Development	NP	NP	NP5	NP2	NP	NP	P4				P4	P4	NP	P
6. Road and Utility Related Development	NP	P3	P3	NP	NP	NP	P4				P4	P4	P3	P
7. Water Development Projects	NP	NP	NP	NP	NP	NP	P4				P4	P4	P3	P
Land Use Activity														
1. Harvesting														
· wood harvesting	P3	NP	P6	NP	NP	NP	P4				P4	P4	P6	P
· non commercial harvest of other forest products	P	P	P	P	P	NP	P				P	P	P	P
2. Grazing, subject to SERM grazing policy	NP	NP	P3	NP3& NP4	NP	NP	P4				P4	P4	P3	P
3. Tourism and Recreation														
· snowmobile and all terrain vehicle only	P1	P1	P1	P1	P1	NP	P4				P4	P4	P3	P
· hunting and fishing	P2	P	P	P	NP	NP	P				P	P	P2	P
· commercial outfitting	NP	NP	NP4	P	NP	NP	P				P	P	NP4	P
· non-consumptive ecotourism based on guided tours	P	P	P	P	P	NP	P				P	P	P	P
· campsites	P	P	P	P	P	NP	P				P	P	P3	
4. Trapping	P	P	P	P	P	NP	P				P	P	P	P
5. Access														
· motorized recreational, on designated trails	P1	P1	P1	P1	P1	NP	P3				P1	P3	P3	P
· non-motorized recreational (e.g. trail riding, hiking)	P1	P1	P1	P1	P1	NP	P3				P3	P3	P1	P
6. Wildlife oriented activities (e.g. scientific research)	P	P	P	P	P	NP	P				P	P	P	P

P - Permitted

P1 - On existing roads/trails only or according to specific management plans for the area
P2 - No baiting allowed
P3 - Based on specific management plan for the site
P4 - Based on specific plan or guidelines that address the sensitive nature of the area
P5 - New development in designated areas only
P6 - Based on a plan that meets vegetation management goals

NP - Not Permitted

NP1 - Maintenance of existing roads/trails only
NP2 - Zero impact exploration only, does not imply development will be allowed.
NP3 - Only applicable to the RAN in the Pasquia-Porcupine planning area
NP4 - No new developments
NP5 - Losbstick Lake Reserve still subject to discussions

ADMINISTRATIVE PARTNERSHIPS

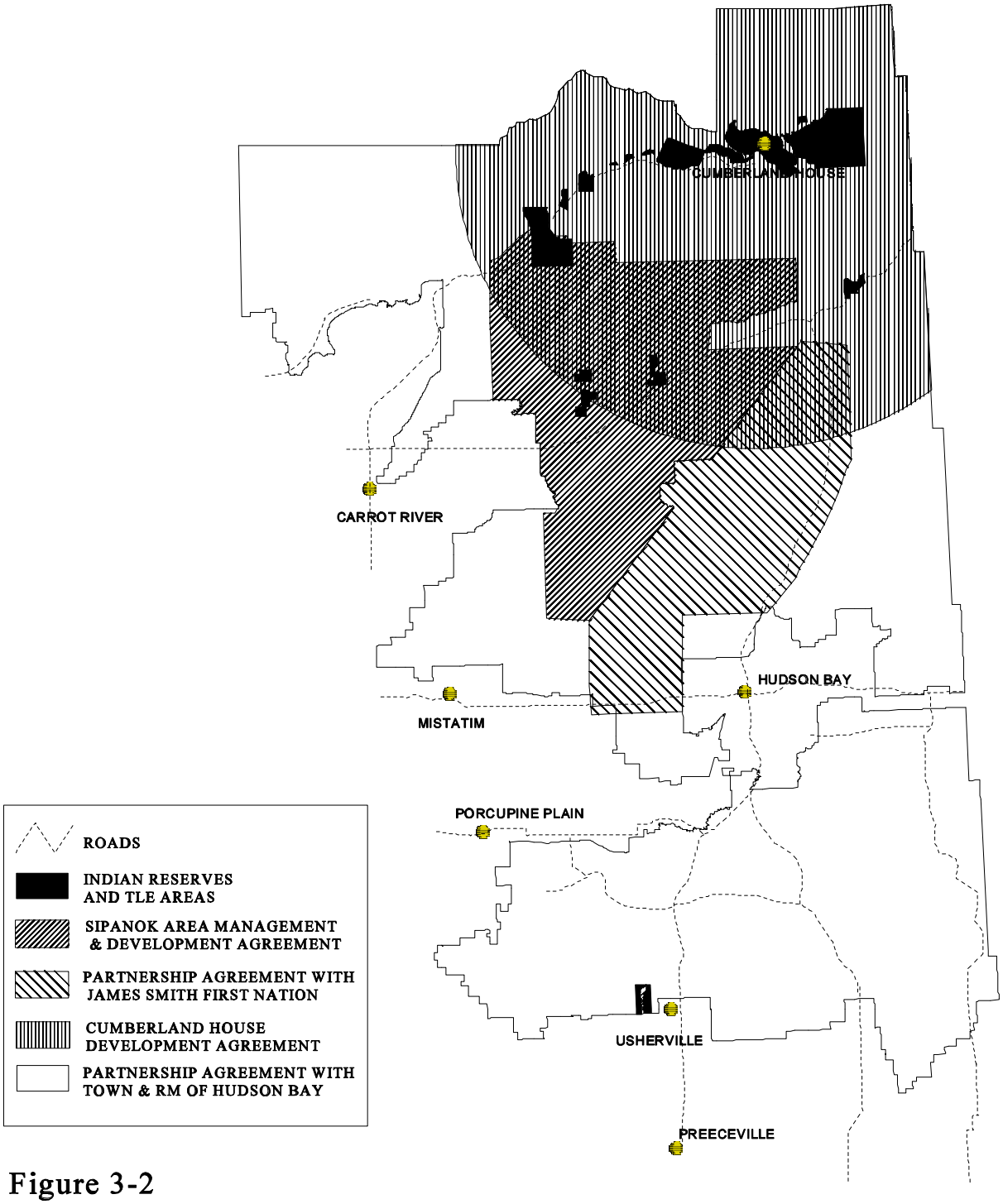

Figure 3-2

plans) that may be developed for specific resources or uses in any management area.

This land use plan provides overall direction for allocation and uses of land and resources. It does not, however, provide specific guidelines for how activities or developments will be conducted. Operating procedures and guidelines must be developed during plan implementation to clearly indicate how activities or developments will occur. These will provide the resource user with information in advance of any proposal, and allow the public to scrutinize how developments or activities are being conducted.

Recommendation:

Action	Initiating Agency	Priority
1. Establish operating procedures and guidelines to clearly indicate how activities or developments will occur in each of the three management areas. -Take inventory of existing applicable guidelines, identify gaps and inadequacies, and develop new guidelines where required. - Involve the public, FMAC, and affected users.	SERM	1
2. Develop and distribute a condensed version of land use guidelines in clear language for public use.	SERM	2

3.1 Resource Protection Area

The purpose of the Resource Protection Area is to set aside representative areas, and those areas with important or distinct features. These may be used as benchmarks (or points of reference) to compare against areas where development is allowed. The greatest level of land use restriction will apply in this area, with minimal to no disturbance allowed.

Guiding Principles:

- Conserve and protect areas that are distinct ecologically or culturally, or important for recreation.

- Minimal to no surface disturbance is to occur.

- Activities allowed must be compatible with the intent of the area.

The Resource Protection Areas make up approximately 9% of the planning area (Figure 3-3). They include:

- Most Representative Area Network (RAN) sites.
- Heritage Sites:
  - Ceremonial sites identified by First Nations.
  - Burial sites identified by Metis and First Nations.
  - Other sensitive heritage sites known to Saskatchewan Heritage Branch.

The proposed RAN is made up of four types of land selections:

1) **Wilderness parks** are legally protected under *The Parks Act*

2) **Protected areas** are legally protected under *The Parks Act.*

3) **SERM Reserves** are lands identified by SERM, for reasons including ecological, recreation or wildlife potential. Although these reserves do not have legal status, relevant acts and regulations are followed to guide their use. This designation imposes a temporary holding by SERM policy until SERM takes further action, and could proceed to formal designation of Park Land Reserve or other legislative categories.

4) **New RAN sites** are potential candidates for protection that are being set aside particularly to maintain native biodiversity and to act as benchmarks. RAN areas will be given legal status under existing legislation such as *The Parks Act* or *The Ecological Reserves Act*.

RAN site boundaries that are proposed in this land use plan have not been finalized and are subject to change, following discussion with resource users and others.

Two of the proposed RAN sites (shown in Figure 3-3: status undecided) are still under discussion prior to being included in the RAN: the Lobstick Lake Reserve is under negotiations between SERM and Energy and Mines because of assessed high mineral potential in that area; and RAN A requires further discussion with the residents of Cumberland House and area.

Heritage Sites are protected by *The Heritage Property Act*. The proponent of any land development or land use activity which may have an adverse effect on heritage sites must go through a review process. The review will determine if the development area includes known heritage sites or has potential for containing heritage sites, and whether heritage resource impact assessment or other conservation action is required before the project goes ahead. Cultural and mass burial sites will have a 100 meter buffer zone around sites. Single burial sites will have a 100 meter buffer.

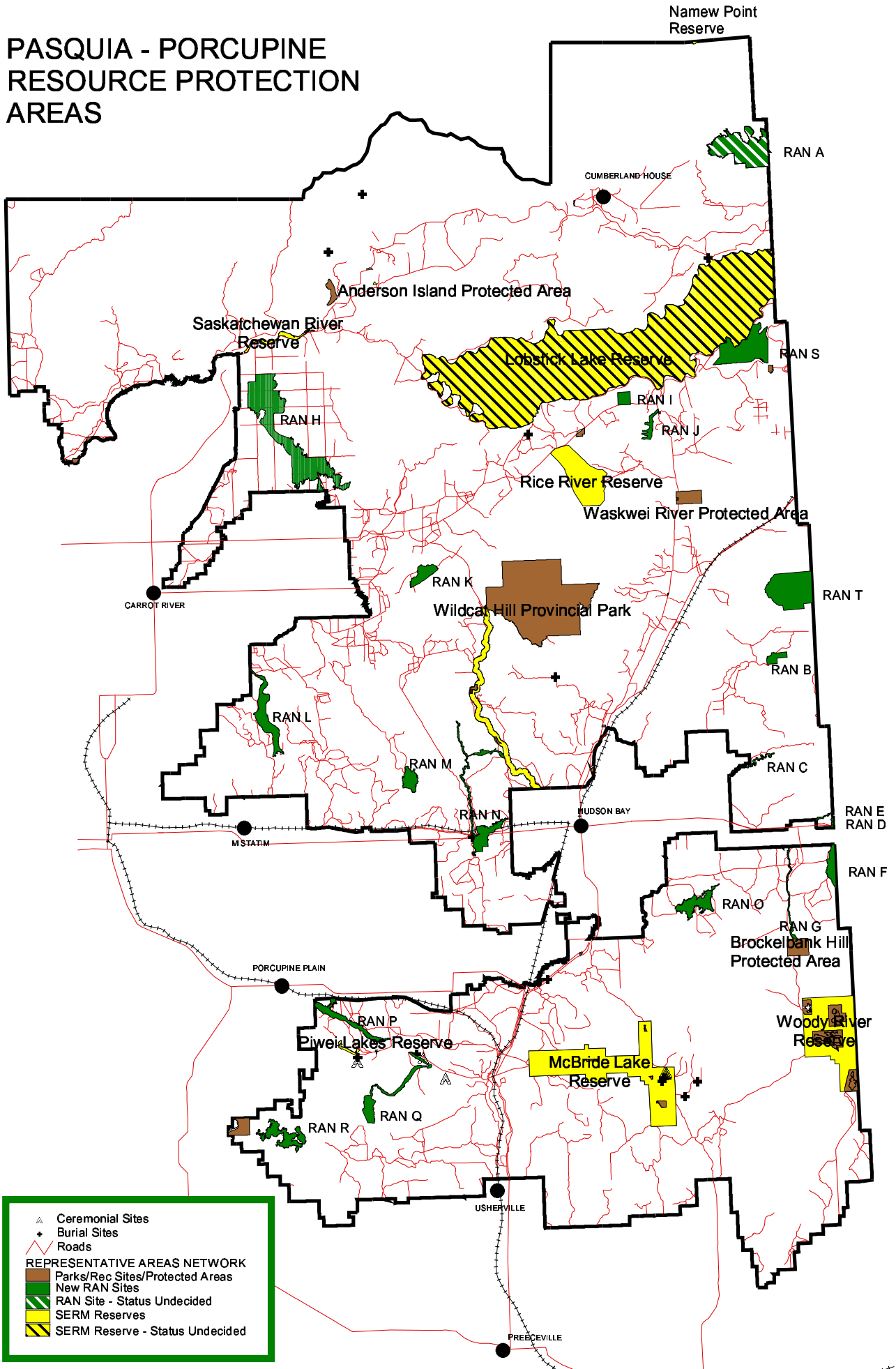
PASQUIA - PORCUPINE
RESOURCE PROTECTION
AREAS
Namew Point
Reserve
RAN A
CUMBERLAND HOUSE
Anderson Island Protected Area
Saskatchewan River
Reserve
Lobstick Lake Reserve
RAN S
RAN I
RAN J
RAN H
Rice River Reserve
Waskwei River Protected Area
CARROT RIVER
RAN K
Wildcat Hill Provincial Park
RAN T
RAN B
RAN L
RAN M
RAN C
RAN N
HUDSON BAY
RAN E
RAN D
MISTATIM
RAN F
RAN O
RAN G
Brockelbank Hill
Protected Area
PORCUPINE PLAIN
RAN P
Piwei Lakes Reserve
Woody River
Reserve
McBride Lake
Reserve
RAN Q
RAN R
USHERVILLE
PREECEVILLE
Ceremonial Sites
Burial Sites
Roads
REPRESENTATIVE AREAS NETWORK
Parks/Rec Sites/Protected Areas
New RAN Sites
RAN Site - Status Undecided
SERM Reserves
SERM Reserve - Status Undecided

Figure 3-3

Permitted Land Use Activities

Developments and activities in parks and protected areas are subject to *The Parks Act.*

In SERM Reserves and new RAN sites, only activities that do not have any major impact on the area will be allowed:

- Sustainable hunting, trapping, fishing and non-commercial gathering, camping, non-motorized recreation and motorized recreation access along existing roads and trails.
- Snowmobile and all terrain vehicle (ATV) use limited to existing trails.
- Ecotourism, environmental education, scientific research, ecosystem monitoring and surveys.
- Zero-impact mineral exploration.

Prohibited Land Use Activities

To avoid surface disturbance of land and to protect native biodiversity, the following uses and activities are prohibited:

- Commercial, industrial, new residential and cabin development.
- Sand or gravel development.
- Road or utility development.
- Intensive recreation developments such as serviced campgrounds, golf courses, and motorized vehicle trails.
- Mineral industry development.
- New grazing permits.
- New or expanded wild rice operations.
- New groomed snowmobile trails.
- Commercial harvest of forest products.

3.2 Sensitive Resource Area

The purpose of the Sensitive Resource Area is to identify areas with features that are sensitive to disturbances or development. Special precautions and constraints are needed to minimize impacts on these sensitive features. Designated recreation sites are included here.

Guiding Principles:

- Protect areas that are considered sensitive to possible impacts from development.

- Allow sustainable developments and activities based on the completion of a plan or guidelines that address how the proponents will address the sensitive nature of the area.

The Sensitive Resource Areas make up approximately 25% of the planning area (Figure 3-4). They include:

- Slopes of the Pasquia and Porcupine Hills;
  - Steep erosion-prone slopes.
  - Streams that experience extreme natural variations in flows.
  - Concerns include impacts on erosion, water quality and hydrology.

- Cumberland Delta;
  - Unique inland delta, recognized internationally as an important natural feature.
  - Concerns include impacts to important wetland habitat, limited upland habitats within the delta, water quality and hydrology.

- Helldiver and Leaf Lakes;
  - Major wetlands.
  - Concerns include impacts to important wetland habitats, limited upland habitats, water quality and hydrology.

- Riparian areas and aquatic buffers;
  - Transition zone between aquatic and upland terrestrial ecosystems.
  - Concerns include impacts to soils, plant communities, wildlife and aquatic habitats, wildlife movement corridors, and water quality.

- Campbell Beach;
  - Concerns center on impacts to important heritage resources.

- Recreation sites that have facilities;
  - Cumberland House Provincial Park
  - Big Stone Cutoff
  - D. Gerbrandt
  - Dagg Creek
  - Fir River Road Mile 16 and 21
  - Greenbush River
  - McBride Lake
  - Mountain Cabin
  - Overflowing River

PASQUIA - PORCUPINE SENSITIVE RESOURCE AREAS

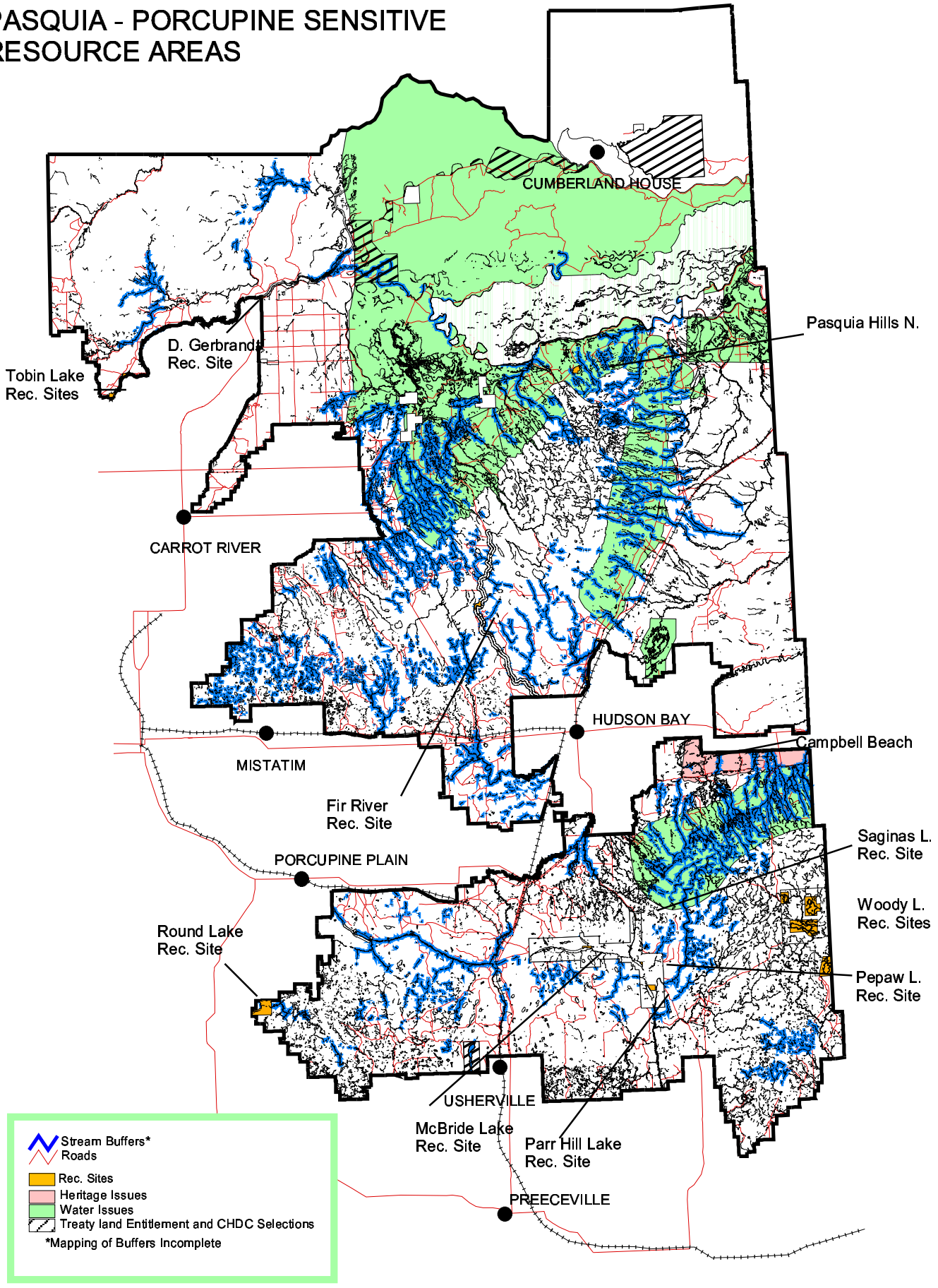

Figure 3-4

- < Parr Hill Lake
- < Pasquia Hills North
- < Pasquia River
- < Pepaw Lake
- < Piwei River
- < Round Lake
- < Ruby Lake
- < Saginas Lake
- < Tobin Lake
- < Waskwei River
- < Woody River (Isbister Lake, Spirit Lake, Woody/Townsend/Elbow Lakes, Smallfish Lake)

Permitted Land Use Activities and Developments

Permitted land use activities and developments within designated recreation sites will be in accordance with *The Parks Act*. In the rest of the Sensitive Resource Area the following activities will be allowed:

- C Sustainable hunting, trapping, fishing and camping.
- C Non-motorized recreational activities.
- C Motorized recreational activities along existing roads and trails only.

The following developments and activities will be allowed, based upon an approved plan or guidelines which protect the sensitive features of the area:

- C Roads, trails and utilities.
- C Industrial developments.
- C Mineral exploration and development.
- C Commercial harvesting of forest products and renewal activities.
- C Outfitting and ecotourism.
- C Grazing.
- C Commercial and recreational cabin development (in designated areas only).

Prohibited Land Use Activities and Developments

- C Activities and developments which have potential significant impacts on the sensitive features of the area.

3.3 Resource Management Area

The purpose of the Resource Management Area is to allow sustainable integrated development. This area is managed to encourage integrated land uses and to accommodate new ventures that are environmentally sound.

Guiding Principle:

- Support integrated sustainable development of renewable and non-renewable resources.

The Resource Management Areas make up approximately 66% of the planning area (Figure 3-5). They include all areas that are not zoned for either Resource Protection or Sensitive Resource management.

Permitted Land Use Activities

A broad range of developments and activities can be considered for this area, subject to federal, provincial or municipal policies and regulations.

PASQUIA - PORCUPINE
RESOURCE MANAGEMENT AREAS

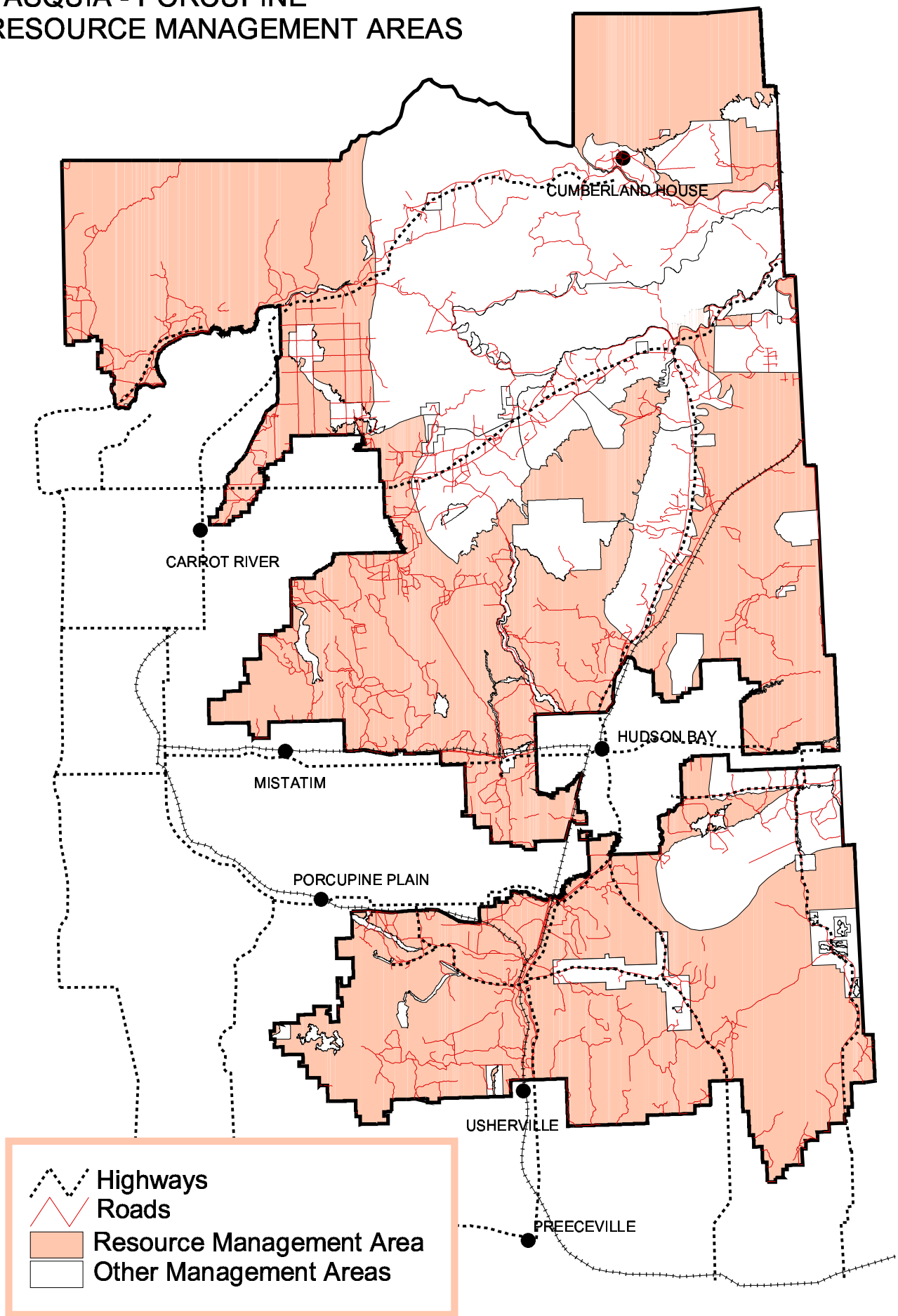

Figure 3-5

Chapter 4 LAND USE STRATEGIES

This chapter contains strategies to address various land use issues in the planning area, while implementing the concept of Integrated Resource Management (IRM). IRM means managing whole ecosystems, including soil, water, trees, animals and plants, to meet a variety of objectives.

Each strategy contains an overview of related issues and recommendations. The recommendations are in the form of guidelines and actions. Guidelines give ongoing direction for a situation; actions are definite steps that must be taken.

The agency responsible for initiating each action is identified. However, these will not be the only agencies involved in implementation — integrated management means that those affected work together towards solutions. Saskatchewan government agencies identified are: Environment and Resource Management (SERM), Economic Development (ED), Energy and Mines (SEM), Agriculture and Food (SAF), Municipal Government (MG), Saskatchewan Water Corporation (SWC), Tourism Saskatchewan (TS), and Northern Affairs (NA). Other agencies identified as responsible for initiating actions include the Saskatchewan Outfitters Association (SOA), a local advisory board, the Forest Management Agreement (FMA) holder, grazing permittees, and snowmobiling associations.

Actions have been given a priority ranking of 1, 2 or 3. All actions are important, but priorities are used to decide which actions should be done first, or to make choices among actions when financial and human resources are limited. Priority 1 items are essential to implement the plan, and in some cases must be done first in order to enable other actions. Priority 2 items are important, but are not critical for immediate plan implementation. Priority 3 items are desirable, but need not be done immediately, or may need other actions done first.

4.1 Protection and Sustainable Management of Forest Ecosystems

PROTECTION AND SUSTAINABLE MANAGEMENT OF FOREST ECOSYSTEMS: ISSUE 1

Sustainable management maintains and enhances the long-term ecological integrity of forest ecosystems, while providing economic, social, cultural and spiritual opportunities for present and future generations. Forest resources and associated lands, including the Pasquia/Porcupine forest, should be managed in this way. Current practice is evolving from managing for the harvest of commercial trees to a more sustainable, ecosystem-based management and protection.

Traditional methods for harvesting trees are being adapted to be more like natural disturbances, and include ideas such as spreading downed woody material in harvested areas, leaving trees and wildlife structures in cut blocks, cutting following landscape contours, and allowing natural regeneration (Stelfox, 1995).

The Pasquia/Porcupine region hosts one of the highest areas of bird diversity on the North American continent. In addition, the number of rare plant species is higher than anywhere else in Saskatchewan. Preservation of these species is extremely important to the maintenance of provincial biodiversity.

There are many gaps in the data about wildlife distributions and habitat requirements, as well as the effects that resource use has on both. There is a danger in trying to make land use management decisions, and to continue with major resource extractions, without this missing information.

The Cumberland Delta is different ecologically, culturally and economically, than the rest of the Pasquia/Porcupine planning area. There is a need for more detailed land and resource management planning for this area.

Recommendations:

Guidelines

- Resource users will comply with all environmental protection statutes, regulations and guidelines.

C Resource users will ensure that what is taking place on the working landscape is ecologically sustainable.

- Resource users should follow principles of adaptive management, to ensure continuous improvement and adaptations to reflect changing values, understandings and circumstances. Management practices should evolve to reflect best knowledge and information.

Action	Initiating Agency	Priority
1. Develop and implement a process to monitor all forest industries and ensure compliance with applicable legislation, the land use plan, and the twenty year plan.	SERM	1
2. Establish and protect a network of areas representative of all types of forest ecosystems.	SERM	1
3. Develop a program to acquire, share and update knowledge on global research and understandings on forest ecosystem management.	SERM	1

Action	Initiating Agency	Priority
4. As part of the forest management planning process : C use an ecological classification system and a comprehensive inventory program for multiple forest values C identify data gaps and develop programs to fill gaps. C develop and use a variety of harvesting systems to accommodate other resource uses in the area. C ensure that representative stages of forest succession are present in the FMA area.	FMA Holder/SERM	1
5. Develop a forest ecosystem inventory, monitoring and research program to increase forest ecosystem knowledge.	SERM/ Proponents of Major Developments	1
6. Develop a program to conduct additional land and resource management planning for the Cumberland Delta.	SERM	1
7. Ensure open communications and co-operation with Manitoba Natural Resources and Manitoba Environment about resource management activities whose effects cross provincial boundaries.	SERM	2

PROTECTION AND SUSTAINABLE MANAGEMENT: ISSUE 2
REPRESENTATIVE AREAS NETWORK (RAN) CONSTRAINTS

SERM is developing a Representative Areas Network. The RAN sites, which are areas that are relatively undisturbed by human activities, will be designated to conserve biodiversity and to serve as ecological benchmarks against which sustainability of various land practices can be measured.

Some specific land uses will be acceptable within the Representative Areas, and some uses will be prohibited. Some land uses within the RAN sites, such as existing grazing, will be carefully monitored in the short term until sustainability of these practices can be determined.

Land uses next to RAN sites must be carefully managed to ensure that the ecological integrity of the Representative Areas is not at risk when developments occur close to their boundaries. Restricting activities within the Representative Areas themselves will not be enough, on its own, to meet conservation goals of the planning area. It follows, that land use activities in the rest of the planning area will have to be carried out in an ecologically sustainable manner.

Recommendations:

Guidelines

- Only uses which will not impair the natural functioning of forest ecosystems will be allowed within Representative Areas. Conditional upon the management plan of the particular Representative Area, permitted uses include:

    - < sustainable hunting, trapping and fishing
    - < non-commercial gathering of non-timber forest products
    - < zero impact (on biodiversity) mineral exploration (including geophysics, geochemistry)
    - < ecotourism operations
    - < outfitting
    - < existing snowmobile trails
    - < existing wild rice operations
    - < research plots (if compatible with long term RAN objectives and approved by SERM)

C Uses which will be excluded from Representative Areas in the planning area are:

    - < new roads (existing winter roads may be maintained)
    - < new cabins and cabin subdivisions
    - < timber harvesting
    - < mineral industry development
    - < new grazing permits
    - < commercial harvesting of non-timber products
    - < hydro-electric development
    - < construction of new groomed snowmobile trails
    - < new wild rice operations or expansion of existing operations
    - < peat extraction
    - < new sand and gravel extraction

C The ecological integrity of RAN areas must be considered when development occurs close to RAN area boundaries.

C The proposed RAN areas and boundaries may require further review and may be subject to "fine tuning" to ensure appropriate representation has been achieved, prior to finalization.

Action	Initiating Agency	Priority
1. Evaluate other potential uses in RANs, as they are identified.	SERM	2

Action	Initiating Agency	Priority
2. Designate RAN areas as Park Land Reserves.[1]	SERM	2
3. Because RAN areas and boundaries may require further review and may be subject to change, deal with outstanding issues during land use plan implementation, involving affected forest users, the FMAC, and the public.	SERM	2
4. After review of proposed RA boundaries, finalize through legislative SERM designation.	SERM	2
5. Create long-term management plans for each RAN area, including provisions for public education, review and comment, and guidelines for development in RANs.	SERM	2
6. Develop monitoring programs to determine the sustainablility of specific land uses (eg: grazing) within the RAN areas.	SERM	2

PROTECTION AND SUSTAINABLE MANAGEMENT: ISSUE 3
IMPACTS OF ROADS AND OTHER LINEAR DEVELOPMENTS

Roads are needed for the extraction of resources but roads built for this purpose also have other implications — the creation of social and economic opportunities, and a chance to explore for and use other resources. Linear developments are long-narrow areas of forest cleared for such things as transmission lines. Although not intended to provide access for resource use, these clearings change forest structure and provide access for all-terrain vehicles.

Roads and other linear developments can have other impacts on the forest ecosystem — forest fragmentation, which affects wildlife species, soil erosion and compaction, for example. Even when road development is only intended to be temporary, revegetation of disturbed surfaces can be difficult. Stream crossings, if improperly constructed, can affect water flow and aquatic habitat. Roads also increase access for humans, and different plant and animal species into the forest, which has both positive and negative impacts.

[1]Under this designation, there will be a freeze on new land use allocations for up to 5 years. During that time more detailed planning and consultation can take place about the best way to manage the RAN sites, the most appropriate permanent designation for individual areas, and finalization of site boundaries. In addition, SERM normally requests a freeze on further allocations of subsurface mineral rights from Sask Energy and Mines by having a Crown Mineral Reserve placed along with the Park Land Reserve.

Recommendations:

Guidelines

- Before a road is built, the proponent will submit a proposal to SERM for approval. SERM guidelines for road construction, maintenance and decommissioning must be followed.

- Proponents will include mitigation and reclamation proposals as part of the development plan.

- Public access to open forest haul roads should be maintained except for ecological, safety or road management reasons.

Action	Initiating Agency	Priority
1. Develop a long-term plan and guidelines for new and existing roads and other linear development(s) for the planning area.	SERM	1
2. As part of the forest management plan, the FMA holder will prepare an access management plan with a well-defined public involvement process.	FMA Holder	1

4.2 Forest Resource Use and Protection

A little more than half of the 20,000 square kilometers in the planning area is forested. Timber harvesting is a major resource use, supplying three large mills and 51 smaller sawmills. While timber harvesting can be sustainable, regeneration does not always occur naturally. Areas that do not regenerate reduce the sustainable timber supply and change forest structure and composition, affecting other resource uses and values.

Besides timber, forest land provides other products such as mushrooms, maple syrup, berries and decorative floral products. Commercial interest in these products is just beginning, indicating potential for growth and diversification in these areas.

Fire, insects and disease are natural and necessary elements of forest ecosystems. However, with increased use, the forest must be protected to a certain extent from some of these natural occurrences. SERM is currently conducting a full review of the provincial forest protection policy which includes fire, insects and disease. Forest protection issues in this land use plan will be included in the provincial review.

FOREST RESOURCE USE AND PROTECTION: ISSUE 1
IMBALANCES BETWEEN FOREST DEPLETION AND RENEWAL

A range of demands is made on forest resources of the planning area. These demands may exceed the sustainable capacity of the resource base, particularly for the timber industry. Demands for different resource uses also need to be in balance with each other, and with the natural composition and replacement rate of the forest.

Recommendations:

Guideline

- All allocations of timber resources will be within sustainable limits established by SERM.

Action	Initiating Agency	Priority
1. Develop allowable timber harvest calculations that include such factors as impacts of new harvesting guidelines and use of alternative harvesting methods to accommodate other resource uses and values.	SERM	1
2. Amend regeneration standards and requirements, where necessary, to ensure complete forest renewal and routine measurement of regeneration success on all cutovers.	SERM	1
3. Develop management systems for controlling and co-ordinating harvests of special forest products, such as mushrooms, berries, moss and lichens, at sustainable levels.	SERM	2

FOREST RESOURCE USE AND PROTECTION: ISSUE 2
ALLOCATION OF TIMBER RESOURCES

The sustainable timber supply, particularly softwood sawtimber, is not large enough to meet the demand for it, causing conflicts among users.

Recommendations:

Guidelines

- All timber allocations will be within the sustainable timber supply.

- Volumes will be identified and allocated to the FMA holder, small independent operators and domestic users.

- Any changes to volume allocation after the FMA has been signed will be negotiated by a committee that includes representation from the local advisory committee, government and industry.

Action	Initiating Agency	Priority
1. Determine the volume of timber by species, size, age and site that may be harvested without affecting ecosystem sustainability for the planning area.	SERM	1
2. Develop a policy for allocating surplus timber resources to encourage economic diversification and community stability.	SERM/NA/ Local Advisory Board	2

FOREST RESOURCE USE AND PROTECTION: ISSUE 3
FOREST HARVESTING: CONFLICTS WITH OTHER USERS

Not all forest uses are compatible with current harvesting practices. Uses such as tourism are negatively affected by clearcutting for aesthetic reasons. Trappers are affected when harvesting close to their traplines alters access trails and wildlife habitat.

Recommendations:

Guidelines

- No forest harvesting for commercial purposes will be done until a plan indicating where harvesting will occur and the harvesting method has been approved by SERM. Before plans are approved, they will be made available to the public and other users for review. Where areas of potential conflict are identified, the plan will indicate how conflicting uses will be accommodated.

- Potential uses that are non-consumptive and incompatible with forest harvesting should be considered in areas that are set aside from forest harvesting (example: ecotours could operate in the Wildcat Hills rather than in timber harvest areas).

Action	Initiating Agency	Priority
1. Develop effective communication processes to ensure that other forest users are part of the planning process.	Proponent of Major Developments	1

FOREST RESOURCE USE AND PROTECTION: ISSUE 4
IMPACTS OF TIMBER HARVESTING PRACTICES

Timber harvesting and the associated road networks produce immediate impacts on forest ecosystems beyond the obvious removal of tree vegetation. Impacts may include: increase in soil erosion, soil compaction, alteration of micro-climates, disruption of nutrient cycling regimes, changes in biodiversity, and siltation of water bodies. Greater access by humans to formerly remote areas is another consequence of forestry which may have negative impact on the ecosystem.

Clear-cut logging, which is the most common method used to harvest trees in the boreal forest, has received the brunt of public criticism and concern. Other harvesting methods can cause their own problems, such as increased forest fragmentation; a condition which arises from the greater number of roads required on the landscape. The public feels that past and present harvesting in the Pasquia/Porcupine has upset the natural balance in the forest. In particular, they feel that recent intensive, large scale harvesting operations are not good for the ecosystem and interfere with their ability to undertake other economic, recreational, spiritual and other pursuits of the forest.

Several factors contribute to the concern about ecosystem health: past forest practices in the study area, the relatively rapid expansion of the forest sector, the expense and time required by research projects to study forestry issues, seemingly conflicting results from past research, and greater public interest in environmental conservation.

There is controversy, both public and scientific, around forest management techniques. And there is a great deal of scientific uncertainty about the longer-term ecological impacts of timber harvesting methods. It is recognized that natural disturbances (such as wildfires and insect outbreaks) cause continual change in the environment and are critical to the functioning of the boreal forest. Timber harvesting is a man-made disturbance that also causes change. In an effort to meet biodiversity, wood production and other goals, natural disturbances such as fire, are increasingly being recognized throughout the boreal forest as the basis of forestry practices. Our understanding of disturbance(s) in the ecosystem, however, is limited.

Some recent scientific studies have concluded that harvesting can adversely affect the abundance and variety of plants and animals where others have indicated that biodiversity may be increased. Some of the confusion may be the result of broad generalizations from studies conducted at

limited space and time scales. The key issue is whether forestry practices cause irreversible changes to ecosystems, beyond the range of natural variation. The forest landscape needs a balance of young to old aged stands to perpetuate maximum natural biodiversity. The challenge of forest management is to ensure that balance exists now and into the future.

In light of the controversies and uncertainty about the impacts of timber harvesting, several needs in forest management have emerged. A fuller range of silvicultural systems must be utilized. The level of scientific effort has to increase to address sustainability issues in the forest, and forest management practices need to be adapted more quickly as the results of this science work becomes available.

Recommendations:

Guidelines

- Timber harvesting and renewal activities for the Forest Management Agreement (FMA) licence holder will be guided by an approved twenty-year forest management plan (prepared by the FMA holder, and requiring an environmental impact assessment), and approved by SERM through the review of five-year and annual operating plans.

- Forest harvesting operations should emulate natural disturbance regimes, to the extent possible, and maintain the ecological integrity of the forest ecosystem.

- All harvesting plans must demonstrate how ecological integrity of the ecosystem will be maintained.

- All harvesting plans must include plans for regeneration.

- New technology and research in timber harvesting and forest management will be reviewed on an ongoing basis and incorporated into forest resource use.

- The FMA Holder will keep the public informed of all harvesting plans, and will address questions and concerns about potential impacts.

Action	Initiating Agency	Priority
1. Develop operational guidelines for forest harvesting, based on sound ecological science, and with input from interest groups. These guidelines will: C ensure that the integrity of the forest ecosystem is maintained. C consider seasonal requirements for all plants and animals. Include conditions for harvesting in areas that have been identified as important for wildlife habitat or other values. C include specific guidelines for forest site operations and access, considering riparian zones, existing proportions of forest habitat, habitat fragmentation, special areas (eg. calving areas, salt licks, nesting areas), conservation of habitat and animal corridors. C ensure protection of riparian and other sensitive areas. C be open to adaptation as new information and knowledge becomes available.	SERM/ FMA Holder	1
2. Conduct ongoing research and monitoring on effects of forest management practices, and use new information to adapt practices when appropriate.	SERM/ FMA Holder	1
3. Develop indicators to determine the effects of forest management practices on the integrity of the ecosystem, and measure these indicators regularly. Results of monitoring will be used to revise forest management practices as required, and will be available to the public.	SERM/ FMA Holder	2

FOREST RESOURCE USE AND PROTECTION: ISSUE 5
RENEWAL PROBLEMS FROM PAST TIMBER DEPLETIONS

In the past, not all cutovers have received needed regeneration treatments. In addition, areas that burned may not have regenerated back to productive forest land. Areas that have had forest cover removed and not renewed are known as 'not satisfactorily restocked' (NSR) or backlog. This problem occurs in predominantly softwood stands, which do not regenerate naturally as easily as hardwood stands.

The amount of NSR area is approximately 141,420 hectares. Records are kept of areas harvested and burned, and of areas that have received regeneration treatments. However, not enough surveys have been done of how areas left for natural regeneration have fared, or of the success rate of planted or treated areas.

If not regenerated to a commercial timber species, NSR backlog areas have usually grown in with non-commercial tree and brush species. This makes regeneration more difficult and expensive than if renewal is done immediately.

A Renewal Agreement has been signed by SERM and Saskfor MacMillan that addresses the renewal of both current harvests and NSR backlog.

Recommendations:

Action	Initiating Agency	Priority
1. Develop a plan for reducing and eliminating reforestation backlog. The plan should include actions to completely assess backlog, and options for renewing areas, with priority given to areas with highest productivity potential.	SERM/ FMA Holder	1

FOREST RESOURCE USE AND PROTECTION: ISSUE 6
FIRE SUPPRESSION PRIORITIES

Although fire is a natural and necessary element of forest ecosystems, expanded use of forests and resources have made fire suppression and detection necessary. The need to protect timber from fire has increased with the demand for wood supply. At the same time, the need to protect non-timber resources has also increased.

Burned forests are important to the ecosystem. They contribute to the biodiversity and health of the forest by providing habitats and forage areas for wildlife (animals, insects, plants, bacteria, etc.). Burned forests are different ecosystems than clearcuts, and are necessary for the survival of some plants and animals.

For economic reasons, not every fire can be fought with the same intensity. For biological reasons, some areas must be left to burn, so that the overall ecological integrity of the forest is sustained. So a system of priority areas is needed, based on ecosystem health and resource and community values. A full inventory of forest values and their relative importance will allow integration of fire management strategies in forest resource management. A broad range of inputs is required to devise fire protection priorities.

Recommendation:

Action	Initiating Agency	Priority
1. When the provincial Forest Protection Policy is complete, develop a fire priority map and fire suppression plans, with input from the Forest Management Advisory Committee and forest industry.	SERM	2

FOREST RESOURCE USE AND PROTECTION: ISSUE 7
FUEL MANAGEMENT PLANNING

Intensive harvesting and fire suppression over the past fifty years has interrupted the natural fire cycle in the planning area. Fire has been partly replaced by harvesting as the primary disturbance agent.

New concepts suggest that harvesting may be planned to make forests less prone to extensive fires, and to better mimic patterns of natural fire. Fuels available for forest fires — the area's vegetation — significantly affect fire behavior. Harvesting practices offer opportunities to manipulate forest fuels to influence fire intensity and its rate of spread, reducing the likelihood of large fires and protecting various forest resources and values.

Recommendations:

Guideline

- Recognize the role of fire in ecosystem functioning, while protecting the timber supply and other forest values from fire.

Action	Initiating Agency	Priority
1. Include fuel management proposals in timber harvesting plans.	Timber Harvesters	1

FOREST RESOURCE USE AND PROTECTION: ISSUE 8
INSECT AND DISEASE OUTBREAKS

Insects and disease are part of the natural cycles of the forest ecosystem. However, these agents can create problems when levels significantly affect forest resource values. For example, significant outbreaks of spruce budworm in the planning area have raised concerns.

Funding levels have been inadequate to control outbreaks.

Unfortunately, an ideal solution for insect and disease problems does not exist. Harvesting infested forests to prevent further spread of pests may result in excessive cutting and undesirable cutting patterns. Pesticide use has raised concerns about environmental safety, impacts on non-target species, effectiveness of treatments, and costs. These concerns must be monitored, and the need for control must be balanced with the need to protect timber supplies.

Recommendations:

Guideline

- Recognize the role of insects and disease in ecosystem functioning, while protecting the timber supply and other forest values from insects and disease.

Action	Initiating Agency	Priority
1. Develop a monitoring program to assess insect and disease risks and infestations on an ongoing basis.	SERM	1
2. Develop a research program to determine the ecological role of insects and disease in the forest, and to assess impacts of control programs on non-target species.	FMA Holder/SERM	1
3. Develop appropriate strategies for dealing with insect and disease outbreaks.	SERM/ FMA Holder	2

FOREST RESOURCE USE AND PROTECTION: ISSUE 9
TIMBER SALVAGE OPERATIONS

Timber that is affected by fire, insects or disease is harvested for a variety of purposes including fence posts, rails, firewood, etc. If the timber is not harvested within a year or two, it becomes an unusable resource, depending on the end-product. Because of the urgency, harvest restrictions are sometimes relaxed. Full consideration of harvesting impacts on other resource values may be overlooked in favor of economic benefits and a desire to conserve green healthy trees by directing forest harvesting into burns. Operators with “green” allocations are often directed into burns instead.

Biologically, the practice of salvage logging raises concerns about the ecological impacts of this practice on soils, vegetation and wildlife. Snags (dead standing trees), fire-damaged trees and fallen timber, which are normally removed during salvage operations, all serve as important nutrient sources for forest soils, as habitats for insects and as forage areas for birds. Logging the burned area — the fire-damaged trees along with pockets of surviving green timber — negates many of its biological benefits.

Recommendations:

Guideline

- Manage burned forests to ensure long-term sustainability of the forest and the best use of merchantable timber. Consider timber salvage and right-of-way clearings.

Action	Initiating Agency	Priority
1. Develop guidelines for managing burned forests.	SERM/ Forest Harvesters	1

4.3 Fish and Wildlife

Fish and wildlife resources of the planning area are important to area residents, and to people outside the planning area. These resources are used for recreation, income and traditional purposes. These varied uses require that a balance be maintained among various demands, and between harvest rate and productive capacity of resources.

The planning area has seven major drainage basins made up of hundreds of streams and tributaries. Sport fishing is limited because of few major water bodies. Fish enhancement projects have occurred throughout the planning area to provide fishing diversity. Commercial fishing occurs only in the Cumberland House delta and involves 25-35 fishermen.

Animal wildlife in the planning area can be grouped as: game (big game and game bird); non-game (small animals, birds); and fur species.

The most common big game species are moose, elk, white-tailed deer and black bear with 60%, 55%, 10% and 30% respectively of provincial licenced harvest coming from the planning area. Outfitting for game species is a rapidly expanding business in the planning area. These species, except for bear, are also traditionally hunted by Aboriginal people. SERM has management strategies for all big game species.

In July 1996 the Saskatchewan Research Council was commissioned to prepare a report on wildlife habitat management in the Stove Creek area which included part of the Porcupine Forest. The report provides recommendations to improve elk habitat, while maintaining the habitat for other species in the area.

Harvest of ducks, geese, and grouse is also regulated by management strategies.

The Pasquia and Porcupine forests provide ideal habitat for non-game bird species. Historically, over three hundred species have been recorded; over half of these species breed in the planning area and as many as forty species stay year round, (see Appendix 9). The Porcupine Forest is also an important breeding area for trumpeter swan.

Fur species management is regulated through season dates and Fur Conservation Blocks. Trapping is decreasing, due to declining demands for fur, low prices and declining populations of some species such as muskrat. The planning area has approximately 100 active trappers, and many more that still consider trapping as a way of life.

Fish and wildlife populations can fluctuate considerably due to a variety of factors, many of which cannot be influenced by humans. Some examples of fluctuating populations are fish, moose and muskrat in the Cumberland Delta, fish in the Helldiver Lake area, and moose in the Hudson Bay area.

Issues and Recommendations

FISH AND WILDLIFE: ISSUE 1
NEED FOR SUSTAINABLE ALLOCATIONS OF FISH AND WILDLIFE

Different user groups are interested in the same resource. These demands may exceed sustainable levels. As well, inventories of plant and animal life within the planning area are incomplete. Many of the past management decisions have been based on existing information that doesn't present the whole picture.

Moose populations in the Cumberland area have suffered a drastic decline from 1987 to the present. Recovery of the population will require input from all affected stakeholders locally, provincially, and in co-operation with the Province of Manitoba.

Growing elk numbers has resulted in significantly more damage to agricultural crops and haystacks. Consequently, herd management south of the Cumberland Delta has become largely a compromise between the high demand for the species for hunting and recreation and the tolerance of forest fringe landowners.

Recommendations:

Guideline

- More complete inventories of all plants and animals are required. Hunting/trapping records should not be the only source of data for economic species.

- Rare and endangered species and their habitats must be protected.

- Resource allocation processes will include the local advisory committee, all user groups and any established co-management boards or partnership groups. These groups will be encouraged to co-operatively manage land and resources.

Action	Initiating Agency	Priority
1. Prepare more comprehensive inventories of all plant and animals species. Attach time frames for initiating inventory programs.	SERM	1
2. Develop fish and wildlife management plans (e.g. *Wildlife Habitat Management in the Stove Creek Area*, 1996), with input from stakeholders.	SERM	1
3. Using information from resource inventories and management plans, finalize and use the SERM resource allocation policy.	SERM	1
4. Examine the ecological role of riparian areas. Develop and implement suitable management strategies to address areas of concern. Monitor the effectiveness of protection strategies for riparian areas.	SERM	1
5. Develop strategies that include monitoring, allocating and managing fish and wildlife resources, in consultation with the local advisory committee, forest industry, and other user groups.	SERM	3

FISH AND WILDLIFE: ISSUE 2
LOSS OR ALTERATION OF WILDLIFE HABITAT DUE TO INDUSTRIAL DEVELOPMENTS

Recommendations:

Guidelines

- Proponents of any major project will be responsible for determining potential impacts on the forest ecosystem, and monitoring these impacts. This information will be made available to other resource users, interest groups, and the general public.

- Proponents of major projects will be responsible for mitigating any damages to the ecosystem they may cause.

Action	Initiating Agency	Priority
1. Develop comprehensive guidelines to assess impacts and determine appropriate mitigation for developments and commercial activities which may have significant impacts on forest plant and animal populations.	SERM	1

FISH AND WILDLIFE: ISSUE 3
IMPACTS OF THE E.B. CAMPBELL DAM ON FISH AND WILDLIFE HABITAT

The operation of the E.B. Campbell Dam has altered natural waterflows in the Cumberland Delta, affecting fish and wildlife habitat.

Recommendations:

Action	Initiating Agency	Priority
1. Develop a water management plan that will ensure acceptable sturgeon spawning and rearing habitat below the E.B. Campbell Dam. This plan should also consider impacts of the dam and its operations on the overall ecology of the Cumberland Delta.	SERM/SWC	1

FISH AND WILDLIFE: ISSUE 4
OUTFITTING PRACTICES: EFFECTS OF BAITING ON ECOSYSTEM HEALTH

Outfitters use baits to attract animals. Baits include screenings from grain elevators which may introduce exotic species into the forest. Baiting may have long-term detrimental effects on deer populations, by increasing the proportion of trophy animals harvested. It may also result in dependency on bait by feeding animals, change feeding patterns and increase susceptibility to predators and disease.

Baiting can cause conflicts between resident hunters and outfitters who tie up key hunting areas with bait sites and permanent tree stands.

Recommendations:

Action	Initiating Agency	Priority
1. Conduct research to determine effects of baiting on the ecological integrity of the ecosystem. Use results to develop recommendations for baiting in revisions to the Land Use Plan.	SERM/ SOA	2
2. Develop guidelines to address outfitter needs and concerns of other users (see Issue #5, Action #1).	SERM/ SOA	2

FISH AND WILDLIFE: ISSUE 5
OUTFITTING PRACTICES: TREE STANDS

Outfitters build tree stands for their clients' use. Some of these are elaborate structures, not easily removed, and give an impression of exclusive rights to an area. Current SERM policy does not allow the placement of new permanent tree stands in the Provincial Forest.
While agreement has been reached on how to deal with **new** permanent tree stands, there is no consensus on how to handle already existing ones.

Recommendations:

Guideline

- No new permanent tree stands will be allowed.

Action	Initiating Agency	Priority
1. Develop detailed guidelines for tree stands that satisfy both outfitter needs and the concerns of other users.	SERM/ SOA/ Public	2

4.4 Grazing

Cattle grazing has occurred in the Pasquia/Porcupine planning area since the turn of the century. Today, 22 cattle producers have grazing permits for 1,400 head of cattle on 470 square kilometers (182 square miles), or just over 2 per cent of the planning area. Forest grazing provides an important source of forage for these cattle producers, helping to maintain their economic viability. The estimated annual economic benefit of grazing in the planning area is $3 million.

Current regulations set the grazing season from May 24 to October 15, or as the Minister may determine. Grazing fees are $5 per adult head per season. Calves graze for no charge. Permittees are not allowed to control public access, to clear brush and trees to increase forage

production, or to break and seed non-native forage species on Provincial Forest lands. Permittees must graze their own cattle, or cattle they are managing, and must confine livestock to their permit area. Fencing or natural barriers such as waterways and wetlands are used for confinement.

Applications for new grazing areas and transfers of existing areas to individuals other than immediate family are assessed for carrying capacity by SERM. These areas must support a minimum of 60 animal units months (AUM)[2] per quarter section (65 hectares) for the grazing season, to limit new grazing opportunities to lands best suited for grazing. Transfer of existing areas to non-family members must support a minimum of 30 AMU per quarter section (see Appendix 6).

In 1994 a Provincial Working Group was formed to develop a policy on grazing in the Provincial Forest. Committee members included representatives from several branches of SERM, forest cattle producers, forest industry and representatives of non-government organizations. This working group achieved consensus in 1996 on a Provincial Forest Grazing Policy (see Appendix 6).

Issues and Recommendations

GRAZING: ISSUE 1
CONFLICTS BETWEEN GRAZING AND OTHER FOREST USERS

While grazing is an important use of some forest lands, conflicts can occur with other users. The Pepaw Plains and surrounding areas have been identified as areas of conflict.

Recommendations:

Action	Initiating Agency	Priority
1. Identify areas of conflict between grazing and other uses.	SERM	1
2. Arrange meetings of affected stakeholders to resolve conflicts.	SERM	1

[2] 1 AUM = the amount of forage required by a 1000 pound mature cow with calf for 2 months

GRAZING: ISSUE 2
GRAZING: IMPACTS ON THE FOREST ECOSYSTEM

There have been several studies over the past twenty years on the effects of grazing in the aspen mixedwood forest of Saskatchewan. In general, these studies suggest that many forest understorey shrubs and herbs have low tolerance to grazing, compared to grassland vegetation. In mixedwood forest, overgrazing usually causes a decline in understorey species, and in extreme cases may result in increased invader species. Grazing removes habitat for many ground or shrub-nesting bird species; as many as 50% of the forest birds nest on or within a meter or so of the ground. There is also potential for livestock to pass diseases and parasites on to healthy deer and elk populations. As well, there is concern that people will take actions against animals in the forest that might prey on grazing livestock.

Light to moderate grazing can increase plant diversity and improve habitat for some wildlife species. Trials using sheep have shown that carefully controlled grazing can benefit conifer growth in plantations. Overgrazing can lead to loss of understorey vegetation, increased abundance of invader species, altered habitats, reduced tree growth and vigor, and increased surface run-off and erosion. Inadequate control of cattle distribution can increase tree seedling mortality in planted areas.

Recommendations:

Action	Initiating Agency	Priority
1. Develop a grazing condition resource inventory for existing grazing permit areas.	SERM	1
2. For each grazing permit, develop a forest grazing management plan, that maintains acceptable levels of species diversities. Involve the FMA holder and other forest users.	Grazing permittees/ SERM	1
3. Develop an ongoing site monitoring and communications plan with grazing permittees to educate, modify and enforce grazing plans.	SERM	2

GRAZING: ISSUE 3
LIMITED GRAZING OPPORTUNITIES IN THE PROVINCIAL FOREST

Some cattle producers feel that current regulations severely restrict additional grazing opportunities in the Provincial Forest, as new grazing opportunities are limited to the best quality grazing lands only.

Recommendations:

Action	Initiating Agency	Priority
1. Re-evaluate carrying capacity limitations of the grazing policy applied to new grazing applications, with input from SAF, livestock producers and other forest users, and based upon the following factors: C ecosystem impacts and sustainability, C compatibility and impacts on other users, C requirements of livestock producers, C costs and benefits to producers and resource management agencies, C effectiveness of management controls.	SERM	1
2. Revise carrying capacity limitations if/as warranted by the results of Action 1. Monitor the impacts of grazing, and where appropriate, revise the minimum allowable carrying capacity.	SERM	2

4.5 Recreation Cabins

Recreational cabins are secondary, non-permanent residences, not to be used for commercial or business purposes. There are two types of recreational cabins: remote, and those in subdivisions. There are 211 remote cabins throughout the Planning Area (Figure 4-1). There are eight subdivisions, located mostly in the Porcupine Forest (Figure 4-2).

In order to build a cabin in the planning area, a permit or lease issued by SERM is required. SERM's policy on dispositions includes requirements for surveys, building size and location, and licence and permit fees.

Since 1982 there has been a freeze on remote cabin development in the Porcupine Forest. Remote cabins are allowed in the Pasquia Forest and Cumberland Delta.

Issues and Recommendations

RECREATION CABINS: ISSUE 1
RECREATION CABIN DEVELOPMENT IN THE FOREST

The demand for more remote recreational cabins in the planning area has raised concerns that:

1) more cabins will create additional roads in the forest which will affect other values, such as diminished wilderness values;

REMOTE RECREATION CABINS

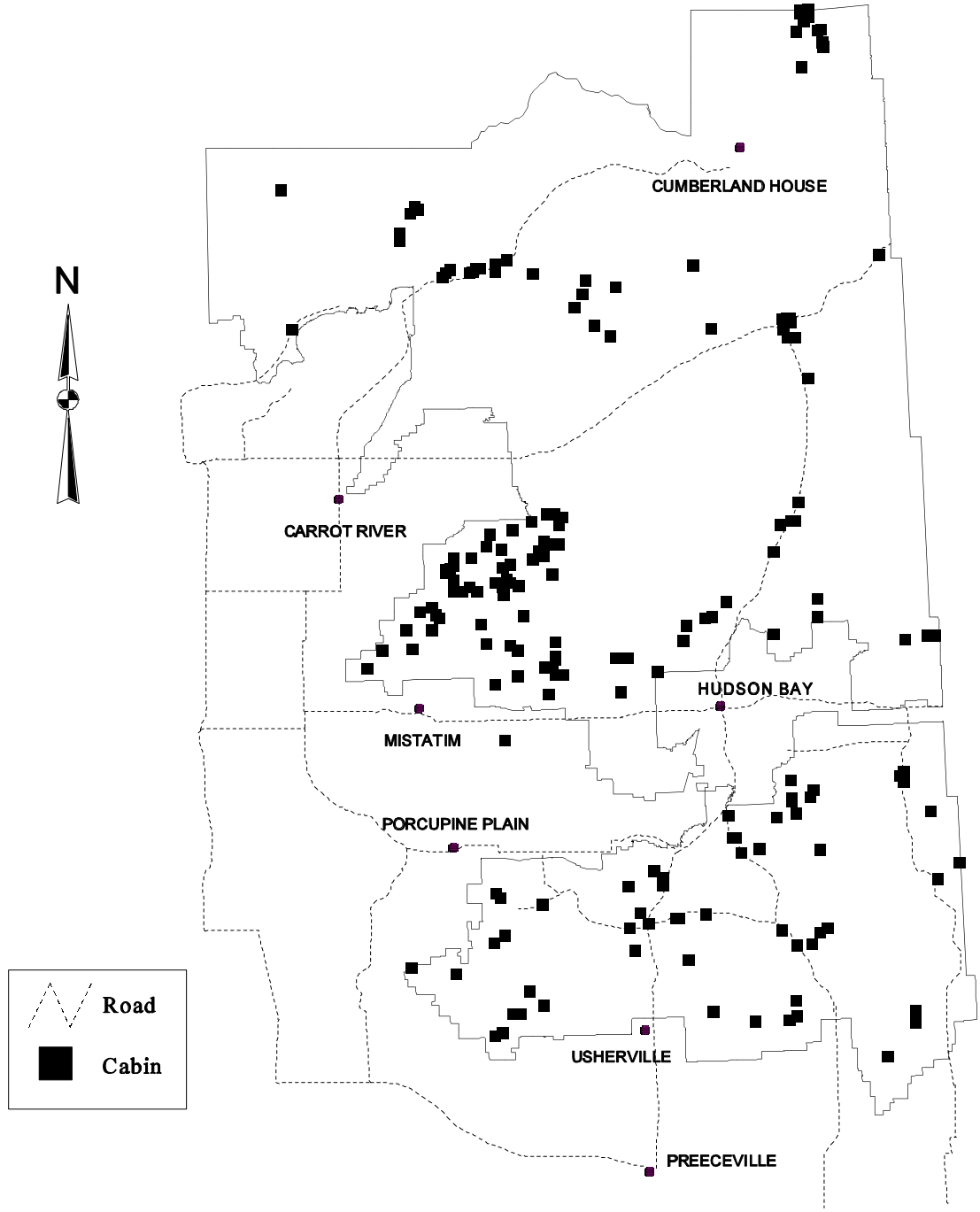

Figure 4-1

CABIN SUBDIVISIONS

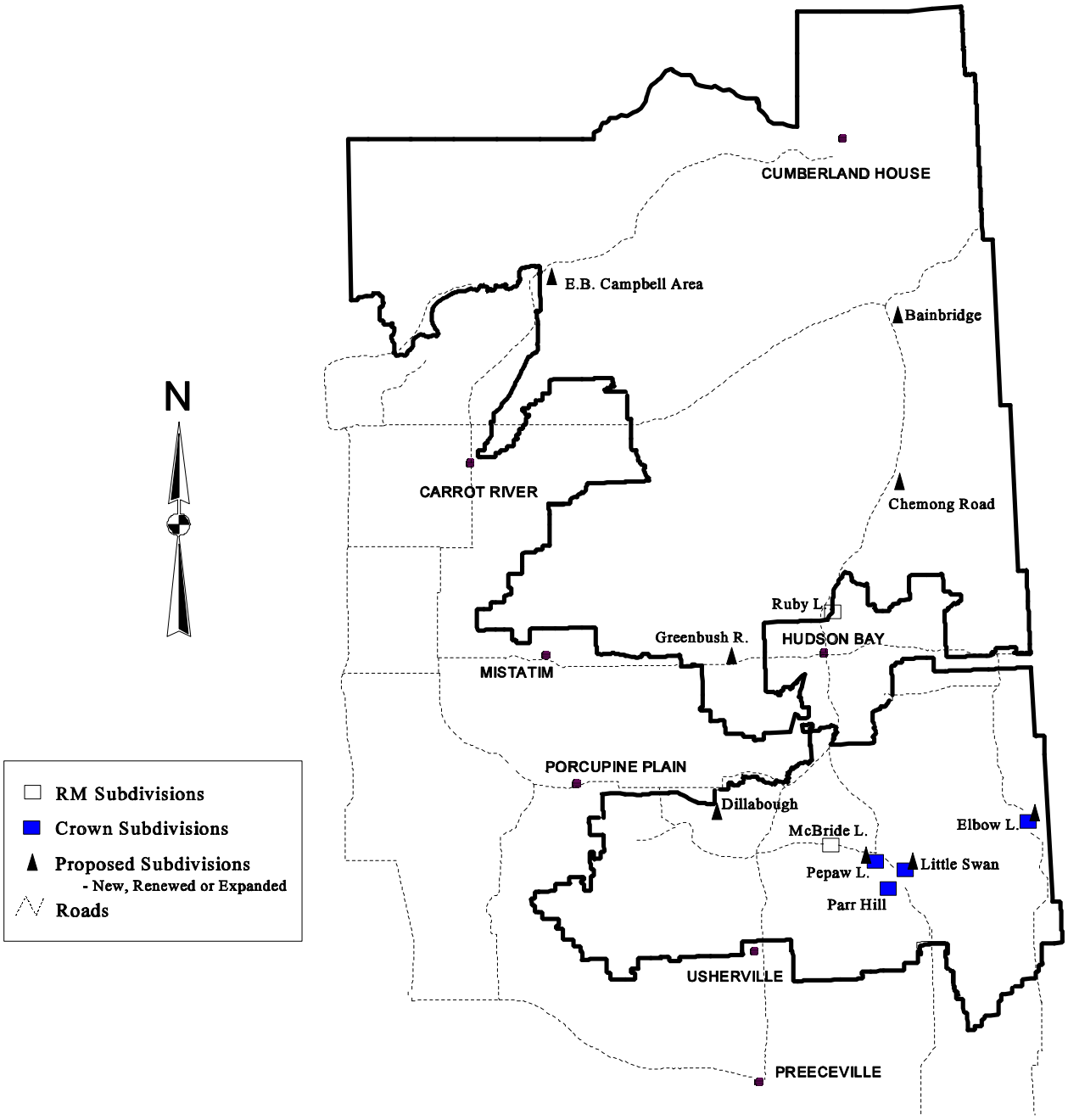

Figure 4-2

2) cabin owners tend to claim ownership to the surrounding areas which causes conflict with other users; and

3) more cabins may limit hunting areas because of Section 13 of the Wildlife Act, which prohibits hunting within 500 meters of a dwelling.

Recommendations:

Guidelines

C Allow recreational cabin development in designated areas shown in Figures 4-2. Cabin development could consist of a subdivision or loosely spaced cabins.

Criteria for designating areas are:
- < existing road access;
- < minimal potential conflict with existing uses; and
- < consultation with RM's and stakeholders before designation of an area for cabin development is finalized.

Proposed designated areas are:
- **< Porcupine Forest**: Dillabough, Pepaw Lake, Little Swan Subdivision, Elbow Lake
- < **Pasquia Hills Region**: Chemong Road, Bainbridge, Tobin Lake, Greenbush (a subdivision in the Greenbush area depends on proximity to burial sites and RAN sites).

C Conversion of recreation cabins to commercial cabins in the Little Swan and Elbow Lake Subdivisions:
- < These subdivisions were established as recreation cabin subdivisions, and will remain as recreation cabin subdivisions with no conversion of cabins/leases in these subdivisions from recreation to commercial.
- < Further expansions of these subdivisions could include commercial leases if the public involvement processes surrounding expansion supports this direction.

RECREATION CABINS: ISSUE 2
CABINS BUILT WITHOUT PERMITS

Legislation requires that all structures in the forest have a legal permit or lease, but some people set up cabins in the bush without a permit. Hunting shacks are often left in the forest.

Recommendations:

Guidelines

- Appropriate enforcement action will be taken on structures in the forest that do not have a legal disposition, or comply with the guideline below.

- Temporary hunting cabins will be allowed, from one week before hunting season to one week after hunting season closes. Cabins must be posted, identifying the owner.

Action	Initiating Agency	Priority
1. Add an educational message about temporary camps to hunting guides.	SERM	1

RECREATION CABINS: ISSUE 3
BUFFER ZONES AROUND CABINS

A buffer zone of 90 meters has generally been applied to logging operations around cabins. Some cabin owners would like this increased; they feel that such uses reduce the aesthetic and wildlife values around their area. Larger buffer zones will reduce available timber for the forest industry, and will give cabin owners a sense of ownership and control of surrounding areas.

Recommendations:

Guidelines

- Proponents will discuss all plans for extractive use in the general area with the cabin owner.

- Timber harvesters will use harvesting strategies that will maintain the integrity of the buffer zone.

Action	Initiating Agency	Priority
1. Develop a policy to implement a formal 90 meter buffer zone around cabins.	SERM	1

4.6 Trapping Cabins

Trapping cabins are intended to be used for traditional trapping, hunting or commercial fishing activities. These cabins are tied to licenced trapline operations. There are 140 trapping cabins located throughout the planning area.

Issues and Recommendations

TRAPPER'S CABINS: ISSUE 1
TRAPPING CABINS USED FOR OTHER PURPOSES

Trappers are allowed to have more than one trapping cabin for their operation. Some of these cabins are being used for recreational purposes by non-trappers. Trapping and recreational cabins have different legal obligations. A trapping cabin permit costs $15 per year; a recreational cabin permits costs $250 per year. A recreational cabin requires a legal survey costing $1-2 thousand; no legal survey is required for a trapping cabin.

The recreational use of trapping cabins may reduce the demand for commercial operations that provide lodging in the area. As well, using trapping cabins for recreation is a way of getting around the current freeze on recreational cabin development in the Porcupine Forest.

Recommendations:

Guidelines

- Additional trapping cabins will be allowed only when necessary for the trapping operation.

- Allowed use of trapping cabins includes occupation by the licenced trapper and members of his or her immediate family (spouse, son, daughter). A recreational permit allows others to stay in the cabin for recreational purposes.

- The use of trapping cabins for recreation without a recreational use permit will be treated as a non-compliance situation.

Action	Initiating Agency	Priority
1. Determine conditions that will allow a trapper to have more than one trapping cabin.	SERM/Trappers Association	1

Action	Initiating Agency	Priority
2. Establish an annual permit to allow recreational use of trapping cabins. C one recreational use permit per trapping licence, C permit fee will be $250.00/year, C no legal survey required, C non-transferrable. This recommendation will require a change to provincial legislation, and consultation with stakeholders from other areas.	SERM	2
3. Develop standards and guidelines for different types of cabins (ie: trapping cabin, recreational trapping cabin, remote recreational). (eg: Define the maximum size of a recreational trapping cabin, define "recreational use" of a trapping cabin, etc.)	SERM/Municipal Government	1

4.7 Commercial Developments

Commercial developments in the planning area include outfitters, gas stations, stores, restaurants, accommodations and ecotourism operators. Most commercial leases in the planning area are for outfitters; there are 90 outfitters. Four commercial operations, located along provincial highways, provide other services to the public.

Outfitting cabins are used for commercial operations that provide guiding services for fishing and hunting activities. Ecotourism cabins are used by ecotour operations that provide guiding services for nature-centered, non-consumptive tourist activities. Significant growth is expected in the ecotourism industry.

Issues and Recommendations

COMMERCIAL DEVELOPMENTS: ISSUE 1
INCREASING COMMERCIAL DEVELOPMENT WITHIN THE PROVINCIAL FOREST

Present policy allows outfitters to build one permanent structure, on a commercial lease, and up to two temporary structures on their assigned operating area (AOA). Many new cabins could be built throughout the planning area. More cabins will mean more roads, further fragmentation of the forest, increased impacts on the forest ecosystem and increased conflicts with other forest users.

However, limiting new cabins may restrict new development.

Recommendations:

Guidelines

- Allow commercial cabin development in designated areas only, under the same conditions as recreation cabin development.

  - Development outside designated areas will be allowed only under exceptional circumstances:
    - when the location is critical to the viability of the enterprise, and
    - when the applicant can demonstrate that he has investigated and exhausted all options outside the Provincial Forest.
    - When potential impact on the ecosystem and other resource users is minimal, and
    - when potential economic and social benefits are high.

    Commercial development must be compatible with existing uses and management goals for the area.

    Proposals will require municipal approval, and review and approval by the local advisory board, **before** being submitted for SERM's approval.

- Creation of new access roads or trails is not allowed.

- Designated areas and development restrictions for permanent developments are as follows:

Outfitting Businesses

- Lease holders must maintain their outfitting licence and AOA (for deer).
- Sale and transfer of lease developments will be allowed only with transfer of outfitting licence and deer AOA.
- Outfitters planning to locate by lakes with populations of gamefish will require a gamefish allocation on that lake.
- Proponents must discuss their plans with the local advisory committee prior to application.
- Development proposals require approval of the Rural Municipality.
- Outfitters will be allowed up to two temporary outcamps which must be dismantled and removed from the forest at the end of deer hunting season.

Action	Initiating Agency	Priority
1. Determine, with involvement from the FMAC and other users, if the forest is at its carrying capacity for cabins. In the interim, no commercial cabins will be allowed, other than in proposed designated areas. Note: carrying capacity determines the number of cabins that the planning area can support while maintaining the ecological integrity of the forest, and considering all uses of the forest.	SERM	1

COMMERCIAL DEVELOPMENT: ISSUE 2
SALE OF COMMERCIAL LEASES ON CROWN LAND

Current SERM policy states that commercially leased lands are eligible for private purchase. Such purchases increase management difficulties, increase conflicts between users and fragment the Provincial Forest. Prior to sale, a site and a registered road must be surveyed which presents servicing implications and potential difficulty for municipalities.

Recommendations*:*

Guideline

- Ownership of leased lands within the Provincial Forest should remain with the Province, except for situations determined in the policy referred to in the following action. Allocation of resource use does not imply ownership.

Action	Initiating Agency	Priority
1. Change SERM policy on sale of crown leases within the planning area, so that there are no further land sales, with the exception of waste disposal sites and existing legally surveyed subdivisions.	SERM	1

4.8 Waste Disposal Sites

There are eight waste disposal leases located within the Pasquia/Porcupine Planning Area: six are leased to communities and Rural Municipalities; two are operated by SERM. Existing leases have a 10-year term. As leases expire, SERM's policy has been to sell sites to the community or RM for the cost of a legal survey. These sites are sold because of concerns about liability, and the unsuitability of the site for other uses.

Any proposed waste disposal site must undergo an engineering and environmental study by the

proponent to determine site suitability and potential impacts. The proposal is reviewed by SERM and other government agencies. A public consultation process must be conducted as well, prior to SERM approving the site. Upon approval, the proponent must do a legal registered survey of the land. SERM then transfers title to the proponent.

Issues and Recommendations

WASTE DISPOSAL SITES: ISSUE 1
IMPACTS OF MORE WASTE DISPOSAL SITES

New waste disposal sites may be requested within the planning area. This will make the area used unavailable for other users and, according to current policy, the land will be transferred to the lessee, removing it from the Provincial Forest.

Recommendations:

Guidelines

- Waste disposal sites will be sold to the municipality.
- New waste disposal sites will be approved only following an engineering and environmental review.
- New waste disposal sites will be allowed only in the Resource Management Area.
- Applications for waste disposal sites from communities outside the planning area will not be considered for approval unless no other options are available outside the planning area.
- Information and education about waste disposal sites will be available through SERM.
- Operating standards for waste disposal sites will be strictly enforced.

Action	Initiating Agency	Priority
1. Prepare educational information about waste disposal sites and encourage multi-community or municipal landfill sites.	SERM	1

4.9 Sawmill Sites

There are five sawmill sites in the planning area. Sawmills require an annual Sawmill Licence ($10), and an annual camp fee ($5), paid when the Timber Permit is purchased. Each sawmill occupies 5-10 hectares of Provincial Forest. Sites usually include a sawmill, other buildings, slash and sawdust piles, old vehicles and machinery.

Issues and Recommendations

SAWMILL SITES: ISSUE 1
ENVIRONMENTAL IMPACTS OF SAWMILL SITES

The Sawmill Licence and camp fee do not specify legal boundaries or guidelines for site development or reclamation. Sites tend to cover large areas, and expand with accumulation of slash, sawdust piles, old equipment and vehicles. Some sites are located near streams, increasing the risk of water contamination.

Recommendations:

Guideline

- Applications for Industrial Leases for new sawmill sites will be considered only if no suitable areas are available outside the planning area.

- Operating standards for Industrial Leases will be strictly enforced.

- Industrial Leases will not be sold.

Action	Initiating Agency	Priority
1. Change Lands policy to require leasing of sawmill sites on an Industrial Lease with conditions attached concerning site cleanliness, reclamation, and required financial guarantees. Since Industrial Lease rates are area based, site size will be limited.	SERM	2

4.10 Mining and Quarrying

The mining industry is a major contributor to the Saskatchewan economy. Saskatchewan is the world leader in the production of potash and uranium. In 1995, the mining industry provided

5,600 direct jobs, 10-12,000 indirect jobs, and $185 million in royalties to the Province, from an annual production valued at $1.9 billion.

In the Pasquia/Porcupine area, silica sand, cement rock, horticultural peat, and sand and gravel are currently produced. Nickel and copper were recently produced from the Namew Lake Mine, northeast of the planning area in Manitoba. High potential for base metal deposits exists in the northern part of the planning area. A large reserve of oil shale is known in the Carrot River region, and potential exists for manganese and phosphorus deposits in the Pasquia Hills.

Saskatchewan Energy and Mines (SEM) regulates the disposition of Crown mineral rights for the Province through issuance of mineral claims (for exploration) and mineral leases (for development and production). SEM administers all Crown-owned mineral and petroleum commodities, including quarried commodities, in the Province, except for aggregates (sand, gravel and structural clay) and horticultural peat which are administered by SERM. SERM administers Crown surface rights for the Province in the planning area. This includes monitoring environmental regulation of mining operations and rehabilitation of mining sites by the mining companies.

Issues and Recommendations

MINING AND QUARRYING: ISSUE 1
ACCESS TO MINERALS

Potential conflicts with other land uses or priorities may restrict access to land for mineral exploration and development.

Limitations on mineral exploration and development will have negative economic implications. Land lost from mineral exploration and production represents a potential economic loss to the province. Any loss of economic development and employment opportunities in rural and northern parts of the province is serious, as these areas suffer from high unemployment.

Recommendations:

Guidelines

- Consider both known and potential mineral resources when making land use decisions.

- Maintain access to land for mineral exploration and development whenever possible.

- For any land use proposals that could restrict mineral exploration and development the following course of action is required:

  - Contact Saskatchewan Energy and Mines (SEM) to evaluate mineral potential. SEM has already identified existing mineral deposits and potential mineral resources by conducting a mineral resource assessment of the Pasquia/Porcupine area. Periodic updates of this assessment will be required, including input from the mining industry.

  - SEM will identify existing mineral dispositions (claims and leases) in the area from current mineral disposition maps.

  - Using this information, negotiations among the various stakeholders will resolve conflicts where possible. Options could include moving the site of the conflicting use to one of lower mineral potential, or the land use proposal could be altered to address the concerns of the mineral interests.

MINING AND QUARRYING: ISSUE 2
MINING: COMPENSATION

Mineral exploration and development involve a high risk of investment over a significant time span, and will not occur if there are uncertainties about tenure of mineral rights. If resolution to a disputed site cannot be reached, and existing mineral dispositions have to be canceled, rights holders must be adequately compensated. It should be noted that existing mineral dispositions can be canceled only after the voluntary surrender of the dispositions by the rights holders. There is no legislative provision under the *Crown Minerals Act* for the expropriation of existing mineral dispositions.

Recommendation:

Action	Initiating Agency	Priority
1. Develop a compensation process, involving the mineral industry and other affected stakeholders.	SERM/ SEM	2

MINING AND QUARRYING: ISSUE 3
SAND AND GRAVEL QUARRIES: INSUFFICIENT ENVIRONMENTAL GUIDELINES

Existing controls on sand and gravel quarries may not ensure the maintenance of healthy forest ecosystems.

Recommendation:

Guidelines

C Existing controls and guidelines must be enforced.

Action	Initiating Agency	Priority
1. Review existing controls and guidelines to ensure that they are adequate. Revise if necessary.	SERM	2

MINING AND QUARRYING: ISSUE 4
SAND AND GRAVEL QUARRIES: REHABILITATION OF QUARRY SITES

Abandoned quarry sites need to be rehabilitated.

Recommendation:

Guidelines

C All leases will require a reclamation plan.

Action	Initiating Agency	Priority
1. Ensure leases/dispositions are in place for all quarries and establish reclamation standards that will return sand and gravel quarrying sites to predisturbance condition.	SERM	1
2. Change legislation to allow for a portion of quarry lease fees to be directed toward reclamation of old quarry sites.	SERM	2

MINING AND QUARRYING: ISSUE 5
SAND AND GRAVEL QUARRIES: CONFLICTS WITH OTHER USERS

New sand and gravel quarries may conflict with existing resource uses.

Recommendations:

Guidelines

C Proposals for new quarry developments should be evaluated by SERM for potential conflicts with other resource users.

- Development of access to new quarries must be planned with other resource users to minimize conflict and new road construction. Reclamation of quarry sites must also consider other users, access and road reclamation.

Action	Initiating Agency	Priority
1. Identify areas where sand and gravel quarries will not be allowed.	SERM	1
2. Identify areas where quarry developments must follow special guidelines.	SERM	1

4.11 Snowmobiles and Other All Terrain Vehicles

All terrain vehicles (ATVs) are self-propelled vehicles designed for off-highway travel. Examples include; snowmobiles, Argos, swamp buggies, trikes and quads. People use ATVs in the forest during all seasons — to provide access to berry picking spots, cabins, traplines and hunting camps, and for general recreational travel.

Many hunters and trappers rely on a quad or snowmobile. Travel by ATV and snowmobile has increased significantly. In 1992, four snowmobile clubs belonged to the Porcupine Forest Snowmobile Association; by 1995 membership had mushroomed to 14 clubs.

ATV travel is unrestricted in the forest, except for specific hunting restrictions. ATVs travel on snowmobile trails, logging roads, trapline trails, game trails, and travel off trails throughout forest, meadows, cutovers, along waterways and across wetlands.

Fifteen hundred kilometers of planned and developed snowmobile trails crisscross the planning area (see Figure 4-3). Snowmobile trail development and management are governed by a planning process and guidelines, developed and endorsed by the Saskatchewan Snowmobile Association, the Saskatchewan Wildlife Federation, the Saskatchewan Trappers Association and SERM. The planning process and guidelines ensure thorough evaluation of trail planning and upgrading, and give direction and understanding on how trails should be co-operatively managed. (See Appendix 8.)

MAINTAINED SNOWMOBILE TRAILS

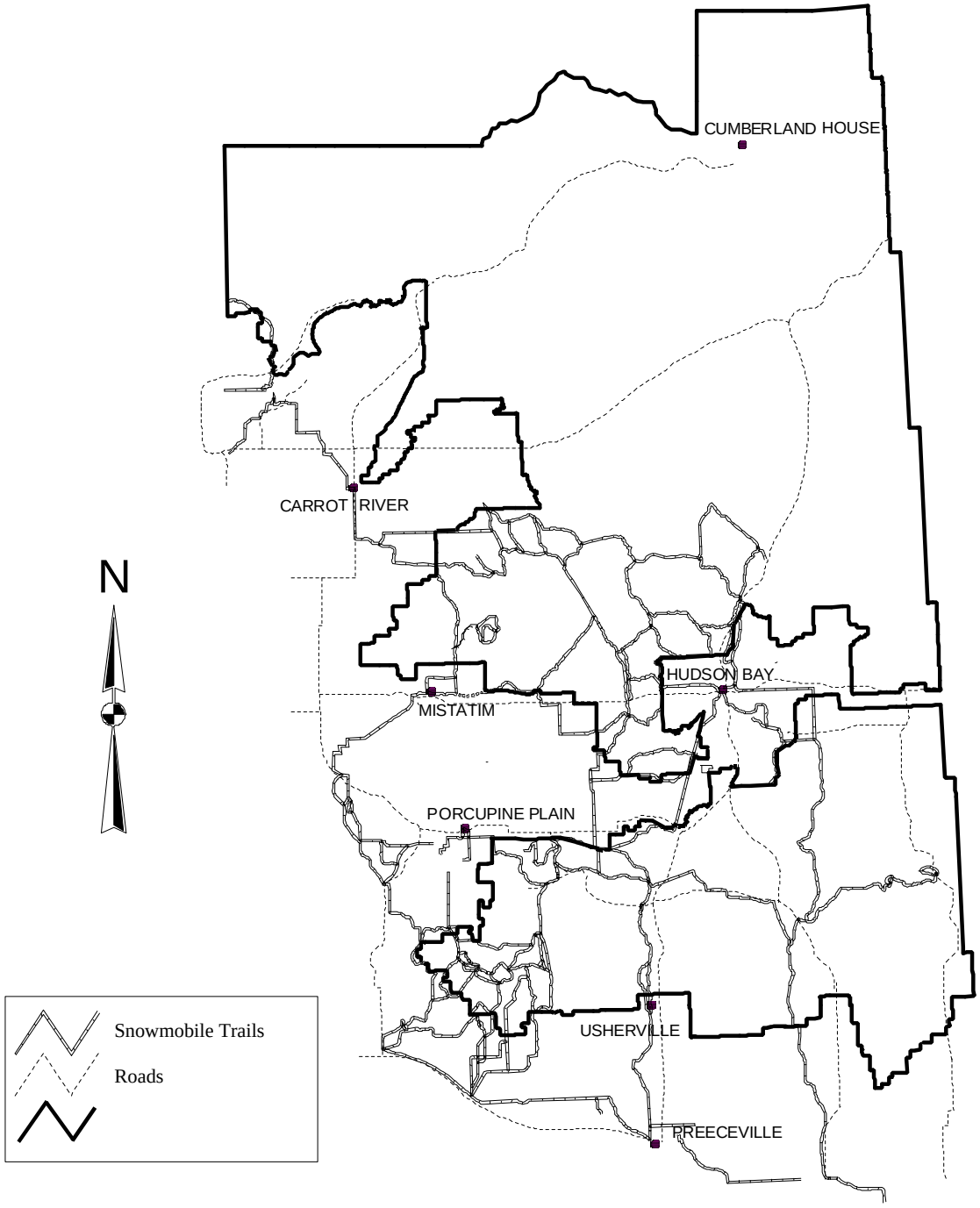

Figure 4-3

SNOWMOBILES AND OTHER ALL-TERRAIN VEHICLES: ISSUE 1
ENVIRONMENTAL IMPACTS FROM ATVS

ATVs travel on and off existing trails throughout the forest, affecting wildlife, vegetation and soils especially in wetland areas. ATV use contributes to soil erosion, particularly along steep trails and in bogs.

Snowmobiles compact snow, which removes small mammal habitat between snow and ground, inhibits tunneling, reduces snow insulation qualities, and increases frost penetration. Snowmobiles damage vegetation, both above and below ground level. Bog vegetation is particularly susceptible to damage.

Large mammals may be startled by ATVs, which can be heard up to 3 kilometers away. This is most harmful in winter, when animals are weakest.

Recommendations:

Guidelines

- New snowmobile trails will not be allowed in Representative Areas. Existing trails in Representative Areas will be assessed, and closed if found to cause long-term environmental damage.

Action	Initiating Agency	Priority
1. Develop plans for snowmobile trail expansion, in consultation with other user groups, taking environmental considerations and other values into account. Potential impacts will be considered on a site specific basis.	Local snowmobiling clubs	1
2. Assess the environmental impacts of existing trails in Representative Areas.	SERM	1
3. Educate ATV users and others (general public, hunters, trail planners, high school students, snowmobile clubs) on impacts of ATVs on the environment, and encourage use of existing trails.	SERM/ Snowmobiling associations	1
4. Monitor impacts of ATVs, restricting use where it causes long term ecosystem damage.	SERM	2
5. Explore options for research on effects of ATVs, including research from other jurisdictions. Use results to adapt recommendations in Land Use Plan revisions.	SERM	3

SNOWMOBILES AND OTHER ALL TERRAIN VEHICLES: ISSUE 2
CONFLICTS ON TRAILS

Conflicts occur between ATV users and other resource users. ATVs have damaged trapping trails, disturbed or damaged traps, and disturbed animals. Cross country ski trails are damaged by snowmobiles.

ATV use on roads used by logging trucks raises concerns about safety.

As the number of trail users grows and diversity of trail activities increases, the potential for conflict also grows.

Recommendations:

Action	Initiating Agency	Priority
1. Inform trappers of signs available from snowmobile clubs to indicate traplines, and encourage use.	Snowmobile clubs/ SERM	1
2. For safety reasons, current logging roads must be clearly signed. Invite snowmobile clubs to timber harvesting plan review meetings, to inform them of roads that will be used by logging trucks.	FMA Holder	1
3. Develop information and education programs, and present to ATV users, related to responsible trail use and trapline concerns.	SERM	1
4. Determine the scope of the problem and compatibility of concurrent uses.	SERM	2

SNOWMOBILES AND OTHER ALL TERRAIN VEHICLES: ISSUE 3
EFFECTS OF TIMBER HARVESTING ALONG SNOWMOBILE TRAILS

Some timber harvesting practices such as clearcutting affect aesthetic qualities along snowmobile trails, and reduce shelter from wind.

Recommendations:

Guideline

- The forest industry will consult with snowmobile clubs when developing harvesting plans, to accommodate their needs wherever possible.

4.12 Traditional Aboriginal Uses

Aboriginal peoples have a long-standing relationship to lands in the planning area. These ties are ancestral, cultural, spiritual, recreational and material. Many Aboriginal people are worried about the overall health of their communities, the future of their descendants, and the physical and spiritual integrity of their traditional lands. All of these concerns are inter-connected. As well, many want to identify and obtain employment and economic development opportunities.

Some communities have entered into co-management or partnership arrangements with the Province. These arrangements set the stage for additional consultation among First Nations, Government, other users of the forest, and proponents of land or resource development.

TRADITIONAL ABORIGINAL USES: ISSUE 1
COMMUNICATIONS DURING DEVELOPMENT AND IMPLEMENTATION OF THE LAND USE PLAN

Better communications are needed between Aboriginal peoples and Government. Cultural and language differences must be recognized, understood and addressed. Participants need to feel comfortable and on equal footing.

Recommendations:

Guideline

- Partnerships and co-management arrangements among SERM, Aboriginal people, and other resource users have been, and will continue to be, established to involve Aboriginal people in decision-making.

- When discussions occur, use a facilitation process that recognizes and addresses the needs, issues, languages and cultural understandings of all people involved.

- Use processes designed to prevent disputes before they happen, such as consensus processes, full sharing of information, clear language and open communication. Ensure participation, by accepted people from both Aboriginal and government groups, to discuss and address issues.

Action	Initiating Agency	Priority
1. Use Aboriginal cultural sensitivity training to help communication and understanding between Aboriginal and non-Aboriginal peoples.	SERM	2

TRADITIONAL ABORIGINAL USES: ISSUE 2
THE EFFECTS OF ECONOMIC DEVELOPMENT ON THE ENVIRONMENT

Many Aboriginal people are concerned about effects that commercial developments may have on the environment. The ecological integrity of the ecosystem may be affected, which in turn affects hunting, fishing and trapping.

Aboriginal spiritual and cultural ties to specific areas of land need to be respected when development occurs. One ongoing activity in the land use planning process is collecting geographic data on known heritage sites and adding them to the existing provincial inventory. This information can be used to help protect areas of concern from future impacts. Unfortunately, this collection does not include areas, such as sacred sites, that are not available for disclosure.

The preservation of the ecosystem is a concern of both Aboriginal and non-Aboriginal people. This is recognized in the Goal and Principles of the Land Use Plan. Resources will continue to be harvested from the planning area but the Plan attempts to address many environmental issues in a holistic way.

Recommendations:

Guidelines

- Use existing environmental legislation, along with public review processes, to address impacts that developments may have on the environment.

- Encourage discussions between government and Aboriginal peoples, so that Aboriginal concerns are identified and addressed.

- Ensure confidentiality and recognition of the spiritual importance of specific areas that require protection. Continue to identify and register new sites with frequent updates.

Action	Initiating Agency	Priority
1. Gather information from Aboriginal peoples on their knowledge and understandings about the ecosystem. Use this to enhance SERM's current management practices.	SERM	1
2. Update and maintain records of heritage sites in the planning area in the Hudson Bay SERM office.	SERM	1

TRADITIONAL ABORIGINAL USES: ISSUE 3
PERMITS FOR TRAPPING CABINS

Trapping cabins require an annual permit. The permit fee of $15 contributes to administration costs. Cabin registration provides SERM with information on cabin ownership and location. This helps SERM in circumstances such as protection from forest fires, timber harvesting, and land use planning. In the past, cabins that were not registered were destroyed.

Trapping cabins are often used for more than one purpose; some trappers use their cabins for both subsistence and commercial trapping. Some First Nations trappers have expressed that they should not have to purchase annual permits because cabin use is inherent with their treaty rights for subsistence trapping.

Recommendation:

Action	Initiating Agency	Priority
1. Review the annual $15 trapping cabin fee. In the interim, cabin owners must continue to register their cabins	SERM	1

TRADITIONAL ABORIGINAL USES: ISSUE 4
TRAPLINE ACCESS

In the past, access trails to traplines have been blocked through road closures that have been made for wildlife management reasons.

Recommendation:

Action	Initiating Agency	Priority
1. Contact trappers when road closures are being planned.	SERM/Forest Harvesters	1

4.13 Water Management and Protection

Changes in land use could affect natural patterns of runoff, rate of recharge of aquifers, natural basin storage and quality of surface and ground water supplies. These are concerns to resource managers and to individuals and communities who rely on water that originates in the Pasquia/Porcupine area. Impacts of resource extraction and related access roads are of particular concern.

The Saskatchewan River (Cumberland) Delta has been identified as a unique ecosystem. Several other areas also have unique biological communities. Concern has been expressed about continued preservation of these features.

Issues and Recommendations

WATER MANAGEMENT AND PROTECTION: ISSUE 1
PROTECTION OF STREAMS AND GROUNDWATER SUPPLIES

Watersheds in the Pasquia and Porcupine hills are steep and have limited water storage. Streams are subject to severe erosion and siltation in flood situations. In addition, infiltration of precipitation is important to groundwater recharge.

Recommendations:

Action	Initiating Agency	Priority
1. Identify areas at risk to erosion and siltation.	SERM/SWC	1
2. Develop guidelines that may allow extractive uses, without causing erosion or siltation, or further aggravating current conditions.	SERM/ Proponent of Major Developments/ SWC	1
3. Develop comprehensive watershed management plans to ensure high water quality for domestic use, downstream users, and other users. Address cumulative impacts of new and existing developments.	SWC/SERM	2

WATER MANAGEMENT AND PROTECTION: ISSUE 2
PROTECTION OF THE SASKATCHEWAN RIVER DELTA AND OTHER DELTA AREAS WITHIN THE PLANNING AREA

Delta areas are sensitive ecosystems, easily disrupted through changes to water flow or alterations to natural levees. Any development that could affect water flow or land formations could affect the ecological integrity of the ecosystem.

Recommendation:

Action	Initiating Agency	Priority
1. With the input of SERM, local residents and stakeholders, develop guidelines for resource use development that will ensure protection of delta ecosystems.	SERM/ Proponent of Major Developments/ SWC	1

4.14 Strategies for Economic and Community Health

The forest industry has historically been the primary industry in the Pasquia/Porcupine area and, as such, has been the main employer of its residents. Agriculture, tourism, commercial fishing (in the Cumberland House area), outfitting and trapping also make significant contributions to the economy of the area. Aboriginal people have traditionally relied on forest resources for sustenance, as well as cultural and spiritual needs. Development of the forests is an opportunity for all communities to diversify their economic base.

To maximize employment training and business development opportunities for communities and residents impacted by forestry developments, Government anticipates the negotiation of an employment and business planning process as part of the Forest Management Agreement. The purpose of the planning process is to identify economic development opportunities and training needs for all people living in and/or near the planning area.

Issues and Recommendations

ECONOMIC AND COMMUNITY HEALTH: ISSUE 1
SUSTAINABLE ECONOMIC DIVERSIFICATION

While the economy of the planning area is already diversified to a certain extent, some residents feel that the area relies too much on a single company: Saskfor MacMillan, for economic support. While diversification will provide new jobs and a more stable economic base, the development of

new industries may conflict with existing industries.

Recommendations:

Guidelines

- Promote regional and local economic development corporations which operate under the guiding principles of the Land Use Plan.

- Encourage opportunities for diversification.

- New enterprises must recognize and respect existing uses and adapt their operations to minimize conflicts.

Action	Initiating Agency	Priority
1. Meet with economic development corporations to explain the Land Use Plan.	SERM	1
2. Include economic development corporations as part of the public involvement program.	SERM	1
3. Work with Saskfor MacMillan's economic development staff to ensure that recommendations in the Business and Employment Development Plan are co-ordinated with recommendations from the Land Use Plan.	ED/NA	1
4. Investigate and promote use of different products of the forest.	SAF	2
5. Investigate and promote non-consumptive uses of the forest, such as ecotourism.	TS/NA	1
6. Initiate a government-wide and multi-stakeholder review of the Guidelines and Proposal Outline for Ecotourism Operations in the Pasquia/Porcupine Planning Area (see Appendix 7). Following the review, determine which agency should be responsible for administering ecotourism. 6a. SERM and Tourism Sask. are to follow up on the tourism review process and report back to the FMAC.	SERM/ TS	1
7. Identify training and education needs for current and future area industries, to help prepare residents for long-term employment opportunities.	Post Secondary Education and Skills Training/ED/ Proponent of Major Developments	1

ECONOMIC AND COMMUNITY HEALTH: ISSUE 2
ABORIGINAL ECONOMIC DEVELOPMENT

Many Aboriginal people depend on the forest for traditional uses such as hunting, trapping, fishing, berry picking and gathering medicinal plants. However, the forest and its resources also have potential as a basis for economic development that could benefit Aboriginal communities, where unemployment levels are high. While Aboriginal communities want to develop new business ventures and better job opportunities, they also want to protect traditional lifestyles.

Aboriginal peoples have also expressed a desire to establish "Indian Parks" in the planning area.

Recommendations:

Guidelines

- Support traditional resource activities by including Aboriginal peoples in resource allocation plans.

- Encourage communications between Aboriginal peoples and SERM, to attempt to incorporate Aboriginal needs within the existing park system.

Action	Initiating Agency	Priority
1. Encourage and facilitate communication with Aboriginal communities through groups such as local advisory committees and co-management boards.	SERM	1
2. Encourage and support business development proposals from Aboriginal people, through: - regular meetings with communities and band councils; - providing information and direction about potential business opportunities.	ED/NA	1
3. Encourage the development of training programs that better accommodate the northern Aboriginal lifestyle and traditional economy.	ED/NA	1
4. Investigate economic incentives to provide business and employment opportunities.	ED/NA	2
5. Protect traditional cultural areas by: - meeting with communities and bands to discuss resource management plans, - requiring other resource users to meet with communities and bands to discuss resource use plans.	SERM	1
6. Encourage joint ventures between Aboriginal and non-Aboriginal communities.	ED/NA	1

Action	Initiating Agency	Priority
7. Meet with Aboriginal Peoples to explore the intent, use and location of Indian Parks.	SERM	1

Chapter 5 IMPLEMENTATION STRATEGIES

This chapter sets out strategies for ongoing plan implementation. Monitoring and evaluation of the plan are essential to see that resource management goals are achieved, and to allow for effective plan changes and updates. The Monitoring and Evaluation Strategy sets out guidelines and recommendations to ensure this.

The Public Involvement Strategy makes recommendations for setting up an effective public involvement process in the Pasquia/Porcupine area on an ongoing basis.

The Dispute Resolution Strategy recommends alternatives for resolving disputes that may arise during plan implementation.

5.1 Plan Monitoring and Evaluation Strategy

The forest ecosystem is constantly changing, both from natural processes and from human activities. Some processes and activities, and their effects on the ecosystem, can be predicted but many cannot. Because of this, the Land Use Plan must be monitored and evaluated so that it can be revised whenever necessary, to adapt to changing circumstances, to incorporate new information and to adjust actions if plan goals and objectives are not being achieved.

Recommendations:

Guidelines

- Plan monitoring and evaluation will involve SERM, other government agencies, local communities, Aboriginal people, industry, other resource users, and the general public.
- Ongoing plan monitoring and evaluation, will focus on the following components:
  - Compliance with plan recommendations and goal, principles and objectives;
  - Compliance with guidelines for developments and activities; and
  - Effectiveness of the recommendations in achieving plan objectives.
- The results of monitoring and evaluation will be used to change recommendations.

Action	Initiating Agency	Priority
1. Assign one person to assume responsibility to see that the Land Use Plan is implemented and monitored.	SERM	1
2. Develop a government technical committee to provide advice and to help implement the Land Use Plan.	Interested Government Agencies	1
3. Prepare an annual progress report on plan implementation for public review and comment.	SERM	1
4. Prepare, with public involvement, an annual review of plan implementation, monitoring and evaluation results, including any recommendations for change, and the rationale for such change.	SERM	1
5. Design a process for monitoring the ecological integrity of the forest.	SERM	1
6. Ensure that this monitoring process is followed.	SERM	1
7. Maintain an overall master inventory of ecosystem information, including land uses, ecological attributes, information about individual resources, and pertinent research results. Information for this master inventory will be provided by a variety of agencies.	SERM	1
8. A comprehensive plan review and update will be done ten years after the start of plan implementation, and every ten years thereafter, to re-examine the plan's appropriateness and success at meeting ecological and social needs.	SERM	3

5.2 Public Involvement Strategy

Public involvement is an ‘umbrella’ term meaning a co-operative, inclusive process where stakeholders, Aboriginal peoples and the general public are involved in identifying and solving problems, making decisions and planning for the future. Opportunities for public involvement have been available throughout the development of the Pasquia/Porcupine Land Use Plan. These opportunities include the Forest Management Advisory Committee (FMAC), public meetings, meetings with individuals and groups, newsletters, and written submissions.

The FMAC, industry and government have identified the need for a public involvement process to continue after the plan has been developed, to help in implementation and monitoring. The Land Use Plan will directly and indirectly affect many sectors of the business community. Providing opportunities for the participation of all affected interests in the area, is necessary for successful plan implementation.

PUBLIC INVOLVEMENT: ISSUE 1
EFFECTIVE ONGOING PUBLIC INVOLVEMENT IN PLAN IMPLEMENTATION

The opportunity for public involvement is an important part of the planning process, and to the subsequent implementation of the Integrated Land Use Plan. Appropriate and effective methods for public input have to be developed for land use planning and implementation on an ongoing basis. A process is required to provide continued access to information, to identify common interests and to provide avenues for joint problem-solving.

Recommendations:

Guidelines

- Adapt existing public involvement processes, where appropriate, that contribute to Aboriginal participation in environment and resource management, within the current jurisdictional framework.

- SERM will provide continued and enhanced opportunities for public participation in decision-making for all affected groups and citizens, including the business community.

- The public involvement process will include feedback mechanisms to ensure that the public will receive a response to their input.

- Participants will be accountable both to their constituencies and to the public process.

Action	Initiating Agency	Priority
1. Hold regular public meetings to provide opportunities to raise issues, answer questions and present plans.	SERM	1
2. Establish a regional advisory board, to assist with the implementation of the Land Use Plan and Saskfor MacMillan's forest management activities. - Continue with the FMAC as the advisory board, adapting its membership and structure to ensure appropriate representation of users and communities. - Re-examine the role of the board, and its terms of reference. - Develop mechanisms to enhance the board's public accountability.	SERM	1
3. Hold one-on-one meetings when necessary for specific issues (e.g. between trappers and the FMA holder).	Variable	1

Action	Initiating Agency	Priority
4. Convene a special planning meeting to explore enhanced aboriginal involvement.	SERM	1

5.3 Dispute Resolution Strategy

Conflict in environment and resource management can be successfully dealt with in two ways: by preventing conflict from developing, and by having dispute resolution processes in place before conflicts occur. Various mechanisms to help prevent conflict have been used in the planning process. Examples of these include **integrated planning**, based on managing resources for a variety of interests and benefits and developing strategies to deal with conflict over resources, **public involvement**, and the **environmental assessment process** required for the 20-year forest management plan.

When disputes occur in the implementation of the land use plan, such as enforcing legislation, this can result in win-lose, confrontational encounters that create hostility and ill will. Local conflicts that arise from competing values require long-lasting solutions. This strategy recommends alternatives for resolving disputes.

Issues and Recommendations

DISPUTE RESOLUTION: ISSUE 1
NEED FOR DISPUTE RESOLUTION MECHANISMS

Land use dispute mechanisms are needed to ensure better decisions and to deal with conflicts fairly and effectively.

Recommendations:

The recommendations are divided into preventative actions and dispute resolution actions. These mechanisms apply only to issues/disputes that occur in relation to the legislated mandate of SERM.

Preventative Actions:

- Continue interagency and interest group co-operation and consensus building in the implementation of the land use plan (e.g. continue the FMAC as a regional resource advisory board, adapting its membership and structure to ensure appropriate representation of users and communities within the planning area).

C Co-ordinate decision-making among government agencies with various responsibilities for land use and resource management in the area, especially at the local level.

C Provide continued and enhanced opportunities for public participation in decision-making, focusing on interests, listening and understanding.

• Provide adequate information and user education for potential resource use conflicts.

C Provide information in a clear and understandable form.

C Use a mediator during discussions to promote understanding among different users and interests.

Dispute Resolution Actions:

• Resolution should begin with collaborative problem-solving processes (example: involve all interest group and use a mediator, to aid in discussions and negotiations). The formation of a regional resource advisory board for the planning area will assist in resolving disputes and also provide a framework for managing future conflict. The settlement of the dispute would then be forwarded to the appropriate Cabinet Minister(s) for approval.

• If full agreements are not achieved within the regional board, areas of agreement and disagreement should be specified, including potential options in areas of disagreement, and forwarded to appropriate Cabinet Minister(s) for resolution.

• Resolution must be within the framework of existing legislation.

LITERATURE CITED

Aird, Paul, 1994. *Conservation for the Sustainable Development of Forest World Wide - A Compendium of Concepts and Terms.* Volume 70:6 Forestry Chronicle.

Saskatchewan Indian Cultural Center, 1993. *Practicing the Law of Circular Interaction, First Nations Environment and Conservation Principles*. Indian Governments of Saskatchewan and Federation of Saskatchewan Indian Nations.

SERM (Saskatchewan Environment and Resource Management), 1995. *Saskatchewan Long-Term Integrated Forest Resource Management Plan*. Saskatchewan Environment and Resource Management.

Stelfox, J.B. (editor) 1995. *Relationships between Stand Age, Stand Structure, and Biodiversity in Aspen Mixedwood Forests in Alberta.* Jointly published by Alberta Environmental Centre (AECV95-R1), Vegreville, AB, and Canadian Forest Service (Project No. 0001A), Edmonton, AB. pp. 308.

Thorpe, J and B. Godwin, July 1996. *Wildlife Habitat Management in the Stove Creek Area.* Saskatchewan Research Council, Resources and Environment Group. SRC Publication No. R-1540-6-E-96.

REFERENCES

Banfield, A.W.F. 1974. *The Mammals of Canada.* University of Toronto Press.

Beck, L.S. 1974. *Geological Investigations in the Pasquia Hills Area; Department of Mineral Resources.* Report No. 158. 16pp, with map no. 158A.

Brewster, D.A; Stewart, R.R. 1980. *Lobstick Lake Wilderness Area: A Proposal to Protect the Southern Portion of the Saskatchewan River Delta.* Saskatchewan Tourism and Renewable Resources. Wildlife Technical Report 80-9.

Canadian Wildlife Service. 1977. *Hinterland Who's Who*.

Harmes, V.L., *Proposed Protected Natural Areas in the Pasquia Hills, Porcupine Hills and Nitenai/Carrot River Regions.* Requested Submission to Saskatchewan Department of Environment and Resource Management, 31 January 1996.

Kosowan, A.; Zimmer, B. 1993. *Conceptual Development Strategy for the Woody River Recreation Site.* Saskatchewan Environment and Resource Management.

Masyk, W.J. 1973. *The Snowmobile, A Recreational Technology in Banff National Park: Environmental Impact and Decision Making.* National Park Series No. 5, Studies in Land Use History and Landscape Change, University of Calgary, and, University of Western Ontario, London.

Moore, R.L. 1994. *Conflicts on Multiple-Trails: Synthesis of the Literature and State of Practice.* North Carolina State University, Dept. of Parks, Recreation, and Tourism Management. Raleigh, NC. Report No. FHWA-PD-94-031.

Murray, A.R.; Brickley, K.W.; Joerissen, R. 1993. *1990 Survey of Sport Fishing in Saskatchewan.* Saskatchewan and Environment and Resource Management, Fisheries Technical Report 93-4.

Powell, D. 1994. *Rice River Canyon Background Report.* Prepared for Nature Saskatchewan.

Ross, J.B. 1991. *Environmental Impact of All-Terrain Vehicles in the Bogs and Barrens of the Cape Breton Highlands.* School for Resource and Environmental Studies, Dalhousie University, Halifax, N.S. 35 pp.

Rule, J.L. 1976. *General Land Use and Recreation Concept Plans for the McBride - Parr Hill Lake Area.* Saskatchewan Department of Tourism and Renewable Resources.

Saskatchewan Energy and Mines. 1996. Mineral Deposit Index.

Saskatchewan Energy and Mines. 1996. Mineral Disposition Maps.

Saskatchewan Energy and Mines. 1996. Assessment Files.

Saskatchewan Energy and Mines. 1994. *Geology and Mineral Resources of Saskatchewan*; Sask. Energy and Mines, Misc. Report 94-6, 99p.

Saskatchewan Environment and Resource Management. 1995. *Saskatchewan Long-Term Integrated Forest Resource Management Plan.* March 1995.

Saskatchewan Parks and Renewable Resource. 1991. *Provincial Parks System Plan Summary Document, Report 90-4. Updated Version.* Saskatchewan Parks and Renewable Resources, Parks Branch, Regina.

Smith, C.B.; Goodman, J.F; Jeffery, C.A. February 1996. *Saskatchewan Forest Fire Policy Study.*

Thorpe, J. February, 1996. *Fire History and Its Application to Management of Saskatchewan Forests.* Saskatchewan Research Council, Plant Ecology Section. Publication E-2500-2-E-96.

Timoney, K. 1993. *Ecological Impacts of Snowmobiles on the Ministik Lake Game Bird Sanctuary, Central Alberta.* Treeline Ecological Research, Ft. Smith, N.W.T.

Yarmoloy, C.; Bayer, M.; Giest, V. 1988. *Behavoir Responses and Reproduction of Mule Deer Does Following Experimental Harassment with an All-terrain Vehicle.* Canadian Field Naturalist 102(3): 425-429.

APPENDICES - SUMMARY

The appendices contain documents that provide backup information for a variety of topics and issues that are discussed in the Management Plan and the Background of the land use plan. The following is a list of the appendices:

Appendix 1: Common and Scientific Names of Plants and Wildlife Species
- Plants and Animals that are Referred to in the Land Use Plan

Appendix 2: Forest Management Advisory Committee Consensus Items
- Consensus Items Related to Discussion of Land Use Planning
- Consensus Items Related to Forest Management Agreement Issues

Appendix 3: Relevant Legislation
- Provincial Legislation
- Federal Legislation

Appendix 4: Provincial, National and International Agreements and Strategies
- Conservation Strategy for Sustainable Development in Saskatchewan
- Saskatchewan Long-term Integrated Forest Resource Management Plan
- Saskatchewan's Forest Management Policy Framework
- Forest Fire Protection Agreements
- Canada-Saskatchewan Partnership Agreement in Forestry (PAIF)
- National Forest Strategy and Canada Forest Accord
- National Round Table on the Environment and the Economy
- Canadian Biodiversity Strategy
- Whitehorse Mining Initiative
- UNCED Convention on Biological Diversity
- UNCED Statement of Principles on Forestry
- United Nations Framework Convention on Climate Change (1992)
- Santiago Declaration
- Surface Lease Agreements
- Human Resource Development Agreements

Appendix 5: Proposed Representative Areas Within The Pasquia/Porcupine Planning Area

Appendix 6: Interim SERM Grazing Policy
- Livestock Grazing in the Provincial Forest
- Application for Grazing Permit

Appendix 7: Ecotourism

- Guidelines
- Proposal Outline for Ecotour Operations in the Pasquia Hills and Porcupine Forest

Appendix 8: Snowmobiling

- Trail Planning Process
- Trail Development Principles
- Snowmobile Trail Guidelines

Appendix 9: Birds of the Pasquia/Porcupine Hills

- Species
- Farm Status and Forest Status

Appendix 10: Summary of Public Input

GLOSSARY

adaptive management - management practices that are monitored, evaluated and adjusted (as required), based on current knowledge and understandings.

annual allowable cut (AAC) - an expression of the maximum volume of timber that may be harvested each year from an area of land.

aspen parkland - zone of transition between boreal forest and drier grassland to the south, characterized by patches of aspen grove and patches of grassland.

benchmark - something that serves as a standard by which others may be measured.

boreal forest - the Canadian boreal forest is part of a vast landscape of trees that encircles the Artic circle. 1/3 of Canada is covered by boreal forest. A major role of the boreal forest is maintaining the health of the atmosphere. The boreal forest is dominated by spruce, fir, pine, larch, poplar, and birch.

biological diversity (or biodiversity) - the variety of different forms of life, including variety of genes, species, and ecosystems.

browse - leaves and twigs of trees or shrubs, used as food by plant eating animals.

calcareous - containing calcium carbonate.

ceremonial areas - areas of importance for traditional ceremonies of Aboriginal peoples.

clastic - composed of broken pieces of older rocks.

clearcutting - a method of harvesting timber in which all the trees are removed in a certain area of a forest, providing full sunlight.

co-management - is a tool SERM uses for effective environment and renewable resource management by involving groups in community-based recommendations, based on consensus. Inclusiveness is a principle of co-management; full representation of all resource interests must be at the co-management table. The co-management model is not a means of sharing jurisdiction or control with a local co-management committee.

conifer - trees that bear cones and have needle-like leaves.

cretaceous - period in geological history representing the end of the Mesozoic Era. The end of the Cretaceous is marked by the extinction of dinosaurs.

crown land - land under the tenure of the provincial or federal government.

deciduous - trees that drop their leaves.

development - The carrying out of any building, engineering, mining or other operations in, on or over land or the making of any material change in the use or intensity of use of any building or land.

dolomite - mineral or rock of calcium magnesium carbonate.

ecological integrity - the structure and function of the ecosystem are unimpaired by human caused stresses, the native species are present at viable population levels.

ecological land classification (ELC) - a system by which land units are identified and mapped, based on ecological features such as climate, soil, and vegetation.

ecological region (or ecoregion) - a relatively large area of land characterized by a distinctive regional climate as expressed by general patterns of vegetation.

ecosite - a relatively small area of land which is relatively homogeneous with respect to parent material, soil type, moisture and nutrient regime, and composition and productivity of vegetation.

ecosystem - an area of land or water, considered in relation to all of its components (soil, water, air, plants, animals, microbes) and the interactions among them. A forest stand is an ecosystem, if it is viewed as an interacting system of all of these components, and not just as a group of trees.

ecosystem health - a natural balance of physical, chemical, and biological components that make up the ecosystem.

ecotourism - is respectful, environmentally responsible travel to relatively undisturbed and uncontaminated natural areas, with the objectives of studying, admiring and enjoying the scenery, wild plants and animals, and cultural features.

even-aged - describes a forest stand in which trees are of approximately the same age.

exotic - describes a species not native to a given area, introduced from elsewhere.

extensive management - management of large areas with relatively low investment of time and money per unit area. Extensive forest management generally implies protection from fire and reliance on natural regeneration.

fertilization - application of fertilizers to increase productivity.

forbs - a non-grasslike herbaceous plant (lacking a woody stem).

Forest Management Agreement (FMA) - agreement between the Province of Saskatchewan and a forest company to give the company long-term access to timber as well as management responsibilities on a specified area of land.

forest fringe - zone along the southern edge of the boreal forest, extending from Meadow Lake to Prince Albert to Nipawin to Hudson Bay, which was originally forested but now has been partly cleared for agriculture.

geographic information system (GIS) - a computer system used to store and analyze map information.

green strip - band of vegetation of low flammability designed to retard the spread of fire.

hardwood - wood from a broad-leaved tree (e.g. poplar, birch), or a stand dominated by broad-leaved trees.

harvest volume schedule (HVS) - expression of the maximum timber volume that can be depleted each year by both harvest and fire. It is calculated as standing volume at or above rotation age, divided by rotation age, plus the long-run sustained yield of stands not yet mature.

integrated land and resource management - management of the whole ecosystem, which allows for a broad range of resource uses, and gives all affected parties the opportunity to be involved in management planning.

intensive management - management with relatively high investment of time and money per unit area; intensive silviculture generally implies such things as intensive site preparation, use of genetically improved planting stock, weeding, thinning, or pruning.

kimberlite - geological formation in which diamonds may be found.

landscape - an area of land which includes a variety of interconnected ecosystems. For example, a hummocky area with aspen forest on the uplands and sedge meadows in the depressions.

long-run sustained yield (LRSY) - theoretical annual harvest level for a fully regulated forest, calculated by multiplying the total area by the average yield per unit area at rotation age.

mature - describes trees that are fully developed so that they are capable of reproducing. In the forest industry this term describes a tree or stand that is sufficiently developed to be harvested.

merchantable - describes a tree or stand that has attained sufficient size, quality, and/or volume to make it suitable (in economic terms) for harvesting.

mitigation - to reduce the severity of or eliminate negative impacts resulting from a particular activity

mixedwood - forest stand with both hardwoods and softwoods present in significant amounts.

mycorrhizal association - association of a fungus with the root of a plant, in which organic products from the plant nourish the fungus, and the fungus helps in uptake of soil nutrients by the plant.

nodular concretions - rounded or irregular masses of mineral material sharply separated from and harder than the beds in which they occur.

nonvascular plants - plants such as mosses, lichens, and algae, which have no tissue for conducting water from roots up to shoots.

not satisfactorily restocked (NSR) - describes productive forest land on which the forest has been cut or burned and not adequately regenerated.

ordovician - the second palaeozoic period, below Silurian and above Cambrian.

palaeozoic - geological era from the end of the Precambrian to the beginning of the Mesozoic. Contains the oldest forms of highly organized life (reptiles, seed-bearing plants, etc.)

partial cutting - any timber harvest in which only part of the stand is cut.

partnerships - in Saskatchewan Environment and Resource Management policy, ‘partnerships’ are formed between the department and stakeholders to work toward a common goal. Three kinds of partnerships, or combinations among them, are most often used:

- consultative partnerships - where there is discussion on an issue, plus shared responsibility for accountability, commitment, integrity, and outcome.
- task partnerships - where there is shared work in developing a product, program, or process.
- sponsorships or contributory partnerships - where shared finances result in a shared product or program.

placer - a mineral deposit found on or just below the surface which is formed by the mechanical concentration of mineral particles from weathered debris. The concentrated minerals are usually heavy minerals such as gold.

planting - establishing a forest stand by setting out seedlings, transplants, or cuttings.

productive forest land (or timber-productive land) - land capable of producing merchantable stands of timber within 'a reasonable length of time'.

protected area - an area protected by legislation, regulation or land use policy to control human occupancy or activity (Aird, 1994).

RAN - Representative Areas Network is composed of lands and waters selected and designated to represent the natural ecological and biological diversity of the province and managed to retain that diversity. RANs act both as reservoirs of biological diversity and benchmarks for comparison with the more heavily utilized landscape.

regeneration - renewal of a forest area (i.e. establishment of new young trees) by natural or artificial means.

riparian zone - zone of vegetation found between aquatic (rivers, creeks, lakes, sloughs, potholes, hay meadows and springs) and terrestrial (upland) ecosystems.

rotation - the planned number of years between the regeneration of a forest stand and its final harvest.

scarification - loosening the topsoil or breaking up the forest floor, in preparation for regeneration by natural or artificial seeding.

seeding - establishing a forest stand by sowing of seeds.

silica flux - silicon dioxide mixed with metal, etc. to promote fusion in the smelting process.

silurian - palaeozoic period above Ordovician and below Devonian. Marked by the appearance of the first land plants and jawed fish.

silviculture - the theory and practice of controlling the establishment, composition, growth, and quality of forest stands to achieve management objectives.

site - an area of land characterized by the climatic, soil, and biological factors that determine its suitability and productivity for particular tree species and vegetation types. For example, a dry sand plain which supports jack pine-lichen vegetation with low productivity.

site preparation - treatment (mechanical, chemical, fire, or hand) that modifies the site to provide favourable conditions for natural or artificial regeneration.

softwood - wood from a conifer tree, or a stand dominated by conifers.

stakeholders - Stakeholders include all people, groups, or organizations that are directly influenced by actions of government or whose actions have an influence on the government.

stand - a patch of forest which is fairly uniform in species composition and distribution of tree heights and ages.

subsistence use - use of forest resources (e.g. fish and game, food and medicinal plants, fuelwood and building timber) by local people for personal consumption.

succession - the sequence of stages through which an ecosystem develops, following some disturbance which alters part or all of the previous ecosystem. For example, after a fire burns a mature forest, the ecosystem passes through a series of successional stages leading up to a new mature forest.

sustainable development - a general approach to combining economic development with environmental protection that ensures the ecological integrity of ecosystems, and that has been described as "...use of resources in a way that satisfies the needs of today without compromising the ability of future generations to satisfy their needs".

sustainable management - management to maintain and enhance the long-term ecological integrity of forest ecosystems, while providing economic, social, cultural and spiritual opportunities for the benefit of present and future generations.

till - stiff clay containing boulders, sand, etc.

traditional territories - traditional territories are those lands that were historically used by particular Aboriginal peoples prior to European settlement.

uneven-aged - describes a forest stand in which intermingling trees differ markedly in age.

zero impact mineral exploration - mineral exploration activities that do not significantly disturb the natural landscape. This includes such activities as: geological mapping, prospecting, surveying, flagged reference lines, geochemical sampling by hand (soil, stream sediment, water, lake sediment, rock), and airborne and hand-held ground geophysical surveying. Excluded activities would include: cut reference and grid lines, road or trail construction, trenching or stripping activities, geochemical sampling and geophysical surveying with tracked or wheeled equipment, and diamond drilling.

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