



Graham – Laurier Provincial Park

Management Plan

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Graham-Laurier Provincial Park

Management Plan

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Acknowledgements

This plan was produced by the planning staff of the Environmental Stewardship Division in the Peace Region of the Ministry of Environment (MOE). The planning process was coordinated by Scott Fraser, Planning Officer, and the plan was written by Marilynn Hagedorn, Planning Assistant. General direction was provided by Don Roberts, MOE Project Manager. Jeff Burrows, MOE Senior Fish Biologist; Rob Woods, MOE Wildlife Technician; and Rob Honeyman, North Peace Area Supervisor provided valuable technical assistance. Mapping and GIS analysis was provided by Jason Kubian, MOE Data Technician.

We would like to thank the Muskwa-Kechika Advisory Board Trust Fund for providing support through all the phases of plan development.

This management plan was developed with direction from two higher level management plans. The Fort St. John Land and Resource Management Plan and the Muskwa-Kechika Management Plan provided guidance concerning conservation, recreation and cultural heritage roles and values.

Vision Statement

This vision statement describes the future state and management regime that is desired for Graham-Laurier Park over the next 25 to 50 years. The vision provides long term direction for park managers, while aiding them in making decisions regarding current issues. It is based on prevailing environmental and socio-economic attitudes concerning protected areas. It is, however, dynamic and conceptual and therefore allows for change due to evolving ideas regarding conservation and recreation.

This vision statement is also based, in part, on the conservation and recreation contributions of Graham-Laurier Park to the provincial Protected Areas Strategy.

Graham-Laurier Park remains a largely untouched wilderness area. The ecosystem is allowed to evolve through natural processes (e.g. fire, erosion, migration, colonization, death) and a dynamic equilibrium has been achieved in the wildlife populations. It has become part of a large, interconnected system of protected areas that encompasses great tracts of land from South America to the Arctic Ocean. Comprehensive inventory work is ongoing and management decisions are made based on the accumulated information.

Graham-Laurier Park continues to play an important role in providing backcountry recreation opportunities to the residents of northeast British Columbia. National and international visitor use has increased slightly, however the primary users are still locals.

Development in the heart of the park has been kept at a minimum and the few facilities that exist have been maintained with the goal of providing a 'rustic' wilderness experience. The area around Christina Falls has seen increasing levels of use. Graham River Trail has been improved to allow access to more visitors. Minor facility development has occurred which allows visitors to stay in the area without damaging the environment. Levels of use in the rest of the park, both public and commercial, have been kept low and are closely monitored to ensure that the carrying capacity of the area is not exceeded.

TREATY 8 FIRST NATIONS VISION STATEMENT

WELCOME to our homeland. The Beaver (Dunne-za, Dane-zaa), Cree, Sauleau, Slavey (Dene), and TseK' hene indigenous groups have occupied these lands since time immemorial. Treaty 8 was signed in the spirit of Peace and Friendship June 21, 1899. British Columbia Treaty 8 Territory is hundreds of thousands of square kilometers in size and includes 8 groups: Blueberry River First Nations, Doig River First Nation, Fort Nelson First Nation, Halfway River First Nation, McLeod Lake Indian Band, Prophet River First Nation, Sauleau First Nations and West Moberly First Nations. Our relationship to the land has and continues to be the spiritual basis for our mode of life. The land has always, and will continue to, provide shelter, food, clothing, and the economic resources for our livelihood. As a First Nation, we have an obligation to implement our inherent rights that are affirmed by the Constitution Act, 1982. This includes sustainability of our resources in order for us to hunt, trap, fish, and continue our mode of life. Prior to the arrival of the Europeans we were actively involved in the management of our territories: the lands understood us and we understood the land.

Today, we continue to manage our Territory.

BC Treaty 8 First Nations were not involved in the initial development plans of this park in regards to its location and why the area was chosen. We would like neighbouring First Nations, outdoor enthusiasts and other visitors to our land who are enjoying the bounties of this park to acknowledge and respect that you are on Treaty 8 Territory. Please act as a steward of Treaty 8 Territory so that together we will maintain its natural beauty, and cultural resources. This maintenance will be respectful to our current use and for future generations. Please conduct yourself in a manner that respects cultural heritage resources and values. Treaty 8 Territory will always be the home of First Nations for as long as the sun shines, the grass grows and the water flows.

Relationships with First Nations

The Province of British Columbia is committed to a new government to government relationship with First Nations based on respect, recognition and accommodation. New approaches to consultation and accommodation are currently being developed in recognition of this dutyⁱ. Negotiated collaborative management agreements with First Nations are an example of such processes. The Park and/or Protected Area (PPA) Management Plan and subsequent management actions within the plan area will respect First Nations traditional harvesting, cultural activities, and other aboriginal rights and interests. Approval of the PPA Management Plan is without prejudice and is consistent with section .35 (1) of the Constitution Act, 1982ⁱⁱ, which recognizes and affirms aboriginal rights.

Some First Nations did not participate in the Land and Resource Management Planning that led to this PPA. However, collaboration with First Nation Governments is essential for the effective implementation of the PPA Management Plan. Treaty 8 First Nations have provided the following First Nation's Vision Statement for this PPA.

Graham-Laurier Park falls within the traditional territory of the Slavey, Beaver, and Sekani cultures from the Fort Nelson, Prophet River, Blueberry River, Doig River, Halfway River, Sauleau, Moberly Lake and McLeod Lake First Nations.

BC Parks – Peace Regions vision is to build a locally driven, constructive and collaborative relationship which recognizes the early presence of aboriginal peoples, their knowledge and understanding of the land and its processes. We hope to share ideas, management concepts and concerns in order to provide mechanisms for continuing First Nation participation in planning, long and short-term management, and evaluation.

Principles

- BC Parks will promote an understanding and respect of cross-cultural differences.
- Ecological integrity is critically linked to social integrity and First Nations are an important component of the wilderness of Northeastern British Columbia.
- First Nations are key in identifying and evaluating cultural resources.
- First Nations traditional resource harvesting activities will continue in all parks, including protection for current ways in which these activities are carried out.

BC Parks – Peace Region believes that the management and planning of protected areas can be improved by incorporating First Nations' traditional ecological knowledge and cultural knowledge. To achieve this all parties must work to develop and maintain open and effective communication, including other local communities and the general public. All parties must trust the traditional, as well as the non-traditional (Western scientific management) approaches to resource management. The goal will be to gather, collate and integrate local traditional knowledge with other scientific data to identify, design, establish, monitor and manage parks.

Graham-Laurier Provincial Park is a wilderness area in the southern portion of the Muskwa-Kechika Management Area of northeast British Columbia. The main feature in Graham-Laurier that attracts visitors to the park is the spectacular Christina Falls waterfall. Additional attractions include hunting, fishing and snowmobiling. The park currently has low levels of facility development and access. Three zones have been designated in Graham-Laurier Provincial Park; the Nature Recreation zone adjacent to Christina Falls, the Special Feature Zone around Christina Falls, and the Wilderness Recreation zone through the remainder of the park. The following summarizes selected issues and proposed strategies or actions to be taken for Graham-Laurier Provincial Park.

Issue

Safety and management of the Graham River Trail and at Christina Falls (trail to cliff) may be problematic due to liability risks.

Management of wildlife, fisheries, and cultural heritage values will be difficult due to lack of detailed inventories.

Some impact may occur to camping sites and vegetation in localized areas due to capacity use during the hunting season, and to alpine areas due to recreational activities.

Fish populations may be stressed due to increased fishing pressure.

Wildlife forage quality and quantity may be negatively affected by domestic livestock grazing if use increases.

Strategies

Place signs at critical locations to advise park visitors of safety hazards, for example, along the trail above Christina Falls.

Maintain the Graham River Trail within Graham-Laurier Provincial Park to ensure limited environmental or aesthetic degradation.

Allow snowmobile activity throughout the park; allow ATV use only on designated M-K MA routes.

Require that replacement or modification of structures be within the existing “footprint” and mirror the rustic nature of the park. No new developments will occur within the park, except for around the Christina Falls area and localized high use sites where minimal infrastructure such as a pit toilet may be necessary.

Consult with adjacent industry and provincial regulatory agencies to manage potential ecological disturbance, impacts resulting from resource exploration, and access issues along the park boundary.

Conduct inventories of park values and monitor recreational and park use activities for erosion and impacts to habitat, wildlife and vegetation communities; adjust management strategies accordingly.

Assess all proposed commercial operations individually to determine if they are compatible with park vision and goals.

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1.0 Introduction

The Graham-Laurier Provincial Park Management Plan provides management direction for Graham-Laurier Provincial Park for a time frame of 10 to 20 years. This plan addresses both immediate management issues and provides long-term management direction for Environmental Stewardship Division staff.

Under direction provided by the *Park Act* and the *Park and Recreation Area Regulation*, and with guidance from the *Muskwa-Kechika Management Area Act* and higher level plans (LRMP, and various Muskwa-Kechika Management Area plans), this management plan provides objectives and strategies to manage for conservation, to manage recreation and maintain recreation values, and to maintain cultural heritage values. The plan also provides direction for potential development, education, and park operation programs. To ensure that the planning process was well informed, all available information relating to natural and cultural values, recreational opportunities within the park, and resource opportunities surrounding the park has been considered in the drafting of this plan.

1.1 Management Plan Purpose

○ The Management Planning Process

The management planning process involved a complete analysis of overall management goals, traditional, recreational and wildlife use patterns, management objectives, and potential areas of conflict. Several different management options were developed and assessed for compatibility with management goals and objectives. The management direction which best balanced human use of the area with the conservation of wildlife and their respective habitats was chosen.

This park management plan provides long term direction for the park, but also identifies management actions that require immediate attention. Since government resources are limited, priorities for management and an implementation schedule have been established. Priority management actions will be undertaken as time and funding becomes available.

An integral part of the planning process was the creation of park zones to distinguish levels of access, recreational activities and ecological protection. Zoning aids in the planning and management of the provincial parks and protected areas. It divides a provincial park into logical areas that can be managed to achieve objectives for conservation, recreation and cultural heritage. The zones reflect desired and current use, acceptable amounts of development and the level of management required. There are five zones – Intensive Recreation, Nature Recreation, Special Feature, Wilderness Recreation and Wilderness Conservation – in the ministry’s protected areas zoning

system. The zones can be placed on a continuum. Intensive Recreation, with the highest levels of use and management is at one end. Wilderness Conservation, with very low levels of use and management, can be placed at the other. See **Appendix A** for a complete description of the Protected Areas Management Plan Zones.

The Graham-Laurier Provincial Park Management Plan has been produced with public involvement through an open house process. Open houses were held in Chetwynd, Dawson Creek, Fort St. John and Fort Nelson. Advertising to notify the public of each event was provided through local newspapers and radio, by flyer posted in community venues e.g. recreation centers, and by mail outs to various organizations. During the formulation of the plan, interest groups were consulted for information and to identify potential issues within the parks. The general public, special interest groups, First Nations, other levels of government and other government agencies have had a chance to provide valuable input. A draft copy of the management plan has been made available for review at the Fort St. John Ministry of Environment office, and will be posted on the Parks website; and comments have been received through both meetings and personal communications.

○ **Management Services**

Graham-Laurier Park is administered by the Peace Region of the Ministry of Environment (MOE) based in Fort St. John. Management of the park is under the guidance of the *Park Act* and the *Park and Recreation Area Regulation* as well as the policy and procedures of MOE. Park management is also reliant, to an extent, on additional acts and planning initiatives, for example the *Muskwa-Kechika Management Area Act* and a number of Muskwa-Kechika Management Area plans including the Recreation Management Plan and Wildlife Management Plan. There is one year-round Area Supervisor, several Seasonal Rangers and a number of other MOE employees that will aid in the implementation of strategies set out in this plan. Some of the tasks that MOE is responsible for are:

Issuing Park Use Permits to commercial guide outfitters;

Public safety and awareness;

Monitoring and enforcing regulations;

Collecting and analyzing data concerning fish, wildlife and plant communities;

Monitoring visitor use and minimizing impacts;

Working with outside groups to identify and protect significant cultural heritage sites.

○ **Background Summary**

The climate in Graham-Laurier Park is characteristic of the two main ecosections contained within it. The Misinchinka Ranges, in the western part of the park, often receive high quantities of precipitation due to moist Pacific air stalling over the mountains. The Peace Foothills, in the southeast section, are in the leeward rain shadow of the mountains creating a relatively dry climate.

The mountains of the Misinchinka Ranges are different from the rest of the Rocky Mountains. They are composed of a type of rock, known as schist, which breaks easily and cannot support steep slopes and castellated forms. This results in mountains that are more rounded and smaller. Also, they have been subjected to considerably less valley glaciation and have fewer alpine areas. The Foothills are also quite different in that they have a definite blocky appearance. The surface landscape of Graham-Laurier Park is underlain by several different types of sedimentary rock. Siltstone, sandstone, limestone and shale are the more prevalent varieties. In the past when tectonic activity was frequent, northeast facing thrust faults helped to shape the region and gave the mountains their appearance. This is most easily seen at Christina Falls where the Carbon fault has created a large waterfall.

Rivers and creeks are the main hydrological feature of Graham-Laurier Park. The upper Graham River and all of its tributaries are contained within the park. This includes Horn, Poutang, Lapierre and Guibault creeks. Portions of Graham River around Christina Falls and upstream of Crying Girl Prairie are also within the park. In the southern portion of the park, Needham Creek watershed and part of the lower Emmerslund Creek watershed are also included. All of these eventually feed into the Arctic Ocean. There are very few lakes in this park. Lady Laurier Lake is the largest and most well known. The entire Graham River watershed above the confluence with Needham Creek is considered undeveloped.

Vegetation in the park can be categorized into four biogeoclimatic subzones. The moist warm Boreal White and Black Spruce (BWBSmw) subzone contains white spruce or aspen dominated forests that have an abundant variety of herbs. The wet cool Boreal White and Black Spruce (BWBSwk) subzone is characterized by white spruce or lodgepole pine dominated forests that also contain subalpine fir. The moist very cold Engelmann Spruce Subalpine Fir (ESSFmv) subzone is dominated by the trees it is named after. It also contains a sparse cover of herbs and shrubs and a dense moss layer. The Alpine Tundra (AT) zone is characterized by shrubs, herbs, bryophytes and lichens. Also, extensive old-growth habitat can be found in the lower Graham River valley bottom.

Graham-Laurier Park is home to a wide variety of wildlife. Large mammals such as caribou, moose, elk, Stone's sheep, mountain goat, grizzly bear, and wolf can be found in the area. There are many species of resident birds and the avian community increases in the spring when migratory birds either pass through the area or settle to nest. Small furbearers (e.g. fisher, marten and lynx) live in the old growth forests associated with valley bottoms. Several species of rodents, reptiles, amphibians and many species of invertebrates can also be found in the area.

Fisheries values in the watersheds found in Graham-Laurier Park are very high. Bull trout and slimy sculpin have been found in the Graham River. Arctic grayling exist in Lady Laurier Lake, Needham Creek has rainbow trout and Emmerslund Creek contains Lake Chub and slimy sculpin. Also, white and long nose sucker have been found in several areas of the park. Lady Laurier Lake was illegally stocked with both Arctic grayling and rainbow trout in the 80's. Arctic grayling has become well established, however no rainbow trout have been caught in the lake for many years.



Plate 1: Lady Laurier Lake (photo by Sandra Vince)

There is very little information documented about the pre- and post-contact history of Graham-Laurier Park. The park is located within the traditional territory of the Halfway River and Carrier-Sekani First Nations and traditional use studies are currently underway that will include part of the park. Also, this area was important for hunting and trapping and it supplied furs to the Hudson's Bay Company outposts in Fort St. John and Hudson's Hope. There are no known archaeological sites within the park.

Graham-Laurier Park provides a wide variety of recreational opportunities to both public and commercial visitors. Hunting, fishing, snowmobiling and horse back riding are the most popular activities in the area. The scenic and wilderness values of the park are very high and there is a great potential for non-consumptive, low-impact activities such as backpacking, backcountry skiing, photography and camping. Lady Laurier Lake, Christina Falls and areas of old-growth forest are a few of the special features that attract visitors to the area.

The main route that is used to access Graham-Laurier Park is the Graham River Muskwa-Kechika Access Management Area (AMA) route. It runs just outside the park boundary near the southeast end of the park and ends at Christina Falls. Only a small portion of this trail is within the park boundary. Two other AMA routes, the Cypress Creek Trail and the Chowade River Trail, approach the north end of the park from the east but do not come up to the boundary. The most favourable access to the Cypress and Chowade River Trails is via a public road in the north that starts near Wonowon. The Halfway-Graham Forest Service road (partially deactivated) may also be used to access the Graham River and Cypress Creek Trails from the Alaska Highway. A number of small trails have been created by guide outfitters; horseback and hiking are the most likely mode of travel. These run along Emmerlund, Needham and Horn creeks, and the Graham River. Travel within the park is by non-motorized means, except for snowmobile use in the winter.

Facilities within the park are limited to guide outfitter and trapper cabins. There is a public recreation site just outside the southeast boundary of the park at Crying Girl Prairie. This is maintained by the Fort St John division of Canadian Forest Products Ltd. It is accessed by the Halfway-Graham Forest Service road.

In a regional context, Fort Nelson and Fort St. John are the closest large communities. Many of the users in the area are local residents of northeast British Columbia. Guide outfitter companies provide hunting and nature tours to much of the region for a local, national, and international clientele.

1.2 Planning Area

1.3 Legislative Framework

1.4 Management Commitments/Agreements (optional)

○ Relationship with Other Land Use Planning

The Graham River watershed was identified as an Area of Interest to the Protected Areas Strategy in 1992. In June of 1995, the Land Use Coordination Office directed the Fort St. John Land and Resource Management Planning table to recommend 4% of its planning area for protected area status. Graham-Laurier was one of eleven areas proposed to meet this requirement. In 1997, the Muskwa-Kechika Management Area was established and Graham-Laurier was identified as a new protected area. It was established as a Class A Park in 1999.

The Fort St. John Land and Resource Management Plan (LRMP) provides a number of directives to guide the management of several values and activities within the protected area. **Appendix B** contains a complete list of the Fort St. John LRMP objectives and strategies.

Figure 1: Graham-Laurier Provincial Park Regional Context Map

○ Management Issues

The following issues have been identified and require management action.

Theme	Issue
Planning	<p>Implementation of the Access Management Area (AMA) controls may be difficult due to the low enforcement presence within the park.</p> <p>Maintaining the ‘primitive status’ of the park may be challenging in the future due to increased use and access.</p> <p>Maintaining the ‘wilderness’ character of park will be difficult due to proposed forestry and oil and gas access roads near park boundary.</p> <p>Wildlife, fisheries, and heritage resource management will be difficult until more in depth inventory work is completed.</p>
Trail Development/ Management	<p>Safety and management are issues for the Graham River Trail and Christina Falls due to liability risks i.e. viewing of the falls is not facilitated by platforms or fencing</p> <p>Knowledge of access routes and controls may be limited due to the lack of adequate signage.</p>
Campsites/ Facilities	<p>Christina Falls is at this time the only high use area and impact to this campsite may occur due to over use during hunting season.</p> <p>Potential impacts to vegetation due to the lack of designated camping locations.</p> <p>Potential environmental and wildlife concerns at Christina Falls due to the lack of facilities (toilets, caches, fire pits, garbage).</p>
Park Operations	<p>Disturbance of traplines due to recreational activities may be a problem.</p>

Public Safety	Public safety may be at risk because of the remoteness of the area. Education of visitors is important to minimize safety, wildlife and environmental concerns. Bear/human encounters may occur around hunting kills, bear encounters maybe frequent due to a high bear population.
Access	Monitoring of the Chowade and Cypress Trails for levels use and associated impacts.
Protecting Ecological Values	Effects of off-trail ATV and snowmobile use on caribou and other wildlife populations are unknown due to the lack of evaluation and monitoring. Damage to vegetation due to timber cutting for firewood. Fish populations may be stressed due to increased fishing pressure and disturbance of the aquatic ecosystem. Knowledge of ecological values is limited due to a lack of inventory. Impacts to alpine and sub-alpine areas from recreational activities are unknown due to a lack of evaluation and monitoring. Wildlife forage quality and quantity may be negatively affected by the grazing of horses within the park should use increase.
Protecting Recreational Values	Park enforcement activities are limited by financial constraints and lack of staffing.

1.5 Relationship with First Nations/First Nations Cultural Context/First Nations Land Use Plans (optional)

1.6 Relationship with Local Communities (optional)

1.7 Adjacent Patterns of Land [and Marine] Use (optional)

1.8 Land Uses, Tenures and Interests

Access Management

The southeast boundary of Graham-Laurier Park can be accessed by automobile to a point where the Halfway/Graham Forest Service Road then terminates at a recreation site at Crying Girl Prairie. From there the main trail, the 22 km Graham River Trail - Muskwa-Kechika Access Management Area (AMA) Route, can accessed by a 4km hike through private property or through forestry cut blocks; the Graham River Trail continues

on to Christina Falls. This trail is open to ATV's, snowmobiles, horses, mountain bikes and foot travellers.

The northeast boundary of the park is accessible by two other AMA routes. The Cypress Creek Trail can be accessed from the 192 Road which leaves the Alaska Highway at Pink Mountain. It terminates several kilometres back from Laurier Pass, which is on the border of the park. Horse and foot travellers can enter the park through the Pass. The Chowade River Trail can be accessed from the partially deactivated Halfway/Graham Forest Service Road. The trail comes to within a kilometre of the park boundary, and horseback riders and hikers can access the park from there. Note that beyond these AMA routes the trail is closed to all motor vehicle travel, including snowmobiles.

There are no roads within the park boundary; however guide outfitters maintain several smaller trails that can be travelled by horse or foot. These follow main water courses such as Emmerslund, Needham and Horn creeks and the Graham River.

Access management is an important concern in Graham-Laurier Park. Within the next several decades access will increase substantially due to resource extraction activities, such as forestry and oil and gas, which will occur on land adjacent to the park. This could have serious impacts on wildlife populations. Ungulate populations are of special concern as increased access would undoubtedly amplify hunting pressures.

Objectives	Strategies
Manage access to protect the natural, cultural and aesthetic values of the park.	<p>Follow the guidelines of the Muskwa-Kechika Access Management Plan. Changes will only be implemented through the existing AMA process.</p> <p>Implement access limitations where necessary.</p> <p>Maintain the portion of Graham River Trail that is within the park</p> <p>Monitor access and its impacts on natural, cultural or aesthetic values. Adjust management strategies accordingly.</p>
Maintain an adequate level of access for public users.	<p>Allow traditional forms of access to continue with some limitations.</p> <ul style="list-style-type: none"> ◆ Snowmobiles are not allowed in the park. ◆ ATV's are allowed on the designated trail only. ◆ Non-motorized forms of access are allowed in the entire park.

Existing Tenures, Alienations and Encumbrances Management

Graham-Laurier Park is a relatively remote, wilderness area. As such, there are very few facilities found within the boundary. Four cabins have been built by guide outfitters for use as hunting and fishing camps. There are also two small airstrips in the northern region of the park.

Just outside the southeast border of the park is a public recreation site at Crying Girl Prairie. It is located on the banks of the Graham River. There are 15 campsites and a

short hiking trail to a small pothole lake. Canadian Forest Products Ltd. (Fort St John Division) maintains the site and it receives fairly heavy use in the summer and fall.

For a complete list of tenures within the area see **Appendix D**.

Objectives	Strategies
Manage tenures within the park to meet conservation objectives while considering the needs of the holders.	Consult with tenure holders on all aspects of management relating to their activities. Encourage a feeling of stewardship for the park. Issue park permits as necessary.
Minimize environmental and visual impacts due to the tenured activities.	Regulate facility development/ maintenance. Require that replacement or modification of structures/facilities be approved by the Environmental Stewardship Division. <ul style="list-style-type: none"> ◆ Ensure that there is no significant increase in the “footprint” created by man-made structures. ◆ Ensure that existing structures are maintained at an acceptable level. The rustic nature of the park should be mirrored in all facilities.

Adjacent Patterns of Land Use

The lands surrounding Graham-Laurier Park fall into two different LRMP areas: Fort St. John and Mackenzie. Plans have been completed and objectives and strategies for management have been established. Each of the following areas has unique values and resources; impacts on the park related to their management must be considered.

Appendix E contains a description of the surrounding resource management zones.

There are five privately owned lots adjacent to the southeast boundary of the park. These contain an airstrip, cabins and pastureland. The owners of these lots should be consulted with concerning park management issues that may affect them. Also, parks staff should work with these individuals to ensure that activities occurring on their lands do not have a negative impact on park values.



Plate 2: Watson’s Ranch (photo by Sandra Vince)

There are three forestry companies that operate in the general area of Graham-Laurier Park. Two of these have harvest plans that include road building and timber removal near the park boundary. Slocan Forest Products Ltd. will be working in the Ospika River and Balden Creek areas west of the park within the next 3 years. Subsequent harvest planning will likely involve an expansion of roads and cutblocks in the area. This will increase access to the area and may lead to an increase in recreational use of the park.

Canadian Forest Products Ltd. operates near the southeast boundary of the park. They have developed a 45-year harvest plan that outlines future road and cutblock locations. They plan to log in the Graham River valley south of Christina Falls for the next 21 years. In 2023-2024 they will be working in the Christina Falls area just outside the park boundary. After that until 2039 they will be in the Graham River Valley between Christina Falls and the park boundary near the mouth of Needham Creek. Their activities will improve road access in the area and may lead to increased use. Other potential impacts include decreased visual quality and threats to the ecological integrity of the lower Graham River watershed.

Along with improved road access there is the opportunity for an expansion of recreational opportunities within the park. Future park plans may allow for the development of facilities near Christina Falls. If funding becomes available in the future these ideas should be explored further.

Appendix F contains relevant memoranda of understanding

Objectives	Strategies
Maintain the ecological integrity of the park though potentially conflicting activities occur outside the boundary.	<p>Consult with Ministry of Forests and industry regarding potential impacts of future adjacent timber harvesting and access road development.</p> <p>Consult with the Oil and Gas Commission and leaseholders regarding potential impacts of future adjacent exploration, development and access.</p>

	Work with government and industry to establish requirements to protect park values. Focus on concerns associated with access, environmental impacts and visual quality.
Ensure commercial recreation activities on adjacent lands do not negatively impact the experience of park visitors.	Work with commercial recreation operators to ensure that visitors to the area can experience the wilderness without interference.

1.9 Planning Process

2.0 Values and Roles of the [Designation Type]

● The Role of the Protected Area

○ Provincial and Regional Context

Graham-Laurier Park is located in the Environmental Stewardship Division Peace Region of northeast British Columbia. The closest large community is Fort St. John. Fort St. John is the largest city in the Peace region and has a population of about 15000 and services more than 45000. It has a resource extraction based economy, with oil and gas, agriculture, and forestry providing the greatest percentage of direct income in the area.

Graham-Laurier Park is part of the Muskwa-Kechika Management Area and therefore has close ties to several other new and existing protected areas. The three closest are Redfern-Keily, Ospika Cones and Sikanni Chief Ecological Reserve. Redfern-Keily is located approximately 50 km north of Graham-Laurier. It protects many important natural, cultural and recreational values and is one of the most visited backcountry parks in northeast British Columbia. Sikanni Chief Ecological Reserve can be found approximately 50 km north and Ospika Cones Ecological Reserve is about 35 km northwest of Graham-Laurier. Their primary function is the maintenance of biological diversity; research and education are their main uses.

Appendix C contains the British Columbia Protected Areas System Goals.

○ Significance in the Protected Areas System

Graham-Laurier Park plays an important role in the provincial protected areas system. It is significant for the following reasons:

The area provides representation of important transition zones from river bottom old growth to subalpine and alpine areas;

The park has high natural biodiversity, containing a mix of forest cover types and age classes, moist riparian corridors, and natural connectivity corridors between valley lowlands and alpine;

The park contains Christina Falls, which is an easily accessed special feature;

The park provides medium or high capability habitat for caribou, grizzly bear, moose and several furbearers (including wolverine, lynx, marten and fisher). It also provides significant habitat for other large mammals such as Rocky Mountain elk, Stone's sheep and mountain goat. The park contains populations of red- and blue-listed species of plants, birds, and fish;

The park conserves all of the undeveloped Upper Graham River watershed from the mouth of confluence with Needham Creek;

The park provides backcountry tourism opportunities to local, provincial, national, and international users. The highly scenic landscape is popular with a wide variety of recreationists interested in low-impact nature appreciation.

The following tables list provincial biogeoclimatic zone and ecosection representation for the park (the coverage may be updated to reflect a recently approved boundary change):

Table 1: Provincial Ecosection Representation Data for Graham-Laurier Provincial Park

PA Name	Ecosection Name	% of the total Ecosection area within the province that is protected	Number of protected areas in this Ecosection	Area of this Ecosection in this Provincial PA (ha)	% of the province-wide protected area in this Ecosection that is in this Provincial PA
Graham - Laurier	Eastern Muskwa Ranges	40.13	9	91	0.01
Graham - Laurier	Misinchinka Ranges	8.58	3	64,577	97.96
Graham - Laurier	Muskwa Foothills	30.56	8	2,395	0.73
Graham - Laurier	Peace Foothills	6.51	5	32,918	75.84

Graham-Laurier Park is one of three parks and protected areas that protect the under-represented Misinchinka Ranges Ecosection (8.58% is protected in British Columbia). The park protects 97.96% of the total Misinchinka Ranges Ecosection that is protected in British Columbia. The park also provides substantial protection of the under-represented Peace Foothills Ecosection, protecting 75.84% of the 6.51% that is protected in British Columbia. Graham-Laurier contributes a smaller proportion to the representation of the well represented Eastern Muskwa Ranges and the Muskwa Foothills ecosections.

Table 2: Provincial Biogeoclimatic Zone Data for Graham-Laurier Provincial Park

PA Name	BGC Code	% of the total BGC Code area within the province that is protected	Number of protected areas in this BGC Code	Area of this BGC Code in this Provincial PA (ha)	% of the province-wide protected area in this BGC Code that is in this Provincial PA
Graham - Laurier	AT unp	22.47	151	49,036	1.30
Graham - Laurier	BWBS mw 1	0.68	23	181	0.74
Graham - Laurier	BWBS wk 2	2.40	2	3,081	40.95
Graham - Laurier	ESSF mv 2	7.70	5	4	0.01
Graham - Laurier	ESSF mv 4	8.31	4	47,545	74.08

Graham-Laurier Provincial Park is one of only 2 parks and protected areas that protect the Boreal White and Black Spruce (BWBS wk 2) subzone. Only 2.40% of the subzone is protected in British Columbia. The park protects 40.95% of the entire BWBS wk 2 that is protected in British Columbia. The park also protects a substantial amount (74.08%) of the 8.31% of Englemann Spruce Subalpine Fir (ESSF mv 4) subzone that is protected in British Columbia. The park provides minor representation of the Alpine Tundra (AT unp), ESSF mv 2 and BWBS mw 1 biogeoclimatic subzones.

● Protected Area Roles

○ Conservation Role

Graham-Laurier Park contributes to the protected areas system conservation goals concerning representation and special features in the following ways:

The park protects important areas of the Engelmann Spruce-Subalpine Fir (ESSFmv), Boreal White and Black Spruce (BWBSmw & BWBSwk) and Alpine Tundra (AT) biogeoclimatic subzones within the Misinchinka and Eastern Muskwa Ranges and Peace and Muskwa Foothills ecosections. This includes, but is not restricted to, transition zones from river bottom old growth to subalpine and alpine areas;

The park protects important habitat for several red- and blue-listed birds, fish, and mammals, Refer to Appendix H and J;

The park preserves the Upper Graham River as an undeveloped watershed;

Graham-Laurier Park, in association with other surrounding protected areas and Muskwa-Kechika management areas, protects important wildlife populations and habitat linkages.

○ **Recreation Role**

Graham-Laurier Park contributes to the protected areas system goals for recreation in the following ways:

The park provides backcountry outdoor recreation opportunities which include, but are not limited to, nature appreciation, backpacking, fishing, and hunting;

The park provides international visitors and local recreationalist superb opportunities to observe and enjoy northeast British Columbia;

Graham River Trail provides easy access to Christina Falls, which is a special feature of the park.

○ **Cultural Heritage Role**

Graham-Laurier Park contributes to the protected areas system goals for cultural heritage values and Environmental Stewardship Division cultural heritage policies in the following ways:

Traditional use studies that may be completed in parts of Graham-Laurier Park by the Moberly Lake and Treaty 8 First Nations will add to the inventory of cultural heritage values within the region.

● **Special Management Considerations**

Graham-Laurier Provincial Park is located in a remote area of British Columbia; however the area sustains use by people for both recreational purposes and to provide an income from occupations such as trapping and guiding. Activities within the park and adjacent land uses need to be managed to ensure that the park retains its wilderness values.

HEADING	Designation Type				
	Park	Ecological Reserve	Protected Area	Conservancy	WMA or Conservation Land
ROLE IN THE PROTECTED AREA SYSTEM					
'Significance in the Protected Areas System'	Y	Y	Y	Y	N
'Significance in the Protected Lands System'	N	N	N	N	Y
VALUES AND ROLES					
'Natural Heritage' AND/OR 'Biodiversity and Natural Environments'	Y	Y	Y	Y	N
'Wildlife Species and Habitats'	N	N	N	N	Y
'Cultural Heritage' AND/OR 'Social, Ceremonial and Cultural Uses of First Nations'	Y	Y	Y	Y	Y
'Recreation'	Y	N	Y	Y	N
'Wildlife Dependent Recreation'	N	N	N	N	M (Where there are wildlife dependent recreation activities such as wildlife viewing, hunting, fishing, etc)
'Development and Use of Natural Resources'	N	N	M (Where described as an appropriate role or purpose of the area)	Y	N
'Research and Education'	N	Y	N	N	N
'Other Protected Area Attributes'					
This section will be used in most management plans. This section is used to describe other attributes which are not normally considered core values or roles for the designation type but should be described because they are relevant to the area's management.					
PARK- This would include any use of the park which is not related to the natural, cultural or recreational values/role of the park (e.g.,					

communication sites, non-recreation access roads, grazing activities, water control structures, etc.).

ECOLOGICAL RESERVE- This would include any use of the ecological reserve which is not related to the natural, cultural or research/education values/role of the ecological reserve (e.g., recreation activities, access roads, grazing activities, other licenses/permits/tenures/encumbrances etc.).

PROTECTED AREA- This would include any use of the protected area which is not related to the natural, cultural, recreation values/roles or the specific use/role outlined in the Order in Council (e.g., other licenses/permits/tenures/encumbrances etc.).

CONSERVANCY- If there is a conservancy attribute which does not fit under one of the four conservancy headings, the attribute information should go under this heading. This section will not likely be needed in conservancy management plans.

WILDLIFE MANGEMENT AREA/CONSERVATION LAND- This would include any use of the wildlife management area/conservation land which is not related to wildlife species and habitats values/roles, cultural values/roles or wildlife dependent recreation values/roles of the area (e.g., non-wildlife dependent recreation activities, natural values unrelated to the wildlife species and habitats, grazing activities, water control structures, other licenses/permits/tenures/encumbrances etc.).

2.1 Significance in the Protected Areas System

2.2 Section 2.2– 2.9 *Context and Examples*

Values

Role

Table 3: Biogeoclimatic Zone Representation

Biogeoclimatic (BEC) subzone		Area of BEC in Morice Lake Park (ha)	Total Area of BEC Protected in Province (ha)	% Total Area of BEC Protected in Province Contributed by Morice Lake Park	% BEC Protected in Province
Coastal Western Hemlock wet, subaritime, Montane variant	CWHws2	7 635	100 937	8%	16%
Sub-boreal Spruce moist, cold, Nechako variant	SBSmc2	4 564	275 562	2%	13%

2.2 Natural Heritage (see Table on Page 10)

Values

Role

2.3 Wildlife Species and Habitats (see Table on Page 10)

Values

Role

2.4 Cultural Heritage (see Table on Page 10)

Values

Role

2.5 Recreation (see Table on Page 10)

Values

Role

2.6 Wildlife Dependent Recreation (see Table on Page 10)

Values

Role

2.7 Research and Education (see Table on Page 10)

Values

Role

2.8 Development and Use of Natural Resources (see Table on Page 10)

Values

Role

2.9 Other [Designation type] Attributes (see Table on Page 10)

3.0 Management Direction

3.1 Vision

3.2 Management Objectives and Strategies

4.0 Natural and Cultural Values Management

○ Introduction

Graham-Laurier Park has been identified through the Fort St. John LRMP process as having significant natural and cultural heritage values. Important cultural values, unique landscape features, pristine freshwater resources, and a diverse assemblage of vegetation, fish, and wildlife make this area a vital part of the provincial protected area system. Its existence also contributes to the sustainability of global ecosystem diversity.

This section provides a brief description of the primary natural and cultural attributes of the park, and sets out management objectives and strategies.

○ Geology, Soils and Landforms

The geology of the ranges in Graham-Laurier Park is notably different from others in the Rocky Mountains. They are made of Misinchinka schists from the late Precambrian and Cambrian eras. This material breaks relatively easily and cannot support the characteristic castellated forms that can be seen in other ranges. As with other areas in northeast British Columbia, the ranges are underlain with sedimentary rock and have been shaped by thrust faults. These northeast facing faults are responsible for structures such as Christina Falls, which is a special feature in the park.

The Peace Foothills have a blockier appearance and exhibit a more gradual elevation increase than the Muskwa Foothills found to the north. They are underlain by primarily lower and middle Triassic age sedimentary rock.

Another important landscape forming process in the area was glaciation. During the last ice ages the entire area was covered by thick sheets of ice, which formed wide U-shaped valleys and left a layer of glacial drift in many parts of the park. This drift, composed of small, worn rocks, is only covered by a thin layer of soil in most locations. From 1100-1500 m Humo-Ferric Podzols are the dominant soil. These blend with Melanic/Dystric Brunisols which are the primary soil from 1500-1700 m. Between 1700 and 1900 m Brunisols and Regosols can be found and above this there is no soil establishment.

○ Water

Fresh water resources are being increasingly valued as the links between clean water and a healthy ecosystem are becoming more clearly understood by the public, as well as industry. Graham-Laurier Park protects the entire Upper Graham River watershed, which is considered to be undeveloped. Lady Laurier Lake (0.34 km²), which is one of the few bodies of water in the park, is included in this area. It also encompasses Needham Creek watershed and part of the lower Emmerslund Creek watershed. Shielding these areas from future development will aid in the preservation of unpolluted water resources that will be important to future generations.

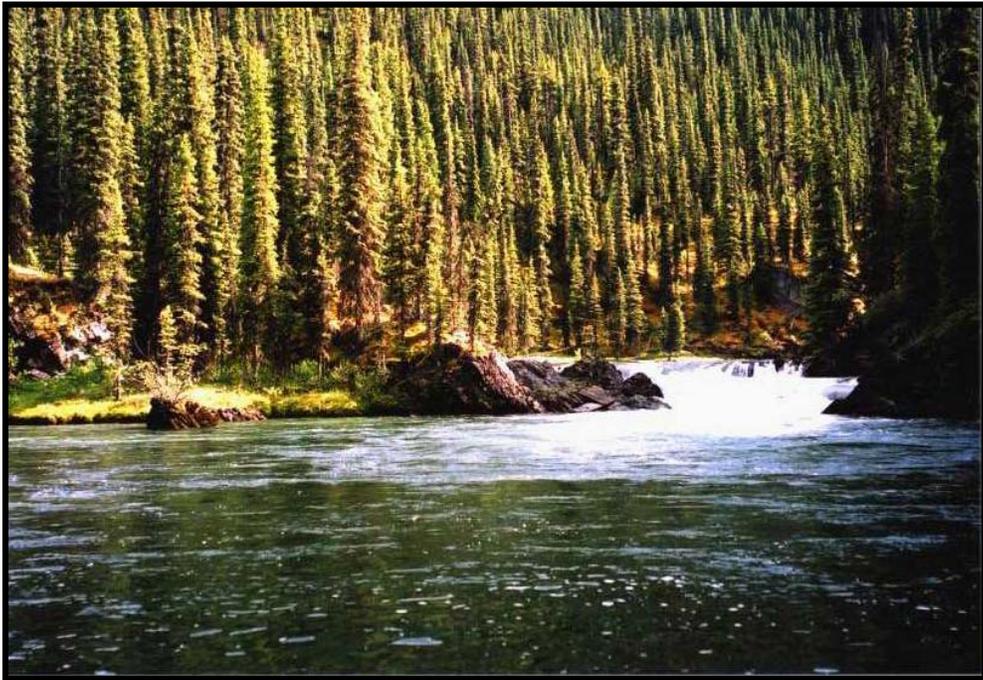


Plate 3: Red Falls (photo by Sandra Vince)

Objectives	Strategies
Maintain the natural quality of freshwater resources.	Monitor recreational activities for erosion impacts and adjust management actions accordingly. <ul style="list-style-type: none"> ◆ Implement access limitations on lakes and waterways if use levels are degrading the aquatic or riparian ecosystem. Encourage horse users to rest their horses away from the water's edge.

○ Vegetation

Vegetation within the park is influenced by several factors including climate, soils, and elevation. These factors interact to create patterns of common plant communities that can be described using the biogeoclimatic ecosystem classification system.

There are four different biogeoclimatic subzones that can be found within Graham-Laurier Park. The moist, warm Boreal White and Black Spruce (BWBSmw1) variant is located along the Graham River in the southeast corner of the park up to 1100 m elevation. Its forests are dominated by white spruce or aspen. Other vegetation commonly found is creamy peavine, tall bluebell, northern bedstraw and common miterwort. The wet, cool Boreal White and Black Spruce (BWBSwk) variant is found between 900 and 1300 m. Its range extends farther up the Graham River and also along Emmerslund Creek and part of Needham Creek. It has a shorter growing season than BWBSmw due to the cooler temperatures associated with a higher elevation. Forests are dominated by white spruce and lodgepole pine; and areas of old growth can be found along the lower Graham River valley bottom. Subalpine fir and black huckleberry are also commonly found. The moist, very cold Engelmann Spruce-Subalpine Fir (ESSFmv) variant is found between the BWBSwk and Alpine Tundra (AT) regions at an elevation of 900 – 1700 m. Forests are usually dominated by spruce with the understory containing subalpine fir; however, at higher elevations fir becomes the more dominant species in the canopy. Sub-alpine meadows contain a variety of herbs, shrubs and mosses. Mountain-heather is also fairly common. The AT subzone can be found above approximately 1400 m. It contains a sparse covering of shrubs, herbs, bryophytes and lichens.

The area surrounding and including Graham-Laurier Park contains several provincially red- and blue-listed plant species. **Appendix H** contains the British Columbia Conservation Data Center Plant Tracking Lists for the Fort St. John and Mackenzie Forest Districts.

Objectives	Strategies
Maintain natural vegetation and plant communities for ecological integrity, visual aesthetics and their inherent value.	Conduct a vegetation inventory. Identify and map plant communities and rare, endangered or threatened species. Focus initially on areas that will be potentially impacted by recreation.
Protect rare and sensitive plant communities and species, as they are identified.	Monitor all activities in areas of rare and sensitive plant communities and species to assess their potential negative impacts.
Prevent the establishment of non-native plant species.	Educate park visitors about the methods and consequences of introducing non-native plant species. Use the internet, brochures and verbal messages during chance encounters with Environmental Stewardship Division staff. Suggest that horse users implement the following

	<p>recommendations:</p> <ul style="list-style-type: none"> ◆ Encourage the use of processed supplemental feed; ◆ Require that horses must spend 24 hours before entering park to allow them time to excrete all waste that may contain non-native plants.
Protect wildlife habitats, especially for threatened species.	<p>Identify important habitat areas using vegetation and wildlife inventories, and interviews with park users.</p> <p>Monitor the impacts of recreational activities to critical wildlife habitats and ecosystem to determine if more restrictions are necessary.</p>
Work with other agencies to co-ordinate resource management issues inside and outside the park.	<p>Prepare a vegetation management plan. Address issues such as disease, insects, blow down and prescribed burning.</p> <p>Follow fire management plan for Graham-Laurier.</p>
Encourage low impact, non-destructive scientific studies to improve the knowledge of vegetation within the park.	<p>Work with educational institutions and First Nations groups to plan and implement studies.</p> <p>Where funding and staffing are available, set up a method to collect informal vegetation information from commercial operators and other park visitors.</p>

○ Wildlife

Graham-Laurier Park is inhabited by several species of large mammals. These include white-tailed and mule deer, black bear, elk and wolf. Moderate to high capability habitat exists for caribou, mountain goat, Stone’s sheep, moose and grizzly bear. The park also provides habitat for several species of furbearers, such as fisher, marten and lynx.

Appendix I contains a list of wildlife species that can be found within the Graham River watershed.

It was compiled from “A Literature Review of the Ecology and Habitat Requirements of Wildlife Species in the Graham River Watershed” that was prepared for Canadian Forest Products Ltd. by Diversified Environmental Services Ltd. in 2001. While this provides a list of common species in the watershed, more in depth inventory and habitat capability work needs to be done focusing specifically on the park. Also, studies focusing on smaller species such as small mammals, birds, reptiles, amphibians and invertebrates should be a priority. Very little information is known about these frequently overlooked but ecologically important species.

Other important features in the area are the many mineral licks. Ungulates congregate in these areas to ingest salts that are concentrated on the surface. They are formed due to downslope water movement depositing materials leached from the surrounding rocks and soils.

Appendix J contains the British Columbia Conservation Data Center Wildlife Tracking Lists for the Mackenzie and Fort St. John Forest Districts.

Special care must be taken when making management decisions to include the habitat requirements of these species.

Objectives	Strategies
Identify and maintain the natural diversity of wildlife species and populations within the park.	<p>Conduct in depth bird, mammal, reptile, amphibian and invertebrate inventories. Identify and map locations of rare, endangered or threatened species and areas of critical habitat. Focus initially on areas that will be potentially impacted by recreation.</p> <p>Follow the guidelines of the Wildlife Management Plan created for the Muskwa-Kechika. The Environmental Stewardship Division can deviate from this when it is deemed necessary for conservation purposes.</p>
Protect rare, endangered, sensitive and vulnerable species.	<p>Monitor all activities in areas of rare, endangered, sensitive and threatened species to assess their potential negative impacts.</p> <p>Use appropriate action to mitigate negative impacts.</p>
Increase knowledge and understanding of wildlife resources and habitat, and encourage scientific research where compatible with other objectives.	Work with educational institutions and First Nations groups to plan and implement studies.
Ensure that all uses (hunting, viewing and appreciation) are managed to maintain natural population levels and minimize disturbance.	<p>Monitor the impacts of activities and implement regulations as necessary.</p> <p>Adjust harvest levels based on hunting data and natural fluctuations in populations.</p> <p>Work with hunters, guides, First Nations and special interest groups to collect and analyze data.</p>
Protect and maintain high capability habitat for species of concern (i.e. ungulates and grizzly bear).	<p>Use zoning to limit motorized access to high capability habitat if use levels increase and negative impacts become an issue.</p> <p>Monitor recreational activities for potential negative impacts. Implement greater spatial or temporal restrictions as necessary.</p>

○ Fisheries and Aquatic Resources

Graham River and its tributaries have very high and unique fisheries values. They contain the required habitat for many of the life cycles of a diverse set of species. For example, Needham Creek is known to contain spawning habitat for the provincially blue-listed bull trout. Also, Christina Falls acts a barrier to fish movement. This means that all of the populations upstream are genetically isolated and should be managed in order to protect this variability.

Seven species of fish have been identified in Graham-Laurier Park: bull trout, slimy sculpin, Arctic grayling, rainbow trout, lake chub, long nose sucker and white sucker. Arctic grayling and rainbow trout were illegally stocked into Lady Laurier Lake in the 1980's. Grayling quickly adapted and have become well established. Rainbow trout, however, gradually declined in numbers and today there are no known remaining individuals.

The recreational fishery within the Park Complex will be managed conservatively within the natural productivity of the supporting ecosystem.

Objectives	Strategies
<p>Maintain a low intensity, high quality fishery in designated areas of the park.</p>	<p>Maintain current recreational fishing opportunities. Continue enforcing the established provincial freshwater fisheries regulations.</p> <p>Establish a method for self-reporting.</p> <p>Use this information to regulate fishing activities.</p> <p>Possible management options include implementing a catch-and-release fishery and imposing quotas.</p>
<p>Ensure that fisheries management actions do not adversely affect indigenous aquatic life forms.</p>	<p>Stocking of non-native or exotic aquatic species will not be permitted for consumptive purposes.</p> <p>Enhancement of previously introduced fish stocks and species indigenous to the watershed in question may be permitted. Reasons for increasing fish stocks/populations through enhancement include:</p> <p>Ensure that populations do not become extirpated from a system.</p> <p>Enhancement will be subject to the national and provincial stocking policies:</p> <ul style="list-style-type: none"> ◆ Parks and Protected Areas Conservation Program Policies, wildlife section ◆ Policy for Wild Indigenous Fish, Province of British Columbia. ◆ National Code on Introductions and Transfers of Aquatic Organisms. <p>Undertake assessment and monitoring of the impacts on all aquatic and terrestrial biodiversity of implementing enhancement measures for sport fish species or conservation purposes.</p>
<p>Protect and maintain the natural diversity and productivity of aquatic ecosystems.</p>	<p>Conduct fish and aquatic invertebrate inventories. Identify and map locations of rare, endangered or threatened species and areas of critical habitat.</p> <p>Focus initially on areas that will be potentially impacted by</p>

	recreation.
Increase knowledge and understanding of aquatic resources, and encourage scientific research where compatible with other objectives.	<p>Work with educational institutions and First Nations groups to plan and implement studies.</p> <p>Set up a method to collect informal aquatic resource information from commercial operators and other park visitors.</p>

○ Cultural Heritage

Graham-Laurier Park is found within the traditional use areas of the Halfway River and Carrier-Sekani First Nations. Treaty 8 and Moberly Lake First Nations are currently working on a traditional use study. Parts of the park are included in the study area. This will provide valuable information that will aid park managers in making conservation decisions.

During the post-contact era, the area encompassed by the park was important for hunting and trapping. It supplied fur traders with skins that they sold at Hudson’s Bay Companies in Hudson’s Hope, Fort Nelson and Fort St John. Laurier Pass was part of an important RCMP trail which was used to deliver mail to and from the north.

There are no known archaeological sites within the park. One site does exist near the boundary along the Graham River (HdRs1: prehistoric cultural material, surface lithics).

Objectives	Strategies
Work with local residents and First Nations to increase cultural and historical knowledge of the area.	<p>Complete an in-depth inventory of cultural and archaeological sites.</p> <p>Complete a traditional use inventory of the entire park.</p>
Protect and maintain important historical, cultural and archaeological features and sites as they are identified.	<p>Protect important features and sites by keeping their location undisclosed.</p> <p>Assess all facility expansion or development proposals or activities to ensure they will not negatively impact an important feature or site.</p>

○ Landscape Setting and Feature Values

The most impressive feature of the Graham-Laurier Provincial Park is Christina Falls. Caused by movement along the Carbon fault, this 63 m waterfall on the Graham River is a drawing point for many of the visitors in the area.

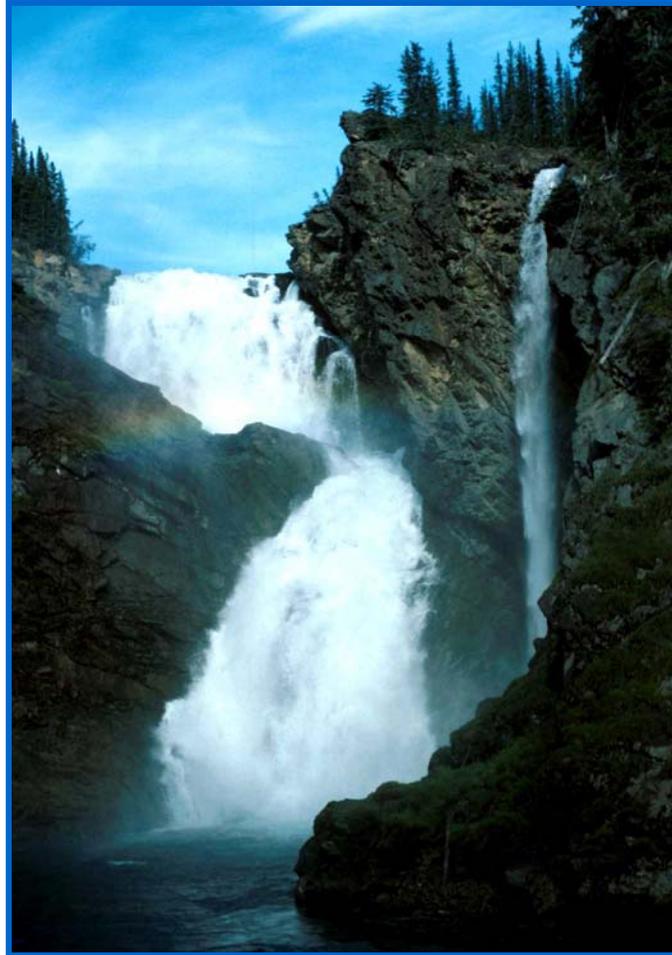


Plate 4: Christina Falls

Graham-Laurier Park is a topographically diverse area of rounded alpine summits, forested valleys and blocky foothills. Its landscape is different from other ranges in the Rocky Mountains due to the physical properties of the rock which the Missinchinka Range is made of. While other areas, such as Redfern-Keily Park, offer views of spectacular castellated peaks, Graham-Laurier provides a more subdued, rolling vista. It does, however, contain special features which provide visitors with awe-inspiring scenery. Lady Laurier Lake is nestled in a forested sub-alpine valley at the base of several tall mountains. Small meadows and wetlands scattered around the lake provide ample opportunity for wildlife viewing.

Objectives	Strategies
Protect the landscapes and features that make this park unique.	Monitor use levels and impacts related to recreation activities and manage as required.

Increase public awareness of park features and areas of special concern.	Create educational information that can be viewed on the internet, or verbally passed on by parks staff during chance encounters.
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Overall Management Objectives	
1	Identify, protect and maintain known archaeological and historic sites.
2	Provide for and promote Gitga'at and other First Nations' traditional and sustenance uses and harvesting activities.
3	Identify, protect and maintain Gitga'at and other First Nations' cultural heritage, and traditional use sites and features.
4	Identify and protect regionally rare and at risk ecosystems, ecological communities and species.
5	Identify and protect special ecological features.
6	Sustain the abundance and distribution of wildlife, and intertidal and subtidal species.
7	Identify and enhance recreation values.
8	Provide visitors with safe cultural and wilderness recreation opportunities.
9	Identify and allocate commercial opportunities to assist local economic diversification, particularly for First Nations.
10	Sustainably manage commercial tourism opportunities.

Management Opportunities/Stressors	
A	First Nations' cultural heritage sites and features are not well documented but are known to exist in the area.
B	Traditional and sustenance natural resource harvesting activities are being impacted by the availability of these resources.
C	Populations of wildlife and intertidal and subtidal species are small so they are more easily adversely impacted by high levels of harvesting activity.
D	Where human use areas overlap with special ecological and cultural features (e.g., clam beds), there are likely to be impacts to the features. Those values in areas of high sensitivity to sea level rise are more vulnerable to these impacts.
E	Spills, sewage and other disturbance from commercial marine transportation and recreation boating activity may contaminate intertidal and subtidal areas.
F	Incomplete knowledge of current recreational use levels and use patterns makes it difficult to enhance future recreational experiences.

G	Lack of recreation infrastructure prevents recreational use by visitors with small craft.
H	Frequent air access (e.g., helicopters and float planes) in some locations is disturbing backcountry recreation use.
I	Low public knowledge of recreation values in the conservancy restricts the areas' recreational use.
J	Limited availability of cultural interpretation and guiding services impacts on the cultural experience available to visitors.
K	Gitga'at First Nation is developing and working to implement a cultural and wildlife viewing tourism enterprise.
L	Tourism operators from other areas have an interest in the area.
M	Commercial services (e.g., fuel station, marina, accommodation) in Hartley Bay are underutilized.

Management Strategies	Associated Key Objectives	Associated Key Opportunities/Stressors
Perform historical and ethnographic research, and cultural heritage field inventories.	1, 3	A, D, K
Identify threats to cultural heritage and traditional use sites and features and, as necessary, implement protective measures which may include: - marking areas as off-limits for public and commercial access; and, - focus use away from known sites.		
Perform reconnaissance and site-level historical/archaeological site field assessments in conjunction with any cultural heritage field inventories.		
Identify threats to historic/archaeological sites and develop and implement protective measures, as necessary.		
Support efforts to identify and monitor traditional and sustenance harvesting activities.		
Support efforts to determine the baseline clam population, and monitor the clam population and harvest levels.		
Monitor and, if necessary, encourage the Department of Fisheries and Oceans to limit recreational catch of clams, crabs, sea urchins, etc.		
As appropriate, use pamphlets or other communication material to inform and discourage the discharge of bilges and sewage in or around the clam beds.		
Inventory terrestrial, intertidal and marine ecosystems, communities and species, focusing on rare and at risk ecosystems, communities and species.		
Prior to development of infrastructure (e.g., tent pads, trails, etc.) complete site specific inventory of on rare and at risk ecosystems, communities and species.		
Inventory special ecological features (e.g., clam beds).		
If recreational and commercial disturbance causes unacceptable impacts to special ecological features (e.g., clam beds), establish specific "no-go" areas.		
Develop a baseline inventory of current and potential recreational use.		
Implement a Backcountry Recreational Impact Monitoring (BRIM) assessment on recreation sites.		
In Brant Bay or Curlew Bay, support small scale onshore development of infrastructure to support short-term camping and day use (e.g., tent sites, outhouses). In the bay not selected for such development, on shore use should not be promoted.		
Identify recreation opportunities and facilities in promotional and marketing materials.		

Gitga'at Stewardship Program will develop cultural interpretation and guiding services.		
Support development of Gitga'at operated cultural and wildlife viewing activities.		
Direct commercial aircraft to land in areas of the conservancy where the recreational experience is not contingent on a wilderness experience. Commercial aircraft will be requested to avoid the use of Brant Bay and Curlew Bay unless use of these bays is specifically required.		
Encourage tourism operators to establish partnerships with the Gitga'at.		
Identify and allocate opportunities to assist local economic diversification, particularly of area First Nations.		
Encourage conservancy users to utilize local services in Hartley Bay.		

4.1 Zoning

Zone Name

Description

Objective and Management Intent

● Protected Area Zoning

○ Introduction

Graham-Laurier Park contains three of the five zones; a Nature Recreation Zone, a Special Feature Zone, and a Wilderness Recreation Zone.

Appendix G contains an allowable use matrix which covers activities, use and facilities in each zone.

○ Zone Description

The Nature Recreation Zone is located in the adjacent to Christina Falls between the Graham River and the park boundary. It encompasses an area of 185.4 ha and makes up 0.2 % of the park. The main goal of this zone is to protect scenic values and provide for backcountry recreation opportunities in a largely undisturbed Nature Recreation. This section of the park is accessible by the Graham River AMA route. It has the potential for future recreational developments if and when forestry activities on adjacent lands improve access to the area.

The area including, and immediately surrounding, Christina Falls is zoned Special Feature to protect the scenic value provided by the falls. It covers 108.4 ha and makes up 0.1 % of the park.

The remainder of the park is zoned Wilderness Recreation. It covers an area of 100 942.5 ha and makes up 99.7 % of the park. The objective of this zone is to protect a remote, undisturbed natural landscape and to provide backcountry recreation opportunities dependent on a pristine environment. There has been limited facility development and levels of use are low. This area has the potential to provide a wilderness recreation experience to the average public user due to its proximity to Fort St John.

Figure 3: Graham-Laurier Provincial Park Protected Area Zone Map

5.0 Outdoor Recreation Opportunities Management

○ Introduction

Graham-Laurier Park was identified through the LRMP process as having important outdoor recreation values. It provides the type of wilderness backcountry experience that is becoming difficult to find in parks closer to more populated areas.

The Muskwa-Kechika Management Area Recreation Management Plan (RMP) estimates the current recreation value of the park as being \$0 - \$200,000. In the most general sense, recreation value is the net benefit to society of a recreation activity, experience or opportunity. Estimates of the value of backcountry recreation for carrying out recreation analysis for the RMP was defined as the dollar value spent by all recreationists for direct purchases such as food, fuel, supplies and commercial operators' fees.

It also estimates that there will be up to a 33% increase in public and commercial use in the future. The estimates of activities and use levels were made based on each RMZ's recreation supply information and data obtained from MKMA users, organizations, First Nations and government agencies. They are solely estimates of what recreationists might want to do in the future. The estimates of increases in demand for each RMZ in the table are relative to the estimated current use numbers for that RMZ, i.e., they are percentage increases from current use levels.

This section describes the range of recreational activities that currently take place in the park and provides objectives and strategies for managing these activities in the future. It is consistent with the Muskwa-Kechika Management Area Recreation Plan.

○ **Outdoor Recreation Opportunities and Facilities**

Graham-Laurier Park is a popular recreation destination for residents of Fort St John and the surrounding area. This is due to its close proximity and accessibility. It is the closest large protected area to Fort St John and the most southerly park in the Muskwa-Kechika Management Area. The southeast boundary of the park is accessed by vehicle on the Halfway – Graham Forest Service Road; private land lies between the park and the road.

The most frequent recreational activity that occurs within the park is hunting. The area's beautiful scenery, wilderness character and high wildlife values draw hunters from the local area as well as from farther away. Animals that are of most interest include grizzly bear, caribou, moose and Stone's sheep.

A well used trail follows the Graham River upstream and extends from the Graham River AMA route. The north end of the park can be accessed in two ways. Follow the Cypress Creek AMA route and enter from the east through Laurier Pass. Alternatively, trails can be followed from the Halfway River area south into the park; neither snowmobile nor ATV access is permitted.

Fishing is also a popular pastime, with low to very low use. The Graham River and its tributaries have high fisheries values and Lady Laurier Lake provides good quality Arctic grayling angling opportunities. Other activities that are engaged in include hiking, camping, horseback riding, photography, and nature appreciation. A popular destination is Christina Falls which has high recreation value.

There are no public facilities within the park. Just outside the southeast boundary near Crying Girl Prairie is a public recreation site which is maintained by Canadian Forest Products Ltd. (Fort St John Division). There are 15 campsites available as well as picnic tables and toilets. If access to the Christina Falls area were to be improved, public use facilities may be developed in the Nature Recreation Zone.



Plate 5: Fishing the Graham River (photo by Sandra Vince)

Objectives	Strategies
<p>Maintain the wilderness qualities of the park while providing a full range of wilderness recreation opportunities.</p>	<p>Follow the guidelines of the Recreation Management Plans created for the Muskwa-Kechika Management Area. The Environmental Stewardship Division can deviate from these when it is deemed necessary to protect natural or cultural values.</p> <p>Use zones and trail regulations to limit areas affected by high-impact recreation.</p> <ul style="list-style-type: none"> • Investigate the need for minimal public facilities and designated campsite locations, and establish minimal new facilities and campsites where required for health and safety or to prevent negative impacts e.g. place a pit toilet and develop minor infrastructure at Christina Falls. <p>Ensure facilities match the parks wilderness setting.</p>
<p>Ensure continued public access to the park is not jeopardized by commercial access.</p>	<p>Be aware of all current Oil and Gas and Forestry developments on or near the boundary of the park.</p>
<p>Promote low-impact and non-motorized recreational</p>	<p>Encourage participation in non-motorized and low-impact activities.</p> <ul style="list-style-type: none"> ◆ Allow unlimited access for walking, hiking and

activities within the park	backpacking. ♦ Allow mountain bike access on designated trails.
Ensure that recreational activities are monitored for their potential impacts on natural and cultural values, and are managed appropriately.	Monitor all recreational activities on a continuing basis. If potential negative impacts are identified, research will be conducted to determine the appropriate mitigation measures.
Honour existing uses where compatible with conservation goals.	Allow the continued use of the park for hunting, fishing, horseback riding and ATVs (on designated routes). Refer to Use Matrix.
Enhance visitor awareness of parks values, wildlife etiquette and user safety.	*Promote the “leave no trace” wilderness ethic for public lands. Educational information will be made available on the internet. Provide and promote bear awareness information to reduce human-bear conflicts.
Monitor use levels and manage accordingly in order to maintain the wilderness experience.	Work with private sector and other groups to determine public and commercial use levels. Implement appropriate measures such as timing restrictions or full closure, if use levels become too high.
Manage activities associated with recreational horse use.	Monitor horse use impacts. ♦ Assess the possible use of permits or letters of authorization to limit or monitor numbers and length of stay.
Ensure an acceptable level of safety for park users.	Educate, via BC Parks website, winter users of the potential avalanche hazard and recommend that individuals have avalanche awareness training to travel in the park. Follow the guidelines of the Peace Liard District Bear-People Conflict Prevention Plan.

○ Commercial Recreation Opportunities

There are two guide outfitting companies operating in Graham-Laurier Park. One company guides clients in the northern region of the park while the second company operates in the south. These companies focus on backcountry hunting and fishing, however there are opportunities for other activities such as photography, wildlife viewing, hiking and horseback riding. Together they have four tenured camp locations scattered throughout the park.

Opportunities for other commercial ventures exist within the park. Future applications will be assessed by parks staff and permits will be granted based on their commitment to maintaining high recreational standards and conserving natural and cultural values.



Plate 6: Horse Train along the Graham River (photo by Sandra Vince)

Objectives	Strategies
Maintain commercial recreation opportunities within the park.	<p>Allow existing companies to continue working within the park.</p> <p>Assess all proposed commercial operations individually to determine if they are compatible with the park vision and roles. Issue park use permits as necessary.</p>
Determine levels of use and management practices for commercial recreation that are consistent with park objectives and protect natural and cultural values.	<p>Collect information from commercial operators regarding use associated with their business.</p> <p>Work with commercial operators to encourage stewardship of the parks and develop a code of conduct appropriate for the area.</p>
Manage activities associated with commercial horse use.	<p>Research the appropriateness of prescribed burning to enhance forage availability.</p> <p>If complementary to conservation values, parks staff will conduct burning with the cooperation of guide outfitters.</p>

● Visitor Information

○ Introduction

Graham-Laurier Park provides recreational opportunities for a wide range of people, from naturalists to big game hunters. It is important that all visitors understand this and be considerate of other users. In the fall, non-hunters must be aware of the potential hazards associated with hunting. Also, hunters must consider public safety with regard to bears when choosing areas to clean their kills.

Visitors must keep in mind when planning for their trips that the area is a remote wilderness. There are no public facilities and you must come prepared to be self-sufficient, bringing proper camping, cooking, food and water supplies. There are no communication facilities within the park so rescue services are not easily contacted. Information related to pre-trip planning and special concerns can be obtained via various web sites, BC Parks website and the local British Columbia Tourism Info centres.

○ Visitor Experience

Graham-Laurier Park is to be maintained as a wilderness area. This means that visitor use levels need to be kept relatively low. Promotion of the park must therefore be minimal. There does, however, need to be some information available to the public to facilitate trip planning. Graham River AMA route and the public recreation site at Crying Girl Prairie should be identified on a map even though they are outside the park boundary. Also, contact information for commercial operators should be available so that visitors who could not normally access the park on their own have the opportunity to experience the area.

Muskwa-Kechika Management Area plans contain strategies that provide management direction for issues concerning Graham-Laurier Park. One of these states that signage is not generally allowed.

Graham-Laurier Park has several special concerns that must be understood by visitors to the area. It is a remote, wilderness area that is not easily accessible to emergency personnel. This means that it is not a recommended destination for inexperienced or ill-prepared individuals. Also, the park is home to many large mammals which must be treated with respect at all times. Caution and common-sense must be exercised when encountering any animal as there is always a potential for conflict.

○ Interpretive Themes

The protected areas of British Columbia provide an excellent opportunity to promote awareness and education about natural and cultural heritage and outdoor recreation values. Graham-Laurier Park can play an important role in this by increasing public knowledge of several interpretive themes. Some of the key topics include:

Natural Heritage: conservation biology, the importance of undisturbed wilderness to wildlife, the park’s role in the representation of natural diversity;

Cultural Heritage: the history of the RCMP, the history of fur-trading, the importance of the protection of First Nation’s traditional sites and practices;

Outdoor Recreation: wilderness and conservation ethics, outdoor safety, multi-user trail etiquette, opportunities within the park.

Objectives	Strategies
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<p>Increase public understanding and appreciation of natural, cultural and recreation values within the park.</p>	<p>Work with commercial operators to provide educational messages to park visitors.</p> <p>Use internet sites to inform regarding local flora and fauna and its importance to the whole ecosystem.</p> <p>Include interpretive messages in all internet-based and potential future written information concerning the park.</p> <p>Work together with external groups that express an interest in developing interpretive material for the park (e.g. Christina Falls)</p> <p>Ensure all parks staff, especially those in direct contact with the public, are aware of the interpretive information that should be focused on.</p>
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○ Management Messages

Environmental Stewardship Division staff and volunteers play a key role in delivering management messages to the public. This can occur in the park during chance encounters with visitors. It can also take place outside the protected area. Schools, community groups and public meetings are just a few of the venues where public understanding and support of the stewardship role of parks can be fostered. Three examples of such messages are:

The significance of undisturbed wilderness areas to biodiversity and ecological sustainability;

The value of “low-impact only” areas in provincial parks;

The importance of cooperation between government, industry, First Nations and the public to maintain the natural, cultural and recreation values of Parks and Protected Areas.

● Plan Implementation

Creation of this plan is only the first step in the continuing process of park management. The next is an ongoing procedure of implementation. The strategies outlined above are only useful if they are put into practice in a timely and appropriate manner. Since parks staff cannot accomplish everything at once, strategies need to be prioritized. Then as time and funding becomes available a course of action has already been developed.

○ High Priority Strategies

Many of the strategies outlined require immediate attention and should have the highest priority for implementation. These include enforcement of regulations and creation of lower level management plans. The following list is not in order of importance.

Park Management

Protect important First Nations sites and features by keeping their location undisclosed.

Motorized and Mechanized Use and Access

Maintain the portion of the Graham River Trail that is within the park.

Work with industrial interests in adjacent RMZs to ensure alternative access is considered away from park boundaries.

Snowmobiles will be subject to timing restrictions and weight restriction according to the MKMA plan.

- Maintain snowmobiles at a minimal level within the park.

ATVs will only be permitted on the designated M-K AMA access route.

Facility and Infrastructure Management

Upgrade existing facilities (e.g. trapline cabins or guide outfitter cabins) as necessary, but maintain the same ecological footprint.

Establish no new facilities, except replacement of trapline and guiding cabins, within the parks, except for areas where impacts are causing degradation of park values e.g. place a pit toilet and develop minor infrastructure at Christina Falls.

Ensure that facilities match the parks wilderness setting.

Research and Assessment

To be prioritized where staff, funding and time permits

Conduct overview, and where strategic, in-depth inventories and research of flora, fauna (fish, bird, mammal, reptile, amphibian and invertebrate), water quality, critical habitats, listed species in the park. Studies should include population mapping, distribution, presence/not detected, critical habitat mapping, habitat requirements and migration pattern studies

Assess recreational uses and associated impacts to ecology within the park. If potential negative impacts are identified, then conduct research to determine the appropriate mitigation measures.

Assess all new proposals for facilities or activities to ensure they will not negatively impact natural, cultural or recreational values. Focus on areas of impacts to the Nature Recreation and to the wilderness recreation experience.

Implementation

Implement limitations and restrictions for access, activities and uses to ensure that park values are protected.

Implement greater spatial or timing restrictions as necessary and/or adjust management strategies accordingly. Limitations and restrictions will be based on degradation of park values.

Use zoning to limit access if use levels increase and negative impacts become an identified conservation issue.

- Additional methods may be implemented following a feasibility assessment to determine the best method. E.g. limit user numbers, length of stay, or number of visits in a specified time period.

○ **Task or Project Strategies**

Many of the strategies involve research projects or short-term tasks. These should be implemented as soon as possible; however it is not vital that they be completed immediately. The following list is not in order of importance.

Develop vegetation, wildlife and fire management plans; utilize existing plans where necessary e.g. MoF range use plan.

Design a method to collect informal information for various park values from commercial operators and other park visitors.

Consultation

Consult First Nations, commercial operators, the Ministry of Energy and Mines, Ministry of Sustainable Resource Management, Oil and Gas Commission, Ministry of Forests, leaseholders/tenure holders, industry, and user groups to:

Establish requirements and methods to protect park values concerning access, environmental impacts and visual quality. For example work with adjacent land users to ensure that access is shared; to reduce the number of roads that approach a park boundary.

Ensure that the commercial activities are not negatively affecting the wilderness experience for park visitors.

Encourage a feeling of stewardship for the park.

Ensure protection of significant habitats and listed species by limiting activities in areas with identified vulnerable park values.

Education

Provide management messages through the Parks Internet Website; convey information to visitors in person where possible and by written communication in partnership with other agencies and groups.

Educate the British Columbia public and park visitors about concepts such as

- Methods and consequences of introducing non-native species to the park.
- Encouraging participation in non-motorized and low impact activities by
 - Allowing the activities and
 - Encouraging low impact activities such as nature appreciation and photography.
- Encourage horse users to use process supplemental feed for their horses and provide recommendations regarding horse use on the Parks webpage.

Recreation

Maintain recreational fishing opportunities under the current provincial angling regulations.

Assess all proposed commercial recreation operations individually to determine if they are compatible with the park vision and roles.

○ **Ongoing or Monitoring Strategies**

A majority of the strategies require ongoing management responsibility. These include tasks such as consultation and implementation of lower level plans. It is also important to monitor the effects of activities and make the necessary adjustments to management practices. This is the only way to ensure that the conservation and recreation goals of the park are being met. The following list is not in order of importance.

Ensure that tenure holders' practices are consistent with park values and allow these to continue.

Follow the guidelines of the Wildlife and Recreation Management Plans created for the Muskwa-Kechika Management Area.

Mechanized and Motorized Use and Access

Follow the guidelines of the *Park Act* and the *M-K Access Management Area Regulation*.

Monitor recreational access in the parks and its impacts on natural, cultural and aesthetic values to determine if future access restrictions are necessary.

Monitor commercial access along park boundaries and assess the impact that existing or proposed commercial recreation activities have on public access.

Monitor recreational activities such as horse use, recreational fishing activities, snowmobiling and hiking for erosion, soil compaction or impact to the natural values.

Gather information about the recreational fishery from anglers.

Monitor aircraft periodically to determine whether there are detrimental effects to wildlife or the recreational experience.

Facility and Infrastructure Management

Regulate facility development and maintenance through mechanisms including approval by The Parks and Protected Areas Section, monitoring facility condition, requiring that facilities be maintained and uphold a rustic appearance by tenure holders.

Review all proposals for public facility development to determine necessity and impacts.

Research and Assessment

To be prioritized where staff, funding and time permits

Monitor human activity (e.g. mechanized and motorized use) and the surrounding Nature Recreation for impacts to ecological integrity, biodiversity, water quality, exotic species introduction and impacts, and specific flora and fauna.

Monitor the forest landscape for fuel loading, soils and duff layer and areas previously burned.

Enforcement

Ensure that all pertinent regulations and restrictions are enforced.

Horse Use

Regulate horse use as necessary for conservation purposes (e.g. processed supplemental feed and the length of time before a horse may enter the park).

Note: **Appendix K** contains a glossary of terms that are used in this document

6.0 Plan Implementation

1.1 High Priority Strategies

The following strategies have been identified as high priorities for implementation:

- *List the top priority strategies to help focus implementation efforts. Aim for 1-5 strategies but this will depend on how many are in the management plan.*

1.2 Adaptive Management

In order to ensure the management of [protected area name] remains relevant and effective, an adaptive management approach will be used. Adaptive management involves a five-step process of planning, action, monitoring, evaluation and revision of the management plan to reflect lessons learned, changing circumstances and/or objectives achieved. Adaptive management is flexible, collaborative, and responsive to public input.

The management plan will be reviewed as required by the [Relevant First Nation partner] and BC Parks. A review of the management plan should generally be triggered by the complexities of the management issues in the protected area and/or a significant change in circumstances (e.g., a natural disaster, major environmental change or discovery of a major new archaeological site), and not a by a specific time period.

A management plan review looks for any necessary updates to the management plan that: are required to keep management direction current and relevant; correct the intent of a policy statement; address some error or omission; or, address a new proposal. Any updates or changes to the content of the management plan will be addressed through a formal management plan amendment process. The amendment process will include an opportunity for public input

7.0 References (optional)

8.0 Glossary (optional)

Appendix 1: Appropriate Uses Table

Template Table (remove N/A uses, add rows where needed):

Activities	Name of Zone	Name of Zone
Hiking/Walking		
Wildlife Viewing		
Camping		
Boating (motorized)		
Boating (non-motorized)		
Mechanized Off-Road Activity (e.g., biking, mountain boarding)		
Motorized Off-Road Activity (e.g., quads, 4x4s, dirt bikes- not including snowmobiles, snowcats or aircraft)		
Snowmobiling		
Aircraft Access		
Snowcat Use		
Skiing		
Dog and Horse Sled Use		
Hang Gliding/Para Gliding Launching		
Exotic Pack Animal Use		
Horse Use		
Rockclimbing		
Grazing (domestic livestock)		
Gold Panning		
Hunting		
Recreational Fishing		
Commercial Fishing (Saltwater)	The appropriateness of this activity is determined by DFO.	
Commercial Botanical Forest Product Harvest		
Commercial Marine Plant Harvesting		
Commercial Harvesting of Herring Spawn on Kelp		
Trapping		
Fish Stocking and Enhancement		
Facilities/Infrastructure	Name of Zone	Name of Zone
Camp Sites (vehicle accessed)		
Camp Sites (walk-in)		
Camp Sites (boat accessed)		

Activities	Name of Zone	Name of Zone
Lodges		
Information and Interpretation Buildings/Centres		
Administrative Buildings and Compounds		
Cabins/Yurts/Huts		
Shelters		
Picnic Areas (vehicle accessed and serviced)		
Boat Launches		
Boat Docks/Wharves		
Mooring Buoys		
Ski Facilities (downhill or cross-country)		
Interpretive Signage		
Roads		
Parking Lots		
Trails		
Utility Corridors		
Water Control Structures		
Fish Stocking and Enhancement Infrastructure		
Commercial Aquaculture Facilities		
Communication Sites/Towers		
Commercial Log Storage/Dump Sites		
Commercial Hydro Electric Projects and Infrastructure		

Additional Appendices

Province of British Columbia. *The New Relationship With First Nations and Aboriginal Peoples: Overview*. Aboriginal Relations and Reconciliation. http://www.gov.bc.ca/arr/newrelationship/new_relationship_overview.html (April 15, 2008).

ⁱⁱ Province of British Columbia. 1996. *Constitution Act*. RSBC1996, c.66. Queen's Printer, Victoria, BC. http://www.qp.gov.bc.ca/statreg/stat/C/96066_01.htm (October 26, 2006).

Appendix A: Protected Areas Management Planning Zone Descriptions

Protected Areas Management Planning Zone Descriptions			
	Intensive Recreation	Nature Recreation	Special Feature
Objective	To provide for a variety of readily accessible, facility-oriented outdoor recreation opportunities.	To protect scenic values and to provide for backcountry recreation opportunities in a largely undisturbed Nature Recreation.	To protect and present significant natural or cultural resources, features or processes because of their special character, fragility and heritage values.
Use Level	Relatively high density and long duration types of use.	Relatively low use but higher levels in association with nodes of activity or access.	Generally low.
Means of Access	All-weather public roads or other types of access where use levels are high (see "Impacts" below).	Motorised (powerboats, snowmobiles, all terrain vehicles), non-motorised (foot, horse, canoe, bicycles). Aircraft and motorboat access to drop-off and pickup points will be permitted.	Various; may require special access permit.
Location	Contiguous with all-weather roads and covering immediate areas, modified landscapes or other high-use areas.	Removed from all-weather roads but easily accessible on a day-use basis. Accessible by mechanised means such as boat or plane.	Determined by location of special resources; may be surrounded by or next to any of the other zones.
Size of Zone	Small - usually less than 2,000 ha.	Can range from small to large.	Small - usually less than 2000 hectares.
Boundary Definition	Includes areas of high facility development in concentrated areas.	Boundaries should consider limits of activity/facility areas relative to ecosystem characteristics and features.	Area defined by biophysical characteristics or the nature and extent of cultural resources (adequate to afford protection).
Recreation Opportunities	Vehicle camping, picnicking, beach activities, power-boating, canoeing, kayaking, strolling, bicycling, historic and nature appreciation, fishing, snowplay, downhill and cross-country skiing, snowshoeing, specialised activities.	Walk-in/boat-in camping, power-boating, hunting, canoeing, kayaking, backpacking, bicycling, historic and nature appreciation, fishing, cross-country skiing, snowmobiling, river rafting, horseback riding, heli-skiing, heli-hiking, and specialised activities.	Sightseeing, historic and nature appreciation. May be subject to temporary closures or permanently restricted access.

Facilities	May be intensely developed for user convenience. Campgrounds, landscaped picnic/play areas, trail accommodation or interpretative buildings, boat launches, administrative buildings, service compounds, gravel pits, disposal sites, wood lots; parking lots, etc.	Moderately developed for user convenience. Trails, walk-in/boat-in campsites, shelters, accommodation buildings may be permitted; facilities for motorised access - e.g., docks, landing strips, fuel storage, etc.	Interpretative facilities only - resources are to be protected.
Impacts on Nature Recreation	Includes natural resource features and phenomena in a primarily natural state but where human presence may be readily visible both through the existence of recreation facilities and of people using the zone. Includes areas of high facility development with significant impact on concentrated areas.	Area where human presence on the land is not normally visible, facility development limited to relatively small areas. Facilities are visually compatible with natural setting.	None - resources to be maintained unimpaired.
Management Guidelines	Oriented toward maintaining a high quality recreation experience. Intensive management of resource and/or control of visitor activities. Operational facilities designed for efficient operation while remaining unobtrusive to the park visitor.	Oriented to maintaining a Nature Recreation and a high quality recreation experience. Visitor access may be restricted to preserve the recreation experience or to limit impacts. Separation of less compatible recreational activities and transportation modes. Designation of transportation may be necessary to avoid potential conflicts (e.g. horse trails, cycle paths, hiking trails).	High level of management protection with ongoing monitoring. Oriented to maintaining resources and, where appropriate, a high quality recreational and interpretative experience. Active or passive management depending on size, location, and nature of the resource. Visitor access may be restricted to preserve the recreation experience and to limit impacts.
Examples of Zoning	Campground in Rathrevor Beach Park; Gibson Pass ski area in E.C. Manning Park.	Core area in Cathedral Park; North beach in Naikoon Park.	Botanical Beach tidepools within Juan de Fuca Park; Sunshine Meadows in Mount Assiniboine Park.

Protected Areas Management Planning Zone Descriptions		
	Wilderness Recreation	Wilderness Conservation
Objective	To protect a remote, undisturbed natural landscape and to provide backcountry recreation opportunities dependent on a pristine environment where air access may be permitted to designated sites	To protect a remote, undisturbed natural landscape and to provide unassisted backcountry recreation opportunities dependent on a pristine environment where no motorised activities will be allowed.
Use Level	Very low use to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.	Very low use to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.
Means of Access	Non-mechanised & non-motorised - except may permit low frequency air access to designated sites; foot, canoe (horses may be permitted).	Non-mechanised & non-motorised (no air access); foot, canoe (horses may be permitted).
Location	Remote - not easily visited on a day-use basis.	Remote - not easily visited on a day-use basis.
Size of Zone	Large - greater than 5,000 hectares.	Large - greater than 5,000 hectares.
Boundary Definition	Defined by ecosystem limits and geographic features. Boundaries will encompass areas of visitor interest for specific activities supported by air access.	Defined by ecosystem limits and geographic features.

Recreation Opportunities	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, hunting, fishing, cross-country skiing, snowshoeing, horseback riding, specialised activities (e.g., caving, climbing).	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, fishing, cross-country skiing, snowshoeing, horseback riding, specialised activities (e.g., caving, climbing).
Facilities	Minimal facility development for user convenience and safety, and protection of the environment e.g. trails, primitive campsites, etc. Some basic facilities at access points, e.g., dock, primitive shelter, etc.	None.
Impacts on Nature Recreation	Natural area generally free of evidence of modern human beings. Evidence of human presence is confined to specific facility sites. Facilities are visually compatible with natural setting.	Natural area generally free of evidence of modern human beings.
Management Guidelines	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the Nature Recreation and visitor experience.	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the Nature Recreation and visitor experience.
Examples of Zoning	Quanchus Mountains Wilderness in Tweedsmuir Park; Wilderness Zone in Spatsizi Park.	Upper Murray River watershed within Monkman Park; Garibaldi Park Nature Conservancy Area.

Appendix B: Management Objectives and Strategies from the Fort St. John LRMP

Value	Objectives	Strategies
Recreation	Maintain guide and outfitting opportunities.	<p>Develop strategies in a Protected Area Management Plan to complement the wildlife management policies and management practices of wildlife managers, to sustain wildlife and guide outfitting opportunities.</p> <p>Identify and protect guide outfitting campsites and cabins.</p> <p>Manage existing tenures and the associated grazing activities of guide outfitters to limit impacts and reduce risk to other resource values (keep grazing out of sensitive habitats, etc.).</p> <p>Seasonal access (e.g. snowmobile) may be limited to address wildlife habitat needs. Recreation use should be addressed within the Protected Area Management Plan.</p>
	Provide a full range of recreation opportunities.	Manage the area consistent with the intent of ROS recognizing existing historical recreation activities.
	Provide a full range of wilderness recreation opportunities.	Develop strategies to maintain a range of wilderness recreation opportunities across the Resource Management Zone in a Protected Area Management Plan.

	Maintain opportunities for commercial and non-commercial livestock grazing associated with recreation.	Address issues of forage allocation among tenured users, residents and wildlife within a Protected Area Management Plan. Identify and manage appropriate grazing management activities (e.g. burns).
	Provide backcountry recreation and tourism opportunities in a way that maintains a natural or natural-appearing condition.	The Protected Area Management Plan process will determine the areas that are suitable for backcountry and tourism expansion, while maintaining the objectives of the Resource Management Zone. Provide opportunities for development of backcountry facilities. Plan access in conjunction with tourism and recreation groups in the area. Tourism facilities and development will be matched with intended recreation experiences.
Access	Manage access to protect Protected Areas Strategy values, recreation values and fish and wildlife and their habitats.	In consultation with users, restrict the use of existing motorized access except along designated roads and trails to non-motorized and approved industrial uses to sustain other resource values (e.g. fish and wildlife populations and habitats, rare ecosystems).
Wildlife	Maintain furbearer habitat for priority species (e.g. fisher, marten, and lynx).	Identify critical furbearer habitat and incorporate in a Protected Area Management Plan.
	Maintain high capability ungulate winter habitat (e.g. elk, deer, moose, mountain sheep and mountain goat).	Identify and map high capability ungulate wintering areas in a Protected Area Management Plan. Consider establishing wildlife habitat areas (WHAs) in a Protected Area Management Plan, on a priority basis, to protect critical wintering habitat.
	Maintain medium and high quality grizzly bear habitat.	Identify and map medium and high quality grizzly bear habitat, in a Protected Area Management Plan, on a priority basis. Consider identifying and designating critical grizzly bear habitat areas, on a priority basis, as wildlife habitat areas (WHAs) in a Protected Area Management Plan.
	Maintain caribou habitat.	Identify and map medium and high capability caribou habitat. Consider identifying and designating critical caribou habitat areas, on a priority basis, as wildlife habitat areas (WHAs), in a Protected Area Management Plan.
Biodiversity	Maintain functioning and healthy ecosystems in the resource management zone.	The general biodiversity emphasis is high.
	Restore and rehabilitate negatively impacted ecosystems.	Identify and prioritize negatively affected ecosystems for potential restoration and rehabilitation.

Fish	Maintain fish habitat and water quality for priority fish species (e.g. bull trout, grayling and red and blue listed species).	Identify and map critical fish habitat (e.g. pools, migration patterns, spawning and rearing areas). Incorporate the protection of fish and fish habitat in a Protected Area Management Plan.
	Maintain high quality fisheries in natural settings.	Incorporate habitat protection criteria for bull trout in a Protected Areas Management Plan (as these criteria are developed). Minimize permanent access to remote lakes, streams and rivers with high quality fisheries.
Water	Maintain the headwaters of major rivers and streams in a pristine, undisturbed condition.	Consider identifying and designating the highest order headwater tributaries of specific streams and rivers (in the Resource Management Zone) with a designation such as a sensitive area.
Protected area	To protect, over the long-term for ecological representation and natural, culture, heritage, and recreation values.	Designate the area under appropriate legislation, consistent with "Protected Areas" definition (PAS Document, 1993) 50 that logging, mining, oil and gas development and exploration, and hydro dams are not allowed uses. Ensure that the Protected Area Management Plan respects the natural, culture, heritage and recreation values identified by the LRMP Table. The values include: public, commercial and backcountry recreation, hunting and fishing, culture - identified First Nations values: wilderness, wildlife, guide outfitting, trapping, ecological representation, fisheries, heritage - historic trails and existing trail networks, etc.

Appendix C: British Columbia Protected Areas System Goals

The protected areas system, administered by The Environmental Stewardship Division, has two mandates:

- to conserve significant and representative natural and cultural values including special features;
- to provide a wide variety of outdoor recreation opportunities.

Goal 1: Representativeness

To protect viable, representative examples of the natural diversity of the province, representative of the major terrestrial, marine and freshwater ecosystems, the characteristic habitats, hydrology and landforms, and the characteristic backcountry recreational and cultural heritage values of each ecosection.

Wherever possible, protected areas should combine natural, cultural heritage and recreational values. Where it is not possible to combine these in a common area, they may be represented separately. Where it is not possible to represent all values, the natural values will be given priority.

Goal 2: Special Features

To protect the special natural, cultural heritage and recreational features of the province, including rare and endangered species and critical habitats, outstanding or unique botanical, zoological, geological and paleontological features, outstanding or fragile cultural heritage features, and outstanding outdoor recreational features such as trails.

Many protected areas will be set aside primarily to protect rare or vulnerable features. Others will combine protection with giving people the opportunity to appreciate and enjoy the intrinsic value of the areas. Others will be protected to attract people to experience and appreciate their natural and cultural heritage.

Parks and Protected Areas Recreation Goals

Within the recreation mandate, Parks and Protected Areas has four goals:

Goal 1: Tourism Travel Routes

To provide park attractions and services which enhance tourism travel routes.

To help British Columbia build a worldwide reputation for offering tourism opportunities along major highways, lakes and the Coast;

Goal 2: Outdoor Recreation Holiday Destinations

To provide park attractions which serve as or improve key destinations for outdoor recreation holidays.

We want to help the province build a reputation for world-renowned natural holiday destinations;

Goal 3: Backcountry

To provide outstanding backcountry recreation opportunities throughout the province.

Some sites may feature adventure tourism, while in other areas the wilderness would remain untouched.

We want to build the province’s reputation for backcountry recreation by protecting and managing our most outstanding wilderness areas;

Goal 4: Local Recreation

To ensure access to local outdoor recreation opportunities for all residents of this province.

Appendix D: Existing Tenures

Registry/File Number	Description
800876	License of Occupation – Hunting and Fishing Camp (site 7)
800876	License of Occupation – Hunting and Fishing Camp (site 8)
800876	License of Occupation – Hunting and Fishing Camp (site 13)
8002872	Fish and Wildlife – Notation of Interest – Trapline Cabin Purposes (site 2)
8002872	Fish and Wildlife – Notation of Interest – Trapline Cabin Purposes (site 3)
8002872	Fish and Wildlife – Notation of Interest – Trapline Cabin Purposes (site 4)
8002872	Fish and Wildlife – Notation of Interest – Trapline Cabin Purposes (site 5)

0331503	License of Occupation – Hunting and Fishing Camp (site 2)
700076	Guide Outfitter
	Guide Outfitter
RAN073621	Grazing License - Horse grazing associated with guide tenure
RAN072877	Grazing License - Horse grazing associated with guide tenure
743T005	Trapline
736T004	Trapline
736T005	Trapline
GP0010106	Air Transportation – Helicopter
GP0010108	Air Transportation – Fixed Wing
GP0010112	Air Transportation – Helicopter
DL 41448	Oil and Gas Lease – AEC/Conoco (excluded from park)

Appendix E: Adjacent Resource Management Zones

Besa Halfway Chowade Resource Management Zone

This area is within the Fort St. John LRMP. Below is a brief description of natural, cultural and recreational values.

Relatively unexplored area. There are numerous tenured properties and gas potential seems high. Exploration is expected to increase.

High metallic and industrial mineral potential. There are eleven documented mineral occurrences including the tenured Robb Lake deposit (up to 20 million tonnes at 5% combined lead and zinc).

Extensive burning has been done in the Halfway and Sikanni drainages.

Wolf, grizzly bear and moose population densities are among the highest in North America.

Contains critical winter habitat and calving area for 8 ungulate species and 4 predator species.

Several rivers and streams have bull trout, Arctic grayling and other priority species. Contains important spawning and rearing habitat for Peace River bull trout populations.

Commercial backcountry recreation operators are working in the area.

Graham North Resource Management Zone

This area is within the Fort St. John LRMP. Below is a brief description of natural, cultural and recreational values.

Contains extensive volumes of coniferous timber in mature and older seral stage forests. It is not scheduled for harvest in next 5 years but will be cut within a several decades.

High natural gas potential.

Medium metallic potential and medium-high industrial mineral potential. Phosphate is the primary commodity, but there are also deposits of sand, gravel and coal.

Contains significant habitat for moose, mountain caribou, furbearers and grizzly bear.

Several streams contain grayling, mountain whitefish, rainbow trout and bull trout.

Commercial backcountry recreation operators are working in the area.

There is no road access; however there are several seismic lines.

Graham South Resource Management Zone

This area is within the Fort St. John LRMP. Below is a brief description of natural, cultural and recreational values.

Contains extensive tracts of operable coniferous timber.

High natural gas potential. There are several tenured parcels in the eastern and western areas of the zone.

Low-medium metallic potential and medium industrial mineral potential. There is the potential for coal deposits in the area.

Contains critical wintering and calving areas for caribou and moose, important summer caribou range and important class 1 and 2 grizzly bear habitat in ESSF areas.

Crying Girl Resource Management Zone

This area is within the Fort St. John LRMP. Below is a brief description of natural, cultural and recreational values.

Contains operable coniferous timber. There has been limited logging to date.

There are several tenured oil and gas parcels.

Medium potential for industrial minerals including sand, gravel and coal.

Contains significant habitat for furbearers, ungulates and carnivores. It is a vital habitat linkage for caribou as they migrate from Hackney Hills to Butler Ridge.

High existing and potential recreation values.

Commercial backcountry recreation operators are working in the area.

Crying Girl all-weather Forest Service Road is found in the southern end of the zone.

Lower Ospika General Resource Management Zone

This area is within the Mackenzie LRMP. Below is a brief description of natural, cultural and recreational values.

High timber values.

High mineral potential. Contains the Aley phosphate-niobium-rare earth element deposit and mineral tenure.

There are tracts of moderate and high gas potential.

Moderate to high wildlife values and moderate fisheries values.

Moderate recreation values, especially for hunting and wildlife viewing.

Nabesche General Resource Management Zone

This area is within the Mackenzie LRMP. Below is a brief description of natural, cultural and recreational values.

Timber values high on Nabesche and West Nabesche Rivers and moderate in Lost Cabin and Gavreau Creek areas.

Moderate and high mineral potential in western and central areas. There are ten mineral occurrences and tenures in this zone.

High natural gas potential in the eastern area.

Wildlife and fisheries values are generally moderate; however they are high for grizzly bear.

Commercial backcountry recreation operators are working in the area.

Moderate recreation values due to the ruggedness of the area.

Schooler General Resource Management Zone

This area is within the Mackenzie LRMP. Below is a brief description of natural, cultural and recreational values.

Timber in this zone is predominantly immature.

Low mineral potential.

High natural gas potential. There are blocks of tenured areas.

Moderate to high wildlife values. There are areas of good winter range.

Moderate fisheries values.

High wilderness recreation values. Hiking, wildlife viewing and hunting opportunities are significant.

Appendix F: Relevant Plans and Memoranda of Understanding

Fort St John and Mackenzie Land and Resource Management Plans

Contact:

Ministry of Sustainable Resource Management, Resource Management Division
Ominica-Peace Region (250)565-6154
Strategic Land Use Plans Homepage: srmrpdwww.env.gov.bc.ca/lrmp/index.htm

Fire Management Plan

Contact:

Ministry of Forests, Protection Branch
Prince George Fire Centre (250)565-6124
Protection Branch Homepage: www.for.gov.bc.ca/protect/

Muskwa-Kechika Access Management Area Regulation

Contact:

Ministry of Water, Land and Air Protection
Fort St John Sub-Region (250)787-3411
Regulation Website: www.qp.gov.bc.ca/statreg/reg/W/Wildlife/183_99.htm
Muskwa-Kechika Homepage: www.luco.gov.bc.ca/lrmp/mk/mk0301/index.html

Muskwa-Kechika Management Plan, Muskwa-Kechika Management Area Recreation Management Plan, Wildlife Management Plan, Kaska MOU

Contact:

Ministry of Sustainable Resource Management, Resource Management Division
 Ominica-Peace Region (250)565-6154
 Muskwa-Kechika Homepage: www.luco.gov.bc.ca/lrmp/mk/mk0301/index.html

Peace Liard District Bear-People Conflict Prevention Plan

Contact:

Ministry of Water, Land and Air Protection, Environmental Stewardship Division
 Parks and Protected Areas Section, Peace Region (250)787-3411
 Parks Homepage: wlapwww.gov.bc.ca/bcparks/index.htm

Appendix G: Allowable Use Matrix

Activity/Use/Facility	Acceptable Uses by Zone			Comments
	NR	SF	WR	
Hunting	Y	Y	Y	Subject to hunting regulations.
Fishing	Y	Y	Y	Subject to fishing regulations.
Trapping	N ₂	Y	N ₂	Traditional activity continues. Existing tenures are renewable and transferable but additional tenures will not be issued. Park Use permits may be required for fixtures such as cabins.
Horse Grazing	Y	N	M	Park Use Permit required.
Horse Use	Y	Y	Y	No exotic species allowed.
Camping (No Trace)	Y	Y	Y	
Camping (Hardened Campsites)	M	N	M	
Hiking and Walking	Y	Y	Y	
Natural and Cultural Values Appreciation (e.g. Birding, Photography)	Y	Y	Y	
Skiing (Helicopter)	Y	N	N	
Skiing	Y	N	Y	Cross-country and unassisted skiing, telemarking, and snowboarding.
Snowshoeing	Y	Y	Y	

Guide Outfitting	Y	Y	Y	Park Use Permit required.
Packing	Y	Y	Y	Park Use Permit required.
Heli-Assisted Commercial Recreation	Y	N	M	Park Use Permit required. May be restricted in certain areas depending on conservation concerns.
Commercial Recreation (i.e. Horseback Tours, River Tours)	M	Y	M	Park Use Permit required.
Aerial Sight Seeing Tours	Y	Y	Y	
Training Schools	M	N	M	Park Use Permit required.
Road Access – Motorized (Vehicular)	M	N	N	A partially reclaimed forestry fire route exists north of the Emerslund Lakes in the southern portion of the park in the Wilderness Recreation Zone. This is a closed route and no other road access will be allowed in this zone
Snowmobile Access	Y	N	N	Activity is somewhat limited by terrain and access. Snowmobiling for trapping purposes only is allowed via Park Use Permit.
Motorized Access (Not Snowmobiles)	Y	N	N	Limited to designated trail, only to Christina Falls.
Mountain Bike Access	Y	Y	Y	
Rotary Aircraft Access and Landings	Y	Y	Y	
Fixed Wing Aircraft Access and Landings	Y	Y	Y	
Non-Motorized Access (i.e. Dog Sleds, Horse Sleds)	Y	Y	Y	
Fish Stocking and Enhancement	N	N ₁	N	May be re-evaluated as necessary.
Fire Management (Prevention and Suppression)	Y	N ₁	N ₁	Policy recognizes need to protect public safety/facilities, values on adjacent lands, etc.
Prescribed Fire Management	N ₁	N ₁	N ₁	Only for expressed management purposes as defined by protected area Management Plan.
Forest Insect / Disease Control	N ₁	N ₁	N ₁	Mitigative actions permitted where there is a need to prevent unacceptable damage to values on adjacent lands, prevent damage to significant recreation features or values, etc.
Exotic Organism Control	Y	N ₁	Y	Under direction of park staff.

Noxious Weed Control	Y	N ₁	Y	Under direction of park staff.
Removal of Wildlife for Transplants	N ₁	N ₁	N ₁	May be allowed subject to the findings of more in depth fisheries and wildlife inventories.
Ecosystem and Habitat Restoration	N ₁	N ₁	N ₁	Subject to consultation with the Wildlife, Habitat and Protection Division.
Wildlife Habitat Enhancement	N ₁	N ₁	N ₁	Subject to consultation with the Fish and Wildlife, and, Ecosystems Sections of the Environmental Stewardship Division.
Wildlife Management	N ₁	Y	N ₁	Subject to consultation with the Fish and Wildlife, and, Ecosystems Sections of the Environmental Stewardship Division.
Oil and Gas Exploration and/or Extraction	N	N	N	
Forestry	N	N	N	
Scientific Research	M	Y	M	Manipulative activities normally not allowed. Specimen collections allowed only if data conclusions provide increased scientific knowledge or protection and/or understanding of protected area values. Park Use Permit required.
First Nations traditional activities and uses	Y	Y	Y	May be limited for ecosystem sustainability concerns.
Filming (Commercial)	M	N	M	If there are no impacts on conservation, cultural, or recreation values in the park. Park Use Permit required.
Administrative Buildings and Compounds	M	N	N	May be built in NR zone in the future.
Boat Launches	N	N	N	
Interpretation and Information Structures	M	N	N	May be built in NR zone in the future.
Trail Maintenance	Y	N ₁	Y	Designated trails may be maintained.
Trail Building	M	N ₁	M	If deemed acceptable based on the parks conservation roles and vision statement.
Water Control Structures	N	N	N	
Backcountry Huts and Shelters (Private Use)	N	N	N	No new private facilities.

Backcountry Huts and Shelters (Public Use)	M	N	M	May be built if need arises.
Power Lines / Transmission Lines and Other Rights-of-Way	N	N	N	
Communication Sites	N	N	N	

Y = allowed subject to conditions identified in the management plan

M = may be permitted if compatible with protected area objectives

N = not allowed

N₁ = allowed for expressed management purposes only

N₂ = present and allowed to continue but not normally allowed

Appendix H: Provincially Endangered or Threatened Plants

Rare Vascular Plant Tracking List: Fort St John Forest District

Scientific Name	English Name	Status
<i>Alopecurus alpinus</i>	alpine foxtail	Blue
<i>Anemone canadensis</i>	Canada anemone	Blue
<i>Arnica chamissonis ssp. incana</i>	Meadow arnica	Blue
<i>Artemisia longifolia</i>	long-leaved mugwort	Red
<i>Atriplex nuttallii</i>	Nuttall's orache	Red
<i>Calamagrostis montanensis</i>	plains reedgrass	Red
<i>Carex bicolor</i>	two-coloured sedge	Blue
<i>Carex misandra</i>	short-leaved sedge	Blue
<i>Carex rupestris ssp. rupestris</i>	curly sedge	Blue
<i>Carex torreyi</i>	Torrey's sedge	Blue
<i>Carex xerantica</i>	dry-land sedge	Blue
<i>Draba glabella var. glabella</i>	smooth draba	Blue
<i>Draba lactea</i>	milky draba	Blue
<i>Draba porsildii</i>	Porsild's draba	Blue
<i>Epilobium hornemannii ssp. behringianum</i>	Hornemanns willowherb	Blue

<i>Epilobium leptocarpum</i>	small-flowered willowherb	Blue
<i>Eriophorum vaginatum ssp. vaginatum</i>	Sheathed cotton-grass	Blue
<i>Glyceria pulchella</i>	slender mannagrass	Blue
<i>Gymnocarpium jessoense ssp. parvulum</i>	Nahanni oak fern	Blue
<i>Helictotrichon hookeri</i>	spike oat	Blue
<i>Juncus arcticus ssp. alaskanus</i>	arctic rush	Blue
<i>Lomatium foeniculaceum var. foeniculaceum</i>	fennel-leaved desert-parsley	Red
<i>Lomatogonium rotatum</i>	marsh felwort	Blue
<i>Luzula nivalis</i>	arctic wood-rush	Blue
<i>Luzula rufescens</i>	rusty wood-rush	Blue
<i>Minuartia austromontana</i>	Rocky Mountain sandwort	Blue
<i>Oxytropis jordalii ssp. davisii</i>	Jordal's locoweed	Blue
<i>Penstemon gracilis</i>	slender penstemon	Red
<i>Polemonium boreale</i>	Northern Jacob's-ladder	Blue
<i>Polemonium occidentale</i>	western Jacob`s-ladder	Blue
<i>Polygala senega</i>	seneca-root	Red
<i>Polypodium sibiricum</i>	Siberian polypody	Red
<i>Ranunculus pedatifidus ssp. affinis</i>	Birdfoot buttercup	Blue
<i>Ranunculus rhomboideus</i>	prairie buttercup	Red
<i>Rosa arkansana var. arkansana</i>	Arkansas rose	Blue
<i>Rumex paucifolius</i>	alpine sorrel	Blue
<i>Salix petiolaris</i>	Meadow willow	Blue
<i>Senecio plattensis</i>	plains butterweed	Blue
<i>Senecio sheldonensis</i>	Mount Sheldon Butterweed	Blue
<i>Silene drummondii var. drummondii</i>	Drummond's campion	Blue
<i>Silene taimyrensis</i>	taimyr campion	Blue
<i>Solidago nemoralis ssp. longipetiolata</i>	field goldenrod	Blue

Rare Vascular Plant Tracking List: Mackenzie Forest District

Scientific Name	English Name	Status
<i>Apocynum x floribundum</i>	western dogbane	Blue
<i>Astragalus umbellatus</i>	tundra milk-vetch	Blue
<i>Botrychium simplex</i>	least moonwort	Blue
<i>Draba cinerea</i>	gray-leaved draba	Blue
<i>Epilobium leptocarpum</i>	small-flowered willowherb	Blue
<i>Erigeron uniflorus ssp. eriocephalus</i>	Northern daisy	Blue
<i>Juncus stygius</i>	bog rush	Blue
<i>Minuartia austromontana</i>	Rocky Mountain sandwort	Blue
<i>Nymphaea leibergii</i>	Leiberg's water-lily	Blue
<i>Oxytropis maydelliana</i>	Maydell's locoweed	Blue
<i>Papaver alboroseum</i>	pale poppy	Blue
<i>Polypodium sibiricum</i>	Siberian polypody	Red
<i>Potentilla nivea var. pentaphylla</i>	five-leaved cinquefoil	Blue
<i>Ranunculus pedatifidus ssp. affinis</i>	Birdfoot buttercup	Blue
<i>Sagina nivalis</i>	snow pearlwort	Blue
<i>Saxifraga nelsoniana ssp. carlottae</i>	cordate-leaved saxifrage	Red
<i>Stellaria umbellata</i>	umbellate starwort	Blue

Appendix I: Wildlife Species found in the Graham River Watershed

Birds	Fur-Bearers	Bats
black-backed woodpecker	red squirrel	little brown myotis
three-toed woodpecker	short-tailed weasel	big brown bat
northern flicker	Lynx	long-legged myotis

pileated woodpecker	Beaver	northern long-eared myotis (B)
hairy woodpecker	fisher (B)	silver-haired bat
yellow-bellied woodpecker	Marten	hoary bat
American kestrel	least weasel	western long-eared myotis
northern hawk owl	Wolverine	Reptiles and Amphibians
great gray owl	Muskrat	wood frog
boreal owl	Coyote	boreal chorus frog
ovenbird	Large Mammals	Columbia spotted frog
house wren	grizzly bear (B)	boreal toad
golden-crowned kinglet	Moose	common garter snake
mountain chickadee	rocky mountain elk	long-toed salamander
black-capped chickadee	mountain goat	
red-breasted nuthatch	white-tailed deer	
brown creeper	gray wolf	
tree swallow	black bear	
winter wren	woodland caribou	
Mountain bluebird	Stone's sheep	
varied thrush	mule deer	
red crossbill		
black-throated-green warbler (R)		
bay-breasted warbler (R)		(B): Provincially Blue-Listed
Cape May warbler (R)		(R): Provincially Red-Listed

Appendix J: Provincially Endangered or Threatened Vertebrates

Vertebrate Animal Tracking List: Fort St John Forest District

Scientific Name	English Name	Status
<i>Hiodon alosoides</i>	Goldeye	Blue

<i>Salvelinus confluentus</i>	Bull Trout	Blue
<i>Botaurus lentiginosus</i>	American Bittern	Blue
<i>Cygnus buccinator</i>	Trumpeter Swan	Blue
<i>Melanitta perspicillata</i>	Surf Scoter	Blue
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Yellow
<i>Buteo platypterus</i>	Broad-winged Hawk	Red
<i>Grus canadensis</i>	Sandhill Crane	Blue
<i>Bartramia longicauda</i>	Upland Sandpiper	Red
<i>Asio flammeus</i>	Short-eared Owl	Blue
<i>Vireo philadelphicus</i>	Philadelphia Vireo	Blue
<i>Dendroica tigrina</i>	Cape May Warbler	Red
<i>Dendroica virens</i>	Black-throated Green Warbler	Blue
<i>Dendroica castanea</i>	Bay-breasted Warbler	Red
<i>Oporornis agilis</i>	Connecticut Warbler	Red
<i>Wilsonia canadensis</i>	Canada Warbler	Blue
<i>Ammodramus leconteii</i>	Le Conte's Sparrow	Blue
<i>Ammodramus nelsoni</i>	Nelson's Sharp-tailed Sparrow	Red
<i>Myotis septentrionalis</i>	Northern Long-eared Myotis	Blue
<i>Ursus arctos</i>	Grizzly Bear	Blue
<i>Martes pennanti</i>	Fisher	Blue
<i>Gulo gulo luscus</i>	Wolverine, luscus subspecies	Blue
<i>Rangifer tarandus population 14</i>	Caribou, Boreal population	Blue
<i>Rangifer tarandus population 15</i>	Caribou, Northern population	Blue
<i>Bison bison bison</i>	Plains Bison	Blue

Vertebrate Animal Tracking List: Mackenzie Forest District

Scientific Name	English Name	Status
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<i>Salvelinus confluentus</i>	Bull Trout	Blue
<i>Salvelinus malma</i>	Dolly Varden	Blue
<i>Thymallus arcticus</i> population 1	Arctic Grayling, Williston Watershed population	Red
<i>Botaurus lentiginosus</i>	American Bittern	Blue
<i>Cygnus buccinator</i>	Trumpeter Swan	Blue
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Yellow
<i>Falco peregrinus anatum</i>	Peregrine Falcon, anatum Subspecies	Red
<i>Grus canadensis</i>	Sandhill Crane	Blue
<i>Asio flammeus</i>	Short-eared Owl	Blue
<i>Myotis septentrionalis</i>	Northern Long-eared Myotis	Blue
<i>Ursus arctos</i>	Grizzly Bear	Blue
<i>Martes pennanti</i>	Fisher	Blue
<i>Gulo gulo luscus</i>	Wolverine, luscus subspecies	Blue
<i>Rangifer tarandus</i> population 15	Caribou, Northern population	Blue

Rare Vertebrate Animals Known to be Found in or Around Graham-Laurier Park

Scientific Name	English Name	Status
<i>Dendroica castanea</i>	Bay-Breasted Warbler	Red
<i>Dendroica tigrina</i>	Cape May Warbler	Red
<i>Oporornis agilis</i>	Connecticut Warbler	Red
<i>Ursus arctos</i>	Grizzly Bear	Blue
<i>Martes pennanti</i>	Fisher	Blue
<i>Myotis septentrionalis</i>	Northern Long-Eared Myotis	Blue
<i>Botaurus lentiginosus</i>	American Bittern	Blue
<i>Dendroica virens</i>	Black-Throated Green Warbler	Blue
<i>Wilsonia canadensis</i>	Canada Warbler	Blue
<i>Vireo philadelphicus</i>	Philadelphia Vireo	Blue

<i>Grus canadensis</i>	Sandhill Crane	Blue
<i>Asio flammeus</i>	Short-Eared Owl	Blue
<i>Melanitta perspicillata</i>	Surf Scoter	Blue
<i>Cygnus buccinator</i>	Trumpeter Swan	Blue
<i>Salvelinus confluentus</i>	Bull Trout	Blue

* This list is not exhaustive and will be updated as more species are identified.

From: Conservation Data Centre, Environment Inventory Branch, Ministry of Sustainable Resource Management, Victoria, British Columbia

Appendix K: Glossary of Terms

Access: a way or method of approach, (includes paths, trails, routes, corridors, roads, rails, etc.), to a specified interest

Access Management: the process of planning, developing, regulating and deactivating a way or means of approach to a specified interest

Archaeological Sites: locations that contain physical evidence of past human activity for which the application of scientific methods of inquiry (i.e. survey, excavation, data analysis, etc.) are the primary source of information. These resources do not necessarily hold direct associations with living communities. Examples of archaeological sites include shell middens, lithic scatters, cache pits and pit house remains (*from: Douglas Glaum communication, April 1996*)

Backcountry: an area in a park or recreation area that is farther than one kilometre from either side of the centreline of a park road or a highway

Biodiversity or Biological Diversity: the variety of plants, animals and other living organisms in all their forms and levels of organization, and includes the assortment of genes, species and ecosystems, as well as the evolutionary and functional processes that link them

Biogeoclimatic Zones: the geographic areas having similar patterns of energy flow, vegetation and soils as a result of broadly homogeneous climate (*from: Biodiversity Guidebook, September 1995*)

Blue-listed Species: those that are considered to be vulnerable and "at risk" but not yet endangered or threatened. Populations of these species may not be in decline, but their habitat or other requirements are such that they are vulnerable to further disturbance

Connectivity: a qualitative term used to describe the degree to which late successional ecosystems are linked to one another to form an interconnected network. The degree and characteristics of these linkages are determined by topography and Natural Disturbance Type (NDT). Specific types of connectivity are: upland to upland, upland to stream, upland to wetland, cross-elevation (*from: Biodiversity Guidebook, September 1995*)

Conservation: the careful protection, utilization, and planned management of living organisms, and their vital processes to prevent their depletion, exploitation, destruction, or waste

Conserve: to keep in a safe or sound state; to avoid wasteful or destructive use of

Ecosection: a natural region distinctive in landform, hydrology, vegetation and climate

Ecosystem: a community of animals, plants and bacteria and its interrelated physical and chemical environment

Endangered: a species is facing imminent extirpation or extinction, COSEWIC

Facility: something that is built, installed, or established to serve a particular purpose

Firearm: a rifle, shotgun, handgun, spring gun or any device that propels a projectile by means of an explosion, compressed gas or spring, but does not include a longbow or crossbow

Goal: broad statements that describe a future vision with respect to a particular subject (environmental, social or economic)

Guide: a person who, for compensation or reward received or promised, accompanies, assists or provides a service to another person

Guideline: a preferred or advisable course of action respecting park and protected area management. Guidelines imply a degree of flexibility, based on administrative judgment or feasibility to apply the guideline, and are consequently not normally enforceable through legal means

Habitat: the place or type of site where an organism or population naturally occurs. Species may require different habitats for different uses throughout their lifecycle

Issue: problems and unrealized opportunities respecting land and resources that a management planning process will address. Identification and documentation of planning and management issues is an important step in the planning process as a basis for assembling relevant planning information and for developing appropriate management objectives and strategies

Land and Resource Management Planning (LRMP): the sub-regional integrated resource planning process for British Columbia. LRMP considers all resource values and requires public participation, interagency co-ordination and consensus-building in land and resource management decisions

Management Strategy: a method for achieving an end or objective

Natural: an event or state within the environment that occurred without direct influence or involvement by humans.

Natural Resources: land, water and atmosphere, their mineral, vegetable and other components, and includes the flora on and fauna on and in them

Objective: a concise, measurable statement of a desirable future condition for a park value, activity or use which is obtainable through management strategies and actions

Old growth: a climax forest that contains live and dead trees of various sizes, species, composition and age class structure. The age and structure of old growth forests varies significantly by forest type and from one biogeoclimatic zone to another. (*from: Biodiversity Guidebook, September 1995*)

Operator: a person authorized by a park use permit or resource use permit to operate facilities in any part of a park or recreation area

Packer: a non-commercialized activity wherein a person may escort a hunter or group of hunters to an area. A packer may not give any indication as to where game may be residing, however the packer may pack out an animal that was killed by the hunter (s).

Park: land managed and administered by the minister under section 6 of the Act; Crown land established or continued as a park by or under this Act or the *Protected Areas of British Columbia Act*

Park Road: a road in a park or recreation area that is designed and developed for the passage or parking of motor vehicles licensed under the *Motor Vehicle Act*

Park Use Permit: a licence, issued under the Act, authorizing an activity or a course of behaviour or conduct, or the occupancy, use, development, exploitation or extraction of a natural resource on or in a park

Predator-prey System: a combination of a population of large predators, a complex of prey populations, and the environment in which this relationship exists. In the Fort Nelson Forest District, there are two large predator-prey systems: bears and wild ungulates; and wolves and wild ungulates. Any network of areas designed to maintain large predator-prey populations must include the centre of their occurrence and the vital linkages or movement corridors between them

Protected Area: a designation of areas of land and water set aside to protect natural heritage, cultural heritage or recreational values (includes Provincial Park, ecological reserve and protected area designations)

Protected Area Role Statements: articulate the reasons the protected area or park exists; they do not include mandates for management or other legislative requirements

Protected Area Strategy (PAS): a British Columbia Provincial strategy to develop and expand the provincial protected area system. The intention is to protect 12 per cent of the provincial land base by the year 2000. The goals of the strategy are to protect viable, representative examples of natural diversity in the province, and special, natural, recreational and cultural heritage features

Red-listed Species: those that are either extirpated, endangered or threatened, or are being considered for such status. Any indigenous taxon (species or subspecies) threatened with imminent extinction or extirpation throughout all or a significant portion of its range in British Columbia is endangered. Threatened taxa are those indigenous species or subspecies that are likely to become endangered in British Columbia if factors are not reversed

Regionally Important Species means those that are not red- or blue-listed, but require management practices that differ from standard integrated resource management guidelines in order to fulfill critical habitat needs; or locally or regionally threatened or declining species or those that may reasonably be expected to decline without protection of critical habitats

Restoration: the process of repairing damage caused by humans to the diversity and dynamics of indigenous ecosystems

Riparian Habitat: a distinct wildlife habitat zone located in riparian areas (land adjacent to the banks of rivers, streams, lakes and wetlands). Riparian areas are dominated by continuous high moisture content and influenced by adjacent upland vegetation. They incorporate ecosystems that are biologically diverse, frequently containing the highest number of plant and animal species found in a forest. Riparian areas provide critical habitats, home ranges and travel corridors for wildlife and serve to maintain ecological linkages throughout the forest landscape by connecting hillsides to streams and upper-elevation stream headwater areas to valley bottoms.

(from: Riparian Management Area Guidebook, March 1995)

Route: a general area defined by geography to enable travel from Point A to Point B; may or may not be passable

Species at Risk: (a) any species that in the opinion of the deputy minister of MELP or a person authorized by that deputy minister is threatened, endangered, sensitive or vulnerable, (b) any threatened and endangered plants or plant communities identified by the deputy minister of MELP or a person

authorized by that deputy minister, as requiring protection, and (c) regionally important wildlife as determined by the deputy minister of MELP or a person authorized by that deputy minister

Strategy: a method of achieving a management objective

Structure: any building or permanent improvement constructed, placed or established on *Park Act* lands, excluding pit toilets

Summer Season: the period from June 15 to Labour Day

Threatened or Endangered Species: indigenous species that are either threatened or endangered, and identified as 'red-listed' by the Ministry of Environment, Lands and Parks (*from: Biodiversity Guidebook, September 1995*)

Traditional: defined through the LRMP process.

Trail: a route altered by humans (i.e. blazing, cutting, clearing); has some frequency of use; goes from point A to point B; involves some level of maintenance; may also include snowmobile trails

Trapping Cabin: a cabin used for shelter and for storage of trapping supplies on a periodic but temporary basis in conjunction with the operation of a trapline; maximum size requirement

Ungulate: a hooved mammal

Vulnerable Species: those that are not threatened or endangered but are sensitive and particularly at risk, and identified as 'blue-listed' by the Ministry of Environment, Lands and Parks (*from: Draft Wildlife Habitat Areas Field Guide, October 1994*)

Watershed: an area drained by a particular stream or river. A large watershed may contain several smaller watersheds

Wetland: a swamp, marsh or other similar area that supports natural vegetation that is distinct from the adjacent upland areas. More specifically, an area where a water table is at, near, or above the surface or where soils are water saturated for sufficient length of time that excess water and resulting low oxygen levels are principle determinants of vegetation and soil development

Wilderness: an area generally greater than 1000 hectares that predominantly retains its natural character and on which human impact is transitory, minor and in the long-run substantially unnoticeable

Wildlife: (a) a vertebrate that is a mammal, bird, reptile or amphibian prescribed as wildlife under the Wildlife Act, S.B.C. 1982, c.57 (b) a fish, or including (i) any vertebrate of the order Petromyzoniformes (lampreys) or class Osteichthyes (bony fishes), or (ii) any invertebrate of the class Crustacea (crustaceans) or class Mollusca (mollusks), from or in the non-tidal waters of the Province, and (c) an invertebrate or plant listed by the Minister of Environment, Lands and Parks as an endangered, a threatened or a vulnerable species, and includes the eggs and juvenile stages of these vertebrates, invertebrates and plants;

Yellow-listed Species: those identified by the Ministry of Environment, Lands and Parks that require a management emphasis on a regional basis