

**Muskwa-Kechika Management Area  
Recreation Management Plan**  
[Note: This plan does not address the Mackenzie Addition]

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## ACKNOWLEDGEMENTS

A Working Group made up of government agency staff and representatives of First Nations and the Muskwa-Kechika Advisory Board prepared this Recreation Management Plan. However, many other people contributed to its development as well.

First of all, I would like to acknowledge the participation of the individuals, clubs, organizations and local communities and governments. Numerous government staff also contributed both as information providers and draft reviewers.

I would also like to acknowledge the assistance of the First Nations whose traditional territories the Muskwa-Kechika Management Area overlaps. Their obvious love and concern for their traditional territories was an inspiration to the Working Group.

Funding support from the Muskwa-Kechika Advisory Board is also gratefully acknowledged.

Special thanks is extended to those members of the public, First Nations and interest groups who took the time to participate through open houses, meetings, phone calls and written comments.

Lastly, my thanks to the members of the Working Group whose dedication, hard work and commitment over the last two years has resulted in a plan that will provide for continued recreation opportunities in the Muskwa-Kechika while maintaining the area's spectacular wilderness and wildlife values.

**Ron Rutledge**  
Chair  
Working Group

## EXECUTIVE SUMMARY

### Introduction

The Muskwa-Kechika Management Area (MKMA) Recreation Management Plan fulfils requirements set out in the *Muskwa-Kechika Management Area Act*. This legislation came about as a result of recommendations from the Fort Nelson and Fort St. John Land and Resource Management Plans accepted by the Provincial government in 1997.

In June 1998, a Working Group was formed by government to begin development of the Recreation Management Plan for the entire MKMA, including provincial parks. The Working Group included representatives from the Ministry of Forests, BC Parks, BC Assets and Land Corporation, First Nations and the Muskwa-Kechika Advisory Board.

The primary purpose of this plan is to produce an overview assessment of recreation resources in the MKMA consistent with LRMP management objectives and strategies and the *Muskwa-Kechika Management Area Act*. The plan:

- Identifies appropriate commercial and public recreation activities;
- Provides principles for the review of commercial recreation proposals and future recreation management planning;
- Identifies priority areas where more detailed planning is needed; and
- Specifies how the plan can be revised, implemented, monitored and evaluated.

### Management Direction

A set of general management directions describes the appropriateness of commercial and public recreation uses and access methods; processes for evaluating commercial recreation applications; and objectives for all zones in the MKMA. Specific management directions or desired future conditions for five groupings (categories) of the 28 Resource Management Zones that make up the MKMA are also set out. A summary of these directions is described in the following table.

Resource Management Zone Category	Management Direction (Desired Future Condition)
I Small Provincial Parks	<ul style="list-style-type: none"> <li>• Essentially undisturbed and unmodified environment</li> <li>• Protection of special features is paramount</li> <li>• Minimal site modifications</li> <li>• No tenured developments and camps</li> <li>• Few campsites and developed trails</li> <li>• Non-motorized access, except for motorized boats</li> <li>• Little chance of human contact</li> <li>• Small party sizes</li> <li>• Signs are generally not allowed</li> </ul>
II Large remote Resource Management Zones, primarily in northern portion of the MKMA	<ul style="list-style-type: none"> <li>• Essentially unmodified environment</li> <li>• Few facilities and developed trails</li> <li>• Little motorized access</li> <li>• Low levels of air and water transport</li> <li>• Little chance of human contact, except along travel corridors and at high destination points</li> <li>• Generally small party sizes</li> <li>• Signs are generally not allowed</li> </ul>

<b>Resource Management Zone Category</b>	<b>Management Direction (Desired Future Condition)</b>
III Major River Corridors	<ul style="list-style-type: none"> <li>• Essentially unmodified environment</li> <li>• Few facilities and developed trails</li> <li>• Significant motorized water transport</li> <li>• Occasional human contact</li> <li>• Small to moderate party sizes</li> </ul>
IV Large Resource Management Zones, primarily in the southern portion of the MKMA	<ul style="list-style-type: none"> <li>• Environment ranges from essentially unmodified to modified</li> <li>• Facilities are rare and isolated</li> <li>• Developed trails are common near watercourses and waterbodies and through mountain passes</li> <li>• Significant motorized water, air and vehicle (ATV) transport access</li> <li>• High motorized use levels along rivers and motorized trails in summer and fall</li> <li>• Human contact ranges from rare to frequent</li> <li>• Small to large party sizes</li> <li>• Signs are generally not allowed</li> </ul>
V Alaska Highway Corridor	<ul style="list-style-type: none"> <li>• Environment ranges from unmodified to intensely modified</li> <li>• Facilities and trails are common</li> <li>• High levels of motorized transport, especially during high tourism periods</li> <li>• High chance of human interactions, especially close to highway</li> <li>• Recreation activities that enhance highway-based tourism are promoted</li> <li>• Signs are allowed with appropriate government agency approval</li> </ul>

### **Recreation Activity Guidelines**

For the most part, all traditional recreation activities are acceptable throughout the MKMA. There may be, however, specific areas where activities or activity levels are not appropriate for reasons such as environmental sensitivity, to protect special features, wildlife and wildlife habitat protection, user conflicts and/or in the protection of the wilderness recreation opportunity, itself. The determination of such specified areas will be developed in more detailed planning initiatives (e.g. Forest Service district recreation planning, park management planning processes, wildlife management planning, etc.) and through public and First Nations' consultation.

### **Review of Commercial Recreation Proposals**

The legislation, policies and guidelines of the BC Assets and Land Corporation and BC Parks presently guide the review of commercial recreation proposal applications. Because of the uniqueness of the MKMA and to ensure consistency with *the Muskwa-Kechika Management Area Act*, this plan sets out seven principles for government to incorporate into their current commercial recreation proposal review procedures. The following is a summary of those principles.

- Maintain and Protect Ecological and Environmental Integrity

The maintenance and protection of wildlife populations and the wilderness environment of the MKMA must be considered in the review of commercial recreation applications. All commercial recreation evaluations must include an assessment of cumulative impacts.

- Consider Rights and Interests of First Nations

The interests of Treaty 8 First Nations, the Kaska Dena or other First Nations must be carefully considered when evaluating applications for commercial recreation activities and permits. Government has the responsibility to ensure meaningful and fair consultation with First Nations concerning commercial recreation applications.

- Maintaining Public Access and Use

Maintaining historical and future public access and use is a priority. The review and evaluation of commercial recreation applications must consider the effects the proposed activities may have on existing and future public access and use. Commercial recreation proposal evaluations must also consider the extent to which the applicant has communicated with the public recreation sector.

- Be Cautious in Allocating Commercial Recreation Interests

Precise capacity thresholds for various types of recreation activities in the MKMA have not yet been determined. Time is required to assess the full impacts of existing and newly allocated commercial recreation activities, tenures and permits, and to determine appropriate thresholds. Therefore, it is incumbent on managers to take a conservative, cautious approach to issuing approvals for commercial recreational activities and tenures while these thresholds are being determined.

- Leave Room for Future Allocations

It is important to not fully allocate commercial recreation permit rights across the MKMA, in order that new commercial recreation activities can be considered in the future. This is a particularly critical issue for First Nations. Time is required so that commercial recreation policies and application procedures can be communicated, and the capacity to develop applications can be built.

- Give Preference to Applicants with Good Track Records

Applicants with a good track record of operating within the guidelines, policies, and regulations in respect of commercial recreation and related matters, should have preference over those who have a poor track record. This should not, however, limit the fair consideration of proposals from new applicants who have no track record of operating CR businesses.

- Involve Local Residents in Commercial Recreation Activities

In order that northern residents benefit from economic development initiatives, including commercial recreation ventures, operators should be encouraged to hire local residents and demonstrate how the proposed business will benefit the economy of the northeast.

## **Monitoring**

Monitoring is the regular assessment of a situation or management program that provides information on the success of management decisions. The results of monitoring provide the basis for determining whether the desired future conditions for the MKMA are being achieved.

Elements of the resource setting or physical environment to be monitored include: facility levels; trails and motorized routes; prescribed burns and range tenures/conditions; and campsite development. In addition, a number of factors related to recreation experiences of users (social setting) will be assessed. These include: commercial and public use levels; the size of recreation groups or parties; the degree of contact between recreation groups (encounter levels); and the frequency of contact between recreationists and management personnel. Other elements that will be tracked include incidents related to: search and rescue; conflicts

between users and between users and wildlife; environmental degradation; and encounters between humans and bears.

### Recommendations

Many issues and concerns related to recreation planning and management were identified by individuals and groups during the planning process. To help resolve and increase awareness of these issues, the Working Group has made a number of recommendations. The recommendations are grouped into six categories and are summarized in the following table.

Category	Recommendation
Collection of information and research	<ul style="list-style-type: none"> <li>• Update recreation inventory</li> <li>• Collect and analyze baseline information on recreation use</li> <li>• Research on the effects of recreation activities on ecological components</li> <li>• Collect information on riverboat use</li> <li>• Research to assist in the development of policy direction on the use of exotics</li> <li>• Fill fisheries inventory gaps</li> <li>• Fill information gaps on First Nations' traditional use</li> <li>• Develop maximum acceptable levels or thresholds for monitoring indicators</li> <li>• Implement the Monitoring Plan</li> <li>• Develop a system to store and analyze recreation inventory and monitoring data</li> </ul>
Policy issues	<ul style="list-style-type: none"> <li>• Provide policy direction on "packer" issue</li> <li>• Continue policy of not stocking non-native fish species</li> </ul>
Enforcement issues	<ul style="list-style-type: none"> <li>• Enhance presence of enforcement personnel and their activities in the field</li> <li>• Continue to use and monitor compliance with Access Management Area regulations</li> <li>• Encourage and facilitate public reporting of enforcement and safety incidents</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Continue to develop and implement strategies regarding user ethics, safety issues and "best commercial operation practices"</li> </ul>
Commercial recreation application process	<ul style="list-style-type: none"> <li>• Use the "Principles to Guide the Review of Commercial Recreation Applications" developed in this plan</li> <li>• Communicate commercial recreation policies and application process to First Nations</li> <li>• Work with First Nations to develop effective consultation mechanisms in respect of commercial recreation proposal reviews</li> </ul>
Plan implementation and future planning	<ul style="list-style-type: none"> <li>• Develop and implement more detailed planning strategies to address site-specific management issues</li> <li>• Continue to give high priority to developing a Wildlife Management Plan</li> <li>• Periodically review the Recreation Management Plan and revise as needed</li> <li>• Create an Implementation Committee to ensure the Implementation Schedule is followed and reporting is done</li> </ul>

### **Plan Implementation and Review**

An implementation schedule for carrying out the actions and recommendations is identified in the plan. The schedule contains 22 specific action items and provides target completion dates for each action. Priority areas are described for some of the actions such as where more detailed planning is needed. The agencies and groups responsible for each action are also identified.

A complete review of the plan is required in five years or earlier if needed. Annual reviews of the implementation of the plan are to be carried out by the appropriate government agencies. All consultation and notice provisions in the *Muskwa-Kechika Management Area Act* must be followed when revisions or amendments to the plan are made.

## INTRODUCTION

### BACKGROUND

Few places in the world can match the significance of the Muskwa-Kechika (pronounced musk-quah ke-chee-kah) area. Found in northern BC where the extensive boreal plains and muskeg of the east meet the mountains to the west, the 4.4 million-hectare Muskwa-Kechika Management Area (MKMA) remains one of North America's last true wilderness areas south of the 60<sup>th</sup> parallel (see Figure 1.). Rich in untouched beauty, intact ecosystems, natural resources and abundant animal life, the Muskwa-Kechika area has local, regional, First Nations, national, international and global ecological significance.

Through the dedication and hard work of land and resource planning tables in Fort Nelson and Fort St. John, consensus was reached on land-use in the MKMA. They agreed that the area was unique and should be managed as a special management area, which would allow resource development to continue while recognizing, accommodating, and protecting important wildlife and environmental values in the area. They also recommended that a board be appointed to advise government on management of the area and that a special trust fund be created to support special projects and planning initiatives within the Muskwa-Kechika.

Approved by an Order in Council in December, 1997, the Muskwa-Kechika Management Plan balances resource management with conservation, making it an excellent example of how interests that were once in competition have found a way to co-exist on the land. More than one million hectares have been permanently protected with the creation of 9 new provincial parks. These areas are surrounded by more than three million hectares of special management zones where wilderness and wildlife habitat will be maintained over the long term while resource development such as logging, mineral exploration and mining, and oil and gas exploration and development will be allowed in a way that is sensitive to wildlife and environmental values. In all, the MKMA is the largest and most innovative package of provincial parks, protected areas and special management zones in British Columbia.

In June, 1998 the Provincial government passed legislation establishing the MKMA and, thereby, approved the recommendations from the Fort Nelson and Fort St. John Land and Resource Management Plans (LRMPs). Section 8 of the *Muskwa-Kechika Management Area Act* specifies that the approval of a recreation management plan is a prerequisite to the approval of commercial recreation activities (e.g., commercial recreation tenure applications) in the MKMA.

### PURPOSE AND OBJECTIVES

The primary purpose of this plan is to produce an overview assessment of recreation resources in the MKMA consistent with LRMP management objectives and strategies and the *Muskwa-Kechika Management Area Act*. More specific objectives of the plan are to:

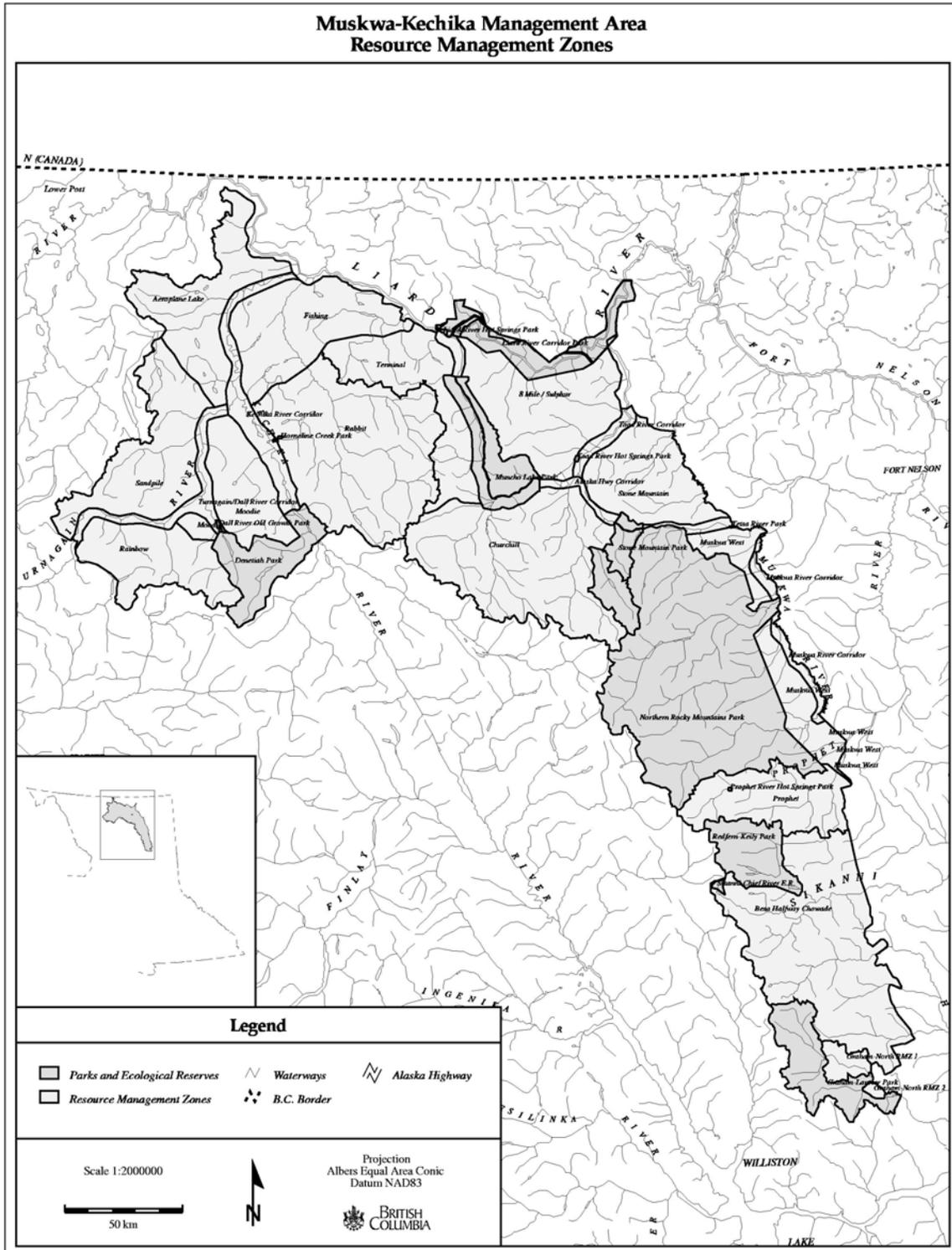
- identify appropriate commercial and public recreation activities/levels for Resource Management Zones (RMZs);
- provide principles to guide review of Commercial Recreation (CR) applications;
- provide principles to guide future recreation management planning in the area;
- identify priority areas for more detailed local strategic recreation management planning; and
- provide mechanisms for ensuring that in the future, the plan can be amended with more detailed or updated management prescriptions that will be implemented, monitored, and evaluated as required.

### PLAN ORGANIZATION

This plan contains 10 sections and a number of appendices.

**The first section** is an introduction and provides: background information on how and why the process for the plan was created and initiated; the objectives and purpose of the plan; how the plan is organized; and an

Figure 1. Map of MKMA



overview of the MKMA with respect to its location, unique attributes, and significant history, including the evolution of recreation in the area.

**The second section** describes the planning process and First Nations and public involvement.

**The third section** provides the recreation management framework including guidelines and principles for recreation planning and management.

**The fourth section** explains the procedures used to analyze the information in the preceding section.

**The fifth section** describes the values of the area, recreation supply, access methods, recreation activities, environmental considerations and factors that could potentially limit recreation use.

**The sixth section** describes the major ecosystem components that can be affected by recreation use and summarizes some ways to minimize those effects.

**The seventh section** describes the management direction for recreation resources in each RMZ and new Provincial Parks, including management activity guidelines and recreation activity guidelines.

**The eighth section** describes principles to guide review of CR applications.

**The ninth section** provides a plan for monitoring recreation management activities and recreation use. The plan recommends various monitoring methods and strategies (e.g., frequencies).

**The tenth section** outlines specific recommendations to the various government agencies with recreation-related mandates in the MKMA.

**The eleventh and final section** describes how the plan will be implemented, including timelines, and when and by whom the plan will be reviewed.

## **MKMA OVERVIEW**

The Rocky Mountain region, known as the Muskwa-Kechika, is a vast wilderness area in northern British Columbia (BC) and is one of the few remaining large, intact and almost unroaded areas south of the 60<sup>th</sup> parallel. It supports a diverse number of large mammals including moose, elk, mule deer, whitetail deer, caribou, plains bison, mountain sheep, mountain goat, wolves, black bears and grizzly bears. The area encompasses the eastern foothills of the Muskwa range, the Kechika ranges of the Cassiar Mountains, and the northern portion of the Rocky Mountain Trench.

The MKMA area has tremendous cultural and heritage significance. Traditionally, and for thousands of years, the land has been used by First Nations for hunting, fishing, trapping, gathering, settlements, camps, recreation, and spiritual fulfilment. There are a number of archaeological sites in the area, a historic fur trading route with related trapper cabin sites, the remains of a Hudson's Bay Trading Post, a historic commercial fishery site, a native village abandoned after World War II, native pack trails, and an old wagon trail.

The Treaty #8 territory includes the entire MKMA and part of the MKMA is within the traditional territory of the Kaska Dena First Nation. The Kaska Dena call the area Dena Keyih (pronounced den-ah key-ah), which means "people's land" in their traditional language.

Within the MKMA there is a high level of recreation use, which is derived from outdoor-related activities. Outdoor recreation use occurs across a range of settings, both on land and water, from remote wilderness experience with low probability of encountering other users to highway based recreational activities. Recreational activities include hiking, hunting, camping, trail riding, wildlife viewing, fishing, canoeing, jet boating, ATVing, rafting, cross country skiing and snowmobiling. Relatively undisturbed natural settings, areas modified by development and accessible by the public, scenic areas and the opportunities to access wildlife and fisheries resources contribute to experiencing the whole range of recreation opportunities.

Commercial recreation providers offer a range of services to recreationists within the MKMA and are an important component of the local economy and backcountry tourism industry. Over 20 guide-outfitting businesses operate within tenured areas in the MKMA. Guided hunts and fishing excursions have been the traditional sources of income for this sector. Transportation providers, such as air charters, and horse and riverboat packers, have also serviced hunting and fishing enthusiasts over the years.

With the growing demand for non-consumptive recreational activities, a number of commercial operators began to expand their businesses to include activities such as guided hikes, trail rides, wildlife viewing, etc. In the mid 1990's, new government policy was introduced to better manage all forms of commercial recreation on Crown land. Currently, there are a variety of commercial operators within the MKMA seeking the proper authority to conduct a wide range of commercial recreation services.

## **PLANNING PROCESS**

The purpose of the recreation management planning process was to develop guidelines to give direction to recreation development and activities in the MKMA that would:

- serve as the Recreation Management Plan until such time as more detailed local strategic recreation management planning can be conducted for all RMZs in the MKMA;
- contribute to the management of the MKMA as an ecological whole;
- provide direction and guidance for operational activities;
- serve as an information reference for resource managers, recreation resource users, tenure holders and the general public; and
- use fair, open and meaningful consultative processes that take into account locally, regionally and provincially established priorities and public interests.

## **MKMA RECREATION MANAGEMENT WORKING GROUP**

In June 1998, a Working Group was formed by government to begin the development of the Recreation Management Plan for the entire MKMA, including provincial parks. The initial group consisted of representatives from the following provincial government line agencies responsible for managing recreation resources in the MKMA: Ministry of Forests (Fort Nelson and Fort St. John Forests Districts), Ministry of Environment, Lands and Parks, and the Ministry of Small Business, Tourism and Culture. In February, 1999 representatives from the Kaska Dena Council and the Muskwa-Kechika Advisory Board were added to the group. In June, 1999, representatives from the Fort Nelson First Nation joined the group. In March, 2000, a representative from the Prophet River First Nation joined the group. Working group members and the organizations they represented are listed in Appendix 1.

In its Terms of Reference, the Working Group was charged with summarizing and assessing the following factors to achieve the purpose and objectives of the plan:

- concerns and issues related to the demand and supply of recreation opportunities;
- the elements of the recreation inventory and the identification of inventory gaps that need to be filled; and
- current levels of recreation use, the demand for recreation opportunities and the value of outdoor recreation and any information gaps that require further research.

In addition, the Working Group was instructed to conduct activities to meet the following process objectives:

- To provide resource agencies, recreation resource users, industry, First Nations, resource tenure holders and the general public with opportunities for participation throughout the planning process;
- To seek consensus among WG members using principles of shared decision-making. Where consensus cannot be reached the areas of disagreement will be documented and handled through the dispute resolution process;
- To work within the framework of existing government policies and all applicable legislation; and
- To involve the Kaska Dena Council in the planning process, consistent with the *Letter of Understanding amongst the Government of British Columbia and the Kaska Dena Council*, September 24, 1997.

## FIRST NATIONS AND PUBLIC INVOLVEMENT

Members of First Nations and the general public have been continually involved in the planning process. Initial involvement took place in the information-gathering phase (January through June, 1999). Scores of individuals came to open houses to inform the Working Group of the issues and concerns related to the management of recreation resources in the MKMA. As well, they contributed suggestions on what the recreation plan should address.

In addition to open houses, dozens of individuals, clubs and organizations, and First Nations' members participated in detailed interviews to provide site-specific information on recreation use and value. A number of these same individuals periodically contacted members of the Working Group during the planning process to provide additional input and support for the process.

First Nations and public involvement concluded in a full public review of the draft plan (August through October, 2000). Copies of the draft were sent to nearly 250 individuals and groups for their review and comment. The Working Group conducted another series of open houses in northeastern communities, during October and November, 2000, to discuss the draft plan and solicit comments. Public review comments on the draft resulted in a number of revisions to the final plan.

## PLANNING STEPS AND TIMELINE

The following table shows the primary steps in the planning process and timelines.

**Table 1. MKMA Recreation Management Plan (MKRMP) Planning Activities**

Planning Activities	June 1998	Sept. 1998	Jan-June 1999	July-Aug. 1999	Sept.-May 1999/00	June 2000	July-Sept. 2000	Oct. 2000	Dec. 2000
Working Group Formed	X								
Terms of Reference Approved		X							
Information Gathering: Open Houses Stakeholder Interviews First Nation Interviews			X						
Campsite and Range Inventory/Assessments				X			X		
Recreation Analysis and Draft Plan Development					X				
Draft Plan Completed						X			
Draft Plan Review by Gov't, MK Board and First Nations						X			
Draft Plan Review by the Public							XXXXXXX		
MKRMP Approval									X

## PLANNING AND MANAGEMENT ISSUES AND CONCERNS

A variety of issues, concerns and existing or potential problems associated with the planning and management of recreation resources in the MKMA were identified at open houses and in interviews with First Nations, government agencies and stakeholders. Many of the issues were associated with government policy, or were questions surrounding the process of recreation management planning in the area. Of the rest, however, four or five types of issues dominated. Of the over 300 comments received, comments on general management issues (63 or 20%.) were by far the most common, followed by enforcement issues (25 or 8%), user conflicts (23 or 7%), site specific issues (23 or 7%) and general concerns regarding increasing use levels (23 or 7%).

It is clear that many people have the perception that there is overuse of the MKMA with regard to some aspects of recreation, or that there is a high potential for overuse in the near future. Many concerns were expressed regarding overuse of specific sites, and more general concerns were frequently expressed about the large number of certain types of facilities or activities (e.g., campsites; river boat traffic). Related to the potential for overuse were concerns about ease of access to remote areas, through the use of industrial roads, ATVs, aircraft, and river boats.

Another dominating concern was that of environmental degradation. Negative environmental impacts, of course, are closely related to, and often result from recreational use. Again, several issues or concerns identified in this regard were site-specific. Others, more general in nature, included: destruction of wildlife habitat; increased pressure on game animal populations; erosion along horse trails and at campsites; garbage; water pollution by float planes and river boats; and a general deterioration of the wilderness values of the area.

Countering to some degree concerns about present-day overuse and environmental degradation, a number of people expressed the need for actions that would promote increased use of the MKMA, thus providing more economic opportunities. Proposed actions included: government promotion of the area as an outdoor adventure tourism destination; more regularly scheduled air flights to communities that serve as entry points to the MKMA; techniques such as controlled burns and predator control to enhance populations of game animals; extension of the hunting season; stocking lakes with fish; more efficient processing of CR applications; and infrastructure development within the area, including access roads, snowmobile and cross-country ski trails; and trail markers and trail heads.

Potential conflicts among different categories of people who use the MKMA were often identified as being of concern. These tended to fall into three different categories:

1. between different recreation participant types — e.g., non-commercial use vs. commercial use; hunters vs. non-hunters; packers vs. guide-outfitters;
2. overlapping tenures — e.g., between CR operators and trappers; between CR operators and resource industries; and
3. between recreational use and traditional use by First Nations' people.

There was a strong message to government that policy to resolve conflicts between packers and guide-outfitters had to be developed. There was an equally strong message that local individuals, First Nations and firms should have preference over non-locals to CR opportunities in the MKMA.

Another issue of major concern was that of enforcement. The need for increased enforcement of regulations and the need for funding to allow adequate enforcement were often expressed. In arguing that a greater enforcement presence was required, participants cited present-day illegal or unethical activities such as: non-licensed commercial operators; the use of industrial roads to gain access to remote parts of the MKMA; the abandonment of meat by hunters; the reservation of campsites for exclusive use by leaving tents and supplies in place over long, unoccupied periods; and thefts from cabins belonging to First Nations' people.

Finally, the need for education, for both commercial operators and visitors to the MKMA, was raised in a variety of forms. It was felt that visitors needed to be educated as to the inherent dangers in backcountry recreation activities, and required assistance through tools such as trail markers and information at trailheads. Education in what might be described as “best operator practices” was identified as a priority for commercial operators.

These, then, were the most common types of issues identified in the information gathering exercise. However, it must be remembered that these issues are based only on the opinions expressed by those who participated in the information gathering exercise. While the exercise provided a good base of information upon which to build a recreation management plan for the Muskwa-Kechika, it was also the responsibility of the Muskwa-Kechika Recreation Management Plan Working Group to anticipate and consider issues and concerns of individuals or groups whose opinions, for whatever reason, were not well documented during the process.

The Province of British Columbia is committed to avoiding the infringement of treaty and aboriginal rights. Meaningful consultation with First Nations on land use and other matters is a fundamental tenet of this commitment. So it is of particular concern that there was a lack of input (in some cases due to lack of capacity) to the MKMA Recreation Management Planning process from all First Nations' individuals and communities. This is a serious deficiency given that the Muskwa-Kechika Management Area falls within the traditional territories of the Kaska Dena First Nations (Dease River Indian Band; Lower Post First Nation; Kwadacha Indian Band) and is within the Treaty #8 territory. First Nations that are signatories to Treaty #8 are the Fort Nelson First Nation; Prophet River First Nation; Blueberry First Nation; Doig River First Nation; Halfway River First Nation; Sauleau First Nation; and West Moberly First Nation. To some extent, this deficiency is ameliorated by participation on the MKRMP Working Group of representatives of the Kaska Dena Council, the Fort Nelson First Nation and the Prophet River First Nation. It is clear that much work still needs to be done to incorporate the views and concerns of First Nations into the MKMA recreation management planning process.

## **RECREATION MANAGEMENT FRAMEWORK**

The Fort Nelson and Fort St. John LRMPs developed general management directions for a number of values associated with outdoor recreation in the MKMA. In addition, strategic management objectives and strategies for achieving these objectives were developed for each RMZ and new provincial parks. The government approved management directions, objectives and strategies provide the foundation for the MKMA's recreation management framework. Appendix 2 describes the administrative framework for recreation management in the MKMA, along with a summary of the role of provincial government agencies with recreation management related mandates. The following sections set out recreation planning and management guidelines and principles that will bring consistency to the decision-making process for the area.

## **PLANNING AND MANAGEMENT GUIDELINES**

The basic premise underlying the management of the Muskwa-Kechika is that the entire area will be managed as an ecological whole. This demands that any local strategic plan developed for a particular resource component recognizes and acknowledges its relationship to the area as a whole with strict adherence to the concept of integrated and adaptive ecosystem management.

These following sections provide broad guidelines on the scope, scale, principles, objectives, participation, dispute resolution, and revision of local strategic recreation plans in the MKMA. The guidelines have been developed to ensure consistency with the management objectives and strategies outlined in the Muskwa-Kechika Management Plan and the recommended Fort Nelson and Fort St. John LRMPs on which the plan is based. In addition, adoption of these guidelines by the line agencies responsible for recreation planning and management will help ensure coordination and consistency of local strategic recreation plans.

### **Scope**

Local strategic recreation plans will be developed to ensure the maintenance of the MKMA's wilderness characteristics, fish, wildlife and their habitats and provide for a spectrum of recreation opportunities, which have minimum impact on the area's natural settings.

Plans should address all aspects of public and commercial recreation use of the area including the acceptability of recreation activities, use levels, infrastructure developments, access, methods of travel (both into and within the area), impact levels, and management activities. In addition, recreation plans should consider any concerns/issues related to site specific features or qualities.

## Scale

The Muskwa-Kechika Management Plan states that a “local strategic recreation plan” is prerequisite to the approval of operational activities within the area. Normally, a recreation management plan is developed for landscape units or combinations of landscape units. However, to take advantage of planning efficiencies and/or accommodate local planning priorities, plans can also be developed in conjunction with and covering the same geographical area as other local strategic plans, such as pre-tenure plans for oil and gas or fish and wildlife management plans. Whatever spatial unit is chosen, all component plans for the MKMA should be integrated and coordinated.

## Objectives

Without recreation management plans derived from orderly planning processes, recreation management may be no more than a series of uncoordinated reactions to immediate problems. Through planning, managers can reconcile differences in management philosophy and ideas before taking actions that have long-range effects on the values of the MKMA.

The objectives of local strategic recreation planning are as follows:

- to inventory existing recreation features, use and biophysical and social conditions;
- to determine any concerns/issues related to site specific features or qualities;
- to determine the acceptability of public and commercial recreation activities and uses, use levels, infrastructure developments, access, methods of travel (both into and within the area), and impact levels;
- to establish clear, attainable, measurable and acceptable desired future conditions for the planning area in written recreation management plans; and
- to develop suitable monitoring and evaluation objectives and strategies.

## Participation

When considering the scope of “involvement” in recreation planning, we must recognize that ownership of plans by First Nations and all interested stakeholders is necessary for successful implementation, especially in the “multi-value” MKMA.

While each line agency responsible for recreation planning in the MKMA will have its own client base and group of interested stakeholders, the parties to this agreement recommend that the principles (see the following section titled “Planning and Management Principles”) related to “Partnerships in Planning”; “Relationships with First Nations”; and “Cooperation and Coordination with Other Agencies” be followed when deciding the extent of participation in planning efforts. All significant requirements of the Muskwa-Kechika Management Plan, including local strategic planning, must follow the consultation and notice provisions in section 5.3.1 and 5.3.2 of the Muskwa-Kechika Management Plan.

## Recreation Plan Approval

The approval, variance or cancellation of a recreation management plan requires approval of the Ministry of Forests District Manager and Designated Environment Officials (i.e., Managers of Fish and Wildlife, Lands and Parks) and that the plan be established as part of Schedule 6 of the Muskwa-Kechika Management Order.

## Dispute Resolution

Resolution of recreation planning and/or recreation management disputes between line agencies and their recreation clients and stakeholder groups will normally be resolved using that agency’s approved dispute resolution processes. If the parties fail to resolve issues, the dispute would then be brought to the Muskwa-Kechika Management Committee for resolution. If the issues cannot be resolved at that level, the dispute would then proceed to the Inter-Agency Management Committee (IAMC) for resolution. Any further need

for dispute resolution would then be brought to the Land Use Coordination Office (LUCO)'s Assistant Deputy Minister (ADM) Committee, the Deputy Ministers' Land Use Committee and potentially the Environment and Land Use Committee.

### **Plan Revision**

Recreation management plans should be reviewed and revised periodically to ensure that stated management objectives are being achieved and to address new concerns or issues that have arisen since the plan was implemented. Any revision of a local strategic recreation plan must comply with the consultation and notice provisions set out in sections 5.3.1 and 5.3.2 of the Muskwa-Kechika Management Plan

## **PLANNING AND MANAGEMENT PRINCIPLES**

Recreation planning and management is complex, particularly in an area as large, diverse and environmentally sensitive as the MKMA. It is, therefore, important that a decision-making rationale produce solutions that are compatible with the values for which the area was given special status. The adoption of a set of management principles for the area can help bring a high degree of consistency to this decision-making process.

Each of the line agencies responsible for different aspects of recreation management within the MKMA have its own set of principles to guide their various recreation management programs. Most of these principles have been approved at the Cabinet level and include: "Guiding Principles for Protected Area Management"; British Columbia Assets and Land Corporation (BCALC)'s CR Policy "Strategic Principles"; and the Ministry of Forests "Wilderness Management Principles." While each set of principles was developed to guide specific agency mandates, they are, in many respects, very similar.

The following principles or fundamental assumptions have been adopted by the various line agencies in an attempt to: (1) help both managers and users of the MKMA make decisions which will be consistent with the objectives and strategies of the Muskwa-Kechika Management Plan; (2) integrate and coordinate their local strategic recreation planning efforts and management activities; and (3) provide guidance in developing effective and implementable recreation plans. The first set of principles (1-8) will guide decision-making related to technical aspects of recreation planning and management. Principles 9-12 refer more to administrative procedures or how decisions are made.

### **Principle 1: Environmental Stewardship**

Maintaining and conserving essential ecological processes and variety in nature (biological diversity) is a vital contribution to provincial, national and global conservation efforts. The MKMA will be managed in a manner that respects natural ecological systems and maintains wilderness characteristics, wildlife, fish and their habitats.

### **Principle 2: The Non-Degradation Concept**

This principle recognizes that conditions of naturalness and solitude vary between RMZs within the MKMA. The objective is to prevent degradation of naturalness and solitude in the area and restore substandard settings to minimum acceptable levels, rather than letting all areas deteriorate to a minimum standard.

To a degree, under this principle, the conditions prevailing in each zone when it was designated establish the benchmark of naturalness to be sought by management. However, the management of conditions of naturalness and solitude in a particular RMZ must be consistent with objectives and strategies as identified in the Muskwa-Kechika Management Plan.

### **Principle 3: Manage Human Influences**

A principle goal of management in the MKMA is the maintenance of ecological processes. Thus, management is, to a large extent, concerned with the management of human use and influences to conserve ecological processes. Human influences include recreational activities, which can affect biophysical and

social conditions. Therefore, recreation management's intent is to guide, modify, and, if necessary, to directly control recreation facility development and use to minimize their impact on natural ecological processes.

#### **Principle 4: Guide Management with Objectives for Specific Areas**

Recreation management in the MKMA will be guided by formal plans that state goals and objectives and explain in detail how they will be achieved. Without such clear prescriptions, management can become uncoordinated and even counterproductive to the goals for which the area was designated. Local resource managers and recreation users of the area need recreation management plans to consider whether strategies and actions are appropriate for specific areas and are consistent with the Muskwa-Kechika Management Plan.

Recreation management objectives must be clear statements of desired future conditions, and proposed management actions must be evaluated for their potential contribution to a specific objective. Objectives are also essential to monitoring progress and evaluating the success of recreation management. Because the goals of the MKMA are diverse, it is difficult to write clear objectives for the various aspects of recreation management. But it is crucial to develop, through an orderly planning process, the clearest and most specific objectives possible and to use them as constant guides to management.

#### **Principle 5: Determine Acceptable Activities and Developments**

Recognition and special consideration will be given to existing tenures, licenses, authorizations and public and commercial recreation use, where those uses are compatible with the management objectives and strategies in the Muskwa-Kechika Management Plan. Uses that have been approved for continuation will be fully respected.

Allowable recreation activities and uses should draw their meaning from association with, and direct relation to, the natural, cultural and recreation values of the area. All recreation activities will be assessed in regard to their impact on the ecological systems and the key natural, cultural and recreation values of the particular RMZ within the MKMA. Developments should directly complement the management objectives and strategies recommended for particular resource management zones within the area.

Recreation planning must also consider the implications and potential impacts from recreation development and use on other resource management goals and activities such as resource extraction or First Nations use.

#### **Principle 6: Zoning**

A diversity of physical and biological features and recreation experiences can be found in the MKMA. To maintain this diversity in the future, a variety of management actions will be needed. Zoning is a useful tool that can help provide for a diversity of biophysical and social settings and help achieve clearly defined objectives for different areas. In addition, use of the concept of zoning can potentially reduce the conflicts among incompatible values (e.g., motorized vs. non-motorized use) and permit retention of values voiced by different segments of the recreating public.

An acceptable recreation activity may not be appropriate in all RMZs or in all parts of a particular zone in the MKMA. Zones within the area may range from areas that accommodate and/or enhance intensive recreation opportunities (e.g., guide/outfitting base camps) to areas that exclude public access to protect fragile and vulnerable ecosystems and sensitive, rare or endangered species (e.g., within Ecological Reserves).

#### **Principle 7: Determine the Limits of Acceptable Change**

The MKMA has limited capacity to absorb the impacts of recreation use and still retain its wilderness character, wildlife and habitat. As use increases, or as damaging patterns of use develop at specific places, or during particular times, wilderness qualities may disappear, either gradually or rapidly. Determining the limits of acceptable change that an area can tolerate without unacceptable impacts offers a framework for

managing recreation use to protect wilderness qualities, such as the opportunity to enjoy a broad spectrum of recreation experiences and outstanding opportunities for solitude.

**Principle 8: Monitor Area Conditions and Experience Opportunities**

Any recreation management plan, or program, needs a monitoring system to evaluate progress toward stated objectives, and to guide the long-term revision, adjustment and refinement of the plan. Devising monitoring plans remains one of the major challenges for advancing recreation management consistent with current adaptive management models. A good plan describes the desired future conditions to be achieved, and sets them out in the form of management objectives. Only through monitoring ( i.e., the systematic gathering, comparing, and evaluation of data) can one tell whether those objectives are being realized. Because biological, physical and social conditions can be influenced by recreation use, all need to be monitored by measuring and evaluating suitable indicators of change in conditions.

**Principle 9: Partnerships in Planning and Management**

The MKMA is a public trust and opportunities for First Nations and the public to provide input into the planning and management of the area must not be neglected. Recreation planning and management should ensure that all interests are involved in decision-making by using a fair, open and consultative process which takes into account provincially, regionally and locally-established priorities and public interests. Mutual learning and understanding is a key benefit in public participation for both managers and interested stakeholders alike.

**Principle 10: Relationship with First Nations**

Recreation planning and management activities within the MKMA will respect First Nations' traditional harvesting, cultural activities and other aboriginal or treaty rights and interests. Opportunities for meaningful consultation with First Nations in recreation planning and management activities are required.

**Principle 11: Coordination with Adjacent Areas and Uses**

The MKMA and adjacent lands should be managed in relation to one another. Human activities on lands adjacent to the MKMA can have substantial impacts inside the boundary and vice-versa. Recreation planning and management decisions inside and outside of particular resource management zones and inside and outside the MKMA should be coordinated and integrated to the greatest extent possible.

**Principle 12: Cooperation and Coordination between Agencies**

Because the recreation resource can be influenced by many human activities (including both industrial and amenity uses) and because local strategic recreation planning and management within the MKMA is a shared responsibility between various government agencies, the co-ordination of recreation planning and management activities is necessary. Therefore, recreation planning and management should be conducted in an integrated, co-operative, collaborative and open manner with provincial government agencies and the Muskwa-Kechika Advisory Board acting as partners in the process.

## RECREATION ANALYSIS PROCEDURES

Recreation analysis was used to develop the management direction, activity guidelines and specific actions for the management of the recreation resource in the RMZs that make up the MKMA. It involved the collection, analysis and interpretation of data concerning:

- recreation supply (i.e., biophysical features, access, facilities, structures);
- recreation use (i.e., where and what recreationists are doing);
- recreation demand (i.e., what recreation experiences/activities people want to participate in);
- the value of recreation use; and
- the opinions of recreationists, governments, First Nations and interested stakeholders.

The following is a description of the components of the recreation analysis, the main sources of data and general analysis procedures. Figure 2 is a diagram of the recreation analysis model.

### RECREATION SUPPLY

In order to develop specific and achievable recreation management objectives, information was needed about the supply of recreation resources that people use to meet their demand for recreation experiences in the area. This information included:

- biological (e.g., flora/fauna) and physical (e.g., lakes/streams and landforms) features where recreation activities can take place;
- facilities and structures (e.g., campsites, and cabins); and
- access routes (e.g., navigable rivers, roads, trails and seismic lines).

Recreation supply information was used to assess the potential of the recreation resource to meet the demand for recreation experiences or opportunities in the present and future. Information on the elements of recreation supply was obtained from users, organizations, First Nations, inventory data from government agencies, and LRMPs. The data were analyzed and compared to recreation use and demand data and stakeholder and First Nations' opinions to meet the plan's objectives.

### RECREATION USE

Recreation use is a measure of actual participation in recreation activities. It includes: participation in both passive and active behaviours (e.g., wildlife viewing, as well as hiking, boating, etc.); and apparent or frontcountry and dispersed uses (e.g., use of designated campsites/trails, as well as hunting, snowmobiling, etc.). It must be pointed out that the term "use" does not necessarily imply value or demand. For example, where there are no facilities (e.g., any lodges), recreation demand may be high even though recreation use is low.

Recreation use information was used to identify current pressures (impacts) on recreation resources and to determine whether the demand for recreation experiences is being met; as well as determine the resources' ability to sustain more use. Recreation use data were obtained from users, organizations, First Nations, government agencies and LRMPs. Recreation use data were analyzed and compared to recreation supply and demand data and stakeholder and First Nations' opinions to meet the plan's objectives.

### RECREATION DEMAND

Recreation demand is the amount of recreation experiences/activities people want to have and participate in for a given cost. Demand can be separated into present-future and public-commercial use components. A number of variables such as consumer income, site quality and the price of substitute sites/experiences affect demand.

As was mentioned earlier, recreation demand does not equate to recreation use. There are a number of reasons why people might demand a recreation experience/activity but defer participating in the activity until a later time (“latent demand”). These include:

- Personal deferred (e.g., because of young children or bad health);
- Facility deferred (e.g., no ski hills, lodges, or trails); and
- Linkage deferred (e.g., no \$ or no transportation).

Information on recreation demand was used in the recreation analysis to determine the recreation opportunities the public wants and what the appropriate activities/levels might be in the MKMA. Demand data was obtained from users, organizations, First Nations, and interested stakeholders.

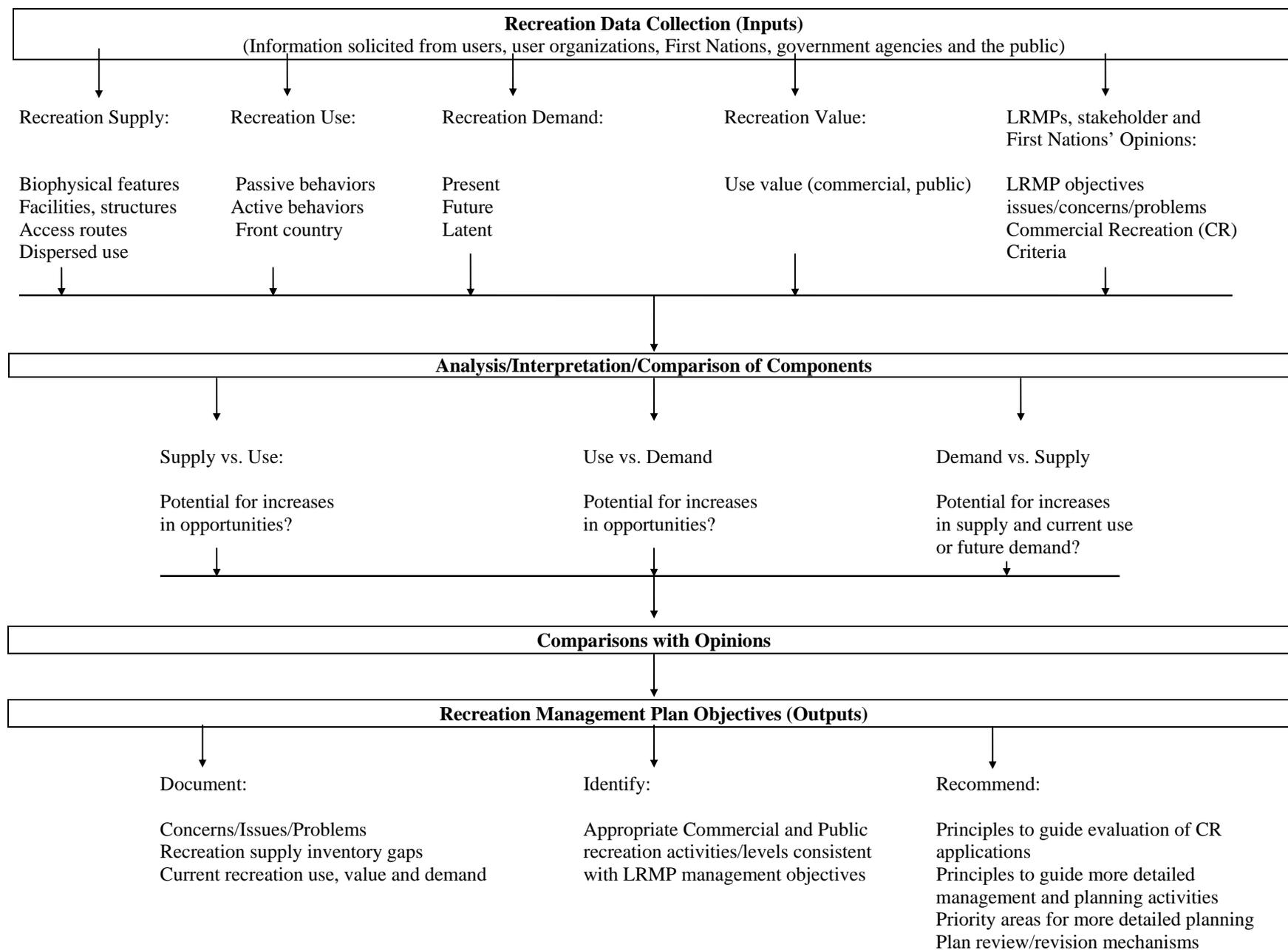
## **RECREATION VALUE**

Recreation value is a very complex economic concept. In the most general sense, recreation value is the net benefit to society of a recreation activity, experience or opportunity. Recreation value consists of two generally recognized components: use values and non-use or intrinsic values. Recreation value can be estimated in terms of dollar and non-dollar value. 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 (public and commercial) for direct purchases such as food, fuel, supplies and commercial operators’ fees. Estimates were obtained from users, organizations, First Nations, government agencies and other pertinent documents and reports.

## **LRMP OBJECTIVES AND STAKEHOLDER AND FIRST NATIONS’ OPINIONS**

Recreation management objectives and strategies developed in the LRMPs, and subsequently incorporated into the MKMA legislation, provide integral strategic direction of this recreation management plan. Stakeholders, users and First Nations also provided valuable information that was used in the development of this plan.

**Figure 2. The Recreation Analysis Model used for the RMP**



## **VALUES, CURRENT SITUATION AND ASSUMPTIONS**

### **INTRODUCTION**

As noted in the preceding section, a number of sources were used to compile information on recreation value and use in the MKMA. Table 2 presents a summary of this information for each RMZ and makes some assumptions related to recreation use in the future. The headings of the table are described in the following paragraphs.

### **RESOURCE MANAGEMENT ZONES**

These are the names of the RMZs as defined in the Fort Nelson and Fort St. John LRMPs and the MKMA Management Plan.

### **FIRST NATIONS' VALUES, TRADITIONAL USE AND OCCUPANCY**

The MKMA has traditionally been occupied and used by Treaty 8 First Nations, the Kaska Dena First Nations and the Fort Liard First Nation. A number of traditional First Nations' uses and sites have been identified for the RMZs. While some of the more significant use sites and levels of use identified so far are listed in Table 2, it should be noted that there are information gaps concerning First Nations' traditional use and occupancy. Filling these gaps is essential for effective recreation planning and management in the MKMA.

### **FEATURES, FACILITIES AND TRAILS**

Wilderness recreation opportunities in the MKMA depend, in part, on the biological and physical features, recreation-related facilities and access routes. Some of the more significant features, facilities and trails in each RMZ are listed in Table 2. In addition to these, there are hundreds of user-created dispersed campsites and trails throughout the area. In the southern portion of the area there are numerous old seismic lines that also serve as access routes.

### **RECREATION VALUE**

As explained in the preceding section, recreation value is a complex concept. Due to the lack of detailed economic data, only rough estimates of the current value of direct recreation-related purchases (i.e., food, fuel, supplies, and commercial operators' fees) are listed in Table 2. Four broad categories are used to describe the estimates for each RMZ.

### **CURRENT ACCESS METHODS**

A number of access methods are used to travel to and within the MKMA. As shown in Table 2, the dominant methods are aircraft (wheeled and float), horse, boat (motorized and non-motorized) and in the winter, snowmobile. High levels of all-terrain-vehicle (ATV) use occurs along designated routes, especially in the southern portion of the area. Travelling on foot occurs in all areas of the MKMA.

### **CULTURAL HERITAGE VALUES**

In addition to the traditional First Nations' cultural values, many of the RMZs in the MKMA have non-aboriginal cultural and heritage values. Some of the more significant examples are included in Table 2 and include trading posts and routes, geological survey routes and historic trails.

## **CURRENT PUBLIC RECREATION ACTIVITIES**

Hunting, fishing and camping dominate the list of current recreation activities described for each RMZ in Table 2. However, numerous other outdoor recreation pursuits are in evidence in the MKMA. Estimates of current levels of use range from 10-50 users per year in the smaller provincial parks and more remote RMZs to thousands in the major provincial parks adjacent to the Alaska Highway.

## **CURRENT COMMERCIAL RECREATION ACTIVITIES**

Commercial recreation suppliers have traditionally offered services for a fee to both resident and non-resident recreationists. Activities offered by the commercial sector include all those engaged in by the public sector. The number of commercial recreation suppliers range from less than a half dozen in many RMZs to over two dozen in Northern Rocky Mountains Provincial Park.

## **ANTICIPATED FUTURE RECREATION DEMAND (PUBLIC AND COMMERCIAL)**

Estimating both the future demand and levels of future use for recreation opportunities is extremely difficult. The estimates of activities and use levels listed in Table 2 were made based on each RMZ's recreation supply information and data obtained from MKMA users, organizations, First Nations and government agencies. However, it should be pointed out that the activities and levels of use listed in the table for public and commercial recreation are not prescriptive. That is, they do NOT necessarily represent what activities and use levels will be appropriate in the future. 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 (see footnote 3 in Table 2).

## **ENVIRONMENTAL CONSIDERATIONS**

When determining the appropriateness of recreation activities, the effects of these activities and accompanying use levels on elements of the natural environment must be considered. (For more detail see the section titled "ECOLOGICAL CONSIDERATIONS FOR RECREATION MANAGEMENT.") Some of the most significant environmental aspects that could potentially be affected by certain recreation activities are listed for each RMZ in Table 2. This does not mean, however, that there may not be other aspects that should be considered. For example, there are likely mineral licks in all the RMZs in the MKMA. Only the most significant ones are listed in the table.

## **OTHER POTENTIAL LIMITING FACTORS**

In some RMZs, there may be certain factors that could potentially limit either the suitability of a recreation activity or a particular level of use. The most significant factors are listed in Table 2. Examples include campsite availability and forage for horses. As is the case with the environmental considerations mentioned above, these factors would need to be examined on a site-specific basis.

**Table 2. Values, Current Situation and Assumptions**

Resource Mgmt. Zone	First Nations Values/ Traditional Use (TU) <sup>1</sup>	Important Features/ Facilities/ Trails	Estimate Current Recreation Value <sup>2</sup>	Current Access Methods	Cultural/ Heritage Values	Estimated Current Public Activities/ Use Levels	Estimated Current Commercial Activities/ Use Levels	Anticipated Future Demand for Public Activities/ Use Levels <sup>3</sup>	Anticipated Future Demand for Commercial Activities/ Use Levels <sup>3</sup>	Environmental Considerations	Other Potentially Limiting Factors
Rainbow	TU	Rainbow Lake; Cassiar River; mountainous scenery, e.g., Sharktooth Mountains.	Low	Floatplane; horse; boat; helicopter	Samual Black's pack route	Hunt, fish, camp, trail ride, wildlife view/ Low use	Hunt, fish, camp, raft, wildlife view/ <6 suppliers; 36-40/yr.	Existing/ Low increase in use	Existing plus Heli-hike/ Heli-ski/ Low increase in use	Critical goat and caribou habitat	Horse forage
Sandpile	Mosquito Ck. Indian reserve; McDame Trail; Kaska settlement sites and burial grounds	Blue Sheep Lk.; Solitary Lk.; Burnt Rose Lk.; Sandpile Lks.; Major Hart River; mountainous scenery; major guide camps	Moderate	Floatplane; boat; horse; aircraft	McDame Trail linking Davie Trail to McDame Post on Dease River	Hunt, fish, camp, trailride, wildlife view/ Low use	Hunt, fish, raft, wildlife view/ <6 suppliers; 36-40/yr.	Existing/ Low increase in use	Existing/ Low increase in use	Mineral licks; critical sheep and caribou habitat	
Aeroplane Lake	Davie Trail; heavy Kaska TU around Aeroplane Lake	Aeroplane Lk.; Twin Island Lk.; Birches Lk.; Kitza and Calf Ck. Complexes; unroaded low rolling forested landscape; major guide camp	Moderate	Floatplane; boat; horse; raft/canoe	Davie Trail	Hunt, fish, raft/canoe, wildlife view, camp, hike, trail ride/ Low use	Hunt, fish, raft/canoe, wildlife view, camp, hike/ <6 suppliers; Low use	Existing/ Low increase in use	Existing/ Low increase in use	Critical habitat around lakes for grizzly bear and moose	

<sup>1</sup> Traditional use includes but is not limited to trapping, hunting, fishing, camping, berry picking, medicine gathering and other similar activities that arise out of the use and occupancy of the land by First Nations. While some of the more significant use sites and levels of use identified so far are listed in Table 2, it should be noted that there are information gaps concerning First Nation traditional use and occupancy.

<sup>2</sup> Low=0-\$200,000      Moderate=\$200,000-\$500,000      High=\$500,000-\$1 million      Very High=\$1 million +

<sup>3</sup> Low-up to 33% increase in use      Moderate-34%-66% increase in use      High-67%+ increase in use

Table 2 - Continued

Resource Mgmt. Zone	First Nations Values/ Traditional Use (TU) <sup>1</sup>	Important Features/ Facilities/Trails	Estimate Current Recreation Value <sup>2</sup>	Current Access Methods	Cultural/ Heritage Values	Estimated Current Public Activities/ Use Levels	Estimated Current Commercial Activities/ Use Levels	Anticipated Future Demand for Public Activities/ Use Levels <sup>3</sup>	Anticipated Future Demand for Commercial Activities/ Use Levels <sup>3</sup>	Environmental Considerations	Other Potentially Limiting Factors
Terminal	Heavy Kaska TU around Long Mtn. Lake and along trail connecting Muncho Lake to Graveyard Lake; Kaska settlement sites; T8TU	Windfall Lk.; Lapie Lk.; Long Mtn. Lk.; Forcier Lk.; Skeezer Lk.; various alpine lakes;borders Muncho Lake Park; horse trail from Muncho Lake Park; Long Mtn.; major guide camp	High	Floatplane; horse; aircraft; snowmobile		Hunt, fish, wildlife view, hike, camp/ 50-60yr.	Hunt, fish, trailride, wildlife view, camp/ 7 suppliers/ 230/yr.	Existing/ Low increase in use	Existing/ Moderate increase in use	Critical goat grizzly bear and caribou habitat	Horse forage
Moodie	Kaska TU	Moodie Lk.; Boreal Lk.; western edge of Rocky Mtn. Trench; mountainous terrain; major guide camp	Moderate	Floatplane; boat; horse; canoe		Hunt, fish, trailride, canoe, wildlife view, camp/ 50/yr.	Hunt, fish, trailride, raft, photo, wildlife view, camp/ 7 suppliers; 130/yr.	Existing/ Low increase in use	Existing/ Low increase in use	Critical sheep habitat	
Fishing	Heavy Kaska TU, particularly around lakes. Kaska settlement and assembly sites and burial grounds (e.g., Graveyard Lake)	Fishing Lk.; Grant Lk.; Gemini Lks.; Graveyard Lks.; Niloil Lk.; Hare Lk.; Rabbit River; rolling hills in unroaded condition; Mt. Reid visible from Alaska Highway; major guide camp	Moderate	Floatplane; boat; horse; raft	Historic trail to Chee House Post	Hunt, fish, camp, raft wildlife view/ 50/yr.	Hunt, fish, camp, raft wildlife view/ <6 suppliers/ 100/yr.	Existing plus ice-fishing/ Low increases in use	Existing plus snow-mobiling, cross-country ski/ Moderate increase in use	Islands of high quality goat and grizzly bear habitat	Horse forage

<sup>1</sup> Traditional use includes but is not limited to trapping, hunting, fishing, camping, berry picking, medicine gathering and other similar activities that arise out of the use and occupancy of the land by First Nations. While some of the more significant use sites and levels of use identified so far are listed in Table 2, it should be noted that there are information gaps concerning First Nation traditional use and occupancy.

<sup>2</sup> Low=0-\$200,000 Moderate=\$200,000-\$500,000 High=\$500,000-\$1 million Very High=\$1 million +

<sup>3</sup> Low-up to 33% increase in use Moderate-34%-66% increase in use High-67%+ increase in use

Table 2 - Continued

Resource Mgmt. Zone	First Nations Values/ Traditional Use (TU) <sup>1</sup>	Important Features/ Facilities/ Trails	Estimate Current Recreation Value <sup>2</sup>	Current Access Methods	Cultural/ Heritage Values	Estimated Current Public Activities/ Use Levels	Estimated Current Commercial Activities/ Use Levels	Anticipated Future Demand for Public Activities/ Use Levels <sup>3</sup>	Anticipated Future Demand for Commercial Activities/ Use Levels <sup>3</sup>	Environmental Considerations	Other Potentially Limiting Factors
Rabbit	Heavy Kaska TU around Netson Lake and Hornline Creek.	Netson Lk.; Hornline Lk.; Moose Lk.; Pup Lk.; Lupus Lk.; Rabbit and Gundahoo Rivers; eastern edge of Rocky Mtn. Trench; Mountainous terrain; horse trails from Muncho Lake Park; Terminus Mtn.; major guide camp	High	Floatplane; aircraft; boat; raft; horse		Hunt, fish, camp, wildlife view/ 50-60/yr.	Hunt, fish, camp, trailride, rafting, hike, wildlife view/ 7 suppliers/ 230/yr.	Existing plus hike, snow-mobiling / Low increase in use	Existing plus snow-mobiling, cross-country ski, heli-skiing/ Moderate increases in use	Critical habitat for caribou and grizzly bear	Horse forage
Eight Mile/Sulphur	Kaska and T8 TU	Numerous trails; unroaded wilderness in mountainous terrain; Old Woman Lks.; Four Mile Lks.; Nonda Ck. Tower viewpoint; major guide camps	Moderate	Vehicles; ATV; horse; riverboat; snow-mobiles; aircraft; floatplane; raft		Hunt, fish, hike, wildlife view, raft, snow-mobiling, photo, camp/ 400/yr. (majority of use in vicinity of Nonda Ck. Road)	Hunt, fish, hike, wildlife view, raft, ecotours, camp/ <6 suppliers 125/yr.	Existing/ Moderate increase in use	Existing plus Heli-hiking, trapline observation, trailride/ Moderate increase in use	Mineral licks; critical habitat for grizzly bear; sheep and elk movement corridors	

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Churchill	Heavy Kaska TU around Moose Lake and Toad River watershed; Kaska settlement sites; Fort Nelson TU and Indian Reserve at Moose Lake	Moose, Emerald, Ram and Yedhe Lks.; Glaciers; old mining roads; Toad, West Toad, Racing rivers; Mt.Roosevelt; major guide camp	High	Vehicles; ATV; riverboat; boat; horse; raft; aircraft; snowmobile floatplane	Potential archaeology and anthropology area	Hunt, fish, camp, trailride, sight-see, hike/ 300+/yr.	Hunt, fish, camp, trailride, trapline observation, raft/ <6 suppliers/ 70/yr.	Existing/ Moderate increase in use	Existing plus trekking/ Moderate increase in use	Mineral licks; Moose habitat at Moose Lk. and alpine areas; critical goat and sheep habitat	Sustainability of fish stocks at Ram Lakes
Stone Mountain	Kaska TU and settlement sites; T&TU	Ram and Snake Cks.; Dunedin River; Stone Mtn.; open grasslands; mountainous terrain	High	Aircraft; horse; raft; snowmobile		Hunt, fish, trailride, camp, hike, sight-see, wildlife view/ 225/yr.	Hunt, fish, ecotours, trapline observation, camp, raft, trailride, wildlife view/ <6 suppliers/ 100+/yr.	Existing plus Mtn. Trekking/ Moderate increase in use	Existing plus Heli-hiking/ Low increase in use	Mineral licks; fragmented habitat for grizzly bear, elk and sheep	
Muskwa West	Prophet River campsites, burial grounds and food gathering sites; Halfway River TU	Foothills, rolling landscape; Kluachesi, Gathto, Beckman Cks.; Chischa and Muskwa Rivers	Moderate	Horse; aircraft; snowmobile ; riverboat; raft		Hunt, fish, camp, trailride/ 200/yr.	Hunt, fish, ecotours, trailride, camp/ <10 suppliers/ 200/yr	Existing/ Moderate increase in use	Existing plus photo, hike/ Moderate increase in use	Mineral licks; extensive climax grasslands for elk	Horse forage in Northern portion

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Prophet	Prophet River and Halfway River TU; numerous archaeological sites	Prophet, Besa Rivers; Richards Ck.; Klingzut Mtn.; Old High trail; Numerous meadow complexes; Major guide camps	Very High	Horse; aircraft; raft; riverboat; snowmobile floatplane	Bedaux Trail	Hunt, fish, trailride, Photo, raft wildlife view, camp, hike/ 900/yr.	Hunt, fish, trailride, photo, wildlife view, raft, camp, hike/ 10 suppliers/ 500/yr.	Existing/ Moderate increase in use	Existing plus cross-country ski, trapline observation/ Moderate increase in use	Mineral licks; diversity of wildlife populations (sheep, caribou and goat)	Horse forage
Alaska Highway Corridor	Kaska and Fort Nelson TU; highway was developed along traditional First Nations' trails	Alaska Highway; Liard, Trout, Racing, and Tetsa Rivers; McDonald Creek; Toad River Corridor; viewscales; numerous trailheads; private land; lodges/hotels; major guide camps	Very High	Vehicle, aircraft, ATV, snowmobile, floatplane, horse, raft, hike, mtn. bikes	Alcan Highway and associated artifacts	Sight seeing, wildlife view, camp, hike, trailride, hunt, fish/ Very high use levels	Sight seeing, wildlife view, camp, hike, trailride, hunt, fish/ Very high use levels	Existing plus ice-climbing/ Moderate increase in use	Existing/ Moderate increase in use	Mineral licks, water quality, vehicle-wildlife interactions (caribou and sheeo); bull trout habitat	Visual considerations Availability of private land for commercial recreation
Graham North #1 and#2	Halfway and West Moberly TU	Graham River; Justice Ck.; AMA route; Emerslund trail; major guide camp	Moderate	ATV; aircraft; horse; snowmobile		Hunt, fish, camp, wildlife view/ 250/yr.	Hunt, fish, camp/ <6 supplier/ 30/yr.	Existing/ Moderate increase in use, except for significant increases in snowmobiling	Existing/ Moderate increase in use	Critical habitat for grizzly bear and bull trout	

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Besa-Halfway-Chowade	Heavy Halfway River and Prophet TU; campsites and burial grounds	AMA Routes; Laurier Pass; Ten Mile; Robb, Marion, Koller, Twin, Cranswick, Colledge Lakes; Loranger and Nevis Cks.; Brown's Farm; Louis' Farm; major guide camps	Very High	ATV; aircraft; floatplane; horse; vehicle; snowmobile	Bedaux and RCMP Trails; traditional human migration route	Hunt, fish, camp, wildlife view, photo/ 3000+/yr.	Hunt, fish, camp, wildlife view, photo/ <10 suppliers/ 500/yr.	Existing/ Moderate increase in use, except for significant increase in snowmobiling	Existing/ Moderate increase in use	Mineral licks; critical habitat for moose, caribou, bison, elk, sheep and grizzly bear	Site specific horse forage
Toad River Corridor	Kaska settlement sites and burial grounds; traditional trail along river; Fort Nelson TU	Toad River; open fire maintained grasslands	Low	Riverboat; horse		Hunt, fish, camp, wildlife view, trailride/ 75/yr.	Hunt, fish, camp, trailride, trapline obs, wildlife view/ <6 suppliers/ 50/yr.	Existing plus rafting/ Canoeing / Moderate increase in use	Existing plus rafting, hike, canoeing/ High increase in use	Mineral licks and hot springs; movement corridor for grizzly bear and elk	Availability of campsites
Muskwa River Corridor	Fort Nelson and Prophet River TU; settlement sites and burial grounds	Muskwa River; view of Samuelson Mtn. from river	Very High	Riverboat, ATV on east side of river, horse, raft, aircraft		Hunt, fish, camp, trailride wildlife view, raft/ 1200/yr.	Hunt, fish, camp, trailride wildlife view/ 10+ suppliers 500/yr.	Existing/ Moderate increase in use	Existing/ Moderate increase in use	Fish habitat at mouths of creeks	Availability of campsites

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Kechika River Corridor	Heavy Kaska TU; Davie Trail; numerous settlement sites	Kechika River; Scoop Lake; Heart of Rocky Mtn. Trench; major guide camp	Moderate	Riverboat; floatplane; aircraft; raft; horse, canoe	Chee House Post, Davie Trail; Heritage river; McDame Trail	Hunt, fish, wildlife view, camp/ 350/yr.	Hunt, fish, camp, wildlife view, trailride/ 14 suppliers/ 250/yr.	Existing plus canoe/ High increase in use	Existing plus canoe/ High increase in use	Mineral licks; critical elk habitat; moose winter range; bird migration/ staging areas	Site specific horse forage
Turnagain/ Dall River Corridor	Heavy Kaska TU with settlement sites and burial grounds	Turnagain, Dall Rivers; Turnagain River Falls; oxbows; major guide camps	Moderate	Aircraft; riverboat; raft; horse, floatplane	McDame Trail	Hunt, fish, wildlife view, camp/ 150/yr.	Hunt, fish, camp, raft wildlife view, trailride, photo/ 3 suppliers/ 50/yr.	Existing/ High increase in use	Existing/ Moderate increase in use	Fish habitat at mouths of streams; critical habitat for caribou, sheep, goat	Availability of campsites
Dall River Old Growth Park	Heavy Kaska TU with settlement sites and burial grounds	White spruce old growth; Dall River portion of McDame Trail	Low	Horse		Hunt, fish/ 10/yr.	Hunt, fish/ 1 supplier/ 50/yr.	Existing/ Low increase in use	Existing/ Low increase in use		
Denetiah Park	Heavy Kaska TU, particularly around Dall and Denetiah Lakes; Davie Trail	Denetiah and Dall Lks.; Davie Trail; Kechika (Heritage River) and Dall Rivers; viewscape of Gataga and Terminus Mountains; major guide camps	High	Riverboat; horse; floatplane; boat; raft/canoe	Historic fur trading route, Davie Trail	Hunt, fish, wildlife view, hike camp, photo, canoe, raft/ 100/yr.	Hunt, fish, wildlife view, camp, photo, trailride, rafting, canoeing/ 12 suppliers/ 350/yr.	Existing/ Moderate increase in use	Existing plus hike, snow-mobiling/ Moderate increase in use	Lake char, northern pike and rainbow; Critical habitat for grizzly and goat; licks	

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Liard River Hotsprings Park	Kaska and Fort Nelson TU	Hotsprings and related habitat; campground and intensively used frontcountry park facilities-(interpretative services; boardwalk; picnic shelters; playground, etc.) beginning of AMA route	Very High	Vehicle and ATV	Old Alaska Highway route; fur trade; geological survey exploration route	Camping, bathing, snowshoeing, wildlife view, fishing, photo, guided interpretation tours, nature appreciation/ 25,000/yr.	Camping, bathing, snowshoeing, wildlife view, photo, guided interpretation tours, nature appreciation/ 15,000/yr.	Existing/ Moderate increase in use, especially for winter activities	Existing/ Moderate increase in use, especially for winter activities	Hotsprings habitat; various red-listed species	Water quality in hotsprings; campsite availability
Muncho Lake Park	Kaska and Fort Nelson TU	Muncho Lake, alluvial fans, interpretive signs, frontcountry campgrounds, Trout, Toad Rivers, Nonda Creek, hoodoos, Folding Mtn, Peterson Canyon; AMA routes; Gundahoo Pass, Prochniak, mineral lick, Strawberry and Sheep Flats Trails; major guide camp; Resort lodges	Very High	Vehicle; aircraft; floatplane; boat; ATV; raft; snowmobile ; hike	ALCAN Highway; archaeological sites	Hunt, fish, camp, hike, wildlife view, rafting x-country ski, photo, canoeing, boating, snowmobiling, trail ride/ Very high use	Hunt, fish, camp, hike, wildlife view, boat tours, rafting/ Very high use, especially associated with highway corridor and Muncho Lake area	Existing/ High increase in use	Existing/ High increase in use	Mineral licks; critical sheep and goat habitat	Campsite availability in frontcountry

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Northern Rocky Mountains Park (includes former Wokkpush Recreation Area)	Kaska Dena, Fort Nelson, Prophet River and Halfway River TU; Burial grounds and significant spiritual sites	Tuchodi, Tetsa, Chischa Wokkpush and portions of the Muskwa Rivers and Gathto Ck.; Tuchodi, Tetsa, Kluachesi, Wokkpush and various alpine lks.; Summits (Mt. Mary Henry, Sleeping Chief and Mt. Sylvia) and glaciated landscapes; Hoodoos; Forlorn and Wokkpush Gorge; Fusillier Glacier; major guide camps	Very High	Riverboat, floatplane, aircraft; raft/canoe; horse, snowmobile	Bedaux and High Trails; Fur trade; Mary Henry expedition	Hunt, fish, camp, wildlife view, photo, ice-fish, rafting, trailride, snowmobile, hike, sightsee/ 1500/yr.	Hunt, fish, camp, wildlife view, photo, ice-fish, trailride, snowmobile, hike, rafting, sightsee, trapline observation/ 30 suppliers/ 1500/yr.	Existing plus rock-ice climbing, summer glacier skiing, mtn. biking/ High increase in use	Existing plus rock-ice climbing, summer glacier skiing/ High increase in use	Mineral licks; Bull trout spawning habitats; cumulative effects of range burning; diverse wildlife values	Horse forage; current high use and campsite availability within Tuchodi River and Muskwa River corridors during hunting season
Graham-Laurier Park	Halfway River and West Moberly TU	Christina Falls; Graham River watershed; Lady Laurier Lk.; Summits; AMA route; Needham Ck.	Low	ATV; horse; aircraft; snow-mobile; floatplane; mtn. bike	RCMP Trail	Hunt, fish, photo, camp, trailride, wildlife view, hike feature view/ 100/yr.	Hunt, fish, photo, camp, trailride, wildlife view, feature appreciation/ 4 suppliers 50/yr.	Existing plus ice-fish, canoeing/ Low increase in use	Existing plus ice-fish, canoeing, heli-hike/ski/ Low increase in use	Mineral licks; critical grizzly bear and caribou habitat; bull trout; fragmented/ Relic sheep and goat populations	

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Liard River Corridor Park	Fort Liard, Kaska and Fort Nelson TU; important trading route; high probability of burial grounds; Two Fort Nelson First Nations archaeological sites	Liard River and Grand Canyon; trail of '98 route; Fossil Ck. Caves; Old Growth Forests; Nordquist and Aline Lakes; Elk Mtn.; Deer River Hot Springs; chum salmon; inconnu; Arctic cisco; wood bison; major guide camp	Moderate	Floatplane; riverboat, raft/canoe; horse; vehicle; ATV; snow-mobile; aircraft	Cultural artifacts (e.g., trading posts, etc.); important early access routes to northern interior of BC; old drilling rig near mouth of Toad River	Hunt, fish, wildlife view, raft Feature Appreciation, camp, spelunking 300/yr.	Hunt, fish, wildlife view, photo, camp, raft/ 10 suppliers/ 100/yr.	Exsting/ Moderate increase in use	Existing/ Moderate increase in use	Wood bison herd; intact predator/ Prey ecosystem; critical grizzly bear habitat	Fossil sites; churt formations; horse forage
Stone Mountain Park	Kaska and Fort Nelson TU	Stone Mtn campgrounds; Summit Lake and Pass, McDonald Creek, Stone Range, Hoodoos, Mt. St. George and Mt. St. Paul, glacial features, North Tetsa River, Flower Springs Lake & trail; Baba Canyon, erosion pillars, Summit microwave tower trail; commercial lodge	Very High	Floatplane; vehicle, horse, hike	Alcan highway, High Trail	Hunt, fish, trailride, hike, camp, wildlife view boating, climbing, photo feature appreciation/ Very high use	Hunt, fish, wildlife view, trail ride, hiking/ <6 suppliers/ Very High use	Existing/ Moderate increase in use	Existing/ Low increase in use	Fish stocks in lakes/streams Wildlife collisions; critical habitat for caribou and sheep	Campsite availability; horse forage

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Redfern-Keily Creek Park	Prophet River and Halfway River TU; spiritual and gathering sites	Redfern, Trimble, and Fairy Lks.; Besa River and Keily Ck watersheds; alpine basins & peaks; glaciers, waterfall and tarns; hoodoos; AMA route; Plains Bison; Trimble Lake trail	High	ATV; horse; floatplane; snowmobile; dogsled; raft/canoe/ Boat/ kayak, boat, aircraft	High Trail; Bedaux Trail; archaeological artifacts; geological surveyors (McCusker)	Hunt, fish, trailride, camp, hike, photo, Wildlife view, snowmobiling ATVing raft/canoe, Feature appreciation, hike/ 500+/yr.	Hunt, fish, trailride, camp, photo, Wildlife view, hike, Snow-mobiling raft/canoe, hike/ <6 suppliers 100/yr.	Existing plus mountaineering, mtn biking/ Moderate increase in use, especially along AMA route	Existing plus Cross-country ski/ High increase in use	Mineral licks; Bear-human conflicts; critical grizzly bear and sheep habitat	Horse forage; campsite availability around Redfern Lk.
Toad River Hot Springs Park	Kaska and Fort Nelson TU with spiritual and gathering sites and burial grounds	Hotsprings and related wildlife habitats	Low	Riverboat, horses; hike		Hunt, fish, wildlife view, camp/ 30/yr.	Hunt, fish, camp, wildlife view/ 5 suppliers/ 20/yr.	Existing/ Moderate increase in use	Existing/ Moderate increase in use	Hotsprings habitat and wildlife, mineral licks	Campsite availability
Horneline Creek Park	Heavy Kaska TU around Horneline Creek.	Riparian and wildlife habitats and features; canyon	Low	Hike; horse		Hunt, wildlife view/ 10/yr.	Hunt, wildlife view/ 1 supplier/ 10/yr.	Existing/ High increase in use	Existing/ High increase in use	Goats	Horse forage; campsite availability

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Prophet River Hotsprings Park	Prophet River and Halfway River TU; settlement sites, burial grounds, campsites and archaeological sites	Hotspring habitat and important wildlife features; Heritage River; tufa mound	Low	Horse, snow-mobile, raft, riverboat	Archaeological artifacts	Hunt, fish, camp trailride, wildlife view/ 50/yr.	Hunt, fish, camp trailride, wildlife view/ 50/yr.	Existing/ Low increase in use	Existing/ Moderate increase in use	Hotsprings habitat; wildlife; mineral licks	Campsite availability
Tetsa River Park	Kaska, Fort Nelson and Prophet River TU	Campground; confluence of Tetsa River and Mill Creek; trail to Muncho Lake	Low	Vehicle		Swim, fish, camp, raft, wildlife, hunt view, hike, picnic/ 5,000/yr.		Existing/ Low increase in use	Low		

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## **ECOLOGICAL CONSIDERATIONS FOR RECREATION MANAGEMENT**

### **INTRODUCTION**

Opportunities for quality wilderness recreation experiences in the MKMA depend, in part, on the maintenance of the wilderness setting or natural environment. In addition, portions of the MKMA are important as scientific benchmarks representing relatively undisturbed ecosystems and processes. Recreation use should be sensitive to the need to maintain these settings and benchmark areas. Subsequent planning processes should identify those areas, especially sensitive to human disturbance. While industrial activities can cause disruption of ecological processes, recreation use and management activities related to recreation use also have the potential to affect components of the ecosystem. The following are some major ecosystem components that can be affected by wilderness recreation use and that will be considered in developing recreation management directions and activity guidelines in later sections of the plan.

### **SOIL CONDITIONS**

The majority of negative effects on soil conditions from recreation use begin with the destruction of organic matter in the soil surface and the compaction of soils and snow, primarily from trampling by people, horses, all-terrain vehicles, etc. Changes to soil characteristics such as aeration, temperature, moisture, nutrition and soil organisms affect the soil's capability to support existing vegetation and the establishment of new growth. In addition, compaction increases the potential for erosion and the diversion of natural watercourses.

### **VEGETATION CONDITIONS**

Vegetation impacts start with damages to soil conditions and are exacerbated by trampling effects. Most common are decreases in vegetation cover leading to changes in species composition. More tolerant (i.e., resistant or resilient) species begin to outnumber those species less resistant to damage (e.g., tree seedlings, low-lying shrubs and lichens). The introduction of non-native species can also change species composition. Growth rates can be affected which cause changes in the age and structure of vegetation species. Loss of vegetation cover exacerbates such effects as loss of organic matter and increased erosion.

### **WILDLIFE AND FISH**

Potential adverse effects on fish and wildlife species from recreation use includes direct mortality (i.e., hunting, trapping, and fishing) and harassment in addition to habitat alterations from the vegetation changes described above. Human presence can have an effect on wildlife behaviour, and many species will tend to avoid areas with a human presence. Alterations to population structures and species composition can also be caused by decreases in food sources, destruction of home and breeding sites (e.g., dead snags for cavity-nesting birds, spawning grounds, etc.) and the alienation of habitat. The introduction of non-native fish and animal species can affect native stocks.

### **WATER**

Recreation use can directly and indirectly affect water quality in wilderness settings. Direct effects include physical disturbance of bottom habitat, the introduction of pathogens as a result of improper disposal of human waste or pollution such as oil and gasoline residue from boat motors and vehicles, discarded fuel drums and fuel spills. Indirect sources include increased sedimentation from erosion associated with soil and vegetation changes. Together, these impacts can cause changes to fish and

riparian habitats, aquatic plant growth and reduced amounts of dissolved oxygen leading to disturbances to aquatic fauna (e.g., through changes of nutrient levels).

### **FACTORS AFFECTING CHANGES TO ECOSYSTEM COMPONENTS**

The major factors that influence both the type and degree of change to ecosystem components from recreation use are: the amount of use; the distribution of use; the type of user groups; party size; user behaviour; the mode of travel; and the environmental conditions of use sites. Factors related to management activities that can affect ecosystem components include prescribed fire for habitat enhancement and other fish and wildlife management practices (e.g., fish stocking). Each of these factors and the degree of impact resulting from them vary considerably. In general, at low levels of use, increases in use cause the most rapid change to ecological components. Impacts occur at less rapid rates at higher level of use, primarily because conditions have deteriorated as much as they can.

Overall, the levels of change are more severe for users: staying overnight; staying longer periods; and carrying more equipment. Similarly, larger parties tend to expand sites and cause more damage to vegetation and soil conditions than smaller parties. Motorized use tends to affect certain ecological conditions more than non-motorized use, primarily on levels of wildlife disruption, vegetation damage and soil compaction. However, horses and packstock also eat and trample vegetation, introduce non-native plant species and disturb soils. Hikers can also damage vegetation and soils at campsites and trails, pollute water sources and disrupt wildlife. For all types of users, the knowledge and practice of minimum impact behaviour lessens negative ecological effects.

As was mentioned earlier, site conditions also affect the extent of ecological effects from recreation use. However, the durability of a site is a very complex issue with few definitive answers. One characteristic may make a site durable while another makes it vulnerable. In addition, both a site's resistance (i.e., not be affected by use) and a site's resilience (i.e., ability to respond favourably after being affected) must be considered. In general: non-forested sites are more resistant to vegetation damage; sites with thick organic horizons are usually most durable; coarse textured soils are less highly erodible than fine textured soils; and erosion potential increases with increases of slope.

Susceptibility to negative effects varies among wildlife species and different environments. Little research has been done on impacts from recreation use, but in general, vulnerability is greatest: at centre key locations (e.g., breeding, spawning, feeding, birthing and watering areas); during periods of harsh weather; and during unproductive years. Riparian areas are almost always critical for many species.

As is the case with wildlife impacts, little research has been done on the susceptibility of different aquatic and riparian environments to damage from recreation activities. Indications are that: water bodies differ in their ability to tolerate damage; frequently flushed out bodies are less vulnerable; and lakes at high elevations are less productive, cooler with fewer nutrients and, therefore, are more at risk than lakes and streams at lower elevations.

### **MINIMIZING CHANGES TO ECOSYSTEM COMPONENTS**

As was mentioned earlier the knowledge and practice of minimum impact behaviour lessens negative changes to ecological components. The success of the "pack-it-in, pack-it-out" litter control program shows what can be done through education. There are, however, limits to what these practices can accomplish. Therefore, education is not a panacea; instead, it is a foundation on which to build a program of other actions to minimize the effects of recreation use.

Many potentially worthwhile minimum-impact techniques exist. Some of the more generally useful and non-controversial techniques include the following:

- Use proper equipment (e.g., waterproof tent floors make drainage ditches unnecessary);
- Keep party size small;
- Select resistant and appropriate campsites (e.g., avoid camping close to water sources);
- Limit firewood consumption and be careful with fire;
- Minimize site pollution (e.g., pack out all garbage);
- Properly dispose of human waste;
- Stay only a short time at individual campsites;
- Remove weeds/seeds from vehicles, boats and equipment (e.g., horse trailers);
- Avoid introducing non-native plant species by using clean livestock feed;
- Confine recreational livestock away from water sources, trails and camping areas and don't tether them to trees;
- Avoid contact with bears and harassing wildlife;
- Store all food in appropriate containers and out of reach of wildlife; and
- Stay on existing trails and avoid wet areas.

In conclusion, appropriate behaviour varies between and within different areas in the MKMA. It also varies for different seasons of the year. However, if all recreation users adopt a minimum-impact ethic, changes to ecological components can be minimized.

## **SUMMARY**

In those areas where recreation occurs, changes to ecological conditions are inevitable. Both the type and severity of effects vary for different use and user characteristic, ecosystem components, and the environmental resistance or resilience of sites. Impacts do not occur in isolation and single activities can cause multiple impacts. Due to the interrelationships of the main ecological components, each impact tends to worsen or balance off other changes.

Because there is potential for significant change (e.g., alterations to the distribution, population structure and behaviour of many wildlife species), ecological considerations are necessary when developing management objectives and activity guidelines for recreation use. The adoption of a minimum impact ethic can reduce or eliminate many of the negative effects from recreation use.

## MANAGEMENT DIRECTIONS FOR RESOURCE MANAGEMENT ZONES

### INTRODUCTION

A diversity of physical and biological features and recreation opportunities can be found in the different LRMP Resource Management Zones of the MKMA. The strategic management objectives and strategies developed by the LRMP tables for the RMZs have been used to delineate five categories of RMZs within the MKMA and to describe different resource, social and managerial conditions that will be maintained in those categories (see Figure 3).

The RMZs grouped into Category I are all small parks which were designated by the LRMP tables to protect significant natural or cultural features and/or outstanding heritage or recreation sites. The RMZs grouped in Category II are, for the most part, large remote areas in the northern part of the MKMA with very similar management objectives as determined by the LRMP tables. All of the major river corridor RMZs are grouped into Category III. The RMZs grouped into Category IV also had similar recreation management objectives as determined by the LRMP tables and are located in the southern portion of the MKMA. Category V is comprised of the Alaska Highway Corridor, the RMZ containing the highest level of development in the MKMA.

Conditions within these categories range from relatively primitive conditions to ones typified by relatively more visible impacts from recreation use. As such, these descriptions provide the management direction or desired future conditions for recreation in each of the LRMPs' Resource Management Zones, including new provincial parks, in the MKMA.

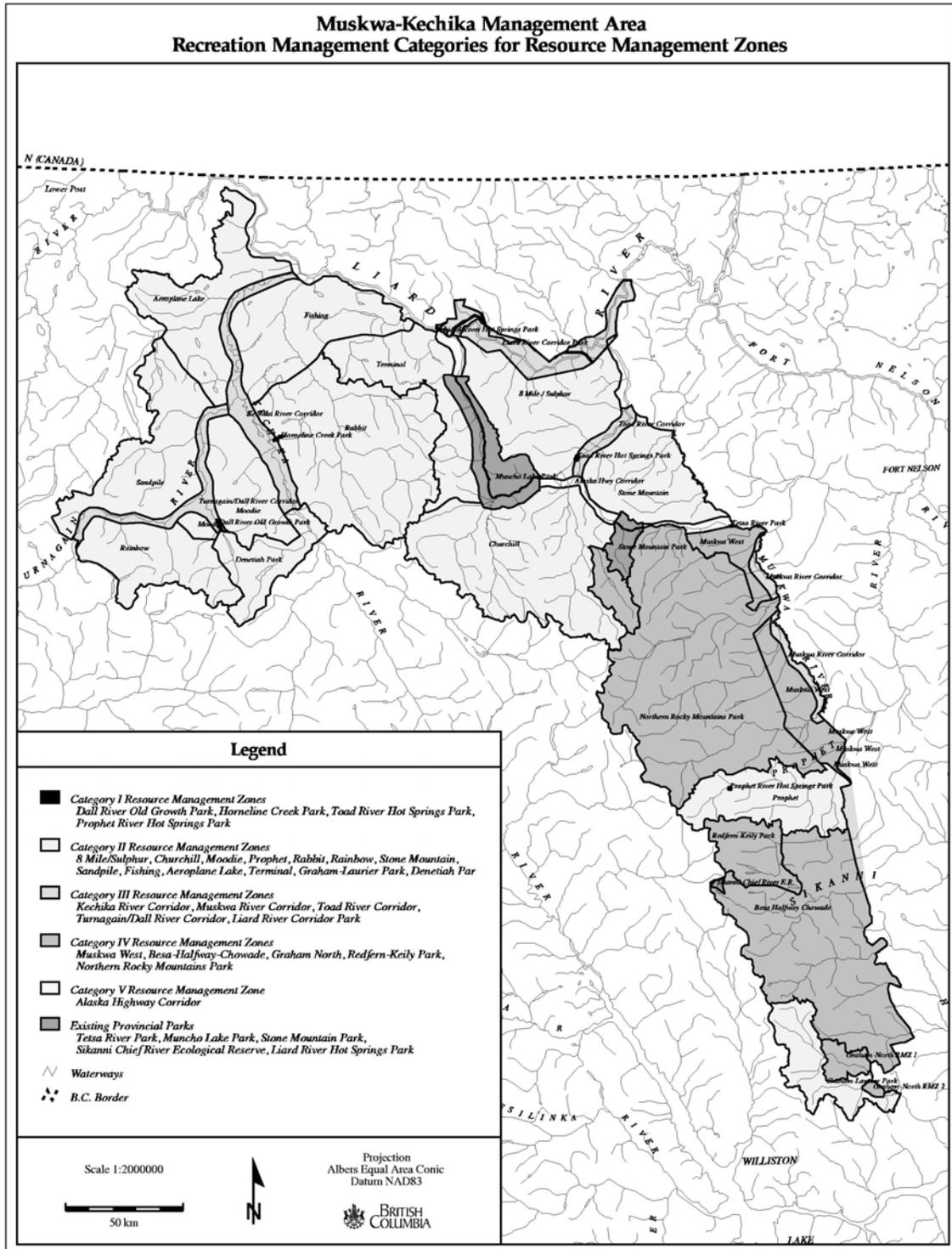
**(Note: As approved park management plans are “local strategic plans” as defined by the *MKMA Act*, parks with park management plans in existence at the time of MKMA establishment, i.e. Stone Mountain, Muncho Lake, Liard River Hot Springs and Tetsa River do not require further evaluation within this plan. While the General Management Directions of the LRMPs apply to these parks, the specific objectives for management of these parks are driven by their approved park management plans. Designation of Ecological Reserves are for research and education, therefore, recreation planning is not appropriate for the Sikanni Chief Ecological Reserve.)**

### GENERAL RECREATION MANAGEMENT DIRECTION

The following general recreation management directions apply to all of the Resource Management Zones, including new provincial parks, in the MKMA unless stated otherwise:

- Both public and commercial recreation uses are allowed in all RMZ categories, consistent with the category's management direction and other plans such as Forest Service District Recreation Plans and park management planning processes. Commercial recreation activities must be tenured by the appropriate government agencies.
- Other than designated Access Management Area routes, non-status campsites, trails and airstrips are not mapped or advertised. Established routes, designated campsites, and/or trails within a provincial park may be mapped and/or advertised as determined by future park management plans. In general, the intent is that routes, trails, campsites and airstrips will be unmapped and unadvertised, except where required to protect ecological values, wilderness recreation experiences or for safety reasons. (This direction does not apply to the Alaska Highway Corridor RMZ and the Toad River Triangle AMA exemption.)

Figure 3. Categories of RMZs



- Motorized water-based opportunities that existed at the time the LRMP was approved are allowed. (This is intended to allow motorized use of those rivers and lakes that have sufficient water flow and depth. Subsequent planning processes must identify those areas where motorized water-based recreation activities will be restricted due to unacceptable impacts on fish and riparian habitats and recreation experiences.)
- Generally low levels of aircraft access to and within the area are allowed. The construction of new airstrips for recreation purposes will generally be limited. Construction of new airstrips within provincial parks will not be allowed. Other motorized access or use for recreation purposes is allowed subject to Access Management Area regulations and park management planning decisions (see Appendix 3). For other restrictions on motorized use see Table 3.
- Helicopter and fixed-wing transported recreation activities have the potential to cause significant site-specific impacts as well as negative effects related to flight path disturbance. These commercial activities must avoid significant impacts to wildlife, sensitive wildlife habitat, wilderness characteristics and the recreation experience of users.
- More detailed planning initiatives (e.g., Forest Service district recreation planning, park management planning processes, etc.) must address impacts from recreation use on sensitive environmental values (e.g., critical winter wildlife habitat, calving areas, etc.).
- At this time, the plan does not address the appropriate size of recreation parties. However, in the future, acceptable maximum party sizes may need to be determined in more detailed planning initiatives to limit their impact on recreation experiences or the environment.
- Trails should be considered a public resource, not available for exclusive tenure or use.
- In those RMZs with high current demand for public use sites (e.g., in some river corridors, Northern Rocky Mountains Provincial Park, Alaska Highway Corridor, etc.) and where use is expected to increase in the future, allocation of sites for commercial use shall consider the needs of the public, First Nations' traditional use and occupancy, and park management plans within provincial parks.
- The process of evaluating/adjudicating commercial recreation applications must consider the effect of the proposed activities on sensitive ecosystem components (e.g., critical wildlife habitat, mineral licks, etc.) and First Nations' traditional use and occupancy. Expansion of CR operations or increases in public use levels may be allowed consistent with the RMZ category's management direction (see Table 3). Acceptable levels of use will be determined in subsequent more detailed planning (e.g., Forest Service district recreation planning, park management planning processes, etc.). In RMZ categories III, IV and V, this determination will take into account existing levels of motorized boat use.
- Constructing new trails and permanent facilities by the general public is prohibited except when authorized by the appropriate government agency. The same activities by commercial operators and registered non-profit societies must be approved through BCALC's CR tenuring process and its protocol agreement with the Ministry of Forests or through BC Parks' Park Use Permit process.
- To minimize negative bear/human interactions, government agencies, outdoor recreation organizations, commercial operators, etc. shall, whenever possible, provide information to the public on dealing with bear/human encounters; bear behaviour; the safest human behaviour while in bear country; and report incidents to the managing authority. All outdoor recreation users should practise and promote backcountry safety behaviour.
- Within provincial parks, the use of off-road motorized recreational vehicles and boats may be restricted either by type of vehicle, time of year, areas or routes as determined through park management planning processes, emerging conservation concerns or safety-oriented issues.
- Determination of the appropriateness of recreation activities that develop in the future will be evaluated on an as needed basis and subject to park management planning processes within provincial parks.
- The Fort Nelson LRMP directed that exotics, such as llamas and ostriches, are not to be used as pack animals in provincial parks. The reason for this direction is an attempt to avoid any diseases being introduced, as this would

compromise the ecological integrity of the area. Over time, horses and mules have proven to be compatible with the environment. With time and research, it may be proven that exotics are also compatible. If this turns out to be the case, then this direction can be revisited and amended. (See Recommendation #5 in the section titled “Recommendations.”)

- Except for roads designated and maintained as AMA routes, roads are not to be built for recreational purposes within the provincial parks.
- Decisions made in RMZs adjacent to provincial parks will encourage management activities that support the intended objectives and acceptable uses of the parks, including conservation and, where appropriate, recreation.
- Minimum impact camping practices, e.g., “Tread Lightly” programs, are strongly encouraged for visitors to the MKMA.

### **CATEGORY I RMZ'S**

Dall River Old Growth Provincial Park, Horneline Creek Provincial Park, Toad River Hot Springs Provincial Park and Prophet River Hot Springs Provincial Park. **(Note: These parks are all smaller than 650ha and were selected to ensure the protection of significant natural or cultural features and/or outstanding heritage or recreational sites.)**

#### **Desired Future Conditions**

**Resource Setting** - Management activities are directed towards maintaining an essentially undisturbed and unmodified environment; protection of the special feature is paramount. Site modifications are minimal. Tenured developments and camps are not compatible within this category. There are relatively few campsites and developed trails. Access is limited to non-motorized methods except for motorized boats.

**Social Setting** – There is little chance of human contact in the area. There are high opportunities for solitude and isolation with a very low likelihood of interaction with other users. Party sizes are small. Visitors have a very high opportunity for experiencing independence and self-reliance associated with wilderness recreation skills, and for experiencing challenge and risk.

**Managerial Setting** – Management activities in the area will emphasize protection and ongoing monitoring of the resource. Management activities in the area will minimize impacts on the wilderness recreation experience. Rules, regulations and minimum impact practices will usually be communicated outside the area. Signs are generally not allowed except where necessary to protect environmental conditions or for safety. Spot checks by management personnel will occur to ensure compliance with the area’s management direction.

### **CATEGORY II RMZ'S**

*8 Mile/Sulphur, Churchill, Moodie, Prophet, Rabbit, Rainbow, Stone Mountain, Sandpile, Fishing, Aeroplane Lake, Terminal, Graham-Laurier Provincial Park and Denetiah Provincial Park.* **(Note: Some of the RMZs in this category, except for the provincial parks, have significant potential for industrial activities. The long-term objective is to return these areas to their natural state as these activities are completed. During the periods these development activities are taking place, there is a greater potential for recreationists to encounter other resource users. These activities may modify the desired recreational experience to some degree.)**

#### **Desired Future Conditions**

**Resource Setting** - Management activities are directed toward maintaining an essentially unmodified environment. (However, there are areas where prescribed fire has been used in the past and may be used in the future to enhance wildlife habitat and forage for recreational livestock. In the past, site modifications at some guide outfitter camps have been significant.) There are relatively few facilities and developed trails. When present, facilities are generally low-key, rustic, widely dispersed and compatible with the resource setting. There is very little motorized vehicle access in this category of RMZs. Air transport, and in some RMZs water transport, plays a significant role in providing access into these remote areas, however use levels are low.

**Social Setting** – There is little chance of human contact in the area except along trail corridors or at major access and destination points. Away from these areas, high opportunities for solitude and isolation exist with a very low likelihood of interactions between users. In general, party sizes are small. Visitors have a very high opportunity for experiencing independence and self-reliance associated with wilderness recreation skills, and for experiencing challenge and risk.

**Managerial Setting** – Management activities in the area will minimize impacts on the wilderness recreation experience. There is a low likelihood of contact between the public and management personnel. However, spot checks will occur to ensure compliance with the area's management direction. Necessary rules, regulations and information on minimum impact practices will be communicated to visitors outside the area, such as at trailheads or other suitable locations. Signs are generally not allowed except where absolutely necessary to protect environmental conditions or for safety.

### **CATEGORY III RMZ'S**

*Kechika River Corridor, Muskwa River Corridor, Toad River Corridor, Turnagain/Dall River Corridor, and Liard River Corridor Provincial Park.*

#### **Desired Future Conditions**

**Resource Setting** – Management activities are directed toward maintaining an essentially unmodified environment. (There are areas where prescribed fire has been used in the past and may be used in the future to enhance wildlife habitat and forage for recreational livestock. In the past, site modifications at someguide outfitter camps have been significant.) There are relatively few facilities and developed trails. When present, facilities are generally low-key and rustic. Motorized water transport plays a significant role in providing access within these corridors.

**Social Setting** – There is occasional human contact in the area, usually in the vicinity of navigable rivers, lakes, AMA routes and aircraft landing strips. Away from these areas, high opportunities for isolation and solitude exist with a likelihood of low interactions between users. Small to moderate party sizes are expected. Visitors have high opportunities for experiencing independence and self-reliance associated with wilderness recreation and for experiencing challenge and risk.

**Managerial Setting** - Management activities in the area will minimize impacts on the wilderness recreation experience. There is a low likelihood of contact between the public and management personnel. However, spot checks will occur to ensure compliance with the area's management direction. Necessary rules, regulations and information on minimum impact practices will be communicated to visitors outside the area, such as at trailheads or other suitable locations. Signs are generally not allowed except where necessary to protect environmental conditions or for safety.

#### **Management Activity Guidelines**

The following are general guidelines to be used to ensure that recreation activities are consistent with the above management direction for this category. Additional guidelines can be found in Table 3.

- There is, at present, significant motorized boat use in the river corridors in this category, particularly during hunting season. (Current levels of use may not allow expansion of CR opportunities utilizing motorized boats.)
- Recurring riverboat access and use should be sensitive to RMZ values and resource user activities.
- In the summer, no motorised vehicle access is allowed off rivers, except for designated park or AMA routes in the Liard River Corridor Provincial Park.

### **CATEGORY IV RMZ'S**

*Muskwa West, Besa-Halfway-Chowade, Graham North, Redfern-Keily Provincial Park, and Northern Rocky Mountains Provincial Park.* **(Note: The RMZs in this category, except for the provincial parks, have significant potential for industrial activities. The long-term objective is to return these areas to their natural state as these activities are completed. During the periods these development activities are taking place, there is a greater**

**potential for recreationists to encounter other resource users. These activities may modify the desired recreational experience to some degree.)**

### **Desired Future Conditions**

**Resource Settings** – Management activities are directed toward maintaining an environment that ranges from essentially unmodified areas to areas that are modified, including areas modified by prescribed fire. (In the past, site modifications at some guide outfitter camps have been significant.) Facilities are, for the most part, rare, isolated and are generally low-key and rustic. Developed trails are common along watercourses, waterbodies and mountain passes. Motorized water, air and vehicle transport plays a significant role in providing access into these areas. At some times of the year, motorized use levels may be high along rivers and AMA routes.

**Social Setting** – The chance of human contact ranges from rare to frequent on travel corridors, aircraft landing strips, along rivers or at major destination points like lakes. Away from these areas, high to moderate opportunities exist for experiencing solitude and isolation. Interaction between users ranges from very low to moderate away from those travel corridors and destination points mentioned above. Small to large party sizes may be encountered. Opportunities for experiencing independence and self-reliance associated with wilderness recreation skills and for experiencing challenge and risk range from very high to moderate.

**Managerial Setting** – Management activities in the areas will, for the most part seek to minimize the impacts on the wilderness recreation experience. Rules, regulations and minimum impact practices will usually be communicated outside the area. Signs are generally not allowed except where necessary to protect environmental conditions or for safety. Contacts between the public and management personnel will, for the most part, be infrequent. However, spot checks will occur to ensure compliance with the area's management direction.

### **Management Activity Guidelines**

The following are general guidelines to be used to ensure that recreation activities are consistent with the above management direction for this category. Additional guidelines can be found in Table 3.

- Recurring aircraft access and use should be sensitive to RMZ values and resource user activities.
- There is, at present, significant motorized boat use in the river corridors in this category, particularly during hunting season. Current levels of use may not allow expansion of CR opportunities utilizing motorized boats.)

## **CATEGORY V RMZ**

***Alaska Highway Corridor*** (Note: This category has significant potential for enhanced resource development. The management intent is to manage the highway corridor to enhance the recreation and tourism resources.)

### **Desired Future Conditions**

**Resource Settings** - Management activities are directed toward maintaining an environment that ranges from unmodified areas to intensely modified areas, including areas modified by prescribed fire. Facilities and trails are common and oriented toward high tourism use. High levels of motorized transport can be expected, especially during peak tourism periods and along the Alaska Highway.

**Social Settings** – The chance of human interactions is highly likely, especially close to the highway. Opportunities for experiencing solitude and isolation increase with the distance from the highway.

**Managerial Settings** – Management activities in this area will, for the most part, promote recreation activities that enhance highway-based tourism with emphasis on destination activities. Signs are allowed, subject to approval of appropriate government agencies.

### **Management Activity Guidelines**

The following general guidelines are to be used to ensure that commercial recreation activities are consistent with the above management direction for this category. Additional guidelines can be found in Table 3.

- While there will be areas of concentrated localized commercial development within the corridor, the remaining areas along the highway corridor will be managed to maintain ecological integrity, wildlife, habitat and wildlife corridors. There will be an increasingly unmodified environment away from the highway.
- All proposals for development on Crown land in this category must provide a detailed business plan that demonstrates:
  1. the feasibility, sustainability and compatibility of proposed recreation development with existing highway use and development;
  2. the distinct need for the proposed development; and
  3. the lack of development opportunity on private land.

### **RECREATION ACTIVITY GUIDELINES**

As was pointed out in an earlier section, a number of recreation activities have traditionally taken place in the MKMA and there is potential for new activities in the future. Table 3 describes the acceptability of those recreation activities for the different RMZ categories. Generally, the activity guidelines reveal the compatibility of specific activities throughout each of the categories. There may, however, be specific areas within these categories where activities are not appropriate; for reasons such as environmental sensitivity, wildlife and wildlife habitat protection, user conflicts and/or for the protection of special features and the wilderness recreation opportunity, itself. The determination of such specified areas will be developed in more detailed planning initiatives (e.g. Forest Service district recreation planning, park management planning processes, wildlife management planning, etc.) and through public and First Nations' consultation. In provincial parks, activities must also be consistent with the cabinet approved *Resource and Recreation Use Guidelines for Protected Areas*.

**Table 3. Activity Guidelines for Categories of RMZs**

Activities	Category I RMZ's	Category II RMZ's	Category III RMZ's	Category IV RMZ's	Category V RMZ
Camping	A	A	A	A	A
Hiking	A	A	A	A	A
Hunting	A	A	A	A	A
Angling	A	A	A	A	A
Ice-Fishing	A	A	A	A	A
Photography	A	A	A	A	A
Wildlife Viewing	A	A	A	A	A
X-country Skiing	A	A	A	A	A
Rock climbing	NA	A	A	A	A
Ice climbing	NA	A	A	A	A
Spelunking	A	A	A	A	A
Trapline observing	A	A	A	A	A
Trail Riding	A	A	A	A	A
Rafting	A	A	A	A	A
Canoeing	A	A	A	A	A
Kayaking	A	A	A	A	A
Cycling	A	A	A	A	A
Non-Motorized Boats	A	A	A	A	A
Motorized Boating	A	A	A	A <sup>3</sup>	A
Recreational flying	A	A	A	A	A
Snowmobile	NA	A	A	A	A
ATVs	NA	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>
Vehicles	NA	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>	A <sup>1</sup>
Heli-Hiking	NA	A <sup>2</sup>	A <sup>2</sup>	A <sup>2</sup>	A <sup>2</sup>
Heli-Skiing	NA	A <sup>2</sup>	A <sup>2</sup>	A <sup>2</sup>	A <sup>2</sup>
Competitive sporting events	NA	A <sup>4</sup>	A <sup>4</sup>	A <sup>4</sup>	A <sup>4</sup>

A=Acceptable, subject to restrictions to protect fish and wildlife, other resource users and the natural environment in general. NA=Not Acceptable. Commercial recreation activities are subject to tenuring or permitting conditions.

- 1 Only on designated AMA routes or designated park routes and subject to weight restrictions
- 2 Heli-hiking and heli-skiing activities have the potential to cause significant site-specific impacts as well as negative effects related to flight path disturbance. These commercial activities must avoid significant impacts to wildlife, wildlife habitat, wilderness characteristics and the recreation experience of users.
- 3 No motorized boats above Tuchodi Lakes.
- 4 Subject to approvals from appropriate government agencies and government corporations

## PRINCIPLES TO GUIDE THE REVIEW OF COMMERCIAL APPLICATIONS

The legislation, policies and guidelines of BCALC and BC Parks presently guide the review of commercial recreation applications. These policies and guidelines include principles in respect of: protecting environmental integrity and maintaining biological diversity; maintaining public access; providing a balanced mix of recreational experiences; ensuring compatibility of overlapping tenures; fair and open consultation taking into account locally established priorities and public interests; meaningful consultation with First Nations; providing economic opportunities for First Nations; and considering the implications of present and future treaty provisions.

Commercial recreation activities within provincial parks take direction from the *Park Act*, generally not resulting in any alienation of park land or exclusive rights associated with the activity. In addition, the intent of permitting commercial recreation is to enhance the experience of park users consistent with the values of a particular park, not solely to provide economic development opportunities.

In the following sections, we more fully discuss some of these principles, and others, as they relate more specifically to the MKMA. Generally speaking, they are discussed in order of importance as factors to consider when evaluating commercial recreation applications, particularly those that may be competing or have overlapping interests.

### 1. Maintain and Protect Ecological and Environmental Integrity of the MKMA

Recreation development and use is allowed in the MKMA. However, it is clear from the *Muskwa-Kechika Management Area Act* and the Muskwa-Kechika Management Plan that such development will be limited by the primary objective of maintaining and protecting the globally significant wildlife populations and the wilderness environment. It is critical that this be recognized and considered in the review of commercial recreation applications.

It is the responsibility of applicants for commercial recreation businesses or tenures to clearly demonstrate that their proposed venture will not cause significant negative impacts on the environment, including wildlife, wildlife habitat, and wilderness values. BC Parks policy requires new commercial recreation applications to be assessed through an impact assessment process. An assessment of cumulative impacts must be included in CR evaluations.

### 2. Consider Rights and Interests of First Nations

The whole of the MKMA is subject to either the provisions of Treaty #8 or the aboriginal rights and interests of the Kaska Dena or other First Nations which have not, as yet, been codified into a treaty. The interests of the Treaty 8 First Nations, the Kaska Dena or other First Nations must be carefully considered when evaluating applications for commercial recreation activities and tenures.

Applicants for commercial recreation businesses or tenures must demonstrate that their proposal has considered First Nations' rights and interests. Present government policy dictates that First Nations be consulted about commercial recreation proposals, and the responsibility for meaningful and fair consultation lies with the government, and not with the applicant. However, it would be prudent for applicants for new commercial recreation businesses to communicate with affected First Nations during the development of their proposal.

### 3. Maintaining Public Access and Use

Maintaining public access to enter and traverse the MKMA is a primary consideration in reviewing and evaluating proposals for CR activities. Public access, as defined here, means the privilege enjoyed by the general public to use an area maintained in the same way and to the same degree as was available prior to tenuring a CR activity. Maintaining historical and future public use is a priority.

The review and evaluation of CR applications must consider the effects the proposed activities may have on existing and future public access and use levels. Priority will be given to those applications that: 1) identify potential conflicts with public use; and 2) most clearly demonstrate measures the applicant will use to minimize/mitigate impacts on public recreation use in the MKMA. BC Parks generally issues non-exclusive permits to ensure public access is maintained. CR evaluations will also consider the extent to which the applicant has consulted with the public recreation sector.

#### **4. Be Cautious in Allocating New Commercial Recreation Interests**

The information is not available at present that would allow the Working Group to set precise capacity thresholds for various types of recreational activities in the MKMA. As a result, proposals for commercial recreation activities must be evaluated using available information and best professional judgement without always fully understanding the capacity of the environment to absorb those activities without causing significant degradation of the values that the MKMA was created to protect. Time is required to assess the full impacts of existing and newly allocated commercial recreation activities, tenures and permits, and to determine appropriate thresholds. Therefore, it is incumbent on managers to take a conservative, cautious approach to issuing approvals for commercial recreational activities and tenures while these thresholds are being determined. Prior to the approval of new CR tenures or permits, managers must identify those areas in the vicinity that will be held for the maintenance of ecological integrity and for the needs of First Nations and the public.

#### **5. Leave Room for Future Allocations**

Even if capacity thresholds could be fully defined at this point, the capacity of an area for recreation activities must not be fully allocated to allow for the consideration of future CR activities. This is a particularly critical issue for First Nations. First Nations, whose traditional territories encompassed the MKMA, must benefit from economic development, including recreation development, in the MKMA.

Currently, First Nations' people are at a serious disadvantage in acquiring commercial recreation tenures and permits. They generally lack familiarity with commercial recreation policies and application procedures and often do not have the business skills that would allow development of a successful commercial recreation venture. Time is required to build this capacity within First Nations' communities.

#### **6. Give Preference to Applicants with Good Track Records**

Applicants with a good track record of operating within the guidelines, policies, and regulations in respect of commercial recreation and related matters, should have preference over those who have a poor track record. This should not, however, limit the fair consideration of proposals from new applicants who have no track record of operating CR businesses.

#### **7. Involve Local Residents in Commercial Recreation Activities**

The level of unemployment is very high in some parts of the northern half of British Columbia. It is fundamentally important that residents of the area benefit from economic development initiatives, including commercial recreation ventures. Operators of commercial recreation businesses in the Muskwa-Kechika should be encouraged to hire local residents, and should demonstrate in their applications for commercial recreation tenures and permits how their proposed business will benefit the local economy.

## **MONITORING PLAN**

### **INTRODUCTION**

Monitoring is the regular assessment of a situation or management program that provides information on the success of management decisions. Monitoring is essential to understanding: (1) the current magnitude of impacts; (2) changes in these impacts over time; (3) the relationship between current conditions and management objectives; and (4) the strengths and weaknesses of the management system. Monitoring can also facilitate adaptive management. For example, monitoring information on commercial operators performance can be considered when renewing or amending tenure documents. In short, monitoring provides the basis for determining whether the desired future conditions for the MKMA are being achieved.

Monitoring methods should be objective and simple, designed to detect changes in conditions and repeated frequently enough to detect trends. Methods should yield consistent results when different people collect data. This is important because management personnel frequently change positions.

### **MONITORING FACTORS, INDICATORS AND PROCEDURES**

Table 4 lists a number of factors that will be monitored to ensure desired future conditions are being achieved for the different RMZ category settings in the MKMA. For each factor, measurable indicators are described that together will reflect the condition of the factor. These indicators will be monitored over time according to the procedures outlined in the table.

### **MONITORING SCALE**

Normally, monitoring will be conducted at the RMZ level. However, information will be aggregated for categories of RMZs to more clearly measure meeting the desired future conditions for that type of category.

### **ACCEPTABILITY OF CONDITIONS MONITORED**

To provide a base against which a particular desired future condition can be judged as acceptable or not, standards need to be specified for each indicator. For example, if the written description for a RMZ category's social setting specifies a "likelihood of low interactions between users," managers can use the monitoring data to help specify how "low interactions" might be quantitatively defined. The monitoring data might show that encounters levels average 2-3 other parties per day. These data could be used to help set the standard for the "encounters with other parties per day" indicator to define the maximum acceptable level for that condition in that RMZ category.

At this time standards for the indicators in Table 4 have not been established due to the lack of data on existing conditions in the MKMA. This plan recommends (see the section on Recommendations) that MK managers in consultation with First Nations and stakeholders co-operatively begin the process to establish these standards to help ensure desired future conditions are being achieved.

**Table 4. Monitoring Factors, Indicators and Procedures**

Zone Setting	Factor	Indicator	Monitoring Procedure		
			Inventory Method	Sampling Procedure	Frequency
<b>Resource Setting:</b>	Facility levels/types <sup>1</sup>	Number/type of new facilities per year	Audit BCALC/BC Parks/ MOF/BC Environment permits/records	Census of all facility developments at end of fiscal year	Annually
	Trail development	Number/km of authorized trails per year	Audit BCALC/BC Parks/ MOF permits/records	Census of all authorized trails at end of fiscal year	Annually
	Prescribed burns	Type (i.e., new maintenance)/number/size (ha) per year	Audit of MOF/BC Environment/BC Parks records	Census of all burns at end of fiscal year	Annually
	Campsite development: 1) public use sites 2) commercial sites (exclusive use only)	Number/condition of campsites	Campsite impact evaluation using campsite impact rating form	Rate each campsite before hunting season	Rate each campsite every 5 years
	Range tenures	Number/AUMs of range tenures	Audit MOF/BC Parks records	Census of all range tenures	Annually
	Range condition	Overall condition	Evaluation of range sites using ocular estimates/exclosures	To be determined	As needed
	Motorized routes	Number/km of AMA routes and designated park routes	Audit of BC Environment AMA routes and BC Park records	Census of all AMA and BC Park designated routes	Annually
	Motorized use: Boat Snowmobile Aircraft Helicopter ATV	Number (median, range) of sightings per month during use season	Survey of use patterns using visual counts	Administrative survey at appropriate locations on randomly selected days during use season	To be determined

<sup>1</sup> Facilities denotes permanent structures e.g., cabins, docks, corrals, bridges, parking lots, etc.

Table 4 – Continued

Zone Setting	Factor	Indicator	Monitoring Procedure		
			Inventory Method	Sampling Procedure	Frequency
<b>Social Setting:</b>	Recreation use: 1) Commercial 2) Public	Recreation activity type/ Recreation user days per year	Audit BCALC/BC Parks records and survey of public activity/ use levels using appropriate sampling procedures	To be determined	Every 5 years
	Party size	Size (median, range) of parties	Survey of party size using appropriate sampling procedures	To be determined	Every 5 years
	Encounter levels	Number (median, range) of other parties encountered per day	Survey of encounter levels using appropriate sampling procedures	To be determined	Every 5 years
	Motorized use: Boat Snowmobile Aircraft Helicopter ATV	Number (median, range) of sightings per day	Survey of encounter levels using appropriate sampling procedures	To be determined	Every 5 years
	Management presence	Number (median, range) of management personnel encountered per day	Survey of encounters using appropriate sampling procedures	To be determined	Every 5 years
	<b>Managerial Setting:</b>	Human/bear safety- related interactions	Number/type of interactions per year	Audit of agency records	Census of all incidents at end of fiscal year
Signs		Number/type of signs	Audit of agency records	Census of all signs at end of fiscal year	Annually
User/Environmental degradation incidents		Number/type of incidents per year	Audit of agency records	Census of all incidents at end of fiscal year	Annually
User/wildlife incidents		Number/type of incidents per year	Audit of agency records	Census of all incidents at end of fiscal year	Annually

Table 4 - Continued

			<b>Monitoring Procedure</b>		
<b>Zone Setting</b>	<b>Factor</b>	<b>Indicator</b>	<b>Inventory Method</b>	<b>Sampling Procedure</b>	<b>Frequency</b>
<b>Managerial Setting:</b>	User conflict incidents	Number/type of incidents per year	Audit of agency records	Census of all incidents at end of fiscal year	Annually
	Search/rescue incidents	Number/location of incidents	Audit of agency records	Census of all incidents at end of fiscal year	Annually

## RECOMMENDATIONS

A previous section of this plan described a number of issues and concerns identified by individuals and groups who participated in the information gathering activities of the WG. Additional management and implementation issues and the need for more detailed recreation planning were also identified as the recreation management directions were developed. The purpose of this section is to advance specific recommendations for resolving many of the identified issues and needs. Not all of the identified issues and concerns are addressed here. However, they all have been forwarded to the appropriate provincial government agencies for consideration. The following recommendations are not listed in order of priority.

### **Collection of Information and Research:**

#### **RECOMMENDATION #1 – Recreation Inventory**

Effective planning and management of recreation resources require reliable and up-to-date recreation supply information. In particular, recreation inventory information on biophysical features, recreation activities and the Recreation Opportunity Spectrum is critical.

*To fill recreation inventory gaps and, thereby, facilitate more detailed recreation planning needed in the MKMA, it is recommended that the MOF and BC Parks update the recreation inventory information.*

#### **RECOMMENDATION #2 – Baseline Information on Recreation Use**

Understanding wilderness recreation use is an essential foundation for effective recreation management in the MKMA. The MK RMP planning process has identified the lack of detailed knowledge of the amount of use, user characteristics, economic value and attitudes toward wilderness in the area. Therefore, to successfully manage and monitor changes in recreation use over time, the collection and analysis of baseline information is critical.

*It is recommended that the MK Advisory Board fund comprehensive studies to collect the above information using appropriate scientific wilderness recreation use data collection and analysis methodologies.*

#### **RECOMMENDATION #3 – Research on the Effects of Recreation**

The need to enhance the scientific knowledge base regarding the effects of recreation activities on ecological components was identified in the MK RMP planning process. In particular, the effect of motorized boat use on fish/wildlife and the effects of using prescribed fire to enhance forage for wildlife and recreational livestock on soil and vegetation were identified as important information deficiencies.

*It is recommended that the MK Advisory Board, its research partner, UNBC, and resource management agencies give a high priority to conducting research to enhance the scientific knowledge base in respect of the impacts of recreation activities on the natural environment.*

#### **RECOMMENDATION #4 – Levels of Riverboat Use**

High levels of riverboat use and increasing levels of use on relatively unused river systems were identified as a concern. However, reliable statistics on riverboat use, especially on specific rivers, is not available.

*To effectively plan for and manage this highly valued recreation opportunity, it is recommended that BC Parks and MOF systematically gather riverboat use information using appropriate scientific methods. In addition, appropriate management strategies must be developed, consistent with the management direction, to address identified riverboat use levels.*

#### **RECOMMENDATION #5 – Use of Exotics**

The Fort Nelson LRMP highlighted a concern regarding the use of exotics (llamas and ostriches) as pack animals in provincial parks and the potential of spreading disease, particularly among native Stone's sheep populations. This potential also exists in other areas of the MKMA with Stone's sheep populations.

*To address this concern, it is recommended that the MK Advisory Board in co-operation with its research partner, UNBC, BC Environment, MOF and BC Parks facilitate research on this topic and that MELP provide policy direction on the issue (e.g., in the Wildlife Management Plan for the MKMA.).*

#### **RECOMMENDATION #6 – Fisheries Inventory and Management**

Fisheries biologists with BC Environment have indicated that insufficient information exists to establish priorities for fisheries management and protection of fish and fish habitat in most of the MKMA.

*It is recommended that MELP prioritize and fill fish and fish habitat inventory information gaps, including harvest levels/use/distribution and knowledge about species rarity in the MKMA and use this inventory information in developing a fisheries management plan*

#### **RECOMMENDATION #7 – First Nations' Traditional Use and Occupancy Information**

The MKMA RMP planning process has identified that there are information gaps concerning First Nations' traditional use and occupancy information. Filling these gaps is essential for effective recreation planning and management in the MKMA.

*It is recommended that the MK Advisory Board fund First Nation's traditional use and occupancy studies to fill critical information gaps that presently limit the efficacy of recreation planning and management. Any funding should be contingent on the development of an information sharing agreement concerning the use and distribution of First Nations' traditional use and occupancy information.*

#### **RECOMMENDATION #8 – Indicator Standards/Thresholds**

Closely associated with Recommendation #9 is the need to develop monitoring indicator standards (maximum acceptable levels or thresholds) for various factors described in the MKMA RMP Monitoring Plan.

*It is recommended that MOF, BC Parks, BC Environment and BCALC work co-operatively with First Nations, local governments and users to develop indicator standards (maximum acceptable levels or thresholds) consistent with management directions*

#### **RECOMMENDATION #9 – Monitoring**

This plan contains a specific monitoring plan to achieve the desired future conditions for recreation. Responsibility for the on-going monitoring of conditions lies with the provincial government and its agencies/corporations.

*It is recommended that all of the appropriate government ministries, agencies and corporations agree to implement the MKMA RMP Monitoring Plan and report the results of their monitoring activities to the MK Advisory Board on an annual basis.*

#### **RECOMMENDATION #10 – Information Management**

Due to the vastness and the variety of land-uses in the MKMA, the amount of information needed to manage the area's resources, track operational activities and achieve the intent of the *MKMA Act* is enormous. The MK Advisory Board and government has begun to develop an information management system to effectively carry out these activities.

*It is recommended that the board and government agencies continue to develop the system to store and analyze needed information, including existing and updated recreation inventory information along with the results of on-going monitoring data.*

**Policy Issues:****RECOMMENDATION #11– Resolution of “Packer Issue”**

One of the most widely communicated recreation-related issues in the MKMA was the need for resolution of the so called “packer issue.”

*It is recommended that BC Environment continue to work with the BC Wildlife Federation, the Guide Outfitter Association of BC and the Packers Association to reach a solution to this issue by 2001.*

**RECOMMENDATION #12 – Introduction of Non-Native Fish Species**

The pros and cons of introducing non-native fish species in the MKMA were identified during the consultation process.

*It is recommended that BC Environment and BC Parks continue their policy of not stocking non-native fish in the MKMA.*

**Enforcement Issues:****RECOMMENDATION #13 – Enforcement Issues**

Another issue/concern raised by users, First Nations and government agencies was that of enforcement. Associated with this concern was the need for a greater “management presence.”

*To address these various issues, it is recommended that resource management agencies, in co-operation with the MK Advisory Board, First Nations and user organizations, enhance their enforcement efforts and management presence in a manner consistent with the management direction for each category of RMZs.*

**RECOMMENDATION #14 – Motor Vehicle Access**

The Fort St. John and Fort Nelson LRMPs endorsed the use of the *Wildlife Act* to limit motorized vehicle access in the MKMA to designated routes to limit environmental impacts from vehicle access.

*It is recommended that MELP continue to use and monitor compliance with the regulation. In addition, it is recommended that MELP continue to use a public, First Nations and inter-agency consultation process for periodic review and revision of the regulation. Agencies should also consider the use of other mechanisms such as the Forest Practices Code of BC Act to better manage motorized access.*

**RECOMMENDATION #15 – Public Reporting**

The MKRMP planning process identified the importance of facilitating the collection of information on various enforcement (e.g., AMA violations, wildlife violations, etc.) and safety (e.g., bear/human incidents) issues.

*It is recommended that the MK Program Management office and co-ordinator, through their offices and communication strategies, encourage the continued use of the provincial 1-800 number for reporting enforcement and safety issues within the MKMA. The information collected must be communicated to appropriate government agencies and other organizations.*

**Education Issues:****RECOMMENDATION #16 – Education**

The need for increased education regarding appropriate backcountry user ethics, safe bear/human encounter behavior and “best commercial operator practices” behavior was voiced during the consultation process.

*It is recommended that the MK Advisory Board and resource management agencies, in co-operation with First Nations, user organizations, regional tourism organizations and other government agencies, continue to develop and implement education strategies to address these needs.*

### **CR Application Process:**

#### **RECOMMENDATION #17 – Review of CR Applications**

BCALC is the Government Corporation responsible for approving and granting tenure to commercial recreation activities on Crown Land outside of Provincial Parks. BC Parks approves permits for these operations in the parks, consistent with the *Park Act*. Both of these organizations have policies and procedures governing the approval process.

*It is recommended that BCALC and BC Parks use, together with their own policies, guidelines and legislation, the principles detailed in the section of this report titled “Principles to Guide the Review of CR Applications” in assessing applications for commercial recreation activities, tenures and permits in the MKMA.*

#### **RECOMMENDATION #18 – First Nations and CR Application Processes**

First Nations’ people, whose traditional and treaty territories are encompassed by the MKMA, must benefit from economic development, including recreation development, in the MKMA. But they are currently at a serious disadvantage in applying for and acquiring commercial recreation tenures and permits because of a lack of familiarity with the policies and application procedures in respect of commercial recreation.

*It is recommended that BCALC and BC Parks hold regularly scheduled (e.g., annual) workshops and information sessions in First Nation’s communities on commercial recreation policies and application processes.*

#### **RECOMMENDATION #19 – Consultation with First Nations on CR Applications**

The responsibility for meaningful and fair consultation with First Nations on commercial recreation proposals lies with the government. In order to ensure that consultation is appropriate for and effective in the MKMA, clarification on specific consultation mechanisms are needed.

*Taking into consideration their existing policies regarding consultation with First Nations, BC Parks and BCALC should work with affected First Nations in the MKMA to work out effective consultation mechanisms in respect of CR proposals.*

### **Plan Implementation and Future Planning:**

#### **RECOMMENDATION #20 – More Detailed Planning**

Because of the site-specific nature of many of the management issues identified in the MK RMP planning process, the WG recognized the need for more detailed planning processes to adequately address the issues and develop effective management directions and activity guidelines.

*It is recommended that BC Parks, MOF, BCALC, BC Environment and the Ministry of Small Business, Tourism and Culture develop and implement planning strategies to address those issues. Examples of potential planning processes include: BC Forest Service district recreation planning; park management planning; wildlife management planning; and the Commercial Recreation Technical Review Committee process. Recommended priorities for implementing planning processes are listed in the Implementation Schedule.*

#### **RECOMMENDATION #21 – Wildlife Management Planning**

Presently, hunting is one of the most significant recreation activities in the MKMA. Because of the close inter-relationship between recreation management and hunting in the MKMA, wildlife management planning is critical for effective management of recreation resources.

*It is recommended that the MKMA Advisory Board and BC Environment continue to give high priority to developing and implementing a Wildlife Management Plan, including provisions for the collection of reliable wildlife population and harvest data.*

**RECOMMENDATION #22 – Plan Review and Revision**

Successful implementation of specific recreation management directions and adapting management strategies to respond to changing conditions in the MKMA over time requires periodic review and possibly revisions to the MKMA RMP.

*It is recommended that government agencies in consultation with the MK Advisory Board, First Nations and users periodically review all elements of the MKMA RMP (in accordance with the Implementation Schedule) and make any needed revisions to achieve the intent of the MKMA Act. In this process, emphasis should be given to evaluating the effectiveness of indicators, standards (maximum acceptable levels or threshold), and monitoring procedures.*

**RECOMMENDATION #23 – Implementation**

Implementation of this MKMA Recreation Management Plan must be carried out in a coordinated fashion and in a cooperative and collaborative manner.

*It is recommended that an ongoing Implementation Committee be struck by the Peace Managers Committee to ensure that the Implementation Schedule is followed and all reporting requirements are met.*

## **PLAN IMPLEMENTATION AND REVIEW**

### **INTRODUCTION**

This recreation management plan for the MKMA identifies recreation management directions, management activity guidelines, and recreation activity guidelines for the RMZs developed in the Fort Nelson and Fort St. John LRMPs. In addition, a number of recommendations were made to ensure the plan is effectively achieved. Implementation of the LRMPs and, consequently, this “local strategic plan” is the legal responsibility of the provincial government resource management agencies and government corporations. However, as pointed out by a number of the planning and management principles described in a previous section, truly effective implementation must involve all stakeholders, First Nations, users and industry operating both in and adjacent to the area.

### **IMPLEMENTATION SCHEDULE**

Table 5 shows an implementation schedule for carrying out the actions and recommendations identified in the plan. All of the actions are necessary for successful implementation of the plan. The implementation actions should be incorporated into the business plans of the responsible agencies and organizations. These groups will address their respective implementation actions through their own processes and procedures. It is noted that achieving the actions by the suggested target dates will be subject to necessary funding/staffing levels in government agency budgets and MKMA Advisory Board funding priorities.

**Table 5. Implementation Schedule**

<b>Action</b>	<b>Reference Section(s) in the MKRMP</b>	<b>Reference Page #</b>	<b>Target Date</b>	<b>Comments</b>	<b>Responsibility</b>
a) Develop list of current CR applications and make available to the public	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns</li> </ul>	<ul style="list-style-type: none"> <li>• 15</li> </ul>	January 1, 2001 and ongoing	Release of information in applications must be consistent with the cabinet approved CR Policy	BCALC and BC Parks
b) Inventory/assessment of dispersed-use campsites and range use sites	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• Factors Affecting Changes to Ecosystem Components;</li> <li>• Table 4</li> </ul>	<ul style="list-style-type: none"> <li>• 15 &amp;16;</li> <li>• 39;</li> <li>• 52</li> </ul>	Ongoing	Using previously developed procedures and maintenance of records	MOF, BC Parks and BCALC
c) Develop education strategies regarding user ethics, safe bear/human encounter behaviour and “best commercial operator practices” behaviour	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• General Recreation Management Direction;</li> <li>• Recommendation #16</li> </ul>	<ul style="list-style-type: none"> <li>• 15;</li> <li>• 43;</li> <li>• 57</li> </ul>	Beginning in 2001	Ensure consistency of messages and co-operation in delivery systems	MOF, BC Parks, BCALC, BC Environment and MKMA Advisory Board
d) Make the MKMA RMP available to the public	<ul style="list-style-type: none"> <li>• Principle 9 – Partnerships in Planning and Management</li> </ul>	<ul style="list-style-type: none"> <li>• 20</li> </ul>	On plan completion	Consider using diverse mediums (e.g., web page)	MKMA Program Management Office
e) Conduct research on exotics (i.e., llamas and ostriches) and develop policy direction	<ul style="list-style-type: none"> <li>• General Recreation Management Direction;</li> <li>• Recommendation #5</li> </ul>	<ul style="list-style-type: none"> <li>• 43;</li> <li>• 55</li> </ul>	2003	Continue Fort Nelson LRMP direction until policy direction is developed	MKMA Advisory Board, UNBC, BC Environment and BC Parks
f) Resolve the “packer” issue	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• Recommendation #11</li> </ul>	<ul style="list-style-type: none"> <li>• 15;</li> <li>• 57</li> </ul>	2001	Policy direction required	MELP
g) Conduct fisheries inventory	<ul style="list-style-type: none"> <li>• Recommendation #6 &amp; 12</li> </ul>	<ul style="list-style-type: none"> <li>• 56 &amp;57;</li> </ul>	Ongoing	Priority RMZs to be determined by Fisheries Section	BC Environment and BC Parks
h) Update recreation inventory	<ul style="list-style-type: none"> <li>• Recommendation #1</li> </ul>	<ul style="list-style-type: none"> <li>• 55</li> </ul>	Ongoing	To current inventory standards	MOF, BC Parks
i) Review of AMA regulation	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• Recommendation #14</li> </ul>	<ul style="list-style-type: none"> <li>• 15;</li> <li>• 57</li> </ul>	March 31, 2002	Meaningful First Nations’ and public consultation	BC Environment

Table 5 - Continued

Action	Reference Section(s) in the MKRMP	Reference Page #	Target Date	Comments	Responsibility
j) Conduct research on effects of motorized boats on ecosystem components	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• Category III &amp; IV RMZ's – Management Activity Guidelines;</li> <li>• Recommendation #3 &amp; 20</li> </ul>	<ul style="list-style-type: none"> <li>• 15;</li> <li>• 45;</li> <li>• 55&amp;58</li> </ul>	Ongoing	Priorities to be determined by BCE and BC Parks. Initial priority is the Tuchodi River	MKMA Advisory Board and UNBC
k) Conduct research on effects of prescribed fire on ecosystem components	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• Factors Affecting Changes to Ecosystem Components;</li> <li>• Recommendation #20</li> </ul>	<ul style="list-style-type: none"> <li>• 15;</li> <li>• 39;</li> <li>• 58</li> </ul>	Ongoing	Priority areas to be determined. Due to the complexity of the topic, research is expected to take a number of years.	MKMA Advisory Board, UNBC, MELP and MOF
l) Gather riverboat use information	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• Category III &amp; IV RMZ's – Management Activity Guidelines;</li> <li>• Table 4;</li> <li>• Recommendation #4</li> </ul>	<ul style="list-style-type: none"> <li>• 15;</li> <li>• 45;</li> <li>• 52;</li> <li>• 55</li> </ul>	Ongoing	Priorities to be determined by BC Parks and MOF. Initial priority is the Tuchodi River.	BC Parks and MOF
m) Report on monitoring	<ul style="list-style-type: none"> <li>• Principle 8 – Monitor Area Conditions and Experience Opportunities;</li> <li>• Monitoring Plan &amp; Table 4;</li> <li>• Recommendation #9</li> </ul>	<ul style="list-style-type: none"> <li>• 20;</li> <li>• 51-54;</li> <li>• 56</li> </ul>	March 31, 2001 and annually thereafter	Develop needed sampling procedures and reporting templates, monitor and compile annual report and ensure consistency across agencies	BC Parks, MOF, BCALC and Implementation Committee
n) Develop monitoring indicator standards (maximum acceptable levels or thresholds)	<ul style="list-style-type: none"> <li>• Monitoring Plan;</li> <li>• Recommendation #8</li> </ul>	<ul style="list-style-type: none"> <li>• 51;</li> <li>• 56</li> </ul>	Start on completion of plan	Ensure consistency in procedures and a collaborative effort. (Note: a high priority action)	MOF, BC Parks, BC Environment, BCALC
o) Conduct comprehensive study on recreation use, economic value and attitudes	<ul style="list-style-type: none"> <li>• General Recreation Management Direction;</li> <li>• Recommendation #2</li> </ul>	<ul style="list-style-type: none"> <li>• 43;</li> <li>• 55</li> </ul>	Ongoing	Ensure consistency in procedures and a collaborative effort	MKMA Advisory Board, BC Parks, MOF, and BCALC

Table 5 - Continued

Action	Reference Section(s) in the MKRMP	Reference Page #	Target Date	Comments	Responsibility
p) Organize Implementation Committee	<ul style="list-style-type: none"> <li>Recommendation #23;</li> <li>Implementation &amp; Plan Review</li> </ul>	<ul style="list-style-type: none"> <li>59;</li> <li>60</li> </ul>	On completion of plan	Terms of Reference and membership to be determined	MKMA Program Management Office and MKMA Management Committee
q) Track enforcement and safety issues	<ul style="list-style-type: none"> <li>Planning and Management Issues and Concerns;</li> <li>Table 4;</li> <li>Recommendation #13 &amp; #15</li> </ul>	<ul style="list-style-type: none"> <li>15;</li> <li>52;</li> <li>57</li> </ul>	On completion of plan	1-800 phone number and web page are examples	MKMA Program Management Office and government ministries
r) Determine the appropriateness of CR operations	<ul style="list-style-type: none"> <li>General Management Direction;</li> <li>Recreation Activity Guidelines;</li> <li>Principles to Guide the Review of CR Applications</li> <li>Recommendation #9</li> </ul>	<ul style="list-style-type: none"> <li>41 – 44;</li> <li>47-48;</li> <li>50;</li> <li>56</li> </ul>	On plan completion and ongoing thereafter	Evaluation of CR applications must be consistent with the section titled “Principles to Guide the Review of CR Application” and with BCALC’s CR Policy and BC Parks legislation and policies. High priority on backlog of CR applications	BCALC and BC Parks
s) Determine the appropriateness of new recreation activities (both commercial and public)	<ul style="list-style-type: none"> <li>Principle 5 - Determine Acceptable Activities and Developments;</li> <li>General Recreation Management Direction;</li> <li>Recreation Activity Guidelines &amp; Table 3;</li> </ul>	<ul style="list-style-type: none"> <li>19;</li> <li>43;</li> <li>47-48</li> </ul>	As required	The intent is to address the appropriateness of recreation activities not included in Table 3, p. 45.	MKMA RMP Implementation Committee in consultation with government agencies, BCALC, MKMA Advisory Board, First Nations and the public
t) Monitor and enforce compliance with AMA regulations	<ul style="list-style-type: none"> <li>Planning and Management Issues and Concerns;</li> <li>Recommendation #14</li> </ul>	<ul style="list-style-type: none"> <li>15;</li> <li>57</li> </ul>	Ongoing	Consistent with AMA Regulations	BC Environment and BC Parks

Table 5 - Continued

Action	Reference Section(s) in the MKRMP	Reference Page #	Target Date	Comments	Responsibility
u) Conduct First Nations' traditional use and occupancy studies	<ul style="list-style-type: none"> <li>• Planning and Management Issues and Concerns;</li> <li>• Principle 10 – Relationship with First Nations;</li> <li>• Recommendation #7 &amp; 20</li> </ul>	<ul style="list-style-type: none"> <li>• 16;</li> <li>• 20;</li> <li>• 56 &amp; 58</li> </ul>	Ongoing	Necessary to fill information gaps and critical to the protection of First Nations' values	MKMA Advisory Board and First Nations
v) Conduct more detailed planning	<ul style="list-style-type: none"> <li>• General Recreation Management Direction;</li> <li>• Management Activity Guidelines;</li> <li>• Recommendation #20</li> </ul>	<ul style="list-style-type: none"> <li>• 43;</li> <li>• 47;</li> <li>• 58</li> </ul>	Begin on completion of plan and ongoing thereafter	Priorities for more detailed planning are: <ul style="list-style-type: none"> <li>• Tuchodi and Prophet river corridors, Muskwa River and Muskwa River Corridor RMZ and</li> <li>• Kechika river and Turnagain/Dall River Corridor RMZs</li> <li>• Toad River Corridor RMZ and Toad River-Moose Lake corridor</li> <li>• Liard River Corridor Provincial Park</li> <li>• Alaska Highway Corridor RMZ and Alaska Highway in provincial parks</li> <li>• Northern Rocky Mountains Provincial Park</li> <li>• High use areas in the Besa-Halfway-Chowade RMZ</li> </ul>	MKMA Advisory Board, BCALC, BC Parks, MOF, BC Environment and Ministry of Small Business, Tourism and Culture

**PLAN REVIEW**

This is the first recreation management plan for the MKMA and will be subject to a thorough review in five years or at an earlier time as directed by the Inter-agency Management Committee in consultation with the MKMA Advisory Board. Annual reviews of the implementation of the plan will be carried out by government agencies in accordance with the provisions of the approved Muskwa-Kechika Management Plan and MKMA Advisory Board policies and procedures. Any revisions or amendments to the MK RMP must be made in accordance with Part 3, Section 6, Part 5, Section 17 of the *MKMA Act* and must follow the consultation and notice provisions in sections 5.3.1 and 5.3.2 of the Muskwa-Kechika Management Plan.

**APPENDIX 1****Working Group Members**

Ron Rutledge, Chair – Fort St. John Forest District

Lynn Bremner - BC Parks

Steve Amonson - Fort St. John Forest District

Susan Hoyle, Myles ThorpDarren Wilkinson, and Stephen Duda - Fort Nelson Forest District

Jim Little – BC Assets and Land Corporation

Stephen Connolly - Ministry of Small Business, Tourism and Culture

Malcolm Foy and Bill Lux - Kaska Dena Council

Ken Barth - Fort Nelson First Nation

Brian Wolf- Prophet River First Nation

Wayne Sawchuk – MKMA Advisory Board

## APPENDIX 2

### ADMINISTRATIVE FRAMEWORK FOR RECREATION MANAGEMENT IN THE MKMA

The statutory authority to manage the recreation resources within the MKMA lies with a number of provincial government line agencies, offices and committees. In addition, the *Muskwa-Kechika Management Area Act* provides the Muskwa-Kechika Advisory Board with roles and responsibilities related to the planning and management of the areas' recreation resources. The following is a summary of the administrative framework surrounding recreation management in the MKMA.

#### Muskwa-Kechika Advisory Board

The Advisory Board is appointed by the Premier to advise government on natural resource management in the area and ensure that activities within the area are consistent with the objectives of the Muskwa-Kechika Management Plan. In addition, the Board will:

- publicly report at least annually on its reviews of operational activities in the area;
- provide advice on corporate priorities for and coordination of local strategic planning in the area;
- review proposals and funding requests and make recommendations for expenditures from the Muskwa-Kechika Trust Fund;
- ensure adequate public consultation in the preparation and approval of local strategic plans, amendments to the Muskwa-Kechika Management Plan, or any other significant policy issues for the area; and
- provide recommendations to the Environment and Land Use Committee on any proposed amendments to the Management Plan.

#### Land Use Coordination Office

The primary role of the Land Use Coordination Office in management of the MKMA is to:

- provide support and advice to the Inter-Agency Management Committee;
- assist in dispute resolution and clarification of significant policy issues for the area; and
- assist in acquiring financial support for management and planning activities in the area.

#### Omineca-Peace Inter-Agency Management Committee (IAMC)

The IAMC is made up of the Regional Managers of Provincial government ministries. The responsibilities of the IAMC with respect to the MKMA include the following:

- to implement the Memorandum of Understanding Respecting Recreation Planning in the MKMA;
- to assist in resolving conflicts between agencies and resource users;
- to maintain a registry of plan documents, amendments, and local strategic plans, available to the public;
- to review and provide recommendations to the Environment and Land Use Committee on any proposed amendments;
- in consultation with the Advisory Board, prepare an annual inter-agency work plan to facilitate the implementation of the Muskwa-Kechika Management Plan; and
- in partnership with the Advisory Board: provide for and coordinate public review and consultation as necessary; and prepare an annual monitoring report on plan implementation, amendments and expenditures

## **Muskwa-Kechika Management Committee**

The Muskwa-Kechika Management Committee (MKMC) gets direction from the IAMC and is made up of the following line agency representatives and government corporations: Ministry of Forests District Managers, Fort Nelson and Fort St. John Forest Districts; BC Environment and Lands, Regional Manager; Ministry of Energy and Mines, Manager of Field Operations; BC Parks, Peace-Liard District Manager; and the senior land agent from the BC Assets and Land Corporation. Responsibilities of the MKMC include the following:

- coordinate the approval of all recreation-related approvals, issuances, permits or authorizations of plans, allocations, tenures, dispositions and licenses (including Commercial Recreation applications) until such time as a local strategic recreation management plan has been approved for the area;
- identify areas requiring local strategic plans and prioritize the timing of those plans;
- designate a working group for local strategic planning processes;
- coordinate the development of procedures for local strategic planning;
- manage local strategic plans;
- establish technical teams as required, including terms of reference, policy direction, scope and resources necessary for the teams to function;
- ensure involvement and meaningful consultation with First Nations consistent with government responsibilities;
- arrange for the involvement of local governments, tenure holders, stakeholders, and the public in local strategic planning and management initiatives;
- ensure that information is provided to facilitate meaningful involvement;
- oversee the adequacy of inter-agency referral processes; and
- Implement and manage the dispute resolution process as necessary.

## **Line Agencies**

The following provincial line agencies have recreation-related legislated mandates and are responsible for and/or participate in local strategic recreation planning in the MKMA.

### *BC Parks*

BC Parks is the provincial government agency responsible for the planning and management of the Protected Areas System (PAS) component within the MKMA. In co-operation with the public, First Nations and other government agencies, BC Parks manages Provincial Parks, Protected Areas, Ecological Reserves and Recreation Areas. The two primary goals of the PAS are: (1) To protect viable, representative examples of the natural diversity of the province, representative of major terrestrial, marine and freshwater ecosystems, the characteristic habitat, hydrology and landforms, and the characteristic backcountry recreational and cultural heritage values of each ecosystem; and (2) To protect the special natural, cultural heritage and recreational features of the province.

More specific recreation goals of BC Parks include: (1) To provide park attractions and services which enhance the province's major tourism travel routes; (2) To provide park attractions that serve as or enhance outdoor recreation holiday destinations in key areas across the province; (3) To provide outstanding backcountry adventure recreation experiences across the province; and (4) To ensure access to local outdoor recreation opportunities for all residents of the province.

BC Parks' management planning program, in concert with guiding legislation and policy, ensures that all protected areas have plans that ensure the continuity of the values for which they have been designated. Management planning is one form of decision-making BC Parks uses to manage areas under its jurisdiction. Management planning is complemented by other decision-making processes such as systems planning, operational planning, business planning and impact assessment processes.

A Protected Area Management Plan guides the management, conservation and use of a protected area. It describes management objectives that relate to the protection and management of lands and waters, to associated natural, recreational and cultural heritage values, and the avoidance of Treaty and aboriginal

rights infringement. A management plan responds to strategic issues by defining a set of management strategies, and the range of uses and activities that can occur within a protected area.

BC Parks is committed to involving the public, First Nations, other government agencies and licensed users, in developing management plans for protected areas. Three general approaches to involvement may be used: informative, consultative, or shared planning. The approach used for a particular protected area will vary with the complexity of management issues and with the expectations and interests expressed by members of the public, First Nations and government agencies.

### *Ministry of Forests*

The Ministry of Forests is responsible for the management, protection and conservation of the forest and range resources, particularly timber, forage and recreation (including landscape and wilderness) within the Muskwa-Kechika Management Area, outside Protected Areas. (The ministry does have agreements with the Ministry of Environment, Lands and Parks for conducting range and fire management activities within Protected Areas.) The ministry is also charged with planning for these resources and other natural resource values in consultation and co-operation with other ministries, agencies of the crown, First Nations and the public.

The recreation program of the Ministry of Forests has a two-fold mission: to provide the opportunity for recreation experiences and benefits by protecting the Provincial Forest recreation resource, and to manage the use of the Provincial Forest recreation resource. Five activities are administered by the ministry's recreation program: program management, resource management, use management, landscape management, and wilderness management. Recreation planning is a sub-activity of resource management and is guided by government policy.

Operational plans for recreation are required in order to: (1) achieve recreation objectives established in strategic land use plans; (2) guide recreation activities at the operational level; and (3) provide input into operational plans for other forest resources. Forest district recreation plans have four components. The first element is the recreation vision and goals assessment, which describes the "Desired Future State" for recreation for the long term (5 to 20 years or more horizons). The second element includes a description of the district's intent with respect to recreation and sets out recreation priorities and recommended actions. The third element of the plan is the business planning process. Here, funding requirements are prepared and set out in appropriate formats for review by ministry and non-ministry funding mechanisms. Lastly, monitoring standards and indicators are described which enable managers to evaluate if desired objectives are being achieved.

A number of public involvement methods are available for use in the ministry's recreation planning process. Consultation methods include position papers, written briefs, public meetings and workshops. More extended involvement methods include the establishment of task groups, public advisory committees, and joint planning teams. Selection of the appropriate involvement method is dependent on the scope and complexity of the issues, the interest/expectation levels of interested stakeholders, and the available resources (staff time/money).

### *BC Assets and Land Corporation*

BC Assets and Land Corporation (BCALC) is responsible for the administration and allocation of Crown land (outside of Protected Areas) for commercial, industrial, agricultural, residential, recreational, institutional, utility, aquatic and conservation uses. The tenuring and management of Crown land for the purposes of commercial recreation (CR) within the MKMA will be consistent with the Muskwa-Kechika Management Plan and the Protocol on Crown Land Administration and Forestry Activity between the BC Forest Service and BCALC.

The management and disposition of Crown land for CR activities are administered by BCALC through its Commercial Recreation On Crown Lands Policy. Government has recently revised the policy. In the MKMA special provisions require the approval of a recreation plan prior to tenure issuance.

Under the new policy, a number of tenure options are available to CR tenure applicants. These options include: short term Investigative Use Permits; low impact Temporary Permits; long term licensees of

Occupation; and long term Leases (site specific). Each form of tenure confers different rights, tenure terms, pricing, application requirement, referral and advertising requirements, tenure replacement procedures and sub-tenuring availability. CR management plans are required for Licensees of Occupation and Leases.

CR Management Plans contain: (1) mapped information, including locations of all proposed activities, site diagrams, access routes, cultural and heritage sites and other tenures within the CR area; and (2) narrative information, including a detailed description of the operation, restrictions, guidelines and conditions for use of the operating area.

All applications for CR leases and licenses are referred to provincial government agencies, First Nations, local governments and other interested parties in order to ensure that all resource values and environmental considerations, potential impacts and benefits, cultural and heritage values, existing and potential commitments are identified and addressed.

*Fish and Wildlife Section, Ministry of Environment, Land and Parks*

Although not directly responsible for recreation planning, the Fish and Wildlife section of the Ministry of Environment, Lands and Parks has an interest in the planning and management of recreation resources in the MKMA. Hunting and sport fishing are primary recreation activities in the area. Recreation objectives and strategies related to hunting and fishing activities, therefore, can affect the agency's ability to achieve its fish and wildlife program goals which include the following:

- to conserve the natural diversity of fish and fish habitat and to sustainably manage freshwater sportfishing;
- to maintain clean, healthy and safe land, water and air for all living things;
- to provide social, economic and outdoor recreational opportunities (e.g., through the licensing of guide/outfitters for hunting and angling activities) consistent with maintaining a natural diverse and healthy environment;
- to maintain the diversity and abundance of native wildlife species and their habitats;
- to provide a variety of opportunities for the use and enjoyment of wildlife; and
- to promote people and wildlife living in harmony.

*Ministry of Small Business, Tourism and Culture*

Within its tourism mandate, the Ministry of Small Business, Tourism and Culture (MSBTC) works to reflect tourism interests in land and resource use and management. This work is done through the Corporate Services and Land Use Branch, based in Victoria.

Land-based resources of importance to tourism can be broadly categorized under four themes:

- Tourism and recreational settings (i.e., roaded, non-roaded, etc.);
- Visual landscape management;
- Tenures; and
- Infrastructure and access (i.e., trails, roads, campsites, etc.).

MSBTC has no regulatory authority with regard to tourism resources. Authority for managing each of the above themes rests with other provincial agencies. MSBTC works to ensure that decision-makers have the guidance and information necessary for due consideration of tourism-related effects of resource decisions.

To achieve this, MSBTC participates in regional and sub-regional planning processes and maintains a provincial inventory of tourism businesses and resources. The Tourism Resource Inventory contains information on tourism operators, their use areas, and key land and water resources important to tourism businesses. The inventory also contains strategic-level modeling capability for new tourism products.

MSBTC also participates in local strategic planning with a particular interest in identifying areas with high capability for new tourism and recreation development. MSBTC works with resource agencies, communities, and the tourism industry to recommend appropriate resource management objectives and strategies for high-capability areas such as the MKMA.

APPENDIX 3

ACCESS MANAGEMENT AREA (AMA) REGULATION MAP

