The Muskwa - Kechika

A Proposal for the Protection of
Globally Significant Wildlife Values

and the Sensitive Development of Oil and Gas

Ministry of Environment, Lands and Parks
Wildlife Branch
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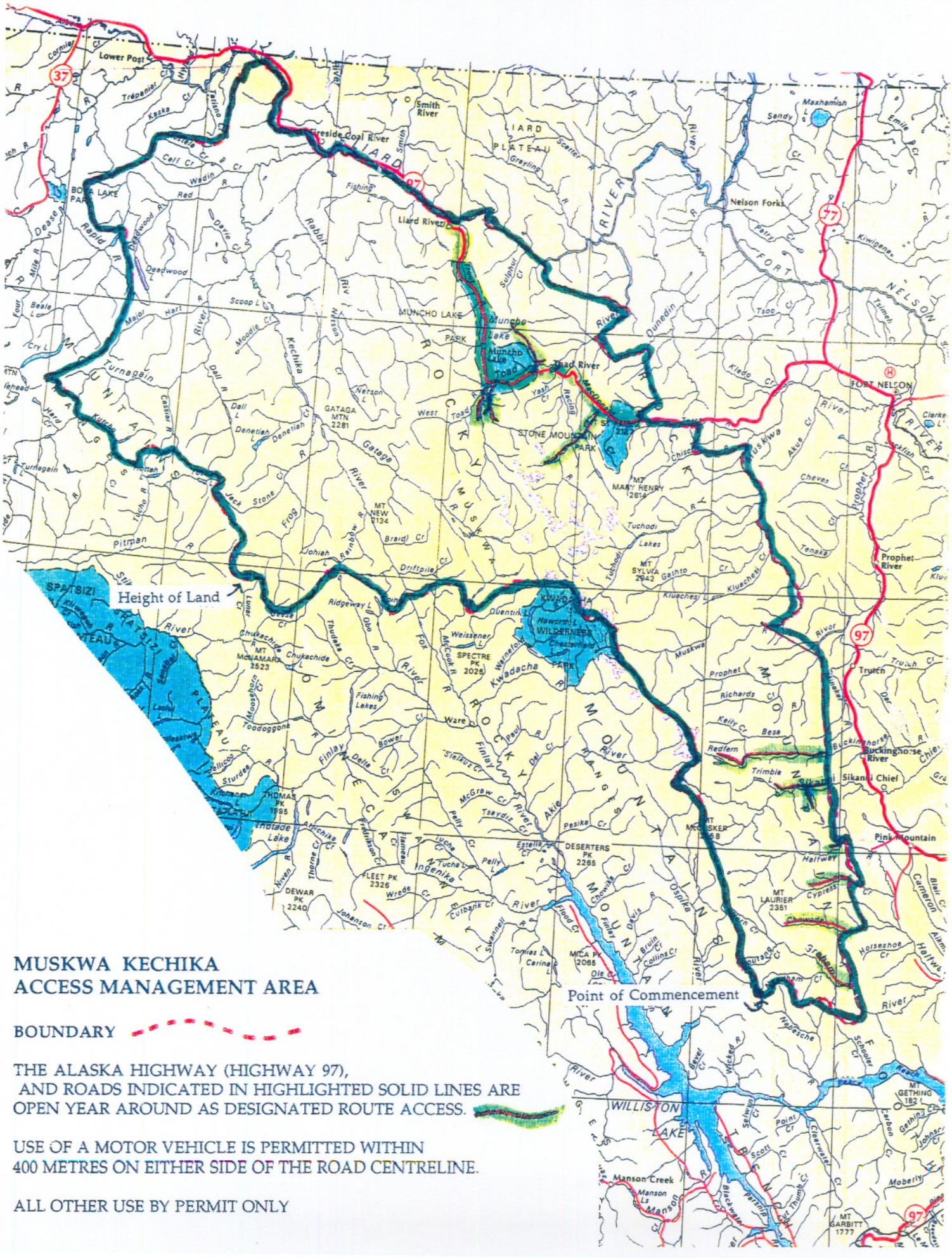

MUSKWA KECHIKA ACCESS MANAGEMENT AREA

BOUNDARY

THE ALASKA HIGHWAY (HIGHWAY 97), AND ROADS INDICATED IN HIGHLIGHTED SOLID LINES ARE OPEN YEAR AROUND AS DESIGNATED ROUTE ACCESS.

USE OF A MOTOR VEHICLE IS PERMITTED WITHIN 400 METRES ON EITHER SIDE OF THE ROAD CENTRELINE.

ALL OTHER USE BY PERMIT ONLY

Purpose of this Paper

This paper is intended to provide the regional Land and Resource Management Planning (LRMP) tables with a proposal for stakeholder discussion that is intended to ensure the maintenance of the high wildlife and wilderness values of the Muskwa-Kechika area and at the same time allow for sensitive economic development.

This concept of maintaining ecological values and yet allowing for sensitive economic development, includes the following components:

Reserve initiatives

The Muskwa-Kechika represents one of the best opportunities in BC to protect an intact, functional large mammal ecosystem. Provincial initiatives such as the Protected Area Strategy (PAS) and the proposed Provincial Grizzly Bear Strategy (PGBS) will provide for establishment of some large reserves with as yet undefined levels of protection (PAS Document, 1993; PGBS Document, 1995). The establishment of such reserves are being actively pursued by national NGO's such as World Wildlife Fund and Canadian Parks and Wilderness Society, and could be designed to meet the criteria of the Federal-Provincial Biodiversity Strategy.

Ecosystem management

While the establishment of such reserves will provide some protection, the high wildlife values of this area necessitates a much larger and more comprehensive land and resource use plan. The area should be managed on an ecosystem basis in order to accommodate human use and resource extraction while maintaining viable populations of all native species. To achieve the goals of ecosystem management, it may be necessary to designate management zones which will provide for the large mammal populations and their long term viability. These designations could include protected areas, wildlife management areas, special management areas, and other management zones.

This proposal consists of:

1. This concept paper
2. A folio of biophysical wildlife capability inventories for the area
3. A Memorandum of Understanding between Ministry of Energy, Mines and Petroleum Resources (MEMPR) and Ministry of Environment, Lands and Parks (MELP).
4. A map indicating a preliminary suggestion for land use zoning.

Introduction

Geographic location

The northeastern part of British Columbia has within it a large pristine area known as the Muskwa-Kechika. Situated where the extensive boreal plains and muskeg of the east meet the mountains to the west, the Muskwa-Kechika is one of the few remaining large, intact roadless wilderness areas south of the 60th parallel.

Comprising about five million hectares, this area is approximately one and one half times the size of Vancouver Island. The Muskwa-Kechika encompasses the eastern foothills of the Muskwa Range of the Rocky Mountains north of the Peace River, the Kechika Ranges of the Cassiar Mountains and the northern portion of the northern Rocky Mountain Trench.

Two large developments have affected the development and the wilderness values of the northeast. The Alaska Highway was built in 1943 along the northeastern part of the region. In 1968 the construction of the W.A.C. Bennett Dam in the southwest resulted in the flooding of 178,200 ha of the Peace, Finlay, and Parsnip Rivers.

Communities of the Northeast

The northeast of British Columbia comprises 205,144 sq. km which represents approximately 23% of British Columbia. The communities of Fort Nelson, Fort St. John, Dawson Creek, Chetwynd, and Hudson Hope are located within the Fort Nelson-Liard and Peace River Regional Districts. These communities were originally established

as fur trading centres and pioneer communities in the early 1800s. The population of the area was 58,300 in 1991. These northeastern communities have a variety of industries based on natural resources including oil, natural gas, sulphur, timber, tourism, and agriculture. The Alaska Highway begins in Dawson Creek and passes through Fort St. John, Fort Nelson and Mancho Lake on the way to Whitehorse, Yukon and Fairbanks, Alaska.

Wildlife values

The significance of the Muskwa-Kechika is that it supports a diverse number of large mammals in population densities of global importance. Wildlife communities of this diversity and abundance persist in only a few places in the world. Large portions of this area, particularly in the Muskwa Foothills, have the world's best habitat for Stone sheep.

Apart from some protected areas in Africa, few other places in the world match the features of the Muskwa-Kechika in terms of species groupings, remoteness, minimal development and low human population. Most options for the maintenance of diverse and abundant large mammal populations, especially predator-prey systems, have been foregone.

Oil and gas

The oil and gas industry is experiencing a boom in the northeast which began in 1993 and is forecast to continue in 1995. As the demand and price for natural gas increases, exploration and development is now moving into very high capability wildlife habitat in the Muskwa-Kechika. Already the integrity of wildlife habitat is being compromised.

High capability land located on the eastern foothhills west of the Alaska Highway has been heavily impacted over the years by oil and gas exploration and development, severely compromising its value as wildlife habitat.

RESOURCE VALUES

Tourism

Tourism is an important sector of the region's economy with spectacular scenery, a variety of recreational opportunities, and an abundance of wildlife of global significance. The Regional District advertises Fort Nelson as a "world class" destination for adventure tourism, fly-in fishing and big game guide-outfitting. Approximately 335,000 tourists visited the northeast in 1989.

Wildlife Based Industry

First Nations people rely extensively on fish and wildlife for sustenance, and trapping is an important component of their way of life. There are 35 traplines in the Muskwa-Kechika of which 14 are owned and operated by aboriginal people. The fur trapping industry in the northeast generates about $1.77 million, and produces close to half of the provincial trapping revenues.

Wildlife viewing and wilderness activities

Non-consumptive wildlife activities such as nature viewing and bird-watching and preservation value have been calculated as worth $27.2 million annually.

The potential for wilderness and backcountry recreation in the Muskwa-Kechika is very high and must be an integral part of any planning process that takes place. Over 20,000 square kilometres of the area provide excellent opportunities for solitude and challenge. Backcountry recreation activities in the area include: hiking, hunting, fishing, horseback riding, wildlife viewing, nature appreciation, river boating, and snowmobiling.

District Ministry of Forests staff have long been involved in wilderness management in this area, and must be fully involved in management and planning for the area. The pristine character of the area requires that planning and management activities focus on

minimizing impacts on ecological and wilderness values. The recently approved Commercial Backcountry Recreation Policy will be one instrument in properly managing the recreational potential of the area.

Wildlife Hunting

Hunting activities in the northeast had a net economic value of about $18.3 million in 1989. This includes both recreational hunting by residents and guided hunting provided by licensed guide-outfitters. The northeast supports the highest employment and revenue levels for guide-outfitting operations in the province. There are 17 guide territories in the Muskwa-Kechika, providing full time employment for the owners and seasonal employment to 180 local people. The majority of the clients are non-residents and bring $5.2 million into the local economy annually.

Wildlife Values

While the Muskwa-Kechika has a wide diversity of animal and plant species, it is best known for the fact that it supports significant populations of 12 species of large mammals, including 4 species of large predators and 8 species of ungulates. The concentrations of moose, Stone sheep, bison, and elk found in the Muskwa-Kechika are among the highest densities found in North America.

Table 1. Estimated population of large mammals present in the Muskwa-Kechika.

Predators	Population
Wolf	1000
Grizzly bear	500
Black bear	500
Cougar	25

Ungulates	Population
Moose	27000
Rocky Mountain elk	15000
Stone sheep	9000
Mountain goat	5000
Caribou	3500
Mule deer	2000
Bison	1200
White-tailed deer	500

In a North American context, comparable areas include the Rocky Mountain National Parks and areas of Alaska and the Yukon. However, most of the national parks are roaded and contain developments such as towns and ski resorts which have significantly reduced populations of large predators. Alaska and the Yukon contain areas which are less productive and support fewer species than the Muskwa-Kechika.

Table 2. Comparison of productivity of sizable protected areas with the Muskwa-Kechika for large mammals.

Area	No. Species	Productivity
Muskwa-Kechika	12	high
Banff National Park	11	high
Yellowstone National Park	10	high
Jasper National Park	9	high
Spatsizi Provincial Park	8	high
Kluane National Park	7	moderate
Denali National Park	6	moderate

In southern British Columbia, areas which once supported comparable wildlife communities have been altered by extensive resource development and settlement. Wildlife species diversity and abundance have been significantly reduced, and in some areas large predators have been extirpated regionally.

Petroleum Resources

The oil and gas industry has been operating in B.C. since 1947. In 1993 and again in 1994/95 both gas prices and demand increased, sparking a boom in the industry. Although there is the potential for oil and gas in other areas of the province, northeastern B.C. has been the focal point, and there is a well established network of pipelines, roads and processing facilities in place in the region.

Provincial revenues generated from the oil and gas industry were approximately $335 million in 1993 and are expected to increase in 1994. From 1947 to 1993, the oil and gas industry has contributed over $6 billion to the provincial economy in the form of bonus bids, rents and royalties. These figures do not take into account the jobs and regional economic benefits the industry affords.

Future development

The search for gas has intensified and expanded in northeastern B.C., resulting in exploration and development pressures on previously undisturbed areas. Specifically, the industry is interested in developing the eastern slope of the Rocky Mountains as the area's geology indicates that significant natural gas reserves are present. Although the geology of this area makes exploration and development more difficult than in previous producing areas, improving technology and the expected size of the reserves make the economics of gas extraction very attractive.

Mineral Resources

Overall, the area has seen little mineral exploration activity and although there are no operating mines or mineral production occurring in the Muskwa-Kechika area, the potential exists. In the summer of 1994, MEMPR, Geological Surveys Branch, made two discoveries in the Kechika Mountains. These discoveries will be announced at the February 1995 Annual Mineral Exploration Roundup in Vancouver. The Ministry anticipates that there will be a staking rush as a result of this announcement.

There are three mineral formations that overlay the Muskwa-Kechika area including the Gataga-Kechika lead and zinc belt, the eastern foothills lead and zinc belt, and the Churchill copper belt. The Gataga district is considered by the Ministry of Energy, Mines and Petroleum Resources (MEMPR) to have high mineral potential, and it considers the area to be under-explored. The eastern foothills lead and zinc belt has seen no production but there are large mineral occurrences, some containing gallium and germanium, making the

mineral resource potentially quite valuable. The Churchill copper district located near Yedhe Mountain is described as having moderate potential, however, the type of copper limits interest.

Timber Values

The Muskwa-Kechika contains a limited amount of timber included in the calculation for the annual allowable cut (AAC) in the MacKenzie Forest District. The majority of the Fort Nelson Forest District AAC is located east of the Muskwa-Kechika, thereby minimizing the potential for conflict between forest development plans and wildlife management objectives.

There is some long term interest by the MacKenzie and Cassiar Forest Districts in timber located along the western edge of the area if the Protected Areas Strategy (PAS) impacts the AAC. There is some potential for harvesting in the Liard River area west of the Hot Springs in the Smith River area. This unit lies north of the Muskwa-Kechika and west of the Rocky Mountains. Difficult access and low forest values combine to limit interest in the forests in the Kechika area. The Fort St. John Forest District's AAC does include southern portions of the Muskwa-Kechika, specifically the Graham River area.

First Nations

Territories

The Muskwa-Kechika is within Treaty 8 Territory which includes the Fort Nelson, Halfway River, West Moberly, Saulteau, Blueberry, Doig River and Prophet River Bands. Located west of the area are the Fort Ware, Lower Post, Good Hope Lake and Kaska tribal groups which are not signatories to Treaty 8.

Aboriginal communities and wildlife

The aboriginal communities of the area rely on the diverse and abundant wildlife, fish and vegetation resources of the Muskwa-Kechika for sustenance, medicinal and ceremonial purposes. Aboriginal people in the area have repeatedly expressed concern over impacts of industrial development on the fish and wildlife resources and are very concerned about sustainability and wise use of these resources.

Aboriginal employment

Many aboriginal people maintain active traplines and many are involved in the guide-outfitter industry, providing employment and economic benefits to the community. Only recently have there been concerted attempts to provide some economic opportunities for aboriginal people in the northeast. Some training and employment programs for aboriginal people have been initiated with the oil and gas industry, the forest industry and BC Environment, Lands and Parks.

Aboriginal land claims

The Treaty 8 Tribal Association have assumed a government to government relationship with the Provincial Government. The Inter-Agency Management Committee (IAMC) is working with the Treaty 8 Tribal Association to develop a process by which there is aboriginal input into the LRMP planning process. Since the Kaska Bands are not in an area where LRMPs are being pursued, and they are not a signatory to Treaty 8, they will be involved through the Muskwa-Kechika steering group to be established later this year through the Land Use Coordination Office (LUCO).

Overlapping Interests

Until recently, exploration and development of oil and gas in northeastern BC has been only moderately influenced by concerns for wildlife management due to its location in the plateau and plains region to the east of the Rockies. These developments occurred mainly in the muskeg area where wildlife habitat is generally of low to moderate value. Exploration, especially through the construction of thousands of kilometres of seismic lines has resulted in extraordinarily high densities of roads. Previous and existing planning processes such as the referral system and individual assessments have not been adequate for protection of wildlife/fisheries values. In particular, the cumulative effects of these developments have not been adequately assessed.

Potential impacts associated with oil/gas exploration and development are of two main types:

Increased road access:

- road development into pristine wilderness areas, particularly sensitive alpine areas
- fragmentation of forests, grasslands, and wildlife habitats
- excessive/redundant roads due to lack of access coordination
- unregulated use of ATV's in sensitive areas
- disruption of traditional native land uses
- increased hunter concentrations in newly accessed areas
- wildlife loss due to vehicular traffic

Habitat loss or alteration

- erosion and sedimentation of fish bearing streams
- direct wildlife habitat loss due to surface disruptions
- habitat disturbance due to pipeline construction
- disruption of wildlife behaviour and migrations

Present Status of Planning

Land and Resource Management Planning

The Muskwa-Kechika is subject to several government planning processes, most notably Land and Resource Management Planning (LRMP) for the Fort Nelson and Fort St. John Forest District administrative boundaries. LRMPs are responsible for recommending the planning framework and the appropriate resource management objectives for an area, as well as recommending areas for protection under the Protected Areas Strategy (PAS).

These two LRMP's are both at different stages with the Fort Nelson LRMP more advanced, with work now in progress on resource unit analysis. The Fort Nelson LRMP requested responsibility for the entire Muskwa-Kechika area which was approved by both the Interagency Management Committee (IAMC) and Land Use Coordination Office (LUCO). The Fort St. John LRMP will continue to plan its area and an advisory group based in McKenzie will provide input for the upper Kechika area to a LUCO appointed coordinator who will oversee coordination of all 3 planning processes involved in the Muskwa-Kechika area.

Interagency Management Committee

The Prince George IAMC serves to coordinate and oversee planning of the Fort Nelson and Fort St. John LRMP's. The IAMC also provides direction to the Regional Protected Areas Team (RPAT) which is charged with identifying the most suitable candidate areas for PAS designation. Proposed PAS areas have been forwarded to the two LRMP's for their review and recommendations. Recommendations for PAS areas are expected by the end of 1995 and this time frame allows for the planning process to consider the entire Muskwa-Kechika area.

A Proposal from BC Environment

As indicated at the beginning of this paper, there are two components that provide the focus for any future management to maintain and protect wildlife and cultural values and form the basis of BC Environment's proposal for the area:

1. Utilizing the Protected Area Strategy to provide one or several protected areas as cornerstones in maintaining in perpetuity an intact, functional large mammmal ecosystem.

2. Managing the area around these protected areas on an ecosystem basis so that any activity that does occur gives priority to the protection of wildlife and cultural values and ensuring this total area is large enough to encompass all the elements of a large mammal ecosystem.

This protection can best be accomplished by setting up land use zonation similar in concept to those that have been established in other regions.

Land Use Zones

BC Environment proposes the following types of management zones for consideration in the planning framework for the area:

Zone 1 • Protected Wilderness Areas

Under the Protected Areas Strategy several areas may be designated as protected within the Muskwa-Kechika, based on LRMP recommendations. This designation would preclude industrial activity, but should allow traditional wildlife management activities and compatible recreation activities to occur.

Any new PAS areas should be managed to meet the primary objective of maintaining and enhancing wildlife values over the greater Muskwa-Kechika ecosystem.

Zone 2 • Sensitive Development Zone

In these areas, the objective would be to manage for wildlife values but allow for compatible industrial and recreational activities to occur. No activity would be allowed at critical times or in certain fragile areas.

Restrictions on activity could include such constraints as:

- No permanent access.
- Winter access only
- Summer access only
- Heliportable seismic only
- Drilling outside of critical lambing and calving times or when wildlife are at seasonal lows.
- Restoration of disturbed habitat to a specified standard.
- Coordinated access management planning , involving government, industry and the public.

Zone 3 • Integrated Management Zone

Although wildlife management is the primary objective in this zone, all other activities will be considered. The restrictions on this zone will not be as onerous because wildlife and habitat values are not as sensitive. However, this unit will still be managed as part of the overall large mammal ecosystem.

Managing the Area After Planning

BC Environment's preferred scenario following from the LRMP process would be to have much of the area identified as requiring special management prescriptions for wildlife and recreation to maintain the long term abundance of large mammals and diversity of wildlife species. This would require development of a protocol agreement between the affected resource management agencies (MEMPR, MELP, MOF).

Wilderness management plans

Wilderness quality, with its attendant wilderness-based recreation, would be emphasized depending on zonation. Strict standards would be set for developers and recreational users where such uses are agreed upon through planning. Beyond producing the strategic level plan, the LRMP could also be responsible for detailed plans within the designated zones, developed by the LRMP as a whole or more likely by a sub-committee of those sectors and agencies most directly involved.

Wildlife management area

One management option would be to designate the area as a Wildlife Management Area (WMA) under Section 4 of the Wildlife Act. Wildlife Management Areas allow for resource development within the broader context of wildlife management; any activites which take place within a WMA are governed by the management plan, which requires the input and approval of all affected stakeholders.

Another option would be to designate the area under special legislation, similar to the Creston Valley Wildlife Management Area. In either case, it is proposed that a board would be established to serve as a Steering Committee to ensure objectives are met. Reporting to the board, technical committees would be responsible for wildlife and wilderness management and long term research. The Board would have representation from industry, government, First Nations, recreational user groups and community groups.

Research committee

The area has much potential for large scale ecosystem research especially predator-prey systems. Research on wilderness values and impacts due to human use also have priority. A research committee comprised of representatives from First Nations, universities, industry, federal and provincial governments and other organizations could be established to oversee research needs. A natural linkage for proposed research could be to the new University of Northern British Columbia.

A Different Approach to Exploration and Development

Sequential development

A key concept for this area may be the idea of sequential development which has been interpreted in different ways. One approach is to develop, exhaust and rehabilitate one area before any approvals are granted for the next. This would undoubtedly be the best approach environmentally as it would give the maximum time for inventory and planning. However it would be a drastic departure from the present approach to development and may be inconsistent with the present competitive nature of the industry.

Performance based development

A second approach is based on the same concept as "performance based logging", used in areas such as Clayoquot Sound, where the company must show one or two years of proven performance in a limited area or watershed before approvals are granted to move to the next watershed. The key concept here is "proven performance".

An innovative approach to development that is best for this area should be a major subject of discussion for the LRMP tables. It is clear that the system of planning used in the recent past is inadequate to protect the values identified.

Factors influencing success

A number of advantageous factors indicate that a different and environmentally sensitive approach is possible for the area.

- industry is very cooperative/willing to invest in long term planning
- recreational users will accept restrictions if good land use is exercised
- First Nations apparently want to be involved
- there is broad agency/industry/public recognition of the importance of northeast wildlife
- the industry can be served by existing communities therefore minimizing infrastructure requirements
- permanent roads are needed only when gas is discovered, thus providing opportunity for road reclamation of temporary roads
- technology is constantly improving and devising ways of minimizing exploration impacts
- there are few if any established communities in the area itself

Summary

The Muskwa-Kechika area supports a wildlife community that is globally significant. It represents one of the best opportunities in BC to protect an intact, functional large mammal ecosystem.

The Muskwa-Kechika also contains oil and gas resources that can contribute to the economic and social development of the northeast region, and the entire province.

A judicious balance must be struck, one which recognizes the globally important wildlife resources, and the economic potential of sensitive resource development.

The regionally based Land and Resource Management Planning process can provide the appropriate balance between resource development and environmental protection. This process must be based on an ecosystem management approach to ensure that any activities undertaken in the Muskwa-Kechika be done on a sustainable basis.