Muskwa-Kechika Advisory Board

An Operational Wilderness Definition for the M-KMA

February 29, 2004

MUSKWA-KECHIKA
MANAGEMENT AREA

Ratified by the Muskwa-Kechika Advisory Board, February 12, 2004 at the Mackenzie meeting (with final Board revisions included February 29th 2004)

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The Muskwa-Kechika Board has undertaken a project to define the terms “wilderness,” “wilderness quality” and “wilderness characteristics.” It is necessary to clearly define these terms in order to manage activities in a manner that is consistent with the intention of the Muskwa-Kechika Management Area Act.

The Board will provide a final definition as advice to the Minister of MSRM, (who has responsibility for the Muskwa-Kechika Management Area,) so that an operational definition of wilderness and related terms may be utilized where needed, including in Oil and Gas Pre-Tenure and other Plans. This will aid in the establishment of: impact targets, acceptable limits of change, parameters of cumulative impacts, and adaptive management regimes.

It is intended that this definition guide management activities within the Muskwa-Kechika. It is understood that this is a dynamic document that may “evolve” over time in response to new information or changing conditions. It is also intended that this definition will be used to develop a regulation as soon as possible, which will be reviewed and may evolve over time.

The Muskwa-Kechika Management Area Act states:

1. Preamble

WHEREAS the Muskwa-Kechika Management Area is an area of unique wilderness in northeastern British Columbia that is endowed with a globally significant abundance and diversity of wildlife;

AND WHEREAS the management intent for the Muskwa-Kechika Management Area is to maintain in perpetuity the wilderness quality, and the diversity and abundance of wildlife and the ecosystems on which it depends while allowing resource development and use in parts of the Muskwa-Kechika Management Area designated for those purposes including recreation, hunting, trapping, timber harvesting, mineral exploration and mining, oil and gas exploration and development;

AND WHEREAS the long-term maintenance of wilderness characteristics, wildlife and its habitat is critical to the social and cultural well-being of first nations and other people in the area;

AND WHEREAS the integration of management activities especially related to the planning, development and management of road accesses within the Muskwa-Kechika Management Area is central to achieving this intent and the long-term objective is to return lands to their natural state as development activities are completed;

THEREFORE HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of British Columbia, enacts as follows:

Please find below a discussion of wilderness.

Definition of Wilderness, Wilderness Characteristics, and Wilderness Quality

Wilderness Definition: Wilderness consists of two inter-related concepts,

I) an ecological system maintaining its ecological integrity, based on best scientific analysis, and
II) a large area perceived by humans to be natural or wild, based on anthropocentric criteria.

III) The terms "ecological system" "ecological integrity," "large area" "perceived by humans" "natural" and "wild" must be defined in order to ensure that this definition of wilderness is precise.

Definitions:

- "ecological system" - ecosystem: a self-sustaining community of plant and animal species, the non-living components of the environment on which that community depends, and the interrelationships between all of these.
- "ecological integrity" - a state or condition where structures and functions of the ecological system (or ecosystem) remain unimpaired by human-caused disturbances, where all native species are present at viable population levels and where, within successional limits, the ecosystem is likely to persist and evolve naturally. Ecosystems have integrity when their components (plants, animals and other organisms) and processes (such as growth, reproduction, predator-prey relationships, and disturbance regimes) are functioning within a natural range of variation.
- "large area" - an area greater than 5000 ha. (as suggested by the Wilderness Advisory Committee, 1986.) "perceived by humans" - in the opinion of a neutral human observer or observers familiar with the ecosystem or area.
- "natural" – perceived as unaffected by humans or human activities, particularly industrial activities, where environmental characteristics are within the range of historic variability that existed prior to European settlement.
- "wild" –where ecological systems, including predator prey systems, exist in a state similar to that which existed prior to European settlement, in a landscape where there is a large probability of experiencing human solitude.
- "Post European"- after the date of arrival of Europeans on the North American Continent.
- "possible and practicable-" the goal is that best established practices and methods will be utilized, with new and innovative methods utilized where it is predicted they will create a better management outcome.

Wilderness Characteristics

Wilderness Characteristics are those elements that comprise Wilderness.

If Wilderness is a large area perceived by humans as natural or wild, with an ecological system maintaining its ecological integrity, then Wilderness Characteristics include the following:

- an area greater than 5000 ha. that is perceived to be unaffected by humans, and is within the range of natural variation, where the landscape is perceived to be wild, or in a state similar to that which

existed prior to European settlement, and where there is a high probability of encountering human solitude,

- a landscape where evidence of post-European-contact human activity including road access or linear corridors, industrial facilities or other infrastructure, lights, sounds, or smells, is not apparent to a neutral observer, and
- an ecosystem in a state or condition where the structures and functions of the system are unimpaired by human-caused disturbances, and where native species are present at population levels within the range of natural variation, with their processes (such as growth, evolution, and reproduction) intact.

Wilderness Quality

"Wilderness quality" is a measure of the degree to which the ecosystem and landscape retain "wilderness characteristics." It is the responsibility of the proponents of activities that would affect or alter the wilderness characteristics to measure wilderness quality on both a project-by-project and a cumulative basis. The benchmark for measuring wilderness quality should be the wilderness characteristics that exist prior to the initiation of the project, and the goal should be to return the landscape to a state that restores that level of wilderness quality over time.

The objective is to maintain wilderness characteristics to the extent possible. Where they are fully maintained, wilderness quality is high. The M-K Act implicitly recognizes that "wilderness" cannot be maintained at all times in a landscape where industrial activity takes place, and requires that it is "wilderness characteristics" that must be maintained over time. This means that "wilderness quality" will decline for periods of time in areas where industrial activity is taking place. For instance, in the case of an open pit mine, wilderness quality may decline for many decades. However, in all cases this period must be kept as short as possible and practicable, in order that ecological integrity, and the human perception of wilderness, be maintained over time.

The goals for maintaining, and where necessary, restoring wilderness quality should be:

- To ensure activities create the least impact possible and practicable on wilderness characteristics and quality during the period of construction and operation, in part by utilizing best project design
- to ensure impacts created are of as short a duration as possible and practicable, that restoration is "progressive" and proceeds as soon as possible, and
- to ensure pre-existing wilderness characteristics are restored as soon as possible and practicable after the conclusion of activities. In all cases, the goal should be a return to pre-existing wilderness conditions in one human lifetime, or 75 years after operations cease. (This time period is chosen since time periods longer than a human lifetime can be considered permanent from a human perspective.) Longer time periods may be acceptable under specific conditions, but only where it can be definitively demonstrated that ecological regeneration occurs at rates inconsistent with this goals.

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Implications

The Muskwa-Kechika consists of approximately 1/4 Provincial Parks, and 3/4 Special Management Zones (Smz's). Inside the Parks, wilderness will remain unimpaired by industrial activities including forestry, logging, oil and gas development, or hydro development. However within the SMZ's there may be a decline in wilderness quality during the period of operations of industrial activities and during the period of time required for full restoration.

Access

For all activities that require the construction of new road access, construction methods and usage will be managed both seasonally and spatially in order to minimize impacts to the extent possible and practicable. All access* will be developed in a manner that allows for the restoration of wilderness characteristics over time, with a goal to reclaiming access as soon as possible and practicable after it is no longer needed. All new access will be reclaimed and recontoured using debris disposal, reforestation/seeding to re-establish native species, softening of abrupt cuts, water pattern reestablishment, and the termination of motorized access.

*The exception will be primary routes in the Fox and Obo RMZ's (as approved in the Mackenzie LRMP) which are allowed to be constructed for forest harvesting in the future. Also, the Mackenzie Plan did not prevent or endorse a potential highway access route from Fort Ware north to the Alaska Highway.

Biodiversity

The management of biodiversity is an important key to maintaining wilderness conditions. The goal is to reclaim all human caused disturbances to biodiversity as soon as possible and practicable. All disturbances will be reclaimed so that the species mix and composition and resulting stand structure will resemble pre-disturbance conditions, as soon as possible and practicable. The intention is to remove these impacts entirely in the long term.

Visual Quality

The management of visual quality is key to maintaining wilderness characteristics. The goal is to reclaim all disturbances to visual quality as soon as possible and practicable, so that if a visual landscape inventory were completed, the landscape sensitivity and resulting visual quality objectives would be the same as pre-disturbance conditions. In the case of open pit mines, some impact to visual quality can be expected to persist on the landscape, however this should be minimized to the extent possible and practicable, utilizing the highest level of reclamation standards.

Oil and Gas Activities

For oil and gas activities within SMZ's, all activities are to be designed to minimize the ecological footprint. Seismic activities will be designed to create as little impact upon visual quality as possible and practicable, and to create as little access (both human or animal) as possible and practicable, by using methods such as non-linear, avoidance, under-canopy construction, and by scheduling activities to avoid conflict with other values. For production activities, interim reclamation will commence as soon as possible and practicable after the production at each wellsite begins, with final reclamation to begin after the production at each

wellsite ceases or falls to an uneconomic level. Access roads to abandoned wellsites should only be left when there is a demonstrated plan to use them within a specified period of time, which should not be longer than 5 years. Linear corridors, including those required for pipelines, will be designed and constructed to blend into the visual landscape, utilizing sate of the art best practices.

Forest Activities

Potential forest harvesting activities will be based on ecosystem based management principles that consider the relationships with the surrounding landscape. Activities will be designed to maintain natural ecological processes, mimic natural disturbance patterns, and blend into the visual landscape. Tree regeneration strategies must mimic natural regeneration patterns to avoid managed stand characteristics.

Mining Activities

Mining activities will be designed to minimize their ecological footprint, to blend into the landscape, and to minimize impacts on other values in both the short and the long term. Reclamation should be planned prior to commencement of activities, with the goal of progressively reclaiming and recontouring minesites, roads, access and disturbance, so that all disturbed areas are returned, as quickly as possible and practicable, to a state which returns wilderness characteristics over time. In the case of open pit mines, there may be a substantial change to the appearance of a site, however, large disturbed areas should be designed and reclaimed such that they appear to be natural features at the conclusion of the development and reclamation cycle, and so that they are returned to an average land capability that is not less than the average that existed prior to the commencement of mining activities.

Non-industrial, Trapping and Recreational activities

These activities have the potential to affect wilderness quality and characteristics. These uses should be limited to those which are compatible with a wilderness. Where allowed, structures and buildings, for instance, must be designed to blend into the landscape. Caution must be exercised when considering the acceptability of new motorized activities that may produce a new or different level of impact on wilderness. Similarly, new non-motorized activities must be evaluated for impacts to wilderness before they are allowed. All non-industrial, trapping, and recreational activities must be monitored and a cautious approach taken if use levels begin to affect wilderness quality.