

Lake Louise and Yoho and Kootenay National Parks Field Unit

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Executive Summary

This Lake Louise and Yoho and Kootenay National Parks Field Unit (LLYK) Vegetation Management Plan is based on the Mountain Park Vegetation Management Guideline prepared by the Mountain Park Fire & Vegetation Management Working Group. Included in this vegetation management plan are Guiding Principles and Operational Guidelines for vegetation management, an overall vegetation management goal as well as goals for the major components of vegetation management in the Field Unit. Vegetation management goal implementation and priority setting is integrated with the goals and objectives of the LLYK Business Plan and outlined in a time/action schedule.

This Vegetation Management Plan will serve as the basis for the development of other resource management plans for the major components within Vegetation Management. The major components of vegetation management are:

- Fire Management - Natural Disturbance - Non-native Plants - Special Plant Features - Herbivory
- Disturbed Sites
- Developed Areas

As a result of the complex nature of vegetation management, this plan is intended as a dynamic document that will necessarily evolve over time in reaction to new challenges, advances in our scientific understanding and shifting priorities.

Plan Approval

SIGNATURE V DATE

FUN CT ION POSITION

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Recommended by Manager, Warden Services

Lake Louise & Yoho & Kootenay Field Unit

Recommended by Manager, Ecosystem

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Approved by Superintendent,

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1.0 Background

The Lake Louise and Yoho and Kootenay National Parks Field Unit (LLYK) vegetation displays considerable diversity as a result of the range of environments in its large land base (Achuff et al 1984, Achuff et al 1993, Holland & Coen 1982). It is generally representative of the Rocky Mountain Natural region, identified in the National Parks System Plan (Parks Canada 1990). The diversity of the vegetation was recognized in the designation of the Rocky Mountains World Heritage Site.

Vegetation management in protected areas and specifically in National Parks refers to all resource management planning, activities, and responsibilities that directly or indirectly affect park vegetation. This Vegetation Management Plan will support a consistent approach for some aspects of vegetation management for the Mountain National Parks.

Vegetation management actions in LLYK affect neighbouring lands. LLYK has extensive boundary areas that adjoin commercially harvested forests. The differences in land management mandates between National Parks and adjacent Provincial lands can lead to sharply defined park boundaries. The presence of major protected areas seem to have little effect on commercial activities or practices except to preclude those activities from the park land base. However, the presence of commercial harvest adjacent to the park boundaries can have significant effects on park resources. This situation makes regional ecosystem concerns a very high priority for LLYK.

Managing vegetation resources in an ecological, political, financial, social and regional context is a complex task involving many issues and stakeholder groups. Vegetation management issues include the major components of fire management, forest insects and diseases, non-native plants, protection of special vegetation features, wildlife/vegetation (grazing) dynamics, restoration of disturbed sites, management of vegetation in developed areas, and improved communications. Other, imbedded issues include old growth forest, pesticide use, watershed management, and management of forest fuels in wildland/urban interface areas.

A Mountain Park Vegetation Management Guideline was prepared by the Fire & Vegetation Management Working Group which provides background and detailed actions for the Mountain Parks. This LLYK Vegetation Management Plan is based on that guideline document. This Vegetation Management Plan will serve as the basis for the development of other resource management plans for the major components within Vegetation Management.

2.0 Principles and Strategic Goals 2.1 Principles and Operational Guidelines

2.1.1 Vegetation Management Principles

The following principles for vegetation management will apply in LLYK (largely based on Woodley et al 1995):

1. Ultimately, the Field Unit Superintendent is responsible for all aspects of vegetation management in their field unit.
2. The structure and function of LLYK ecosystems can be maintained or restored by managing ecological disturbance processes. The main ecological disturbance processes affecting vegetation in LLYK are fire, herbivory, insects and disease, windstorms, avalanches and flooding.
3. Disturbance regimes within regional ecosystems, including some portions of LLYK, have been altered by management actions, such as fire suppression, timber harvesting, agriculture and elimination of aboriginal land use.
4. Economic and social constraints preclude the option of maintaining an absolutely natural disturbance regime for wildfire in many areas of LLYK. Achievement of some results will require amendment to leases and business licenses.
5. Knowledge of historic and prehistoric vegetation conditions and disturbance regimes has fundamental value in guiding the development of vegetation management objectives and methods. However, maintenance of a pre-European state is not necessarily desirable.

2.1.2 Vegetation Management Operational Guidelines

The following guidelines for vegetation management will be followed in LLYK (largely based on Woodley et al 1995):

1. A science-based, adaptive management approach will be taken to all vegetation and fire management activities.
2. The current practice of full suppression of fire, which leads to fire exclusion is not acceptable.

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3. LLYK will maintain adequate fire control capability to protect values at risk, cooperate with adjacent land managers, and to manage ecosystems appropriately.
4. Vegetation and fire management actions will be undertaken in consultation and collaboration with neighbouring land managers and other regional stakeholders inside and outside LLYK.
5. Management interventions must be based on clear objectives and plans that are open to review and scrutiny. Efforts must be taken to fully consult and inform the public on management actions.
6. The management of LLYK vegetation will generally follow the Parks Policy of minimal intervention. Where intervention is required, the techniques will duplicate natural process as closely as possible.

2.2 Overall Vegetation Management Goal

The overall goal for vegetation management is: “To maintain or restore natural composition, structure and processes of vegetation representative of the Rocky Mountain Natural Region.”

2.3 Component Goals for Vegetation Management 2.3.1 Fire

To maintain or restore fire regimes while ensuring adequate public safety and facility protection and considering the objectives of adjacent land managers.

2.3.2 Forest insects and Disease and Other Natural Disturbances

To ensure the perpetuation of natural processes of vegetation disturbance (e.g., wind events, avalanching) and to allow fluctuations of natural, dynamic populations of forest insects and diseases while considering the concerns of our neighbors.

2.3.3 Non-Native Plants

To prevent the introduction of non-native plants and to eliminate or control them, as practical where they already exist, in support of maintaining native plant diversity.

2.3.4 Special Features

To protect and maintain special plant features (species, populations, or communities) including those that are rare, endangered, threatened or vulnerable (COSEWEC), are of scientific interest or interpretive value, or are locally, regionally or nationally significant (i.e., on provincial conservation data centre tracking lists).

2.3.5 Herbivory (Grazing & Browsing)

To maintain natural vegetation structure and composition by ensuring perpetuation of habitat relationships and the natural browsing and grazing regimes of native ungulates, and by appropriately managing domestic grazing.

2.3.6 Disturbed Sites

To maximize retention of biomass, nutrients and ecological roles within the ecosystem in cases where vegetation must be removed from the site by an approved project; to restore, as closely as possible, the composition, structure and dynamics of native communities to human disturbed sites; and to minimize future disturbance.

2.3.7 Developed Area Vegetation Management

To maintain or manage vegetation in developed areas of the park to resemble, as closely as possible, natural structure and composition in a manner that does not jeopardize natural ecosystems.

3.0 Strategy

The strategy has been developed to address major components of vegetation management. Detailed actions and time lines will be included in specific component resource management plans (i.e. LLYK Fire Management Plan).

3.1 Fire Management Strategies

1. Apply the "Mixed Fire Restoration approach to fire management planning within LLYK to enable a range of management actions (e.g., full suppression, planned and random prescribed fire, and limited suppression) as appropriate to each of the various management zones.
2. Define target fire regimes in terms of a range of desired fire cycles for various

vegetation groups, ecoregions, and site moisture classes.

3. Identify a planning period (i.e., thresholds) at which time deviations from the desired fire cycles are identified.

4. Develop prescriptions for randomly ignited fires; refine in discussion with managers and stakeholders.

5. Identify possible planned prescribed burn units for a five-year period to maintain, or move toward, the desired fire regimes.

6. Protect facilities, communities and adjacent lands from unwanted fires through suppression capability and fuel management (e.g., developed area or Townsite fire protection plan).

7. Work with other agencies and stakeholders to achieve common fire management objectives in boundary areas (i.e., interagency fire cooperation plans as per Canada/Alberta Fire Agreement).

8. Deliver consistent and effective fire management communication programs.

9. Monitor and research the effects of fire management interventions.

3.2 Natural Disturbance Strategies

1. Evaluate the past, current and predicted future status of forest insect and disease populations through monitoring and research.

2. Maintain the forest insect and disease database.

3. Manage native forest insect and disease populations only under strictly defined conditions as required by Parks Canada Policy and develop predetermined responses to potential natural disturbance events such as large areas of blown down trees.

4. Control or eliminate, where practical and appropriate, populations of non-native forest insects or disease.

5. Support and cooperate with provincial and federal agencies, businesses, universities and others to develop information, awareness, appreciation and respect for the ecological roles of forest insects and diseases.

6. Change the current perception of forest insects and disease as “forest pests.” 3.3 Non Native Plant Strategies

1. Identify opportunities to minimize the risk of new infestations using appropriate prevention and control methods.
2. Work cooperatively with other stakeholders to implement an Integrated Pest Management Approach to eliminate or control existing infestations;
3. Maintain a current inventory and priority rating system for non-native vegetation.
4. Increase stakeholder support, issue awareness, and involvement in the non-native plant control program.

5. Monitor the results of controlling high priority non-native vegetation. 3.4 Special Plant Features Strategies

1. Develop a special features information base using existing information in literature, scientific collections, personal knowledge and provincial conservation data centers.
2. Evaluate current status of special features (e.g., specific location, size, trends, threats) through field inspection, as necessary.

3. Monitor and manage special features, as appropriate. 4. Prepare Status Reports on species and sites for consideration by COSEWIC.

5. Participate in preparation of COSEWIC Recovery Plans (extirpated, endangered, or threatened species) and Management Plans (vulnerable species) for species in Mountain Parks and sites.

6. Support and cooperate with provincial agencies (e.g., BC-Conservation Data Centre, Alberta Natural Heritage Information Centre, BC Ministry of Environment, Alberta Environmental Protection), federal government agencies, business, colleges and universities, and others to develop information, awareness, appreciation and respect for special features.