

Lower Mainland District

**MANAGEMENT DIRECTION
STATEMENT**

January 2001

for Liumchen Ecological Reserve



**BRITISH
COLUMBIA**

**Ministry of Environment
Lands and Parks
BC Parks Division**

Liumchen Ecological Reserve Approvals Page

Forward

This management direction statement for **Liumchen Ecological Reserve** provides management direction until such time as a more detailed management plan is prepared.

Approvals:

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Introduction

Purpose for the MDS

The purpose of this management direction statement (MDS) is to provide management direction for the Liumchen Ecological Reserve. As an important component of the overall protected area system of the Lower Mainland (Figure 1), the upper Liumchen Creek drainage was established as an ecological reserve as a result of the Government acceptance of the 1996 recommendations of the Lower Mainland Protected Areas Region Public Advisory Committee. While several management objectives and strategies are identified within this MDS, the completion and realization of these strategies are subject to funding and implementation procedures. All initiatives associated with these strategies are subject to BC Parks' Impact Assessment Policy.

Context and Setting

Liumchen Ecological Reserve was chosen to be included in the protected areas system because it satisfied the two goals of the Protected Areas Strategy (PAS). Firstly, the reserve protects mid to upper elevation, representative examples of natural diversity in the province and characteristic habitats, hydrology and landforms of the provincially small North West Cascades (NWC) Ecosection. Secondly, Liumchen Ecological Reserve protects special natural features including rare and endangered species, critical habitats, and unique botanical and geological features. In addition, and secondary, the reserve contains minor recreation values in the form of the backcountry trails leading to Liumchen Lake, Mt. Liumchen and Church Mountain. The International Ridge Trail enters and leaves the reserve at its far western boundary with Cultus Lake Provincial Park.

Located 9 km southeast of Chilliwack (Figure 2), Liumchen Ecological Reserve is a small 2,300 hectare reserve that contains old-growth Subalpine fir stands in mid and higher elevations. There is access to subalpine meadows with a trail winding through varied terrain to a small lake and spectacular views over the Fraser and Columbia valleys. This small reserve protects habitat for several endangered amphibian, plant and animal species.

Ecological Reserve Attributes

Conservation Values

- Preserves very rare complex of ecosystems on limestone based soils.
- Represents most westerly limit of the Subcontinental Forested Mountain Hemlock Subzone (MHb).
- Preserves habitat for red and blue listed plant and animal species such as: Pacific Giant Salamander (*Dicamptodon tenebrosus*), Northern Spotted Owl (*Strix occidentalis*); at least one nesting pair are believed to utilize the reserve, Fendler's Waterleaf (*Hydrophyllum fendleri* v. *albifrons*), Spotted Touch-me-nots (*Impatiens capensis*) and Rusty Cliff Fern ¹ (*Woodsia ilvensis*).

¹ *Red list*: Includes any indigenous species or subspecies (taxa) considered to be Extirpated, Endangered, or Threatened in British Columbia. Extirpated taxa no longer exist in the wild in British Columbia, but do occur elsewhere. Endangered taxa are facing imminent extirpation or extinction. Threatened taxa may become endangered if limiting factors are not reversed. Red-listed taxa include those that are currently listed or are being evaluated for this designation.

Blue list: Includes any indigenous species or subspecies (taxa) considered to be Vulnerable in British Columbia. Vulnerable taxa are of special concern because of characteristics that make them sensitive to human activities or natural events. Blue-listed taxa are at risk but are not to be considered to be Threatened, Endangered or Extirpated.

Figure 1 - Context Map

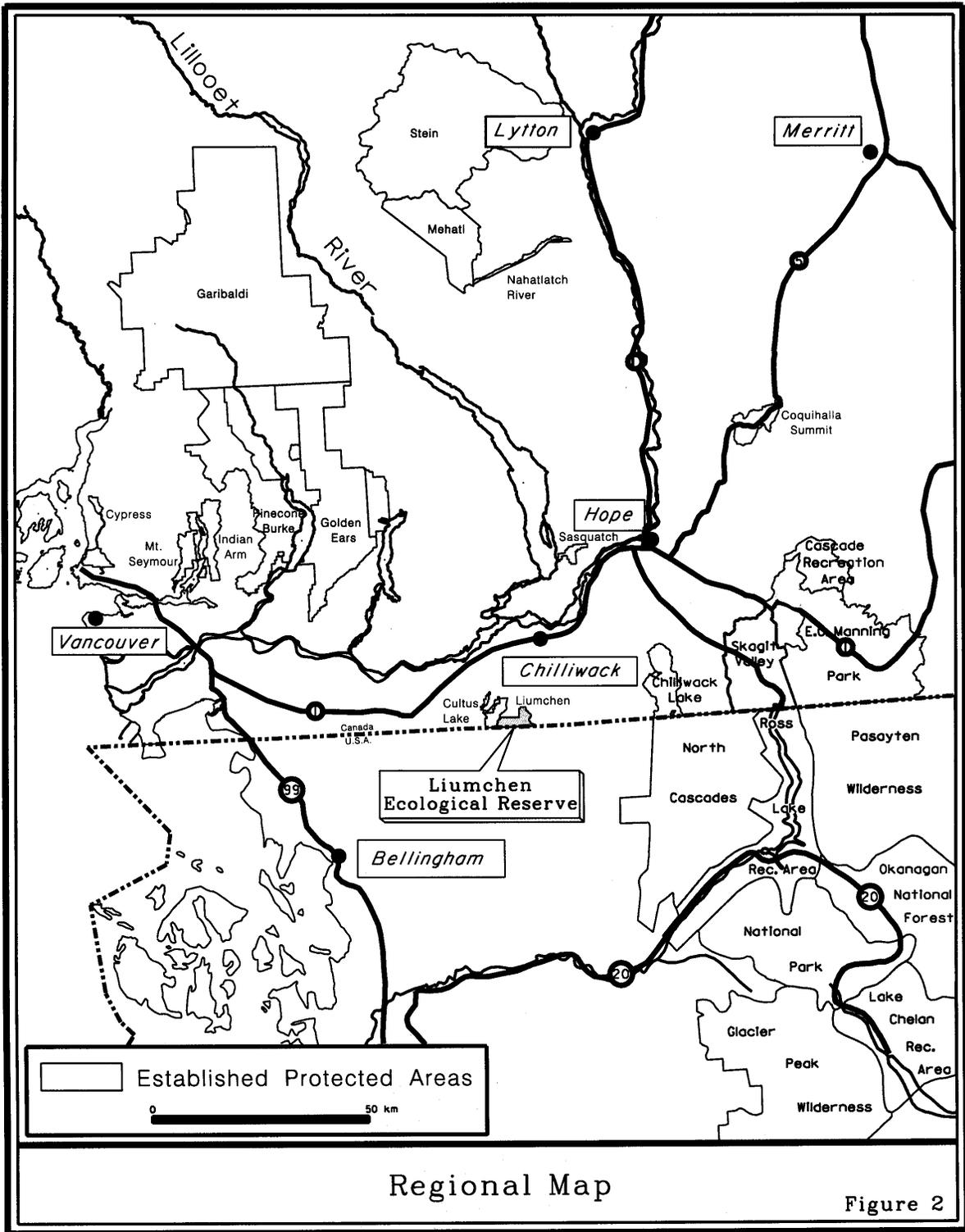
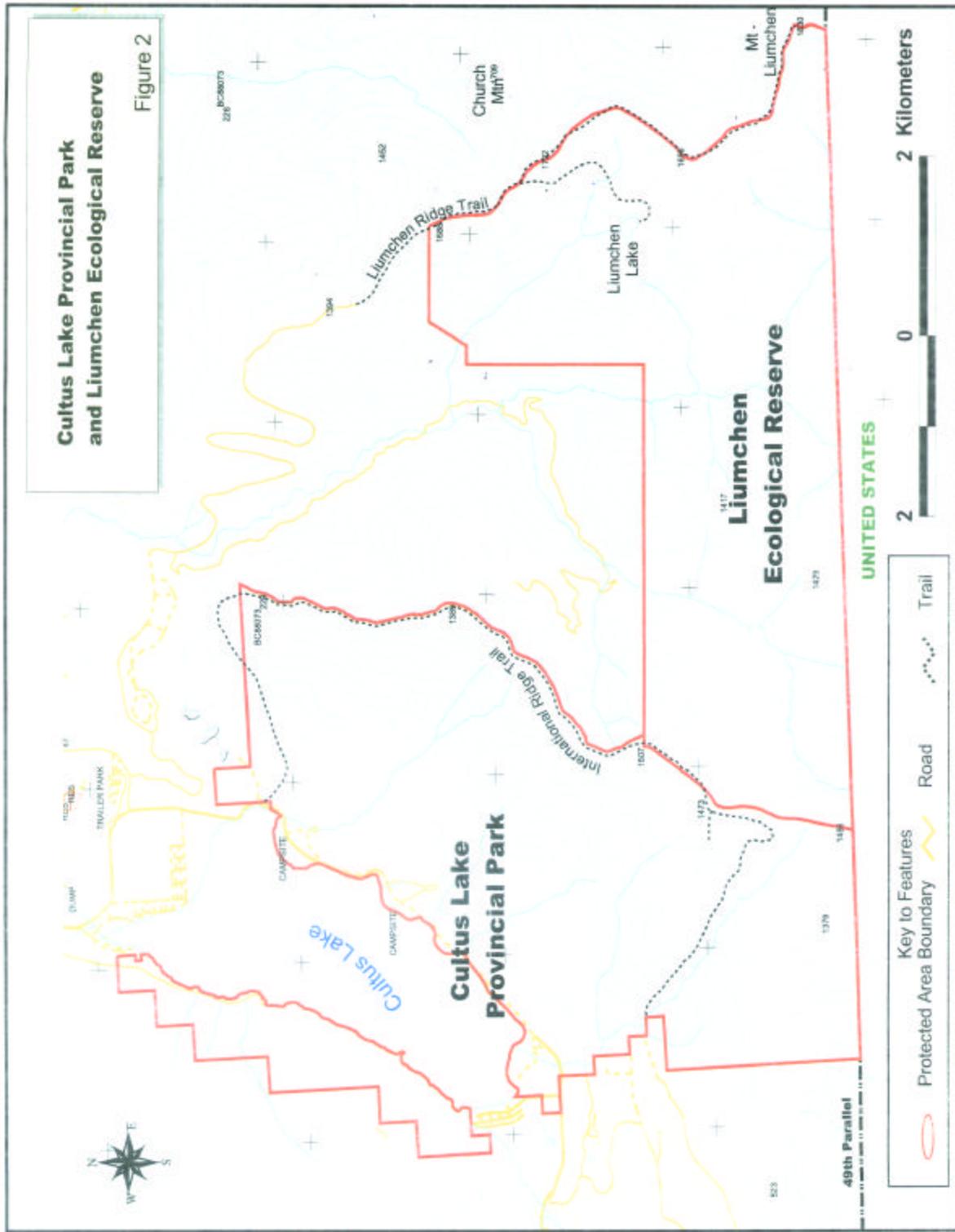


Figure 2 - Map of the Ecological Reserve



Other Values of Importance

Limited recreation opportunities, including backcountry camping, hiking and hunting occurred in the area prior to its designation as an ecological reserve. These opportunities contributed to the overall recreation opportunities in the Lower Mainland.

The importance of this area to the Sto:lo First Nation is unknown.

Significance in the Protected Areas System

- Protects a portion of the NWC Ecosection and unique *Abies lasiocarpa* and *Abies amabilis* ecosystem on limestone bedrock.
- Adds conservation values and continuity to Cultus Lake Provincial Park.
- Meets ecological reserve goals for representation (no other similar protected communities known), special features (limestone bedrock based plant communities) and research (rare and endangered species present).
- Contributes to Provincial Government's Spotted Owl Management Plan.
- Provides opportunity to study man-modified ecosystem in previously harvested areas as almost 25% of the ecological reserve was previously harvested.

Land Uses, Non-Conforming Uses and Interests

Access

The eastern portion of the ecological reserve is accessible from a 20 kilometer, deactivated logging road off the Columbia Valley highway. A four-wheel drive vehicle is needed for road access. An existing hiking trail at the eastern perimeter of the ecological reserve provides access to the interior of the ecological reserve and higher elevations along the ridge to Mt. Liumchen.

The northwestern portion of the ecological reserve is also accessible from the same logging road, however, no trails lead to the ecological reserve from this access. The International Ridge Trail wanders into the ecological reserve at various locations on the western boundary.

Existing Land Use Activities and Facilities

The existing recreational opportunities such as camping and hiking that occurred prior to designation require attention. The regulations of the *Ecological Reserve Act* prohibit camping, hunting and trail building unless associated with research and educational purposes and are, at most, minimally destructive.

Adjacent Patterns of Land Use

The ecological reserve is surrounded by the Chilliwack Provincial Forest to the north and east and the United States' Mt. Baker National Forest to the south. The western border of the ecological reserve is shared with the Cultus Lake Provincial Park. The areas surrounding the ecological reserve have, for the most part, been harvested.

First Nations Interests

The ecological reserve falls within the traditional territory of the Sto:lo First Nation. Sto:lo have objected to the Government's acceptance of the 1996 Lower Mainland Protected Area Strategy and have

generally declined to participate in protected area land use planning until treaty settlement. As such, specific interests are unknown at this time.

Other Agency Interests

Ministry of Environment, Lands, and Parks has significant interest in the Northern Spotted Owl within the reserve and the unique ecosystem this area represents.

Private and Public Stakeholder Interests

- The Liumchen Ridge Trail provides access to Church Mountain and Mt. Liumchen.
- The Liumchen Lake Trail fork provides access to Liumchen Lake for hiking and camping. The International Ridge Trail also lies partly in the reserve. The trails are referenced in several guide books.
- Members of the Chilliwack Fish and Game Association have hunted in the ecological reserve in the past.

Role of Liumchen Ecological Reserve

The designation of ecological reserve status over the upper drainage will alter recent land use as the role of the area has moved from integrated forest management as part of the Chilliwack Provincial Forest to conservation, education and research as part of the ecological reserve system.

Conservation Role

In association with adjacent Cultus Lake Provincial Park, the ecological reserve will protect a rare complex of ecosystems associated with the Subcontinental Forested Mountain Hemlock Zone. In particular, it will also protect several endangered, threatened and vulnerable species. The ecological reserve will also make a contribution to the Cabinet approved Spotted Owl Management Plan.

Education and Research Role

Within the conservation role and with its designation, the ecological reserve provides an excellent opportunity for research and education at both the government and institutional level. The ecological reserve's proximity to educational institutions will enhance its research role.

Management Commitments and Issues

Some direction for future management of the reserve is provided from previous planning and land use including:

- Identified in the *Spotted Owl Management Plan* as a Spotted Owl Conservation Area for long-term management for Spotted Owls. Recognized area for a stable habitat and potential to improve Spotted Owl habitat.
- Identified in *A Protected Areas Strategy for BC*.
- Previously identified as potential protected area for research and conservation in *Parks and Wilderness for the '90's* and as an ecological reserve in BC Parks' system planning.

Management Issues

Theme	Issues
Knowledge of values and habitat and species protection	<ul style="list-style-type: none"> • Further understanding of existing habitat for recognized endangered species • Potential habitat damage from existing recreation activities. • Lack of public awareness about special features of reserve and therefore, lack of awareness of habitat/species loss
Access	<ul style="list-style-type: none"> • Action required to address existing trail access
Cultural heritage	<ul style="list-style-type: none"> • Limited knowledge of aboriginal significance of the reserve

Management Direction

Priority Management Objectives and Strategies

Objectives	Strategies
Increase knowledge of natural and cultural values.	<ul style="list-style-type: none"> • Work with BC Environment to further research on Northern Spotted Owl • Encourage research on other natural values • Encourage Sto:lo to share history and traditional use information
Ensure natural processes are allowed to continue and ensure management decisions protect the conservation values	<ul style="list-style-type: none"> • Manage the ecological reserve to protect natural processes and conservation values by liaising with other provincial government agencies to address issues of access and fire management. • Contact the United States Forest Service to discuss transboundary issues associated with resource management. • Identify the ecological reserve through signage and literature to garner support.
Limit recreation opportunities	<ul style="list-style-type: none"> • Limit access to existing trails and limit existing camping to ten sites for education and research outings on a permit basis. • Increase knowledge of management regulations through signage. • Close motorized access to previously logged portion of the reserve on the east side of International Ridge. • Close the reserve to hunting.

Consultation and Future Planning

BC Parks is the managing agency for protected areas within the province and is responsible for planning administration and management of Liumchen Ecological Reserve. The future development of a comprehensive management plan for the ecological reserve will be coordinated with other agencies, various public planning groups and Sto:lo First Nation.

Consultation is required with the Sto:lo First Nation regarding their history, traditional use and this statement's content. In addition, further consultation is required with the existing outdoor recreation users in an effort to explain the rationale and impact of the ecological reserve status and the necessary management restrictions.

In addition, research on the conservation values is needed to further improve our knowledge about the ecological reserve and its components in an effort to better manage not only the ecological reserve but also similar ecosystems.

The ecological reserve is ranked as a long-term priority for development of a management plan because of the need for further research to support future management directions.

Appendix I - Purpose and Objectives of Ecological Reserves

Purpose

Ecological reserves are areas selected to preserve representative and special natural ecosystems, plant and animal species, features and phenomena. Scientific research and educational purposes are the principal uses of ecological reserves. Ecological reserves are established for the:

- Preservation of representative examples of British Columbia's ecosystems;
- Protection of rare and endangered plants and animals in their natural habitat;
- Preservation of unique, rare or outstanding botanical, zoological or geological phenomena;
- Perpetuation of important genetic resources; and
- Scientific research and educational uses associated with the natural environment.

Role in the Protected Areas System

Ecological reserves role in the protected areas system focuses on the maintenance of biological diversity and the protection of genetic materials. Appropriate research and educational functions are the primary uses of ecological reserves. They are not created for outdoor recreation. Parks and ecological reserves complement each other, with ecological reserves providing a narrow range of educational and research activities associated with strict preservation while parks and protected areas provide a broad spectrum of uses from preservation to intensive facility oriented recreation.

Appendix II

Activity / Use Matrix for Liumchen Ecological Reserve

The following table provides a summary of acceptable uses, activities and facilities in the protected area.

Activity/Use/Facility	Acceptability
Hunting	N
Fishing	N
Trapping	N
Hiking and walking	Y
Grazing (domestic livestock)	N
Recreational Gold Panning/Rock Hounding	N
Utility corridors	N
Communication Sites	N
Horse Use/ Pack Animals	N
Guide Outfitting (hunting)	N
Guide Outfitting (fishing)	N
Guide Outfitting (nature tours)	N
Guide Outfitting (river rafting)	N
Cat-Assisted Skiing	N
Ski Hills	N
Commercial Recreation (facility-based)	N
Commercial recreation (non-facility based)	N
Backcountry Huts	N
Water Control Structures	N
Fish Stocking and Enhancement	N
Road Access	N
Off-road Access (snowmobiling)	N
Off-road Access (motorised)	N
Off-road Access (mechanical activities)	N
Motorised Water Access	N
Aircraft Access	N
Fire Management (suppression)	Y
Fire Management (prescribed fire management)	Y
Fire Management (prevention)	Y
Forest Insect/Disease Control	N
Noxious Weed Control	Y
Exotic Insect/Disease Control	Y
Scientific Research (specimen collection)	Y
Scientific Research (manipulative activities)	Y

Y = allowed subject to conditions identified in the management direction statement or management plan
M = may be permitted if compatible with protected area objectives

N = not allowed
N1= allowed for expressed management purposes only
N2 = present and allowed to continue but not normally allowed