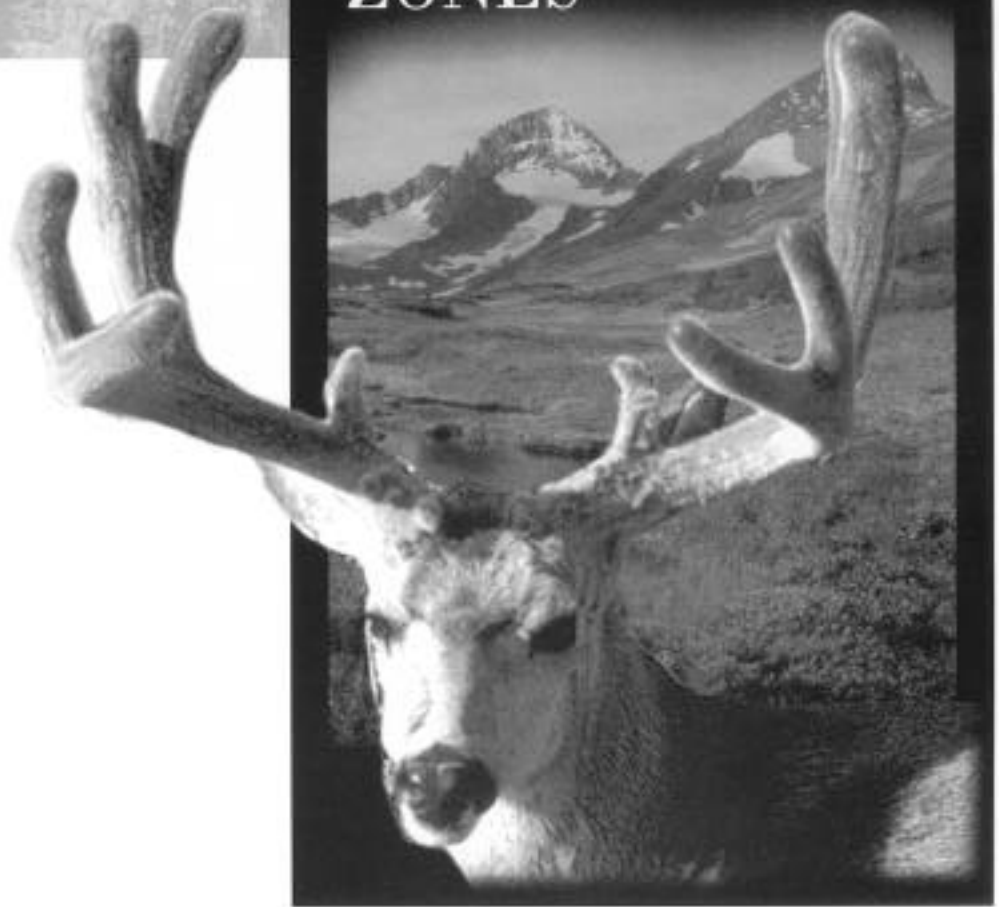


KEEPING THE

# SPECIAL

IN SPECIAL  
MANAGEMENT  
ZONES



A CITIZENS' GUIDE



By Jim Cooperman

# Foreword

BC Spaces for Nature is a solutions-oriented, conservation organization created in 1990 to promote the protection of British Columbia's rich diversity of wilderness and wildlife. BC Spaces works with individuals and organizations throughout the province to ensure that British Columbia's wild spaces remain intact. Given this mandate, BC Spaces recognized the potential that Special Management Zones could make in safeguarding these values. Hence this Citizens' Guide has been written to help the public ensure that the Special Management Zones will indeed achieve their potential.

After over 125 years of forest development, British Columbia still contains extensive temperate forests. These wildlands contain an extraordinary range of plants and animals that are the envy of the world. Consequently, British Columbians have a global responsibility to steward the environmental values of our province. However, for many years British Columbia's forests have been subjected to damaging logging practices and unsustainable overcutting. In the late 1980's and early 1990's, this led to increasing conflicts between the logging industry and conservationists. In places such as Carmanah Valley and Clayoquot Sound the tensions of these confrontations became intense.

To help resolve these conflicts the B.C. government sponsored a series of land use planning processes to designate the landbase for the management of both economic and ecological values. The zones delineated through these public negotiation exercises included: Protected Areas, Integrated Management, Enhanced Resource Use and Special Management.

In particular, the establishment of Special Management Zones to maintain and enhance values other than timber - such as environmental and social concerns - were critical to achieving success at the negotiation table. Often, the Special Management Zones were the tool that provided the means to break key deadlocks and bridge the gap between industry and conservationists. In many respects these Special Management Zones epitomize the good will and faith of those individuals who had the courage to sit down and negotiate with their adversaries.

To achieve agreements on these land use plans - often in the face of seemingly overwhelming odds - people from all walks of life, in countless communities across the province devoted a tremendous effort of time and energy. This being so, it is essential that the B.C. government honour the commitments made to these citizens to ensure that the intrinsic ecological values in the Special Management Zones will endure.

To date, over eight million hectares have been zoned for special management. As well, land use planning processes now underway have the potential to designate more significant areas. Given that Special Management Zones encompass some of our province's most environmentally critical areas, BC Spaces believes heightened public awareness of their values and greater citizen involvement in their management is essential. Therefore, we have commissioned Jim Cooperman, a leading authority within the B.C. environmental movement on land use planning, to prepare this Citizens' Guide. By so doing, it is our hope that we can provide the public with the tools and knowledge needed to ensure that the province's Special Management Zones will always remain special.

Ric Careless, Executive Director  
BC Spaces for Nature, April 1998

# Acknowledgments

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We are grateful to those who assisted us with the preparation of this guide. In particular, several experts authored individual portions of this book. Greg Utzig, a scientist and consultant based in Nelson, wrote the section on the Kootenay/Boundary land use plan and reviewed other portions of the guide. Dave Neads, a conservationist living in the West Chilcotin and a representative on the Regional Resource Board, contributed the section on the Cariboo/Chilcotin land use plan and the Itchas-Ilgachuz Special Management Zone case study. Syd Haskell with the Carmanah Forestry Society contributed the Walbran Periphery Special Management Zone case study; while John Nelson, a Victoria-based researcher provided the piece on the Vancouver Island land use plan. Matt Price who works with the Friends of Clayoquot Sound, wrote about Special Management in Clayoquot Sound; while Mark Haddock of West Coast Environmental Law, provided expert assistance on the Spotted Owl zones.

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We also appreciate the work of Irene Watters, who prepared the artwork for the guide, and Roger Handling, who contributed the cover design. This report would not have been completed without the project guidance of Ric Careless and expert editorial assistance of Dona Reel and Kathleen Cooperman.

Finally we would like to dedicate this guidebook to the environmental activists from across the province who are working hard to help ensure an ecologically sustainable future for British Columbia.

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# Executive Summary

Effective public land use planning in British Columbia began with the Commission on Resources and Environment (CORE) in 1992 and continues today through Land and Resource Management Planning processes. The land use plans resulting from these processes are now being implemented and include Special Management Zones (SMZs). In these zones, resource extraction activities are meant to be carried out in a sensitive manner in order to protect non-timber values. These Special Management Zones now encompass over 8.5 million hectares. The significance of SMZs is recognized by B.C.'s Forest Practices Code which is designed to ensure that operational forest planning adheres to higher level plans that meet the objectives for SMZs.

The overarching goal for SMZs should be to protect biodiversity and other non-timber values. This goal should be achieved through management systems that place priority on environmental safeguards instead of simply maximizing resource extraction. Unfortunately, current management practices seldom meet these SMZ goals. Of most concern, timber extraction volume targets frequently override other land use objectives, especially in areas where the timber supply is limited, as a result of past overcutting. Of particular concern is the current SMZ management in the three CORE regions; Vancouver Island, Cariboo/Chilcotin and the Kootenay/Boundary. Here forestry appears to continue with insufficient regard for the environmental qualities the Special Management Zones were designed to safeguard. This management is not acceptable as it both endangers critical ecological values and discounts the intensive citizen efforts that were involved in reaching agreements on these land use plans.

If the non-timber values in the SMZs are to be protected, long range planning should be undertaken prior to resource development, after comprehensive inventories are completed. This planning should actively involve continuous, balanced participation by all interest groups. Citizens can help to achieve this goal both in regions where land use plans are completed and in regions where planning is still underway. The Forest Practices Code provides one opportunity for more detailed planning through landscape unit planning. Opportunities for better planning also occur through the sensitive area designation and will occur through the Code's Identified Wildlife requirements. As well, follow-up regional and sub-regional stakeholder processes need to continue in the CORE regions.

Forest practices in SMZs need to be ecologically-based to protect non-timber values and processes. Alternative systems to clearcutting, such as selection logging should be used where possible. Furthermore, forest management in SMZs should emphasize the *Variable-Retention Silvicultural System*. This approach places the focus on the forest structure that is to be left after logging, to better protect and maintain ecosystem functions.

This guide has been prepared so that citizens interested in ecological sustainability can use the tools and resources provided to design appropriate SMZs for their regions and to promote better planning and management of existing SMZs. A provincial focus on the Special Management Zone designation will help raise its profile with the goal of enabling Special Management Zones to achieve their promise and their potential.

# 1. Introduction

## 1.1 The Context

British Columbia has entered a new era of resource management, in which environmental values and functions will receive greater attention and, hopefully, an improved level of stewardship.

The principle of integrated management, in which the entire landscape is managed for all values has been replaced by a new system based on land use plans that delineate zones for specific management goals and objectives. The new zones in these plans range from areas of intensive forestry use to areas that are completely protected as parks and ecological reserves.

As of April, 1998, after years of interest-based negotiations, land use plans have been completed for:

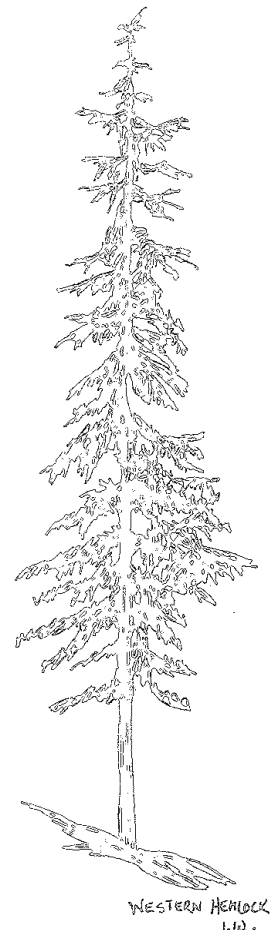
three regions -

- Vancouver Island,
- Cariboo/Chilcotin,
- Boundary/Kootenay;

and six sub-regions -

- Kamloops,      • Kispiox,
- Bulkley Valley,   • Vanderhoof,
- Fort St. John,   • Fort Nelson.

During the information gathering stages and the negotiations, it became clear to participants at the land use planning tables that zones were needed to provide greater protection for biodiversity, wildlife habitat and recreation. The result was the creation of Low Intensity Areas on Vancouver Island; Special Resource Development Zone areas in the Cariboo/Chilcotin; Special Resource Management Zone areas in the Kootenays; and Special Resource Management Zone areas for wildlife habitat, recreation/tourism and community watersheds in the Kamloops Land and Resource Management Plan sub-region. To date, there has been little effort made to standardize the nomenclature. **Consequently, for the majority of this publication, these areas will be referred to as Special Management Zones (SMZs).**



The purpose of this guide is to provide concerned citizens with a source of tools, knowledge and advice to help them maintain the ecological integrity of Special Management Zones.

*The Land Use Plan is an integral part of the Forest Resource Commission's vision for the protection and enhancement of all values on the land base. It is the foundation which further changes in the structure of integrated resource planning depend.*

**- The Future of Our Forests, Forest Resources Commission, April, 1991**

The purpose of this guide is to provide concerned citizens with a source of tools, knowledge and advice to help them maintain the ecological integrity of existing SMZs. Also, this handbook will serve as a guide for representatives of organizations involved in ongoing and future Land and Resource Management Plan (LRMP) sub-regional processes.

## 1.2 A Brief History

The major changes seen today in B.C. forest management originated in 1989, when the government of the day attempted to increase the number of tree-farm licenses (TFLs - an area-based tenure system). The result was widespread public criticism and a call for a full Public Inquiry.

Instead of initiating an inquiry, the government chose to create the Forests Resources Commission (Commission) chaired by Sandy Peel, a former Deputy Minister of Education. The Commission held public meetings throughout the province, sponsored numerous studies and produced a wide range of recommendations that resulted in new government policies. These recommendations included a call for comprehensive land use planning, the creation of “**land use classifications for values and uses that fall within provincial goals,**” the development of a Forest Practices Code, improved inventories and improved public participation in planning.

Through a series of seven regional workshops, the Commission defined nine possible Protection Classifications:

- archaeological sites
- ecological reserves
- flood or avalanche prevention
- wilderness areas
- special environmental features (sensitivity or instability)
- cultural and spiritual values
- wildlife migration corridors
- parks
- unique wildlife habitat

At the same time the Commission was underway, a second process was at work to determine a strategy for the province’s old growth forests. Through a series of workshops, public consultations and studies; multi-sector teams created a set of recommendations known as the **Old Growth Strategy**. These recommendations included a call for land use planning, as well as for the establishment of old growth reserves using the existing park, wilderness, wildlife management area and ecological reserve designation systems. In addition, the Old Growth Strategy recommended that special management areas for old growth forests be incorporated within landscape level plans.



In 1992, a third, parallel process was established to expand the B.C.'s park system. The **Protected Area Strategy (PAS)** replaced the former government's **Parks and Wilderness for the 90's**, which lacked a focus on conservation principles. PAS technical teams established *study areas* and *areas of interest* where resource activities were deferred to provide time for land use planning to take place. Thus, the Commission's recommendations for the ecological reserve, park, and wilderness classifications have been addressed through the Protected Area Strategy and through various land use planning initiatives.

The Commission's proposal for archaeological sites, flood or avalanche prevention areas, and special environmentally sensitive areas are covered under B.C.'s Forest Practices Code (Code). The SMZs that resulted from land use planning processes address the proposed Commission classifications for unique wildlife habitat, wildlife migration corridors and areas with cultural and spiritual values at the strategic or broad regional and sub-regional scale. In addition, the Code now provides the legal context for SMZs through the Resource Management Zone definition and Higher Level Plans.

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### 1.3 The CORE Process

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Early in 1992, the B.C. government established the Commission on Resources and Environment (CORE) in an effort to end what was then billed as "valley by valley confrontations." Under the leadership of Stephen Owen, B.C.'s former ombudsman, CORE set up three, multi-sector land use planning tables at the regional level, with the hope of creating consensus-based plans. In addition to regional land use planning, CORE produced a provincial **Land Use Charter** which spelled out the goals and objectives for sustainable management of B.C.'s resources.

**The Forest Practices Code provides the legal context for SMZs through the Resource Management Zone definition and through Higher Level Plans.**

***Planning at a regional scale provides an opportunity to achieve a sustainable balance of broad social, economic and environmental interests....to address the need to provide strategic direction and coordination across a full spectrum of resource interests.***

**- West Kootenay-  
Boundary Land Use Plan,  
Commission on  
Resources and  
Environment**

***Sustainability has been identified as one of the most important principles in regional land use planning. It provides the assurance that present land use decisions do not compromise the opportunities available to future generations.***

**- West Kootenay-Boundary  
Land Use Plan,  
Commission on Resources  
and Environment**

CORE regional planning began first on Vancouver Island, which set the stage for the other regional and sub-regional processes. The Vancouver Island conservation sector presented a comprehensive design for Low Intensity Zones that included four sub-categories:

- **Future Options** - areas designed for the maintenance of future options where major alteration of natural ecosystems will be avoided;
- **Old Growth Management** - areas designed to maintain the values of old growth while allowing low intensity extractive uses;
- **Visual Management** - areas designed to maintain pristine visual landscapes for tourism, recreation and residential interests, while permitting compatible industrial use; and
- **Connectivity, Buffers and Restoration** - areas designed to maintain ecological connections between protected areas and to buffer protected areas. Also, to increase old growth attributes in areas depleted by past activities.

The Vancouver Island CORE table never did reach consensus. However, Stephen Owen and his staff prepared a land use plan that was based on the work of the table. In addition to new protected areas for 13 percent of the land base, CORE recommended a Regionally Significant Land zone designation for 16 areas. The final government plan renamed these zones, Low Intensity Areas. In April, 1996, the Vancouver Island Resource Targets Project report recommended that these zones be called Special Management areas.

In the Cariboo/Chilcotin, the conservation sector developed a plan based on the principles of conservation biology. They proposed that 26 percent of the region should be protected in parks and 32 percent should be in Special Management Zones based on the need to maintain connectivity. Special management was to be determined by a scientific committee similar to the Clayoquot Sound Scientific Panel. The final government plan created parks covering 12 percent of the land base and SMZs covering 26 percent of the region.

In the Kootenay/Boundary region, the entire plan area was divided into polygons (a mapping unit of various sizes and shapes), with specific management direction defined for each one. The West Kootenay/Boundary/Columbia conservation sector recommended that approximately 25 percent of the land base be designated special management to provide linkage corridors between existing and proposed protected areas. In the final government plan, 17.6 percent of the West Kootenay region was designated Special Resource Management Zones. While in the East Kootenays, 11.3 percent of the region was designated as SMZs.

Within the three CORE regions, there are now 97 SMZs, covering more than 3,600,000 hectares. While the government's intention may have been to achieve many of the objectives discussed at the negotiating tables for these zones, this has not yet occurred. Instead of *special management*, there is currently an inadequate continuation of status quo management in many of the SMZs.

Upon completion of the recommended regional land use plans, CORE continued its work on a provincial land use strategy. A number of documents were produced, including a Strategic Land Use Planning Source Book, an Energy Strategy and four volumes relating to the Land Use Strategy. Despite all of its accomplishments, in response to budgetary concerns and complaints from the resource sectors, the government scrapped CORE early in 1996.

## 1.4 The LRMP Process

The government recognized the problems associated with the CORE process to create plans for large regions. A more localized planning process was developed by a multi-agency team with the assistance of CORE that focused on sub-regions at the Timber Supply Area (TSA) level. The **Land and Resource Management Plan (LRMP)** process began first in the Kispiox and Kamloops areas, where it replaced the ongoing TSA planning processes. Besides covering a smaller area, the LRMP process differs from the CORE model by including representatives from all the government agencies at the planning tables along with public, labour and industry representatives.

Establishment of SMZs has continued through LRMP processes. In the Kamloops LRMP sub-region, there are 14 wildlife habitat zones, 12 recreation/tourism zones, and 21 community watersheds covering a total of approximately 465,000 hectares (some of these zones overlap). Three special management zones, were created in the Vanderhoof LRMP totaling 55,200 hectares. Nineteen Special Management Zones were created in the Bulkley LRMP totaling 159,100 hectares. In the Kispiox LRMP 14 special management areas, including 9 community watersheds, were designated totaling 223,965 hectares.

In the fall of 1997, two large LRMPs were approved by government for the northeast corner of the province. Nine SMZs were created in the Fort St. John TSA totaling 627,000 hectares. In the Fort Nelson TSA, 16 SMZs were created totaling 2,915,300 hectares. **As of April 1998, approved LRMPs include 106 SMZs totaling approximately 4,401,860 hectares.**

**Within the three CORE regions, there are now 97 SMZs, covering more than 3,600,000 hectares.**

***Land and Resource Management Planning is an integrated, sub-regional, consensus building process that produces a Land and Resource Management Plan for review and approval by government. The plan establishes direction for land use and specifies broad resource management objectives and strategies.***

**- Land and Resource Management Planning, A Statement of Principles and Process, Province of B.C.**

**As of April 1998, there are 225 Special Management Zones totaling over 8.3 million hectares.**

**In the United States, Land and Resource Management Planning with public participation was mandated in 1976 by the National Forest Management Act for the national forests.**

In addition to the SMZs designated for the CORE regions and the LRMP sub-regions, there are 204,000 hectares of Spotted Owl Special Management Zones. When all of these SMZs are combined with the CORE SMZs, the official total for the province as of April, 1998 stands at 225 SMZs encompassing over 8.3 million hectares (over 8.5 million hectares with the inclusion of Clayoquot Sound).

LRMP planning tables are continuing to meet in 12 sub-regions of the province. When these tables arrive at a plan, most of the province (except for the Lower Mainland, the Merritt TSA and the far northwest) will have completed land use plans. Land use planning is coordinated provincially by the **Land Use Coordination Office** in Victoria. Within each forest region, senior government staff provide management direction through **Inter-Agency Management Committees**. When land use plans are in place everywhere, it is possible that 10 to 15 percent of the B.C.'s land base could be in Special Management Zones. Hopefully by that time, special management will be truly special.

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## **1.5 Special Management in U.S. Forests**

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The concept of a Special Management Zone is not unique to the B.C. experience. In the United States, land use planning for the national forests was mandated in 1976 by the National Forest Management Act. This Act required that Land and Resource Management Plans be created with public participation for all national forests within ten years. While the deadline was not met, most of these plans are now complete. Within these plans there are management area categories for specific species and uses. These categories include prescriptions that define the management objectives. Some of the categories that would fall under B.C.'s more general special management zone classifications are: unroaded recreation, wild and scenic rivers, wilderness, research natural areas, wildlife (separate areas for pine marten, mountain goat, pileated woodpecker, deer and elk, and spotted owl), visual emphasis, and old growth.

In 1993, as a result of litigation over listing the Northern Spotted Owl as an endangered species, an additional special management zone was created to protect the owls. Lessons learned over the years in the U.S. National Forests are available for helping British Columbians ensure our SMZs receive 'state of the art' management.

# 2. Ideas for Management Planning and Practices

## 2.1 Goals and Criteria

In British Columbia, Special Management Zones (SMZs) are areas identified as containing special ecological or social values. The overall goal for these areas is to protect biodiversity and other non-timber values and functions. This goal should be achieved through management systems based on ecology instead of ones based on resource extraction. Unfortunately, significant portions of some SMZs have already been roaded and clearcut. Consequently, for these areas, ecosystem restoration will also be a priority.

The criteria for Special Management Zones often emphasize the value that these areas have for maintaining biodiversity and ecological processes. As well, in some cases, SMZs were designated through land use planning for their recreational and/or scenic values. Regardless of why each zone was designated, SMZs require state of the art management plans and practices to protect their sensitive ecological and social values.

In spite of government's current proposals to cap SMZ management objectives with allowable annual cut (AAC) targets, the conservation community needs to maintain the original intention of SMZs by promoting a vision of well managed future forests based on ecological sustainability.

**Ecological sustainability is the perpetual conservation of ecological process so that the biological productivity of the air, land and water persists without the use of non-renewable input.**

**- Scott Harrison,  
Conservation Biology  
Principles for Forested  
Landscapes**

In Conservation Biology Principles for Forested Landscapes, co-editor Scott Harrison defined ecological sustainability as *the perpetual conservation of ecological process so that the biological productivity of the air, land and water persists without the use of non-renewable input*. To further clarify this definition, Harrison added these comments:

- *Sustainable means forever and, within the bounds of natural variation, is timeless.*
- *Forest use is based on ecology, not economics.*
- *Conservation of processes requires that rates of change occur on a time scale that is similar to the natural variation in the system without humans.*
- *Knowledge and understanding of ecological processes and rates are important to their conservation.*
- *Plans for sustainable use should not require human interventions to ‘speed up’ ecological processes.*

The intent of this chapter is to provide an ecologically sustainable management vision for SMZs, using principles gleaned from various publications, including the Clayoquot Sound Scientific Panel Report.

One overarching concept that must be applied to SMZ management is the “**Precautionary Principle**,” which says that management must be cautious and err on the side of maintaining forest ecosystem values and functions, rather than on the side of timber economics devoted to maintaining fibre flow. The Precautionary Principle recognizes the dynamic nature of ecosystems and humanity’s current limited understanding about the interrelationships between parts of the system and how they function.

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## **2.2 Planning**

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The first step towards sustaining the ecological and social values in SMZs is comprehensive, ecosystem-based planning at sub-regional, landscape and stand levels. In order to develop these plans, inventories are required for all forest values and processes. Detailed information is needed on fish and wildlife populations and habitat, watershed hydrology, existing forest conditions, recreational and tourism values, and cultural values. The sources for this information should include local knowledge and First Nations, as well as government inventories and assessments.

The actual planning process should involve the balanced participation of all sectors, including conservationists and First Nations. This shared decision making process could begin as a technical exercise at the

agency level, before public sectors become involved. At the final stage, it is critical that these detailed plans be approved by both the Ministry of Environment, Lands and Parks (MOELP) and the Ministry of Forests (MOF).

Plans should incorporate respect for all forest uses, values and functions through a balanced, holistic process. Ultimately, **planning must protect the ecological integrity of the forest and should balance human needs with those of nature.** This balance can be achieved through the designation of sub-zones within each SMZ to accommodate incompatible forest uses or situations where uses are compatible but one use predominates.

Ideally, the landscape level or watershed level plans for SMZs need to be for a full, natural successional cycle, rather than the artificial timber rotation cycle used to set AACs. In tree plantations, the rotation age is determined by the projected time period that the trees will reach a peak **mean annual increment** (the average growth in diameter).

Consequently, the industrial forestry model is based on the time it takes for tree growth to begin to decline, which could vary from 60 to 140 years depending on the site. Ecologically responsible forestry proposes that rotation time should instead reflect the natural disturbance regimes, which ranges from 100 to 150 years for the dry interior forests; to 250 years or longer for the coastal and interior rainforests.

Long term SMZ plans should also include access management, visual quality objectives, road development and deactivation, strategies for pest and disease management, locations for logging and silviculture treatments, locations for recreation development, protected **forest ecosystem networks** (FENs), protected old growth reserves, and special habitat requirements. This type of planning has been called **total-chance** planning and is now referred to as **total-resource** planning.

Access management is an important component of planning. Access may be needed for a number of uses including logging, silviculture, mineral exploration, recreation, food gathering and tourism. Roads may benefit one user at the expense of another. For example, wilderness values are lost once roads are built. As well, roads can also encourage illegal hunting to the detriment of threatened or endangered species. While road maintenance can be expensive, unmaintained roads and culverts can produce sediment which degrades water quality and aquatic habitat. Road deactivation also requires foresight and input from public consultation, as the road may be the only access to a favourite fishing hole or a special feature for tourism.

**The first step towards sustaining the ecological and social values in SMZs is comprehensive, ecosystem-based planning at sub-regional, landscape and stand levels.**

**Forest ecosystem networks are landscape level zones that incorporate sensitive areas, old growth areas and protected areas to form connecting corridors to facilitate animal movements and genetic flow. FENs may also include stands in various successional stages to which special management practices are applied.**

**Rather than attempting to create plans that support a predetermined rate of cut as is currently the case, the AAC should be an output from the planning process.**

**Once the SMZ plans have been developed and approved, only then should the rate of cut be determined at the watershed level through spatial analysis.** Spatial analysis uses mapping to estimate how much area can be logged during a specified time period. Rather than attempting to create plans that support a pre-determined rate of cut as is currently the case, the AAC should be an output from the planning process.

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## **2.3 Planning Products**

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The primary planning product should be a GIS map (GIS stands for geographic information system - a computer generated map) that accurately displays the boundaries of areas with known resource values, as well as the ecosystem networks. In addition, the map should serve as a long-term plan by identifying the proposed cutblocks and road development for the full successional cycle.

Sub-zones should be identified by their primary function or by the concentration of resource values within them and they can be categorized as either relating to ecological issues or social issues. The following are some examples:

### **Potential Sub-zones for *Ecological Values*:**

- **Grizzly Bear Habitat** - particularly spring habitat
- **Caribou Habitat** - particularly the low-elevation old growth forest used in early winter
- **Old Growth** - especially rare stands of ancient rainforest
- **Sensitive Areas** - including wetland complexes, steep unstable ground, and sensitive soils
- **Restoration Areas** - ecosystem restoration may be necessary to restore fisheries, wildlife habitat or recreational features

### **Potential Sub-zones for *Social Values*:**

- **Recreation** - hiking, camping, eco-tourism, water sports, and fishing
- **Visual Quality** - areas where there are high visual quality objectives
- **Forestry Areas** - Sub-zones where ecologically sustainable timber management is compatible with the overall objectives of the SMZ



- **Cultural Areas** - ancient village sites, burial grounds, and sacred sites
- **Agro-forestry** - mushrooms, berries, traditional foods and medicines, and ornamentals
- **Special Resource Features** - waterfalls, hot springs, and fossil sites
- **Buffers for Protected Areas** - many SMZs were chosen to maintain the integrity of protected areas through careful management of adjacent land
- **Range** - areas under permit or lease for cattle or sheep grazing

Additional sub-zones can be defined by identifying the primary use or function and the secondary ones. For example, an area designated as caribou habitat may be also suitable for special types of logging, as long as this development can be done in a manner that does not endanger the caribou population.

Planning within SMZs should be integrated with Landscape Unit planning as defined by the Biodiversity Field Guide (more on this in the next chapter). Every effort should be made to expedite this level of planning so that it can form the basis of the SMZ plans.

The plan should also include specific objectives for each sub-zone. These objectives could range from maintaining or enhancing population levels of certain species to ensuring that specific recreational values are protected. For many SMZs, it may be necessary to identify sub-zones, such as **Old Growth Management Areas**, that require no resource development, either on a temporary or permanent basis, in order to protect specific values or ecosystem processes.

Temporary deferrals are necessary for some sensitive ecosystems where proposed practices should be first demonstrated to have achievable results in similar, already disturbed landscapes. Deferrals may also be necessary to allow time for comprehensive, baseline inventories that are needed to provide the information necessary for good decision making. This is the case in Clayoquot Sound, where the Scientific Panel recommended that the remaining pristine watersheds be left untouched, until alternative logging practices have been tried in already developed watersheds and have proven successful. Such trials may take many years of observation and analysis in order to determine the degree of success.

**Deferrals may also be necessary to allow time for comprehensive, baseline inventories that are needed to provide the information necessary for good decision making.**

## 2.4 Restoration

**Ecosystem restoration can be defined as the “active intervention by humans to accelerate natural healing processes that renew ecosystem integrity.”**

Many of the SMZs designated to date contain areas that have been disturbed by past logging and/or roadbuilding and require restoration. In B.C., restoration to date has been largely focused on watersheds, especially now under Forest Renewal BC’s Watershed Restoration Program. Watershed restoration begins with detailed assessments and usually includes: road and trail deactivation, slope and gully stabilization, and stream stabilization through the addition of large woody debris and sometimes the re-routing of diverted stream channels. Monitoring the results for evaluation purposes is part of the follow-up to these activities.

Ecosystem restoration entails far more than watershed restoration and it is an emerging new field in Canada, although it has been underway in the U.S. since the 1940’s. While watershed restoration focuses largely on rehabilitating fish habitat, ecosystem restoration deals with rehabilitating elements of the entire ecosystem. It can be defined as the “active intervention by humans to accelerate natural healing processes that renew ecosystem integrity.” Attributes of ecological integrity include:

- the ability to recover from disturbance;
- long-term functioning without or with minimal need for maintenance;
- long-term stability;
- a structure containing native plants and animals; and
- natural levels of biodiversity.

Given the current limited and incomplete understanding of how ecosystems function, a cautious approach to ensuring the maintenance of ecological integrity actually attempts to mimic the ecological conditions of similar areas that remain free of unnatural disturbance.

Ecosystem restoration activities can include:

- soil rehabilitation to repair damage from compaction, contamination, erosion and nutrient depletion;
- removal of non-native species;
- rehabilitation of wetlands, grasslands and riparian zone structures;
- return of natural disturbance processes (e.g. fire);
- restoration of specific natural structures (e.g. snags, downed logs, or canopy gaps);
- restoration of natural distributions of seral stages; and
- reintroduction of native plants and animals.

In order to maintain and protect the ecosystem values that were recognized in land use planning processes, it is imperative that restoration be a high priority within those SMZs that contain disturbed areas. Also, the cumulative effects of logging and forest fragmentation need to be assessed before specific stand management prescriptions are carried out in SMZs. While in some cases the disturbance may take centuries to heal - as in the case of soil erosion on the clearcut hillsides of Vancouver Island - restoration efforts will hopefully accelerate the healing process.

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## 2.5 Forest Practices

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Where comprehensive inventories and planning have identified areas within SMZs that are suitable for logging, the management practices should be innovative, ecologically responsible and socially acceptable. In B.C. to date, few examples exist of non-conventional logging practices that could be deemed to meet the criteria for “special management.” Rather, the majority of the staff in the MOF, forestry consulting firms and forest companies still appear largely resistant to techniques other than conventional clearcutting. However, some on the ground examples do exist both on the coast and in the interior to demonstrate that alternative practices are feasible. As well, current literature provides some excellent direction.

One key management system that should and can be applied to logging within all SMZs is the *Variable-Retention Silviculture System* (VRSS), as defined by the Clayoquot Sound Scientific Panel. The VRSS places the emphasis on what is left after logging by providing for the retention of forest structures as needed to protect and maintain multiple values and ecosystem functions. For cutblocks with significant values other than timber, VRSS calls for the retention of 70 percent of the forest with cutting limited to small openings 0.3 hectares or smaller. For cutblocks without significant values, 15 percent of the forest should be retained, with windfirm trees well dispersed throughout the unit. **Site level plans are prepared on the basis of what structure should remain after logging, rather than what timber is to be removed.** Logging systems should be restricted to lower-impact yarding systems such as hoe forwarding, suspension cable or helicopter logging.

To date, there has been very limited use of alternative silviculture systems to clearcutting in the coastal forests. A 1994 report by Keith Moore on alternative systems and practices in the Vancouver Forest Region showed that only 100 to 150 hectares per year were cut using alternative systems and practices, which amounts to less than 0.4 percent of the approximately 30,000 hectares logged each year.

***Variable-Retention Silviculture System* places the emphasis on what is left after logging by providing for the retention of forest structures as needed to protect and maintain multiple values and ecosystem functions.**

***...throughout B.C., silvicultural systems research and operational trials...are challenging and changing old misconceptions about appropriate management of B.C.'s diverse forests. The preliminary results to date are powerful evidence that partial-cut systems have strong potential for more widespread operational use.***

**- Michael Jull, RPF  
in the ABCPF Forum,  
Sept./Oct. 1997**

However, this report shows that the few examples studied have been largely successful. These alternative systems include:

- **seed tree** - an even-aged system that retains 5-20 high quality trees per hectare as a seed source, these trees may be logged before the next rotation;
- **shelterwood** - an even-aged system that retains 30-60 trees per hectare to provide shelter to the young forest, these trees may be logged before the next rotation;
- **group selection** - an uneven-aged system that removes groups of trees with openings less than one hectare;
- **single tree selection** - an uneven-aged system that removes single trees of varying sizes, species and diameters; and
- **reserves** - a modified system that leaves singles trees or groups of trees to benefit non-timber resource values and processes, applicable to riparian zones.

More recently, there was a very successful cable logging trial involving high-retention systems on steep, sensitive slopes on the west coast of Vancouver Island. Between July 1995 and September 1996, International Forest Products (Interfor) conducted this trial near Chamiss Bay in Kyuquot Sound, in response to concerns expressed by local citizens and the Kyuquot / Checleset First Nations. In one unit, 65 percent of the stand was retained and in another, 70 percent of the forested stand remained. A follow-up technical report by the Forest Engineering Research Institute of Canada explains how standard coastal equipment (swing yarders and cable systems) worked well for the unique conditions of this operation. Although the planning and logging costs were significantly greater than for the nearby clearcut block, there are notable benefits of improved protection of non-timber values in these high-retention blocks. This trial definitely shows that selection logging is workable in coastal oldgrowth forests.

The Forest Practices Code has provisions to designate objectives for wildlife trees and coarse woody debris to be specified in Forest Development Plans. However, no matter what silvicultural system is used, the Workman's Compensation Board regulations require the felling of standing dead trees (snags). Consequently, only through the use of wildlife tree patches within cutblocks or within riparian management areas will it be possible to retain standing dead trees that provide critical habitat for wildlife. These patches include a dead tree that is surrounded by green trees that serve as a buffer to prevent potential injury to forest workers.

In the interior of the province, alternative practices have been the standard for a number of years for most of the logging operations handled through the Vernon forest district small business program. Jim Smith, the former MOF manager of the program, reports that he has used the above systems successfully within a wide diversity of interior forest ecosystems and, as well, he has developed long-term, total-resource watershed plans.

In recognition of the work in Vernon, Greenpeace approved the first eco-certified cut block on public land in Canada. The prescription for this certified small business cutblock called for only 30 percent of the trees to be logged and a minimum of 30 percent of the dominant and co-dominant trees to be marked as permanent leave trees. In addition to the single tree selection system, the Vernon foresters have developed other innovative prescriptions, including an angled series of strip cuts on a visually sensitive hillside above a small community and a group selection system in a community watershed. The Vernon forest district's small business program illustrates how alternative, ecologically responsible logging practices can work in interior forests. This program should help to serve as a model for forest management practices in SMZs throughout much of the interior of B.C.

An evaluation of the use of alternative silvicultural systems used in the Vernon Small Business Program that was prepared by consultants for the MOF shows a complexity of management options. The resulting stand structure after logging can either be even-aged or uneven-aged. The leave trees can be retained for a short-term (less than twenty years) or a long-term, which often means they will remain standing for the entire rotation period. These reserve trees can be left either in a uniform, group or strip fashion. Overall, there are 14 options for stand structure designs, that provide an expanded silvicultural toolkit that has the ability to address a myriad of management objectives. As well, the evaluation shows there are many benefits to partial cutting, including: a positive public response, a potential to access more volume, and an ability to meet complex management objectives. Additionally, the success of the Vernon program shows the need for financial incentives, changes in administration and tenure policies and an increase in training and extension to further promote the use of alternative logging systems in B.C.

***This certification shows that society can ensure that forests are protected while providing timber in socially and economically successful ways.***

**- Herb Hammond,  
Clear-cut Free-Just Did It,  
A Greenpeace Report**

***It is seen as part of the Ministry of Forests mandate to promote the successful implementation of alternative silvicultural systems as viable options in conflict areas or areas where non-timber resource values are high.***

**- Evaluation of Alternative  
Silvicultural Systems  
within the Special Log  
Sales Projects for the  
Small Business Forest  
Enterprise Program, by  
Bryce Bancroft, Ken Zielke  
and Stuart Deverney for  
MOF**

**An ecosystem-based approach to planning is one in which the primary objective is to sustain the productivity and natural diversity of the region. Planning at a variety of spatial and temporal scales is critical at all stages of forest ecosystem management.**

**- adapted from the Clayoquot Sound Scientific Panel Report**

There are currently a number of partial cutting research trials underway across the province. Both MOF and MOELP staff, as well as university researchers are investigating alternatives to clearcutting and assessing the impacts of these systems on fish and wildlife habitat, biodiversity, soil and scenic values. Under the Silvicultural Systems Program, approximately 200 projects are underway in areas with very diverse ecosystems, such as Date Creek near Smithers, Sicamous Creek near Salmon Arm and Opax Mountain near Kamloops. Already, initial evaluations show that partial cutting can offer distinct advantages and be ecologically suitable. The knowledge gained from these trials, can be easily transferable to management activities within the province's expanding network of Special Management Zones.

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## **2.6 Summary**

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Special Management Zones have been designated through land use planning processes because they contain high non-timber values and because of their contribution to maintaining and protecting critical ecological processes. Consequently, SMZ management should not be based on timber quotas per se, as in the integrated forest zone, but instead, should seek to achieve high quality planning and innovative, alternative practices. Although they are specific to one region, the Clayoquot Sound Scientific Panel recommendations provide an excellent set of guidelines that should be adapted to every SMZ. Where comprehensive planning identifies areas within SMZs that are suitable for logging, there are models of alternative forest management practices that should be used.

# 3. Existing Management Direction

## 3.1 Forest Practices Code

The Forest Practices Code (Code) serves as the baseline for forest management in B.C. and includes the Act and the Regulations which are mandatory and legally enforceable. The Regulations describe how to develop operational plans, implement forestry activities, and carry out enforcement actions. In addition, the Forest Practices Code Guidebooks provide comprehensive procedures and processes for conducting forest practices, however they are only enforceable when they are included in plans, prescriptions or contracts. Code Guidebooks also stipulate detailed tolerances and evaluation criteria.

Although the goal of the Code is to improve forest management in B.C., many of its requirements for forest stewardship can be overridden through the discretionary powers of the district managers. Recent changes to the Code have also resulted in fewer planning requirements and place greater emphasis on economic objectives, on monitoring the results of forestry practices and on the “professional accountability” of foresters.

Special Management Zones fall under the Code classification system as “**Higher Level Plans**,” and, as such, they receive special consideration throughout the operational level planning process. SMZs are land use categories that are classified under the Code as a type of resource management zone. Other possible resource management zones include enhanced resource development zones and community watersheds. The Forest Practices Code Act requires all operational plans, including forest development plans, logging plans, silviculture plans, and range use plans to be consistent with relevant higher level plan objectives.

The forest development plans are prepared by a licensee or the MOF Small Business Program staff every year. These plans include maps that show the location of existing and proposed cutblocks, roads, road development and deactivation plans, and describe the development proposals for a five year period. **The forest development plan is the key forest plan that directs most forestry activities and the only operational plan that allows for public input.**

There is a requirement to advertise in local papers that forest development plans are ready for public viewing either in forest company or forest district offices. The public has two months to review these plans and provide comment. Staff who prepare these plans must consider all comments and must provide copies of both the comments and revisions to the district manager. However, there is no requirement to inform the members of the public who provided comments of what changes, if any, were made to the plans to address the comments.

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## 3.2 Higher Level Plans: Policy and Procedures

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***Policy deals with fundamental principles and matters that are considered before decisions are made. Procedures, on the other hand, deal with process - the steps to be followed prior to making a decision or to implementing the decision once it is made.***

**- Higher Level Plans: Policy and Procedures, Forest Practices Code of B.C.**

In June of 1996, the B.C. government released a manual that includes a summary of legislation, chief forester policies and procedures, and related information regarding Higher Level Plans. Entitled ***Higher Level Plans: Policy and Procedures***, this reference manual describes in detail the steps necessary for sub-regional planning and landscape unit planning to become official Higher Level Plans.

In July of 1997, the B.C. Government made approximately 157 amendments to the Forest Practices Code Act and the Forest Act. Included in these amendments is a new definition for Higher Level Plans that restricts these plans to only objectives. These changes, however, are not retroactive and existing plans will continue to be in force. Two of the three existing Higher Level Plans (Cariboo/Chilcotin and Kamloops LRMP) include more details than just objectives.

Higher Level Plans encompass objectives for:

- resource management zones (including SMZs);
- landscape units;
- sensitive areas (areas that need to be “treated differently” as determined by the opinion of MOF district managers or designated environment officials); and
- interpretive forest sites, recreation sites, and recreation trails.

Since all operational plans must conform to the higher level plans, the manual recommends that adequate notice be provided to licensees regarding any imminent establishment of Higher Level Plans. Phase-in provisions are also recommended to allow a “smooth transition” from existing operational planning to new planning.



For those sub-regions where LRMPs are underway, participants should be well aware of the potential management directions that can be included within the SMZ objectives. Opportunities exist for SMZs to:

- determine if joint approval is required for forest development plans or amendments;
- determine if development plans for longer than 5 years are required;
- specify where logging or other activities are to be “post-poned;”
- identify features and objectives as “known” information requirements for operational plans;
- establish visual quality objectives;
- provide direction for maintaining biodiversity;
- identify “old growth management areas;”
- provide management direction for “identified wildlife;”
- guide determination of silvicultural systems and stand structure;
- guide treatment of forest health factors;
- specify cutblock size, shape and pattern;
- specify requirements for species composition;
- guide tree selection during spacing and commercial thinning;
- specify green-up height;
- identify forest resources that a soil rehabilitation plan must address; and
- guide selection and location of optimum road locations.

**Higher Level Plans are not cast in stone, as resource management zones can be varied or canceled through a process that begins with an order filed by a regional manager.** If the chief forester decides that the public will be significantly affected by the proposed changes, then the next step is an opportunity for public review that begins with a notice in a newspaper that includes a map and a copy of the proposed or established objectives. The public has 60 days to provide comments (this review period may be reduced to only 15 days if the order to establish the resource management zone is set to occur in less than 60 days). The final decision is made either by the ministers (cabinet) or by the chief forester if “he is of the opinion that the order should take effect at an earlier time so as to adequately manage and conserve the forest resources of B.C.” If there is no time for public review, the chief forester is required to prepare a background that explains the rationale for accelerating the process.

Many of the existing Higher Level Plan objectives are vague and subject to interpretation by MOF district staff and forest industry licensees. For example, the Cariboo/Chilcotin Land Use Plan requires that the

***An operational plan is deemed to be consistent with higher level plans and other operational plans if the operational plan does not materially conflict with them, and a higher level plan is deemed to be consistent with other higher level plans if the higher level plan does not materially conflict with them.***

- Forest Practices Code of  
B.C. Act

**Resource management objectives describe a desired future state with respect to a particular resource or resource use and must be measurable, spatially specific and describe a time-frame within which the objective will be achieved.**

**- adapted from A Guide to Writing Effective Resource Management Objectives (draft)**

preparation of Forest Development Plans is "...sensitive to the specific values and objectives identified in the particular areas." The degree of sensitivity is left to the discretion of the agency staff and often first pass logging is considered to have minimal impact on non-timber values.

Only three higher level plans have been designated as of November 1997; the Cariboo/Chilcotin Plan, the Kamloops Land and Resource Management Plan (LRMP) and the Kispiox LRMP. Specific guidelines for the other two CORE regions are pending. Specific details regarding these plans are provided in chapter four. LRMPs have also been approved for the Bulkley Valley, Vanderhoof, Fort St. John and Fort Nelson sub-regions, and the government is now working to formally designate these LRMPs as higher level plans. As described in Chapter four, the land use plans for Vancouver Island and the Kootenay/Boundary region have not yet been designated as higher level plans. Consequently, these SMZs do not have legal authority to direct operational planning.

For the remainder of the province, higher level plan direction under the *Code* will have to wait until ongoing and future LRMPs are completed and approved. The key lesson for those involved in these processes, is to develop SMZ objectives and strategies that are specific enough to provide explicit direction for forest development plans and other operational plans. Specifically worded objectives will require the least amount of interpretation by the forest district staff and forest companies.

A guide to writing effective resource management plans will soon be available from the Land Use Coordination Office. The draft guide recommends that objectives consider existing government policies, conform with existing plans, take into account existing lower level plans (such as Local Resource Use Plans), reflect the proposed land use category (such as special or enhanced), be internally consistent and achievable. Effective resource management plans should answer the five key questions relating to resource use: what, where, when, how and who. Objectives should relate to issues of concern and be prescriptive and measurable. Strategies can be incorporated into objectives, where they are technically sound and fundamental to attaining the objective and it is unlikely that they will need to be amended.

### 3.3 Sensitive Areas

The Sensitive Areas Designation offers another opportunity to provide an improved level of management or **conservation for specific areas that are smaller than 1000 hectares** (this size restriction can be amended). Examples of areas that could be designated as sensitive include: a rare plant community, a hot spring and surrounding forest, or a combination of resource features that require sensitive management. While this designation could result in restricted access, **Sensitive Areas are not generally intended to preclude logging.**

The steps necessary to designate a Sensitive Area begin with the joint determination between the Ministries of Forests and Environment, Lands and Parks that an area should be declared sensitive. Objectives for the area are then developed and agreed upon by government agency staff. The public is then notified through publication of an impending order in the local newspaper, and they will have 60 days to review the order and draft boundaries. Finally, the area is mapped and entered into the inventory base. Currently, forest cover maps include areas now called environmentally sensitive areas (ESAs). Over time, district managers are to review these ESAs to determine whether any are suitable for establishment as a Sensitive Area.

Policy calls for the Sensitive Area designation to be only used where landscape unit objectives cannot accomplish the desired result. In addition, the objectives for Sensitive Areas must be consistent with the objectives of any existing higher level plan, including landscape units. Existing operational plans may proceed despite the establishment of Sensitive Areas. However, future operational plans must be consistent with the objectives of Sensitive Areas.

As of April, 1998, only one Sensitive Area has been established in the province. The Rose-Swanson area was designated as a Sensitive Area by the Vernon Forest District in order to better manage its high recreational values. The 712 hectare Rose-Swanson area contains numerous hiking, mountain biking and horseback riding trails and local schools use the area for environmental studies. The objectives for the area include maintaining the trails and protecting the visual quality. A 100 metre buffer has been established around the existing hiking trails and for the rest of the area, logging is limited to low impact silviculture systems such as horse logging, helicopter logging and selection systems. A monitoring group has also been established that includes community representatives, agency staff and a representative from the forest company.

***If in the opinion of the district manager or a designated environment official special circumstances require that Crown land or private land in a tree farm licence or woodlot licence....be treated differently from adjacent lands to manage or conserve the forest resources, the district manager, by written order, may establish the area as a sensitive area...***

**- Forest Practices Code of B.C. Act**

Ministry of Forests planning staff in Victoria have a pilot project underway to assist with the identification and development of other Sensitive Areas in the province. Areas now under consideration include First Nation cultural sites in northern B.C. There is also a Forest Practices Code Sensitive Areas Working Group in Victoria. They have drafted a decision guide for establishing Sensitive Areas that outlines all of the other opportunities for higher level planning under the Code to protect and maintain sensitive environmental and social values. As currently drafted, this draft guide provides clarification as to where and for what purposes sensitive areas could be applied. When the pilot projects have been completed, the results will be used to revise the draft decision guide to become the final policy for establishing Sensitive Areas.

***Identified Wildlife is a term defined under the Forest Practices Code that refers to species or plant communities that are considered to be sensitive to habitat alteration associated with forest and range activities.***

**- Ministry of Environment,  
Lands and Parks  
Background Document**

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### **3.4 Identified Wildlife Guidebook**

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The long overdue Identified Wildlife Management Strategy is expected to be released in 1998. This strategy will provide management direction for endangered and threatened species (red and blue and some yellow listed species called “Regionally Important Wildlife”) by focusing on the limiting habitats of these species. The first volume contains 41 species, including grizzly bear, marbled murrelets, Queen Charlotte goshawks and 4 plant communities. Volume 2 is planned which will add additional species.

The Strategy outlines procedures to follow in order to establish wildlife habitat areas (WHAs) which are mapable defined areas, and measures to follow within WHAs. Examples of measures include reduced or no harvesting, and/or no road building. The measures are legally enforceable and provide clear direction on what activities can occur within a WHA. Nesting areas, snake hibernaculum, and fawning areas are examples of where WHAs could be designated. Overall, impacts of the Identified Wildlife Management Strategy are restricted to no more than 1 percent of the provincial AAC, however this will vary from region to region. The two species that are estimated to have the greatest impact on timber supply are the Queen Charlotte goshawk and the grizzly bear. Impacts for Marbled Murrelet WHAs will come out of the impacts allocated to the Biodiversity Guidebook.

WHAs will provide one more tool to protect non-timber values, however there are concerns that this tool will be extremely limited by the AAC impact cap placed by government. The WHAs will only have a defined and generally small geographic radius and will focus on nesting and breeding sites. Logging and road building will also be allowed in most WHAs and even in core nest areas provided there is no other “practicable option” and the variance is approved by both the district manager and a designated environment official.

Citizens will have the opportunity to recommend that WHAs be designated. Once a site is proposed, the application is reviewed by the regional rare and endangered species specialist (RES). It is then reviewed by both regional and provincial WHA committees. Final approval is the joint responsibility of the chief forester and the deputy minister of Environment. Approved WHAs are then delineated on district forest cover maps.

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### 3.5 Biodiversity Guidebook

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The Biodiversity Guidebook, when implemented, is intended to provide some degree of improved protection and maintenance of old growth forest values and forest ecosystem processes across all forested landscapes. The Guidebook assumes logging will occur and focuses on the design of landscape level plans to achieve a future forest with a similar level of diversity as existed in the past. However, **the implementation of the Biodiversity Guidebook is limited to having no more than a 4 percent impact on the province's short-term timber supply.** Implementation is also limited by agency staff discretion.

The Biodiversity Guidebook gives direction to landscape unit planning, which will take place in roughly three stages:

**1. Landscape unit delineation** - The determination of the boundaries for each landscape unit within a sub-region is usually based on watershed boundaries and the unit size may be up to 100,000 hectares. All units in a forest region should be designated simultaneously to avoid gaps or overlaps. Units should be determined in a way that minimizes the number of natural disturbance types. Wherever possible, community watersheds should be wholly contained within a landscape unit. Major river watersheds can be divided into several units. The size of the unit should relate to the level of ecological complexity, so that units are smaller where the terrain is complex and are larger in relatively uniform terrain.

**2. Assignment of emphasis designation for each unit** - Each unit is assigned either a low, intermediate or high biodiversity emphasis based on an ecological evaluation, and in some cases, public input through a land use planning table. This designation determines the recommended seral stage distribution percentages, with a larger percentage of old growth forests left standing in the high emphasis units. Strict limits are placed on this process: a maximum of 10 percent of the sub-region is allowed to be designated high emphasis, 35-60 percent is allowed as intermediate emphasis, and 30-55 percent as low emphasis.

***The goal for biodiversity [protection] is to maintain sufficient old forest stand structure and species composition across the landscape to create second-growth forests in which old growth forest attributes and the biodiversity associated with these are able to persist.***

**- Biodiversity Conservation in B.C.'s Forest Practices Code: Requirements for Cutblock Design by Mike Fenger**

***Rare ecosystems are defined in the biodiversity guidebook as ecosystems that make up less than 2 percent of a landscape unit and are otherwise uncommon in adjacent landscape units. In addition, the Conservation Data Centre together with regional ecologists have developed a provincial list of rare forested ecosystems.***

**- Biodiversity Question and Answer Document, February, 1996, MOELP/MOF**

**3. Objective setting** - The final design for each unit includes the following objectives for biodiversity: seral stage distribution, temporal and spatial distribution of cut and leave areas, old growth retention and representation, landscape connectivity (forest ecosystem network design), stand structure and species composition. As well, objectives can also be included for timber production, forage production, recreation, wilderness, water, fisheries, wildlife and cultural heritage resources.

There are six steps used to design forest ecosystem networks (FENs):

1. Identify and map representative and rare ecosystems greater than 600 metres across.
2. Identify and map existing protected areas; streams, lakes and wetland areas; wildlife habitat areas for wildlife that require a high degree of forest retention; and unstable slopes with logging restrictions.
3. Assess the areas identified and locate the ecosystems not protected as potential old growth forest management areas.
4. Where old growth management objectives have not been achieved, establish old growth forest management areas as needed to meet retention objectives.
5. Assess whether connectivity objectives have not been achieved and whether additional connectivity needs to be developed from mature and old growth stands.
6. Assess the resultant FEN and adjust and verify that it meets the landscape unit objectives. Verify areas of concern in the field.

Biodiversity management will be based on the principle that “the more that managed forests diverge from natural disturbance regimes, the greater the risk of loss of biodiversity.” Consequently, five “natural disturbance types” (NDT) have been designated for the province, each with distinct guidelines for objective setting. For example, NDT1 refers to those ecosystems with rare stand-initiating events, such as the coastal and interior cedar/hemlock rainforests. The recommended level of old growth retention for NDT1 Coastal Western Hemlock is 19 percent or greater in high emphasis areas and 13 percent or greater in low and intermediate emphasis areas. While this system is an improvement over the management that is directed by AACs based on the complete liquidation of old growth forests, it still provides for a significantly higher percentage of a landscape unit to be in a young seral stage and a much lower percentage in mature and old seral stages than the historic natural levels.

Protected areas and inoperable areas all contribute to the recommended level of seral stage distribution, which will further lessen opportunities to increase the protection of low elevation forests. For those sub-regions without landscape unit plans in place (most of the province), **low biodiversity emphasis is the default option.** In addition, if halting the logging of the remaining stands of old growth forest in low emphasis units is “politically unacceptable,” then old growth retention targets will not be required for three rotations. Consequently, a commitment to retaining old growth options through landscape unit planning is severely handicapped by timber management objectives.

In August, 1997, the government released a new policy directive that weakens the Biodiversity Guidebook further in order to reduce impacts on the province’s already depleted timber supply. Targets for maintaining old-growth forests, which are the most critical elements for the maintenance of biodiversity, have been relaxed. Government now envisions reducing old-growth forests to as low as one-third of the original target set out in the Biodiversity Guidebook for the low biodiversity emphasis areas. As well, goals for maintaining mature rainforests (trees at least 80 years of age) have been dropped altogether unless there is no potential impact on timber supplies.

The relationship between SMZ guidelines and landscape unit planning has not been defined by government agencies. For example, it could happen that the 10 percent “budget” for high biodiversity emphasis could be used up in the SMZs to the detriment of the rest of the land base. Government staff in Victoria have unofficially stated that the relationship between the two levels of planning is up to each sub-regional planning group.

The Code states that if the objective for a landscape unit is inconsistent with the objective for a resource management zone (RMZ), then the objective for the management zone prevails. Thus, objectives for intensive development zones could prevail over biodiversity objectives and objectives for SMZs could prevail over lower emphasis landscape unit objectives. Landscape unit planning is progressing slowly and will likely be completed only after sub-regional plans have been determined. Only the Kamloops LRMP and more recently the Vanderhoof LRMP have the first two stages of landscape unit plans completed.

***The combined mature plus old seral requirements, if strictly applied, can result in significant timber supply impacts. We agreed that considerable flexibility would be allowed to avoid timber supply impacts.***

**- August 25, 1997 letter from Deputy Ministers John Allan (MOF) and Cassie Doyle (MOELP) to operational staff.**

**Connectivity is an ecological term that describes connections among habitats, species, communities and ecological processes. Connectivity enables the flow of energy, nutrients, water, disturbances, and organisms and their genes at many spatial and temporal scales.**

- Chapter 3, **Conservation Biology Principles for Forested Landscapes**,  
Scott Harrison and  
Joan Voller

## 3.6 Landscape Unit Planning

Landscape unit planning will provide key opportunities to ensure the SMZ goals and objectives are realized. Chapter Five of *Higher Level Plans, Policy and Procedures* prescribe government policies related to landscape unit planning. MOF district managers in consultation with regional managers and MOELP staff are required to prepare regional landscape unit planning strategies. As of April 1998, all regions except Prince George have a strategy in place. These strategies were developed through the following steps:

1. **Locate boundaries** for draft landscape units across the region, ensuring coordination within the region and between regions.
2. **Determine information needs** and the nature and scheduling of resource inventories.
3. **Assign initial biodiversity emphasis** consistent with any existing higher level plans.
4. **Review and finalize boundaries** and biodiversity emphases.
5. **Set priorities for landscape unit planning**, including identifying which units require only biodiversity objectives and which require objectives for a broader range of values and uses.
6. **Establish a schedule** for landscape unit planning and for establishing objectives, ensuring integration with other planning processes such as LRMPs.
7. **Develop a public participation process.**

The regional landscape unit strategy is developed through consultation with the Interagency Management Committee (IAMC) and all applicable strategic planning tables (LRMPs), plan follow-up committees or resource boards. The level of public involvement in the development of landscape unit boundaries and biodiversity emphasis designation is dependent on whether a planning process is currently underway. District managers may assign biodiversity emphasis with the approval of the MOELP where higher level plans do not exist or where plans do not provide direction.

Final approval of the designated environment official is required for landscape unit objectives (except those for recreation). Agreement with the strategy should also be obtained from the MOELP to ensure successful implementation.



Once landscape units have been delineated and initial biodiversity emphases chosen, the policy guide calls for a review process to ensure that the proposed plans “do not obviously impact severely on short-term timber supply, existing or proposed operations, biodiversity, other resource and environmental values or land use plan objectives.” While these reviews are not to be full scale analyses, efforts are to be made to identify units that have potential for high conflict or impact.

If the reviews indicate problems, adjustments include: amalgamating adjacent units, reconfiguring units and adjusting emphasis assignments. For regions where impacts cannot be mitigated and a public planning table exists, staff are instructed to prepare options for the table. If no planning tables exist, the final decision is to be made jointly by the designated MOELP officer and the MOF district manager.

Once the boundaries and biodiversity emphasis designations have been set, a timetable should be developed for determining the objectives. High priority should be given to the following types of areas:

- areas with few remaining options for old growth retention;
- areas where there are high conservation values at risk from forest and range practices;
- areas with multiple development plans that need coordination; and
- areas where proposed plans will significantly reduce options for biodiversity and other non-timber forest resources.

Policies that will provide more detailed direction for developing landscape unit plans are under development. At present, district managers have two alternatives for establishing objectives: either prepare a concise set of biodiversity objectives or undertake a more comprehensive approach and develop a more complete list of objectives that cover the broader range of forest resources. The second approach is preferred and is more effective if higher level plans have been declared.

***...landscape level biodiversity objectives can not be incorporated into operational plans until landscape level biodiversity objectives have been established. The one exception to the above is patch size requirements...***

**- Biodiversity Question and Answer Document, February, 1996, MOELP/MOF**

## 3.7 Conclusion

**Landscape Unit objectives may address the following:**

- a) retention of old growth;**
- b) seral stage distribution;**
- c) landscape connectivity;**
- d) stand structure;**
- e) species composition;**
- f) temporal and spatial distribution of cutblocks.**

**- Forest Practices Code of B.C. Act Strategic Planning Regulation**

**Although there are strict limitations to the overall impact of biodiversity planning, landscape units still provide the best opportunity to achieve the goals for SMZs.**

SMZs are land use categories that are components of Higher Level Plans or of land use plans that are still slated to become Higher Level Plans (such as the regional plans for the Vancouver Island and Kootenay/Boundary regions). In LRMP sub-regions, land use planning process participants need to be aware of the opportunities that exist when developing SMZ objectives, which include providing direction for long term planning, visual quality objective setting and directives to maintain biodiversity. **Since SMZ plans can be varied, citizens need to remain vigilant to ensure SMZ objectives are not weakened and they should also be aware of the potential to improve these objectives** through a process that begins with the regional manager.

Although there are strict limitations to the overall impact of biodiversity planning, landscape units still provide the best opportunity to achieve the goals for SMZs. For the three regions where land use plans have been completed (Cariboo/Chilcotin) or are near completion (Kootenay/Boundary and Vancouver Island), landscape unit planning provides the final opportunity to achieve improved protection of non-timber values and processes. Citizens can contact those agency staff responsible for preparing the regional landscape unit planning strategy to determine how they can provide input.

The protection of non-timber values within SMZs can also be accomplished through the establishment of Sensitive Areas and wildlife habitat areas. While these designations will not preclude logging, they will provide opportunities to protect key values with constraints on development and through the use of alternative silviculture practices.

In sub-regions where LRMPs are underway, participants can work to ensure that landscape unit planning will work to achieve the goals identified for proposed SMZs. Landscape unit plans could eventually become the format for the long-term plans that were proposed in chapter two. The document *Higher Level Plans, Policy and Procedures* contains a proposed framework for developing landscape unit objectives. A copy of this framework is provided in Appendix V.

# 4. Current State of Special Management

## 4.1 Special Management on Vancouver Island

by John Nelson

Special Management Zones (formerly known as Low Intensity Areas or LIAs) cover 6.4 percent of Vancouver Island, and total 215,902 hectares, excluding the Special Management Zones in Clayoquot Sound. In 1995, The Low Intensity Area Review Committee (LIARC), chaired by John Allan, made a set of recommendations to govern SMZs which were accepted by government. The LIARC report declared that SMZs will be:

*“...where the lands and waters will be planned, managed, and used for a variety of extractive and non-extractive activities in a manner that protects and minimizes impacts upon identified regionally significant recreational, cultural, and natural values. As part of the Forest Land Reserve, LIAs will be available for forest development and other forms of resource development. LIAs will also be vanguard areas for the implementation of the principles of Sustainable Eco-system management.”* (Page 9, Report of the LIA Review Committee, January 1995.)

Members of the conservation community on Vancouver Island envisioned SMZs to have ecosystem sustainability as the dominant objective. The vision saw the protection of non-timber values over logging, where no clearcutting would be allowed and all resource use would be ecologically sustainable. However, the timber industry expected that *“SMZs will not radically alter their business environment”* (LIARC Report, Jan. 1995). This difference of opinion

***LIAs have the potential to foster social and economic well-being of communities and environmental well-being of the forest.***

**- Sierra Club of Western  
Canada Submission to LIA  
Review Committee,  
November, 1994**

has led to continued disagreements between forest companies and conservationists about how SMZs should be managed.

The Vancouver Island Land Use Plan remains unfinished due to the government's creation of the Vancouver Island Resource Targets (VIRT) process to establish new components of the regional land use plan. The VIRT process includes creating and defining Enhanced Development Zones (EDZs), formerly known as High Intensity Areas, and General Management Zones. VIRT is also responsible for recommending SMZ implementation based on LIARC's recommendations, which will not be legally binding until VIRT is completed and declared, in part or in whole, a higher level plan. The absence of a higher level plan has contributed to delayed SMZ implementation under the Forest Practices Code.

## **The Vision**

Members of the conservation community originally proposed that the low intensity areas at the CORE Vancouver Island planning table would be "*an integrated management area, giving priority to the maintenance of regionally significant recreational and/or natural qualities and functions while allowing compatible human uses*" ("In Search of Consensus", Conservation Sector at the CORE table, November 1993). These low intensity zones were designed to be biodiversity connectivity corridors that would link protected areas.

CORE, and subsequently the provincial government, interpreted and modified the concept of low intensity resource use designation. The government set up the Low Intensity Areas Review Committee to further refine and implement SMZs. In January 1995, the Committee's Report recognized the existence of the conservation vision:

*LIAs were envisioned by the conservation community to be areas where the sustenance of identified environmental values and special resources takes precedence over development, not through prohibition, but by ensuring that all forms of development do not jeopardize environmental values and sustainability.*

Low Intensity Areas Review Committee Report, January, 1995

However, present government implementation of SMZ management is a long way from the conservation vision. Members of the conservation community have been frustrated by continued clearcutting within SMZs and a lack of alternative logging practices, such as eco-forestry. The lack of lower level planning processes to implement SMZ principles continues to cause great concern.

## The Revisions

In 1995, the LIA Review Committee made several changes to the SMZs, including adjusting SMZ boundaries, which were a setback to conservation interests. The whole concept of connectivity was diminished during these revisions. These boundary adjustments included the reconfiguration of the Klaskish-East and Shushartie River SMZ boundaries on northern Vancouver Island. Boundaries were re-drawn to exclude critically important old growth forests with very high recreation, wildlife, fish, and ecological values. Also, SMZs continue to include large amounts of degraded landscapes, including some of the most infamous clearcuts on Vancouver Island: Mt. Paxton and Redstripe Mountain. Clearly, many of the SMZ boundaries remain unsatisfactory.

In August 1995, the VIRT process began and immediately put SMZs into limbo. Further revisions to standards and management objectives are still being made and the effectiveness of SMZs will continue to remain uncertain until they are designated a higher level plan and individual zones have management plans. Each SMZ, as well as general management zones and enhanced development zones, have been assigned draft management goals, as well as draft objectives and strategies for each zone.

VIRT's recommended objectives for the SMZs include (quoted from VIRT's Resource Management Zones for Vancouver Island, page 38):

- generally maintaining, within the zone, a high proportion of old forests required to meet landscape level biodiversity objectives for seral stage distribution, forest interior conditions, and habitat connectivity;
- generally creating and/or maintaining stand structures and forest attributes associated with mature and old forests, and suitable to produce high value, large diameter logs;
- generally promoting within the range of natural variability, the creation of uneven aged stands with retention of mature forest attributes in Natural Disturbance Type (NDT) 1, and the creation of even-aged stands with retention of veteran trees in NDT 2;
- retaining, after harvest, structural forest attributes and elements with important biodiversity functions;
- providing a variety of patch sizes and patch shapes;
- promoting natural regeneration of cutblocks; and
- minimizing environmental impacts of roads.

***The VIRT Report's recommendations.... maintain the status quo with an explicit short-term, high volume, low-value focus, when what is needed is a long-term vision for forestry which will be low-volume and high value.***

**- Sierra Club of British Columbia letter to LUCO, February, 1998**

**Recently, the chief forester...acknowledged the role and importance of the concept of timber targets. He called for an approach to develop targets based on detailed analysis supported by appropriate data and information and a bottom-up incorporation of the variety of timber and non-timber resource requirements which influence forest management in a given area.**

**- VIRT Team Report,  
November, 1997**

The VIRT document also listed the following strategies for SMZs:

- joint sign-off of forest development plans by the district manager and the designated environment official;
- apply innovative timber harvesting methods to meet the primary non-timber objectives for the zone;
- apply silvicultural measures and forest rotations suited to create structures and attributes of mature forests, as well as high value, large diameter logs;
- apply silvicultural systems to which trees are retained on the area after harvest;
- limit the use of any one applicable silvicultural system in any given 5 year period, to less than or equal to 75 percent of the forested area within the zone;
- patch size should be in keeping with the specific management objectives assigned to the zone; and
- maintain mature and old seral forest connectivity.

The application of these objectives and strategies place logging first and protection of special values second. It remains to be seen whether the application of these objectives and strategies will put the “special” into special management.

## **Resource Targets**

During 1995 and 1996, the VIRT Technical Team explored the use of targets within the regional land use plan, but realized that “*data limitations were a key obstacle to defining quantitative targets for the forest resources considered in this project*” (Resource Management Zones, VIRT Technical Team, Nov. 1997). The VIRT Technical Team has dropped the establishment of targets, leaving this issue to a new policy team tasked with creating a provincial policy context for timber targets.

## **The Restriction**

The government has limited the effectiveness of SMZs by placing a cap on the impact to the Long Range Harvest Level (LRHL). The Low Intensity Areas Review Committee Report defined this limitation: “*The regional effect of SMZ management objectives should not exceed an average reduction to the LRHL of 10 percent over the effect of the Forest Practices Code and other forest practices.*” However, timber companies interpret this limitation to mean a 10 percent reduction in either the size or volume of individual cutblocks, which was very different from government’s original intentions. Members of the conservation community have always objected to planning by numbers

which limit the effectiveness of logging standards and land use planning.

## **Public Participation**

One of the fundamental problems with SMZs is the lack of public participation. Currently, the only formal way the public may participate is during the public viewing of Forest Development Plans (FDPs). Unfortunately, there is no legal obligation to involve or inform the public after the public viewing. The companies can make changes to the FDP after the public review period and then submit the revised plans to Ministry of Forests for approval without a legal obligation to show the public their revisions. Excluding the public from reviewing changes is a serious flaw and goes against the principle of public participation as outlined by CORE and LIARC.

If and when a higher level plan is declared for the Vancouver Island Land Use Plan, it is hoped that the public will be actively involved in creating lower level plans for individual SMZs to guide the creation of Forest Development Plans. These landscape unit plans will be essential for SMZ implementation.

## **Planning**

After nearly three years of delay, planning framework statements have been released with the final draft of the VIRT report. Critical to the implementation of SMZ principles in landscape level plans for individual SMZs, planning framework statements identify:

- sensitive values at a sub-regional scale;
- the names of key stakeholders;
- research needs to assist further planning; and
- priority planning objectives and initiatives.

Each SMZ is to be managed by a set of identified primary planning objectives reflecting the values for which the SMZ was created. Currently, these objectives are only being applied at the stand level. The creation of lower level planning processes for individual SMZs has been delayed by the slow delivery of the planning framework statements. SMZs continue to lack the comprehensive planning necessary to make them live up to the spirit and intent of special management. The only landscape level identification of SMZ values is in TFLs, but this work has proved to be disappointing. Lack of proper planning continues to be a serious problem. Many conservationists are concerned that the management direction for SMZs provided by the VIRT process will be inadequate.

***Planning Framework Statements are intended to provide guidance to local and sub-regional planning, by identifying sensitive values at a more localized scale, identifying issues and stakeholder interests, and generally setting the stage for the next, more localized level of SMZ planning, which will likely occur in the context of landscape unit planning under the Code.***

- VIRT Team Report,  
November, 1997

***The Resource Management Zones for Vancouver Island Report will enable continued unsustainable rates of logging, and constrain possibilities for ecosystem-based management and more community control.....Where more stringent requirements are determined at the Landscape Unit level or in Sensitive Areas, these must take precedence over the direction of the Higher Level Plan.***

**- Sierra Club of British Columbia response to the VIRT Reports, February 1998**

## **Conclusion**

In the absence of a legally binding higher level plan, SMZ implementation has been restricted to stand management direction at the cutblock level. Without lower level planning processes to guide the creation of the Forest Development Plans for each SMZ, there has been no landscape level SMZ implementation. Ultimately, the difficult work ahead will be to ensure that approved logging and other human activity in SMZs, is truly “special.” As a result of layers of post-CORE processes, Vancouver Island is only one step closer to completing a higher level plan and to establishing binding rules for SMZs.



## 4.2 Special Management Zones In The Cariboo/Chilcotin

by Dave Neads

### The Plan Structure

The Cariboo-Chilcotin Land-Use Plan (CCLUP) establishes 26 percent of the land base (approximately 2,000,000 hectares) as Special Management Zones. These SMZs were established where “*significant fish, wildlife, ecosystem, backcountry recreation and tourism values exist. Timber harvesting, mining, and grazing will take place in this zone in a manner that respects these values.*” (pp. 1, CCLUP).

There are 16 Cariboo-Chilcotin SMZs, each representing specific watersheds or groups of watersheds that share common values. In some cases the SMZs follow existing planning boundaries, while in others the boundaries are determined by the needs of regionally significant species such as caribou or salmon. Other boundaries were drawn to reflect tourism interests, including trapping and guide outfitting, as well as lodge and fly-in fishing operations.

The short-term management for these SMZs is jointly administered by the Inter-Agency Management Committee (IAMC) and the multi-sector Cariboo-Chilcotin Regional Resource Board. In the longer term, management will be directed by sub-regional planning teams, which will refine and redirect the CCLUP. The spirit and intent of the CCLUP is to phase in sub-regional planning under the broad strategic direction of the regional plan.

Central to this overall direction is the concept of “targets”. While not discussed widely during the negotiations leading up to the announcement of the Land Use Plan, government made them an integral part of the document. For the SMZs, the targets provide the forest industry with access to 70 percent of the timber volume from the productive forest land base averaged over the zones.

The CCLUP also establishes targets for specific silviculture systems in the SMZs, as well as in the integrated resource management and enhanced resource development zones. The method of cutting is broken into three categories: conventional, modified, and no cutting. Each method is given a target expressed as a percentage of the productive forest land base. For the SMZs, the targets are: 28 percent conventional; 49 percent modified; and 23 percent no cutting.

**Resource development activities - such as forestry, mineral exploration and mining development, cattle grazing, tourism, wildcraft/agro-forestry, fishing and hunting - will be carried out in a manner which respects sensitive natural values.**

**- Cariboo-Chilcotin  
Land-Use Plan,  
Government of B.C.**

**SMZ Objectives:**

- **Foster sufficient diversity of silvicultural systems across the landscape to maintain natural landscape patterns and stand structure and to meet a variety of management objectives.**
- **Greater emphasis on the conservation of biodiversity a stand and landscape levels**
- **Planning and managing forest development activities so as to avoid, minimize or mitigate impacts to significant other commercial and non-commercial values...**
- **Priority completion of Landscape Unit planning**
- **Prepare long term Forest Development Plans**
- **Establish FENs**

- CCLUP 90-Day  
Implementation Process  
Final Report,  
February, 1995

The intention is to use the methods of conventional cutting, modified cutting or no cutting as necessary to protect other values for which the SMZs were created. The overall targets are considered “firm” by the government and must be adhered to over the entire plan area. The individual SMZs are assigned targets for each of these cutting methods as well. These targets are less firm, but are still to be used as guides in strategic and operational planning. Planning at the watershed or landscape unit level can vary widely as the needs of the values being managed dictate, but the overall targets for the zone and generally for the sub-unit must be met.

Additionally, there are targets for grazing, wildcraft, mining, recreation, tourism, fish and wildlife (biodiversity) and timber. While there are no overall percentages established in terms of the land base for these activities and interests, the SMZs do have percentages assigned in most cases. For example, 70 percent of the Taseko Lake SMZ is to be maintained in a backcountry condition, permanent road access is restricted in 20 percent of the unit and 17 to 36 percent of the unit should remain as mature/old growth forest.

### **Plan Implementation**

When the vagueness of the CCLUP is combined with the biodiversity guidebook, the Forest Practices Code and the number of implementation committees; the result is a level of complexity that leads to confusion instead of direct action. The IAMC and the Regional Resource Board are supposed to implement this plan jointly. To do this the IAMC has created 10 subcommittees and a master committee called the implementation committee. The Regional Resource Board has several subcommittees as well.

The overall result of these implementation problems, is that the forest industry appears to be in a “business as usual” mode, claiming that they have not received any direction from the plan and therefore cannot implement it.

To make some sense of this situation, it is necessary to focus on four key elements of the CCLUP as they relate to Special Management Zones:

- The SMZs were established *because* they were to be managed for other values first and timber cutting second;
- While targets were to be area based, the timber target is volume related, yet it does not define in any way the rate of cut;
- Sub-regional planning was to be the mechanism to test the assumptions made in the CCLUP and adjust them if necessary; and

- The Board, while advisory in nature, was to be consulted on all major interpretations required to implement the CCLUP. If agreement with IAMC was not possible, a dispute resolution mechanism is to be invoked.

In theory, these four principles coupled with the language in the CCLUP set out a framework that allows for the continued refinement and negotiation of management practices in the SMZs in order to fulfill the objective of “respecting other values”.

For example, with reference to biodiversity conservation, the CCLUP states that “The maintenance of ecosystem function and the species diversity of the region will be incorporated into the implementation of the plan.” (page 153) Given that this is a legitimate priority for the SMZs and given that the cutting regimes can be adjusted to respect these values and given that the Regional Resource Board will be involved in the interpretation of the words “maintenance of ecosystem function,” the process should work. It is for this reason that conservation interests in the region supported the CCLUP.

### **Implementation Problems**

The way that the Plan implementation is occurring on the ground is much different than the vision outlined above. The IAMC, in coordination with its various subcommittees presented the Regional Resource Board with a draft “integration plan” in September, 1997, which shows, from their perspective, how industry can get its timber supply and how targets for other values can be met. The Board will then review this integration and come to some agreement with the IAMC. The definitions being used to drive the interpretations were not discussed with, or agreed to, by the Board, nor are they at this time slated for discussion. This means that the Regional Resource Board will have to accept or oppose these interpretations. This is clearly not the vision outlined in the CCLUP.

Further, there are “interpretations” being implemented that were never discussed during, before or after negotiations. One of these is that the timber target was actually linked to an industrial rotation and therefore is related to the rate of cut. Consequently, the timber allocated within each unit is planned to be logged in 80 years, instead of over a longer time frame as was the original intent of the agreement. For example, selective logging proposed for a tourism viewshed would have resulted in a longer rotation, but with this new interpretation, all of the timber will be slated for removal within 80 years. These newly unearthed definitions being implemented by the IAMC would seem to be departing from the spirit and intent of the CCLUP.

***The data indicates that the forest industry is planning to log at a greater rate in the SRDZs, which were intended to receive less intensive logging, than in the Enhanced or Integrated Development Zones. The data also shows that 92.5 percent of the logging approved in these areas is conventional clearcutting.***

**- Business As Usual: the Failure to Implement the Cariboo-Chilcotin Land Use Plan, Sierra Legal Defence Fund and Forest Policy Watch, April, 1996**

***The impacts of logging across the landbase could even be greater than prior to the CCLUP, because the pre-plan AACs are now required to be extracted from a reduced land base. ....the inflated AAC will result in:***

- ***an increased risk to caribou;***
- ***significant damage to the viewsheds surrounding existing recreation and tourism operations;***
- ***impact upon the stability of numerous watersheds; and***
- ***an increased risk to salmon in the Quesnel River watershed***

**-Business As Usual: the Failure to Implement the Cariboo-Chilcotin Land Use Plan, Sierra Legal Defence Fund and Forest Policy Watch, April, 1996**

The decision as to what it means to “maintain an ecosystem function” is being made in-house by the government agencies. As a result the ability of the conservation community to influence this interpretation is being hampered. As well, there is no opportunity for the decision makers to use facts and figures other than those provided by government or industry. Consequently, conservationists are currently unable to ensure that the Plan objectives (as were originally interpreted) are being met.

If the original intent and spirit of the CCLUP is followed, the conservation interests can be met or negotiated to the fullest extent possible. The Regional Resource Board has the potential to “**level the playing field**” if it is brought into the process in a meaningful way. In any future land use plan these “details” must be negotiated in a way that guarantees all parties have an equal say in the definitions driving operational decisions.

The CCLUP is at a critical stage. If it is to succeed, the Regional Resource Board must be given the full means to implement the Cariboo Land Use Plan.

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## **4.3 Special Management in the Kootenay/Boundary Region**

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**by Greg Utzig, P.Ag.**

In March 1995 the provincial government announced the Kootenay / Boundary Land-Use Plan (KBLUP). The East Kootenay portion allocated approximately 462,000 hectares or 11.3 percent of the sub-region to a Special Resource Management Zone or Special Management Zones. The West Kootenay/Boundary portion allocated approximately 737,000 hectares or about 17.6 percent of the sub-region as SMZs. This provides about 14.6 percent of the overall Kootenay Boundary Region in SMZs.

The government Land-Use plan stated: “Some areas within this zone [SMZs] contain concentrations of special values - such as critical fish or wildlife habitats, important viewscapes, conservation values, community watersheds, sensitive recreation sites and cultural heritage features - where there is a higher sensitivity to resource development. In these areas, all types of resource development and recreation activities can take place, **but they will be managed so as to respect these sensitive values.**”

Within the SMZs, four Wildlife Management Areas (WMAs) were established: in the East Kootenay, the Columbia River Marshes and East Columbia Lake; and in the West Kootenay, Midge Creek and Hamling Lakes. These areas will be administered by the Ministry of Environment, Lands and Parks (MOELP) to maintain critical wildlife habitat.

Overall, the areas designated as SMZs were the result of negotiated compromises, and do not necessarily represent the ideal locations required to protect environmental values in all cases. During negotiations at the CORE Regional Planning Process, a number of areas were proposed for SMZs based on a wide range of values, including: wildlife and fisheries, recreation, visual quality, and domestic watersheds. A series of proposed management guidelines were developed for application in the SMZs and Integrated Use areas, based on recognition of resource values present. The guidelines were developed to ensure conservation of a range of specific resources and values, including old-growth dependent species, wide ranging carnivores, fisheries, natural grasslands, alpine/subalpine habitats, ungulate winter range, general biodiversity, visual quality, recreation-sense of solitude, wildlife habitat, and spiritual/aesthetics. These guidelines were intended to either guide implementation of the Forest Practices Code provisions or, where necessary, to provide protection for specified values beyond the basic level of the Code, especially in SMZs. Application of these guidelines was recommended by the CORE reports.

The KBLUP announced in March of 1995 made no comment on implementation of specific guidelines in SMZs, other than the vague statement: “the interested public will be given the opportunity to assist government in confirming appropriate guidelines for achieving management objectives in each area of the region.” For an interim period immediately following the announcement, SMZs were subject to High Emphasis Biodiversity guidelines as outlined in the the Code’s Biodiversity Guidebook; however, this directive was subsequently canceled. Existing management guidelines from any previous Land and Resource Use Plans (LRUP) and Coordinated Resource Management Plans (CRMP) and Interior Watershed Management Plans (IWMP) remain in effect. **As a result, at present there is no “special management” in Special Management Zones.**

***The Special Resource Management Zone includes areas where the full range of resource use will proceed, but in a way that respects sensitive natural and cultural values, such as fish and wildlife habitats, conservation values, community watersheds and sensitive recreation sites.***

**- The East Kootenay  
Land-Use Plan,  
Government of B.C.,  
March 1995**

***The primary limitation [to the maintenance of biodiversity] is the lack of adequate inventory information for most species and habitats. The information should be reviewed and updated on a regular basis as new information on habitat suitability, species distribution and species movement becomes available.***

**- Kootenay/Boundary  
Regional Biodiversity  
Strategy DRAFT Report,  
September, 1995**

Since March 1995, internal negotiations have proceeded between the various government agencies to finalize the implementation of the KBLUP. As a part of these negotiations, the MOELP has prepared a Regional Biodiversity Strategy which identifies key habitat areas and low risk management regimes which they believe are required to maintain the region's ecosystems in a viable state. The Regional Biodiversity Strategy concentrates on five key conservative values: regional representation and connectivity, caribou, grizzly bears, fisheries, and ungulate winter ranges. The recommended management regimes are derived from the CORE management guidelines and the Forest Practices Code. The habitat areas are based on habitat capability mapping, species distribution and expert opinion.

Although there is significant overlap between the areas outlined in the Biodiversity Strategy and the SMZs, there is not a perfect fit. MOELP will be setting priorities for application of management guidelines based on identified habitat values rather than SMZ designation, and therefore some SMZs may receive little in the way of "special management." From a biodiversity perspective, this is probably an improvement over concentrating on areas designated SMZ per se, as representation of low elevation forests and grasslands is inadequate in protected areas and SMZs (see accompanying chart).

Unfortunately, the absolute levels of management (i.e. guidelines), and the total area assigned low risk management is not determined by the management necessary to conserve the values present, but by the potential impacts on the AAC. Although the new protected areas and the Code have made a major step forward, there will still be increasing risks to biodiversity without significant further reductions to the AAC.

This became clear, when in November of 1996, the provincial government released a draft version of the Implementation Strategy for the KBLUP. Although it has incorporated some recommendations of CORE and portions of the MOELP Biodiversity Strategy, the KBLUP Implementation Strategy still falls far short of the objectives of either of these initiatives. The two main limitations are: weak, ineffective guidelines and insufficient area of guideline application. In essence the KBLUP has been reduced to a network of poorly distributed protected areas, unrealistic timber targets and a set of regional platitudes intended to provide District Managers with direction for setting Landscape Unit objectives. Although the Implementation Strategy includes a 5 to 15 percent reduction in the timber target, the plan currently contains no specific requirements for maintaining wildlife habitat or populations at viable levels, nor does it provide for adequate public input to participate in lower level planning. No distinction has been made between SMZs and other development zones. In fact

SMZs are open to establishment of Enhanced Resource Development Zones for intensive timber management and every SMZ includes this objective for timber: “Maximize opportunities for timber harvesting, subject to ranges of KBLUP objectives and strategies.”

Since approval of the Implementation Strategy in July, 1997, the policy direction provided to regional ministry staff by the Timber and Jobs Accord has made it clear that maintaining unrealistic timber targets is the primary focus of the government, not the balanced plan which was envisioned at the outset of the CORE process. To this end a Taskforce has been established to find ways of ensuring maximum timber targets are met. Early stages of Landscape Unit planning suggest that the KBLUP and Implementation Strategy will not succeed in protecting environmental resources, nor will it provide the direction required for economic diversification and community stability. Because the KBLUP has never been declared a “higher level plan,” MOF district managers are questioning whether it has to be implemented at all. It is critical therefore, that the public continue to tell government that to maintain environmental values and sustainable communities, timber targets must be further reduced, and the biodiversity, wildlife, recreation and watershed guidelines must be strengthened and fully implemented.

***The Implementation Strategy should be changed to conform to the principles of long-term ecological, economic and social sustainability as outlined in the government's Land Use Charter. In particular, the objective "To ensure the availability of the short-term timber supply" must be removed....***

**- What the Kootenay-Boundary Land-Use Plan means to the Environment and Communities, Valhalla Wilderness Society, February 1998**

## 4.4 Special Management in Clayoquot Sound

by Matt Price

The word “special” has been consistently applied to Clayoquot Sound for decades, first by environmentalists, and more recently by the provincial government. Environmentalists believe Clayoquot to be special because it is the last large, low elevation wilderness area on the heavily degraded landscape of southern Vancouver Island. The government, however, calls it special presumably to contain the precedents in forest management that have been developed in response to the largest environmental protests in Canadian history.

Clayoquot Sound is visually stunning. Its 262,000 hectares contain magnificent old growth forests, bears, 4 species of salmon, steelhead trout, 29 rare plant species, significant First Nations heritage sites, rich intertidal ecosystems, and many marine species including migratory gray whales.

In the context of Vancouver Island, where over 70 percent of the original low elevation forests have been clearcut, Clayoquot’s value is its large intact areas. Out of an original 170 large pristine watersheds on the Island, only 11 remain, and 6 of those are in Clayoquot (with just 2 of these protected).

Clayoquot too would have by now fallen victim entirely to clearcutting if not for the effort of local people. In 1984 members of the Nuu-chah-nulth First Nation joined forces with environmentalists to halt logging on Meares Island. It was the first logging blockade in Canadian history and resulted in an injunction by MacMillan Bloedel, and a counter-injunction by First Nations which remains in force to this day.

Protests spread to other parts of the Sound, with 35 arrested at Sulphur Pass in 1988, and another 65 in Clayoquot Arm in 1992. These protests combined with two failed attempts at community based, land use planning helped to set the stage for the April 1993 Clayoquot Land Use Decision by the B.C. government which left 74 percent of the Sound open to logging. The decision provoked an outcry which reverberated throughout the province as the 1993 ‘Clayoquot Summer’ gained momentum, with news of daily arrests broadcast around the world. That summer the government arrested and charged 856 peaceful protesters, and staged mass trials in order to process them all.

***Twenty years of struggle, unprecedented civil disobedience, an incalculable amount of local and provincial energy spent on analysis and debate - these have all been signs of transition..... Traditional belief systems are re-emerging, grounded in a respect for the integrity of both nature and culture.***

***- seeing the ocean through the trees,  
Ecotrust Canada, 1997***



***In keeping with the goal of sustainable ecosystem management, the Panel recommends a shift in both planning and implementing timber harvesting - from a focus on the trees removed during harvesting to the trees retained. This shift is embodied at the watershed level by delineating reserves to protect ecosystem integrity and forest values, and carried through at the site level by specifying trees to be retained in individual cutting units.***

**- Report 5, Clayoquot Sound Scientific Panel**

Under immense pressure, in October of 1993 Premier Harcourt announced the creation of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound in order to develop the “world’s best forest practices” for the area. The Panel also incorporated First Nations concerns into its studies, with the inclusion of Traditional Ecological Knowledge in its methodology.

To reflect the partnership with First Nations in the endeavour, the Panel was co-chaired by Dr. Richard Atleo from the Ahousaht First Nation who is a Hereditary Chief, a specialist in Indigenous Human Resources, and an instructor at Malaspina University College. The other co-chair was Dr. Fred Bunnell, Professor of Forest Wildlife Ecology and Management, and Director of the Centre for Applied Conservation Biology at UBC. The Panel also included specialists from areas ranging from forestry, hydrology, soil science, scenic resources, and worker safety.

During the year and a half that the Panel deliberated, an Interim Measures Agreement was struck in March of 1994 between the five First Nations bands of Clayoquot and the B.C. government. This Agreement created the Central Region Board, an approval body with a veto power over resource development in the Sound. The twelve member board consists of five voting First Nations, five voting provincial appointees (drawn from local communities), and two co-chairs, one Native and one appointed by the provincial government.

When the Scientific Panel finally reported in May of 1995, the B.C. government quickly accepted all of its 120 recommendations and charged the Central Region Board with helping to implement them. The Panel’s recommendations represent a watershed in B.C. forest policy, for this provincially-appointed, ‘blue-chip’ panel advocated “turning forestry on its head.”

The most significant aspect of the Scientific Panel is that it proposed the end of volume-based forest management in Clayoquot, so that decisions would no longer be simply based on how much timber the companies and governments want to log. In its place, The Scientific Panel recommended an ecosystem-based approach in which the primary objective is to sustain the productivity and natural diversity of the forests in the Clayoquot Sound region. Finally, a government approved report acknowledged that the volume-based planning practiced everywhere else in B.C. does not have ecosystem integrity as its primary objective, but rather the continued flow of timber. Essentially, rather than focusing on the old volume-based approach of how many trees could be cut, the Panel instead placed the emphasis on

how many trees must be left to ensure a fully functioning forest ecosystem. In this era of biodiversity and species loss, the Scientific Panel report is an important, state-of-the-art development.

What an “ecosystem-based” approach means is further defined in the Scientific Panel recommendations. They said that planning needs to occur at subregional, watershed, and site levels, with the need for significant portions of the forest land base to be removed from logging to maintain cultural, visual, and environmental values. To properly assess which areas should be removed, the Scientific Panel recommended that much more information be gathered than has traditionally been available before logging occurs.

In addition to carefully defining the area to be harvested, the Panel recommended limiting how much can be cut over a given period of time. Noting that logging affects the ecology and hydrology of watersheds, the Panel prescribed a rate-of-cut of no more than 5 percent of large watersheds over five years.

As for logging practices, the Scientific Panel described many of the damaging impacts of clearcutting (such as altering streamflow, causing soil erosion, removing old-growth habitat, destroying cultural areas, and degrading visual landscapes) and instead recommended the use of a “variable-retention silvicultural system” to preserve far more characteristics of the natural forest. While not prescribing exactly how to log, the Panel recommended a 15 to 70 percent retention of the original forest, a limit of between 0.3 hectares to 2 tree height canopy openings, and the existence of “no-work zones” within cutblocks. Furthermore, the Panel recommended experimenting with the appropriate machinery and methods in order to meet all of the overall objectives.

Upon adoption of the 120 recommendations, the B.C. government moved to contain the impacts of the Panel’s findings by claiming that the ecosystem of Clayoquot Sound is unique, and that the findings are therefore not suitable for other regions. So, for the government, Clayoquot finally became truly “special.”

Environmentalists responded to the findings of the Scientific Panel by welcoming its critique of industrial forestry, but pointing out that the process had one fundamental flaw, that the Panel was asked how to, not whether to log the unprotected pristine areas of Clayoquot Sound. This concern remains today.

***Road construction and logging in [the pristine watersheds] should be delayed until...***

***a) the necessary inventories....have been prepared...***

***b) Exemplary forest practices....have been demonstrated...***

***c) The MOF has developed a pre-qualification procedure for work in sensitive areas....***

**- Report 2, Clayoquot Sound Scientific Panel**

***A reality of the ecological conditions of Clayoquot Sound is that a significant portion of the landscape has been degraded from past clearcutting and road construction.....An active, comprehensive restoration program is necessary in Clayoquot Sound to assist Nature in re-establishing forest functioning at all scales.***

**- Review of Reports  
Prepared by the  
Clayoquot Sound  
Scientific Panel,  
Silva Foundation,  
June, 1995**

Implementation of the Panel's recommendations has proven to be a slow and cumbersome process. A five year phase-in period has been adopted, and a planning process established to work on identifying the areas of the Sound that are suitable for logging. While this work is underway, the licensees have been allowed to log in the developed areas (defined as more than 2 percent logged) under interim plans.

The planning process, while 'community-based' in name, is funded and controlled by the Ministry of Forests (MOF). Logging has been deferred in the pristine watersheds while government-funded inventories take place. However, some critics point out that these inventories are designed to only give one time, "snap-shot" pictures rather than provide a complete understanding of how ecosystems work over time.

Late in 1997, watershed level sub-committees were struck to begin placing lines on maps outlining where the tenure holders can log. Meanwhile, Interfor and MacMillan Bloedel have continued to log in Clayoquot, interpreting the recommendations of the Panel in their own way. For example, the requirement that openings be no larger than two tree lengths was interpreted by MacMillan Bloedel in one cutblock to give a donut-shaped opening, with a small patch of trees in the middle serving as the 'edge' of it. While this technique follows the letter of the recommendation, there is some question that it does not follow the spirit of it. As well, transgressions of both the Panel and the Forest Practices Code have occurred in Clayoquot, particularly for road-building practices.

For their part, the licensees have pointed out that some innovative logging has taken place. For example, Interfor cut a shelterwood block in Virge Creek, a pattern which takes narrow strips of trees out of the block in multiple passes. This type of 'showcase logging' highlights the critical question in Clayoquot Sound - whether the more sustainable logging recommended by the Scientific Panel is economically viable for conventional, industrial forestry operations.

MacMillan Bloedel responded to this question in the short term in January 1997 when it suspended logging in southern Clayoquot. To accommodate the mid and long term, negotiations are now underway between MacMillan Bloedel and First Nations to develop a joint venture logging company which will likely focus on value-added processing and a diverse range of forest products in order to be viable.

According to MOF figures, the annual cut in Clayoquot has fallen from 600,000 cubic metres in 1989 to 80,000 cubic metres in 1997. This

reduction has had the greatest impact on the town of Ucluelet. Meanwhile, over half a million tourists a year are coming to Clayoquot Sound to enjoy the pristine environment. Because Tofino has been the principal beneficiary of this growing industry, lingering concern remains in the region over the shift in economic fortunes. However, with many millions of dollars in tourism infrastructure investment planned for Ucluelet, economic transition for this area now seems to be underway.

As for changing logging practices, the principal barrier seems to be that of attitude. To date, the companies have too often viewed the Scientific Panel as a burden rather than an opportunity to make fundamental changes. Hopefully, this problem will be resolved with the proposed MacMillan Bloedel / First Nations joint venture company, but it will require engaging people who wish to go well beyond the traditional volume-based forestry.

Ultimately, whether Clayoquot will prove to be a model for “special” forestry will depend upon rebuilding a sense of trust in the region. Years of conflict has led to one of the most polarized areas of the province. Clayoquot Sound remains, however, B.C.’s best hope for real change in the forest industry if cooperation is allowed to supplant confrontation.

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## 4.5 Special Management Zones in the Kamloops Land and Resource Management Plan

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### Introduction

The Kamloops Land and Resource Management Plan (LRMP) encompasses both the Kamloops and Clearwater forest districts. It was the first sub-regional plan in the province to be completed and it was declared an official “higher level plan” on January 29, 1996. The Kamloops LRMP established 14 Special Management Zones for habitat and wildlife management, 12 Special Management Zones for recreation and tourism, and 21 Special Management Zones for community watersheds.

### Plan Details

For both the habitat and recreation SMZs, government agencies are directed to undertake long-term planning that includes an inventory of opportunities and features; mapping of wildlife and biodiversity values; defined and mapped long term operational areas for other resource uses

***There are too few places in the world where we can even attempt to build a new ethic and a new economy that derives from and enriches an ecosystem as diverse as Clayoquot Sound's. ...There is an historic opportunity now to re-invent prosperity in Clayoquot Sound, to craft a future for the people, and for the place, that holds the promise of abiding and enduring prosperity.***

**- seeing the ocean through the trees,  
Ecotrust Canada, 1997**

***The overall goal in Late Winter [caribou] habitat is to ensure that logging development does not impact the structural and functional integrity of the habitats. Ideally logging should mimic the naturally occurring forest patterns. ...partial cut or group selection prescription is preferred. Objectives:***  
***1) maintain a minimum of 33 percent of the area to retain old growth attributes...***  
***2) silviculture systems other than clearcutting are preferred.***  
***3)...restrict clearcut block size to a maximum of 15 hectares.***

**- Timber Harvesting Guidelines for North Thompson Caribou Habitat, Kamloops LRMP, March 1996**

(i.e., primarily logging and recreation); and access management. Joint sign-off by the forest district manager and a designated environment official is required for all forest development plans within the SMZs established for wildlife habitat. This provision of joint sign-off was included to achieve a balance between the MOF and the MOELP, which will hopefully lead to an improved level of management.

The majority of the area that is within the wildlife habitat SMZs was designated to maintain existing caribou populations. The zones were designed to include both low and high elevation old growth forests that contain lichen bearing trees which are an important food source for this species. As well, the zones include critical migration corridors between Wells Gray and Kootenay caribou populations that will allow intermixing to continue and thus maintain the long-term genetic viability of these herds.

Specific timber harvesting guidelines are being implemented to maintain a viable caribou population and to maintain ecosystem health. These include:

- maintaining early winter snow interception cover, foraging, calving areas and movement corridors;
- maintaining late winter lichen production and movement corridors; and
- 150 year rotation age in late winter habitat areas with second entry allowed only if adequate habitat is maintained.

A research and inventory project is underway to evaluate the caribou management guidelines, to identify key caribou habitat requirements and attributes, and to review the attributes required in movement corridors. Within the caribou SMZ, boundaries for a specific research area have been identified in which no further logging will take place for a minimum of five years (except for five small, previously approved cutblocks). A review at the end of five years will assess the need for continuation of this moratorium.

The other five habitat and wildlife SMZs include two established wildlife management areas that have been and will continue to be managed with direct participation by the Ministry of Environment, Lands and Parks. Management for all five areas will be directed to maintain and enhance habitat for mule deer, big horn sheep, bats, rattlesnakes, badgers, moose, wolves, fur-bearing species, and various bird species.

As of April, 1998 only one long-term SMZ plan has been completed. The Skull Mountain SMZ plan provides detailed objectives and strategies for maintenance of old growth forests, restoration of natural disturbance patterns, forest regeneration, forest health concerns, riparian management, and grazing. Management in the Skull Mountain SMZ will focus on maintaining and/or enhancing the habitats of wintering mule deer, blue grouse, and a number of red and blue listed species. As well, efforts will be made to re-establish populations that have disappeared, including the yellow-breasted chat and yellow badger. Detailed mapping is still needed to complete this SMZ long-term plan.

## **Zones for Recreation**

The recreation and tourism SMZs are areas where there is already existing recreational use or where there are significant opportunities for future use. These zones have been further divided into four sub-zones: higher use, natural environment, backcountry and remote. The higher use areas provide easily accessible tourism and recreation opportunities and are located where there are intensive use tourism facilities, such as a downhill ski resort. The natural environment sub-zones are located in roaded or non-roaded areas and are managed to maintain a natural environment. Backcountry areas are generally non-roaded and are managed to maintain a wilderness setting. The remote areas are unroaded and will largely remain in a primitive condition, with little evidence of human activity. Recreational use in the backcountry and remote areas include heli-skiing, hiking, ski-touring, hunting and snowmobiling, while fishing, hunting, canoeing, hiking, and cross-country skiing are activities that occur in the natural environment areas.

Management directions for the Recreation/Tourism SMZs focus on the maintenance of visual quality and access management. The objective is to maintain natural or wilderness settings within these areas. Resource extraction (i.e. mining and logging) will be allowed as long as it is consistent with the objectives. Some restrictions may also be applied to the development of new recreation facilities and trails in order to meet these objectives.

### ***Primary objectives for Recreation and Tourism Resource Management Zones [SMZs] are to:***

- maintain and enhance opportunities for a diverse range of recreational values and uses across the biophysical settings of the zones; and***
- maintain and enhance tourism opportunities.***

**- Kamloops LRMP,  
March 1996**

***The highest priority areas [for landscape unit planning] will include:***

- extensively developed watersheds, where biodiversity may already be at risk;***
- watersheds containing habitat for provincially important species or those at risk;***
- undeveloped watersheds; and***
- watersheds in which the first "pass" has not yet been completed.***

**- Interim Measures for Biodiversity Management, Kamloops LRMP, March 1996**

## **Biodiversity Planning**

When the first stage of the LRMP was completed, the table formed into a follow-up committee which dealt with biodiversity planning, Goal II protected areas and intensively managed zones. This committee determined that intensively managed zones were not necessary. Consensus was reached on the need to establish 38 Goal II areas that total approximately 6,000 hectares. Biodiversity emphasis designations were determined for the 29 landscape units in the LRMP area, although full table agreement was not reached for three of the units.

Landscape unit planning is also progressing in the Kamloops LRMP area, with the draft strategy now available. The existing condition of each landscape unit; in respect to the amount of early, mature and old seral forest with interior forest habitat condition; has been determined and mapped. The next stage will be the development of basic biodiversity objectives, including old growth management areas (OGMAs), forest ecosystem networks and identification of potential areas where larger patch sizes may be pursued.

Existing SMZs (in particular, the caribou habitat zone) will receive priority for the location of OGMAs, and will be avoided for the location of larger openings. An impact analysis of the initial landscape unit plans will be part of the upcoming timber supply review and this analysis along with the plan will be reviewed by the LRMP monitoring table. Once the basic plan is completed, more comprehensive landscape unit planning will occur that will include objectives for social and ecological values.

## **The Future**

Public participation is continuing with the same group of sector representatives through a long-term LRMP monitoring committee. Agency staff periodically prepare monitoring reports that will be reviewed by this committee, which may lead to future amendments to the plan. The LRMP also calls for additional lower level planning or Local Resource Use Plans (LRUPs) for specified areas that are in need of more detailed planning. If these LRUPs identify a need for better management, additional SMZs may be established in these areas.

The Kamloops LRMP chose not to adopt a target approach as was done in the CORE regions. Instead, the plan focuses on management objectives and more in-depth, long range planning. While timber targets in other regions pose the threat of sacrificing environmental values for continued unsustainable forest exploitation, the clear management objectives in the Kamloops LRMP will hopefully provide the opportunities for both continued resource use and improved environmental protection.

## 4.6 Special Management Zones for Spotted Owls

In April 1997 the provincial government announced a Spotted Owl Management Plan for the Lower Mainland and surrounding area which relates to the geographic range in Canada for this endangered species. The central part of the plan is to be the designation of 19 habitat areas as Special Resource Management Zones (or SMZs) that total 204,000 hectares. The Plan states, "Forest practices within SMZs will be oriented toward creating, enhancing or maintaining a sufficient quantity and quality of suitable spotted owl habitat." The goal is to maintain a minimum of 67 percent suitable owl habitat over the long term while the remaining 33 percent is logged. What goes unmentioned is that a high percentage of the forests inside these zones have already been extensively logged and thus do not constitute ideal habitat for spotted owls.

The Plan has been criticized as unscientific because of the small size of the SMZs, the large dispersal distances between them, and the low levels of suitable habitat within them. Recommendations of the Canadian Spotted Owl Recovery Team were not followed by the government in the plan. The SMZs do not cover all the currently known habitat of spotted owls, nor the currently known range of this endangered species. Spotted owls have been discovered outside the boundaries of the proposed SMZs, but the government has been unwilling to expand the number or size of SMZs because it promised that the area dedicated to owl management would be "capped" at the SMZs which were proposed as of June 1995. Existing owl populations outside the SMZs may well be extirpated, as there is no provision to maintain their habitat. As well, studies in the Northwest U.S. suggest that owls require about 80 percent suitable habitat in their home range to survive.

The Management Plan states that attempts to manage spotted owl habitat will be made through implementation of the Biodiversity Guidebook, but there are no approved landscape units and the Forest Service is managing according to the default "low emphasis biodiversity" option. As of April 1998, the spotted owl SMZs have not been formally designated as resource management zones under the Code, nor have the objectives been officially established. Consequently, there are concerns that logging plans could be approved in these areas that will further threaten the survival of B.C.'s spotted owls.

***The primary threat to the persistence of Spotted Owls is fragmentation of the remaining old forest. Not only do adult Spotted Owls not hunt over open clearcuts or in regenerating forests, but juvenile owls are apparently easily killed by larger predators such as Great Horned Owls as they move across open country in their search for a new home.***

**- British Columbia,  
A Natural History,  
Sydney and  
Richard Cannings**



***A provincially approved management plan is in place for the spotted owl and land [is] formally allocated to the survival of the spotted owl. As a result, the owl will not become extinct in B.C.***

**- Larry Pederson,  
Chief Forester,  
Letter-to-the-Editor,  
Vancouver Province,  
April 1998**

The government has also promised that the rate of logging within each SMZ would not be reduced by more than 10 percent. In order to try to meet this constraint, the plan assumes that 100 year old stands represent suitable owl habitat, even though there is no scientific evidence that owls can or do utilize these young stands. There is a danger that the management approach will be driven very much by a calculation of the area of forest in a given age class, rather than by the quality of habitat selected by owls.

Resource managers have been tasked to prepare management plans for each SMZ that will determine which areas of suitable habitat should be retained, and where the logging will take place. Yet, many SMZs already have less than 67 percent suitable habitat within them. Due to all these limitations on the ability to manage for this endangered species, an independent analysis by scientists at the University of California at Davis has concluded that there is a very low probability that spotted owls will survive in British Columbia under this plan.

# 5. Special Management Zone Inventory Methodology

Special Management Zones were identified during regional and sub-regional land use planning processes on the basis of their non-timber values and their importance to the maintenance of ecosystem functions. Despite the recognition that these areas now have, detailed information for many of the areas remains sketchy. In order to achieve the best possible management plans and practices within these zones, more detailed information is needed.

To ensure that such information is compiled in standardized and systematic fashion that can allow SMZ management priorities, precedents and prescriptions from throughout the province to be compared, there is a need for a common SMZ inventory template. This chapter proposes the data and criteria that should be included in such a standardized SMZ inventory template.

## SMZ INVENTORY METHODOLOGY

### A. Location, size, percent undeveloped, forest cover

Accurate mapping is key to the inventory process. Forest cover data will determine where development has occurred and where old growth forests remain standing. Biogeoclimatic zone and sub-zone designations determine the natural disturbance type (NDT) and show the locations of rare ecosystems. The specified NDT provides direction for the recommended seral stage distribution through landscape unit planning.

***Old growth is a forest that contains live and dead trees of various sizes, species composition and age class structure that are part of a slowly changing but dynamic ecosystem. Age and structure varies significantly by forest type and from one biogeoclimatic zone to another. Attributes include:***

- ***large trees***
- ***wide variation in tree sizes and spacing***
- ***accumulations of large size dead standing and fallen trees***
- ***multiple canopy layers***
- ***canopy gaps and understory patchiness***
- ***decadence in the form of broken or deformed tops or boles and root decay.***

- An Old Growth Strategy  
for British Columbia, May  
1992

## **B. Ecological Attributes:**

1. Water quality, quantity, and timing of flow Identify:
  - a) location of community watersheds;
  - b) domestic use watersheds;
  - c) potential risks to these watersheds from logging and roadbuilding;
  - d) existing status of the watershed, including natural drainage patterns (have assessments been done?); and
  - e) the existence or need for watershed restoration.
2. Wildlife Identify:
  - a) available information about existing wildlife and wildlife habitat;
  - b) special habitat needs for specified species, including caribou, grizzly bear, elk, marbled murrelet, Queen Charlotte goshawks and/or other threatened or endangered wildlife; and
  - c) where wildlife movement corridors are needed and the specific management objectives within these corridors.
3. Rare Plant Communities Identify the location and management objectives for rare plant communities.
4. Old Growth Forests Identify the locations of rare stands of old growth forests, especially ancient rainforests. Determine if the ecosystem is a natural disturbance type that supports continuous old growth.
5. Fisheries Identify:
  - a) salmon streams in the area;
  - b) existing and potential impacts on fish habitat; and
  - c) identify water bodies that contain rare species of fish, such as bull trout.
6. Buffer for Adjacent Protected Area Determine:
  - a) potential need for the SMZ to buffer adjacent protected areas (including parks, ecological reserves and wildlife management areas);
  - b) the values within the adjacent protected areas that need to be buffered; and
  - c) the specific SMZ objectives needed to support and buffer the identified values within adjacent protected areas.

7. Ecosystem Representation Determine if the SMZ provides some level of protection for ecosystems that are otherwise poorly represented in protected areas. Ecosystem representation should be examined at the fine filter level that includes biogeoclimatic subzone variants.

### C. Social Attributes:

1. Visual quality and scenic values Identify the existing visual quality objectives (VQOs) for this area. Determine if these VQOs are adequate and if not, then recommend improvements.

2. Recreation and Tourism Identify:

- a) location and types of existing backcountry tourism operations;
- b) areas for non-commercial recreational use by local residents; and
- c) potential areas for future commercial and non-commercial recreational use, including:
  - river adventure;
  - lake adventure;
  - land adventure (e.g. biking, hiking, backpacking, etc.);
  - marine adventure;
  - winter adventure (cross-country and backcountry skiing, snowshoeing, snowmobiling, etc.); and
  - fishing and hunting.

3. Cultural Heritage Identify:

- a) location and type of archaeological sites present;
- b) trails, trappers cabins, miner's cabins, or signs of other historical use; and
- c) existing archaeological assessments and determine the need for additional assessments.

4. Wildcraft Identify:

- a) locations of existing or potential harvesting sites for traditional foods, such as berries and roots or mushrooms; and
- b) locations of existing or potential harvesting sites for ornamentals, such as boxwood or salal.

**Basic information required to support subregional planning includes:**

- watershed geography;
- descriptions of major ecosystems;
- summary information of the current forest condition;
- identification of First Nations' cultural areas;
- existing and proposed transportation corridors, recreation and scenic areas;
- important areas for wildlife including migration routes; and
- centres of human activity.

- Report 5, Clayoquot Sound Scientific Panel

**Four key government agencies and initiatives involved with inventory are:**

**1. Resource Inventory Committee and Corporate Resources Inventory Initiative (RIC/CRII): develops standards and methodologies**

**2. Geographic Data BC: is developing a comprehensive data base / mapping system for B.C.'s watersheds**

**3. B.C. Conservation Data Centre: compiles and maintains a comprehensive data base for all species and ecosystems at risk in B.C.**

**4. Forest Renewal BC: Funds the Resource Inventory Program that gathers information for forest development planning**

**- see Appendix II for contact information**

The detailed information necessary to enable comprehensive analysis of each SMZ in many cases is not easily accessible. Sources of information can come from the background material prepared for the land use planning tables or from government agencies. For many areas, information will have to be obtained from those people who live near the area, such as native people, trappers, wilderness guides and outfitters, hunters, recreationists and local ranchers. Ideally, local groups could take on the role of volunteer stewards for nearby SMZs. Also, Forest Renewal BC funding should be considered to undertake SMZ inventory and research.

The SMZ inventory information, when compiled, can then be used to determine the locations and boundaries of sub-zones for long term plans. Through this mapping procedure, the best locations for forests suitable for a limited level of ecologically sustainable forest use can be located. Areas within SMZs that have high commercial timber values and which are not critical for other values and processes could thus become the focus for ecologically progressive forestry practices.

While SMZ inventories are the responsibility of the government agencies, this information is also important to the environmental community to effectively advocate for good planning and management for these areas. Just as information about proposed protected areas helped to raise public support for their protection, so will information about SMZs help to secure ongoing public stewardship for these areas.

# 6. Case Studies

## 6.1 The Itcha-Ilgachuz Special Management Zone

by Dave Needs

The Itcha-Ilgachuz Special Management Zone was established to recognize fur bearer refugia, wetland habitat, tourism objectives, and woodland caribou requirements.

Centred on two extinct volcanoes in the northwestern corner of the Chilcotin plateau, the area in this SMZ was proposed for protection in the CORE process. While the high elevation portion in the middle was protected, the lower elevation old growth forest critical for caribou winter range was left open for development.

The diversity here encompasses high elevation spruce forests, mid elevation spruce/pine forests, wetlands and grasslands. The climate is severe with no frost free months and annual precipitation of 35-40 centimetres, roughly distributed year round. Trees here are slow growing. It is not uncommon to find pine taking more than 140 years to reach 25 centimetres in diameter. Timber values are low, averaging 85 to 125 cubic metres per hectare.

On a provincial scale, the soils here are rated poor to low site class, with poorly drained shallow profiles producing widely spaced, fast tapering trees. Although this is primarily a pine forest, its classification is Montane Spruce, which implies an extra dry, extra cold climate. After disturbance, forest regeneration is very slow. Yet, because the fire regime is less prevalent at this elevation, there may be some antique forests found here. In upland dry sites, there are extensive areas where pine is the climax species for the region. This situation is extremely rare for interior pine stands in western North America.

Interspersed with meadow grassland complexes, the Itcha-Ilgachuz forests provide habitat for a number of species including grizzly bear, marten, fisher, lynx, wolves, moose, black bear, wolverine and caribou. The alpine regions of the Itchas support the most northerly herd of California Big Horn Sheep in North America. This large, intact

**The Itchas herd is about 1500 in number and, unlike all other southern caribou populations, is stable. This irreplaceable gene pool will be lost if “business as usual” road building and forest removal occur.**

predator/prey ecosystem is one of the last chunks of the Chilcotin plateau still in a wilderness state. If development is to occur here, it must be done in a truly innovative fashion to protect the values intrinsic to the land.

Tourism has an economic stake in the way this SMZ is managed. There are eight guide outfitters using the Itchas for horseback hunting, photography, trail riding and fly-in fishing. Some have permanent base camps while others use tent camps and old cabins.

The overriding issue is the maintenance of the Itchas caribou herd. The SMZ encompasses a portion of the critical winter range these animals utilize. The ancient network of migration routes are worn a foot deep into the rocky soil along the Chilcotin River and the auxiliary drainages. The Itchas herd is approximately 1500 in number and, unlike all other southern caribou populations, is stable. This irreplaceable gene pool will be lost if “business as usual” road building and forest removal occur.

In the short term, the concerns regarding the impact of forest development relate to the potential disruption of the predator evasion strategy adopted by these caribou and result in a drastic increase of poaching. In the longer term, the concerns centre on the impact on lichen availability (which is the caribou winter food source) and interior forest conditions.

The Itchas caribou disperse over a large area thereby reducing the threat of predation by wolves. Roads, especially if they are packed by snow machine use, become “predator highways” allowing wolves to travel greater distances faster in their pursuit of caribou. If parallel roading occurs, these loops become “traps” enclosing the herds. Needless to say, unauthorized winter hunting also puts tremendous pressure on caribou.

Potential logging poses other major threats to the Itchas caribou herd. If clearcutting becomes prevalent in caribou ranges, the resulting browse foods that moose populations eat will trigger a growth in the wolf population, which in turn will likely feed on caribou. Also, when moose and caribou mingle too closely, because of reduced range and increased moose, the caribou often contract a fatal virus which the moose population harbours and transmit as carriers.

The Itchas herd feeds primarily on terrestrial lichens; however it also uses arboreal lichens in heavy snow years. The terrestrial lichens are fragile and very slow growing once they have established themselves. Estimates vary from 80 to 125 years for the time required for the terrestrial lichens to become abundant enough to form a food supply after logging. The arboreal lichens need even longer and are only found on old growth sites. Since these tree-growing lichens are the safety net that allows this herd to survive in the worst years, they are vital in the ecology of these animals.

The Cariboo-Chilcotin Land Use Plan's overriding objective is to maintain the viability of the Itchas herd over the long term. Various draft landscape plans have been prepared that show several different designs for both logging and no logging zones. In order for this herd to survive, the logging practice and road building design chosen must protect the caribou habitat. Options include increasing the number of passes, extending rotations, adjusting the season of logging, modifying block size and shape, avoidance of the better lichen sites, modifying site preparation and the use of comprehensive access management strategies to protect the herd.

In addition to these options, truly modified practices need to include helicopter logging rather than roads; trails which use all-terrain vehicles and other sensitive forwarding methods; and winter roads on swamps which disappear in the spring. Strict enforcement of hunting regulations is critically needed. Full protection of riparian areas (not 10 metre wide strips) should be required along with the exclusion of wildlife refuge areas from the operable timber land base. Comprehensive landscape level planning that delineates FENS and other wildlife corridors must be completed.

Forest removal rates have to be lowered to be consistent with the objectives of this SMZ. Selection cutting that is limited to 30-40 percent removal and single tree selection are some of the practices that need to be utilized.

The CCLUP implementation is ongoing and the decisions concerning where the no logging zones and the modified logging zones are located have not yet been made. The accompanying map shows the places which must be designated as no logging zones and modified cutting sites for the plan to meet its objectives.

***...the central, core area of the Itcha-Ilgachuz caribou winter range, is currently believed to be the most critical habitat area for caribou.....any harvest in this area at this time will place the herd at a risk well above the level mandated in the land use plan...***

**- Caribou Strategy Committee**



***In North America, every herd of caribou has declined once the forest has been logged-no exceptions-over the course of the last two centuries. And in eastern North America, most of those herds are now extinct.***

**- Rick Page, Research Scientist, MOF, 1996**

The pressure from the forestry sector to log in this SMZ is enormous, even though the fate of the Itchas herd hangs in the balance. A 20-year cut level projection map prepared by industry reveals the impending crisis. The Itchas would be particularly hard hit, but nowhere in the region are there any watersheds left without roads and clearcutting as a major component of forest use. Only time will tell if the Cariboo-Chilcotin Land Use Plan will live up to its commitment to protect the Itchas herd in the long term.

If the original intent and spirit of the Plan is followed, the result is that the conservation interests can be met or negotiated to the fullest extent possible. The Regional Resource Board has the potential to “level the playing field” if it is brought into the process in a meaningful way. In future land use plans these details must be negotiated in a way which guarantees that all interest groups have input in the designing of the objectives and strategies that direct operational planning decisions.

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## 7.2 The Walbran Periphery

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by Syd Haskell

The Walbran Valley is located on the southwest of Vancouver Island, adjacent to the Carmanah Valley and Pacific Rim National Park (and the West Coast Trail). In 1995, sections of the valley became part of the Carmanah-Walbran Provincial Park as a result of the Vancouver Island Land Use Plan. Subsequent to that, the Protected Areas Boundary Adjustment Team altered the Park boundary slightly and created a 2,615 hectare Special Management Zone. This Walbran Periphery has extremely high values; that is the reason why it was originally recommended for park status by the conservation sector during the CORE process.

The SMZ and the park are under First Nation Treaty claims, and negotiations are part of the provincial treaty settlement process between the government and the Ditidaht First Nation and the Pacheenaht First Nation.

In the land use plan, the government recognized the following objectives for the Walbran Periphery SMZ: recreation, fisheries, old growth values, and biodiversity. The Vancouver Island Resource Targets Project (VIRT), which followed the Low Intensity Area Review Committee's (LIARC) Report sent recommendations to government which have yet to be acted on. Consequently, special management status through a Higher Level Plan has been delayed for nearly four years.

The April 1996, VIRT interim technical report contained the following recommended objectives and strategies for the Walbran Periphery:

- that the old seral forest be conserved at the intermediate level of biodiversity emphasis;
- that old growth management areas be identified within Forest Ecosystem Networks (FENs);
- that extended riparian management areas be established;
- that clearcut patch size does not exceed 15 hectares;
- that the area receives very high priority for landscape unit planning, including stakeholder and public participation; and
- that FEN design and special harvesting focus on scenic areas.

***Planning to maintain scenic, recreational and tourism values should be conducted largely at the subregional level. These plans should include visual and recreation management objectives for all areas, including the desired character of the area, the proposed level of alteration or development, needs and methods of rehabilitation, acceptable land and water uses, and recreation opportunity spectrum objectives.***

**- Report 5, Clayoquot Sound Scientific Panel**

The VIRT Interim Technical Report also catalogued the following non-timber resource values for the Walbran Periphery:

- sensitive viewsheds exist which are visible from the protected area;
- access to Walbran Protected area and recreation resources associated with Walbran Creek;
- a high potential for tourism use;
- high wildlife capability, including marbled murrelet, eagles and ungulates;
- anadromous fish values (with a recommendation for a 50 percent extended riparian management zone); and
- old growth values.

## **Recreation**

The Walbran Periphery features a confluence of three creek systems with valuable riparian habitat zones, accessible waterways, quality vistas and ideal campgrounds. These qualities make this SMZ an excellent day trip destination for hikers, nature enthusiasts and tourists from Southern Vancouver Island. The waterfalls and the accessible trails are bordered by impressive western red cedars. A recreation study has revealed that this part of the periphery has higher recreational values than that of the adjacent Walbran park.

When traveling to the Walbran Park, one is overwhelmed by the continuous clearcuts, particularly when entering the West and Central Walbran areas. By contrast the north bank of East Walbran (included in the SMZ) is still pristine, and stretches undisturbed to the hills of Carmanah to the north and Pacific Rim Park to the west. The focal point of the SMZ is the bridge over the lower Walbran, which links the relatively pristine north bank to the roaded south bank. This area was the site of the protests in the summer of 1991, and was appropriately named “the heart of the Walbran.” The waterway has high recreational values as do the lowland floodplain and hills. Immediately north are the hillsides feeding Botley Lake, which is protected in the park. Further north, the SMZ contains the headwaters of West Walbran Creek. These areas are a critically important buffer that is needed to protect the magnificent Sitka Spruce immediately downstream in the park. Marble Canyon, Fletcher Falls, and the pristine north bank of East Walbran Creek are also essential parts of an integrated reserve.

Unfortunately, the current park boundaries were drawn to support logging interests. If environmental or recreational values had prevailed, the boundaries would have followed natural watercourses and heights of land.

## **Fisheries**

The Walbran, which features a catch and release fishery, provides protection for an unusual species of Kokanee which occupies the West Walbran Creek and Anderson Lake. Coho are also able to traverse into the SMZ, accompanying various species of resident trout. The alteration of drainage patterns from logging in this area could have a serious adverse effect on the spawning and habitat needs of the resident steelhead, rainbow and Kokanee trout, as well as the Dolly Vardon, coastal Cutthroat trout and Coho salmon.

Recent logging slides, roadbuilding and clearcutting have resulted in damage to watercourses. Streamside cutting increases the temperature of the water affecting oxygen, nutrient and feed-insect supply which disrupts the hatching and life-cycle timing of fish species and the various larvae and insects they feed upon. Young fish are particularly vulnerable to the formation of algae, which leaches oxygen from the water. Deposits of clay, sand and loam sediments damage eggs and small fry. If logging is permitted to continue, the effects which have already begun to damage the fish habitat will proliferate. Further clearcutting in the Walbran Periphery will seriously alter drainage patterns and hydrology. This in turn may adversely affect the fisheries downstream in the protected park areas.

## **Old Growth Forest and Wildlife Values**

The Walbran Periphery creates a continuous old growth forest ecosystem, which provides endangered wildlife and fish habitat, and maintains various social values including mushroom, fern and berry gathering. This area is rich in Pacific Yew, a tree known for its medicinal uses in battling various cancers. Unique and amazingly complex species of vegetation, invertebrates and insects thrive in this coastal temperate rainforest. The canopy of these giant trees acts as a “blanket” over the forest, protecting it from the harsh winds and storms which batter the coast. Sensitive species beneath this canopy require humidity and temperature moderating influences in order to develop and survive. Rich ferns, mosses, fungi, mushrooms, invertebrates, and a host of other fragile life forms thrive within the protected forest environment.

### ***MOELP Data Needs for the Walbran Periphery:***

- ***marbled murrelet habitat use (site specific)***
- ***northern goshawks habitat use***
- ***rare and endangered species and rare plants***
- ***bear management studies to develop management strategies and carrying capacity***
- ***songbird communities in old growth and second growth***

***- Planning Framework Statements for Special Management Zones, Vancouver Island IAMC, November, 1997***

**The marbled murrelet is a small seabird found in coastal areas of the eastern Pacific Ocean from Alaska to central California. It spends the majority of its time at sea, where it feeds on small ocean fish. The marbled murrelet nest on branches of old growth trees. The reproductive rate of the bird is extremely low, as it lays only one egg each year and predation by other birds is high. It is red-listed and designated as threatened in Canada....The main threat is the loss of old growth nesting habitat.**

**- adapted from Species and Plant Community Accounts for Identified Wildlife, Forest Practices Code of B.C.**

The Walbran is classified as coastal western hemlock, although substantial amounts of mature Sitka spruce, western Redcedar and Douglas fir are present. This forest type is becoming increasingly rare, along with the habitat it provides as clearcutting continues on Vancouver Island. The old growth forest at Walbran provides “travel corridors” for prey and predator species such as cougar, bear, various ungulates and small mammals.

MacMillan Bloedel (TFL 44) and TimberWest (TFL 46) are the timber license holders in the Walbran periphery. The East Walbran section of the SMZ is a pristine forest, with sensitive banks bordering East Walbran Creek. Unfortunately, extensive logging has taken place across the creek. The reluctance by the timber companies to change was typified by TimberWest, when they released a Forest Development Plan at a public viewing which placed eight cutblocks over five years in their portion of the Walbran which already has six clearcuts. Also, a large proposed cutblock was located in the most highly valued riparian, marbled murrelet, old growth, and recreation area in the entire LIA. Since that time, TimberWest has revised their plans.

### **Biodiversity**

Since 1991, Stephen Pittner, an independent researcher who has resided in the Walbran, has conducted ongoing fish, rain, wildlife and plant research within the Walbran “confluence area.” His monitoring shows evidence of cougar, bear and deer using South Walbran as a migratory route from the Gordon River. These corridors are now threatened by cutblocks. His reports show that various red- and blue-listed bird and animal species are found throughout the Periphery. Many other varieties of species, including woodpeckers, martens, owls, swifts, hawks and eagles have also been observed.

Recent studies conducted by the Marbled Murrelet Recovery Team determined that the marbled murrelet, an endangered seabird, uses the West and East Walbran Creeks for nesting. The first murrelet nest in Canada was located in the upper West Walbran Creek area by volunteers in 1991. The marbled murrelet is recognized as an indicator species. Should it become extinct, many other life forms dependent on the same habitat will be endangered. The Recovery Team, which includes government and industry representatives, have recently approved flexible guidelines. These include protection of known nesting areas, and reserves of at least 200 hectares, but preferably larger, so as to maximize areas of interior forest, where nests will be safer from predatory birds which fly over logging roads and clearcut openings to raid nests.

Plants such as the sundew and butterwort are also threatened. They require specific conditions such as moist ponds, which are sacrificed during logging activities.

## **Current Plans**

The East Walbran has been heavily logged over the past 15 years, while the West and Central Walbran remain relatively pristine. TimberWest has applied to log numerous areas in the West and Central Walbran over a 60 year rotation period. Their proposals place dispersed clearcuts over a myriad of untouched hillsides. Cutblock size varies from 6 to 38 hectares and the companies have been able to cut contentious areas during the last few years, including one 15 hectare clearcut located directly above the protected Sitka spruce and marbled murrelet nesting area of the park.

The present logging plans allow for clearcuts up to 38.4 hectares with standard road building into pristine areas. MOELP has approved a disturbance regime of NDT3 (frequent stand-initiating events) rather than NDT1 (rare stand-initiating events) which more accurately reflects the forest type. Government is also willing to allow a 140 year rather than 250 year forest rotation, which will result in far less forest retention per hectare. Potential cuts on Sad Lake Mountain, East Walbran Creek and South Walbran will destroy the viewscales for park visitors.

Logging practices, including large cutblocks, clearcutting or clearcutting with small reserves, standard roadbuilding and grapple yarding all indicate that industry is treating the SMZ as if it does not exist. Government to date has shown little will to enforce the values and procedures outlined in the LIARC Report.

Additional clearcut logging is proposed for the headwaters of the West Walbran Valley which would result in increased erosion and hydrological impacts on the rich Sitka Spruce flats and West Walbran fishery. The Walbran-Carmanah region, which totals less than 15,000 hectares, contains the only remaining contiguous, natural old growth forests on Southern Vancouver Island. Less than 3 percent of this region remains as non-roaded wilderness. Under the present land use plan, industry continues to control approximately 40 percent of the Walbran drainage. The area allocated for logging contains the timber with the highest volume, while the lowlands of Cullite, Logan, and Lower Walbran Creeks, which contains poor quality timber, became a park.

***The Walbran Periphery is in two forest districts and two Tree Farm Licences (TFL 44 - MacMillan Bloedel and TFL 46 - TimberWest). Consequently, there is a need for coordination of management between these districts and companies.***

***- adapted from Planning Framework Statements for Special Management Zones, Vancouver Island IAMC, November, 1997***

## **Walbran Periphery**

### **1. Major Planning**

#### **Issues:**

- **specify fish habitat, biodiversity and recreation objectives**
- **alternative silviculture systems management**

### **2. Major Planning**

#### **Needs:**

- **prepare landscape unit plan, with a focus on biodiversity/FEN and WHA designation and visual resources**

### **3. Priority for planning: High**

**Rationale: pending development**

**applications and concern about SMZ impacts on rate of cut elsewhere; high public profile**

**- Planning Framework Statements for Special Management Zones, Vancouver Island IAMC, November, 1997**

## **A Sustainable Vision for the Walbran**

The goal for the Walbran Periphery SMZ should be to protect the resource while benefiting from it in a way which does not consume the capital but harvests the interest. This goal has been forgotten in the management of the Walbran Periphery. No sub-regional process has yet been implemented as defined and identified by the various government bodies involved. Industrial considerations have been given priority while higher level planning remains stalled by the VIRT Process.

To achieve sustainable management in the Walbran, the major objective should be to lower the logging rates so that adequate regeneration can occur before cutting proceeds into new areas. Logging plans should be based on the results of research and mapping. FENs need to be designated to sustain wildlife habitats. All features necessary to maintain the ecological integrity of the forests need to be identified for protection before plans are approved. Selective cutting of 20-30 percent using single tree selection may be practiced depending upon the wind, soil stability, habitat and other factors. Clearcutting should not be used. The above recommendations, together with designation of permanent no-cutting areas as illustrated on the accompanying map, and the strict application of the "roadless logging" techniques in modified cutting areas, are the minimum requirements necessary to achieve the proper management of all resources and conditions within the Walbran Periphery.

If the interests of the timber industry continue to be given priority over all other considerations in this critical area, not only will a major resource of natural beauty be lost to future generations, but the economic benefits will be short term. Any development should make use of the resource without jeopardizing the forest characteristics vital to intrinsic natural values as well as human enjoyment. Careful, innovative and responsible management of the Walbran Periphery could serve as an example for other areas of similar significance.

# 7. Conclusion

Over the past decade, forest management in British Columbia has come under increased public scrutiny. As the B.C. government explained in a public discussion paper released when the Forest Practices Code was being written:

*The need for better stewardship to accommodate these [non-timber] values has been voiced by many British Columbians. A major reason for this has been the destructive impacts of inadequate forest practices, despite improvements in recent years. Huge clearcuts, poorly constructed logging roads and poorly planned harvesting in watersheds have at times led to soil erosion, fish and wildlife habitat destruction, and the loss of forest and rangeland biodiversity.*

One result of these types of concerns has been a series of land use planning processes that has delineated zones for specified categories of resource use. In particular, Special Management Zones have been designated throughout the province. This work continues today as land use planning tables in regions around the province complete their work by creating further plans and additional SMZs.

The overall goals for SMZs are to protect biodiversity, wildlife habitat, recreation and tourism opportunities, clean and reliable sources of water and other non-timber values through management systems emphasizing ecological health. To best protect these values, ongoing long-term planning is needed at the landscape, sub-regional and regional levels that involves the cooperative partnership of all interest groups. Only in this fashion can the commitments made for SMZs in the CORE and LRMP land use planning processes be honoured.

An important opportunity for more comprehensive SMZ planning exists through the Forest Practices Code landscape units. Landscape Unit planning begins at the regional or sub-regional planning level through the establishment of biodiversity emphasis designations. Citizens concerned about ensuring that resource use in SMZs is ecologically responsible, need to become involved in the landscape unit planning process.



***The Scientific Panel recommends an ecosystem-based approach to planning in which the primary planning objective is to sustain the productivity and natural diversity of the Clayoquot Sound region. Planning at a variety of spatial and temporal scales is critical at all stages of forest ecosystem management.***

**- Clayoquot Sound  
Scientific Panel,  
Report 5**

In areas of the province where Land and Resource Management Plans are still under negotiation, citizens and organizations can utilize many of the concepts and resources in this Guide to assist them in participating in land use planning. It is crucial that the plans resulting from these processes include clearly written objectives to provide explicit direction for operational planning.

As the overview of completed land use plans in this Guide indicates, current management in many SMZs, particularly those in the regional land use plan areas, is too often “business as usual.” Problems include continued high rates of logging, continued use of clearcutting, inadequate respect for non-timber values, and the dearth of more detailed, long term planning. To overcome these problems, hopefully citizens and organizations concerned about the continued status quo management in SMZs will be able to utilize the vision of good stewardship presented in this Guide in their efforts to advocate for change.

Currently, the province is investing a substantial amount of funding and effort towards pilot areas for intensive forestry practices with the goal to maintain or increase future cutting levels. A similar level of investment and effort must also go towards pilot Special Management Zones, where eco-forestry methods can be utilized. Certainly, there is a need to gain more knowledge and experience with alternative forestry practices, and SMZs are an ideal place to begin these trials.

A key source for such ideas for better forest management in SMZs are the reports prepared by the Clayoquot Sound Scientific Panel. Ideally, forest practices in SMZs should be based on what the Panel calls the variable-retention silvicultural system. This approach places the emphasis on the forest structure that should be left after logging, so as to better protect and maintain ecosystem functions and processes.

Only a few years ago, British Columbia society was deadlocked in conflict over our forests. Tensions ran high and communities were at risk of being torn apart in the controversy. Both jobs and the environment were threatened. To its credit, the government chose to try to diffuse this situation by establishing the participatory CORE and LRMP land use negotiation processes.

Contrary to the expectations of the skeptics, so many citizens showed the courage to sit down with their adversaries. Rather than fighting, they engaged in negotiating land use plans in good faith. In region after region of the province, they succeeded, thereby enabling confrontation to be replaced with cooperation. These land use plans were workable compromises achieved through extensive public effort and increasing good will.

While these plans incorporated several land use designations, from complete protection to intensive development, the Special Management Zones were especially critical to bridging the differences between opposing viewpoints in sensitive areas. In many ways, these zones epitomize the spirit of innovation and cooperation which enabled the land use processes to achieve consensus.

Given that land use plans represent an extraordinary investment over the years in time and trust by countless members of the public, the B.C. government must honour the promises it made when the land use plans were officially endorsed by cabinet. Government staff must now fulfill these commitments by working to ensure that resource use in Special Management Zones becomes truly special.

***As we did on Vancouver Island, we have brought people together in good faith...built a consensus based on trust...and made land-use decisions that were in the best interest of all those involved....local communities, forest workers, the natural environment, business and the province as a whole.***

**- Radio Address by  
Premier Mike Harcourt,  
Cariboo Land use Plan,  
October 24, 1994**

# Appendix I A Summary of Existing SMZs

## I.1 Vancouver Island Special Management Zones

1. **Goletas Channel:** 10,632 hectares (ha.) Relatively undisturbed mature and old growth, low elevation forests; habitat for endangered and threatened species, including eagles; three salmon streams; kayaking and fishing corridor; boating and sailing areas; and scenic values.
2. **West Coast Nahwitti Lowlands:** 15,650 ha. Coastal old growth; biodiversity connectivity function; critical riparian wildlife habitat; salmon streams; three estuaries critical for waterfowl and fisheries; hiking trails; boating and sailing in adjacent waters; and known archeological sites.
3. **Brooks Bay:** 10,563 ha. Significant mature coastal forest; five salmon streams; includes some intensively logged areas requiring restoration; sea otter and marine bird habitat; high scenic values from the coast for marine-based tourism; and biodiversity connectivity.
4. **Koprino:** 6,081 ha. Old growth biodiversity values (including under-represented ecosection variants); significant salmon habitat; localized biodiversity connectivity; and some extensively logged areas requiring restoration.
5. **South Books-Bunsby:** 6,535 ha. Population and habitat values for sensitive marine species; archaeological values; sea kayaking routes; visual quality values; some significant old growth and includes the Mt. Paxton clearcut requiring restoration.
6. **Woss-Zeballos:** 8,591 ha. Recreation, including fishing lakes; visual quality; old growth biodiversity values; and some deer and elk winter range.
7. **Johnstone Strait:** 3,147 ha. Biodiversity connectivity to Lower Tsitika; critical fish and wildlife habitat; and marine scenic values for this popular destination for fishing, touring, whale watching, and visual quality.
8. **Tsitika River:** 5,128 ha. Important salmon and summer steelhead stream; old growth forests; elk and deer winter ranges; and biodiversity connectivity.
9. **Tsitika-Woss:** 15,132 ha. Some old growth despite extensive logging(restoration required); significant wildlife and fish populations and habitats; visual quality for Island Highway and entrants to Woss Lake Park; biodiversity connectivity; kayaking, rafting, and fishing values in Nimpkish River; and known archaeological sites.
10. **Pinder-Atluck:** 8,040 ha. Salmon habitat; some deer and elk winter range; visual quality values associated with fishing and tourism; old growth biodiversity values; and community watershed protection.

11. **Schoen-Strathcona:** 23,500 ha. Old growth biodiversity values; deer, elk and wetland habitats; wildlife corridor between Strathcona Park and Davie River Park; visual qualities; includes portions of salmon streams; and recreational fishing lake.
12. **Western Nootka Island:** 17,577 ha. Coastal wildlife habitats; visual quality in relation to marine-based recreation; undisturbed, very wet coastal old growth; salmon streams; and important archaeological sites.
13. **Nahmint:** 24,138 ha. Biodiversity connectivity; salmon streams; critical wildlife winter habitat; visual quality above Sproat Lake highway; hunting, fishing and camping; and archaeological sites.
14. **Barkley Sound:** 17,025 ha. Marine wildlife habitats; visual quality in relation to marine-based recreation; old growth biodiversity values; critical wildlife winter habitat; archaeological sites; fishing, camping and hunting.
15. **Tofino Marine:** marine only Significant waterfowl and fishery habitats; wildlife viewing; and intertidal mudflats and inlets. (NB. the role of special management for marine areas is unclear).
16. **Saanich Inlet:** no landbase High marine conservation values; overwintering habitat for wildfowl; and marine-based recreation.
17. **Strathcona-Taylor:** 12,151 ha. Salmon streams; old growth biodiversity values; buffering role to Strathcona Park; critical wildlife winter habitat; fishing, and camping; archaeological sites; and visual quality.
18. **Alberni Canal:** 4,558 ha. Visual quality in relation to marine-based recreational and tourism traffic and coastal wildlife values.
19. **Quadra Island:** 20,439 ha. Under-represented ecosection variant; forest biodiversity; community values; marine-based recreation and visual quality.
20. **Upper Qualicum** 1,457 ha. Under-represented ecosection variant; adjacent to Horne Lake Caves Provincial Park; and mature second growth biodiversity values.
21. **Walbran Periphery** 2,615 ha. Support buffer to Walbran Park; visual quality along access to Walbran Park; old growth biodiversity values; and recreation.
22. **San Juan Ridge:** 2,943 ha. High recreation values and ecosystem diversity.
23. **Clayoquot Sound:** 262,000 ha. Since the adoption of the Clayoquot Sound Scientific Panel Recommendation, this entire area has become an unofficial SMZ with a progressive system of management. Under the original 1993 decision, 17.6 percent of the area was placed in Special Management Zones for recreation (Pretty Girl Lake), wildlife (Ursus Creek), and scenic corridors. The values within the Sound are internationally renown and include: old growth forest biodiversity; marine-based recreation; archaeological sites; critical wildlife habitat; tourism; salmon streams; pristine watersheds; hiking trails; and First Nation cultural values.

## I.2 Cariboo/Chilcotin Special Management Zones

*(Note: SMZs in the Cariboo/Chilcotin Land Use Plan are identified by letters rather than numbers. This protocol has been followed in this summary.)*

- A. **Boss/Deception:** 83,475 ha. Horsefly River salmon habitat; moose, caribou and grizzly bear habitat; backcountry recreation and tourism; and wilderness lakes.
- B. **Brittany Triangle:** 139,269 ha. Chilko and Taseko River salmon habitat; backcountry recreation and tourism; recreational fisheries; grazing tenures; support buffer to Taseko Lake Provincial Park; and traditional First Nation use areas.
- C. **Charlotte Alplands:** 89,900 ha. Goat, grizzly bear and furbearer habitat; recreational fisheries; scenic Charlotte Lake; and backcountry recreation and tourism.
- D. **Flat Lake:** 12,006 ha. Significant wetland habitat; wildlife migration corridor; and support buffer to Flat Lake Provincial Park.
- E. **Interlakes:** 138,938 ha. Backcountry recreation, including fishing, hunting, camping, horseback riding, cross-country skiing and snowmobiling; significant salmon fishery values; and critical wildlife habitat for grizzly bear, moose, furbearers, and species at risk.
- F. **Itcha-Ilgachuz:** 305,925 ha. Backcountry recreation, including fishing, hunting, camping, horseback riding, and guide outfitting; significant caribou habitat and corridors; habitat for bighorn sheep and grizzly bears; support buffer to the Itcha-Ilgachuz Provincial Park; and First Nation traditional use areas and archaeological sites.
- G. **Lang Lake - Schoolhouse:** 19,356 ha. Backcountry recreation and tourism; moose, furbearers and species at risk; and support buffer to the Lang Lake/School House Provincial Park.
- H. **Lower Blackwater:** 102,163 ha. Backcountry recreation; support buffer to Kluskoil Lake Provincial Park; high quality fishery along the Blackwater River; includes a portion of the Alexander MacKenzie Heritage Grease Trail; and moderately high values for marten.
- I. **Marble Range:** 55,581 ha. Support buffer to Edge Hills and Marble Range Provincial Parks; visual quality for Fraser River valley; bighorn sheep and mule deer habitat; and includes the community watershed for Clinton.
- J. **Niut:** 224,144 ha. High backcountry tourism and recreation values; mountaineering, hunting and wildlife viewing; critical habitat for mule deer, moose, grizzly bear and mountain goat; and support buffer for Homathko River/Tatlayoko Provincial Park.
- K. **Potato Range:** 157,388 ha. Support buffer for Tsylos Provincial Park; backcountry recreation and tourism; four wilderness fishery lakes; and habitat for grizzly bear, moose, mountain goat, and furbearers.

L. **Quesnel Highlands:** 151,519 ha. Support buffer for Bowron Lake and Cariboo River Provincial Parks; visual quality for the Barkerville corridor, the Cariboo River and the Stanley-Cariboo Wagon Road ; tourism; and critical habitat for caribou, grizzly bear, moose, and furbearers.

M. **Quesnel Lake:** 338,181 ha. Support buffer for Mitchell Lake/Niagara and Cariboo Provincial Parks; provincially significant caribou and grizzly bear habitat; culturally significant areas; backcountry recreation and tourism; significant old growth cedar and spruce forests; migration corridor for caribou; grizzly bear, wolverine, wolves, moose and furbearers; critical wetland habitat for migratory waterfowl; guide outfitting; and high sockeye salmon, rainbow trout, and bull trout fishery values.

N. **South Chilcotin:** 120,519 ha. Support buffer and biodiversity connectivity for Big Creek/South Chilcotin and Churn Creek Provincial Parks; habitat for grizzly bear, moose mule deer and bighorn sheep; and backcountry recreation and tourism.

O. **Taseko Lake:** 173,481 ha. Support buffer and biodiversity connectivity for Big Creek/South Chilcotin and Ts'yl-os Provincial Parks; currently pristine wilderness; visual quality; grizzly bear, mountain goat, bighorn sheep; wilderness fisheries; and furbearer habitat; and First Nation traditional use areas and cultural sites.

P. **Upper Blackwater:** 88,069 ha. High backcountry recreation and tourism values; significant heritage and cultural sites and traditional use areas including the MacKenzie Grease Trail; critical moose and grizzly habitat; fishing, river kayaking, canoeing and rafting; fishing and horseback riding.

## I.3 East Kootenay Special Management Zones

*(Note: Each listing includes a polygon number which corresponds to the Land Use Coordination Office map, followed by the CORE identification number and then followed by the Kootenay/Boundary Land Use Plan Implementation Strategy (KBLUP) polygon code.)*

1. **Akamina-Kishinena:** Approximately 10,000 ha. Wildlife habitat and corridor for wide-ranging carnivores (wolves, grizzly bears and other species); critical habitat for several rare plant and animal species, including the Rocky Mountain red-tailed chipmunk, the tailed frog and bull trout; support buffer to Akamina-Kishinena Provincial Park; high recreation values for wildlife viewing, hiking, camping and hunting. 1-06a, 38, C-S05 (the draft implementation strategy combines Akamina-Kishinena with the Flathead River Corridor).
2. **Flathead River Corridor:** 41,445 ha. Internationally significant wildlife habitat and travel corridor for wide-ranging carnivores (wolf and grizzly); highest density of grizzlies in the interior; critical component of the Crown of the Continent Ecosystem; pivotal role in U.S. grizzly bear recovery; important bull trout habitat; wildlife movement corridor; has extensive logging history and road development; and high values for river recreation. 1-03, 1, C-S05
3. **Upper Wigham River:** 32,856 ha. Critical habitat for wolf, grizzly, and cutthroat trout; backcountry hunting, fishing and camping; extensive damage from old forest fires; and wildlife movement corridor. 1-12 & 1-05, 2, C-S06
4. **Gilnockie Creek:** 6,478 ha. Rare stands of old growth larch; unique sub-alpine grasslands; B.C./Montana connectivity for grizzly bears; support buffer for Gilnockie Creek Ecological Reserve; guide-outfitting for hunters; representation for unrepresented ecosection; and habitat for bull trout, elk, deer and moose. 18-05, 43, C-S07
5. **Pickering Hills and Bull Mountain:** 11,096 ha. Critical winter range habitat for bighorn sheep, elk, deer, badger and Lewis woodpeckers; high visual quality; hunting, fishing, wildlife viewing, camping and guide-outfitting; and long history of grazing use. 19-05, 22, C-S04
6. **Steeple - Mount Fisher:** 14,388 ha. Important habitat for grizzly bear, wolverine, deer, elk, bighorn sheep and mountain goat; high visual quality; and backcountry hunting, fishing, wildlife viewing, camping, guide-outfitting and horseback riding. 4-07, 23, C-S03
7. **Upper Meachen Creek:** 22,624 ha. Important habitat for grizzly bear, wolverine, deer, elk, and mountain goat; backcountry hunting, fishing, wildlife viewing, camping, guide-outfitting, hiking and horseback riding; and support buffer and connective corridor for Lockhart Creek and the Kianuko drainage in the West Kootenays. 17-03, 21, C-S08
8. **Upper Galbraith:** 9,984 ha. Provides support buffer and connectivity for Top of the World Provincial Park; important habitat for grizzly bear, cutthroat trout, bighorn trout, and mountain goat; backcountry hunting, fishing, wildlife viewing, camping, guide-outfitting and horseback riding and First Nation traditional use sites and spiritual values. 4-06, 6, C-S02

9. **Upper Elk Valley:** 56,626 ha. Support buffer and connectivity for Height of the Rockies Provincial Park; important habitat for wolf, grizzly bear, cutthroat trout, elk, moose, deer, bighorn sheep and mountain goat; historic trail; and backcountry hunting, fishing, wildlife viewing, camping, and horseback riding. 3-03, 7, C-S01
10. **Height of the Rockies/Albert River:** Approximately 3,000 ha. Support buffer to Height of the Rockies Provincial Park, important habitat for wolf, grizzly bear, cutthroat trout, bighorn sheep and mountain goat; backcountry hunting, fishing, wildlife viewing, hiking, camping, and horseback riding, connective corridor linking Banff National Park and the southern Rockies (4.03a), part of 4, I-S03
11. **Height of the Rockies/North White River:** Approximately 7,000 ha. Support buffer to Height of the Rockies Provincial Park, alpine lakes, important habitat for wolf, grizzly bear, cutthroat trout, bighorn sheep and mountain goat; backcountry hunting, fishing, wildlife viewing, hiking, camping, and horseback riding, connective corridor linking Banff National Park and the southern Rockies (4.03b), part of 4, I-S04
12. **Height of the Rockies/Kotsats Creek:** Approximately 2,800 ha. Support buffer to Height of the Rockies Provincial Park, important habitat for wolf, grizzly bear, cutthroat trout, bighorn sheep and mountain goat; backcountry hunting, fishing, wildlife viewing, hiking, camping, and horseback riding, connective corridor linking Banff National Park and the southern Rockies (4.03c), part of 4, I-S05
13. **Diorite Creek and Premier Face:** 12,322 ha. Only remaining unroaded watershed in southern Rockies that connects to the Rocky Mountain Trench; important east-west corridor between the Rockies and the Purcells; habitat for grizzly bear, wolverine, deer, elk, bighorn sheep, cutthroat trout and mountain goat; backcountry hunting, fishing, wildlife viewing, camping, guide-outfitting and horseback riding; high visual quality. (4-04), 5, C-S09 and I-S12
14. **Premier Ridge:** 4,638 ha. Critical winter range and lambing area for Rocky Mtn. bighorn sheep; valuable winter range for elk and deer, important habitat for badger and Lewis woodpeckers; support buffer to Premier Lake Provincial Park; backcountry hunting, fishing, wildlife viewing, camping, and horseback riding; high visual quality. (20-09), 24, I-S12
15. **Buhl-Skookumchuck:** Approximately 64,550 ha. Critical winter range habitat for elk and deer; and includes areas where sharp-tailed grouse were last seen; one of the best native trout fisheries in B.C.; provincially significant cutthroat and bull trout fishery; connectivity corridor and support buffer for Purcell Wilderness Conservancy; grizzly, black bear, wolverine, deer, elk, moose, mountain goat and caribou habitat; most viable old growth representation in the Invermere T.S.A.; most crucial area of old growth habitat for the threatened Purcell mountain caribou herd; important east-west connectivity corridor for ungulates moving from the Purcell Wilderness Conservancy to the Rocky Mountain Trench; old growth larch forests that provide habitat for woodpeckers and other cavity nesters; and backcountry hunting, fishing, hiking, climbing, wildlife viewing, camping, guide-outfitting and horseback riding. Note: This SMZ combines four areas from the two previous draft land use plans (20-03, 16-03 & 16-06, 16-01 and 16-05); 18, 19, 20 and 42; I-S10
16. **Mt. Findley - Purcell:** Approximately 2,200 ha. Part of the Purcell core wilderness area, high wildlife values; and same as above. (16-05b), 42, I-S11



17. **Mt. Brewer:** Approximately 10,000 ha. Same as above two areas, (16-08a), 42, I-S08
18. **Fir Mountain (north side):** Approximately 3,800 ha. Important migration route for mule deer and elk; visual quality values for nearby tourist lodge; backcountry hunting, hiking, wildlife viewing, guide-outfitting and horseback riding; and high value paddling recreation on Dutch Creek. (16-15), 26, I-S09
19. **Columbia Lake:** 8,576 ha. A Wildlife Management Area providing a buffer support zone for two ecological reserves and a small Provincial park; critical wildlife winter range support for elk and Rocky Mountain Bighorn Sheep from Kootenay National Park; important winter range habitat for deer, bear, cougar, coyote, bald eagle, golden eagle, osprey and red-tailed hawk; habitat for species dependent on grassland or open forest habitat; several rare and unique plant and animal species; migratory and connectivity corridor; visual quality values for highway travelers and lakeside residents; hunting, fishing, wildlife viewing, camping, water-based recreation and horse use; includes private block planned for development by Fairmont Hot Springs; and native heritage values, archaeological sites and historic “spirit trail.”(21-04), 25, I-S06
20. **Jumbo and Upper Horsethief:** 29,842 ha. Very important habitat for grizzly bear, including congregation, breeding and denning areas; critical wildlife connectivity corridor for both north-south and east-west movement in the Purcells; support buffer to the Purcell Wilderness Conservancy; critical habitat for elk, deer, moose, and mountain goat; movement corridor that helps to maintain natural genetic interchange between wildlife populations on either side of the Purcell divide; nationally significant recreation area for hiking, back country skiing and climbing; high visual quality values; and guide-outfitting and heli-skiing. (15-07), 17, I-S07
21. **Moose Creek:** 7,297 ha. Important mating and denning area for grizzly bear; ungulate habitat that is critical to area wolf populations; support buffer for Kootenay and Yoho National Parks; high value backcountry recreation; and hunting and guide-outfitting. (7-02), 9, G-S06
22. **Upper Spillmacheen:** 6,462 ha. Support buffer for Glacier National Park; habitat for elk, deer, moose, mountain goat and grizzly bear; high visual quality values; includes a four-season wilderness lodge; and heli-skiing and guide-outfitting (15-01), 16, I-S01
23. **Canyon Creek:** 12,261 ha. Winter range for ungulates; support buffer for Glacier National Park; habitat for elk, deer, moose, mountain goat and grizzly bear; heli-skiing and guide-outfitting; and popular outdoor recreation area for Golden. (13-02), 14, G-S04
24. **Esplanade Range:** 4,447 ha. Scenic values for recreation; heli-skiing; and backcountry lodge and cabins. (11-07), 13, G-S03
25. **Windy Creek, Mt. Sir Sanford, and the Adamants:** 37,850 ha. Scenic values for renowned alpine wilderness area; contains some of the most important wildlife habitat areas in the Selkirks; important habitat for caribou and grizzly bear; connectivity corridor over a subalpine pass; heli-skiing, ski-mountaineering, climbing and photography; guide-outfitting; and backcountry cabin. (11-01 and 11-02), 11 and 12, G-S02

26. **Upper Wood River:** 34,865 ha. Support buffer and connective corridor for Jasper National Park, Hamber Provincial Park and Cummins River Provincial Park; important habitat for caribou, moose, mountain goat and grizzly bear; important kokanee, bull trout and whitefish fishery; key riparian and old growth values; visual quality values along Athabaska Trail and its connecting trails; and potential for trail link through the Cummins River Valley, (10-05), 10, G-S01

27. **Columbia River Wetlands and Moberly Marshes:** 25,289 ha. Now designated as a Wildlife Management Area; a floodplain of outstanding regional, national and international significance with 95 percent of the wetlands in a natural state; First Nation cultural heritage values and archaeological sites; hunting, fishing, wildlife viewing, camping and hiking; two commercial rafting/canoeing operations; internationally important as staging area for Pacific migratory waterfowl; species include ducks, whistling swans, rare trumpeter swans, loons, gulls, birds of prey and 100 species of song birds; and winter habitat for elk, deer and moose. (14-02, 21-05, 21-06, 21-07, & 22-02) 15, 27 & 28, I-S02 and G-S05

## I.4 West Kootenay Special Management Zones

*(Note: Each listing includes a polygon number which corresponds to the Land Use Coordination Office map, followed by the CORE identification number and then followed by the Kootenay/Boundary Land Use Plan Implementation Strategy (KBLUP) polygon Code.)*

1. **Gilpin Grasslands, Snowball Creek, and West Side of Christina Lake:** 18,377 ha. Critical habitat for rare, endangered and threatened species including the tiger salamander, northern leopard frog, white-headed woodpecker, gopher snake, badger, western rattlesnake and burrowing owl; high visual quality values for Hwy 3; support buffer zone for Gladstone Provincial Park; archaeological sites; and nature viewing, hunting, motorized recreation and high scenic values for lake based recreation and tourism. (1-5, 1-6 and 3-4), 1 and 2, and B-S01
2. **Goatskin Creek:** 13,830 ha. Support buffer for Granby Park; mature and old growth upper elevation forests; hiking, nature viewing, hunting, horseback riding, camping and snowmobiling; and important grizzly bear habitat. (2-12), 3, B-S04
3. **Galloping Mountain and Headwaters of Burrell, Eagle, Cortiana and Galloping Creeks:** 15,187 ha. Support buffer for Granby Park; mature and old growth upper elevation forests; hiking, nature viewing, hunting, horseback riding, camping and snowmobiling; and important grizzly bear habitat. (13-9 and 2-14), 4, B-S03, A-S05, and A-S06
4. **Texas Creek:** Approximately 1,400 ha. Support buffer for Gladstone Provincial Park; hiking, horseback riding, and hunting; habitat for Selkirk Foothills ecosection species. (3-2), 5, B-S02
5. **South Salmo River, Lost Creek, Prest River and Summit Creek headwaters:** 41,803 ha. Support buffer for Stagleap Provincial Park; high visual quality values for Hwy 3; nature viewing, hiking, berry picking, hunting, fishing, ski touring and snowmobiling; includes a segment of the Dewdney Trail; and critical habitat for the South Selkirk mountain caribou herd, grizzly bear and South Columbia Mtn. ecosection high elevation species. (5-1, 5-3, 6-1, and 6-3), 6, A-S01 and K-S01
6. **Creston Valley Wildlife Management Area:** 6,522 ha. Only extensive marsh habitat in the West Kootenays; important habitat for migratory birds and winter habitat for ungulates; visual qualities for Hwy 3A; and wildlife viewing, mountain biking, canoeing, hunting, camping and hiking. (6-6), 7, K-S02
7. **Arrow Creek:** 8,636 ha. A largely undisturbed watershed that provides the water supply for Creston; important habitat for Southern Columbia Mountains ecosection species; fills representation gaps for the ICH zone. (6-9), 8, K-S03

8. **Malandaine, Kamma and Kid Creeks:** 40,842 ha. Support buffer for Kianuko Provincial Park; fills gaps in representation of ICHmw2 and ESSFmw including old growth forests; critical core habitat for southernmost caribou populations in the Purcell mountains; habitat for elk, grizzly bear and mountain goat; includes major tributaries of the Goat River which support an important fishery; hunting, fishing, hiking, mountaineering and guide-outfitting; and First Nation traditional use and spiritual area. (7-1 and 7-2), K-S04
9. **North and West Arms of Kootenay Lake:** Approximately 122,400 ha. Low elevation forests that provide winter range habitat for deer, elk, grizzly bear, wolverine and mountain goat; domestic use watersheds; stream habitat for bull, rainbow and cutthroat trout and kokanee; includes important representations of low, mid, and high elevation forests including some of the best examples of old growth cedar-hemlock forests remaining in the West Arm; high visual values for Kaslo, Nelson and Ainsworth; domestic use watersheds; high visual quality values for Hwy 3 and ferry traffic; First Nation and post-contact historical sites; rare karst landforms and associated species; and hiking, camping, boating, wildlife viewing, mountain biking, skiing, fishing, hunting and motorized recreation. Note: this SMZ combines six areas from previous draft plans. (8-1, 8-1a, 8-6, 8-2a, 9-2, 9-11b, 9-9, 9-10, 9-5d, 10-4, and 10-3 ); 11, 12, 14, 17 and 18; K-S06
10. **Midge:** Approximately 25,000 ha. Support buffer for the West Arm Provincial Park; habitat for grizzly bear, osprey and woodland caribou; winter habitat for deer; spawning and rearing habitat for kokanee and bull trout; First Nation and post-contact historical sites and themes; domestic use watersheds; and wildlife viewing, water sports, camping, fishing, hunting, hiking and horseback riding; fills representation gaps for ICH. (9-1, 9-6, 9-4a), 16, K-S05
11. **Lardeau, Cooper and Meadow Creeks:** 43,229 ha. Support buffer for West Purcells and Goat Range Provincial Park; winter range habitat for ungulates; domestic use watersheds; high visual quality values; fills representation gaps for ICH, critical habitat for Gerrard rainbow, bull trout and kokanee; core and migratory habitat for caribou and grizzly bear; biodiversity corridor; and wildlife viewing, hiking, camping, boating, fishing, hunting, snowmobiling and cat skiing, (10-4, 14-2, 14-7b and 14-14), 19 and 27, K-S08
12. **Lyle and Whitewater Creeks:** 2,263 ha. Support buffer for Goat Range Provincial Park (White Grizzly); critical habitat for grizzly bear and mountain goats; old growth cedar stands; high visual quality values; and hiking, camping, mountaineering and ski touring. (10-8 & 12-3a), 20, K-S07
13. **Faith and Peter Creeks:** Approximately 9,900 ha. Support buffer for Gladstone Provincial Park; includes some mature and old growth mid to upper elevation forests; habitat for grizzly bear, wolverine and mule deer; domestic use watersheds; and hiking, horseback riding, hunting and wildlife viewing. (11-5 & 11-7), 21, A-S02
14. **Hutchison:** 12,414 ha. Includes significant areas of mature and old growth interior Cedar-Hemlock and interior Douglas-fir forests; a unique warm micro-climate that produces rare grassland and ponderosa pine habitats; critical winter range for ungulate species; fishing, hiking, boating, camping, hunting and wildlife viewing; and First Nation heritage sites. (11-6), 22, A-S03

15. **Slocan Valley:** 82,566 ha. Support buffer for Valhalla, Kokanee Glacier and Goat Range Provincial Parks; habitat for grizzly bear, ungulates, caribou and a multitude of fish species; biodiversity corridor; high visual quality values; includes an extensive network of trail systems for hiking, horseback riding, skiing and mountain biking; water-based recreation on Slocan Lake and River; pre and post contact historical themes and sites; and domestic use watersheds. (12-4 and 12-11), 22 and 23, A-S04
16. **The Pinnacles:** 9,124 ha. Grizzly bear and mountain goat habitat; hiking, ski touring, mountaineering, guide outfitting and heli-skiing; and domestic use watersheds. (13-3), 25, A-S07
17. **Lardeau Range:** Approximately 79,000 ha. (including Trout Lake) Support buffer for Goat Range Provincial Park, habitat for grizzly bear, wolverine and the Central Selkirks caribou population; critical habitat for Gerrard rainbow; domestic use watersheds; and hiking, camping, fishing, hunting, ski-touring, water-sports and heli-skiing. (13-11, 13-12, 13-12a, 13-12b, 12-10, 14-4, 14-10, 14-9 and 14-9a), 26, 28, A-S09 and K-S10
18. **Hill and MacKenzie Creeks:** 7,576 ha. Most important kokanee and rainbow trout spawning channel on the Arrow Lakes system; high visual quality values; and domestic use watershed. (14-5), 29, A-S10
19. **Upper Glacier Creek:** 6,979 ha. Critical old growth stands of cedar-hemlock and Engelmann spruce; representation gaps in ICH; high visual quality; access to spectacular alpine meadows and glaciers for hiking, camping and ski touring; and critical corridor link to East Kootenays for grizzly bear, elk and other wildlife. (15-1), 30, K-S09
20. **Giegerich and East Creek Headwaters:** 11,272 ha. (formerly Bugaboos Recreation Area) Support buffer for Bugaboo Provincial Park; mountaineering, skiing and hiking; and historically significant area for exploration and early alpine ascent. (15-9), 31, K-S11
- [Note: The SMZs in the Revelstoke region do not have new polygon codes.]*
21. **Upper Arrow Lake (south of Revelstoke):** 5,024 ha. Critical wetland habitat for migratory waterfowl as similar habitats have been flooded; winter range habitat for ungulates; high visual quality for Revelstoke and Hwy 23; wildlife viewing, hiking, canoeing and kayaking; and heritage themes for early settlement and transportation. (16-2), 32
22. **Fostill and Oden Creeks and Bear Lake:** Approximately 43,500 ha. Support buffer for Monashee Provincial Park; hiking, ski touring, fishing, horseback riding and mountaineering; and habitat for Central Columbia Mountains ecosection species, including the Central Monashee caribou population. (16-4n, 16-9n & 16-9s), 33, includes A-S08
23. **Frisbee Ridge:** Approximately 12,000 ha. Cedar-hemlock and Engelmann spruce old growth; critical habitat for Revelstoke caribou population; hiking, ski touring and snowmobiling. (17-9), part of 36

24. **Keystone Standard:** Approximately 23,000 ha. Cedar-hemlock and Engelmann spruce old growth; critical habitat for Revelstoke caribou population; hiking, ski touring, heli-skiing and snowmobiling. (17-4), part of 34
25. **Upper Tangier River and Downie Creek:** Approximately 56,000 ha. Support buffer for Mt. Revelstoke and Glacier National Parks; biodiversity corridor; wildlife viewing, and hunting, ski touring, mountaineering, heli-skiing and snowmobiling; old growth forest habitat for grizzly bear, caribou, and wolverine. (17-12), part of 34
26. **Upper Hoskins and Kirbyville Creeks:** Approximately 34,000 hectares. Contains significant amounts of low-elevation ICHwk1 and ESSFvc subzones which are under-represented in the Northern Columbia Mountains ecosection; critical old growth forest habitat for caribou, grizzly bear, wolverine, wolf and moose; and hunting, fishing, mountaineering, ski-touring and potential for heli-skiing and commercial fishing, (17-6 & 17-14), part of 36
27. **Caribou Basin:** Approximately 5,200 hectares. Cedar-Hemlock and Engelmann spruce old growth; critical habitat for Revelstoke caribou population; hiking, ski touring, heli-skiing and snowmobiling. (17-11), part of 34
28. **Mt. Revelstoke Corridor:** approximately 11,000 hectares. Support buffer for Mt. Revelstoke National Park; viewsapes from trans-Canada highway and Mt. Revelstoke Park; ungulate migration corridor; fills representation gap for ICH subzone; domestic use watersheds (17-5)

## I.5 Kamloops LRMP Special Management Zones

### a) *Habitat / Wildlife Management Areas*

Approximately 321,000 hectares or 14 percent of the plan area

**H1- H9 North Thompson Caribou Habitat:** Critical caribou migration corridors; early and late winter habitat; migration corridors; and old growth high and low elevation forests. Includes: H1 - North Thompson, H2 - Alan Creek, H3 - Bischoff, H4 - Bone, H5 - Clemina, H6 - North Blue, H7 - North Thompson Glacier, H8 - Smoke, and H9 - Thunder.

**H10 Battle Bluffs Wildlife Habitat:** Grassland and ponderosa pine/interior Douglas-fir ecosystem; California big horn sheep, mule deer, bats, rattlesnakes habitat; and support buffer to adjacent Dewdrop-Rousseau Wildlife Management Area.

**H11 Skull Wildlife Habitat:** Very diverse landscape ranging from dry bunchgrass and ponderosa pine in the south to wet cedar and cool spruce forests in the north; overlaps community watershed; and critical habitat for deer, badger, spadefoot toad, bats, snakes and various bird species. Includes existing Skull Wildlife Management Area (H14).

**H12 Skwilatin Wildlife Habitat:** the southernmost limit of sub-boreal spruce in B.C.; high fisheries values in Taweel Lake; support buffer for Taweel Lake protected area; important habitat for moose, wolves and furbearers; migration corridor and winter range for mule deer.

**H13 Dewdrop-Rousseau Wildlife Management Area:** Critical bighorn sheep and mule deer habitat; extensive grasslands; old growth Ponderosa Pine and Douglas-Fir.

### b) *Recreation and Tourism Management Areas*

Approximately 108,700 hectares or 5 percent of the plan area. Note: some of these areas overlap with the Caribou Habitat Zone

**R1 Alan Creek:** Backcountry sub-category for snowmobiling, hiking, ski-touring, heli-skiing, and hunting.

**R2 Bischoff:** Backcountry and Remote sub-categories for hiking, snowmobiling and ski-touring. Opportunities for commercial tourism.

**R3 Blustery:** Backcountry sub-category for trail riding, hunting, wildlife viewing, hiking, and First Nation plant gathering. Commercial potential for trail riding.

**R4 Bone:** Remote sub-category for heli-skiing, mountaineering and hunting.

**R5 Clemina:** Backcountry sub-category for snowmobiling, hiking, skiing and hunting.

**R6 Lac le Jeune:** Natural Environment sub-category for ice fishing, cross-country skiing, mountain biking, hiking, hunting, orienteering and wildlife viewing.

**R7 North Thompson Glacier (including McAndrew Lake):** Remote sub-category for heli-skiing, hiking, ski-touring and hunting.

R8 **Smoke:** Backcountry sub-category for heli-skiing, hiking and ski-touring.

R9 **Taweel:** Natural Environment sub-category for fishing, hiking, wildlife viewing and hunting. Support buffer for Taweel Lake Protected Area.

R10 **Thompson and South Thompson Rivers:** Natural Environment sub-category for fishing, canoeing, rafting, scenic corridor, and First Nation interests. Municipal and agricultural water supply source.

R11 **Tod Mountain:** Natural Environmental sub-category for hunting, fishing, hiking, snowmobiling, cross-country skiing, scenic values and ATVing.

R12 **Tod Mountain Ski Hill:** Controlled, intensive use recreation area; site of Sun Peaks resort.

R13 **Lakes Areas:** Akehurst, Caverhill, Latremouille, Lynn, Meadow and Thuya Lakes will be assessed for their recreation and tourism values to determine area boundaries and management direction.

**c) *Community Watersheds***

Approximately 95,600 ha. or 4 percent of the plan area, W1 to W21.



## I.6 Kispiox LRMP Special Management Zones

### a) *General Areas:*

1. **Atna/Shelagyote:** 79,688 ha. Significant scenic resources; backcountry recreation; grizzly bear and mountain goat habitat; and extensive wetlands. Logging will be deferred while scenic, recreation and wildlife resources are inventoried.
2. **Rocher Deboule:** 20,616 ha. Provincially significant scenic resources; backcountry recreation opportunities; and wildlife habitat. Logging will be deferred while scenic, recreation and wildlife resources are inventoried.
3. **East Kispiox/Kuldo:** 97,821 ha. Provincially significant scenic resources; backcountry recreation opportunities; and grizzly bear and mountain goat habitat. Logging will be deferred while scenic, recreation and wildlife resources are inventoried.
4. **Babine River Valley:** 9,598 ha. Buffer for river-based resource values within the protected Babine River Wilderness Corridor. Logging will be limited to selective systems or clearcuts less than 15 hectares and cutting rates will be minimized. Approval of both MOF and MOELP is required for all development plans.
5. **Andimaul Lookout:** 219 ha. Rocky mountain juniper community; deciduous forest; and recreation trail. Approval of both MOF and MOELP is required for all development plans.

### b) **Community Watersheds:**

Nine community watersheds totaling 16,023 ha. also have Special Management Zone status.

## I.7 Vanderhoof LRMP Special Management Zones

1. **Upper Sutherland:** 6,100 ha. High wildlife values including bear denning sites, pine marten habitat and moose winter habitat; hunting, angling, hiking and ecotourism values; and trout, kokanee, steelhead and sockeye habitat in Sutherland River watershed. Joint MOF and MOELP approval required for all resource development.
2. **Upper Nechako River:** 11,900 ha. Critical freshwater fish, sturgeon and salmon habitat; waterfowl, raptor, grizzly and moose habitat; scenic area; backcountry recreation; and extensive archaeological, cultural and heritage values. Joint MOF and MOELP approval required for all resource development.
3. **Upper Blackwater:** 37,200 ha. Adjacent to Lower Blackwater SMZ in the Cariboo/Chilcotin land use plan; contains sections of the Nuxalk-Carrier Grease Trail (the Alexander Mackenzie route); rich archaeological sites; world class angling, canoeing and hiking opportunities; extensive freshwater fish and salmon habitat; wolf, moose, and caribou; and fly-in fishing lodges. Includes restricted access areas. Joint MOF and MOELP approval required for all resource development.

## I.8 Bulkley LRMP Special Management Zones

In addition to the two types of SMZs listed below, the Bulkley LRMP provides direction to lower level planning for an Ecosystem Network of core ecosystems and landscape corridors. These areas have been mapped, but the boundaries are flexible to allow for adjustments by the district manager and the designated environment official. Adjustments may be needed in order to consider more specific ecological information or resource use activities. Core ecosystems provide representation of ecosystems, retain samples of old-growth forests and provide forest-interior conditions. Landscape corridors reduce habitat fragmentation, permit movement and dispersal of plant and animal species and maintain the conditions associated with old growth forests.

**A. Special Management 1 Zones** - all industrial activities except exploration and mining are excluded. Only fly-in access or use of existing roads will be permitted for the early stages of exploration and all roads are to permanently deactivated when exploration or mining has been discontinued. These zones total 60,600 hectares or 8 percent of the plan area.

1. **Barbeau Creek Watershed:** pristine watershed, goat habitat, grizzly bear corridors and remote lakes.
2. **Big Onion Mountain:** premier snowmobile recreation site, domestic use watershed, hiking trails, important viewshed, and buffer for Babine Mountain protected area.
3. **Old Cronin Mine Area:** important viewshed, hiking trails, and buffer for Babine Mountain protected area.
4. **Cronin Alpine Area:** important viewshed, hiking trails, and buffer for Babine Mountain protected area.
5. **Howson Range:** caribou and goat habitat, some wilderness recreation and backcountry tourism opportunities and visual quality.
6. **Hankin Plateau:** caribou habitat.
7. **Silvern Lakes:** high backcountry recreation and visual quality values.

**B. Special Management 2 Zones** Industrial activities are allowed, but they cannot compromise the non-industrial resources recognized by the zoning. Planning of activities such as logging and mining are subject to constraints that give priority to other resource values. Management prescriptions will be developed at the landscape unit planning level and will be presented to the Bulkley Resource Board and government agencies prior to implementation. These zones total 98,500 hectares or 13 percent of the plan area.

1. **Babine River Corridor:** buffer for Babine River protected area, grizzly bear habitat, and scenic area.
2. **Reiseter Creek:** scenic viewshed, domestic use watershed, and hiking trails.

3. **Upper Corya Creek:** visual quality, hiking trails, commercial backcountry recreation, and snowmobiling.
4. **Glacier Gulch:** visual quality, water source for fish hatcheries and hiking trails.
5. **Hudson Bay Mountain:** hiking trails and visual quality.
6. **Ski Smithers:** commercial and public winter recreation and visual quality.
7. **Community Forest:** community recreation and education in a demonstration forest.
8. **Mooseskin Johnny Lake:** shallow lake and wetland habitat, caribou habitat, commercial recreation/tourism and visual quality.
9. **Telkwa River:** fisheries, deer and grizzly habitat, landscape corridor, potential for restoration, wetlands, and recreation/tourism activities.
10. **Copper River:** high fishery values, and visual quality.
11. **Serb Creek watershed:** spawning habitat, grizzly bear habitat, high potential for backcountry recreation and visual quality.
12. **Mulwain Creek:** sensitive soils and visual quality.

## I.9 Fort Nelson LRMP Special Management Zones

Sixteen zones in this LRMP form part of the larger Muskwa-Kechika Special Management Zone, which totals approximately 2,915,300 hectares or 29 percent of the Fort Nelson sub-region. The intent for the Muskwa-Kechika is to manage both protected areas and Special Management Zones in an integrated way so that, over time, wilderness characteristics and wildlife habitat will be maintained while allowing resource development and temporary roads.

Important values and activities within the Muskwa-Kechika include: backcountry recreation opportunities, including wildlife viewing, hunting, horseback riding, hiking, snowmobiling, fishing and camping; high density populations of Stone's sheep, moose, elk, caribou, grizzly and black bear, mountain goat, wolves, wolverine, and fur bearers; trapping, historical trails; critical fish habitat; and traditional Native activities.

Management direction for the Muskwa-Kechika includes lower-level planning, comprehensive inventories; access management planning and joint approval for resource activities. An advisory board (with a \$2 million operating fund), appointed by the Premier, will assist with the implementation of the plan. The following zones are included within the Muskwa-Kechika: 8 Mile/Sulphur, Aeroplane, Churchill, Fishing, Moodie, Muskwa West, Prophet, Rabbit, Rainbow, Sandpile, Stone Mountain, Terminal, Kechika River Corridor, Muskwa River Corridor, Toad River Corridor and Turnagain/Dall Rivers Corridor.

## **I.10 Fort St. John LRMP Special Management Zones**

Approximately 14 percent of the Fort St. John LRMP area or 627,000 hectares, is classified as Special Management Zones. The majority of the area in special management (465,608 hectares) form part of the larger Muskwa-Kechika Special Management Zone described above (specifically Besa / Halfway Chowade and Graham North). Other Special Management Zones include those designated for Tourism and Visual Quality (Alaska Highway Corridor); Major River Corridors (Lower Sikanni, Graham and other rivers); Community Water Supply (Charlie Lake); and for Fish and Wildlife Habitat (Graham South, Cecil and Boundary Lakes, and the west side of Crying Girl).

## **I.11 Spotted Owl Special Management Zones**

There are 19 Special Management Zones, totaling 204,000 hectares, that have been designated for the protection of spotted owls in the Lower Mainland region. Thirteen zones are found in the Chilliwack Forest District, including: Manning/Skagit area, Chilliwack Lake area, Cultus Lake area, Hope area, Sasquatch area, Chehalis Lake area, Golden Ears area, Pinecone-Burke area, Boston Bar area, Harrison Lake east, Harrison Lake Northwest, and Harrison Lake north. Six zones are found in the Squamish Forest District, including: Lillooet River area, Lillooet Lake area, Birkenhead River area, Pemberton area, Whistler area and Squamish area.

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# Appendix III Resources

Note: All B.C. Government offices can be reached via *Inquiry BC*, 1-800-663-7867 or in Vancouver, 660-2421.

1. **B.C. Conservation Data Centre** - The key source for information on endangered and threatened species and ecosystems, including rare plant communities. This information is compiled and maintained in a computerized database which provides a centralized, objective source of information on the status, locations and level of protection of these rare organisms and ecosystems.

**Contact:**

**CDC, 102-780 Blanshard St., Victoria, B.C., V8V 1X4, 250-356-0928,  
fax 387-2733, email: [cdcdata@fwhdept.env.gov.bc.ca](mailto:cdcdata@fwhdept.env.gov.bc.ca),  
website: [www.env.gov.bc.ca/wld/cdc/](http://www.env.gov.bc.ca/wld/cdc/)**

2. **Land Use Coordination Office (LUCO)** - This government agency works to define a vision for land use planning in British Columbia and to oversee, coordinate, evaluate and report to cabinet on ministries' work to deliver the provincial land-use strategy. LUCO:

- does not deliver the land-use strategy (that is the responsibility of government ministries and other governments) but it does however, based on direction from cabinet, set strategic direction, coordinate workplans and monitor and report on ministry programs;
- facilitates land-use decisions by ensuring that all values are identified and all issues and impacts are presented to decision makers objectively;
- ensures that government priorities for land-use related initiatives are reflected in ministry budgets and workplans;
- proposes effective processes and policies to ensure unbiased public involvement and participation, and it reviews, directs and coordinates the development of sub-regional land use planning initiatives and the work of IAMCs;
- by working closely with the Ministry of Aboriginal Affairs, it ensures that land-use planning, land and resource inventory systems and land claims negotiations with First Nations are well integrated;
- coordinates IAMCs and Community Resource Boards (CRBs) to ensure that delivery of land-use plans is closely coordinated with social and economic considerations and the delivery of an effective community renewal program;
- coordinates the inter-ministry strategic inventory program, to acquire and analyze land and resources inventory for land use and First Nation treaty processes; and
- aims to provide coordinated Geographic Information System (GIS) services, advice and direction to assist land-use planning.

For more information on land use planning in B.C., view the LUCO website. This website also has direct links to websites for most of the LRMPs in the province.

**Contact:**

**LUCO, 2<sup>nd</sup> Floor, 836 Yates St., Victoria, mailing address: Box 9426 Stn. Prov. Gov.,  
Victoria, B.C., V8W 9V1, 250-953-3471, fax 953-348,  
website: [www.luco.gov.bc.ca/home.htm](http://www.luco.gov.bc.ca/home.htm)**

3. **Forest Renewal BC** - Provides funding for inventory and restoration projects.

*Contact:*

*Forest Renewal BC, 9th Floor, 727 Fisgard St., Victoria, B.C., V8V 1X4, 250-387-2500, email: frbc.info@gems9.gov.bc.ca Website www.forestrenewal.bc.ca or one of six regional offices in Williams Lake, Cranbrook, Prince George, Campbell River, Smithers, or Kamloops*

4. **Resources Inventory Committee and the Corporate Resources Inventory Initiative (RIC/CRII)** - Develops standards and methodology for resource inventorying, monitoring and mapping.

*Contact:*

*RIC, 840 Cormorant St., Victoria, V8W 1R1, 250-920-0661, fax 384-1841, website: www.for.gov.bc.ca/ric*

## 5. Watershed Ranking Tool

Detailed information about the status of every watershed in the province will soon be available as a result of this new Geographic Data BC project. The watershed ranking tool will provide decision-makers with easy-to-use information about the land, water and resources of the province. Existing Geographic Information System (GIS) databases are being summarized on a watershed basis with results presented either on spreadsheets or on GIS maps. Approximately 150 measurements are calculated for each watershed, many of which pertain to the cumulative effects of forest practices. For example, 12 of the 15 watershed assessment procedure indices are included. This tool can be used to rank and prioritize watersheds for restoration, to provide baselines for future monitoring, to provide strategic overviews, and to analyze existing watershed conditions for management decision-making. Some of the measurements that the tool will provide include:

- percent of watershed logged;
- percent logged on steep slopes;
- percent of remaining old growth forests;
- road density; kilometres of streams logged to the bank;
- kilometres of streams with known fish distribution;
- soil types;
- human uses; and
- biodiversity index.

The preliminary results are now available for Vancouver Island and the Knight and Seymour Inlets areas of the coast.

*Contact:*

*Geographic Data BC, 1802 Douglas, Victoria, B.C., V8V 1X5, email gray@mail.gdbc.gov.bc.ca*

# Appendix IV Glossary

**agro-forestry:** land use involving the integrated production of trees, other forest plants, agricultural crops, and animals in a manner compatible with the local cultural patterns.

**allowable annual cut (AAC):** the volume of timber approved (every five years) by the chief forester to be logged annually AACs are set for timber supply areas, tree farms and woodlots.

**alternative silviculture systems:** any program of logging, regeneration and stand-tending methods that does not include clearcutting; but includes patch-cut, coppice, seed tree, shelterwood, and selection silviculture systems.

**balanced, holistic process:** an ecologically responsible forest planning process that ensures all forest users (human and non-human) have fair, legally protected or designated land bases.

**biodiversity (biological diversity):** the diversity of plants, animals and other living organisms in all their forms and levels of organization, including genes, species, ecosystems, and the evolutionary and functional processes that link them.

**low biodiversity emphasis:** a landscape unit designation that directs forest management to reduce the percentage of old and mature forests to very low levels resulting in significant alteration of natural landscape patterns creating high risks to biodiversity and populations of native species (35 to 60 percent of plan area).

**intermediate biodiversity emphasis:** a landscape unit designation that directs forest management to reduce the percentage of old and mature forests to minimal levels resulting in alteration of natural landscape patterns creating some risks to biodiversity and populations of native species (35 to 60 percent of plan area).

**high biodiversity emphasis:** a landscape unit designation that directs forest management to maintain a percentage of old and mature forests to levels that result in some alteration of natural landscape patterns creating lower risks to biodiversity and populations of native species. Recommended for those areas where biodiversity conservation is a high management priority and which gives a higher priority to biodiversity conservation (a maximum of 10 percent of plan area).

**Biodiversity Guidebook:** a Forest Practices Code guidebook that provides forest managers with a recommended process for meeting biodiversity objectives at both the landscape unit and stand level with the goal to reduce the impacts of forestry on biodiversity.

**biogeoclimatic zone:** a geographic area having similar patterns of energy flow, vegetation and soil as a result of a broadly homogenous macro-climate.

**blue-listed species:** species considered to be vulnerable in B.C., which are thus of special concern because of characteristics that make them sensitive to human activities or natural events.

**buffers:** a zone or strip of forest land that separates two areas, usually to protect a sensitive area from the impacts of the adjacent development activities.

**chief forester:** the assistant deputy minister of the Ministry of Forests who is responsible for determining AACs and oversees the following department branches; Timber Supply, Forest Practices, Resources Inventory, Research and Forestry Division Services.

**Clayoquot Sound Scientific Panel:** a panel of experts including First Nations representatives, foresters and scientists, convened in 1993 by the B.C. government to develop “world class” forestry practices for the Clayoquot Sound region.

**commercial thinning:** a partial cut in immature stands, where trees have reached merchantable size and value, to provide an interim harvest while maintaining a high rate of growth on well-spaced, final crop trees.

**connectivity:** an ecological term that describes connections among habitats, species, communities, and ecological processes to enable a flow of energy, nutrients, water, disturbances and organisms and their genes at both spatial and temporal scales.

**conservation biology:** an application of science centered on biodiversity and the processes that produce and sustain it.

**conservation sector:** a group of people and organizations concerned with promoting and ensuring careful and considerate resource use, which may mean no human use in some locations or use that enhances rather than depletes resources.

**CORE:** the Commission On Resources and Environment established by the B.C. government in 1992 to oversee regional land use planning and other sustainability initiatives. Disbanded in 1996.

**cultural heritage resources:** objects, sites, or the locations of a traditional societal practice that is of historical, cultural or archaeological significance to the province, a community or an aboriginal people.

**cutblocks:** a specific area of land identified on a forest development plan, or in a licence to cut, road permit, or another form of permit, within which timber is to be or has been logged.

**deferrals:** specified areas where logging or other resource use activities have been postponed by government staff for a period of time to allow for adequate planning to be completed.

**district managers:** Ministry of Forest staff who are responsible for the forest management of crown land, including authorizing logging and silviculture activities, within one of B.C.’s 40 forest districts.

**eco-certified:** endorsement or verification that forest stands are managed (including logging and silviculture) according to ecologically responsible forest use.

**eco-forestry:** ecologically responsible forestry practices that maintain ecosystem functions and processes, such as single-tree selection logging.

**ecological processes:** the actions or events that link organisms (including humans) and their environment, such as disturbance, successional development, nutrient cycling, carbon sequestration, productivity, and decay.

**ecological values:** desired, healthy biological conditions for fish and wildlife habitat, microorganisms, soil, terrain, landforms, vegetation, water, diverse land base, and biodiversity.

**ecosystem restoration:** a process of helping to return degraded ecosystems or habitats to original structure and species composition.

**fibre flow:** the industrial conversion of forest stands into manufactured wood fibre products such as lumber, plywood, oriented-strand board, chips, pulp, paper, and cardboard for monetary profit.

**forest development plans:** an operational plan prepared by a licensee or the forest service that shows the location of existing and proposed cutblocks, roads, road developments and deactivation plans, and describes the development plans for a five year period. This is the key forest plan that directs most forestry activities and the only operational plan that allows for public input.

**forest ecosystem networks (FENs):** forested areas that are zoned for minimal resource use to maintain or restore the natural connectivity within an landscape area.

**Forest Practices Code:** refers to the legislation, regulations, and guidebooks that govern forest practices in B.C.

**Forests Resources Commission:** a 12-member advisory body that existed from 1989 to 1991. It was assigned to review forestry issues and produced numerous reports and recommendations, including *The Future of Our Forest* which recommended major change to the forest tenure system.

**full successional cycle:** the stages of growth and development of vegetation towards maturity, old age and death; including changes in species composition that follow natural disturbances.

**GIS (Geographic Information Systems):** refers to the discipline, the software, and the databases for electronic mapping.

**green-up height:** the minimum height and stocking levels which trees on a cutblock must achieve before an adjacent stand of timber may be harvested. This minimum varies from the standard 3 metres to heights of up to 9 metres or more in watersheds and scenic viewsheds.

**group selection:** a silviculture system that removes trees in defined groups to create stand openings with a width less than two times the height of adjacent mature trees, and that manages the area as an uneven-aged stand.

**higher level plans:** refers to an objective for a resource management zone, a landscape unit, a sensitive area, a recreation site or trail, or an interpretive forest site. These plans provide strategic direction to operational planning.

**hydrology:** the science of water, its properties and movement over and under land surfaces.

**identified wildlife:** those species at risk that the Deputy Minister of Environment, Lands and Parks or a person authorized by that deputy minister and the chief forester agree will be managed through a higher level plan, wildlife habitat area or general wildlife measure.

**inoperable areas:** areas within the crown land base that are unavailable for logging due to terrain-related, inaccessibility or economic reasons.

**integrated management:** a land management regime that identifies and considers all resource values, in the context of social, economic, and environmental objectives.

**Interagency Management Committee (IAMC):** a group of senior land and resource management officials in each region of the province who are responsible for integrating all resource planning including protected areas work and for setting regional planning priorities.

**Land and Resource Management Plan (LRMP):** a strategic, multi-agency, integrated resource plan at the sub-regional level, based on the principles; of required public participation, of consideration of all resource values, of consensus decision making, and of resource sustainability.

**landscape unit:** a planning area delineated on the basis of geographic and/or ecological features such as watersheds. These serve as a focal point for the coordinated management of a broad range of resource values and are central to the management of landscape-level biodiversity and are designated by a district manager.

**landscape unit plans:** maps, objectives, strategies and indicators designed for the coordination and integration of resource conservation and development activities and to provide for the maintenance of biodiversity through recommended levels of seral stage distribution. These will include ecosystem networks, old growth management areas, visual resource objectives and access management objectives.

**Long Range Harvest Level (LRHL):** estimated harvest volumes for second and third growth forests in timber supply areas and tree farms.

**mean annual increment (MAI):** the average annual growth rate for a tree.

**natural disturbance types (NDT):** characteristic types of ecosystems with different natural disturbance regimes. Five natural disturbance types are recognized as occurring in B.C.:

- NDT1 - Ecosystems with rare stand-initiating events
- NDT2 - Ecosystems with infrequent stand-initiating events
- NDT3 - Ecosystems with frequent stand-initiating events
- NDT4 - Ecosystems with frequent stand-maintaining fires
- NDT5 - Alpine Tundra and Sub-alpine Parkland ecosystems

**non-conventional logging practices:** the process of removing trees from the forest that minimizes impacts on the forests ecosystem or other non-timber resource values, such as small cable yarding systems, horse logging, or single tree selection.

**non-timber values:** values other than the extraction of timber such as; fish and wildlife, culture, spiritual, tourism, recreation, trapping, and water quality.

**old growth retention:** forest management that maintains old growth or mature seral stages (live and dead trees of various sizes, species, composition and age classes).

**Old Growth Strategy:** a land use framework prepared in 1992 for managing old growth forests in B.C. that resulted from a process which represented the views of citizen and environmental groups, forest industry associations, organized labour, researchers, provincial and federal resource agency staff, and individual professionals.

**professional accountability:** professionals are accountable for any and all work they do in their capacity, or in the expectation that they are acting in their capacity as professionals. Foresters are professionally accountable for the quality and content of any plans they prepare, as well as for any consequences (results) that flow from the implementation of that plan as written. Accountability is exacted through the complaint and discipline processes of the Association of Professional Foresters.

**polygons:** a multi-sided, defined area on a map such as a proposed or existing cutblock or an area that contains a specified type and similarly aged stand of trees.

**precautionary principle:** the rule that management must be cautious and err on the side of maintaining forest ecosystem values and functions, rather than on the side of timber economics devoted to maintaining fibre flow. This principle recognizes the dynamic nature of ecosystems and humanity's current limited understanding about the interrelationships between parts of the system and how they function.

**Protected Area Strategy (PAS):** the B.C. government strategy in place to meet B.C.'s commitment to develop and expand the protected areas system to protect a minimum of 12 percent of the province by the year 2000.

**red listed species:** a species being considered for or already extirpated, endangered or threatened. (Note: threatened species are likely to become endangered if limiting factors are not reversed.)

**refugia:** locations and habitats that support populations of species that are limited to small fragments of their previous geographic range.

**regional manager:** one of six Ministry of Forest managers who are each in charge of a region containing five to eight forest districts and who supervise staff responsible for forest, land and range management activities.

**reserves:** areas of forest land that by law or policy are not available for logging or other types of resource uses.

**resource management zones:** a land use designation category under the Forest Practices Code that have defined objectives and strategies to guide subsequent operational plans.

**restoration:** ecological restoration is the process of assisting in the healing and rehabilitation of damage done to the diversity and dynamics of natural ecosystem processes and functions.

**road deactivation:** measures taken to stabilize roads and trails during, including the rehabilitation of natural drainage patterns, the removal of sidecast soil if necessary, and the re-establishment of vegetation on permanently deactivated areas.

**seed tree:** an even-aged logging system that retains 5-20 high quality trees per hectare as a seed source. These trees may be logged before the next rotation.

**Sensitive Areas:** areas generally under 1000 hectares in size that are established under the Forest Practices Code of British Columbia Act by the district manager to manage or conserve unique or locally significant resource values.

**seral stage:** plant community conditions that develop over time during ecological succession from bare ground (or major disturbances) to climax. There are five main stages:

**early seral stage:** the time period from disturbance to crown closure of conifer stands managed under the current forest management regime. During this stage grass, herbs, or brush are abundant. It is a period of high diversity, often suitable for a broad group of plants and animals.

**mid-seral stage:** the period in the forest stand life from crown closure to first merchantability; usually ages 15-40 years. Due to stand density, brush, grass, or herbs rapidly decrease in number and diversity. Some hiding cover may be present and species diversity declines towards narrower groups of plants and animals.

**late-seral stage:** the period in the forest stand life from first merchantability to culmination of mean annual increment (MAI). Stand diversity is minimal (but conifer mortality rates will be fairly rapid) and animal forage is minimal.

**mature seral stage:** the period in the forest stand life from culmination of MAI to old-growth stage or to 200 years. This stage features gradually increasing stand diversity; hiding; thermal cover and some forage may be present.

**old-growth seral stage:** the stage in a forest stand where the climax forest and plant community capable of existing on that site occurs. The fate of the stand is determined by the frequency of natural disturbance events. This final stage continues on until stand replacement occurs. This stage is typified by a more even-aged forest structure where there is long periods between natural disturbances.

**shelterwood:** a silvicultural system in which groups of trees are logged in a design that leaves adjacent groupings of trees to serve as a seed source or to protect tree regeneration.



**silviculture treatments:** activities by which a forest stand, or group of trees is harvested, regenerated and tended over time. Treatments may utilize chemical or manual brushing, thinning, spacing and pruning.

**single tree selection:** the removal of individual trees of all size classes, more or less uniformly throughout the stand to encourage natural reproduction. Usually the poor quality stems are removed first to improve the overall commercial quality of the stand.

**social values:** the worth to society of aspects or conditions of forest land and its natural attributes, including scenic areas, significant cultural sites, and recreation opportunities.

**spacing:** altering the distance between the trees by planting or by thinning the number of trees per unit area.

**spatial distribution:** the assignment of management activities across the physical landbase.

**Special Management Zones (SMZs):** resource management zones or areas where special management is needed to address sensitive values such as fish and wildlife habitat, visual quality, recreation, tourism and cultural heritage features. The management intent of SMZs is to maintain these values while allowing some level of compatible resource extractive use and development.

**special resource features:** regionally significant or unique resource features such as waterfalls, particular scenic viewscapes, or critical wildlife habitat areas.

**species at risk:** as defined in the Forest Practices Code, any wildlife or plant species or plant communities that, in the opinion of the Deputy Minister of Environment, Lands and Parks, is threatened, endangered, sensitive or vulnerable and requires protection.

**species composition:** the composition and distribution of species populations in a given area.

**stand:** a community of trees sufficiently uniform in species composition, age, arrangement and condition to be distinguishable as a group from the forest or other growth in the adjoining area, and thus forming a silviculture or management entity.

**stand structure:** the arrangement of the parts of a continuous group of trees including large old trees, snags (standing dead trees), fallen trees, and the arrangement and depth of soil organic layers.

**targets:** resource objectives such as preferred harvest rates or population densities of specified species.

**temporal distribution:** the assignment of management activities over long periods of time, such as over a planned harvest rotation period of 60 to 150 years.

**timber rotation cycle:** the estimated growing time needed from initial harvest of a stand of trees through to the next harvest; usually a much shorter time span than occurs naturally when forests are allowed to reach an old growth condition.

**total resource plan:** a design for long-term forest development that guides resource use, such as logging, road building and recreation activities, over an entire area (such as a watershed); and that describes how approved objectives for identified resource values will be achieved on the ground.

**tree-farm licence (TFL):** an agreement in the *Forest Act* which grants the rights to harvest timber for a 25 year term on a described area of Crown land (sometimes including private land) on a sustained or perpetual yield basis.

**Variable-Retention Silviculture System:** as defined by the Clayoquot Sound Scientific Panel, a logging system that provides for the permanent retention after logging of various forest “structures” or habitat elements. These elements include large decadent trees or groups of trees, snags, and downed wood from the original stand that are important to the survival of organisms and processes that would otherwise be lost from clearcutting.

**visual management:** the identification, assessment, and design of the visual values of a scenic landscape, and the consideration of these values in the management of the Crown forest land base.

**visual quality objectives (VQOs):** resource management objectives established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social values for the area. There are five categories; preservation, retention, partial retention, modification, and maximum modification.

**watersheds:** areas drained by a particular stream or river; large watersheds may contain several smaller watersheds.

**wildcraft:** harvesting of non-fibre forest resources, such as mushrooms, berries and ornamental shrubs.

**wilderness:** a pristine, natural area, usually greater than 1000 hectares, that is free of industrial development and roads and is managed with minimal human intervention so as to be self-regulating.

**wildlife habitat areas (WHAs):** a mapped area of land that is designated to meet the habitat requirements of one or more species of identified wildlife.

# Appendix V A Proposed Framework for Developing Landscape Unit Objectives

From Appendix 8 of the *Forest Practices Code of British Columbia Higher Level Plans and Procedures*, June 1996.

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## Introduction

The following is a draft framework for developing landscape unit objectives for a broad range of uses and values. The draft framework describes a basic planning process through which landscape unit objectives are initiated, refined and finalized. The proposed framework has been evaluated through a series of pilot projects and will be revised based on experience gained through those pilots and any comments that may be submitted on this draft. The following process represents a basic approach that will be adapted, simplified or expanded as required.

Planning for landscape units permits the consideration and integration of a wide range of forest resources. This process requires the delineation of preliminary landscape units and the development of associated landscape objectives. Ideally, this step should be followed by the design of long-term resource development activities consistent with the stated objectives. The process also involves choosing strategies or forest practices among those found in Forest Practices Code guidebooks. These strategies provide direction on how to achieve landscape unit objectives and guide the design of resource development.

## Landscape Unit Plan

A landscape unit plan will be produced for each landscape unit and will include the following:

- a description of the biophysical setting, forest resources, and management history;
- a description of relevant management objectives and strategies from other higher level plans;
- an identification and description of management areas (treatment units) that conserve wildlife and riparian habitats, maintain biological diversity and recreation values, ensure adequate old growth retention and landscape connectivity;
- a description of any existing or proposed sensitive areas that fall within the unit;
- an outline of long-term development proposals for range, recreation, timber and access;
- associated objectives for each of the above elements and the overall unit; and
- the necessary forest practices to achieve these objectives.

## **The Planning Process**

### **Preliminary Organization:**

- assemble a landscape unit project team;
- develop a project management plan including roles and responsibilities, budget and schedule; and
- confirm the selected biodiversity emphasis option for the landscape unit.

### **Collect and Analyze Information:**

- collect relevant, available information on forest resources, local ecology, historical development patterns, development proposals, and adjacent development activity;
- identify relevant guidebooks;
- review information from any regional plans, LRMPs, local resource use or higher level plans that cover the area;
- seek local knowledge from stakeholders and interest groups;
- identify issues; and
- analyse and format information to facilitate the design of management areas and compatible development patterns.

### **Design Management Areas and Related Objectives:**

- Where applicable, delineate the following on a map or maps of appropriate scale (e.g., 1:20 000 or 1:50 000):
  - operability lines
  - resource features (defined in s.51 of the Forest Practices Code of British Columbia Act and s.1(6) of the Operational Planning Regulation)
  - community watersheds, community water supply intakes and related water supply infrastructures
  - scenic areas
  - other areas of recreational significance
  - areas of aboriginal sustenance, cultural, social and religious activities associated with traditional aboriginal life
  - protected areas and wilderness areas
  - wildlife habitat areas
  - potentially unstable terrain
  - riparian management areas
  - lakeshore management areas
  - candidate sensitive areas
  - old growth management areas
  - rare or sensitive ecosystems
  - private property
  - public utilities on Crown land
  - trapline trails.

- Identify management areas and develop desired objectives. Objectives for biodiversity may be developed for old growth retention, seral stage distribution, landscape connectivity, stand structure, species composition and temporal and spatial distribution of cutblocks (see the Biodiversity Guidebook).
- Where a long-term harvesting schedule will comprise a component of the plan:
  - outline the sequence of harvesting by five-year increments for all areas to be harvested for the entire landscape unit;
  - design mainline access within and adjacent to the landscape unit; and
  - design secondary access in the vicinity of areas that may have significant sensitivity to development.

### **Review Proposed Objectives and Design Forest Practices:**

- Review all objectives prepared to this point in the process. Determine whether there are areas of incompatibility or duplication. If there are objectives that need to be enhanced, make necessary adjustments.
- To achieve proposed objectives, complete an integrated package of forest practices or management strategies, consistent with applicable guidebooks. Proposed forest practices should be flexible to permit reasonable tailoring at an operational plan level.

### **Develop a Monitoring and Implementation Strategy:**

- Outline a strategy for implementing the landscape unit plan.
- Develop a process for monitoring the achievement of plan activities.

### **Prepare Draft Maps and Landscape Unit Plan:**

- Review and assess objectives and practices and prepare a final draft.
- Refer draft to all relevant government agencies, assess comments, and revise objectives and practices.
- Review and assess whether objectives and practices are compatible with each other.
- Assess whether the plan will achieve anticipated results and sustainability of forest resources over the short and long term.
- Conduct public review and present for approval.
- Conduct public and First Nations reviews, assess comments, and conduct revisions.
- Prepare final document for approval by the district manager and designated environment official.
- Prepare landscape unit order to establish landscape unit and objectives for the district manager's approval.

**Subsequent to approval of document and order, publish landscape unit plan for distribution.**

# Appendix VI Government Staff Contact List

## 1. Inter-Agency Management Committees (IAMCs)

IAMCs consist of senior government staff at the regional level that provide direction and coordination for land use planning and implementation of the protected areas strategy.

### **Contact:**

#### **Cariboo**

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### **3. Forest Ecosystem Specialists**

Forest Ecosystem Specialists (FESs) are the Ministry of Environment, Lands and Parks expert staff at the district level who are responsible for operational and strategic planning and objective setting for landscape units. They also communicate with licensees, MOF staff, and non-governmental agencies to ensure forest resource use is ecological sustainable. Many of these specialists have offices in forest district offices.

#### ***Contact:***

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# Appendix VII Environmental Organization Contact List

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### **BC Spaces for Nature**

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### **BC Wild**

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### **Canadian Parks and Wilderness Society**

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### **Federation of BC Naturalists**

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### **Greenpeace**

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### **Sierra Club of British Columbia (SCBC)**

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5255, fax 386-4453, email scbc@islandnet.com

### **Sierra Legal Defence Fund**

Suite 214, 131 Water St., Vancouver, V6B 4M3,  
604-685-5618, fax 685-7813, email  
sldf@sierralegal.org, website: www.sierralegal.org

### **Turtle Island Earth Stewards**

Box 3308, Salmon Arm, V1E 4S1, 250-832-  
3993, fax 832-9942, email ties@jetstream.net

### **West Coast Environmental Law**

1001 207 W. Hastings, Vancouver, V6B 1H7,  
604-601-2504, 1-800-330-WCEL, fax 684-  
1312, admin@wcel.org, webpage http://  
vcn.bc.ca/wcel/

### **Western Canada Wilderness Committee**

20 Water Street, Vancouver, V6B 1A4, 604-  
683-8220, fax 604-683-8229, email  
info@wildernesscommittee.org webpage  
www.wildernesscommittee.org

### **Valhalla Wilderness Society**

Box 329, New Denver, V0G 1S0, 250-358-  
2333, fax 358-7950, email vws@vws.org

## **Cariboo / Chilcotin**

### **Cariboo-Chilcotin Conservation Society**

#2 150B Oliver St., Williams Lake, V2G 1L8,  
ph/fax 250-398-7929 email:  
ccentre@www.stardate.bc.ca

### **Cariboo Environmental Committee**

Box 2066, 100 Mile House, V0K 2E0, 250-  
395-2347, fax 395-2143

### **Cariboo Horse Loggers Association**

Box 4321, Quesnel, V2J 3J3, 250-297-6305,  
email gpeters@netbistro.com

### **Quesnel River Watershed Alliance**

Box 1098, 140 Mile House, V0U 2G0, ph/fax  
250-296-4358, qrwa@midbc.com

## **Kootenay / Boundary / Columbia**

### **East Kootenay Environmental Society**

Box 8, Kimberley, V1A 2Y5, 250-427-2535, fax 427-3535, email ekes@cyberlink.bc.ca

### **Granby Wilderness Society**

Box 2532, Grand Forks, V0H 1H0, 250-442-1218, email gws@sunshinecable.com

### **Slocan Valley Watershed Alliance (SVWA)**

RR 1, Winlaw, V0G 2J0, 250-226-7222, fax 226-7446, silvafor@netidea.com

## **Lower Mainland / Sunshine Coast**

### **Society Promoting Ecological Conservation**

2150 Maple St., Vancouver, V6T 3T3, 604-736-7732, fax 736-7115, email spec@alternatives.com

### **Sunshine Coast Forest Watch**

RR 4 Franklin Rd. 19-2, Gibsons, V0N 1V0, 640-886-8036, fax 886-2048, email bill\_henderson@sunshine.net

## **Northern B.C.**

### **Canoe-Robson Environmental Coalition**

General Delivery, Dunster, V0J 1J0, ph/fax: 250-968-4410, jhoward@cancom.net

### **Chetwynd Environmental Society**

Box 2049, Chetwynd, V0C 1J0, ph/fax 250-788-2685, email wsawchuk@helix.net

### **Nechako Environmental Coalition (NEC)**

Box 805, St.A, Prince George, V2L 4T3, 250-562-6587, fax 562-4271, nec@ultranet.ca

### **Save The Cedar League**

General Delivery, Crescent Spur, V0J 3E0, ph/fax 250-553-2325, email rzammuto@aol.com

## **Northwest Coast / Haida Gwaii**

### **The Driftwood Foundation**

Box 2781, Smithers, V0J 2N0, 250-847-9693, fax 847-6068

### **Gowgaia Institute**

Box 638, Queen Charlotte City, Haida Gwaii, V0T 1S0, 250-559-8068, fax 559-8006  
website: www.spruceroots.org

## **Okanagan / Shuswap /Thompson**

### **Canadian Earthcare Society**

1476 Water St., Kelowna, V1Y 8P2, 250-861-4788, fax 868-3718, email lfraser@earthcare.org

### **Okanagan Similkameen Parks Society**

Box 787, Summerland, V0H 1Z0, 250-494-8996, fax 494-5475, email johnsons@vip.net

### **Shuswap Environmental Action Society**

RR 1 S10, Chase, V0E 1M0, 250-679-3693, fax 679-8248, email coop@wkpwerlink.com

### **Thompson Watershed Coalition**

170 Nicola St., Kamloops, V2C 2P1, 250-828-1984, fax 372-0660

### **Yellowhead Ecological Association**

Box 23, Clearwater, V0E 1N0, 250-587-6402, fax 587-6432, email borealis@wellsgray.net

### **Yalakom Ecological Society**

Box 1276, Lillooet, V0K 1V0, radiophone H 497904

## **Vancouver Island**

### **Alberni Environmental Coalition (AEC)**

Box 1087, Port Alberni, V9Y 7L9, 250-723-4666, aec@portaec.net

### **Carmanah Forestry Society (CFS)**

1431 Richardson St., Victoria, V8S 1R1, 250-381-1141, fax 389-1848, email carmanah@pacificcoast.net

### **Cortes Islands Forest Committee**

Box 157, Manson's Landing, V0P 1K0, 250-935-6417, fax 935-6757, dship@rfu.org

### **Eco-Forestry Institute**

Box 5783, Stn B, Victoria, V8R 6S8, 250-477-8479, fax 721-5579, email rtravers@islandnet.com

### **Friends of Clayoquot Sound**

Box 489 Tofino, V0R 2Z0, 250-725-4218, fax 725-2527, email focs@web.apc.org, website www.island.net/~focs

### **Galiano Conservancy Association**

RR 1, Porlier Pass Rd., Galiano Island, VON 1P0, ph/fax 250-539-2424, email galiano\_conservancy@gulfislands.com

## Keeping the *Special* in Special Management Zones - A Citizens' Guide

### - ADDENDUM -

#### Ecosystem Representation

An important technical issue involving landscape unit planning has emerged since the Citizens' Guide was written. In Chapter 5 on page 61, the recommendation was made that ecosystem representation should be examined "at the fine filter level that includes biogeoclimatic subzone variants." There is actually a finer scale than the subzone variant level called the *site series*. Ecosystem representation is a key component of any initiative to protect biodiversity and it should be determined at the finest scale possible. The Forest Practices Code (Code) Biodiversity Guidebook recommends that "...site series should generally be retained in proportion to their occurrence in the landscape unit." (see old seral retention and representativeness for NDTs 1-4)

Site series refers to unique, recurring sequences of environmentally and vegetatively distinct ecosystems that reflect difference in slope position, slope gradient, aspect, soil depth, drainage, moisture regime and nutrient regime. For example, the Interior Cedar-Hemlock Zone includes a number of geographically defined subzone variants that range in precipitation regimes from very dry to very wet and temperature regimes from hot to very cold. Within each subzone variant there are also a set of distinct site series, distinguished on the basis of specific soil and vegetation characteristics. Consequently, it is important to ensure that Old Growth Management Areas (OGMAs) are chosen to represent each distinct type of ecosystem, down to the site series level.

The Ministries of Forests and Environment, Lands and Parks has nearly completed a technical guide to landscape unit planning. The most recent draft of this guide includes a letter from the chief forester that further weakens the Biodiversity Guidebook. The chief forester has directed District Managers to "not consider representativeness at a scale finer than the BEC variant level when establishing landscape unit objectives." This new direction is being taken because "applying representativeness on a scale finer than the Biogeoclimatic Ecosystem Classification variant represents a high risk that the Ministry of Forests will not be able to manage the Province's forest resources having regard to the immediate and long term economic benefits that they may confer on British Columbia, as is required by section 4(b) of the Ministry of Forests Act R.S.B.C. 1996, c.300."

While the impacts of this direction to biodiversity have yet to be quantified, the long term implication could be substantial. This direction is a clear indication that the chief forester considers economic concerns to be more significant than risks to biodiversity. The recent chief forester direction follows previous policies that direct that old growth management areas be established in the non-contributing landbase (i.e. inoperable areas first, constrained areas second). The likely result will be that valley bottom site series forests would not be protected in OGMAs in proportion to their distribution over the landscape, while site series on steep rock bluffs will be over-represented.

The chief forester, however, does provide a few alternatives to this new direction. He offers the possibility that he will vary the above direction if an analysis shows that using a finer scale of representativeness is consistent with the level of impact assumed in the 1996 Code Timber Supply Analysis or if the results of a MOF Research Branch study shows that eliminating representation at the site series level poses undue risks to biodiversity. The memo also notes that this new direction could be overruled by the objectives defined by a land use plan for a resource management zone. Consequently, participants in ongoing LRMP processes should work to ensure that land use plans include an objective to determine representation at the site series level and an effective evaluation process to determine the risk to biodiversity over the mid to long term.