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REGIONAL LANDSCAPES FOR THE THE BRITISH COLUMBIA PARKS SYSTEM

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prepared for:

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1.2 The Natural Environment Representation Goal

Goal Statement

The Provincial Parks System of British Columbia should contain representation of the diversity of natural environments found across the province in order to conserve sustainable ecological values and to provide for wilderness and nature appreciation, public outdoor recreation, and environmental education.

Discussion

To accomplish this goal, the Parks Ministry blends a humanistic understanding of the regional geography of the province with various scientific classifications of specific environmental themes. The result is a series of regions that are geographically based, recognizable, general natural environments.

These divisions of the natural geography of British Columbia are reasonably distinctive occurrences of patterns and associations of landforms and terrain, wildlife and vegetation, climate, and water.

By containing within the Provincial Parks System representative samples of these diverse regional natural environments, the Parks Ministry will conserve this natural diversity as well as provide opportunities for public enjoyment of and enlightenment about their environment.



1.3 Concept Definitions

Regional Landscapes

The central concept in implementing the goal is that the natural environment of the province can be described, understood, and conserved on a regional basis. These regions of the natural environment are referred to as Regional Landscapes. Section 2 of this report defines and describes fifty-seven such regional landscapes across the province.

Regional landscapes are land and marine geographic segments of the province that are each reasonably distinct in terms of the occurrence and patterns of the major constituents of the natural environment. One regional landscape can be readily described by identifying its general location (northern or southern; coastal or interior), terrain appearance and typical landforms, typical vegetation patterns, typical wildlife occurrences, presence of freshwater and saltwater bodies, and the general climate.

These distinguishing traits are referred to as environmental characteristics. Each regional landscape is described in terms of its environmental characteristics. Like the elements of a personality, it is the combined effect of these landscape traits which distinguish the landscapes.

The patterns of typical characteristics tend to be interdependent, and people tend to appreciate them a part of a whole regional landscape. Any two regional landscapes may be distinguished by observable differences in one or more of these categories of characteristics. In devising this system, consideration has been given to ensuring that most park visitors will be capable of perceiving and appreciating the differences between adjacent landscapes.

While each regional landscape tends to be a relatively homogeneous setting for wilderness appreciation, recreation and environmental education, compared to adjacent areas, it should be understood that in most instances there will be sub-regional variations and that, ideally, a representative park will include these variations.

Landscape Representation

The objective is to contain a reasonable representation of each significant regional landscape within the park system. Representation means that a balanced sample of the spectrum and

patterns of environmental characteristics is contained within, as the preferred strategy, a single, contiguous park area.

Ideally therefore, to achieve satisfactory representation of a landscape, a park area must encompass a reasonable sample of topographic variety, the full elevational range, and a balanced selection of solar aspects, drainage, and other large scale variations that tend to govern the occurrence of floral and faunal patterns. This will best serve the social and ecological values of the representation goal. Section 3 of this report explains the range of criteria and the process for assessing representation and for achieving the goal.

As a goal, satisfactory representation of all the regional landscapes of the province is an ideal. Progress toward this ideal requires that priorities and strategies be identified among the landscapes because they differ strongly in their inherent appeal to the general public, in their ecological significance, and in their availability for the designation of major parks. Section 3 of this report addresses these matters in distinguishing levels of and strategies for achieving representation.

SECTION 2: REGIONAL LANDSCAPES FOR THE PROVINCIAL PARKS SYSTEM

2.1 Introduction

The purpose of the following text is to provide a brief description of each of the **fifty-seven** landscapes that have been delineated for the purposes of parks system planning. These regional landscapes serve as a **geographic and scientific framework** for the selection of provincial parks oriented to conservation of the diverse natural environments of British Columbia. Also, this framework is useful as an introductory interpretive guide for those interested in the natural geographic diversity of this Province.

These landscapes are identified on the map that accompanies this report. For parks system purposes, the exact location of landscape boundaries is relatively unimportant; it is the character of the landscapes that is important. However, because boundaries and lines on maps are inevitably relied upon to give definition, an effort has been made in these proposed revisions to craft landscape boundaries that follow other recognized or recognizable demarcations. The method in selecting these lines has involved: (1) using both Holland's and Mathews' analyses of physiography to determine an appropriate set of important physiographic distinctions; (2) using Mathews' work and Demarchi's Ecoregion work to refine boundaries, based upon a judgement of which lines better reflect the perceptions of an average observer; and (3) using biogeoclimatic patterns, topographic patterns, and consideration of other environmental characteristics to further refine the boundaries.

The following landscape descriptions emphasize the highlights and most apparent or distinctive elements of the landscapes. They are intended to be concise summaries of general environmental characteristics and classifications, particularly of those landscape traits that make each landscape distinctive and those that should be considered when selecting representative park areas.

Figure 1 summarizes the highlights of these landscape descriptions and serves as a guide to the text. In table form, comparison between the landscapes is facilitated. Neither the textual nor the tabular landscape descriptions are intended as authoritative references. Consequently, readers seeking detailed, specific, or precise scientific information about these landscapes should consult reference texts that focus upon such subjects as physiography, geology, climate, biogeoclimatic zones, ecoregions, fauna, and so on.



2.3 Descriptions of the Regional Landscapes

REGIONAL LANDSCAPE #1: GULF ISLANDS

LOCATION: Southwest, between Vancouver Island and mainland of British Columbia.

GENERAL DESCRIPTION:

A group of islands, as well as adjacent lands of Vancouver Island and the associated marine area that occupies the majority of Georgia Strait; distinctive as the driest maritime region of Canada, having a nearly mediterranean climate.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- intricate system of islands, islets, and passages, adjacent to large island coastal lowland, with significant hilly upland areas.
- bedrock is predominately sedimentary and is frequently exposed as reefs, escarpment faces, rocky shorelines, bold headlands, and rocky knolls.
- extensive sand deposits, occasionally forming entire islands.
- terrain is generally hilly, with extensive flat areas and occasional summits rising to between 200 and 1000 meters a.s.l.
- beaches and bays are most commonly found on northern and southern extremities of islands, due to the north-south alignment of folds in bedrock.

2. Hydrological Patterns:

- on the smaller islands streams are rare, short, and usually flow only in wetter months.
- there are few lakes, with the exception of small, shallow lakes found on the larger islands.
- remarkable tidal flushing, particularly through narrow passages.

3. Ecoregions:

- encompasses much of the Strait of Georgia Ecoregion, which includes the associated marine environment, and the southern half of the Nanaimo Lowland ecosection of the Eastern Vancouver Island Mountains Ecoregion.
- climate is dry and moderate year round; winters are seldom cold; summers are warm and usually accompanied by drought conditions for 2-3 months.

4. Biogeoclimatic Zonation:

- this landscape coincides with the extent of the Coastal Douglas Fir zone, with a mixture of the wetter subzone featuring Western red cedar and the drier subzone featuring arbutus and garry oak.

5. Fauna:

- dense populations of Columbian blacktail deer on most islands.
- cougar are relatively common on the Vancouver Island portion.
- shorebirds, seabirds and raptors are common.
- marine areas are nutrient rich and support abundant migratory salmonids, resident fish species, and mammals such as killer whale, harbour seal and sea lion.
- estuaries along coast of Vancouver Island are very significant zones for fish and birds; important wintering areas for many migratory waterfowl.

OTHER CONSIDERATIONS:

- settled for over 130 years; farms in lowland areas; extensive grazing, particularly by sheep; some introduced species (fallow deer, peacocks) on some islands.
- some old growth forest stands remain, but few undisturbed natural areas and no wilderness areas remain.
- very high recreational and residential/retirement pressures.
- majority of lands are in private ownership, with some whole islands and other large tracts still controlled by single corporate or individual owners.

REGIONAL LANDSCAPE #2: GEORGIA LOWLANDS

LOCATION: Southwest, flanking Georgia Strait area on both Vancouver Island side and mainland side.

GENERAL DESCRIPTION:

A rolling and hilly area of generally low relief in close proximity to protected "inland" sea; mild climate is drier than in adjacent mountain areas; transitional between Gulf Islands Landscape and adjacent mountain landscapes.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- terrain is a combination of flat areas with prominent hills, and hilly, slightly higher elevation areas with rolling summits.
- mostly lying between sea level and 300-500 metres a.s.l., but some summits reach 1,000 meters a.s.l.
- result of erosional forces, principally glaciation.
- bedrock outcroppings are common, but also there extensive deposits of sands and gravels, which, at tidewater, have resulted in extensive shallow beaches.

2. Hydrological Patterns:

- dissected by numerous streams and small rivers flowing to sea level; significant tidal marshes and estuaries are found at the outlets.
- lakes are few and tend to be small
- strong marine association.
- significant tidal currents along the north and east sectors.

3. Ecoregions:

- approximately contiguous with the north half of the Nanaimo Lowland ecosection of the Eastern Vancouver Island Ecoregion (east) and the Georgia Lowland ecosection of the Lower Mainland Ecoregion (west).
- includes portions of the associated marine environment of Georgia Strait.
- a moderate coastal climate: warm, dry summers; wet, mild winters.

4. Biogeoclimatic Zonation:

- the majority of the landscape (northeastern, northern, and western) is dominated by the Coastal Western Hemlock zone, particularly the drier subzone; however there are pockets of the Coastal Douglas fir zone distributed throughout.

5. Fauna:

- wildlife populations, particularly larger land mammals, have been strongly affected by the development that dominates this landscape.
- Columbian blacktail deer are prevalent.
- relatively abundant upland birds, including blue grouse, band-tailed pigeon, quail, and various raptors.
- shorebirds and seabirds are common.
- many of the streams feature runs of salmonid species; some having been enhanced through hatchery projects.

- the many estuaries are high productivity areas for fish and wildlife species; particularly important as wintering areas for migratory waterfowl.
- marine mammals such as sea lion, harbour seal, porpoise, and killer whale are frequently seen.

OTHER CONSIDERATIONS:

- relatively intensely settled and developed portion of the province, including numerous villages, towns and urban areas with agricultural areas stretching between.
- much of the coastline is dominated by urban or residential development.
- only small pockets of old growth forest and natural areas remain undisturbed; there are no wilderness areas.
- high recreational demand and accessibility.
- heavy commercial, industrial, and residential pressures.
- much of the land is privately owned, with some large tracts held for agricultural and forestry purposes.

REGIONAL LANDSCAPE #3: VANCOUVER ISLAND MOUNTAINS

LOCATION: Southwest, comprising most of Vancouver Island except northern, western and eastern lowland areas.

GENERAL DESCRIPTION:

A moderately rugged mountain block and, as the southern component of the Insular Mountain physiographic division, its low to high elevation climates are strongly influenced by proximity to the Pacific Ocean and eastward moving weather systems.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:**1. Physiography:**

- Vancouver Island Ranges are composed of a very heterogenous mixture of ancient (pre-135 million years) sedimentary and volcanic rocks folded about northwesterly trending axes and intruded by numerous granitic batholiths.
- highest peaks are approximately 2,400 meters a.s.l.
- average elevations are greatest in central part and diminish in all directions from there.
- due to heavy continental glaciation, below 1300 meters most mountains have rounded, convex shape and valleys are U-shaped.
- limestone caves and other karst features are common.

- mountain peaks over 1300 meters have been sculpted by alpine glaciation into serrate shapes; interconnecting high ridges are relatively rare.
- two coastlines: north and west.

2. Hydrological Patterns:

- numerous separate drainages; river systems are relatively short, flowing to either the east or the west coasts.
- large, elongated low elevation lakes are common in the valleys.
- some glaciers remain in the central part only.
- in the northwest, where the mountains directly contact the Pacific, the coastline is deeply indented by fiords.

3. Ecoregions:

- eastern portion is classified as the Leeward Island Mountains ecoregion of the Eastern Vancouver Island Ecoregion: primary distinction is somewhat moderated climate and reduced precipitation compared to western counterpart.
- western portion is classified as consisting of the Northern Island Mountains and Windward Island ecoregions of the Western Vancouver Island Ecoregion.
- includes near shore portion of marine environment of Johnstone Strait, as well as the Vancouver Island Shelf marine ecoregion.
- generally the climate is wet, with temperatures varying from mild at sea level to cold at alpine levels.

4. Biogeoclimatic Zonation:

- there is an elevational pattern of three zones.
- the Coastal Western Hemlock zone, extending from near sea level to approximately 1000 meters a.s.l. occupies approximately 80% of the land area: there are diverse subzones and ecotypes within this general regime in accordance with climate, soils, solar exposure, and drainage.
- the Mountain Hemlock zone occupies sites between 1000 and 2000 meters a.s.l.; in the more rugged central and northern areas, this zone occupies approximately 30% of the land area, but is considerably more limited in extent in southern and western parts.
- generally above 2000 meters a.s.l. the Alpine Tundra zone dominates; due to topography this is principally confined to the central part of the landscape.

5. Fauna:

- large mammals including Roosevelt elk, blacktail deer, cougar, wolf, and black bear remain fairly common, particularly in areas of limited accessibility.
- many of the rivers and streams contain significant salmonid habitat.
- marine mammals are relatively abundant in adjacent waters; for example on north coast Robson Bight is central area for killer whale migrations and summer congregation; on west coast, Checleset Bay contains an important sea otter colony.

OTHER CONSIDERATIONS:

- the landscape is dominated by the forest industry; outside of existing parks and other reserves there are few old growth forests remaining.
- the central part of landscape is considered to be highly mineralized, and the mineral industry has been and continues to be active.
- the area is under intensive and extensive pressure from the forest and mineral industries and these remain the mainstays of many communities.
- much of the land area is firmly allocated to existing uses.
- recreational demand is moderately strong in areas accessible by good roads, but demand is low to moderate in majority of landscape due to accessibility and industrial impacts.

REGIONAL LANDSCAPE #4: WEST COAST PLAIN

LOCATION: Southwest, extending along the central and southwestern coast of Vancouver Island.

GENERAL DESCRIPTION:

A low elevation coastal plain directly exposed to the Pacific Ocean; terrain is an abrupt contrast with the adjacent mountains. Offshore, the gentle shelving produces extensive relatively shallow waters.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:**1. Physiography:**

- terrestrial portion is known as the "Estevan Strandflat" (Mathews); marine portion comprises broad "Vancouver Island Shelf".

- terrain is a mixture of flat and gently rolling land of low elevation (generally below 300 meters a.s.l.).
- some hilly terrain, corresponding to exposed harder bedrock.
- gentle slope and extensive glacial deposits of sand and gravels have resulted in long and wide beaches.
- numerous near-shore islands and islets.

2. Hydrological Patterns:

- major inlets, bays, and rivers cut across the plain, the former have been carved by Continental glaciation.
- offshore waters are shallow for a considerable distance from land.

3. Ecoregions:

- western portion of the Windward Island Mountains ecosection of the Western Vancouver Island Mountains Ecoregion.
- includes adjacent portion of the marine environment, "Vancouver Island Shelf".
- climate is mild year round: brief dry, but cool summer, with winters being very wet and windy.

4. Biogeoclimatic Zonation:

- the Coastal Western Hemlock zone entirely occupies the landscape.
- the landscape features those ecotypes and associations that occur in high precipitation, high wind, low elevation areas.

5. Fauna:

- abundant migratory birds and shorebirds; bald eagles are also common.
- very productive intertidal zone, especially in terms of shellfish.
- salmonids are common in tidal waters.
- abundant marine mammals, particularly harbour seals, sea lions, and spring migration of gray whales.

OTHER CONSIDERATIONS:

- high timber productivity has led to a long established forest industry presence; outside of established reserves, there are no uncommitted forestlands.
- foreshore is increasingly of interest to commercial seafood harvesters and growers.
- tourism has recently developed as the fastest growing, highest employment industry due primarily to the national park, the Spring migration of whales, and sport fishing.
- high recreational accessibility and demand.

REGIONAL LANDSCAPE #5: NAHWITTI LOWLAND

LOCATION: Southwest sector of Province; northern end of Vancouver Island.

GENERAL DESCRIPTION:

A low elevation part of the outer coast, with hilly relief and a very wet temperate climate.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:**1. Physiography:**

- terrain consists of a transition from rounded hills, rising to 400 meters a.s.l. in the south, to large expanses of flat, poorly drained areas at less than 25-50 meters a.s.l.
- little exposed bedrock, except as rocky headlands along shoreline.
- generally overlain by sand and gravel tills which, at the shore, often have resulted in beaches.

2. Hydrological Patterns:

- some lakes occur, but these are usually small and shallow.
- the low relief of the valley bottoms and the flat areas yields rivers and streams that slowly meander by very convoluted routes to the sea; often these streams are reversed by the incoming tide for several miles upstream.
- all freshwater is tea coloured, due to dissolved nutrients from cedar-sphagnum bogs.
- the Pacific has a very strong role.

3. Ecoregions:

- coincident with the Nahwitti Lowland eco-section of the Western Vancouver Island Ecoregion.
- associated with the southern limit of the Hecate Depression marine ecoregion.
- climate is relatively mild year round: summers are short and cool with only a brief dry season (1 month); winters are very wet and windy, with occasional periods of cold weather.

4. Biogeoclimatic Zonation:

- Coastal Western Hemlock zone entirely.
- special eco-communities include sphagnum bogs, estuaries, Sitka Spruce/salal forest, pine bogs.

5. Fauna:

- cougar, wolf, blacktail deer, and black bear are relatively common.
- estuaries are important for migratory and resident birds.
- streams carry sea-going cutthroat trout, and sometimes other salmonid species, although they are not highly productive for these.

OTHER CONSIDERATIONS:

- forest industry dominates and, outside of existed reserved areas, there are few remaining stands of old growth forest.
- shoreline varies between desolate sandy beaches and extremely rugged rock headlands.
- remaining wilderness and natural areas are confined to existing parks and areas of non-industrial value.
- recreational demand is relatively low, and is focussed upon westcoast wilderness experiences and wildlife appreciation.

REGIONAL LANDSCAPE #6: FRASER FLOOD PLAIN

LOCATION: Southwest corner of the mainland portion of the Province.

GENERAL DESCRIPTION:

Dominated by the estuaries and alluvial plain of the Province's most significant river, this is a generally flat coastal area of very low elevation and a mild, moderately wet temperate climate.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- dominated by the flood plain, estuaries, and channels (ancient and current) of the Fraser River.
- much of the plain lies at less than 20 meters a.s.l., and consists of alluvial deposits.
- there are some outlier hills, which are underlain by bedrock, and some low, gentle east west ridges which consist of thick deposits of glacial gravels; these hills and ridges can rise to 100-300 meters a.s.l.

2. Hydrological Patterns:

- the Fraser River, including its tributaries and branches, dominates much of the landscape.

- in much of the area the water table is near the surface and drainage is poor.
- ocean tides influence the flow of the river and tributaries for many miles inland.

3. Ecoregions:

- coincides with the Fraser Lowland ecoregion of the Lower Mainland Ecoregion.
- climate is mild year round: summers are fairly dry and warm, winters are usually cool and wet; no snow accumulation except on adjacent slopes.

4. Biogeoclimatic Zonation:

- entirely classified as within the Coastal Western Hemlock zone.
- the vegetation pattern has almost wholly been modified by the last 130 years of human settlement and agriculture.
- important eco-communities include: estuaries, tidal marshes, mud and sand flats, cottonwood stands.

5. Fauna:

- large mammals have generally been extirpated.
- area is extremely important for migratory birds, including wintering waterfowl.
- Fraser River and tributaries support major salmonid populations.

OTHER CONSIDERATIONS:

- the most urbanized and populated part of Province.
- few unmodified areas remain and only relatively small parcels have so far been reserved from agriculture, residential, commercial or industrial development.
- high demand for natural areas for recreation and education.

REGIONAL LANDSCAPE #7: SKAGIT - LOWER MAINLAND MOUNTAINS

LOCATION: Southwest, near the coast, and surrounding the inland limits of the Fraser Flood Plain.

GENERAL DESCRIPTION:

A mountainous coastal area of moderately rugged terrain that is transitional between the Fraser Flood Plain and the more rugged coastal mountains to the north and the drier interior mountain landscapes to the east.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- consists of the southern mountains of the Pacific Ranges, which extend to the north, and the northwestern ranges of the Cascade Mountains, which lie to the south and east.
- consists of south part of Mathew's "Southern Fiord Ranges" and western part of his "Cascade Ranges".
- elevations range from near sea level to 2000/2300 metres.
- majority of summits are rounded and treed, but some, being higher are serrate or pinnacled.
- predominance of granitic rocks.
- slopes tend to be steep and bedrock exposures are common.

2. Hydrological Patterns:

- numerous waterfalls cascading toward the low elevation valley bottoms.
- many streams are of high gradient, until entering the major valleys.
- very large lakes, in the form of freshwater fiords, occupy the major north-south valleys of the north part of this unit.
- in contrast to the adjacent Pacific Ranges, there is little glacial ice.

3. Ecoregions:

- includes southern portion of the Southern Pacific Ranges eco-section and the southern portion of the Eastern Pacific Ranges eco-section, both of the Pacific and Cascade Ranges Ecoregion.
- climate varies with elevation, but is generally moderated by marine influence: summers are dry but cool, winters are wet with significant snow accumulations.

4. Biogeoclimatic Zonation:

- there are three biogeoclimatic zones, in accordance with the transition from near sea level to elevations in excess of 2000 metres; the lowest and the highest are co-dominant in terms of the extent they occupy the landscape.
- below 1200 meters a.s.l.: Coastal Western Hemlock zone.
- between 1000 to 2000 meters a.s.l.: Mountain Hemlock zone.
- above 2000 meters a.s.l.: Alpine Tundra zone.

5. Fauna:

- many streams contain resident and migratory salmonid species.
- black bear and blacktail deer remain relatively common.
- some mountain goats found at higher elevations, although populations are low.

OTHER CONSIDERATIONS:

- the mountain valleys, including lower slopes, are dominated by forestry operations, due to moderately high productivity.
- some natural areas remain at lower elevations, but wilderness is confined to high elevations.
- strong recreational demand on a year round basis for both frontcountry and backcountry experiences.

REGIONAL LANDSCAPE #8: SOUTHERN FIORDLAND

LOCATION: Southwest coast of mainland of Province, inland of Georgia Strait and Georgia Lowlands.

GENERAL DESCRIPTION:

Mountainous coastal and marine area of moderate ruggedness and a moist mild climate. Distinguished from the Pacific Ranges to the east by being considerably less rugged, from the Skagit-Lower Mainland Mountains by the presence of saltwater fiords, and from the Midcoast Fiordland landscape by the relatively greater degree of protection from the full force of Pacific weather systems.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:**1. Physiography:**

- midsection of Mathew's "Southern Fiord Ranges".
- some peaks are jagged and serrate, but most summits are rounded.
- relief is significant because of contrast between sea level at the base of the mountains and the average elevation of summits (2000 meters and above).
- steep slopes rising directly from the fiords are very common.
- very thin soils; bedrock is commonly exposed.

2. Hydrological Patterns:

- numerous waterfalls cascading toward the low elevation valley bottoms.
- many streams are of high gradient, until entering the major valleys.
- the tidal fiords dominate the low elevations; due to steep sides, the intertidal zone is very narrow.
- there is little glacial ice.

3. Ecoregions:

- northern portion of the Southern Pacific Ranges ecosection of the Pacific and Cascades Ranges Ecoregion.
- includes marine environment associated with southern fiords.
- climate reflect strong marine influence but somewhat sheltered from direct impact of Pacific Ocean; cool to moderately cold winters with snow accumulating only at higher elevations; summers are mild with a two month dry period.

4. Biogeoclimatic Zonation:

- there are three biogeoclimatic zones, in accordance with the transition from near sea level to elevations in excess of 2000 metres; the lowest and the highest are co-dominant in terms of the extent they occupy the landscape.
- below 1200 meters a.s.l.: Coastal Western Hemlock zone.
- between 1000 to 2000 meters a.s.l.: Mountain Hemlock zone.
- above 2000 meters a.s.l.: Alpine Tundra zone.

5. Fauna:

- habitat for wildlife is limited in proximity to the fiords but in tributary or higher elevation valleys blacktail deer, black bear and other mammals are relatively common.
- small but important estuaries are often found at the heads of the fiords: mammals and birds congregate here, particularly during salmonid migrations.

OTHER CONSIDERATIONS:

- despite steep slopes, forestry dominates as the land use up to 1500 meters a.s.l.
- few natural areas remain, except at the higher elevations and along the most rugged shorelines.
- recreation demand is focussed upon the fiords, with the primary attractions being the scenery, the boating, and the fishing.

REGIONAL LANDSCAPE #9: PACIFIC RANGES

LOCATION: Southwestern part of mainland of Province; closely associated with the coast.

GENERAL DESCRIPTION:

The most prominent block of mountains, in relief and ruggedness, in southwestern British Columbia; extreme relief, steep lower slopes, serrate and icecapped peaks.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:**1. Physiography:**

- extreme relief: sea level to 3000 metres a.s.l.
- ranges feature several of the highest peaks in the Province.
- mixture of heavily glaciated granitic rocks, with numerous volcanic intrusions and some areas of folded sedimentary rocks.
- steep slopes rise from U-shaped valleys to 2000 meter elevation; above this the peaks have been sculpted into serrate, jagged shapes by alpine glaciation.

2. Hydrological Patterns:

- extensive icefields and numerous glaciers dominate the higher elevations.
- high elevation lakes are often glacially fed, and therefore reflect a milky azure coloration due to suspension of fine lacustrine materials.
- waterfalls are common.
- some long fiords extend into these high mountain ranges.

3. Ecoregions:

- Northern Pacific Ranges ecosection and northwest part of Eastern Pacific Ranges ecosection, both of the Pacific and Cascade Ranges Ecoregion.
- climate reflects extreme range of elevation: from mild, moist valley bottoms near Pacific, to year round cold (to very cold) conditions and heavy snow accumulation at higher elevations.

4. Biogeoclimatic Zonation:

- there are three biogeoclimatic zones, in accordance with the transition from near sea level to elevations in excess of 2000 metres.
- below 1200 meters a.s.l.: Coastal Western Hemlock zone.
- between 1000 to 2000 meters a.s.l.: Mountain Hemlock zone.
- above 2000 meters a.s.l.: Alpine Tundra zone.
- due to slope steepness to 2000 meters a.s.l., and the latter zone contains the greatest area of the landscape.
- many rivers are glacially fed, featuring milky-blue coloration.

5. Fauna:

- habitat for wildlife is limited in proximity to the fiords but in tributary or higher elevation valleys blacktail deer, black bear and other mammals are relatively common.
- small but important estuaries are often found at the heads of the fiords: mammals and birds congregate here, particularly during salmonid migrations.

OTHER CONSIDERATIONS:

- despite steep slopes, forestry dominates as the land use up to 1500 meters a.s.l.
- extensive areas of high elevation wilderness remain outside the established protected areas.
- recreational demand is severely limited by the rugged terrain and lack of access corridor in the majority of the landscape; valleys with road access are moderately to heavily used and adjacent subalpine and alpine areas are of high interest for skiing, hiking, and wilderness appreciation.

REGIONAL LANDSCAPE #10: MIDCOAST FIORDLAND

LOCATION: Southwestern coast of Province; immediately east of northern Vancouver Island.

GENERAL DESCRIPTION:

A coastal mountain landscape that is generally forested, of moderate relief and ruggedness compared to other coastal fiord landscapes, has a wetter climate than adjacent areas to the south, and has a complex coastline of fiords, passages, and islands.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- north section of Mathew's "Southern Fiord Ranges".
- most summits are rounded.
- relief is significant because of contrast between sea level at the base of the mountains and the average elevation of summits (2000 meters and above).
- steep slopes rising directly from the fiords are very common.
- very thin soils; bedrock is commonly exposed.

- numerous islands, islets, and passages, particularly in the Johnstone Straits area.

2. Hydrological Patterns:

- numerous waterfalls cascading toward the low elevation valley bottoms.
- many streams are of high gradient, until entering the major valleys.
- the tidal fiords dominate the low elevations; due to steep sides, the intertidal zone is very narrow.
- significant near shore tidal currents occur in the intricate waterways.

3. Ecoregions:

- northern portion of the Northern Pacific Ranges ecosection and the entire Outer Fiordland ecosection of the Pacific and Cascades Ranges Ecoregion, as well as the southeastern portion of Hecate Lowland ecosection of the Coastal Gap Ecoregion.
- includes marine environment associated with fiords.
- climate varies with elevation and is very strongly moderated by Pacific: wet year round; summers are cool; winters are cold and windy with snow accumulating at mid to high elevations.

4. Biogeoclimatic Zonation:

- there are three biogeoclimatic zones, in accordance with the transition from near sea level to elevations in excess of 2000 metres; the lowest and the highest are co-dominant in terms of the extent they occupy the landscape.
- below 1200 meters a.s.l.: Coastal Western Hemlock zone.
- between 1000 to 2000 meters a.s.l.: Mountain Hemlock zone.
- above 2000 meters a.s.l.: Alpine Tundra zone.

5. Fauna:

- habitat for wildlife is limited in close proximity to the fiords but in tributary valleys blacktail deer, grizzly bear, and black bear are relatively common.
- small but important estuaries are often found at the heads of the fiords: mammals and birds congregate here, particularly during salmonid migrations.
- abundant sea mammal and other marine life populations, particularly in the Queen Charlotte Strait and Johnstone Islands areas.

OTHER CONSIDERATIONS:

- forestry is the dominant land use.

- little wilderness remains and only the more rugged sections of coastline and higher elevations remain as undisturbed natural areas outside established protected areas.
- recreational demand is light in upland areas and moderate to strong in the fiords and passages; use can be expected to grow substantially, particularly in the southern part of the landscape.

REGIONAL LANDSCAPE #11: NORTHERN FIORDLAND

LOCATION: Central latitudes of province, but northern part of coast.

GENERAL DESCRIPTION:

A coastal mountain landscape that is generally forested, of moderate relief and ruggedness, featuring a high number of bare granite faces and slopes reaching from sea level to high elevations, and with a complex coastline of fiords, passages, and islands.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- Mathew's "Northern Fiord Ranges".
- most summits are rounded.
- relief is significant because of contrast between sea level at the base of the mountains and the average elevation of summits (2000 meters and above).
- steep slopes rising directly from the fiords are very common.
- very thin soils; bedrock is commonly exposed.
- exceptional, pronounced display of monolithic granite domes, often looming above the fiords.

2. Hydrological Patterns:

- numerous waterfalls cascading toward the low elevation valley bottoms.
- many streams are of high gradient, until entering the major valleys.
- the tidal fiords dominate the low elevations; due to steep sides, the intertidal zone is very narrow.
- significant near shore tidal currents occur in the intricate waterways of the coast.
- there is glacial ice.

3. Ecoregions:

- northern portion of Hecate Lowland ecosection of the Coastal Gap Ecoregion.
- includes fiord marine environment associated with Hecate Strait.
- climate varies with elevation and is very strongly moderated by Pacific: wet year round; summers are cool; winters are cold and windy with snow accumulating at mid to high elevations.

4. Biogeoclimatic Zonation:

- there are three biogeoclimatic zones, in accordance with the transition from near sea level to elevations in excess of 2000 metres; the lowest and the highest are co-dominant in terms of the extent they occupy the landscape.
- below 1200 meters a.s.l.: Coastal Western Hemlock zone.
- between 1000 to 2000 meters a.s.l.: Mountain Hemlock zone.
- above 2000 meters a.s.l.: Alpine Tundra zone.

5. Fauna:

- habitat for wildlife is limited in close proximity to the fiords but in tributary valleys sitka deer, grizzly bear, and black bear are relatively common.
- small but important estuaries are often found at the heads of the fiords: mammals and birds congregate here, particularly during salmonid migrations.

OTHER CONSIDERATIONS:

- forestry is dominant land use, but less pervasive than in other fiord landscapes due to terrain and soil conditions.
- considerable areas of wilderness remain outside of designated reserves.
- recreation demand is light but growing in association with the waterways.

REGIONAL LANDSCAPE #12: NORTH COAST LOWLAND

LOCATION: Northern mainland coast of the Province, which occupies a central latitudinal position in British Columbia.

GENERAL DESCRIPTION:

A coastal landscape of low elevation, flat to hilly terrain, very wet marine climate, and consisting of storm washed islands and associated passages.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:**1. Physiography:**

- generally low elevation and slight relief, with occasional hilly areas and some granitic summits exceeding 500 meters a.s.l.
- principally volcanic and sedimentary rocks covered by a mantle of glacial till; bedrock is often exposed.
- glacial landforms and features are common.
- extensive beaches and dunes are fairly common, separated by rocky headlands.
- numerous coves, inlets, and passages.

2. Hydrological Patterns:

- strong influence of Pacific Ocean/Hecate Strait.
- high water table, with considerable surface drainage and water storage in small lakes, marshes, bogs, etc.
- tidal waters are relatively shallow.
- intricate network of channels, coves, passages.
- intricate network of streams, bogs, marshes and small lakes.

3. Ecoregion:

- contained within the Hecate Lowland ecosection of the Coastal Gap Ecoregion.
- includes marine environment associated with near-shore Hecate Strait and the passages and inlets of the lowland.
- climate is relatively mild year round: summers are short and cool with only a brief dry season (1 month); winters are very wet and windy, with occasional periods of cold weather.

4. Biogeoclimatic Zonation:

- Coastal Western Hemlock zone entirely.
- special eco-communities include sphagnum bogs, estuaries, Sitka Spruce/salal forest, pine bogs.
- there are extensive areas that are barren of any trees and show only the most meagre development of soils.

5. Fauna:

- on the larger islands, cougar, wolf, sitka deer, and black bear are relatively common.
- estuaries are important for migratory and resident birds.

- streams carry sea-going cutthroat trout, and sometimes other salmonid species.

OTHER CONSIDERATIONS:

- commercial and industrial interests appear limited in this landscape; forestry dominates in the more inland, forested portions.
- extensive natural and wilderness areas remain outside established reserves.
- recreational demand is light but growing, particularly in terms of saltwater sport fishing, ocean kayaking, and cruising.

REGIONAL LANDSCAPE #13: QUEEN CHARLOTTE LOWLAND

LOCATION: Northeastern half of Graham Island, the northern main island of the Queen Charlotte Islands.

GENERAL DESCRIPTION:

A low elevation, generally flat offshore island environment with a very wet marine climate, and extensive bogs, marshes, and beaches.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- underlain by sedimentary materials, but occasional intrusions of volcanic rocks (eg. Tow Hill) are present.
- relatively thick mantle of glacial till of clay, sand, and gravel.
- average elevation rises very gradually toward the southwest, such that the southwestern periphery meets the northeastern limit of the Queen Charlotte Mountains.
- coastline is very regular, with few coves or other indentations, with the one major exception being Masset Inlet.
- entire shoreline consists of continuous beach with no rocky headlands.

2. Hydrological Patterns:

- strong influence of Pacific Ocean/Hecate Strait.
- high water table, with considerable surface drainage and water storage in small lakes, marshes, bogs, etc.
- tidal waters are relatively shallow.

- intricate network of streams, bogs, marshes and small lakes.
3. Ecoregion:
- contiguous with the Queen Charlotte Lowland Ecoregion.
 - includes near-shore marine environments of the Pacific Ocean, Dixon Entrance, and western Hecate Strait.
 - climate is relatively mild year round: summers are short and cool with only a brief dry season (1 month); winters are very wet and windy, with occasional periods of cold weather.
4. Biogeoclimatic Zonation:
- Coastal Western Hemlock zone entirely.
 - dominant eco-communities include sphagnum bogs, estuaries, Sitka Spruce/salal forest, pine bogs.
5. Fauna:
- sitka deer are very common, although of remarkably small stature, and black bear are relatively common.
 - estuaries are important for migratory and resident birds.
 - streams carry sea-going cutthroat trout, and sometimes other salmonid species.
 - surprising diversity of races of sticklebacks in small lakes and ponds throughout the area.
- OTHER CONSIDERATIONS:
- major land use and economic activities are tourism, fishing and forestry; some mining potential.
 - other than remote coastal areas and established reserves, few wilderness areas remain.
 - moderate recreational demand, particularly in summer months.

REGIONAL LANDSCAPE #14: **QUEEN CHARLOTTE MOUNTAINS**

LOCATION: Offshore of northern coast (middle latitudes) of Province; constitutes the majority of the Queen Charlotte Islands.

GENERAL DESCRIPTION:

An isolated offshore island environment that is rugged, of low to moderate relief, has high precipitation, is

generally forested and has two distinctive coastlines, east and west, featuring a series of islands and islets.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- consists of both the Skidegate Plateau, on the northeastern periphery as a transitional belt to the lowland, and the Queen Charlotte Ranges.
- the plateau portion consists of an upland surface reaching average elevations of 500-800 meters and which has been eroded in to rounded hills.
- the mountains are rugged and steep, having been shaped by uplift and alpine glaciation, but maximum elevations are only about 1100 to 1200 meters a.s.l.
- the continental shelf is located in very close proximity to the west coast.
- east coast is a complex of islands, coves, inlets; while west coast is more regular and less accessible.
- the central part of the range is granitic, but volcanic rocks dominate elsewhere.

2. Hydrological Patterns:

- streams are short and many have steep gradients, particularly on the west coast.
- there are no major river systems; all watersheds are relatively small.
- small lakes and bogs are found at various elevations.

3. Ecoregion:

- contiguous with the Queen Charlotte Ranges Ecoregion.
- includes the near-shore portions of the marine environments of the open Pacific and western Hecate Strait.
- climate is wet and cool year round: winters are moderately cold and very wet with high winds being common, summers are short but weather remain unstable.

4. Biogeoclimatic Zonation:

- three zones are present and are ordered in accordance with elevation.
- the Coastal Western Hemlock zone occurs from sea level to 600-800 meters a.s.l.
- there are relative isolated and small areas of the Mountain Hemlock Zone occurring from 600 to 1000 meters a.s.l. approximately.
- on the higher mountain areas, particularly in the central and northern parts of the landscape, above 1000 meters the Alpine Tundra zone occurs.

5. Fauna:

- the most commonly observed terrestrial mammal is the small sitka deer, which is virtually ubiquitous.
- the area is well known for the numbers of falcon and eagle nesting sites.
- many large bird colonies, particularly on the smaller islands.
- many sea mammals, including large colonies of sea lions and harbour seals.

OTHER CONSIDERATIONS:

- major economic activities are forestry, fishing, and tourism.
- major land uses are forestry and designated park/related reserves.
- large percentage of landscape has been conserved as wilderness under National Parks Act.
- strong recreational demand for wilderness, wildlife appreciation, and cruising experiences.

REGIONAL LANDSCAPE #15: KITIMAT RANGES

LOCATION: Central coastal British Columbia.

GENERAL DESCRIPTION:

Moderately rugged mountain area with a marine moderated climate and displaying massive exposed granite slopes and mountain faces at all elevations.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- blocky, granitic mountains, with a general absence of volcanic and sedimentary rocks.
- prominent display of sheer granitic faces, granite monoliths, and large scale exfoliation sheets: a Yosemite-like appearance.
- a predominance of rocky, rounded peaks.
- relief is strong with many summits above 2,300 metres, but greatly subdued in contrast to the Pacific Ranges to the south.
- peaks less than 2000 metres tend to be rounded, while peaks in excess of this tend to be serrate, with matterhorn structures being fairly common.
- wide, low elevation valleys or trenches bisect this landscape, particularly the northern portion.

- close association with the adjacent fiord landscape, except higher relief and the marine component (fiords) has a less significant role.

2. Hydrological Patterns:

- there are some glaciers and small icefields, but permanent ice is not a dominant trait.
- long fiords extend well into the mountain ranges; above tidewater the same valleys are often filled with long freshwater lakes as well.
- abundant rivers and streams.

3. Ecoregions:

- corresponds to the Kitimat Ranges ecosection of the Coastal Gap Ecoregion.
- climate reflects marine (moisture, temperature moderation) influence on northerly mountain area; mild moist summers, and moderately cold winters with substantial snow accumulation.

4. Biogeoclimatic Zonation:

- Coastal Western Hemlock zone occupies the major valleys and lowest portions of slopes.
- Mountain Hemlock zone occupies the mid-elevations slopes up to about 1400-1600 metres, however it is notable that because of the convex shape of the mountain slopes, particularly at these mid-elevations, these tend to be the steepest parts of the mountains, such that this zone occupies a relatively small percentage of the total land area, and the actual occurrence of forest is substantially reduced due to the exposure of bare granite on this steep slopes.
- the Alpine Tundra zone is found above approximately 1500 meters a.s.l.

5. Fauna:

- habitat for wildlife is limited on the steep, exposed lower slopes, but in the forested valleys sitka deer, grizzly bear, black bear (subspecies "kermodei") and other mammals are relatively common.
- small but important estuaries are often found at the heads of the fiords: mammals and birds congregate here, particularly during salmonid migrations.
- very significant habitat for the coastal grizzly.

OTHER CONSIDERATIONS:

- forestry dominates the lower elevations of the forested valleys; most lands have been allocated.

- large areas of wilderness and undisturbed lands remain outside designated reserves and parks but the majority are high elevation; few non-park low elevation areas in a natural state or non-allocated to forest harvesting.
- recreational demand is relatively light and tends to be focussed upon the lower elevation areas and the mid-elevation transition zone to the high plateaus situated to the east.

REGIONAL LANDSCAPE #16: CASCADE RANGES

LOCATION: Southern central interior, adjacent to southern boundary of Province.

GENERAL DESCRIPTION:

Rainshadow, temperate region of moderate to high relief and relatively gently sloped, well forested mountains.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- a complex geology of folded and metamorphosed volcanic and sedimentary rocks with granitic intrusions.
- some serrate peaks and ridges (above treeline) but most summits are rounded.
- extensive interconnecting ridges, particularly at 1400 to 2000 metres a.s.l.
- average elevation of peaks and ridges is very uniform.

2. Hydrological Patterns:

- no permanent glacial ice; year-round snow is uncommon.
- small lakes scattered throughout at all elevations.

3. Ecoregions:

- includes eastern portion of Eastern Pacific Ranges ecoregion of the Pacific and Cascades Ecoregion, as well as the majority of the Okanagan Range Ecoregion.
- climate is dry, with hot summers and moderately cold winters.

4. Biogeoclimatic Zonation:

- Interior Douglas fir zone occupies the lower valleys.
- Montane Spruce zone occupies the lower mid-elevations of the mountains.

- Engelmann Spruce/Subalpine Fir occupies the upper mid-elevations, which encompasses the majority of the terrain in this landscape.
- the Alpine Tundra zone is limited to areas over 2000 metres, which tend to be isolated, relative small sectors in this landscape.
- the extensive subalpine meadows on the rounded summits and ridges are a noteworthy element of this landscape.

5. Fauna:

- mule deer and black bear are commonly seen large mammals at lower and mid elevations.
- many streams and lakes contain resident rainbow trout.

OTHER CONSIDERATIONS:

- forestry, mining, and ranching dominate the use of lands outside of designated conserved areas.
- remaining wilderness and larger natural areas tend to be within established parks or high elevation only.
- recreation demand to use the frontcountry and the backcountry of this landscape is high.

REGIONAL LANDSCAPE #17: CHILCOTIN MOUNTAINS

LOCATION: Southwest, between the southern coastal mountains and the southern interior plateaus.

GENERAL DESCRIPTION:

Rainshadow belt of rugged mountains of moderate to high relief, with wide dryland valleys between mountain blocks, and with extensive areas of alpine tundra and subalpine vegetation.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- eastern component of the Pacific Ranges, but largely non-granitic.
- eastward/northeastward decrease in average summit elevation and relief.
- many areas display a distinctive concave profile to the mountain shapes, in contrast to the more common convex mountain shape in most of the coastal ranges.
- typically display a combination of high serrate peaks rising to 2300 to 2700 metres (average), which stand above the rounded, expansive subalpine summits and shoulders.

2. Hydrological Patterns:

- higher mountains feature small icefields and glaciers.
- many of the streams and rivers contain glacial meltwater.
- a number of large, elongated lakes occupy valley bottoms.
- small lakes are common at all elevations.

3. Ecoregions:

- corresponds to the Chilcotin Ranges Ecoregion.
- continental climate: cold winters, warm summers and a precipitation maximum in late Spring or early Summer.

4. Biogeoclimatic Zonation:

- Interior Douglas fir zone occupies the lower valleys.
- to a limited degree, the Montane Spruce zone occupies the lower mid-elevations.
- Engelmann Spruce/Subalpine Fir occupies the upper mid-elevations, which encompasses a major part of the terrain in this landscape.
- the Alpine Tundra zone is, occupying areas over 2000 metres, is extensive, although much of this is barren rock and ice/snow.
- the extensive subalpine and alpine meadows on the rounded summits and ridges are noteworthy elements of this landscape.

5. Fauna:

- moose are widespread in low elevation areas.
- California bighorn sheep are found on alpine slopes on the eastern portion of this landscape.
- cougars, black bears, coyotes and wolves are relatively common.
- waterfowl habitat is limited to a few marshes in valley bottom areas.
- major river systems feature salmonid migrations.

OTHER CONSIDERATIONS:

- southern valleys tend to be used as reservoirs or for forestry purposes.
- there is considerable mineral industry activity throughout the landscape.
- in the northern portion, ranching, guide-outfitting, and tourism activities (wilderness resorts) are the important economic activities presently.
- major wilderness and scenic resources, at all elevations, remain outside designated parks and reserves.
- there is a high and growing domestic and international demand for wilderness and frontcountry recreation opportunities in this landscape.

REGIONAL LANDSCAPE #18: PAVILLION RANGES

LOCATION: Southwestern central interior.

GENERAL DESCRIPTION:

A relatively small group of folded and faulted mountain ranges, largely consisting of sedimentary and related rocks, and occurring in the rainshadow of the coast mountains.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- considerable portions are underlain by sedimentary rocks and metamorphosed rocks -- limestone, coal, schists, shales, sandstone, and conglomerates.
- the ranges have been folded and faulted, and while there are dramatic canyons, steep slopes and castellated peaks, the general terrain pattern is fairly gentle.
- major faultline bisects the landscape; the Fraser River flows along this fault at a much lower elevation than the tributary valleys.
- striking exposures of limestone in cliffs and peaks.
- summits reach maximums of 2500 metres a.s.l. while most valleys sit at about 500 to 1000 metres.

2. Hydrological Patterns:

- generally the landscape is fairly arid; most streams are small and many run dry in the summer months.
- there are some lakes in the narrow valleys and often these an azure blue colour due to the limestone.
- there is no permanent ice or snow on the mountains.

3. Ecoregions:

- southern portion is classed as the Clear Ranges ecosection of the Thompson-Okanagan Plateaus Ecoregion.
- northern portion is classed as part of the Eastern Chilcotin Ranges ecosection of the Chilcotin Ranges Ecoregion.
- climate is semi-arid; very hot summers and moderately cold winters.

4. Biogeoclimatic Zonation:

- the Bunchgrass zone is found at the lowest elevations, particularly along the lower benchlands of the Fraser, at about 200 metres a.s.l.

- the Ponderosa Pine zone is also found at the lowest, drier, hotter elevations, but conditions are not quite as severe as in the Bunchgrass zone.
- the Interior Douglas Fir zone occupies most of the tributary valleys and upper benchlands of the Fraser. above about 400 metres a.s.l. and up to about 700 metres.
- the Montane Spruce zone occupies relatively narrow bands along the mid-elevation slopes of the mountains; these are often steep areas and many slopes do not support a vigorous forest.
- the Engelmann Spruce/Subalpine Fir zone occurs on the mountain slopes from about 1500 to 2000 metres.
- some Alpine Tundra is found on summits that exceed 2000 meters.

5. Fauna:

- mule deer are common.
- California bighorn sheep are relatively common.
- wolves, coyotes and black bear are also present.

OTHER CONSIDERATIONS:

- dominant land uses are ranching, forestry and recreation.
- limestone is quarried and large low grade coal deposits have been considered for power generation in previous years.
- there are small areas of high elevation natural and semi-wilderness values outside existing designated parks.
- scenic values are high, but most recreation is focused upon the main road corridors, particularly in association with streams and small lakes.

REGIONAL LANDSCAPE #19: THOMPSON PLATEAU

LOCATION: South central interior.

GENERAL DESCRIPTION:

Rolling and hilly dryland plateau featuring extensive grasslands at the lower elevations, continuous forest cover at mid and higher elevations, and numerous small and medium sized lakes.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- gently rolling upland of low relief lying largely between 1300 and 1700 metres a.s.l.

- a number of summits reach 2200 metres and higher; these tend to be on the periphery of the plateau, where it merges with landscapes of greater elevation and relief.
- the plateau upland has been dissected by the Thompson River, and its tributaries; the major valleys have been glacially scoured and can be as low as 600 metres a.s.l.
- major valley bottoms display thick deposits of silts from ancient glacial lakes.
- a diversity of rocks - stocks of granite intrude volcanic and sedimentary formation; flat lying or gently dipping lavas obscure large areas of older rocks.
- bedrock is frequently exposed in sudden bluffs and rocky hillocks.
- drumlins, eskers, and meltwater channels from the continental glaciers are found throughout.

2. Hydrological Patterns:

- many small shallow lakes occur throughout the landscape at all elevations; most are eutrophic.
- many of the lower elevation lakes have a high alkaline content.
- some medium sized and large lakes occur in the landscape, particularly at the lower elevations.
- most streams are small.
- no glaciers or year round snow pack.

3. Ecoregions:

- corresponds with the Northern Thompson Upland, the Eastern Thompson Upland, and the Southern Thompson Upland ecosections of the Thompson-Okanagan Plateaus.
- climate is dry and hot in the summer months and, in the winter, moderately cold and moist (snow accumulations can be substantial at higher elevations but tend to be temporary or periodic in the low elevation areas.)

4. Biogeoclimatic Zonation:

- pattern of five biogeoclimatic zones:
 - Bunchgrass zone and Ponderosa Pine zone in the lowest and driest valley bottoms; limited in areal extent.
 - Interior Douglas Fir zone dominates most of the terrain, occurring in the low to mid elevation areas.
 - Montane Spruce zone also occupies a substantial part of the terrain, giving a fairly continuous forest cover across the mid elevation plateau summits.
 - Engelmann Spruce/Subalpine Fir zone occurs on a small number of the higher summits.

5. Fauna:

- mule deer, coyote, upland game birds, and waterfowl are fairly common.
- most of the hundreds of lakes are very productive for rainbow trout; other "coarse" species have largely been eliminated by systematic poisoning to enhance the sport fishery.
- streams and rivers are also productive fish habitats.

OTHER CONSIDERATIONS:

- ranching, mining (open pit), recreation and forestry are co-dominant economic activities.
- there is a high level of access through a network of paved and unpaved roads.
- there is a high level of competition among the three economic activities for the available land base.
- many small natural areas remain outside parks, but no extensive wilderness areas remain.
- there is high demand for winter and summer recreation: rustic resorts, fishing, hunting, skiing.

REGIONAL LANDSCAPE #20: THOMPSON BASIN

LOCATION: South, central interior.

GENERAL DESCRIPTION:

A dryland interior basin of flat and hilly terrain, surrounded by higher elevation, dissected plateau country.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- formed by meltwaters from continental glaciers; the site of an extensive periglacial lake.
- deep accumulations of glacial silt, into which the present river has cut a wide channel with 100 foot high steep banks.
- surrounded by benchlands and dissected plateau uplands that rise from a few hundred to 1000 metres above the basin.

2. Hydrological Patterns:

- the confluence of two major rivers: the North and the South Thompson Rivers.
- the rivers join, then feed into a very large lake.

- extensive wetlands at the east end of the lake.

3. Ecoregions:

- corresponds to Thompson Basin ecoregion of the Thompson-Okanagan Ecoregion.
- very dry hot summer climate; winters are moderately cold and moist, although not severe.

4. Biogeoclimatic Zonation:

- a pattern of three zones:
 - the Bunchgrass zone and the Ponderosa Pine zone dominate at the lowest elevations.
 - the slopes to higher elevations are dominated by the Interior Douglas Fir zone.
- a southward extension of this landscape occurs from Kamloops toward Merritt.

5. Fauna:

- coyotes and mule deer remain common, but other large mammals have become less common due to human activities.
- wetlands at Kamloops Lake are a provincially significant waterfowl habitat.
- Thompson River system is important for various salmonid species.

OTHER CONSIDERATIONS:

- urbanization, farming, and ranching dominate much of the land of the basin; some open pit mining also occurs on the periphery.
- small natural sites remain outside designated reserves and parks, but no wilderness areas exist here.
- extensive private land ownership.
- there is a high resident and tourist demand for recreation opportunities in this area, particularly in the Spring, Summer, and Fall.

REGIONAL LANDSCAPE #21: OKANAGAN BASIN

LOCATION: South, central interior.

GENERAL DESCRIPTION:

A wide, north-south oriented dryland valley of flat and hilly terrain that is situated between higher country of dissected relief.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- formed by meltwaters from continental glaciers; the site of an extensive periglacial lake.
- deep accumulations of glacial silt.
- surrounded by benchlands and dissected plateau uplands that rise from a few hundred to 1000 metres above the basin.
- very similar to Thompson Basin, except in alignment.
- beaches are common and of high quality.

2. Hydrological Patterns:

- large, elongated lakes dominate the lowest elevations.

3. Ecoregions:

- corresponds to the Okanagan Basin ecosection of the Thompson-Okanagan Plateaus Ecoregion.
- climate is dry and hot in summer, although moderated by the lakes, and moderately cold and dry in the winter.

4. Biogeoclimatic Zonation:

- in the southern half of the basin, the Bunchgrass and Ponderosa Pine zones dominate the lower elevations, with the former occupying the lowest and driest portions.
- in the northern half, the driest and lowest elevations are classed as in the Ponderosa Pine zone.
- the Interior Douglas Fir zone dominates much of the slopes and benchlands surrounding the valley bottom.
- some Montane Spruce zone is found on the few higher hilltops, although these are not conceptually part of the basin landscape.

5. Fauna:

- this is a highly productive area, particularly for upland birds and waterfowl.
- mule deer, coyote, and California bighorn are commonly observed.
- rattle snakes are common to the grasslands.

OTHER CONSIDERATIONS:

- extensive and intensive urbanization and agriculture dominate much of the land of the basin.
- recreation and tourism are important economic activities, but are largely focussed on the towns and cities.
- few natural areas remain, even within designated parks.
- owing to climate and the large, warm water lakes, there is a very high recreation demand.

REGIONAL LANDSCAPE #22: OKANAGAN HIGHLAND

LOCATION: Southern, central interior.

GENERAL DESCRIPTION:

A transitional area, in terms of climate and terrain, between the dryland basin and plateau country to the west and the more mountainous country to the west; a moderately dry area of moderate elevations and a hilly to mountainous terrain.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:**1. Physiography:**

- elevations range from 500/800 metres (major east-west valleys) to 1600/2500 metres a.s.l. (summits).
- gentle open slopes; step-like.
- Pleistocene ice covered the highland but dramatic sculpting did not occur.
- rounded summits and ridges.

2. Hydrological Patterns:

- abundant small lakes.

3. Ecoregions:

- corresponds to the Okanagan Highlands Ecoregion of the Thompson-Okanagan Ecoregion.
- climate is warm and dry in summer; moderately cold with moderately heavy snow accumulations in winter.

4. Biogeoclimatic Zonation:

- Interior Douglas Fir zone dominates the lower elevations, particularly along the major east-west valleys.
- Montane Spruce zone dominates the mid-elevation areas, which is about 40% of the land area.
- Engelmann Spruce/Subalpine Fir occurs over the higher elevations.
- there is no occurrence of the Alpine Tundra zone, although there are extensive subalpine meadows on the summits and ridge tops.

5. Fauna:

- mule deer are abundant.
- coyote, moose, black bear are fairly common.
- majority of the small lakes are highly productive for rainbow trout and other trout species.

- upland birds are common, particularly in the Interior Douglas Fir zone.

OTHER CONSIDERATIONS:

- forestry and recreation are co-dominant economic activities; also there is some high elevation summer grazing (cattle).
- land base is firmly allocated; forestry occupies the greatest part.
- some natural areas but no wilderness areas remain outside designated parks.
- there is a strong demand for year round recreation opportunities: skiing, resorts, fishing, hunting.

REGIONAL LANDSCAPE #23: SOUTH COLUMBIA RANGES

LOCATION: Southeastern interior, adjacent to the southern boundary of the Province.

GENERAL DESCRIPTION:

A hilly to mountainous area of the moist interior region, with subdued relief and ruggedness, contrasting with other parts of the Columbia Mountains, and with broad, gently sloping valleys.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- broad, gently sloping valleys dominate the landscape.
- the mountain ridges are relatively narrow in the west part of the landscape.
- ruggedness and relief range from low to moderate, increasing toward the east.
- the landscape is the composite of the southern limits of three distinct mountain ranges: Monashees, Selkirks and Purcells.
- elevations range from 500 to about 2500 metres.

2. Hydrological Patterns:

- some large, elongated lakes and reservoirs in some of the valleys.
- medium sized and small lakes at the lower elevations possess warm water in summertime.
- no permanent ice or snow pack.

3. Ecoregions:

- corresponds to Southern Columbia Mountains ecosection of the Columbia Mountains and Highlands Ecoregion.
- climate is fairly moist, except in the most southerly valley bottoms along the international boundary.
- summers are warm and fairly dry; significant snow accumulation in the winter.

4. Biogeoclimatic Zonation:

- pattern of four zones:
 - Interior Douglas Fir zone: the lowest elevations of the southern ends of some of the valleys.
 - Interior Cedar/Hemlock: occupies much of the landscape including many of the valley bottoms and the mid-elevation areas.
 - the Montane Spruce zone is found on the mid- to upper slopes of the mountains.
 - Alpine Tundra zone is found on the summits of most ridges and mountains over 2000 metres.

5. Fauna:

- mountain goat, mule deer, and whitetail deer are the most common ungulates.
- black bears, coyotes, and cougars are fairly common; some grizzly may occur in the more mountainous parts.
- upland game birds are common.
- low waterfowl capabilities generally, but there are significant sites (especially Kootenay Lake and Creston marshes).

OTHER CONSIDERATIONS:

- agriculture and forestry dominate throughout much of the landscape; mining is an important economic activity but directly affects a small area.
- some natural and small wilderness areas remain outside designated parks; but these tend to be limited to the higher elevations.
- recreation demand is strong in relation to the warm water lakes in the southern valleys.

REGIONAL LANDSCAPE #24: CENTRAL COLUMBIA MOUNTAINS

LOCATION: Southeastern interior.

GENERAL DESCRIPTION:

A mountainous, moist interior landscape with a mixture of rounded, moderately rugged and very rugged summits and with relatively wide, gently sloping valley bottoms.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- composed of sedimentary and metamorphosed sedimentary rocks, uplifted and folded on north-south trending axes.
- relief ranges from 500 metres to 2800 metres a.s.l.
- rounded summits and rugged, serrate peaked areas are about equally common.
- transitional in relief and ruggedness from the Southern Columbias to the High Columbias to the north.
- valleys are not as wide as those of Southern Columbia Ranges.

2. Hydrological Patterns:

- some small glaciers and icefields on the highest summit areas, but considerably less than in mountains to north.
- large, elongated lakes and reservoirs occupy several of the major north-south valleys.

3. Ecoregions:

- corresponds to the Central Columbia Mountains ecoregion of the Columbia Mountains and Highlands Ecoregion.
- summers are warm and moderately moist; winters are moderately cold and snow accumulation is significant in many areas.

4. Biogeoclimatic Zonation:

- there is a pattern of three zones:
 - Interior Cedar/Hemlock zone occupies the valleys and lower slopes.
 - Montane Spruce zone occupies the steep mid elevation slopes up to treeline at 2000 metres.
 - Alpine Tundra zone occurs at the highest elevations.

5. Fauna:

- mountain goat, mule deer, and whitetail deer are the most common ungulates.
- black and grizzly bears, coyotes, and cougars are fairly common.
- upland game birds are common on the lower mountain slopes.

- low waterfowl capabilities generally.
- distinctive occurrence of Kokanee, as a species of salmon that does not migrate to ocean.

OTHER CONSIDERATIONS:

- forestry, urbanization, and agriculture dominate the valleys and lower slopes.
- mineral values are considered to be widespread.
- remaining undesignated natural and wilderness areas occur at mid to high elevations only.
- recreation demands are moderate, with much of this being regionally based due to the distance from major population centres.
- recreation interests include fishing, hiking, mountaineering skiing, and lake-based activities.

REGIONAL LANDSCAPE #25: EAST PURCELL MOUNTAINS

LOCATION: Southeastern interior.

GENERAL DESCRIPTION:

A moderately rugged, interior mountain area, physically similar to adjacent areas to the west, but with a rainshadow climate.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- elevation range: 500/1000 metres to 2300 metres a.s.l.
- relief and ruggedness diminish southwards; southernmost segment (McGillivray Range) is very subdued.
- sedimentary and metamorphic rocks (esp. thick quartzite, argillaceous quartzite, argillite, and limestone) which have been intruded by batholithic granitic rocks.
- many round shoulders, with serrate peaks rising above.
- extensive, interconnecting ridges.
- groups of summits are separated by steep and deep glaciated valleys.

2. Hydrological Patterns:

- some permanent glacial ice and some year round snow packs at the highest elevations.
- stream gradients are steep.
- small alpine and subalpine lakes are fairly common.

3. Ecoregions:

- Eastern Purcell Mountains and McGillvray Range ecosections of the Columbia Mountains and Highlands Ecoregion.
- the climate is drier and warmer in summer and, in winter, drier and cooler with less snow in comparison to mountains to west.

4. Biogeoclimatic Zonation:

- a pattern of three zones, extending into the mountains from the lowest elevations on the eastern side:
 - the lower slopes are occupied by the Montane Spruce zone.
 - the mid- to upper slope areas are occupied by the Engelmann Spruce/Subalpine Fir zone, wherein significant high elevation subalpine meadows occur.
 - the highest elevation are occupied by the Alpine Tundra zone; this zone does not occur in the southerly portion, the McGillvray Range.

5. Fauna:

- mountain goat, mule deer, and whitetail deer are the most common ungulates; rocky mountain elk are also present in the lower elevations.
- black and grizzly bears, coyotes, and cougars are fairly common.
- upland game birds are common on the lower mountain slopes.

OTHER CONSIDERATIONS:

- forestry dominates the lower slopes.
- commercial recreation (guiding, heli-skiing) is fairly active in the higher elevation areas.
- mineral values are considered to be widespread.
- remaining undesignated natural and wilderness areas occur at mid to high elevations only.
- recreation demands are moderate, with this being a mix of internationally based heli-skiing, hiking, hunting, and regionally based hiking and mountaineering.

REGIONAL LANDSCAPE #26: NORTH COLUMBIA MOUNTAINS

LOCATION: Southeastern to central eastern interior.

GENERAL DESCRIPTION:

Extremely rugged mountain belt with a moist interior climate and considerable icecaps and glaciers.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- consists of the Cariboo Ranges, and the northern portions of the Selkirk, Purcell, and Monashee Ranges of the Columbia Mountains.
- high relief (700 m. to 3500 metres a.s.l.) and massive boldness.
- sedimentary and metamorphosed sedimentary rocks.
- strongly glaciated, steep-sided valleys.
- rocks are folded along northwesterly oriented axes; some faults parallel these folds.
- summits are towering monoliths and serrate.
- the most rugged interior mountain block in the Province.
- northernmost portion is considerably less rugged.

2. Hydrological Patterns:

- notable absence of major lakes, except in the less rugged northern portion (eg. Bowron system of lakes).
- distinctive trellis-like or rectangular drainage pattern.
- many of the tributary streams are glacial meltwaters, and many mountain lakes are glacially fed.
- icefields and glaciers are very common, although smaller than those in the Pacific Ranges of the coastal region of the Province.

3. Ecoregions:

- corresponds to the Northern Columbia Mountains ecoregion of the Columbia Mountains and Highlands Ecoregion.
- climate is generally moist and cool in summer, and cold with heavy snow accumulations in winter.

4. Biogeoclimatic Zonation:

- pattern of three zones:
 - Interior Cedar/Hemlock dominates the valley bottoms.
 - Engelmann Spruce/Subalpine Fir zone occurs on the steep lower to mid-elevation slopes.
 - Alpine Tundra (and ice) dominates the higher slopes and the peaks; occupies at least 40% of the land area of the landscape.

5. Fauna:

- mountain goat, mule deer, and whitetail deer are the most common ungulates; rocky mountain elk are also present in the lower elevations.
- black and grizzly bears, coyotes, and cougars are fairly common.
- upland game birds are common on the lower mountain slopes.

OTHER CONSIDERATIONS:

- forestry dominates the accessible lower slopes.
- commercial recreation (guiding, heli-skiing) is fairly active in the higher elevation areas.
- mineral values are considered to be widespread.
- remaining undesignated natural and wilderness areas are still fairly abundant, particularly away from the major transportation-oriented valleys, due to difficult access conditions.
- recreation demands are light and principally oriented to wilderness adventure and internationally based recreation activities including heli-skiing, mountaineering, and hunting; northern lakes provide unique wilderness canoeing opportunity in a rectangular circuit.

REGIONAL LANDSCAPE #27: EAST KOOTENAY TRENCH

LOCATION: Southeastern corner of the Province.

GENERAL DESCRIPTION:

A distinctive, broad intra-montane dryland, interior valley of flat and rolling terrain.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- a major valley system caused by the separate orogenic histories of the Columbia Mountains and the Rocky Mountains.
- valley is commonly 20 to 40 km. in width.
- Continental glaciation scoured the trench and left related features: moraines, drumlins, etc.
- definition of the trench includes only the lower elevations, not the slopes of the adjacent mountains.

2. Hydrological Patterns:

- major rivers flow north and south along this valley.
- lateral benchlands (morainal deposits) feature zones of numerous small lakes.
- some major lakes are located along the central valley floor; these feature warm water temperatures during summer months.
- in the northern end of the landscape is a major wetland system.

3. Ecoregions:

- corresponds to the East Kootenay Trench ecosection of the Southern Rocky Mountain Trench Ecoregion.
- climate is hot and dry in summer and, in winter, temperatures are moderately cold and snow accumulation is light.

4. Biogeoclimatic Zonation:

- the driest portions are classed as Ponderosa Pine zone.
- the balance of landscape is classed as Interior Douglas Fir zone.

5. Fauna:

- mule deer, rocky mountain elk and whitetail deer are the most common ungulates; very abundant.
- rocky mountain bighorn sheep are fairly common.
- black bears and coyotes are fairly common.
- upland game birds are common and the wetlands (Columbia marshes) are significant for migrating waterfowl.
- rattle snakes are found in dry rocky areas and painted turtles are common in small ponds.

OTHER CONSIDERATIONS:

- agriculture dominates much of the terrain.
- there is a considerable amount of settlement and cottaging.
- much of the land base is privately owned.
- outside designated parks and other reserves, remaining natural areas are relatively scarce and compact; no wilderness areas exist.
- recreation demand is high for intensive, water-oriented opportunities; significant wildlife viewing opportunities.

REGIONAL LANDSCAPE #28: SOUTHERN ROCKY MOUNTAIN TRENCH

LOCATION: Southeastern and central eastern sector of the Province.

GENERAL DESCRIPTION:

A distinctive, broad intra-montane valley with a moist interior climate and a flat to rolling terrain.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- a major valley system caused by the separate orogenic histories of the Columbia Mountains and the Rocky Mountains.
- valley is commonly 10 to 20 km. in width.
- Continental glaciation scoured the trench and left related features: moraines, drumlins, etc.
- definition of the trench includes only the lower elevations, not the slopes of the adjacent mountains.

2. Hydrological Patterns:

- valley is the path of two of the Province's most significant river systems, the Fraser and the Columbia.
- middle section is occupied by an enormous reservoir.
- many tributaries to the main rivers are glacially fed.
- numerous wetlands along the valley bottom.

3. Ecoregions:

- corresponds to the combination of the Big Bend Trench (now in reservoir) and the Upper Fraser Trench ecosections of the Southern Rocky Mountain Trench Ecoregion.
- climate is cool and moist in summer and, in winter, is cold with heavy snow accumulations.

4. Biogeoclimatic Zonation:

- much of the valley is classed as the Interior Cedar/Hemlock zone.
- toward the northern end, the Sub-Boreal Spruce zone becomes dominant, particularly in close association with the rivers and wetlands.

5. Fauna:

- moose are quite abundant.
- mule deer and whitetail deer are also abundant.
- black bears, grizzly bears, cougars and coyotes are fairly common.
- the wetlands are significant for migrating waterfowl.

OTHER CONSIDERATIONS:

- forestry is the dominant land use; some agriculture also occurs.
- much of the valley bottom is intensively utilized for settlement, transportation or economic activities.
- small natural areas remain, particularly wetlands.
- recreational demand is light, primarily for hunting, fishing and as a travel corridor (southern piece near Golden and north of Valemount).

REGIONAL LANDSCAPE #29: BORDER RANGES

LOCATION: Extreme southeast corner of Province.

GENERAL DESCRIPTION:

Southernmost section of the Rocky Mountains; a hilly and mountainous area of more subdued relief and gentler, wider valleys than its northward counterpart.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- comprised of the Galton, McDonald, and Clark Ranges.
- mountains formed from uplifted, folded and faulted sedimentary and metamorphic rocks arranged in pronounced strata.
- summits are typically serrate and castellated (castle-like).
- long, continuous ridges are common.
- valleys are broad and gently sloped.
- considerably less rugged and more moderate relief on the whole than ranges to the north, however the Clark Ranges do display some of the more typical ruggedness and spectacular strata colours than are found in other parts of the Rocky Mountains.
- elevations range from about 1000 metres (valleys) to 2400 metres a.s.l.

2. Hydrological Patterns:

- there are some small lakes, but no large water bodies.
- little permanent ice.

3. Ecoregions:

- southern part of the Southern Continental Ranges eco-section of the Southern Rocky Mountains Ecoregion.
- summers are warm and fairly dry; winters are cold with a moderate snow accumulation.

4. Biogeoclimatic Zonation:

- pattern of three zones:
 - Montane Spruce zone occupies the valleys and lower slopes.
 - Engelmann Spruce/Subalpine Fir zone occupies the mid- to higher slopes up to treeline at 2100 metres; extensive subalpine meadows are a major feature.

- Alpine Tundra zone occurs above 2100 metres approximately; a relatively small portion of this landscape occurs above treeline.

5. Fauna:

- very significant wildlife populations.
- mule deer, rocky mountain elk and whitetail deer are the most common ungulates; very abundant.
- rocky mountain bighorn sheep are fairly common.
- black bear, grizzly bear and coyote are fairly common.
- upland game birds are common.
- most streams contain resident trout.

OTHER CONSIDERATIONS:

- forestry and mineral (petroleum) interests are the most significant commercial interests; the former has the most extensive control of the land base.
- outside of designated parks/reserves, only the higher elevation areas remain in a natural and semi-wilderness state.
- recreational demand is light to moderate due to accessibility limitations; use is oriented to wilderness trekking and wildlife viewing; demand will grow in relation to use of the adjoining Canadian and U.S. National Parks.

REGIONAL LANDSCAPE #30: SOUTH CONTINENTAL RANGES

LOCATION: Southeast boundary of the Province.

GENERAL DESCRIPTION:

The southern component of the most rugged segment of the Rocky Mountains, the Continental Ranges; distinguished from the northern part by a dryer climate, different biogeoclimatic pattern, and lesser extent of icefields and glaciers.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- mountains formed from uplifted, folded and faulted sedimentary and metamorphic rocks arranged in pronounced strata.
- moderate to high relief.
- summits are typically serrate and castellated (castle-like).
- long, continuous ridges are common.

- valleys are relatively wide and mountain sides are often concave in profile, due to heavy valley glaciation.
- considerable exposure of bedrock, even at low elevations, due to steep cliff faces.
- southwest dip slopes are comparatively gentle (30-45°) while many northeast scarp slopes are very steep.
- many mountains display monumental and castellated peaks.
- ruggedness tends to increase eastward.
- relief: 1000 metres to 3000 metres a.s.l.

2. Hydrological Patterns:

- distinctive trellis drainage pattern.
- small icefields and glaciers are common.
- waterfalls and cascades are common at all elevations.
- many streams and lakes are glacially fed.

3. Ecoregions:

- corresponds to the Southern Continental Ranges ecosection of the Southern Rocky Mountains Ecoregion.
- summers are warm and fairly dry; winters are cold with a moderate snow accumulation.

4. Biogeoclimatic Zonation:

- pattern of three zones:
 - Montane Spruce zone occupies the valleys and lower slopes.
 - Engelmann Spruce/Subalpine Fir zone occupies the mid- to higher slopes up to treeline at 2100 metres; the steep slopes are often devoid of vegetation at even low elevations; extensive subalpine meadows are a major feature.
 - Alpine Tundra zone occurs above 2100 metres approximately; approx. 30% of this landscape occurs above treeline.

5. Fauna:

- very significant wildlife populations.
- mule deer, mountain goat, rocky mountain elk and whitetail deer are the common ungulates; very abundant.
- rocky mountain bighorn sheep are fairly common.
- black bear, grizzly bear and coyote are fairly common.
- upland game birds are common in the valleys.
- most streams contain resident trout.

OTHER CONSIDERATIONS:

- forestry and tourism/recreation are the dominant economic activities.
- owing to high scenic values, much of the landscape is conserved within three major national parks.

- outside of designated parks/reserves, only the higher elevation areas remain in a natural and semi-wilderness state.
- recreational demand is strong for both frontcountry and backcountry experiences.

REGIONAL LANDSCAPE #31: NORTH CONTINENTAL RANGES

LOCATION: Southeast to central eastern periphery of the Province.

GENERAL DESCRIPTION:

The northern component of the most rugged segment of the Rocky Mountains, the Continental Ranges; distinguished from the southern part by a moister, cooler climate, different biogeoclimatic pattern, and greater extent of icefields and glaciers.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- mountains formed from uplifted, folded and faulted sedimentary and metamorphic rocks arranged in pronounced strata.
- summits are typically serrate and castellated (castle-like).
- long, continuous ridges are common.
- valleys are relatively wide and mountain sides are often concave in profile, due to heavy valley glaciation.
- considerable exposure of bedrock, even at low elevations, due to steep cliff faces.
- southwest dip slopes are comparatively gentle (30-45°) while many northeast scarp slopes are very steep.
- many mountains display monumental and castellated peaks.
- ruggedness tends to increase eastward.
- relief: 1000 metres to 3500 metres a.s.l.

2. Hydrological Patterns:

- distinctive trellis drainage pattern.
- small icefields and glaciers are common.
- waterfalls and cascades are common at all elevations.
- many streams and lakes are glacially fed.

3. Ecoregions:

- corresponds to the Central and Northern Continental Ranges ecosections of the Southern Rocky Mountains Ecoregion.

- summers are moderately warm and somewhat moist; winters are cold with heavy snow accumulation.

4. Biogeoclimatic Zonation:

- pattern of four zones:
 - Interior Cedar/Hemlock zone occupies the main and lower valleys.
 - along the Fraser River in the north, the lower elevations/valley bottom is occupied by the Sub-Boreal Spruce zone.
 - Engelmann Spruce/Subalpine Fir zone occupies the slopes up to treeline at 2100 metres; however due to steep slopes, many are devoid of vegetation.
 - Alpine Tundra zone occurs above 2100 metres approximately; a very significant portion of this landscape occurs above treeline.

5. Fauna:

- very significant wildlife populations.
- mule deer, rocky mountain elk and whitetail deer are the most common ungulates; some moose.
- mountain goat are very abundant and rocky mountain bighorn sheep are fairly common.
- black bear, grizzly bear and coyote are common.
- most streams contain resident trout.

OTHER CONSIDERATIONS:

- forestry and tourism/recreation are the dominant economic activities.
- owing to high scenic values, much of the landscape is conserved within major national and provincial parks.
- outside of designated parks/reserves, only the higher elevation areas remain in a natural and semi-wilderness state.
- recreational demand is strong for both frontcountry and backcountry experiences.

REGIONAL LANDSCAPE #32: QUESNEL - SHUSWAP HIGHLANDS

LOCATION: South central interior, between central interior plateaus and Columbia Mountains.

GENERAL DESCRIPTION:

A moist interior area of hilly and gently mountainous terrain with rounded summits.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- a zone of transition from the slightly dissected plateau surfaces to the west and the highly rugged mountains to the east.
- relief: 500/800 metres (valleys) up to 1600/2500 metres (summits).
- plateau surfaces that have been further uplifted due to contact with the Columbia Mountains, and then have been more intensely dissected by erosion due to this higher elevation.
- largely consist of folded sedimentary rocks with some volcanic rocks and volcanic vents and cinder cones.

2. Hydrological Patterns:

- major, elongated lakes occupy the steep-sided valleys.
- an abundance of lakes and streams of all sizes throughout the landscape.
- absence of glaciers and icefields.

3. Ecoregions:

- corresponds to the Quesnel Highland and the Shuswap Highland ecosections of the Columbia Mountains and Highlands Ecoregion.
- summers are moist and moderately warm in south, cool in north; winters are cold with significant snow accumulations, particularly in north.

4. Biogeoclimatic Zonation:

- Interior Cedar/Hemlock zone dominates most of the valleys and low slopes, except in extreme north where the Sub-Boreal Spruce zone occupies this position.
- mid- to upper mountain slopes are occupied by the Engelmann Spruce/Subalpine Fir zone, which tends to occur in large contiguous blocks of upland between the major valleys; extensive subalpine meadows are an important feature.
- above treeline at about 2100 metres, the Alpine Tundra zone occurs; this zone occupies only perhaps 10% of the landscape.

5. Fauna:

- mountain goat, moose, mule deer, and whitetail deer are the most common ungulates;
- black and grizzly bears, coyotes, and cougars are fairly common.
- upland game birds are common on the lower mountain slopes.

- most lakes and streams contain significant populations of resident trout and migrating salmonids.

OTHER CONSIDERATIONS:

- forestry dominates much of the landscape.
- mineral values are considered to be widespread.
- remaining undesignated natural and wilderness areas are still fairly abundant above the valley bottoms due to difficult access conditions.
- recreation demands are generally light, with some notable exceptions (eg. Bowron Lake); interest in the alpine wilderness areas will grow.

REGIONAL LANDSCAPE #33: CARIBOO UPLANDS

LOCATION: Central interior.

GENERAL DESCRIPTION:

A gently rolling, sub-boreal interior plateau featuring a large number of small to medium sized shallow lakes.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- eastern part of interior plateaus with a topography influenced by the formation of the Columbia Mountains and adjacent highlands.
- average elevations range from 1200 to 1700 metres a.s.l., with local relief consisting of 100-200 metres.
- rolling terrain; some hilly areas.
- glacial meltwater channels are a common feature.

2. Hydrological Patterns:

- hundreds of small and medium-sized lakes.
- most lakes feature marshes in their shallow edges.

3. Ecoregions:

- corresponds to the Cariboo Plateau ecosection of the Fraser Plateau Ecoregion, as well as a southcentral portion of the Nechako Lowland ecosection of the Fraser Basin Ecoregion.
- warm moist summers; moderately cold winters, with moderate snow accumulations.

4. Biogeoclimatic Zonation:

- the lower elevations, particularly the north, are dominated by the Sub-Boreal Spruce zone.

- some occurrence of both Interior Douglas Fir zone and Interior Cedar/Hemlock zone in the Canim and Quesnel Lake valleys.
- mid-elevation areas in the southwest are dominated by the Sub-Boreal Pine/Spruce zone.
- isolated pockets of higher elevations are classed as the Engelmann Spruce/Subalpine Fir zone.

5. Fauna:

- moose are the most common ungulate; mule deer are fairly common.
- cougar, black bear, coyote and wolf are common; some grizzly may exist but largely extirpated.
- superb waterfowl and inland shorebird nesting/breeding area.
- significant upland bird populations.
- most waters are very productive for rainbow trout, and migrating salmon species occur in the main river systems.

OTHER CONSIDERATIONS:

- forestry, ranching, mining (placer gold) and recreation are the principal economic activities.
- forestry and grazing dominate much of the land base.
- many of the lakes are intensively used for fishing and support small resorts and cottages.
- remaining natural areas are relatively small and tend to be at higher elevations; although some lakes are as yet undeveloped, these often occur within extensive private or leased lands.
- recreation demand is strong for lake-based, intensive activities as well as for hunting.

REGIONAL LANDSCAPE #34: **CENTRAL CARIBOO BASIN**

LOCATION: Central interior.

GENERAL DESCRIPTION:

A dryland interior plateau surface; the driest portion of the interior plateaus; a flat to rolling terrain dissected by major rivers and featuring a mix of open forest and extensive grasslands.

ENVIRONMENTAL CHARACTERISTICS AND CLASSIFICATIONS:

1. Physiography:

- flat and gently rolling terrain.
- average elevations are 1000 to 1400 metres a.s.l., with the Fraser and Chilcotin Rivers incised to about 650 metres.
- thick deposits of glacial drift overlying lava beds.
- where the rivers are incised, there are notable steppe-like arid grasslands and "badlands".

2. Hydrological Patterns:

- numerous small shallow lakes, especially in the south and eastern parts of the landscape.
- many lakes display high alkaline content.
- the small lakes depend upon snowfall for spring recharge of their levels.

3. Ecoregions:

- corresponds to Chilcotin - Cariboo Basin ecosection of the Fraser Plateau Ecoregion.
- climate is hot and very dry in summer months; dry and moderately cold in winter.

4. Biogeoclimatic Zonation:

- the lowest elevations, along the Fraser and Chilcotin Rivers, from their confluence and southwards are classed as the Bunchgrass zone.
- most of the landscape is uniformly classed as the Interior Douglas Fir zone.
- there are extensive grasslands throughout this landscape.

5. Fauna:

- mule deer and California bighorn sheep are the common ungulates.
- some moose may be seen in the lakes and marshes of the southeast.
- cougars, black bears, coyotes, and wolves are fairly common.
- the small lakes provide excellent breeding and nesting habitat for diverse waterfowl, including species such as the white pelican.

OTHER CONSIDERATIONS:

- ranching is the most dominant economic activity; some forestry also occurs in higher terrain.
- much of the land base is privately owned or leased for cattle grazing.

FIGURE 1: Summary Table of the Regional Landscapes

REGIONAL LANDSCAPES	CLIMATE TYPE	MAJOR HYDROLOGICAL THEMES		PHYSIOGRAPHY		BIOGEOCLIMATIC ZONES (Ministry of Forests)	ECOREGIONS CLASSIFICATION (Demarchi) Ecoregions - Ecosections
		General Character	Relief	Physiographic Grouping - Physio. Unit (Mathews)	CDF		
1 Gulf Islands	temperate coastal, dry-moderate	sheltered gulf	hilly; marine environ.	low-mod.	Coastal Depressions - Georgia Depr.	CDF	Str. of Georgia; East. Vanc. Island - Nanaimo Lowland
2 Georgia Lowlands	temperate coastal, moderate	sheltered gulf	rolling & hilly; marine environ.	low-mod.	Coastal Depressions - Georgia Depr.	CWH	Lower Mainland - Georgia Lowland East. Vanc. Island - Nanaimo Lowland
3 Vancouver Island Mountains	temperate coastal montane	open ocean, sheltered straits, large valley lakes, fiords	rugged mountains; marine environ.	mod.-high	Insular Mountains - Vanc. Is. Ranges	AT, MH, CWH	East. Vanc. Island - Leeward Island Mtns. West. Vanc. Island - Windward & Northern Mtns.
4 West Coast Plain	temperate coastal, wet	open ocean	flat & hilly; marine environ.;	low	Insular Mountains - Estevan Strandflat	CWH	West. Vanc. Island - Windward Is. Mtns.
5 Nahwitti Lowland	temperate coastal, wet	open ocean, fiord	flat & hilly; marine environ.	low	Insular Mountains - Nahwitti Lowland	CWH	Nahwitti Lowland
6 Fraser Flood Plain	temperate coastal, moderate	wetlands, major river	flat & rolling	low	Coastal Depression - Fraser Lowland	CWH	Lower Mainland - Fraser Lowland
7 Skagit - Lower Mainland Mountains	temperate coastal montane	large valley lakes	mountainous	high	Coast Mountains - South. Fiord Rgs.(S) - Cascade Ranges (NW)	AT, MH, CWH	Pacific/Cascade Ranges - South & East. Pacific Rgs.
8 Southern Fiordland	temperate coastal montane	sheltered fiords	mountainous; marine environ.	high	Coast Mountains - South. Fiord Rgs.(mid)	AT, MH, CWH	Pacific/Cascade Ranges - Southern Ranges
9 Pacific Ranges	temperate coastal montane	icefields & glaciers	extremely rugged mountains	extreme	Coast Mountains - Pacific Ranges	AT, MH, CWH	Pacific/Cascade Ranges - North. & East. Ranges
10 Midcoast Fiordland	temperate coastal montane	fiords	mountainous; marine environ.	mod.-high	Coast Mountains - South Fiord Rgs.(N)	AT, MH, CWH	Pacific/Cascade Ranges - Outer Fiordland Coastal Gap - Hecate Lowland
11 Northern Fiordland	temperate coastal montane	fiords, sheltered channels	mountainous; marine environ.	mod.-high	Coast Mountains - North. Fiord Ranges	AT, MH, CWH	Coastal Gap - Hecate Lowland
12 Northern Coast Lowlands	temperate coastal, wet	open ocean	flat & hilly; marine environ.	low	Coastal Depression - Milbanke Strandflat	CWH	Coastal Gap - Hecate Lowland
13 Queen Charlotte Lowland	temperate coastal, wet	open ocean, wetlands	flat; marine environ.	low	Coastal Depression - B.C. Lowland	CWH	Queen Charlotte Lowland

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		General Character	Relief	Physiographic Grouping - Physio. Unit (Mathews)	Ecoregions - Ecoregions		
14 Queen Charlotte Mountains	temperate coastal, wet	open ocean	low - mod. mountains & hills; marine environ.	Insular Mountains - B.C. Ranges	AT, MH, CWH	Queen Charlotte Ranges - Skidegate Plateau - Windward B.C. Mtns.	
15 Kitimat Ranges	temperate coastal montane	glaciers, major river	mod.- high mountainous	Coast Mountains - Kitimat Ranges	AT, MH, CWH	Coastal Gap - Kitimat Ranges	
16 Cascade Ranges	temp. interior montane, dry		mod.- high mountainous	Coast Mountains - Cascade Ranges	AT, MH, ESSF, MS, IDF, CWH	Pacific/Cascade Ranges - East. Pacific Rgs. Okanagan Range	
17 Chilcotin Mountains	temp. interior montane, dry	glaciers & icefields, large valley lakes	mod.- high mountainous	Coast Mountains - Pacific Ranges	AT, ESSF, MS, IDF, CWH	Chilcotin Ranges	
18 Pavillion Ranges	temp. interior montane, dry	major rivers	low - mod. hills & mountains	Coast Mountains - Pavillion Ranges	AT, ESSF, MS, BG, PP, IDF	Chilcotin Ranges Thompson-Okanagan Plateaus - Clear Range	
19 Thompson Plateau	dry interior	plateau lakes	low - mod. flat, rolling & hilly	Interior Plateaus - Thompson Plateau	ESSF, MS, BG, PP, IDF	Thompson-Okanagan Plateaus - North, East & South Uplands	
20 Thompson Basin	dry interior	major rivers, large valley lake	low - mod. flat & hilly	Interior Plateaus - Thompson Plateau	BG, PP, IDF	Thompson-Okanagan Plateaus - Thompson Basin	
21 Okanagan Basin	dry interior	large valley lakes	low - mod. flat & hilly	Interior Plateaus - Thompson Plateau	BG, PP, IDF	Thompson-Okanagan Plateaus - Okanagan Basin	
22 Okanagan Highland	dry interior montane	small lakes	moderate hills & mountains	Interior Plateaus - Okanagan Highlands	AT, ESSF, MS, PP, IDF, ICH	Thompson-Okanagan Plateaus - Okanagan Highland	
23 Southern Columbia Ranges	temp. interior montane, moist	large valley lakes & reservoirs	low - mod. hills & mountains	Columbia Mountains - Selkirk Mtns. - Purcell Mtns. Interior Plateaus - Okanagan Highlands	AT, ESSF, PP, IDF, ICH	Columbia Mountains & Highlands - South. Columbia Mtns.	
24 Central Columbia Mountains	temp. interior montane, moist	large valley lakes, glaciers	mod.- high mountainous	Columbia Mountains - Monashee Mtns. - Selkirk Mtns. - Purcell Mtns.	AT, ESSF, ICH	Columbia Mountains & Highlands - Central Columbia Mtns. - South. Columbia Mtns.	
25 East Purcell Mountains	temp. interior montane, dry		mod.- high mountainous	Columbia Mountains - Purcell Mountains	AT, ESSF, MS, PP, IDF	Columbia Mountains & Highlands - East. Purcell Mtns.	
26 North Columbia Mountains	temp. interior montane, moist	glaciers & icefields, major rivers, large reservoir, large valley lakes	high extremely rugged mountains	Columbia Mountains - Caribou Mtns. - Monashee Mtns.	AT, ESSF, ICH	Columbia Mountains & Highlands - North. Columbia Mtns.	

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		General Character	Relief	General Character	Relief		
27 East Kootenay Trench	dry interior	large reservoir, small lakes, wetlands	flat & rolling	low	South. Rocky Mtn. Trench	MS, PP, IDF	Southern Rocky Mountain Trench - East Kootenay Trench
28 Southern Rocky Mountain Trench	temp. interior, moist	large reservoir, major river	flat & rolling	low	South. Rocky Mtn. Trench	SS, ESSF, CWH	Southern Rocky Mountain Trench - Upper & Big Bend Trenches
29 Border Ranges	temp. interior montane, dry	hills & mountains	hills & mountains	moderate	Rocky Mountains - Border Ranges	AT, ESSF, MS	Southern Rocky Mountains - South. Continental Ranges
30 South Continental Ranges	temp. interior montane, dry-moist	mountainous	mountainous	mod.-high	Rocky Mountains - Continental Ranges	AT, ESSF, MS, IDF, CWH	Southern Rocky Mountains - South. Continental Ranges
31 North Continental Ranges	temp. interior montane, moist	glaciers & icefields	extremely rugged mountains	high	Rocky Mountains - Continental Ranges	AT, SS, ESSF, CWH	Southern Rocky Mountains - North. Continental Ranges
32 Quesnel-Shuswap Highlands	temp. interior montane, moist	large valley lakes	hills & mountains	low - mod.	Interior Plateaus - Quesnel Highland - Shuswap Highland	AT, SS, ESSF, IDF, CWH	Columbia Mountains & Highlands - Quesnel & Shuswap Highlands
33 Cariboo Uplands	sub-boreal interior	plateau lakes, wetlands	rolling plateau	low	Interior Plateaus - Cariboo Plateau	SPS, SS, ESSF, CWH	Fraser Plateau - Cariboo Plateau Fraser Basin - Nechako Lowland
34 Central Cariboo Basin	temp. interior, dry	plateau lakes, major rivers' confluence	flat & rolling	low	Interior Plateaus - Chilcotin Plateau - Cariboo Plateau	SPS, 86, IDF	Fraser Plateau - Chilcotin-Cariboo Basin
35 Chilcotin Plateau	sub-boreal interior, dry	plateau lakes, wetlands	flat & rolling; some mountains	low	Interior Plateaus - Chilcotin Plateau	AT, SPS, SS, ESSF, MS, IDF	Fraser Plateau - Nazko Upland - Nechako Plateau - Chilcotin Plateau
36 Fraser Basin	sub-boreal interior	major river confluence, plateau lakes, wetlands	flat & rolling	low	Interior Plateaus - Nechako Lowland - Nechako Plateau	SS, ESSF	Fraser Basin - Nechako Lowland
37 Nechako Plateau	sub-boreal interior	large lakes, plateau lakes, wetlands	rolling & hilly	low - mod.	Interior Plateaus - Nechako Plateau	AT, SPS, SS, ESSF	Fraser Basin - Babine Upland Fraser Plateau - Bulkley Basin - Nazko Upland - Nechako Plateau

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		General Character	Relief	General Character	Relief		
38 Bulkley-Tahtsa Ranges	sub-boreal interior montane	large valley lakes, glaciers	rolling mountains	moderate	Coast Mountains - Hazelton Ranges	AT, SPS, ESSF, CWH	Fraser Plateau - Bulkley Ranges Coastal Gap - Kitimat Ranges Mass Ranges
39 Mass Ranges	temperate coastal montane	glaciers, major river	rugged mountains	high	Coast Mountains - Hazelton Ranges	AT, ESSF, ICH, CWH	Mass Ranges
40 Mass Basin	temp. interior montane, moist	small lakes, wetlands	rolling & hilly; some mountains	low - mod.	Skeena Mountains - Nass Depression	AT, ESSF, ICH	Mass Basin
41 Skeena Mountains	sub-boreal interior montane	glaciers	mountainous	moderate	Skeena Mountains - Skeena Ranges	AT, SS, ESSF, ICH	Skeena & Omineca Mountains - West. & East. Skeena Mtns.
42 Spatzizi Uplands	boreal montane	<i>ALLIANCE HEADWATER</i>	rolling & mountainous	moderate	Skeena Mountains - Skeena Ranges Stikine Plateau - Spatzizi Plateau	AT, SMB, BWBS	Northern Mountains & Plateaus - Southern Boreal Plateau
43 South Omineca Mountains	sub-boreal interior montane	large valley lakes	rolling & mountainous	low - mod.	Kaska Mountains - Omineca Mountains Interior Plateau - Manson Plateau	AT, BWBS, SS, ESSF	Skeena & Omineca Mountains - Omineca Mountains
44 North Omineca Mountains	boreal montane	mountain lakes	rugged mountains	mod. - high	Kaska Mountains - Omineca Mountains	AT, SMB, BWBS	Northern Mountains & Plateaus - Cassiar Ranges
45 Williston Trench	sub-boreal interior	large reservoir	flat & rolling	low	Northern Rocky Mtn. Trench	SS, ESSF	Skeena & Omineca Mountains - Omineca Mountains
46 Northern Rocky Mountain Trench	boreal	meandering river	flat & rolling	low	Northern Rocky Mtn. Trench	SMB, BWBS	Northern Mountains & Plateaus - Cassiar Ranges - Kechika Mountains
47 Central Rocky Mtns. & Foothills	sub-boreal interior montane	mountain lakes	hilly & mountainous	moderate	Rocky Mountains - Hart Ranges - Muskva Ranges - North.R.M.Foothills	AT, BWBS, SS, ESSF	Central Rocky Mountains
48 Muskva Ranges	boreal montane	glaciers, mountain lakes	mountainous	high	Rocky Mountains - Muskva Ranges	AT, SMB, BWBS	Northern Rocky Mountains - Muskva Ranges
49 Northern Foothills	boreal montane		hilly & mountainous	low - mod.	Rocky Mountains - North.R.M.Foothills	AT, SMB, BWBS	Northern Rocky Mountains - Muskva Foothills

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			General Character	Relief		
50 Peace Plateau	boreal	entrenched rivers, major river, wetlands	flat & rolling	low	SMB, BWBS	Alberta Plateau - Sikanni-Beaton Plateau - Peace Lowland - Kiskatinaw Plateau
51 Fort Nelson Lowland	sub-arctic	meandering streams, wetlands, plateau lakes, major river	flat; some buttes	low	SMB, BWBS	Fort Nelson Lowland Alberta Plateau - Sikanni-Beaton Plateau
52 Liard Uplands	sub-arctic	major river	rolling mountains	low - mod.	AT, SMB, BWBS	Northern Rocky Mountains - Liard Upland - Muskwa Ranges
53 Liard Plain	sub-arctic/ boreal	meandering rivers, major river	flat & rolling	low	SMB, BWBS	Liard Basin
54 Cassiar Mountains	boreal montane	mountain lakes	hills & mountains	moderate	AT, SMB, BWBS	Northern Mountains & Plateaus - Cassiar Ranges - Tuya Range - Kechika Mountains
55 Stikine-Yukon Plateaus	sub-arctic/ boreal	large valley lakes, plateau lakes, wetlands	rolling & hilly; some mountains	low - mod.	AT, SMB, BWBS	Northern Mountains & Plateaus - Stikine Plateau - Teslin Plateau - Tuya Range - Tahltan Highland
56 Boundary Ranges	coastal/boreal montane mix	major rivers, glaciers & icefields, mountain lakes	extremely mountainous	very high	AT, SMB, SS, MH, ESSF, ICH CWH	Boundary Ranges Northern Mountains & Plateaus - Tahltan Highland Tatshenshini Basin
57 St. Elias Mountains	coastal/sub-arctic montane mix	major river, glaciers & icefields	extremely mountainous	mod. - very high	AT, SMB, CWH	Boundary Ranges Tatshenshini Basin