

**EXPANDED LEGEND FOR THE UPLAND
PORTION OF ROBSON BIGHT ECOLOGICAL
RESERVE AND TSITIKA MORATORIUM AREA
1:20 000 BIOPHYSICAL HABITAT MAP**

PAC 1623 Lower Tsitika

Prepared for:

**South Coast Region,
Parks Division,
Ministry of Environment, Land and Parks**

Prepared by:

**Norecol, Dames & Moore, Inc.
Crestwood Corporate Centre
Suite 250
13571 Commerce Parkway
Richmond, British Columbia
V6V 2R2**

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INTRODUCTION

1.1 Background

This project was requested by BC Parks of the Ministry of Environment, Lands and Parks to map biophysical terrain and habitat of the upland area of Robson Bight Ecological Reserve and the Tsitika Moratorium area (Figure 1). Terrain and habitat mapping can be used to characterize ecological units within the study area to provide assistance in management and planning of enhancement projects.

For the present study, the terms of reference provided by BC Parks specified the scale of mapping as 1:20 000 to include the immediate shoreline and upland areas. The marine area of the Robson Bight Ecological Reserve was not included in the present mapping project. The shoreline mapping was limited to the classification of shoreline units, as per the methodology being developed for shoreline classification in British Columbia.

The upland portion of Robson Bight Ecological Reserve and the adjacent Tsitika Moratorium area provide habitat for Roosevelt elk (*Cervus elaphus roosevelti*), black-tailed deer (*Odocoileus hemionus columbianus*), black bear (*Ursus americanus*) and a variety of smaller carnivores and small mammals. A wide variety of bird species also occurs in the area, ranging from aquatic birds associated with the estuary of the Tsitika River to species associated with mature coastal coniferous forests, to those species associated with subalpine krummholz plant communities.

Several wildlife species on the BC Red List or the BC Blue List occur, or may occur in the study area, on the basis of habitat association. The terms of reference provided by BC Parks specified that the project rates the biophysical habitat units for habitat potential for any Red Listed or Blue Listed wildlife species that may occur in the study area.

The present report provides the expanded legend for the mapping project, specifically the biophysical habitat mapping. Separate map legends have been prepared for the 1:20 000 scale terrain maps and the biophysical maps which were provided to BC Parks.

A separate component of the project involved a review of the existing information on archaeological resources of the uplands of the study area. This included a brief summary report and a separate 1:20 000 scale map which has been provided under separate cover to BC Parks.

1.2 Study Area

The study area for the present biophysical mapping project is limited to the upland portions of the Robson Bight Ecological Reserve and the adjacent Tsitika Moratorium area (Figure 1) plus the Tsitika Mountain Ecological Reserve and the Mt. Derby Ecological Reserve. This area is included on NTS map sheets 92L/7 and 92L/8. The study area was selected by BC Parks and specified in the terms of reference for the study.

1.3 Methods

Soils, terrain, vegetation and wildlife habitat were assessed by field work undertaken in October and November, 1992. Data were collected at 22 sample plots throughout the study area. Data were collected following the forms and procedures as described in "Describing Ecosystems in the Field" (Luttmerding et al., 1990). All data sheets for site, soils, vegetation and wildlife for the 22 plots have been provided to BC Parks.

The 1:20 000 base map was prepared from existing 1:50 000 NTS map sheets 92L/7 and 92L/8 through a photographic process.

The habitat potential ratings for the Red Listed and Blue Listed Wildlife species that may occur in the study area were based on the following factors:

- cover/escape terrain
- food availability
- reproductive utilization; and
- animal movement routes.

The ratings were assigned as nil, low, moderate or high on a species wide basis in the context of southwestern British Columbia. Due to the limited time spent in the field and the limited knowledge of the area, the values were based mostly on habitat preferences/associations and by professional judgement.

The potential occurrence of any Red Listed or Blue Listed species in the study area was based on habitat preferences/associations and species distribution maps (Cowan and Guiguet 1965; Banfield 1974; Godfrey 1966). The Red Listed and Blue Listed Species were taken from a 1993 list prepared by the BC Wildlife Branch and included the following:

EXPANDED LEGEND FOR THE ROBSON BIGHT ECOLOGICAL
RESERVE/TSITIKA MORATORIUM AREA

Red List

Northern Goshawk
Water Shrew
Keen's Long-eared Myotis
Wolverine

Accipiter gentilis laingi
Sorex palustris brooksi
Myotis keenii
Gulo gulo vancouverensis

Blue List

Bald Eagle
White-tailed Ptarmigan
Marbled Murrelet
Western Screech-owl
Northern Pygmy-owl
Ermine
Roosevelt Elk

Haliaeetus leucocephalus
Lagopus leucurus saxatilis
Brachyramphus marmoratus
Otus kennicottii kennicottii
Glaucidium gnoma swarthi
Mustela erminea anguinae
Cervus elaphus roosevelti

BIOPHYSICAL HABITAT CLASSIFICATION AND SYMBOLS

2.1 Classification System

Three levels of biophysical classification are used in habitat mapping. These include Ecosections, Biogeoclimatic Units (zones and subzones), and Habitat Classes. Ecosections are a broad level of ecosystem classification based on macroclimatic processes and physiography (Pojar et al, 1991). Biogeoclimatic subzones are areas which have a distinct climax plant community on zonal sites. A subzone consists of unique sequences of geographically related ecosystems in which climatic climax ecosystems are members of the same zonal plant association (Pojar et al, 1991).

The principle difference between ecosection classification and biogeoclimatic classification is that ecosection classification divides the landscape into geographical units that include all elevations, whereas biogeoclimatic classification delineates altitudinal ecological zones within geographical areas. Biophysical habitat classes are areas within biogeoclimatic subzones that are relatively homogenous with regards to terrain (soil, surficial material and topography), disturbance history, climate, animal use and vegetation.

One ecosection and four biogeoclimatic subzones are present in the map area.

2.2 Examples of Map Symbols and Labels

On the biophysical habitat maps the following types of map symbols are used:

Ecosections and Biogeoclimatic Units

Ecosection ---- NIM
CWHvm1 ---- Biogeoclimatic Unit

Biophysical Habitat Classes

Example 1 WBw5—— Successional Stage

 |
 Habitat Unit

Example 2 ROc

 |
 Habitat Unit

The successional stages are:

- 1 Herb - Shrub
- 2 Pole - Sapling (20-40 years old)
- 3 Young Forest (40-100 years old)
- 4 Mature Forest (100-250 years old)
- 5 Old-growth Forest (>250 years old)

Successional stages are not used for non-forested units such as rock outcrop, avalanche track areas, estuaries, wetlands, and sub-alpine.

DESCRIPTION OF MAP UNITS

3.1 Ecosections

The study area occurs within the Western Vancouver Island Ecoregion of the Coast and Mountains Ecoprovince (Figure 2). The Western Vancouver Island Ecoregion contains three ecosections, one of which comprises the study area, namely the Northern Island Mountains Ecosection. The Outer Fjordland Ecoregion Comprises the marine environment adjacent to the study area.

Map Symbol	Ecosection	Ecoregion	Ecoprovince
NIM	Northern Island Mountains	Western Vancouver Island	Coast and Mountains
OUF	Outer Fjordland	Pacific Ranges	Coast and Mountains

Description

NIM Northern Island Mountains Ecosection. This ecosection encompasses the northern and leeward mountain sections of the Western Vancouver Island Ecoregion. All of the terrestrial portion of Robson Bight Ecological Reserve is located in this ecosection. This ecosection usually has an elevational sequence of Coastal Western Hemlock Biogeoclimatic Zone in the valley bottoms and lower mountain slopes, and Mountain Hemlock Biogeoclimatic Zone on the valley sides and upper slopes. It extends seaward to the -20 m level and includes a nearshore and an intertidal marine component.

OUF Outer Fjordland Ecosection. This ecosection encompasses the channels, sounds and straits as well as the islands off the northwestern portion of the Pacific Ranges Ecoregion. The marine portion of the Robson Bight Ecological Reserve deeper than -20 m is located in this ecosection. The islands and peninsula in this ecosection usually have only Coastal Western Hemlock although the Mountain Hemlock zone occurs in the highest inland and peninsulas. Intertidal, nearshore and shallow marine zones occupy the marine waters.

3.2 Biogeoclimatic Units

Four biogeoclimatic units are found within the terrestrial or upland portion of the map area. These are described below:

CWHvm1 Very Wet Maritime Coastal Western Hemlock - Submontane Variant

The submontane variant of the Very Wet Maritime Coastal Western Hemlock subzone occurs along the valley bottoms and lower mountain slopes at elevations which range from sea level to approximately 600 m. The Coastal Western Hemlock (CWH) zone typically has cool summers and mild winters. The CWHvm1 is one of the wettest subzones of the CWH zone (Meidinger and Pojar, 1991). Western hemlock, amabilis fir and western redcedar are the common species in the forest cover. Sitka spruce is present along floodplains and the shoreline. Red alder also occurs on disturbed sites (floodplains and slides). Species typically present in the shrub layer include red huckleberry, Alaskan blueberry, and salal. Salmonberry is common on wetter sites (floodplains and seepage areas). Deer fern and sword fern are found in the herb layer. All of the terrestrial portions of Robson Bight Ecological Reserve fall within this biogeoclimatic unit.

CWHvm2 Very Wet Maritime Coastal Western Hemlock - Montane Variant

This variant occurs on the middle to lower mountain slopes above the CWHvm1 variant. Climatic conditions are similar to submontane variant. Western hemlock, amabilis fir and western redcedar are the common tree species. Yellow-cedar and mountain hemlock are present at higher elevations or on cool, wet sites. Common shrub species are similar to those found in the submontane variant.

MHmm1 Moist Maritime Mountain Hemlock - Windward Variant

The Moist Maritime Mountain Hemlock subzone occurs on the middle to upper mountain slopes above the CWHvm subzone. This subzone is characterized by short, cool summers and long, cool, wet winters. Mountain hemlock, amabilis fir and yellow-cedar are the dominant species in the tree layer. The shrub layer is generally well developed and may consist of black huckleberry, Alaskan and oval-leaved blueberry, copperbush, false azalea and white rhododendron. Mountain heathers are common on slightly drier sites (shallow soils or where bedrock is near surface). Parts of the Mr. Derby and Tsitika Mountain ecological reserves fall within this biogeoclimatic zone.

MHmmp1 Moist Maritime Parkland Mountain Hemlock - Windward Variant

The Moist Maritime Parkland subzone occurs on the upper slopes and mountain tops within the map area. This subalpine parkland is subject to a deeper winter snowpack which is slow to disappear and a shorter growing season than the MHmm1 subzone. Common tree and shrub species are similar to those of the MHmm1 subzone. Tree growth is poorer and cover is not continuous in this subzone. Patches of trees are interspersed with subalpine meadows, wetlands and exposed bedrock. The upper elevation of the Tsitika Mountain and Mt. Derby Ecological reserves fall within this Biogeoclimatic zone.

3.3 Biophysical Habitat Classes

Symbol Biophysical Habitat Classes

Habitat Classes of the Submontane Variant of the Coastal Western Hemlock - Very Wet Maritime Subzone (CWHvm1)

ES	Estuarine
ROc	Rock outcrop, cool aspect
ROW	Rock outcrop, warm aspect
SF	Sitka spruce - salal, shoreline forest
SS	Sitka alder - salmonberry floodplain
SSf	Sitka spruce - salmonberry, rich soil
SM	Sedge wetland
WBw	Western hemlock - blueberry, warm aspect
WBc	Western hemlock - blueberry, cool aspect
WD	Western hemlock - deer fern, moist gentle slope
WSc	Western redcedar - salal, dry, cool aspect
WSw	Western redcedar - salal, dry, warm aspect

Habitat Classes of the Montane Variant of the Coastal Western Hemlock - Very Wet Maritime Subzone (CWHvm2)

CG	Yellow-cedar - goldthread, very moist site
ROc	Rock outcrop, cool aspect
ROW	Rock outcrop, warm aspect
SM	Sedge wetland
WBw	Western hemlock - blueberry, warm aspect
WBc	Western hemlock - blueberry, cool aspect
WSc	Western redcedar - salal, dry, cool aspect
WSw	Western redcedar - salal, dry, warm aspect

Habitat Classes of the Windward Variant of the Mountain Hemlock -
Moist Maritime Subzone (MHmm1)

HBc	Mountain hemlock - blueberry, cool aspect
HBw	Mountain hemlock - blueberry, warm aspect
HBm	Mountain hemlock - blueberry, moderate slope
HD	Mountain hemlock - deer cabbage, very moist, moderate slope
HHc	Mountain hemlock - mountain-heather forest, dry, cool aspect
HHw	Mountain hemlock - mountain-heather forest, dry, warm aspect
HHm	Mountain hemlock - mountain-heather forest, dry, moderate slope
LH	Leatherleaf saxifrage - hellebore, moist meadow
MBm	Mountain hemlock - bramble, moist moderate slope
ROc	Rock outcrop, cool aspect
ROW	Rock outcrop, warm aspect
ROM	Rock outcrop, moderate slope
SAC	Sitka alder avalanche chute, cool aspect
SAW	Sitka alder avalanche chute, warm aspect
SM	Sedge wetland

Habitat Classes of the Windward Variant of the Mountain Hemlock -
Moist Maritime Parkland Subzone (MHmmp1)

AHm	Mountain heather-meadow, moderate slope
AHc	Mountain heather-meadow, cool aspect
AHw	Mountain heather-meadow, warm aspect
HKc	Mountain hemlock - mountain-heather krummholz, cool aspect
HKw	Mountain hemlock - mountain-heather krummholz, warm aspect
HKm	Mountain hemlock - mountain-heather krummholz, gentle to moderate slopes
HMm	Mountain hemlock - mountain-heather parkland, moderate slope
HMc	Mountain hemlock - mountain-heather parkland forest, cool aspect
HMw	Mountain hemlock - mountain-heather parkland forest, warm aspect
ROc	Rock outcrop, cool aspect
ROW	Rock outcrop, warm aspect
ROM	Rock outcrop, moderate slope
SAC	Sitka alder avalanche chute, cool aspect
SAW	Sitka alder avalanche chute, warm aspect
TAc	Talus and rubble, cool aspect
Taw	Talus and rubble, warm aspect

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- Luttmerding, H.A., D.A. Demarchi, E.C. Lea, D.V. Meidinger and T. Vold. 1990. Describing Ecosystems in the Field. Second Edition. MOE Manual 11, Ministry of Environment. Victoria, BC.
- Meidinger, D.V. and J. Pojar (eds). 1991. Ecosystems of British Columbia. Research Branch, BC Ministry of Forests.

BGC Unit: CWHvm1		
ES - Estuarine habitat class		
Description: occurs on fluvial materials in the estuary of the Tsitika River. The unit is flooded by marine and fresh waters.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		ES - Edaphic Climax
Plant Species	Dominants	Four vegetation types were identified by A. Ceska, during a detailed survey of the area. These include: Elymus mollis, Deschampsia beringensis, Plantago maritima community and Carex lyngbei communities.
	Associates	
Potential Wildlife Use	General	Lack of tree cover limits use by listed species. Feeding habitat for Bald Eagles.
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	H
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	M-H
Comments:		

L = Low
 M = Moderate
 H = High

BGC Unit: CWHvm1		
ROc - Rock outcrop, cool aspect habitat class		
Description: areas of bedrock outcrop on steeply sloping, cool aspects		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROc - Edaphic Climax
Plant Species	Dominants	
	Associates	
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: CWHvm1		
ROw - Rock outcrop, warm aspect		
Description: areas of bedrock outcrop on steeply sloping, warm aspects		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROw - Edaphic Climax
Plant Species	Dominants	
	Associates	
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low
 M = Moderate
 H = High

SF - Sitka spruce - salal, shoreline forest soil habitat class

BGC Unit: CWHvm1

Description: occurs as a fringe forest on till and fluvial materials along coastline and near the Tsitika River estuary. Soils are typically Orthic Ferro-Humic or Humo-Ferri Podzols. Influenced by salt spray.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		SF1	SF2	SF3	SF4	SF5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	salal, grasses	red alder, salal, grasses	red alder, western hemlock, western redcedar, salal, sword fern	western hemlock, western redcedar, salal, sword fern	western hemlock, western redcedar, salal, sword fern
	Associates	Sitka alder, red alder, salmonberry	Sitka spruce, Sitka alder, western hemlock, western redcedar, sword fern, red huckleberry	Sitka spruce, false azalea, salmonberry, red huckleberry, deer fern, grasses	Sitka spruce, western redcedar, amabilis fir, red alder, deer fern	Sitka spruce, false azalea, red huckleberry, deer fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (<i>saxatilis</i>)(B)					
	Northern Goshawk (<i>laingi</i>) (R)			L	L	L
	Bald Eagle (B)			L	H	H
	Marbled Murrelet (B)			L	M	M
	Screech-Owl (<i>kennicottii</i>) (B)			L	L	L
	Pygmy-Owl (<i>swarthi</i>)(B)			L	L	L
	Water Shrew (<i>brooksi</i>) (R)					
	Keen's Long-eared Myotis (R)				M	M
	Wolverine (<i>vancouverensis</i>)(R)					
	Ermine (<i>anginae</i>) (B)	L	M	M	L	
	Roosevelt Elk (B)	L	L	M	M	M

Comments: The shrub layer may be very dense and be dominated by salal.

SS - Sitka spruce - salmonberry floodplain habitat class

BGC Unit: CWHvm1

Description: occurs on fluvial material along the Tsitika River. Soils are typically Cumulic or Gleyed Cumulic Regosols and moderately well to well drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		SS1	SS2	SS3	SS4	SS5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	salmonberry, pearly everlasting, horsetail, grasses	red alder, salmonberry, grasses	Sitka spruce, red alder, salmonberry, red huckleberry, three- flowered bedstraw, sword fern, grasses	Sitka spruce, western hemlock, salmonberry, red huckleberry, sword fern, three-flowered bedstraw, grasses	Sitka spruce, western hemlock, salmonberry, red huckleberry, sword fern, three-flowered bedstraw, grasses
	Associates	red alder, thimbleberry	Sitka spruce, western hemlock, Douglas-fir, thimbleberry, three flowered bedstraw, woodrush, sword fern, red huckleberry	Dougals-fir, false azalea, three flowered bedstraw, thimbleberry, three- leaved foamflower, woodrush	Dougals-fir, red alder, false azalea, hedge, lily- of-the-valley, bunchberry, threleaved foamflower	false azalea, lily-of-the- valley, three-leaved foamflower, deer fern, bunchberry
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	M	M
	Bald Eagle (B)			L	H	H
	Marbled Murrelet (B)			L	M	H
	Screech-Owl (kennicotti) (B)			L	M	M
	Pygmy-Owl (swarthi)(B)			L	M	M
	Water Shrew (brooksi) (R)			streams only	streams only	streams only
	Keen's Long-eared Myotis (R)				M	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)	M	H	M	L	
	Roosevelt Elk (B)	L	L	M	H	H

Comments: Douglas-fir is dominant in some younger forests near the estuary. High quality wildlife habitat in mid- to latter successional stages.

L = Low H = High
M = Moderate

SSf - Sitka spruce - salmonberry, rich soil habitat class

BGC Unit: CWHvm1

Description: occurs on fluvial fans along the Tsitika River and coastal shoreline. Soils are typically Podzols or Regosols and are moderately well to well drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		SSf1	SSf2	SSf3	SSf4	SSf5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	salmonberry, horsetail, grasses	red alder, salmonberry, grasses	red alder, western hemlock, salmonberry, red huckleberry, three- leaved foamflower, sword fern, grasses	western hemlock, amabilis fir, salmonberry, red huckleberry, false azalea, sword fern, three- leaved foamflower	western hemlock,, amabilis fir, red huckleberry, sword fern, false azalea, three-leaved foamflower
	Associates	red alder, pearly everlasting, western yarrow	Sitka spruce, western hemlock, western redcedar, thimbleberry, sword fern, red huckleberry	Sitka spruce, western redcedar, amabilis fir, false azalea, three- flowered bedstraw, thimbleberry	Sitka spruce, western redcedar, red alder, bunchberry, three- flowered bedstraw, deer fern	Sitka spruce, western redcedar, salmonberry, deer fern, bunchberry
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	M	M
	Bald Eagle (B)			L	H	H
	Marbled Murrelet (B)			L	M	H
	Screech-Owl (kennicotti) (B)			L	M	M
	Pygmy-Owl (swarthi)(B)			L	M	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)				M	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)	M	H	H	L	
	Roosevelt Elk (B)	L	L	M	H	H

Comments: high quality wildlife habitat in mid- to latter- successional stages

L = Low H = High
M = Moderate

BGC Unit: CWHvm1		
SM - Sedge wetland habitat class		
Description: occurs on fluvial and till materials on floodplains and poorly drained depressions in forested areas. Soils are typically Gleysols.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		SM - Edaphic Climax
Plant Species	Dominants	sedges
	Associates	bulrush, rushes, skunk cabbage
Potential Wildlife Use	General	
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicottii) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	M
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	L
	Roosevelt Elk (B)	M
Comments: generally small areas confined to deprssions		

L = Low

M = Moderate

H = High

WBw - Western hemlock - blueberry, warm aspect habitat class

BGC Unit:: CWHvm1

Description: occurs on colluvial and till materials on moderate to steep mountain slopes to approximately 600m in elevation. Soils are typically Orthic Ferro-Humic and Humo-Ferric Podzols. Soils are well to moderately well drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WBw1	WBw2	WBw3	WBw4	WBw5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, salmonberry, grasses, pearly everlasting	red alder, salmonberry, western hemlock, grasses	red alder, western hemlock, salmonberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern
	Associates	Sitka alder, salal, thimbleberry, horsetail, western hemlock	Sitka alder, western redcedar, salal, deer fern, sword fern	western redcedar, amabilis fir, red huckleberry, oval-leaved blueberry, salal, sword fern	western redcedar, red alder, false azalea, salmonberry, salal, bunchberry, sword fern	western redcedar, false azalea, salal, bunchberry, sword fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)				L	M
	Bald Eagle (B)				L	M
	Marbled Murrelet (B)				L	M
	Screech-Owl (kennicotti) (B)				L	M
	Pygmy-Owl (swarthi)(B)				L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)					
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)	L	L	L		
	Roosevelt Elk (B)	L	L	L	L	L

Comments:

L = Low H = High

M = Moderate

WBC - Western hemlock - blueberry, cool aspect habitat class

BGC Unit:: CWHvm1

Description: occurs on colluvial and till materials on moderately to steep mountain slopes to approximately 600m in elevation. Soils are typically Orthic Ferro-Humic and Humo-Ferric Podzols. Soils are well to imperfectly drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WBC1	WBC2	WBC3	WBC4	WBC5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, salmonberry, grasses, pearly everlasting	red alder, salmonberry, western hemlock, grasses	red alder, western hemlock, salmonberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern
	Associates	Sitka alder, salal, thimbleberry, horsetail, western hemlock	Sitka alder, western redcedar, salal, deer fern, sword fern	western redcedar, amabilis fir, red huckleberry, oval-leaved blueberry, salal, sword fern	western redcedar, red alder, false azalea, salmonberry, salal, bunchberry, sword fern	western redcedar, false azalea, salal, bunchberry, sword fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (<i>saxatilis</i>)(B)					
	Northern Goshawk (<i>laingi</i>) (R)				L	M
	Bald Eagle (B)				L	M
	Marbled Murrelet (B)				L	M
	Screech-Owl (<i>kennicottii</i>) (B)				L	M
	Pygmy-Owl (<i>swarthi</i>)(B)				L	M
	Water Shrew (<i>brooksi</i>) (R)					
	Keen's Long-eared Myotis (R)					
	Wolverine (<i>vancouverensis</i>)(R)					
	Ermine (<i>anginae</i>) (B)	L	L	L		
	Roosevelt Elk (B)	L	L	L	L	L
Comments:						

L = Low H = High
M = Moderate

WD - Western hemlock - deer fern, moist gentle slope habitat class

BGC Unit: CWHvm1

Description: occurs on gently to moderately sloping areas of till and fluvial materials. Situated on lower slope receiving areas. Soils are typically Orthic Ferro-Humic, Humo-Ferric, or Gleyed Humo-Ferric Podzols. Groundwater seepage occurs near surface. Soils are moderately well to imperfectly drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WD1	WD2	WD3	WD4	WD5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, salmonberry, pearly everlasting, horsetail	red alder, salmonberry, horsetail	western hemlock, red alder, salmonberry, red huckleberry, sword fern, three-leaved and cut- leaved foamflower	western hemlock, amabilis fir, red huckleberry, sword fern, deer fern	western hemlock, amabilis fir, red huckleberry, sword fern, deer fern
	Associates	thimbleberry, sword fern, grasses	western hemlock, red huckleberry, salal, thimbleberry, sword fern, grasses	amabilis fir, salal, deer fern	red alder, salmonberry, salal, three-leaved and cut-leaved foamflower	salmonberry, salal, three- leaved and cut-leaved foamflower
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	L
	Bald Eagle (B)			L	M	M
	Marbled Murrelet (B)				M	H
	Screech-Owl (kennicotti) (B)			L	M	M
	Pygmy-Owl (swarthi)(B)			L	M	M
	Water Shrew (brooksi) (R)			streams only	streams only	streams only
	Keen's Long-eared Myotis (R)			L	L	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)	M	M	M		
	Roosevelt Elk (B)	L	L	L	M	M
Comments:	Windthrow is common in this habitat class. Red alder and salmonberry may be common in mature forest stage along small drainages.					

L = Low H = High
M = Moderate

WSc - Western redcedar - salal, dry cool aspect habitat class

BGC Unit: CWHvm1

Description: occurs on moderately to steeply sloped areas of till (or occasionally colluvial) material which overlies rock on lower mountain slopes. Soils are typically Orthic Humo-Ferric Podzols. Slightly dry moisture regime.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WSc1	WSc2	WSc3	WSc4	WSc5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, Douglas-fir, salal,, horsetail, pearly everlasting, yarrow	Dougals-fir, red alder, salal, pearly everlasting	western hemlock, western redcedar, Douglas--fir, red alder, salal, sword fern	western redcedar, western hemlock, salal, sword fern	western redcedar, western hemlock, salal, sword fern, sword fern
	Associates	salmonberry, grasses	western hemlock, western redcedar, salmonberry, grasses	salmonberry, false azalea, deer fern	Douglas-fir, red alder, red huckleberry, false azalea, salmonberry, deer fern	Douglas-fir, red hucklebery, false azalea, deer fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	M
	Bald Eagle (B)			L	L	L
	Marbled Murrelet (B)				L	L
	Screech-Owl (kennicotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)				M	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L
Comments: Species poor herb layer with ferns dominant.						

L = Low H = High

M = Moderate

WSW - Western redcedar - salal, dry warm aspect habitat class						BGC Unit: CW/Hvm1
Description: occurs on moderately to steeply sloped areas of till (or occasionally colluvial) material which overlies rock on lower mountain slopes. Soils are typically Orthic Humo-Ferric Podzols. Slightly dry moisture regime.						
Plant Species and Potential Habitat Use by Wildlife	Map Symbol and Successional Stage					
	WSw1 Shrub - Herb	WSw2 Pole - Sapling	WSw3 Young Forest	WSw4 Mature Forest	WSw5 Old Growth	
Plant Species	Dominants red alder, Douglas-fir, salal, horsetail, pearly everlasting, yarrow	Douglas-fir, red alder, salal, pearly everlasting	western hemlock, western redcedar, Douglas-fir, red alder, salal, sword fern	western redcedar, western hemlock, salal, sword fern	western redcedar, western hemlock, salal, sword fern	
Associates	salmonberry, grasses	western hemlock, western redcedar, salmonberry, grasses	salmonberry, false azalea, deer fern	Douglas-fir, red alder, red huckleberry, false azalea, salmonberry, deer fern	Douglas-fir, red huckleberry, false azalea, deer fern	
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (ainig) (R)		L	L		M
	Bald Eagle (B)		L	L		L
	Marbled Murrelet (B)			L	L	L
	Screech-Owl (kemikotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)			M		M
	Wolverine (vancouverensis)(R)					
	Ermine (gambae) (B)					
Comments: Species poor herb layer with ferns dominant.						L

L = Low
H = High
M = Moderate

CG - Yellow-cedar - goldthread, very moist, receiving habitat class

BGC Unit: CWHvm2

Description: occurs on glacial till on gently sloping receiving areas on middle slope positions. Soils are typically Gleyed or Orthic Humic Podzols. Soil drainage is imperfect to poor. Surface is hummocky with wet depressions; a high water table is present for much of the year.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		CG1	CG2	CG3	CG4	CG5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	sedges, grasses, hellebore	mountain hemlock, yellow-cedar, salal, grasses, sedges	yellow-cedar, mountain hemlock, Vaccinium spp., salal, fern-leaved goldthread	yellow-cedar, mountain hemlock, Vaccinium spp., salal, false azalea, fern-leaved goldthread, bunchberry, crowberry	yellow-cedar, mountain hemlock, Vaccinium spp., false azalea, salal, fern-leaved goldthread, bunchberry, crowberry
	Associates	deer cabbage, salal, mountain hemlock, yellow-cedar	Vaccinium spp., false azalea, fern-leaved goldthread, deer cabbage	western hemlock, amabilis fir, false azalea, red mountain-heather, crowberry, bunchberry, hellebore, deer fern, grasses	western hemlock, amabilis fir, red mountain- heather, hellebore, twinflower, sedges, grasses	western hemlock, amabilis fir, red mountain- heather, hellebore, sedges, grasses, twinflower
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	L
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (keenicottii) (B)			L	L	L
	Pygmy-Owl (swarthi)(B)			L	L	L
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)				L	L
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)	L	L	L		
	Roosevelt Elk (B)	M	M	M	M	M

Comments:

L = Low H = High

M = Moderate

BGC Unit: CWHvm2		
ROc - Rock outcrop, cool aspect habitat class		
Description: areas of bedrock outcrop on steeply sloping, cool aspects		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROc - Edaphic Climax
Plant Species	Dominants	
	Associates	
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low
M = Moderate
H = High

BGC Unit: CWHvm2		
ROw - Rock outcrop, warm aspect		
Description: areas of bedrock outcrop on steeply sloping, warm aspects		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROw - Edaphic Climax
Plant Species	Dominants	
	Associates	
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
Roosevelt Elk (B)	Nil	
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: CWHvm2		
SM - Sedge wetland habitat class		
Description: occurs on flat to gently sloping benches and depressions on glacial till. Soils are typically Gleysols or Organic. A high water table is present for most of the year.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		SM - Edaphic Climax
Plant Species	Dominants	sedges, narrow-leaved cottongrass
	Associates	sticky false asphodel, grasses, Labrador tea, swamp laurel, crowberry, Vaccinium spp. (buckbean, water lily, aquatic mosses in small pools).
Potential Wildlife Use	General	
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	(R) = Red	
	(B) = Blue	
	Water Shrew (brooksi) (R)	streams only
	Keen's Long-eared Myotis (R)	
Wolverine (vancouverensis)(R)		
Ermine (anginae) (B)	M	
Roosevelt Elk (B)	M	
Comments:		

L = Low
 M = Moderate
 H = High

WBw - Western hemlock - blueberry, warm aspect habitat class

BGC Unit:: CWHvm2

Description: occurs on colluvial and till materials on moderate to steep mountain slopes. Soils are typically Orthic Ferro-Humic and Humo-Ferric Podzols.
Soils are well to moderately well drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WBw1	WBw2	WBw3	WBw4	WBw5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, salmonberry, grasses, pearly everlasting	red alder, salmonberry, western hemlock, grasses	red alder, western hemlock, salmonberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern
	Associates	Sitka alder, salal, horsetail, western hemlock	Sitka alder, western redcedar, salal, deer fern, sword fern	western redcedar, amabilis fir, red huckleberry, oval-leaved blueberry, salal, sword fern	western redcedar, red alder, false azalea, salmonberry, salal, bunchberry, sword fern	western redcedar, false azalea, salal, bunchberry, sword fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)				L	M
	Bald Eagle (B)				L	L
	Marbled Murrelet (B)				L	M
	Screech-Owl (kennicotti) (B)				L	M
	Pygmy-Owl (swarthi)(B)				L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)				L	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)	L	L	L		
	Roosevelt Elk (B)	L	L	L	L	L
Comments:						

L = Low H = High
M = Moderate

WBc - Western hemlock - blueberry, cool aspect habitat class

BGC Unit:: CWHvm2

Description: occurs on colluvial and till materials on moderate to steep mountain slopes. Soils are typically Orthic Ferro-Humic and Humo-Ferric Podzols
Soils are well to imperfectly drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WBc1	WBc2	WBc3	WBc4	WBc5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, salmonberry, grasses, pearly everlasting	red alder, salmonberry, western hemlock, grasses	red alder, western hemlock, salmonberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern	western hemlock, amabilis fir, red huckleberry, oval-leaved blueberry, deer fern
	Associates	Sitka alder, salal, horsetail, western hemlock	Sitka alder, western redcedar, salal, deer fern, sword fern	western redcedar, amabilis fir, red huckleberry, oval-leaved blueberry, salal, sword fern	western redcedar, red alder, false azalea, salmonberry, salal, bunchberry, sword fern	western redcedar, false azalea, salal, bunchberry, sword fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)				L	M
	Bald Eagle (B)				L	L
	Marbled Murrelet (B)				L	M
	Screech-Owl (kennicotti) (B)				L	M
	Pygmy-Owl (swarthi)(B)				L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)				L	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)	L	L	L		
	Roosevelt Elk (B)	L	L	L	L	L

Comments:

L = Low H = High
M = Moderate

WSc - Western redcedar - salal, dry cool aspect habitat class

BGC Unit: CWHvm2

Description: occurs on moderately to steeply sloped areas of till or colluvial material which overlies rock on lower to middle mountain slopes. Soils are typically Orthic Humo-Ferric Podzols. Slightly dry moisture regime.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WSc1	WSc2	WSc3	WSc4	WSc5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, salal,, horsetail, pearly everlasting, yarrow	red alder, salal, pearly everlasting	western hemlock, western redcedar, red alder, salal	western redcedar, western hemlock, salal	western redcedar, western hemlock, salal
	Associates	Douglas-fir, salmonberry, grasses	western hemlock, western redcedar, Dougals fir, salmonberry, grasses	salmonberry, deer fern	Douglas-fir, red alder, red huckleberry, false azalea, salmonberry, deer fern	red huckleberry, false azalea, deer fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	L
	Bald Eagle (B)			L	L	L
	Marbled Murrelet (B)				L	L
	Screech-Owl (kennicotti) (B)			L	L	L
	Pygmy-Owl (swarthi)(B)			L	L	L
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)				M	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L

Comments: Salal layer can be very dense; species poor herb layer.

L = Low H = High

M = Moderate

WSw - Western redcedar - salal, dry warm aspect habitat class

BGC Unit: CWHvm2

Description: occurs on moderately to steeply sloped areas of till or colluvial material which overlies rock on lower to middle mountain slopes. Soils are typically Orthic Humo-Ferric Podzols. Slightly dry moisture regime.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		WSw1	WSw2	WSw3	WSw4	WSw5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red alder, salal,, horsetail, pearly everlasting, yarrow	red alder, salal, pearly everlasting	western hemlock, western redcedar, red alder, salal	western redcedar, western hemlock, salal	western redcedar, western hemlock, salal
	Associates	Douglas-fir, salmonberry, grasses	western hemlock, western redcedar, Dougals fir, salmonberry, grasses	salmonberry, deer fern	Douglas-fir, red alder, red huckleberry, false azalea, salmonberry, deer fern	red huckleberry, false azalea, deer fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	L
	Bald Eagle (B)			L	L	L
	Marbled Murrelet (B)				L	L
	Screech-Owl (kennicotti) (B)			L	L	L
	Pygmy-Owl (swarthi)(B)			L	L	L
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)				M	M
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L

Comments: Species poor herb layer with ferns dominant.

L = Low H = High

M = Moderate

HBC - Mountain hemlock - blueberry, cool aspect habitat class

BGC Unit:: MHmm1

Description: occurs on colluvial material on moderate to steep middle to upper mountain slopes on cool aspects. Soils are typically Orthic Ferro-Humic or Humo-Ferric Podzols. Soils are well to imperfectly drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HBC1	HBC2	HBC3	HBC4	HBC5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	Sitka alder, grasses	Sitka alder, mountain hemlock, grasses	Sitka alder, mountain hemlock, copperbush, Vaccinium spp., fern- leaved goldthread	amabilis fir, mountain hemlock, copperbush, Vaccinium spp., fern- leaved goldthread, deer fern	mountain hemlock, amabilis fir, Vaccinium spp., copperbush, white rhododendron, fern- leaved goldthread, deer fern
	Associates	copperbush, mountain hemlock	yellow-cedar, copperbush, Vaccinium spp.	yellow-cedar, amabilis fir, Vaccinium spp., five- leaved bramble, deer fern	yellow-cedar, white rhododendron, false azalea, five-leaved bramble, bunchberry	yellow-cedar, false azalea, five-leaved bramble, bunchberry
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	M
	Bald Eagle (B)					
	Marbled Murrelet (B)				L	L
	Screech-Qwl (kennicotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)			L	L	L
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L

Comments: Yellow-cedar may be co-dominant in some stands. Western hemlock is present in lower elevations.

L = Low H = High

M = Moderate

HBw - Mountain hemlock - blueberry, warm aspect habitat class

BGC Unit:: MHmm1

Description: occurs on colluvial material on moderate to steep middle to upper mountain slopes on warm aspects. Soils are typically Orthic Ferro-Humic or Humo-Ferric Podzols. Soils are well to imperfectly drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HBw1	HBw2	HBw3	HBw4	HBw5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	Sitka alder, grasses	Sitka alder, mountain hemlock, grasses	Sitka alder, mountain hemlock, copperbush, Vaccinium spp., fern- leaved goldthread	amabilis fir, mountain hemlock, copperbush, Vaccinium spp., fern- leaved goldthread, deer fern	mountain hemlock, amabilis fir, Vaccinium spp., copperbush, white rhododendron, fern- leaved goldthread, deer fern
	Associates	copperbush, mountain hemlock	yellow-cedar, copperbush, Vaccinium spp.	yellow-cedar, amabilis fir, Vaccinium spp., five- leaved bramble, deer fern	yellow-cedar, white rhododendron, false azalea, five-leaved bramble, bunchberry	yellow-cedar, false azalea, five-leaved bramble, bunchberry
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	M
	Bald Eagle (B)					
	Marbled Murrelet (B)				L	L
	Screech-Owl (kennicotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)			L	L	L
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L

Comments: Yellow-cedar may be co-dominant in some stands. Western hemlock is present in lower elevations.

L = Low H = High

M = Moderate

HBm - Mountain hemlock - blueberry, moderate slope aspect habitat class

BGC Unit:: MHmm1

Description: occurs on colluvial material on gently to moderately sloping benches and ridge tops. Soils are typically Orthic Ferro-Humic or Humo-Ferric Podzols.
Soils are well to imperfectly drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HBm1	HBm2	HBm3	HBm4	HBm5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	Sitka alder, grasses	Sitka alder, mountain hemlock, grasses	Sitka alder, mountain hemlock, copperbush, Vaccinium spp., fern-leaved goldthread	amabilis fir, mountain hemlock, copperbush, Vaccinium spp., fern-leaved goldthread, deer fern	mountain hemlock, amabilis fir, Vaccinium spp., copperbush, white rhododendron, fern-leaved goldthread, deer fern
	Associates	copperbush, mountain hemlock	yellow-cedar, copperbush, Vaccinium spp.	yellow-cedar, amabilis fir, Vaccinium spp., five-leaved bramble, deer fern	yellow-cedar, white rhododendron, false azalea, five-leaved bramble, bunchberry	yellow-cedar, false azalea, five-leaved bramble, bunchberry
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	L	M
	Bald Eagle (B)					
	Marbled Murrelet (B)				L	L
	Screech-Owl (kennicotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)			streams only	streams only	streams only
	Keen's Long-eared Myotis (R)			L	L	L
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L
Comments: Yellow-cedar may be co-dominant in some stands.						

L = Low H = High

M = Moderate

HD - Mountain hemlock - deer cabbage, very moist, moderate slope habitat class

BGC Unit: MHmm1

Description: occurs on glacial till and colluvial material on gently to moderately sloping receiving areas. Soils are typically Gleyed or Orstein Humic Podzols.
Soil drainage is imperfect to poor.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HD1	HD2	HD3	HD4	HD5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	Sitka alder, grasses, sedges, deer cabbage	Sitka alder, grasses, mountain hemlock, yellow-cedar, deer cabbage	yellow-cedar, mountain hemlock, Vaccinium spp., deer cabbage, grasses, sedges	yellow-cedar, mountain hemlock, Vaccinium spp., red and white mountain-heathers, deer cabbage, grasses, sedges	yellow-cedar, mountain hemlock, Vaccinium spp., red and white mountain-heathers, deer cabbage, grasses, sedges
	Associates	mountain hemlock, yellow-cedar	Vaccinium spp., red and white mountain-heathers, fern-leaved goldthread	Sitka alder, red and white mountain-heathers, copperbush, bunchberry, deer fern	amabilis fir, false azalea, copperbush, five-leaved bramble, bunchberry, fern-leaved goldthread, deer fern	amabilis fir, five-leaved bramble, copperbush, fern-leaved goldthread, false azalea, fern-leaved goldthread, deer fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (<i>saxatilis</i>)(B)					
	Northern Goshawk (<i>laingi</i>) (R)			L	L	L
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (<i>kennicotti</i>) (B)			L	L	M
	Pygmy-Owl (<i>swarthi</i>)(B)			L	L	M
	Water Shrew (<i>brooksi</i>) (R)			streams only	streams only	streams only
	Keen's Long-eared Myotis (R)			L	L	M
	Wolverine (<i>vancouverensis</i>)(R)					
	Ermine (<i>anginae</i>) (B)					
	Roosevelt Elk (B)	M	M	M	M	M

Comments: Hummocky surface; mountain-heathers are generally found on higher micro-sites.

L = Low H = High
M = Moderate

HHc - Mountain hemlock - mountain-heather forest, dry, cool aspect habitat class

BGC Unit: MHmm1

Description: Occurs on moderate to steep upper slopes and ridges on cool, north aspects. Soils are typically shallow (bedrock close to surface) and consist of Lithic Podzols and Orthic Humo-Ferric Podzols. Soil moisture regime is slightly dry.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HHc1	HHc2	HHc3	HHc4	HHc5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red mountain-heather, white mountain-heather, grasses	mountain hemlock, red mountain-heather, white mountain-heather	mountain hemlock, red mountain-heather, white mountain-heather, Vaccinium spp.	mountain hemlock, amabilis fir, Vaccinium spp., red mountain- heather, white mountain- heather	mountain hemlock, amabilis fir, Vaccinium spp., red mountain- heather, white mountain- heather
	Associates	sedges, mountain hemlock	yellow-cedar, grasses, Vaccinium spp.	yellow-cedar, amabilis fir, five-leaved bramble, partridgefoot	yellow-cedar, partridgefoot, Viola sp., five-leaved bramble	yellow-cedar, five-leaved bramble, Viola sp., partridgefoot
Potential Wildlife Use	General					
Potential Use by Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	M	M	M	M	M
	Northern Goshawk (jaingi) (R)				L	L
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (kennicotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)			L	L	L
	Wolverine (vancouverensis)(R)	L	L	L	L	L
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L
Comments:	Open, poorly developed shrub and her layers					

L = Low

H = High

M = Moderate

HHw - Mountain hemlock - mountain-heather forest, dry, warm aspect habitat class

BGC Unit: MHmm1

Description: Occurs on moderate to steep upper slopes and ridges on warm, south aspects. Soils are typically shallow (bedrock close to surface) and consist of Lithic Podzols and Orthic Humo-Ferric Podzols. Soil moisture regime is slightly dry.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HHw1	HHw2	HHw3	HHw4	HHw5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red mountain-heather, white mountain-heather, grasses	mountain hemlock, red mountain-heather, white mountain-heather	mountain hemlock, red mountain-heather, white mountain-heather, Vaccinium spp.	mountain hemlock, amabilis fir, Vaccinium spp., red mountain- heather, white mountain- heather	mountain hemlock, amabilis fir, Vaccinium spp., red mountain- heather, white mountain- heather
	Associates	sedges, mountain hemlock	yellow-cedar, grasses, Vaccinium spp.	yellow-cedar, amabilis fir, five-leaved bramble, partridgefoot	yellow-cedar, partridgefoot, Viola sp., five-leaved bramble	yellow-cedar, five-leaved bramble, Viola sp., partridgefoot
Potential Wildlife Use	General					
Potential Use by Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	M	M	M	M	M
	Northern Goshawk (laingi) (R)				L	L
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (kennicotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)			L	L	L
	Wolverine (vancouverensis)(R)	L	L	L	L	L
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L
Comments:	Uneven, open tree canopy					

L = Low

H = High

M = Moderate

HHm - Mountain hemlock - mountain-heather forest, dry moderate slope habitat class						BGC Unit: MHmm1
Description: Occurs on gently to moderately sloping ridge crests and mountain tops. Soils are typically shallow (bedrock close to surface) and consist of Lithic Podzols and Orthic Humo-Ferric Podzols. Soil moisture regime is slightly dry.						
Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HHm1	HHm2	HHm3	HHm4	HHm5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red mountain-heather, white mountain-heather, grasses	mountain hemlock, red mountain-heather, white mountain-heather	mountain hemlock, red mountain-heather, white mountain-heather, Vaccinium spp.	mountain hemlock, amabilis fir, Vaccinium spp., red mountain- heather, white mountain- heather	mountain hemlock, amabilis fir, Vaccinium spp., red mountain- heather, white mountain- heather
	Associates	sedges, mountain hemlock	yellow-cedar, grasses, Vaccinium spp.	yellow-cedar, amabilis fir, five-leaved bramble, partridgefoot	yellow-cedar, partridgefoot, Viola sp., five-leaved bramble	yellow-cedar, five-leaved bramble, Viola sp., partridgefoot
Potential Wildlife Use	General					
Potential Use by Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	M	M	M	M	M
	Northern Goshawk (laingi) (R)				L	L
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (kennicotti) (B)			L	L	M
	Pygmy-Owl (swarthi)(B)			L	L	M
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)			L	L	L
	Wolverine (vancouverensis)(R)	L	L	L	L	L
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L
Comments:	Uneven, open tree canopy					

L = Low

H = High

M = Moderate

BGC Unit: MHmm1		
LH - Leatherleaf saxifrage - hellebore, moist meadow habitat class		
Description: occurs on flat to gently fluvial material (floodplains of small creeks, seepage areas). Soils are typically Gleysols. A high water table is present for much of the year.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		LH - Edaphic Climax
Plant Species	Dominants	leatherleaf saxifrage, hellebore, sedges, grasses
	Associates	red mountain-heather, partridgefoot, cow-parsnip, rushes, Vioal sp.
Potential Wildlife Use	General	
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	L
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	along streams
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	L
	Ermine (anginae) (B)	M
	Roosevelt Elk (B)	M
Comments:		

L = Low

M = Moderate

H = High

MBm - Mountain hemlock - bramble, moderate slope aspect habitat class

BGC Unit:: MHmm1

Description: occurs on colluvial material on gently to moderately sloping receiving areas. Soils are typically Orthic Ferro-Humic Podzols and are imperfectly drained.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		MB1	MB2	MB3	MB4	MB5
		Shrub-herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	Sitka alder, grasses	Sitka alder, mountain hemlock, grasses	mountain hemlock, Vaccinium spp., five- leaved bramble	amabilis fir, mountain hemlock, Vaccinium spp., fern-leaved bramble	mountain hemlock, amabilis fir, Vaccinium spp., five-leaved bramble
	Associates	sedges, mountain hemlock	yellow-cedar, Vaccinium spp., five-leaved bramble, deer fern	yellow-cedar, amabilis fir, Vaccinium spp., five- leaved bramble, deer fern	yellow-cedar, one-leaved and three-leaved foamflower, deer fern, fern-leaved goldthread	yellow-cedar, three- leaved and one-leaved foamflower, five-leaved goldthread, deer fern
Potential Wildlife Use	General					
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)					
	Northern Goshawk (laingi) (R)			L	M	M
	Bald Eagle (B)					
	Marbled Murrelet (B)				L	L
	Screech-Owl (kennicottii) (B)			L	M	M
	Pygmy-Owl (swarthi)(B)			L	M	M
	Water Shrew (brooksi) (R)			streams only	streams only	streams only
	Keen's Long-eared Myotis (R)			L	L	L
	Wolverine (vancouverensis)(R)					
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L
Comments: Western hemlock may be present in lower elevation stands.						

L = Low H = High

M = Moderate

BGC Unit: MHmm1		
ROc - Rock outcrop, cool aspect habitat class		
Description: areas of steeply sloping bedrock on cool, north aspects. Mountain tops and cliffs on upper slopes.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROc - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Qwl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low
M = Moderate
H = High

BGC Unit: MHmm1		
ROw - Rock outcrop, warm aspect habitat class		
Description: areas of steeply sloping bedrock on cool, north aspects. Mountain tops and cliffs on upper slopes.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROw - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
Roosevelt Elk (B)	Nil	
Comments:		

L = Low
M = Moderate
H = High

BGC Unit: MHmm1		
ROm - Rock outcrop, moderate slope habitat class		
Description: areas of gently to moderately sloping bedrock on upper slopes and mountain plateaus.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROm - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmm1		
SAc - Sitka alder slide forest, cool aspect habitat class		
Description: occurs on colluvial and fluvial materials on steeply sloping, cool, north aspects.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol SAc - Edaphic Climax
Plant Species	Dominants	Sitka alder, grasses
	Associates	sedges, (salmonberry on lower areas)
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	L
Roosevelt Elk (B)	L	
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmm1			
SAw - Sitka alder slide forest, warm aspect habitat class			
Description: occurs on colluvial and fluvial materials on steeply sloping, warm, south aspects.			
Plant Species and Potential Habitat Use by Wildlife		Map Symbol SAw - Edaphic Climax	
Plant Species	Dominants	Sitka alder, grasses	
	Associates	sedges, (salmonberry on lower areas)	
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species	
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)		
	Northern Goshawk (laingi) (R)		
	Bald Eagle (B)		
	Marbled Murrelet (B)		
	Screech-Owl (kennicotti) (B)		
	Pygmy-Owl (swarthi)(B)		
	(R) = Red	Water Shrew (brooksi) (R)	
	(B) = Blue	Keen's Long-eared Myotis (R)	
		Wolverine (vancouverensis)(R)	
		Ermine (anginae) (B)	L
	Roosevelt Elk (B)	L	
Comments:			

L = Low
 M = Moderate
 H = High

BGC Unit: MHmm1		
SM - Sedge wetland habitat class		
Description: occurs on flat to gently sloping benches and depressions on glacial till. Soils are typically Gleysols or Organic. A high water table is present for most of the year.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		SM - Edaphic Climax
Plant Species	Dominants	sedges, narrow-leaved cottongrass
	Associates	sticky false asphodel, grasses, Labrador tea, swamp laurel
Potential Wildlife Use	General	
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Qwl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	L
Roosevelt Elk (B)	M	
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
AHm - Mountain-heather - crowberry heathland, warm aspect		
Description: occurs on gently to moderately sloping mountain tops and plateaus on colluvial materials. Associated with areas of shallow bedrock. Soils are typically poorly developed Regosols.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		AHm - Edaphic Climax
Plant Species	Dominants	white mountain-heather, red mountain-heather, partridgefoot
	Associates	grasses, Saxifrage sp., mountain hemlock, crowberry
Potential Wildlife Use	General	lack of tree cover limits use
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)	H
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	(R) = Red	
	Water Shrew (brooksi) (R)	
	(B) = Blue	
	Keen's Long-eared Myotis (R)	
Wolverine (vancouverensis)(R)	H	
Ermine (anginae) (B)		
Roosevelt Elk (B)	Nil	
Comments:		

L = Low
 M = Moderate
 H = High

BGC Unit: MHmmp		
AHc - Mountain-heather - crowberry heathland, cool aspect		
Description: occurs on upper slopes and mountain tops on colluvial material on cool aspects. Associated with areas of shallow bedrock.. Soils are typically poorly developed Regosols.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		AHc - Edaphic Climax
Plant Species	Dominants	white mountain-heather, red mountain-heather, partridgefoot
	Associates	grasses, Saxifrage sp., mounatin hemlock, crowberry
Potential Wildlife Use	General	lack of tree cover limits use
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)	H
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	H
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
AHw - Mountain-heather - crowberry heathland, warm aspect		
Description: occurs on upper slopes and mountain tops on colluvial material on cool aspects. Associated with areas of shallow bedrock.. Soils are typically poorly developed Regosols.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol AHw - Edaphic Climax
Plant Species	Dominants	white mountain-heather, red mountain-heather, partridgefoot
	Associates	grasses, Saxifrage sp., mounatin hemlock, crowberry
Potential Wildlife Use	General	lack of tree cover limits use
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	H
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Qwl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	H
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low
M = Moderate
H = High

BGC Unit: MHmmp		
HKc - Mountain hemlock - mountain-heather krummholz, cool aspect		
Description	occurs on moderately to steeply sloping upper mountain slopes (cool aspects) on colluvial materials. Soils are shallow and are typically Orstein Ferro-Humic or Lithic Podzols. Soils are well to rapidly drained.	
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		HKc - Edaphic Climax
Plant Species	Dominants	mountain hemlock , crowberry, red mountain-heather, white mountain-heather
	Associates	common juniper, Vaccinium spp., partridge foot, five-leaved bramble
Potential Wildlife Use	General	
Potential Use By Red/Blue Listed Species	White-tailed Ptarmigan (saxatilis)(B)	M
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	M
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments: areas exposed to wind, cold temperatures		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
HKw - Mountain hemlock - mountain-heather krummholz, warm aspect		
Description	occurs on moderately to steeply sloping upper mountain slopes (warm aspects) on colluvial materials. Soils are shallow and are typically Orstein Ferro-Humic or Lithic Podzols. Soils are well to rapidly drained.	
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		HKw - Edaphic Climax
Plant Species	Dominants	mountain hemlock , crowberry, red mountain-heather, white mountain-heather
	Associates	common juniper, Vaccinium spp., partridge foot, five-leaved bramble
Potential Wildlife Use	General	
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	M
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	M
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments: areas exposed to wind, cold temperatures		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
HKm - Mountain hemlock - mountain-heather krummholz, gentle to moderate slopes		
Description . . . occurs on ridge tops and mountain plateaus on colluvial material. Soils are shallow and are typically Orstein Ferro-Humic or Lithic Podzols. Soils are well to rapidly drained.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol
		HKm - Edaphic Climax
Plant Species	Dominants	mountain hemlock , crowberry, red mountain-heather, white mountain-heather
	Associates	common juniper, Vaccinium spp., partridge foot, five-leaved bramble
Potential Wildlife Use	General	
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	M
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	M
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments: areas exposed to wind, cold temperatures		

L = Low

M = Moderate

H = High

HMm - Mountain hemlock - mountain-heather parkland, moderate slope habitat class

BGC Unit: MHmmp

Description: Occurs on gently to moderately sloping ridge crests and mountain tops. Soils are typically shallow (bedrock close to surface) and consist of Folisols and Lithic Podzols and Orthic Humo-Ferric Podzols. Trees are found in clumps interspersed with patches of subalpine heathland and meadow.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HMm1	HMm2	HMm3	HMm4	HMm5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red mountain-heather, white mountain-hemlock, grasses, sedges	mountain hemlock, red mountain-heather, white mountain-heather, sedges	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot
	Associates	mountain hemlock	partridgefoot, grasses	amabilis fir, sedges, grasses, Vaccinium spp.	amabilis fir, five-leaved bramble, Vaccinium spp.	amabilis fir, five-leaved bramble, Vaccinium spp.
Potential Wildlife Use	General					
Potential Use by Red/Blue Listed Species (R) = Red	White-tailed Ptarmigan (saxatilis)(B)	M	M	M	M	M
	Northern Goshawk (laingi) (R)					
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (kennicotti) (B)					
	Pygmy-Owl (swarthi)(B)			L	L	L
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)					
	Wolverine(vancouverensis)(R)	M	M	M	M	M
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	M	M	M
Comments:	Poor tree growth; yellow cedar is present in some stands. Lichens may be abundant. Concentrated elk activity noted in this habitat. in the fall.					

L = Low

H = High

M = Moderate

HMc - Mountain hemlock - mountain-heather parkland cool aspect habitat class

BGC Unit: MHmmp

Description: Occurs on moderate to steeply sloping upper slopes on cool, north aspects. Soils are typically shallow (bedrock close to surface) and consist of Folisols and Lithic Podzols and Orthic Humo-Ferric Podzols. Trees are found in clumps interspersed with patches of subalpine heathland and meadow.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HMc1	HMc2	HMc3	HMc4	HMc5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red mountain-heather, white mountain-hemlock, grasses, sedges	mountain hemlock, red mountain-heather, white mountain-heather, sedges	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot
	Associates	mountain hemlock	partridgefoot, grasses	amabilis fir, sedges, grasses, Vaccinium spp.	amabilis fir, five-leaved bramble, Vaccinium spp.	amabilis fir, five-leaved bramble, Vaccinium spp.
Potential Wildlife Use	General					
Potential Use by Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	M	M	M	M	M
	Northern Goshawk (laingi) (R)					
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (kennicottii) (B)					
	Pygmy-Owl (swarthi)(B)			L	L	L
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)					
	Wolverine (vancouverensis)(R)	M	M	M	M	M
	Ermine (anginae) (B)			L		
	Roosevelt Elk (B)	L	L	L	L	L
Comments:	Poor tree growth; yellow cedar is present in some stands. Lichens may be abundant.					

L = Low

H = High

M = Moderate

HMw - Mountain hemlock - mountain-heather parkland warm aspect habitat class

BGC Unit: MHmmp

Description: Occurs on moderate to steeply sloping upper slopes on warm, south aspects. Soils are typically shallow (bedrock close to surface) and consist of Folisols and Lithic Podzols and Orthic Humo-Ferric Podzols. Trees are found in clumps interspersed with patches of subalpine heathland and meadow.

Plant Species and Potential Habitat Use by Wildlife		Map Symbol and Successional Stage				
		HMw1	HMw2	HMw3	HMw4	HMw5
		Shrub - Herb	Pole - Sapling	Young Forest	Mature Forest	Old Growth
Plant Species	Dominants	red mountain-heather, white mountain-hemlock, grasses, sedges	mountain hemlock, red mountain-heather, white mountain-heather, sedges	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot	mountain hemlock, red mountain-heather, white mountain-heather, partridgefoot
	Associates	mountain hemlock	partridgefoot, grasses	amabilis fir, sedges, grasses, Vaccinium spp.	amabilis fir, five-leaved bramble, Vaccinium spp.	amabilis fir, five-leaved bramble, Vaccinium spp.
Potential Wildlife Use	General					
Potential Use by Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	M	M	M	M	M
	Northern Goshawk (laingi) (R)					
	Bald Eagle (B)					
	Marbled Murrelet (B)					
	Screech-Owl (kennicotti) (B)					
	Pygmy-Owl (swarthi)(B)			L	L	L
	Water Shrew (brooksi) (R)					
	Keen's Long-eared Myotis (R)					
	Wolverine (vancouverensis)(R)	M	M	M	M	M
	Ermine (anginae) (B)					
	Roosevelt Elk (B)	L	L	L	L	L
Comments:	Poor tree growth; yellow cedar is present in some stands. Lichens may be abundant.					

L = Low

H = High

M = Moderate

* May occur in this habitat type

BGC Unit: MHmmp		
ROc - Rock outcrop, cool aspect habitat class		
Description: areas of steeply sloping bedrock on cool, north aspects. Mountain tops and cliffs on upper slopes.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROc - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	Nil
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
ROw - Rock outcrop, warm aspect habitat class		
Description: areas of steeply sloping bedrock on cool, north aspects. Mountain tops and cliffs on upper slopes.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROw - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
Roosevelt Elk (B)	Nil	
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
ROm - Rock outcrop, moderate slope habitat class		
Description: areas of gently to moderately sloping bedrock on upper slopes and mountain plateaus.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol ROm - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	
	Ermine (anginae) (B)	
Roosevelt Elk (B)	Nil	
Comments:		

L = Low
M = Moderate
H = High

BGC Unit: MHmmp		
SAC - Sitka alder slide forest, cool aspect habitat class		
Description: occurs on colluvial and fluvial materials on steeply sloping, cool, north aspects.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol SAC - Edaphic Climax
Plant Species	Dominants	Sitka alder, grasses
	Associates	sedges
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Qwl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	L
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	L
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
SAw - Sitka alder slide forest, warm aspect habitat class		
Description: occurs on colluvial and fluvial materials on steeply sloping, warm, south aspects.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol SAw - Edaphic Climax
Plant Species	Dominants	Sitka alder, grasses
	Associates	sedges
Potential Wildlife Use	General	lack of large trees limits use by red/blue listed species
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	L
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	L
Comments:		

L = Low

M = Moderate

H = High

BGC Unit: MHmmp		
TAc - Talus and rubble, cool aspect habitat class		
Description: areas of steeply sloping talus and colluvial rubble on cool, north aspects. Found below steep cliff faces and ridges.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol TAc - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	L
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	
Comments:		

L = Low

M = Moderate

H = High

* May occur in this habitat type

BGC Unit: MHmmp		
TAW - Talus and rubble, warm aspect habitat class		
Description: areas of steeply sloping talus and colluvial rubble on warm, south aspects. Found below steep cliff faces and ridges.		
Plant Species and Potential Habitat Use by Wildlife		Map Symbol TAW - Edaphic Climax
Plant Species	Dominants	Not applicable
	Associates	Not applicable
Potential Wildlife Use	General	Lack of tree cover and forage limits use.
Potential Use By Red/Blue Listed Species (R) = Red (B) = Blue	White-tailed Ptarmigan (saxatilis)(B)	
	Northern Goshawk (laingi) (R)	
	Bald Eagle (B)	
	Marbled Murrelet (B)	
	Screech-Owl (kennicotti) (B)	
	Pygmy-Owl (swarthi)(B)	
	Water Shrew (brooksi) (R)	
	Keen's Long-eared Myotis (R)	
	Wolverine (vancouverensis)(R)	L
	Ermine (anginae) (B)	
	Roosevelt Elk (B)	
Comments:		

L = Low

M = Moderate

H = High

* May occur in this habitat type