Sustainable Resource Management Plan

Biodiversity Chapter for Meager Landscape Unit

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1.0 Introduction

This report provides background information used during the preparation of the Sustainable Resource Management Plan and associated proposed legal objectives for the Meager Landscape Unit (LU). Specifically, this report forms the biodiversity conservation chapter of the plan. A description of the landscape unit, discussion on significant resource values, and an Old Growth Management Area (OGMA) summary and rationale are provided.

Biological diversity or biodiversity is defined as: *'the diversity of plants, animals and other living organisms in all their forms and levels of organization, and includes the diversity of genes, species and ecosystems as well as the evolutionary and functional processes that link them'*[1]. British Columbia is the most biologically diverse province in Canada. In British Columbia, 115 species or subspecies of known vertebrates and 364 vascular plants are listed for legal designation as threatened or endangered[2]. The continuing loss of biological diversity will have a major impact on the health and functions of ecosystems and the quality of life in the province (Resources Inventory Committee, 1998).

Planning for OGMA and Wildlife Tree Patch (WTP) is recognized as a high priority for the province. LU Planning is an important component of the *Forest Practices Code of British Columbia* (FPC) which allows legal establishment of objectives to address landscape level biodiversity values. Implementation of this initiative is intended to help sustain certain biodiversity values. Managing for biodiversity through retention of old growth forests is not only important for wildlife, but can also provide important benefits to ecosystem management, protection of water quality and preservation of other natural resources. Although not all elements of biodiversity can be, or need to be, maintained on every hectare, a broad geographic distribution of old growth ecosystems is intended to help sustain the genetic and functional diversity of native species across their historic ranges.

The Squamish Forest District has completed draft LU boundaries and assigned draft Biodiversity Emphasis Options (BEO) in accordance with the direction provided by government. There are 20 LUs within this district. Through a ranking process (see Appendix I) the Meager LU was rated as an Intermediate BEO. Current government direction requires that priority biodiversity provisions, including the delineation of Old Growth Management Areas and wildlife tree retention (WTR), be undertaken immediately. This work was completed by the Ministry of Sustainable Resource Management (MSRM) and C.R.B. Logging Co. Ltd. with input provided by Ministry of Forests (MOF) and Ministry of Water, Land and Air Protection (MWLAP) as well as from other forest Licensees. Funding was provided by the Forest Investment Account and MSRM.

Input from First Nations was gathered during consultation between MSRM and individual First Nations. Comment from the public and other agencies was sought during the 60 day public review and comment period. A summary of public comments is included in Appendix II. Refer to the attached legal map for the location of OGMAs.

Supporting documentation regarding government policy, planning processes and biodiversity concepts are provided in the 1995 *Biodiversity Guidebook*, the 1999 *Landscape Unit Planning Guide* (LUPG), the *Vancouver Forest Region Landscape Unit Planning Strategy (1999),* as well as *Sustainable Resource Management Planning Framework: A Landscape-level Strategy for Resource Development*.

2.0 Landscape Unit Objectives

Landscape Unit objectives are legally established within the framework of the FPC and as such become Higher Level Plan objectives. Other operational plans must be consistent with these objectives.

[1] Definition of biodiversity is from page 2 of the Forest Practices Code *Biodiversity Guidebook* (September, 1995).
[2] BC Species and Ecosystems Explorer. 2003. Victoria, British Columbia. Available at: http://srmapps.gov.bc.ca/apps/eswp/

The Meager LU received an Intermediate BEO through the biodiversity value ranking and BEO assignment processes completed earlier (see Appendix I). Table 1 lists the percentages of the LUs productive forest area by natural disturbance type (NDT) required for old seral representation. The target figures listed in Table 1 are derived from Appendix 2 of the LUPG. The percentages of cutblock area required for WTR for each BEC subzone are shown in Table A of the *Legal Objectives*.

Table 1. Required Levels for Old Seral Representation

BEC Variant[1]	NDT[2]	LUPG Old Seral Representation Target[3]	
		%	ha
CWHds1	**NDT 2**	>9	>261
CWHms1	**NDT 2**	>9	>633
MHmm2	**NDT 1**	>19	>709

[1]**CWHds1:** Coastal Western Hemlock zone, southern dry submaritime variant
CWHms1: Coastal Western Hemlock zone, southern moist submaritime variant
MHmm2: Mountain Hemlock zone, leeward moist maritime variant
[2]NDT = Natural Disturbance Type. Refer to LUPG, Appendix 2.
[3]% of total productive forest area within BEC variant, as per LUPG.

Old seral representation targets listed above have been met through the delineation of OGMAs throughout the Meager LU. Refer to the attached Meager LU map for the location of OGMAs, to Appendix IV for OGMA statistics and attributes, and to Table 2 for a breakdown of non-contributing (NC), constrained Timber Harvesting Land base (THLB) and unconstrained THLB components.

Table 2. Non-contributing, Constrained THLB and Unconstrained THLB Components of Meager LU OGMAs.

BEC Variant	Total Old Seral Representation[1]	Non–Contributing[2] Area in OGMA				Constrained THLB[3] in OGMA*		Unconstrained THLB in OGMA[4]	
	Ha	Park Ha	%	Other Ha	%	Ha	%	Ha	%
CWHds1	**265.9**	0	0	106.7	40.1	113.0	42.5	46.2	17.4
CWHms1	**640.8**	10.3	1.6	501.9	78.3	116.0	18.1	12.6	2.0
MHmm2	**716.5**	48.5	6.8	655.0	91.4	0.8	0.1	12.2	1.7
TOTALS	**1623.2**	**58.8**	**3.6**	**1263.6**	**77.8**	**229.8**	**14.2**	**71.0**	**4.4**

Note: any differences in totals are due to rounding
*45 ha of the total 230 ha in constrained THLB are part of the THLB. The remaining 192 ha are considered NC.

1 This represents the actual amount established based on targets from Table 1.
2 Non-Contributing Area in OGMA = productive forest land that does not contribute to the AAC.
3 Constrained THLB in OGMA = Timber Harvesting Land Base that cannot fully contribute to the AAC due to site sensitivity or the need to manage for other resource values.
4 Unconstrained THLB in OGMA = THLB area (productive forest land) that is available for harvesting

Note: Objectives apply only to Provincial forest lands. Protected areas and other Crown forest lands outside of Provincial forest may contribute to old seral representation but the LU Objectives do not apply to these areas.

3.0 Landscape Unit Description

3.1 Biophysical Description

The Meager LU covers a total area of 50,990 hectares and is located on the west side of the Lillooet River, northwest of Pemberton. The LU encompasses several watersheds that flow into Lillooet River. Larger named watersheds include Meager Creek, South Creek and Perkins Creek, along with a few smaller unnamed stream systems.

Of the total LU area, 13,711 ha (27%) are within the Crown forested land base, and 5,235 ha of Crown forest is within the THLB. The remaining 37,279 ha (73%) are non-forested or non-Crown (rock, alpine tundra, water) and have been excluded from any OGMA contributions and calculations. A portion of the Upper Lillooet Protected Area is located within the Meager LU. Access to the landscape unit is provided from both the west and east side of the Lillooet River via Forest Service Road.

The Meager Landscape Unit lies within the Coast Mountains and Islands Physiographic Region, the Pacific Ranges Ecoregion and the Southern Pacific Ranges ecosection. Climatic conditions are best described by elevational gradients. At lower elevations summers are warm and dry, while winters are moist and cool with moderate snowfall. Mid elevations are characterized by moist, cool winters with relatively heavy snowfall and cool but relatively dry summers. High elevation climate is characterized by long, moist, cold winters with high snowfall and short, cool, moist summers.

The LU is comprised of four BEC subzones/variants: Coastal Western Hemlock southern dry submaritime (CWHds1); Coastal Western Hemlock southern moist submaritime (CWHms1); Mountain Hemlock leeward moist maritime (MHmm2); and Alpine Tundra (ATp). These four BEC subzones/variants represent three NDTs: CWHds1 and CWHms1 in NDT 2; MHmm2 in NDT1; and ATp in NDT 5 (alpine tundra and subalpine parkland).

NDT 2 forest ecosystems are influenced by infrequent stand-initiating events and historically were usually even-aged, but extended post-fire regeneration periods produced some stands with uneven-aged characteristics. Approximately 73% of the productive forest area in Meager LU is within NDT 2. NDT 1 forest ecosystems are influenced by rare stand-initiating events and historically were generally uneven-aged or multi-storied uneven aged, with regeneration occurring in gaps created by the death of individual trees or small patches of trees. Approximately 27% of the productive forest area of the Meager LU is within NDT 1. NDT 5 ecosystems are not considered productive forest since they occur above or immediately below the alpine tree line and are characterised by short and harsh growing seasons.

At lower elevations, within NDT 2, the Meager LU has sustained substantial levels of disturbance. Forested stands on lower elevation productive sites (typically on slopes with low to moderate gradients within the CWH) have been disturbed by past timber harvesting, fire and forest health issues. The relatively low levels of old seral forest remaining within the lower elevation BEC variants reflects this disturbance history. Despite these factors, the Meager LU can meet most of the old growth representation targets within productive forests predominantly from the non-contributing (NC) land base.

A significant portion of the LU is located within the Meager Creek Volcanic Complex, which is the site of the most recent volcanic eruption in southern Canada (+/-2400 years ago). This complex contains five major peaks (Mount Job, Capricorn, Mount Meager, Pylon and Devastation) and five major glaciers (Capricorn, Pylon, Devastation, Job and Meager). Hot and cold mineral springs are present in the LU with Meager Creek Hotsprings being well known. The Meager Creek watershed is well known for its occurrences of massive debris torrents along major creeks channels, which periodically scour the valley floors, and lower sidewalls of the main valley and the majority of the tributaries. Reference is still made to the Devastation Slide (1975) and the Hotsprings debris flow (1984). The most recent event was the Capricorn debris flow (1998) where an estimated 1.2 million cubic meters flowed down the creek, cutting off access and blocking Meager Creek.

3.2 Significant Resource Values

The LU supports a range of natural resource values and features, and a diversity of social and cultural values and influences. While there is no private land within the LU, there are two types of forest tenure present (Forest License and Timber Licence). Even though the LU is located away from large urban centres, the area does support Commercial backcountry recreation and the Meager Creek Hotsprings attracts many visitors. These factors all increase the complexity of resource management within the Meager LU.

Fish, Wildlife and Biodiversity: Nineteen wildlife species of specific management concern are known or suspected to be present with the Meager LU. These include RED-listed, BLUE-listed or Yellow-listed and regionally important species; or other species at risk called Identified Wildlife under the Forest Practice Code. Table 3 provides a summary of these wildlife species.

Table 3. Wildlife Species of Specific Management Concern

Species	Status[1]	Additional Comments	Likelihood of Presence[2]
Rubber Boa	Yellow-listed	Identified Wildlife	Confirmed present
Tailed frog	BLUE-listed	Identified Wildlife	Confirmed present
American bittern	BLUE-listed	Identified Wildlife	Low to Moderate
Great blue heron	BLUE-listed	---	Confirmed present
Green heron	BLUE-listed	---	High
Trumpeter swan	BLUE-listed	Regionally important	Confirmed present
Harlequin duck	Yellow-listed	Regionally important	High
Spotted owl	RED-listed	---	High
Bald eagle	Yellow-listed	Regionally important	Confirmed present
Peregrine falcon	RED- and BLUE-listed subspecies	---	Moderate
Northern goshawk	RED- and BLUE-listed subspecies	Identified Wildlife	Confirmed present
Keen's long-eared myotis	RED-listed	Identified Wildlife	High
Townsend's big-eared bat	RED-listed	Identified Wildlife	Low
Trowbridge shrew	BLUE-listed	Identified Wildlife	Moderate
Moose	Yellow-listed	Regionally important	Confirmed present
Mountain goat	Yellow-listed	Regionally important	Confirmed present
Black-tailed deer	Yellow-listed	Regionally important	Confirmed present
Grizzly bear	BLUE-listed	Identified Wildlife	Confirmed present
Wolverine	Yellow-listed	Regionally important	Confirmed present

[1] Status from the British Columbia Conservation Data Centre (CDC). Yellow-listed species is any indigenous species or subspecies (taxa) which is not at risk in British Columbia. The CDC tracks some Yellow listed taxa, which are vulnerable during times of seasonal concentration (e.g. breeding colonies). BLUE-listed species includes any indigenous species or subspecies considered to be Vulnerable in British Columbia. Vulnerable taxa are of special concern because of characteristics that make them particularly sensitive to human activities or natural events. Blue-listed taxa are at risk, but are not Extirpated, Endangered or Threatened. RED-listed species is any indigenous species or subspecies considered to be Extirpated, Endangered, or Threatened in British Columbia. Extirpated taxa no longer exist in the wild in British Columbia, but do occur elsewhere. Endangered taxa are facing imminent extirpation or extinction. Threatened taxa are likely to become endangered if limiting factors are not reversed. Red-listed taxa include those that have been, or are being, evaluated for these designations.

[2] Professional judgement regarding likelihood of presence based on species distribution and habitat requirements.

Of these 19 wildlife species, four species were given specific consideration during the OGMA delineation process. This included mountain goats, grizzly bears, eagles and moose.

Mountain goat winter range habitat has been identified by the Ministry of Environment, Lands and Parks (MELP, now called MWLAP) in suitable areas throughout the Meager LU, based upon inventory work conducted in the 1990s. Legal designation of these areas as Ungulate Winter Range (UWR) has been completed under Section 69 of the FPC Operational Planning Regulation. Mountain goat winter range habitat polygons, spatially defined on 1:20000 reference maps, were considered during OGMA delineation, to pursue overlap of OGMAs with constrained areas.

Four species of Identified Wildlife have been recorded in the Meager LU: Grizzly bear, Rubber Boa, Tailed frog and bull trout. As outlined in the Identified Wildlife Management Strategy (IWMS) Grizzly bears are usually found in the more remote portions of the LU, though occasional sightings of grizzlies within other portions of the LU have been reported. Rubber boa has been found in and around talus/rock slide areas on southerly aspects and near the Meager Creek Hotsprings, and tailed frog have been noted in smaller stream systems. Bull trout occupy several cold water stream systems.

Grizzly bears in the Meager LU are within the threatened Squamish-Lillooet grizzly bear population unit for which a Recovery plan has yet to be drafted. In general, the Recovery plan once completed will include objectives and strategies to protect and/or enhance grizzly bear habitat values. Grizzly bears are also an Identified Wildlife species. Provisions exist to protect some critical foraging or security habitat within Wildlife Habitat Areas (WHA). Designation of WHAs may occur as necessary or as part of the Recovery Plan to protect additional grizzly bear habitat in the Meager LU. Grizzly bear habitat was an important consideration for the OGMA selection process in Meager Creek and South Creek (for avalanche chute adjacency) and along the Lillooet River floodplain.

Small concentrations of bald eagles use low elevation floodplain forest stands along the Lillooet River for over-wintering. Mature or old forest associated with riparian areas and salmon streams are most important (e.g. near South Creek). Although specific habitats have not been mapped, bald eagle nest, perch and roost sites were considered during OGMA delineation.

Moose winter range is also present in lower elevations along the Lillooet River floodplain. Forested stands that provide thermal and snow interception cover near foraging areas (e.g. wetlands or willow dominated sites) were considered important candidates for OGMAs. During spring and summer, the Meager Creek watershed supports a moderate to high black-tail deer population that migrates north from their winter range in MacKenzie basin. The deer remain in the watershed until mid-October when they migrate back to MacKenzie basin.

In addition to these wildlife species, streams and rivers within the Meager LU support resident and migratory salmonid populations. Salmonid species associated with this LU include: rainbow trout, steelhead, cutthroat trout, Dolly Varden char, bull trout (Identified Wildlife), coho salmon, sockeye salmon and chinook salmon. The highest freshwater fisheries values are associated with the Lillooet River, its floodplain channels and the lower (low gradient) reaches of major tributaries.

Several OGMA candidates contain habitat values that meet the requirements of one or more of the identified wildlife species. The summary in Appendix IV lists some of the reasons for choosing OGMAs, including habitat value for wildlife. OGMAs have also been placed to maximize overlap with other high value wildlife habitats such as riparian areas or ungulate winter ranges where appropriate.

While the LU is relatively unsettled, current and anticipated four season recreational use and geothermal development activity will create wildlife resource management issues, particularly for sensitive species such as grizzly bear, mountain goat, wolverine and rubber boa.

Protected Areas: A portion of Upper Lillooet Park, created under the Protected Area Strategy (PAS) is located within the Meager LU. The Park is located in the Meager Creek watershed and a portion of the easterly boundary follows Devastation Creek.

Timber Resources: Commercially valuable tree species in the Meager LU include western red cedar, coastal Douglas-fir, western hemlock and balsam (amabilis fir) at the lower to mid elevations; with mountain hemlock, amabilis fir and lesser amounts of subalpine fir found in higher elevation areas.

According to the latest database, approximately 55% of the total 5,235 ha in THLB is considered early seral or immature forest. Mature forests (>80-250 years old in CWH, >120-250 years in MH) occupy about 10% of the THLB, and old forests (>250 years old) occupy about 35% of the THLB area. The actual area remaining in mature and old forest is less than that shown by mapping due to recent disturbances that have not been incorporated into the data set. Continued access to commercially valuable timber, including future second growth, is a notable concern.

There are three major Licensees operating in the Meager LU, located within the boundaries of the Soo TSA: C.R.B. Logging Co. Ltd.'s chart area covers the Meager Creek watershed; Halray/Weyerhaeuser's chart area covers the lower Meager Creek area and extends south along the Lillooet River to the lower reaches of South Creek; Terminal Forest Products chart area covers mid to upper elevation areas in South Creek extending towards Meager Creek. Timber Licences held by Weyerhaeuser Company Limited and managed by C.R.B. Logging Co. Ltd. are found in the mid to lower elevational ranges from the Meager watershed extending down to South Creek.

Community Water Systems: There are no Community Water systems within the Meager LU.

Private Land: There is no private land within the Meager LU.

Mining and Mineral Exploration: Subsurface resources (minerals and geothermal) and aggregate resources are valuable to the provincial economy, but are difficult to characterize due to their hidden nature. The Ministry of Energy and Mines (MEM) has rated the industrial mineral and metallic mineral potential of this LU as Moderate while the geothermal potential rates as High. These rankings are based on a qualitative analysis which takes into account the values of known resources, past exploration and production as well as the number of known mineral occurrences and a subjective probability estimate of value by industry experts.

In this LU there are eight mineral tenures in one continuous group near the south end of the LU. In Meager Creek, geothermal resources have been researched and documented as early as the mid 1970's by B.C. Hydro. Currently, there is a geothermal lease over much of the Meager watershed and drilling activities were conducted on three sites over the 2001/2002-winter season. OGMA delineation did not take into account mineral potential, showings or prospects; but mineral tenures were avoided. The establishment of OGMAs will not have an impact on the status of existing aggregate, geothermal, oil and gas, and mineral permits or tenures. Exploration and development activities are permitted in OGMAs. The preference is to proceed with exploration and development in a way that is sensitive to the old growth values of the OGMA; however, if exploration and development proceeds to the point of significantly impacting old growth values, then the OGMA will be moved.

Recreation: The forest road network normally provides access to recreational resource values within this LU over the spring through fall seasons. Unless mineral/geothermal tenure holders are active in the winter months, there is no winter road access to much of the LU. During periods when access systems are open, recreational use is considered Moderate-High with the potential to reach High with continued issuance of Commercial Backcountry Recreation Permits. Current summer uses include sightseeing, visits to Meager Creek Hotsprings, nature/wildlife viewing, camping, hiking/mountaineering, mountain biking, fishing and hunting. During the winter months activities include heli skiing, snowmobiling, telemark/cross country skiing and trips to the Meager Creek Hotsprings.

The LU is easily accessible from the communities of Pemberton, Mount Currie and Whistler. The Meager Creek Hotsprings is well known and attracts a high number of local, national and international users. It is expected that the newly constructed campground will also receive high use and facilitate longer stays in the LU. The newly constructed and approved Elaho-Meager trail is also expected to attract visitors to the LU.

First Nations: The Meager LU is located within the traditional territory of Lil'wat Nation/ Mount Currie Band. There is oral history of traditional use throughout this LU, most notably along major water courses, such as the Lillooet River and some of the larger tributary streams. Trap line demarcation and old trap trees are evident along these corridors and long time residents of the Pemberton Valley can recall 'Twenty-five Mile Jim' returning home with a canoe full of pelts.

In 1996 and 1997, an Archaeological Overview Assessment (AOA) model was developed by Millennia Research on behalf of MOF to indicate where archaeological sites were most likely located. This was done to minimize potential impacts by natural resource operations on culturally important areas. The model was useful in predicting potential locations (i.e. moderate or high potential) of Culturally Modified Trees (CMTs), habitation sites and trails. However, use of the model in other areas identified shortcomings, predominately around distance to potential habitation sites and timber typing and CMT potential. Traditional Use Studies using interviews with Elders and oral history translations have provided generally better information to licensees within the Soo TSA.

AOA maps were reviewed to determine if archaeological potential sites or travel routes were captured in OGMAs. In the Meager LU, several OGMAs do overlap with moderate or high potential habitation sites where old forest still exists, these are located on lower slope or valley bottom areas along the major stream systems. Several OGMAs also overlap with forest stands exhibiting high or moderate potential for CMTs. There is no overlap between OGMAs and potential travel routes.

4.0 Biodiversity Management Goals and Strategies

4.1 General Biodiversity Management Goals

Biodiversity management goals and strategies describe, in specific terms, the outcomes that legal LU Objectives are to achieve. They also describe the rationale for selection of OGMAs, some of the ecological features that OGMAs are to include, and some decisions made to balance management of all values present in the LU. While LU Objectives are legally binding, management goals and strategies are not. Goals and strategies must remain flexible to incorporate future direction and new methods in order to ensure continued compliance with the corresponding LU Objectives.

The biodiversity ranking process identified important biodiversity values within the Meager LU that must be managed for (see Appendix I). The delineation of OGMAs cannot be undertaken without recognition of these significant values because OGMA delineation is the most effective provision of the FPC LU planning initiative for managing biodiversity. The previous section (Section 3) describes the resource values considered in the LU planning process.

The development of biodiversity management goals and strategies is important not only for conservation of biodiversity, but also to allow development of strategies to mitigate short and long-term LU planning impacts on timber supply. For example, OGMA delineation was not guided strictly by age class or Allowable Annual Cut contributions, as this approach could result in including stands of marginal biodiversity value and significant timber supply impact within OGMAs. As a result, old forest stands that were proposed or approved for harvesting were avoided as OGMA candidates (except one case in Meager Creek, see below). Individual forested polygons were assessed according to their specific attributes during the OGMA delineation process.

As per the LUPG, OGMAs were established first in areas within the NC land base, according to the last Timber Supply Review (TSR). The only notable exceptions, where contributing land base was included within OGMAs, were forest stands near lower Meager Creek or areas suggested by licensees. The lower

Meager area was required as OGMA due to its spatial location and because there were no other suitable OGMA candidates in the CWHds1 variant. Some stands in South Creek were selected from the contributing land base at the licensee's suggestion due to their inoperable nature. Any potential impacts to the THLB are expected to be offset by areas of NC land base that were specifically avoided during OGMA delineation, to maintain potential for future harvesting opportunities and mitigate timber supply impacts.

To pursue representation of old growth stands in each BEC variant, efforts were made to delineate OGMAs that included a diversity of stand types, by species composition and geographic/topographic locations. OGMAs were aggregated when possible, both within and across BEC variants, to pursue connectivity and to create larger patch sizes with forest interior habitat characteristics. Efforts were made to ensure OGMAs were distributed throughout the LU and not concentrated in a particular drainage. This is consistent with the "coarse filter" approach of biodiversity management whereby representative old growth stands are protected to maintain ecosystem processes and specific wildlife habitat requirements that may be poorly understood. In addition, ensuring OGMA placement is distributed throughout the LU helps ensure that any operational impacts are shared by all licensees operating in the area.

Attempts were made to maximize OGMA overlap with high value wildlife habitats such as Mountain goat winter range, riparian areas and other unique or biologically valuable areas (e.g. wetlands and slide-tracks). Riparian reserve zones (RRZs), established in accordance with the FPC, will help maintain some fish and wildlife habitat values associated with riparian areas and adjacent riparian forests. OGMAs delineated within and adjacent to existing RRZs can be expected to build upon these fish and wildlife habitat values. Narrow or isolated riparian fringes were not included in OGMAs, as such areas are more appropriate for stand level management and do not meet the "coarse filter" approach outlined in the Biodiversity Guidebook.

In all cases, detailed air photo review was performed to confirm forest cover attributes and suitability of a given stand for OGMA. In addition, all OGMAs were reviewed via helicopter survey work to verify suitability and presence of desirable old forest characteristics.

4.2. Specific Biodiversity Management Goals and Strategies

4.2.1 Biodiversity Management Goals

1. Delineate old growth management areas first in the non-contributing portion of the Provincial forest to maintain the full old seral representation targets for each BEC variant (CWHds1, CWHms1, and MHmm2), according to the following targets (from Table 2) and as per the attached map:

    a) CWHds1 target of >9%, or at least 261 ha;
    b) CWHms1 target of >9%, or at least 633 ha; and
    c) MHmm2 target of >19%, or at least 709 ha.

2. Maintain areas that are representative of natural ecosystem patterns and ecosystem mosaics.

3. Maintain a wide range of ecosystem types and species composition.

4. Include rare, unique or under-represented stand types within OGMAs where possible and when compatible with other biodiversity goals.

5. Aggregate OGMAs when possible, both within and across BEC variants, to implement additional biodiversity management provisions like connectivity and forest interior habitat.

6. Place OGMAs where site location and topographic features provide the highest wildlife habitat and biodiversity value, such as UWRs, stream confluences, adjacent to slide-tracks, wetlands and other features when suitable old growth is present.

4.2.2 Biodiversity Management Strategies

A. Delineate OGMAs that include existing stands of old growth (250+ years old) or particularly high biodiversity value older mature stands (generally 140-250 years old) that will provide old growth attributes in as short a time frame as possible (Goals 1 and 2).

B. Include unique stands and habitat types within OGMAs (Goals 1, 2, 3 and 4).

C. Delineate OGMAs that are as large and contiguous as possible, while ensuring that they contain a wide range of sites and habitat types. (Goals 2, 3, 4, 5, 6).

D. Establish OGMAs that are adjacent to biologically valuable non-forest habitats (e.g. lakes, wetlands and slide-tracks) (Goal 6).

E. Retain veterans within harvesting areas to levels typical of densities found following natural disturbances as a focus of stand level biodiversity management, in accordance with the wildlife tree retention objective. Retention of dominants as veteran recruits is recommended where veterans are not present in the stand (Goal 2).

4.3. OGMA Boundary Mapping

OGMA boundaries were delineated to include complete forest stands (i.e. forest cover polygons) and follow natural features whenever possible to improve the ease of OGMA mapping and reduce operational uncertainty. OGMAs were mapped using a 1:20000 scale TRIM base which forms the legal standard for measurement.

4.4. Auditing Wildlife Tree Retention

The percent required for wildlife tree retention described in Table A of the *Legal Objectives for the Meager Landscape Unit* does not have to be fully implemented on a cutblock-by-cutblock basis. Instead, the retention target may apply over a larger area (e.g. FDP or equivalent), so long as the retention target is met each 3-year period. The intent is to provide limited flexibility for retention at the cutblock level provided that the legally required percentage is met across the subzone. Since wildlife tree retention is a stand level biodiversity provision, wildlife tree patches are also to be distributed across each subzone and the landscape unit.

5.0 Mitigation of Timber Supply Impacts

The Meager LU plan has been developed to maximize the effectiveness of the FPC biodiversity management provisions while minimizing impacts on the Soo TSA timber supply.

As mentioned previously there are three forest licensees with operations in the Meager LU. OGMAs were delineated based upon the biodiversity management goals and objectives, with some effort to evenly distribute OGMAs between the licensees. More importantly, LU planning in the Squamish Forest District is intended to minimize impacts to timber supply as a whole across the entire District. Of the total 1623 ha of OGMA to be established, 1322 ha (81.4%) comes from the NC land base; most of the remaining OGMA area from the THLB (either PC or C) was suggested or agreed to by licensees.

With input from the three forest licensees, the following specific measures were adopted to minimize the impact of Meager LU planning to the timber supply:

1. As much as possible, OGMAs were delineated within the NC land base or in THLB areas recommended by or with agreement from licensees.

2. Wildlife ESA's, constrained areas, Ungulate Winter Range (UWR), lower productivity sites, areas of difficult access and marginal economics were included within OGMAs where possible and compatible with biodiversity objectives.

3. Old and mature forested stands with specific wildlife habitat values likely to be constrained operationally were included in OGMAs where compatible with current policy and biodiversity management objectives.

4. During the LU planning process, consideration was made to ensure timber access was not precluded by OGMA delineation. Known access corridors were generally left out of OGMAs and OGMA boundaries were delineated to simplify adjacent management.

5. Approved Forest Development Plans for the Forest Licensees within the Meager LU were used during OGMA delineation to avoid proposed or approved developments.

6. OGMA boundaries used natural features wherever possible to ensure they could be located on the ground. OGMAs were delineated to include complete stands of timber wherever possible to reduce operational uncertainty, increase the ease of OGMA mapping, and maximize the "coarse filter" effectiveness of OGMAs for long-term biodiversity protection.

7. Where possible, OGMA placement avoided areas within the NC land base identified by Licensees as potential future harvest opportunities (e.g. helicopter access). Establishing OGMAs in the NC may still have implications to future timber supply by reducing flexibility for helicopter operations.

5.1 OGMA Amendment Procedure

An MSRM Coast Region policy has been developed to give direction to proponents (forest tenure holders) when applying for amendments to OGMA legal objectives. Amendment procedures cover such things as minor or major amendments for resource development (e.g. roads, bridges, boundary issues, rock quarries & gravel pits) or relocation of OGMAs. The policy also discusses acceptable management activities and review procedures. The procedure has been approved by the Director of the Coast Region and forms an integral part of this landscape unit plan.

Appendix I:

Biodiversity Emphasis Option Ranking Criteria

The Meager LU received an Intermediate BEO during the application of Landscape Unit ranking criteria completed earlier by the Squamish Forest District Landscape Unit Planning Team. The first set of criteria, to rank ecological values, was applied to determine an initial BEO ranking for the District's LUs. The LU with the highest ecological values score was ranked number one, the next highest, number two and so on. The timber values were scored next, with their resultant scores generally being used as tie-breakers for LUs with similar ecological scores. This approach was consistent with direction provided in the FPC "*Higher Level Plans: Policy and Procedures"* document.

Final determination regarding the BEO assignment, particularly when scores were close, was based upon discussions between MELP and MOF.

What follows is a series of Tables that summarize the ecological and timber scores with draft and final BEO assignments.

Table Ia is a summary of general BEO ranking criteria, followed by the ecological scoring summary for the Meager LU (Table Ib). Table Ic summarizes the ecological ranking score for the entire Forest District, while Table Id shows the draft BEOs based on ecological scores. Table Ie illustrates the timber value rating criteria, while Table If shows the timber score for the Meager LU, and Table Ig describes the timber score for all landscape units in the District. The final BEO assignment is shown in Table Ih.

1) Ecological Values Ranking Criteria

The ecological values ranking criteria was used to initially assess which of the Squamish Forest District's LUs required higher levels of biodiversity provisions.

Table Ia. Ecological Values Ranking Criteria for Squamish LUs

Ecological Values	Criteria	Criteria description	Value	Rank	Score
Ecosystem Representation	Representation in Parks	By % of BEC variants	0.0 to 0.4% >0.4 to 0.8% >0.8 to 1.2% >1.2 to 1.6% >1.6 to 2.0% >2.0%	High Low	5 pts 4 pts 3 pts 2 pts 1 pt 0 pts
Ecosystem Complexity	Diversity of BEC variants --- Diversity of special habitat features	By # of different BEC variants --- Professional judgement regarding diversity of special habitat features (estuaries, freshwater deltas floodplains; wetlands/lakes, sidetracks)	7 BEC variants 6 BEC variants 5 BEC variants 4 BEC variants 3 BEC variants --- 5/5 4/5 3/5 2/5 1/5 0/5	High Low --- High Low	8 pts 6 pts 4 pts 2 pts 0 pts --- 5 pts 4 pts 3 pts 2 pts 1 pt 0 pts

Table Ia cont'd

Fish/Wildlife Values	Fish/Wildlife values	Ranked based on points for species of special concern within the Squamish Forest District (anadromous salmonids, bull trout tailed frog, marbled murrelet, spotted owl, grizzly bear, moose and black-tailed deer)	score ≥ 10 score 7 to 9 score 4 to 6 score ≤ 3	High Low	10 pts 6 pts 2 pts 1 pt
Sensitivity to Development	Based on sensitivity of BEC variants --- Inherent level of protection from significant human disturbance (i.e. urbanization, agricultural use, recreational use, etc.)	Determine NDT type which is most prevalent (exclude NDT 5) --- Professional judgement	NDT 1 >60% NDT 1 30-60% NDT 1 <30% NDT2 predominate. --- Based on review and assessment by MELP staff	High Low --- High Low	2 pts 1 pts 0 pts 0 pts --- 3 pts 2 pt 1 pt 0 pts
Connectivity	Based on non-PAS connectivity --- Based on connectivity associated with PASs	Determine what proportion of the gross land area is mature/old (preliminary score) and then use professional judgement to derive a final score --- Determine what proportion of the gross land area is protected	>50% >40 to 50% >30 to 40% ≤30% --- >20% >10 to 20% >1 to 10% <1%	High Low --- High Low	3 pts 2 pts 1 pt 0 pts --- 3 pts 2 pts 1 pt 0 pts
Capability	Based on how easily seral stage targets can be met (exclude AT)	Determine how much old forest is currently present --- Determine how many BEC variants currently achieve old seral targets for high BEO --- Determine how much AC 8 is present (for recruitment and long-term capability)	>60% >40 to 60% >20 to 40% 0 to 20% --- >80% >70 to 80% >50 to 70% 0 to 50% --- >40% >20 to 40% 0% to 20%	High Low --- High Low --- High Mediu m Low	4 pts 3 pts 2 pts 1 pt --- 3 pts 2 pts 1 pt 0 pts --- 2 pts 1 pt 0 pts
Total Score					**48 pts**

Table Ib. Ecological Values Scoring Summary for Meager LU

Ecological Values	Criteria	Criteria description	Value	Score
Ecosystem Representation	Representation in Parks	By % of BEC variants	1.59%	2 pts
Ecosystem Complexity	Diversity of BEC variants --- Diversity of special habitat features	By # of different BEC variants --- Professional judgement regarding diversity of special habitat features (estuaries, freshwater deltas floodplains; wetlands/lakes, sidetracks)	4 variants --- 3/5 special habitat features	2 pts --- 3 pts
Fish/Wildlife Values	Fish/Wildlife Values	Ranked based on points for species of special concern within the Squamish Forest District (anadromous salmonids, bull trout tailed frog, marbled murrelet, spotted owl, grizzly bear, moose and black-tailed deer)	Initial score of 7/21	6 pts
Sensitivity to Development	Based on sensitivity of BEC variants --- Inherent level of protection from signif. human disturbance (i.e. urbanization, agricultural use, recreational use, etc...)	Determine NDT type which is most prevalent (exclude NDT 5) --- Professional judgement	NDT 2 is 25% of gross land base --- no human habitation, no agricultural use and high level of recreational use	0 pts --- 2 pts
Connectivity	Based on non-PAS connectivity --- Based on connectivity associated with PASs	Determine what proportion of the gross land area is mature/old (preliminary score) and then use professional judgement to derive a final score --- Determine what proportion of the gross land area is protected	52% of gross area is mature/old forest --- 0.81% of gross area is protected in Upper Lillooet park	3 pts --- 0 pts
Capability	Based on how easily seral stage targets can be met (exclude AT)	Determine how much old forest is currently present --- Determine how many BEC variants currently achieve old seral targets for high BEO --- Determine how much AC 8 is present (for recruitment and long-term capability)	53.7% of total productive forest is old growth --- 3 of the 4 variants can meet old seral targets --- 31% of age classes 1 thru 8 are age class 8	3 pts --- 2 pts --- 1 pt
Total Score				**24 pts**

Table Ic. Ecological Values Ranking for Original 21 Squamish Forest District LUs

LU	LU #	Total Score (x/48)	Ranking
Rogers	**301**	**23**	8th (tied with East Howe and Upper Squamish)
Meager	**302**	**24**	7th (tied with Lower Elaho and Tuwasus)
Upper Elaho	**303**	**25**	6th (tied with Billygoat)
Lower Elaho	**304**	**24**	7th (tied with Meager and Tuwasus)
Upper Squamish	**305**	**23**	8th (tied with Rogers and East Howe)
Ryan	**306**	**12**	11th
Lower Squamish	**307**	**28**	4th
Billygoat	**308**	**25**	6th (tied with Upper Elaho)
Mamquam	**309**	**20**	9th (tied with Soo and Whistler)
Tuwasus	**310**	**24**	7th (tied with Meager and Lower Elaho)
East Howe	**311**	**14**	**10th**
Indian	**312**	**23**	8th (tied with Rogers and Upper Squamish)
Soo	**313**	**20**	9th (tied with Mamquam and Whistler)
Whistler	**314**	**20**	9th (tied with Mamquam and Soo)
Callaghan	**315**	**9**	12th
Sloquet	**316**	**30**	2nd (tied with Gates)
Upper Lillooet	**317**	**27**	5th (tied with Lizzie)
Railroad	**318**	**29**	3rd
Birkenhead	**319**	**31**	1st
Gates	**320**	**30**	2nd (tied with Sloquet)
Lizzie	**321**	**27**	5th (tied with Upper Lillooet)

Table Id. Draft BEOs for Original 21 Squamish Forest District LUs Based on Ecological Values Ranking

BEO	LU	LU #	Ranking	% of Total THLB
High	**Gates**	**320**	2nd (tied with Sloquet)	**4.1**
High	**Sloquet**	**316**	2nd (tied with Gates)	**4.9**
High	**Birkenhead**	**319**	1st	**1.0 (1.0/3.4)**
				Total = 10.0
Intermediate	**Birkenhead**	**319**	1st	**2.4 (2.4/3.4)**
Intermediate	**Railroad**	**318**	3rd	**3.9**
Intermediate	**Lower Squamish**	**307**	4th	**2.3**
Intermediate	**Upper Lillooet**	**317**	5th (tied with Lizzie)	**6.1**
Intermediate	**Lizzie**	**321**	5th (tied with Upper Lillooet)	**3.8**
Intermediate	**Upper Elaho**	**303**	6th (tied with Billygoat)	**5.6**
Intermediate	**Billygoat**	**308**	6th (tied with Upper Elaho)	**3.8**
Intermediate	**Meager**	**302**	7th (tied with Lower Elaho and Tuwasus)	**3.1**
Intermediate	**Lower Elaho**	**304**	7th (tied with Meager and Tuwasus)	**5.0**
Intermediate	**Tuwasus**	**310**	7th (tied with Meager and Lower Elaho)	**1.9**
Intermediate	**Rogers**	**301**	8th (tied with East Howe and Upper Squamish)	**6.3**
Intermediate	**Indian**	**312**	8th (tied with Rogers and Upper Squamish)	**3.9**
				Total = 48.1

Table Id. (cont'd):

Low	**Upper Squamish**	**305**	8th (tied with Rogers and East Howe)	**12.7**
Low	**Whistler**	**314**	9th (tied with Mamquam and Soo)	**2.4**
Low	**Mamquam**	**309**	9th (tied with Soo and Whistler)	**10.1**
Low	**Soo**	**313**	9th (tied with Mamquam and Whistler)	**5.5**
Low	**East Howe**	**311**	10th	**4.1**
Low	**Ryan**	**306**	11th	**3.4**
Low	**Callaghan**	**315**	12th	**3.6**
				Total = 41.8

2) Timber Values Rating Criteria

Timber values rating criteria were used to assess the relative timber values of the District's LUs and consider short and long-term contributions of each LU to the TSA in terms of value and timber volume.

Table Ie. Timber Values Rating Criteria for Squamish LUs

Timber Values	Criteria	Criteria description	Value/Comments	Rating
Productivity	Site Index	Proportion of THLB in LU with SI of ≥ 25 (higher proportion of better sites resulted in a higher rating)	>35% of THLB 25 to 35% of THLB <25% of THLB	High Moderate Low
Mature and harvestable Timber	Mature and harvestable timber	Proportion of mature and harvestable timber in LU (higher proportion of mature and harvestable timber resulted in a higher rating)	>50% ≥ 101 years 25 to 50% ≥ 101 years <25% ≥ 101 years	High Moderate Low
Operability	Operability	Proportion of age class 8 (141 to 250 years of age) and age class 9 (>250 years) in the productive land base that is considered operable (conventional operability data and professional judgement regarding extent to which new helicopter operability data will change operable land base)	Review of proportion of age classes 8 and 9 that are considered operable, with professional judgement applied to reach a final rating	High Moderate Low
Averaged rating	Site Index, Mature and Harvestable Timber and Conventional Operability	Averaged rating of the 1st 3 criteria	Averaged rating of the 1st 3 criteria, based a review of these ratings and professional judgement	High Moderate Low
Constraints	Constraints on harvesting	Amount of constraints to harvesting (e.g. visual quality, community watersheds, proximity to communities, recreation, high fish and wildlife values)	Professional judgement of the extent of constraints to harvesting	High Moderate Low
Overall Rating				Low to High*

* Note: Unlike the ecological values rating criteria, the rating of timber values did not follow a point scoring system. The 1st three values (productivity/mature and harvestable timber/operability) were utilised by MOF planning staff to develop an "averaged" rating of low, medium or high. When constraints were high, this averaged rating was reduced by 1 level (e.g. from high to medium).

Table If. Timber Values Rating Summary for Meager LU

Timber Values	Criteria	Criteria description	Value/Comments	Rating
Productivity	Site Index	Proportion of THLB in LU with SI of $\geq$ 25 (higher proportion of better sites resulted in a higher rating)	29.6% of THLB	Moderate
Mature and harvestable Timber	Mature and Harvestable Timber	Proportion of mature and harvestable timber in LU (higher proportion of mature and harvestable timber resulted in a higher rating)	52.3% of THLB	High
Operability	Operability	Proportion of age class 8 (141 to 250 years of age) and age class 9 (>250 years) in the productive land base that is considered operable (conventional operability data and professional judgement regarding extent to which new helicopter operability data will change operable land base)	Review of proportion of age classes 8 and 9 that are considered operable, with professional judgement applied to reach a final rating	Low/ Moderate
Averaged rating	Site Index, Mature and Harvestable Timber and Conventional Operability	Averaged rating of the 1st 3 criteria	Averaged rating of the 1st 3 criteria, based a review of these ratings and professional judgement	Moderate
Constraints	Constraints on harvesting	Amount of constraints to harvesting (e.g. visual quality, community watersheds, proximity to communities, recreation, high fish and wildlife values)	Professional judgement of the extent of constraints to harvesting (East Howe LU: recreation and fisheries)	Low/ Moderate
Overall Rating				Moderate

Table Ig. Timber Values Rating for Original 21 Squamish Forest District Lus

LU	LU #	Overall Timber Values Rating
Rogers	**301**	**Moderate**
Meager	**302**	**Moderate**
Upper Elaho	**303**	**High**
Lower Elaho	**304**	**High**
Upper Squamish	**305**	**High**
Ryan	**306**	**Moderate**
Lower Squamish	**307**	**Moderate**
Billygoat	**308**	**Moderate**
Mamquam	**309**	**Moderate/High**
Tuwasus	**310**	**Low**
East Howe	**311**	**Low**
Indian	**312**	**Moderate**
Soo	**313**	**Moderate**
Whistler	**314**	**Low**
Callaghan	**315**	**Moderate**
Sloquet	316	High
Upper Lillooet	317	Low
Railroad	318	Moderate
Birkenhead	319	Moderate
Gates	320	Low/Moderate
Lizzie	321	Low

3) Final BEO Designation

Final BEO designations were based on initial consideration of the draft BEOs, which were derived from the original ecological ranking, and the timber values rating criteria. Ecological values rankings within 2 points of each other were assumed to have the same relative score and the timber values ranking was used to break any ties. Final BEO designation was based on discussions between MELP and MOF planning staff. In regards to the allocation of High, Intermediate and Low BEOs, an attempt was made to achieve a 10-45-45 percent distribution for High, Intermediate and Low BEOs respectively.

The final distribution was 10% High, 46% Intermediate and 44% Low. It should be noted that THLB Area reported in Table Ih is derived from the RLUPS data base which used PAMAP, the THLB numbers used in the new data set used ArcInfo and are considered more accurate.

Table Ih. Final BEO for 20* Squamish Forest District LUs Based on Ecological and Timber Values

Final BEO	LU	LU #	Original Ecological Ranking	Draft BEO	Timber Values Rating	THLB Area (ha)	% of Total THLB**
High	**Birkenhead**	**319**	1st	High/Int.	Moderate	6,768.0	**4.19**
High	**Railroad**	**318**	3rd	Interme diate	Moderate	5,816.8	**3.60**
High	**Sloquet (portion)**	**316**	2nd	High	High	3,574.8	**2.21 (2.21/6.39)**
							Total = 10.00

Intermediate **Intermediate**	**Gates** **Sloquet (portion)**	**320** **316**	2nd 2nd	High High	Low/Mod. High	7,330.7 6743.1	**4.54** **4.18 (4.18/6.39)**
Intermediate	**Lower Squamish**	**307**	4th	Intermediate	Moderate	3,875.4	**2.40**
Intermediate	**Upper Lillooet**	**317**	5th	Intermediate	Low	2,305.5	**1.43**
Intermediate	**Lizzie**	**321**	5th	Intermediate	Low	7,004.1	**4.34**
Intermediate	**Billygoat**	**308**	6th	Intermediate	Moderate	8,386.7	**5.20**
Intermediate	**Elaho**	**303**	6th/7th	Intermediate	High	16,691.9	**10.34**
Intermediate	**Meager**	**302**	7th	Intermediate	Moderate	4,847.7	**3.00**
Intermediate	**Tuwasus**	**310**	7th	Intermediate	Low	4,793.6	**2.97**
Intermediate	**Rogers**	**301**	8th	Intermediate	Moderate	12,230.7	**7.58**
							Total = 45.98
Low	**Indian**	**312**	**8th**	Intermediate	Moderate	5,802.3	**3.59**
Low	**Upper Squamish**	**305**	8th	Low	High	19,922.2	**12.34**
Low	**Whistler**	**314**	9th	Low	Low	4,255.1	**2.64**
Low	**Mamquam**	**309**	9th	Low	Mod./High	14,420.3	**8.95**
Low	**Soo**	**313**	9th	Low	Moderate	8,454.7	**5.24**
Low	**East Howe**	**311**	10th	Low	Low	5,953.3	**3.69**
Low	**Ryan**	**306**	11th	Low	Moderate	5,462.7	**3.38**
Low	**Callaghan**	**315**	12th	Low	Moderate	6,761.7	**4.19**
							Total = 44.02

* Note: In conjunction with final BEO determinations and in response to concerns regarding timber impacts, the Upper Elaho and Lower Elaho LUs were merged into 1 landscape unit (Elaho LU). This reduced the total number of LUs within the District from 21 to 20.

** Note: The THLB areas were based on updated data available in 1999. THLB areas differed from the original information utilized for the initial BEO, which resulted in changes to the overall THLB and the proportion within each LU.

Appendix II:

Public Consultation Summary

This Landscape Unit was advertised for public review and comment for 60 days from April 1, 2004 to June 1, 2004.

Prior to the public consultation period, MSRM met with the local forest licensees and consulted with First Nations. Meetings or conversations were also held with Ministry of Forests and Ministry of Water, Land and Air Protection during the development of the LU plan. Mineral tenure holders were advised of OGMA placement.

No comments were received during the advertising period.

Appendix III:

Acronyms

AAC	Allowable Annual Cut
BEC	Biogeoclimatic Ecosystem Classification
BEO	Biodiversity Emphasis Option
C	Contributing
CMT	Culturally Modified Tree
DDM	Delegated Decision Maker
FPC	Forest Practices Code of British Columbia Act
GBPU	Grizzly Bear Population Unit
IWMS	Identified Wildlife Management Strategy
LU	Landscape Unit
LUPG	Landscape Unit Planning Guide
MELP	Ministry of Environment, Lands and Parks, now called MWLAP
MEM	Ministry of Energy and Mines
MOF	Ministry of Forests
MSRM	Ministry of Sustainable Resource Management
MWLAP	Ministry of Water, Land and Air Protection
NC	Non-contributing
NDT	Natural Disturbance Type, see Biodiversity Guidebook
OGMA	Old Growth Management Area
PC	Partially Contributing
RRZ	Riparian Reserve Zone
THLB	Timber Harvesting Land Base
UWR	Ungulate Winter Range
WHA	Wildlife Habitat Area, designated under the IWMS
WTP	Wildlife Tree Patch
WTR	Wildlife Tree Retention

Appendix IV: OGMA Summary and Rationale Description

OGMA #	BEC LABEL	CONT CLAS	OGMA AREA	THLB AREA	PROTECTED AREA	RATIONALE COMMENTS
1	CWH ds 1	N	3.9	0.0		Valley bottom - very high rating-adjusted boundary for river erosion
2	CWH ds 1	N	18.3	0.0		Valley bottom - very high rating; "I" blk conflct; no other comparable opt.- bndry adjusted as much as possible for logging
3	CWH ms 1	N	1.3	0.0		Part of larger complex - Capricorn ; Mtn.Goat UWR
4	CWH ms 1	N	1.2	0.0		Part of larger complex - Capricorn ; Mtn.Goat UWR
5	CWH ms 1	N	5.0	0.0		Part of larger complex - Capricorn ; Mtn.Goat UWR
6	CWH ms 1	N	3.2	0.0		Part of larger complex - Capricorn ; Mtn.Goat UWR
8	CWH ds 1	N	4.9	0.0		Mtn. Goat UWR; cross-elevational; "I" blk. Conflict
8	CWH ds 1	P	0.9	0.4		Mtn. Goat UWR; cross-elevational; "I" blk. Conflict
8	CWH ms 1	N	30.7	0.0		Mtn. Goat UWR; cross-elevational; "I" blk. Conflict
8	CWH ms 1	P	21.5	6.9		Mtn. Goat UWR; cross-elevational; "I" blk. Conflict
10	CWH ms 1	P	2.7	0.3		Valley bottom - high rating; linkage with other OGMA's
11	CWH ms 1	C	4.4	4.4		Lower elev. w/wetlands & riparian - very high rating.
11	CWH ms 1	N	18.6	0.0		Lower elev. w/wetlands & riparian - very high rating
11	CWH ms 1	P	25.0	2.5		Lower elev. w/wetlands & riparian - very high rating
12	CWH ms 1	N	2.5	0.0		Mtn. Goat UWR; very high rating
12	CWH ms 1	P	3.7	1.5		Mtn. Goat UWR; very high rating
13	CWH ms 1	P	1.5	0.1		Mtn. Goat UWR; very high rating
14	CWH ms 1	C	4.8	4.8		Critical Mtn. Goat habitat; very high rating
14	CWH ms 1	N	2.1	0.0		Critical Mtn. Goat habitat; very high rating
14	MH mm 2	N	46.4	0.0		Critical Mtn. Goat habitat; very high rating
15	MH mm 2	N	0.2	0.0		Mtn. Goat UWR; very high rating; shows on map as AT but is forested
15	MH mm 2	N	1.7	0.0		Mtn. Goat UWR; very high rating
16	MH mm 2	N	4.6	0.0		Mtn. Goat UWR; very high rating
17	CWH ms 1	N	1.0	0.0		Mtn. Goat UWR; very high rating
17	MH mm 2	N	0.5	0.0		Mtn. Goat UWR; very high rating
18	CWH ms 1	N	1.9	0.0		Mtn. Goat UWR; very high rating
18	MH mm 2	N	1.3	0.0		Mtn. Goat UWR; very high rating
19	MH mm 2	N	1.2	0.0		Mtn. Goat UWR; very high rating

OGMA #	BEC LABEL	CONT CLAS	OGMA AREA	THLB AREA	PROTECTED AREA	RATIONALE COMMENTS
22	MH mm 2	N	0.5	0.0		Mtn. Goat UWR; shows on map as AT but is forested; unique features; very high rating
22	CWH ms 1	N	6.0	0.0		Mtn. Goat UWR; unique features; very high rating
22	CWH ms 1	N	6.1	0.0		Mtn. Goat UWR; unique features; very high rating, shown as excluded (X) on map but is forested
22	MH mm 2	N	51.2	0.0		Mtn. Goat UWR; unique features; very high rating
25	CWH ms 1	N	4.8	0.0	Yes	Upper Lillooet Park
25	MH mm 2	N	19.4	0.0	Yes	Upper Lillooet Park
26	MH mm 2	N	0.4	0.0	Yes	Upper Lillooet Park; shows on map as AT but is forested
26	CWH ms 1	N	5.4	0.0	Yes	Upper Lillooet Park
26	MH mm 2	N	29.1	0.0	Yes	Upper Lillooet Park
30	CWH ms 1	N	51.9	0.0		Connectivity Meager – Elaho; very high rating
30	MH mm 2	N	18.3	0.0		Connectivity Meager – Elaho; very high rating
34	CWH ms 1	N	0.1	0.0		Silde track/riparian values; very high rating; part of larger complex
34	CWH ms 1	P	3.8	0.4		Silde track/riparian values; very high rating; part of larger complex
34	MH mm 2	N	5.1	0.0		Silde track/riparian values; very high rating; part of larger complex
34	MH mm 2	P	0.6	0.1		Silde track/riparian values; very high rating; part of larger complex
35	CWH ms 1	P	0.8	0.1		Silde track/riparian values; very high rating; part of larger complex
36	CWH ms 1	N	2.7	0.0		Silde track/riparian values; very high rating; part of larger complex
36	MH mm 2	N	0.7	0.0		Silde track/riparian values; very high rating; part of larger complex
37	CWH ms 1	N	12.1	0.0		Silde track/riparian values; very high rating; part of larger complex
37	MH mm 2	N	0.8	0.0		Silde track/riparian values; very high rating; part of larger complex
39	MH mm 2	N	0.6	0.0		Fish Lake; Rec. Reserve; very high rating; shows on map as AT but is forested; large patch, forest interior
39	CWH ms 1	N	93.6	0.0		Fish Lake; Rec. Reserve; very high rating; large patch, forest interior
39	MH mm 2	N	49.9	0.0		Fish Lake; Rec. Reserve; very high rating; large patch, forest interior
41	CWH ms 1	N	7.4	0.0		cross-elevational linkage
41	MH mm 2	N	51.8	0.0		cross-elevational linkage
42	MH mm 2	N	10.9	0.0		cross-elevational linkage
43	MH mm 2	N	15.2	0.0		cross-elevational linkage
44	CWH ms 1	N	37.9	0.0		cross-elevational' riparian/forest values; very high rating
44	CWH ms 1	P	20.3	2.0		cross-elevational linkage; Meager Hot springs rec.values
44	MH mm 2	N	31.2	0.0		cross-elevational linkage; Meager Hot springs rec.values

OGMA #	BEC LABEL	CONT CLAS	OGMA AREA	THLB AREA	PROTECTED AREA	RATIONALE COMMENTS
46	CWH ms 1	N	2.6	0.0		cross-elevational' riparian/forest values; very high rating
46	CWH ms 1	P	0.7	0.1		cross-elevational' riparian/forest values; very high rating
47	CWH ms 1	N	5.4	0.0		cross-elevational linkage; Meager Hot springs rec.values
48	CWH ms 1	N	0.2	0.0		
48	MH mm 2	N	2.5	0.0		
48	MH mm 2	P	0.2	0.1		
49	CWH ms 1	N	0.1	0.0		
49	MH mm 2	N	22.5	0.0		
51	CWH ms 1	N	25.5	0.0		Large patch, forest interior; very high rating
51	MH mm 2	N	64.7	0.0		Large patch, forest interior; very high rating
53	CWH ds 1	N	5.9	0.0		Low elevation riparian value
53	CWH ds 1	P	21.5	8.6		Low elevation riparian value
57	CWH ms 1	N	0.6	0.0		57-60 combine for larger complex
57	MH mm 2	N	14.8	0.0		57-60 combine for larger complex
58	CWH ms 1	N	8.4	0.0		57-60 combine for larger complex
58	CWH ms 1	P	0.2	0.1		57-60 combine for larger complex
58	MH mm 2	N	15.1	0.0		57-60 combine for larger complex
59	MH mm 2	N	2.6	0.0		57-60 combine for larger complex
60	CWH ms 1	N	2.5	0.0		57-60 combine for larger complex
60	MH mm 2	N	30.3	0.0		57-60 combine for larger complex
61	CWH ds 1	N	3.9	0.0		Eagle nest/roost value
61	CWH ds 1	P	26.7	10.7		Eagle nest/roost value
61	CWH ms 1	P	0.1	0.0		Eagle nest/roost value
63	CWH ds 1	P	4.8	0.6		wetlands/fisheries; very high rating; eagle nest/roost values
64	CWH ds 1	N	1.4	0.0		
64	CWH ds 1	P	5.7	0.6		
64	CWH ms 1	N	15.1	0.0		
64	MH mm 2	N	0.4	0.0		
65	CWH ms 1	N	6.9	0.0		slide track features; very high rating
65	MH mm 2	N	2.2	0.0		slide track features; very high rating
66	CWH ms 1	N	8.3	0.0		
66	MH mm 2	N	4.5	0.0		
71	MH mm 2	N	9.6	0.0		

OGMA #	BEC LABEL	CONT CLAS	OGMA AREA	THLB AREA	PROTECTED AREA	RATIONALE COMMENTS
72	CWH ms 1	N	3.7	0.0		72-78 part of larger complex
72	MH mm 2	N	1.2	0.0		72-78 part of larger complex
73	CWH ms 1	N	2.7	0.0		72-78 part of larger complex
74	CWH ms 1	N	19.2	0.0		slidetracks/forest; very high ranking; 72-78 part of larger complex
74	CWH ms 1	P	2.0	0.2		slidetracks/forest; very high ranking; 72-78 part of larger complex
74	MH mm 2	N	11.4	0.0		slidetracks/forest; very high ranking; 72-78 part of larger complex
75	CWH ms 1	N	1.9	0.0		slidetracks/forest; very high ranking; 72-78 part of larger complex
76	CWH ms 1	N	1.3	0.0		72-78 part of larger complex
76	MH mm 2	N	5.6	0.0		72-78 part of larger complex
77	CWH ms 1	N	12.4	0.0		72-78 part of larger complex
77	CWH ms 1	P	1.3	0.1		72-78 part of larger complex
77	MH mm 2	N	11.0	0.0		72-78 part of larger complex
78	CWH ms 1	N	6.0	0.0		72-78 part of larger complex
78	CWH ms 1	P	3.4	0.3		72-78 part of larger complex
80	CWH ms 1	N	2.4	0.0		
80	MH mm 2	N	23.9	0.0		
81	CWH ds 1	C	2.9	2.9		moose habitat; recruitment in portion of OGMA; eagle nest/roost values
81	CWH ds 1	N	9.8	0.0		moose habitat; recruitment in portion of OGMA; eagle nest/roost value
81	CWH ds 1	P	1.2	0.1		moose habitat; recruitment in portion of OGMA; eagle nest/roost value
82	CWH ds 1	C	11.0	11.0		cross-elevation linkage; riparian
82	CWH ds 1	N	7.0	0.0		cross-elevation linkage; riparian
82	CWH ds 1	P	26.0	3.4		cross-elevation linkage; riparian
83	CWH ms 1	N	4.6	0.0		Partial Mtn. Goat UWR
83	MH mm 2	N	3.4	0.0		Partial Mtn. Goat UWR
84	CWH ms 1	N	1.1	0.0		Partial Mtn. Goat UWR
84	MH mm 2	N	3.9	0.0		Partial Mtn. Goat UWR
86	CWH ms 1	N	0.4	0.0		
86	MH mm 2	N	10.5	0.0		
88	CWH ms 1	N	2.7	0.0		
88	MH mm 2	N	10.8	0.0		
89	MH mm 2	N	4.0	0.0		

OGMA #	BEC LABEL	CONT CLAS	OGMA AREA	THLB AREA	PROTECTED AREA	RATIONALE COMMENTS
90	MH mm 2	N	1.6	0.0		
91	MH mm 2	N	4.2	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
92	MH mm 2	N	1.9	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
93	MH mm 2	N	5.7	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
94	MH mm 2	N	21.7	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
94	MH mm 2	N	0.9	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest, shown as X on map but is forested.
95	AT p	N	8.7	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
95	MH mm 2	N	18.9	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
96	AT p	N	2.9	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
96	MH mm 2	N	5.9	0.0		headwaters S.fork South Cr.; slidetracks/riparian forest
98	MH mm 2	N	6.8	0.0		
101	CWH ms 1	C	1.9	1.9		
101	CWH ms 1	N	9.9	0.0		
101	MH mm 2	N	7.3	0.0		
103	CWH ds 1	N	21.8	0.0		Larger low elevation patch
103	CWH ds 1	P	0.4	0.0		Larger low elevation patch
103	CWH ds 1	N	0.3	0.0		Larger low elevation patch; Shown as X on map but is forested.
103	CWH ms 1	N	21.6	0.0		Larger low elevation patch
105	CWH ds 1	N	7.8	0.0		fisheries sensitive/wetland zones; very high rating; eagle roost/nest
106	CWH ds 1	C	30.9	30.9		fisheries sensitive/wetland zones moose habitat
106	CWH ds 1	N	21.8	0.0		fisheries sensitive/wetland zones moose habitat
106	CWH ds 1	P	17.9	2.4		fisheries sensitive/wetland zones moose habitat; eagle roost/nest value
106	CWH ms 1	C	1.5	1.5		Upland part , connected to lower riparian area
106	CWH ms 1	N	19.4	0.0		Connects to lower riparian area; Partial Mtn. Goat UWR
107	CWH ds 1	C	1.4	1.4		
107	CWH ds 1	P	7.9	0.8		
107	CWH ms 1	N	0.3	0.0		
107	CWH ms 1	P	4.9	0.5		
109	CWH ms 1	N	6.2	0.0		
109	MH mm 2	N	13.0	0.0		
110	MH mm 2	N	1.3	0.0		
111	MH mm 2	N	2.5	0.0		Shows on map as AT but is forested

OGMA #	BEC LABEL	CONT CLAS	OGMA AREA	THLB AREA	PROTECTED AREA	RATIONALE COMMENTS
111	MH mm 2	C	12.2	12.2		
111	MH mm 2	N	4.4	0.0		
114	CWH ms 1	N	25.3	0.0		Part of larger riparian complex
114	CWH ms 1	P	24.1	2.4		Part of larger riparian complex

Appendix V: Preliminary Comments/Rating for OGMAs

Original list compiled by J. Roberts (MSRM) – 03/25/02List has been modified to reflect changes to OGMA ID numbers. Due to changes to OGMA locations since the above date, some of the OGMA numbers listed here may not coincide with OGMA numbers in Appendix IV.

ID #	Comments on Biological Values	Other Comments	Rating*
1	• No specific comments	• Relatively small patch • No other suitable CWHds1 candidates on this side of the creek, so important to include	Very High
2	• Some riparian forest elements on Capricorn Creek and Meager Creek, although suspect that perennial water flow is generally not adjacent forest edge • Thin band alongside Meager Creek includes high number of snags from back flooding caused by latest Capricorn debris torrent event	• Thin band downslope of road • Portion overlaps with "I" block • Portion that overlaps with block (gentle slopes with productive forest) is integral to the OGMA candidate, given the thin band that applies without this upslope addition	Very High
3	• Upslope portion within mountain goat winter range • Slide track feature immediately downslope	• Small patches but part of a larger complex of patches (OGMA candidates 4,5 and 6)	High
4	• Upslope portion within mountain goat winter range • Slide track feature immediately downslope	• Small patch but part of a larger complex of patches (OGMA candidates 3, 5 and 6)	High
5	• Upslope portion within mountain goat winter range • Slide track feature immediately downslope	• Small patch but part of a larger complex of patches (OGMA candidates 3, 4 and 6)	High
6	• Upslope portion within mountain goat winter range • Slide track feature immediately downslope	• Small patch but part of a larger complex of patches (OGMA candidates 3, 4 and 5)	High
8	• Overlaps with mountain goat winter range • Cross-elevational linkage • Also, note that "western finger" provides potential movement corridor for mountain goats from higher elevation habitats to this low elevation winter range	• Steep and rocky with low density tree cover (especially lower slopes on eastern side) • If entire OGMA candidate is included in final LU plan, suggest an inclusion factor of 75% • An effort has been made to minimize overlap with a "I" block associated with "western finger" (width shown on map, approximately 150 to 200 metres, should be considered essential)	High
10	• Small patch, overlapping with riparian of a tributary to Meager Creek	• Although it is a small patch, it is close to OGMA candidate #11 (part of a larger patch with riparian forest values that follows Meager Creek mainstem and further west along North Meager) • Intersected by road and near bridge (consider deleting portion east of road)	High

ID #	Comments on Biological Values	Other Comments	Rating*
11	• Meager Creek riparian • Includes proposed "central finger" that overlaps with wetlands/wet areas associated with Pylon Creek	• Relatively steep terrain alongside Meager Creek • Some sloughing/erosion present in portions of this steep terrain alongside creek, especially within forest cover polygon 134, but not proposing an inclusion factor because overall area of lower tree densities is estimated to be low overall (<10% of total OGMA candidate area)	Very High
12	• High Value portion of a larger goat winter range area (natal area values upslope) • Adjacent slide track features	• Associated with a larger complex of OGMAs, including OGMA candidates #13 thru #19	Very High
13	• High Value portion of a larger goat winter range area (natal area values upslope) • Adjacent slide track features	• Associated with a larger complex of OGMAs, including OGMA candidates #12, 14 thru #19	Very High
14	• Consists of a large forest patch that provides cross-elevational linkage values and surrounds a critically important area of escape terrain utilized by mountain goats (both winter range and natal area values - some portions of this OGMA would potentially be eligible for wildlife habitat area designation under the IWMS provisions for mountain goat winter range) • Adjacent small slide track features, on downslope side	• Associated with a larger complex of OGMAs, including OGMA candidates #12,13, 15 thru #19	Very High
15-19	• Overlaps with a large goat winter range area • Surrounded by high value slide track features	• Associated with a larger complex of OGMAs, including OGMA candidates #12 thru #14	Very High
22	• Significant cross-elevational linkage • Large patch, that overlaps with cold spring features (mineral link values, with 2 known locations of mineral deposition)	• CRB agreed to add approximately a 100 metre buffer to the cold spring feature and associated creek (overlaps with PC AC 8 but unique values present)	Very High
25	• Narrow slide track features present within slightly sparse forest	• Completely within Upper Lillooet Provincial Park • Forest cover somewhat sparse	Moderate
26	• Large patch	• Majority of OGMA candidate is within Upper Lillooet Provincial Park • Large patch on the edge of productive forest in MHmm2 (portions directly adjacent to subalpine forests) • Recommend considering the inclusion of some of the PC AC 8 or 9 that occurs downslope, outside of the park (to avoid a straight line boundary and include some more productive old forest elements)	Moderate

ID #	Comments on Biological Values	Other Comments	Rating*
30	• Large patch in headwaters of North Fork of Meager Creek (near a relatively low elevation pass that connects Lillooet River watershed with Elaho River watershed • Adjacent slide track features • Includes some riparian forest values (North Fork of Meager Creek)	• Consists of some NC AC 8 in CWHms1 that could be deleted from OGMA candidate but appear to be older AC 8 and are in key locations (e.g. next to creek) • Portions directly adjacent to subalpine forests	Very High
34	• Significant slide track features, with some riparian forest values on downslope ends (North Fork of Meager Creek)	• Relatively steep terrain • Complements OGMA candidate #35-36 • Recommend adding to PC AC 8 to surround slide track feature and provide for a more logical OGMA candidate (requires CRB and MoF input)	Very High
35	• Significant slide track features, with some riparian forest values on downslope ends (North Fork of Meager Creek)	• Relatively steep terrain • Complements OGMA candidate #34,36 • Recommend adding to PC AC 8 to surround slide track feature and provide for a more logical OGMA candidate (requires CRB and MoF input)	Very High
36	• Significant slide track features, with some riparian forest values on downslope ends (North Fork of Meager Creek)	• Relatively steep terrain • Complements OGMA candidate #34,35 • Recommend adding to PC AC 8 to surround slide track feature and provide for a more logical OGMA candidate (requires CRB and MoF input)	Very High
37	• Significant slide track features, with some riparian forest values on downslope ends (North Fork of Meager Creek)	• Relatively steep terrain • Complements OGMA candidate #34,35 & 36	Very High
39	• Significant cross-elevational linkage • Large OGMA candidate • Lake and stream riparian (also riparian forests adjacent wetland complex on western end of Fish Lake)	• Notable recreation values associated with Fish Lake (recreation reserve status) • Upslope portions of original patch were excluded (forest cover polygons 486 and 487) due to questionable productivity (lower density forests and poorer sites in MHmm2 • Includes large extent of CWHms1, which appears to be over-represented in Meager LU based on preliminary review (consider further revisions?)	Very High
41	• Cross-elevational linkage • Large patch, with riparian forest values on downslope side	• Complements OGMA candidate #44 (across tributary to South Fork of Meager Creek)	High

ID #	Comments on Biological Values	Other Comments	Rating*
42	• Cross-elevational linkage • Large patch, with riparian forest values on downslope side	• Complements OGMA candidate #44 (across tributary to South Fork of Meager Creek)	High
43	• Cross-elevational linkage • Large patch, with riparian forest values on downslope side	• Complements OGMA candidate #44 (across tributary to South Fork of Meager Creek)	High
44	• Cross-elevational linkage • Extensive riparian forest • Northeastern end is near Meager Creek Hotsprings	• High recreation values in association with Meager Creek Hotsprings • Some portions of the OGMA consist of steep terrain alongside stream features (North Fork and mainstem of Meager Creek), but majority of OGMA candidate is steep but productive ground with acceptable tree densities • OGMA candidate could be improved by providing for more width along entire extent (e.g. widen area along South Fork of Meager Creek to include a minimum 200 m width)	Very High
46	• Cross-elevational linkage • Riparian forest elements	• Some portions of the OGMA consist of steep terrain alongside stream features (Hotsprings Creek), but majority of OGMA candidate is steep but productive ground with acceptable tree densities • Adjacent TL, which limits ability to include additional areas downslope within the CWHms1	Very High
47	• Cross-elevational linkage • Adjacent Meager Creek Hotsprings	• High recreation values in association with Meager Creek Hotsprings (potential for unique flora/fauna in old growth edges associated with this feature) • Day camping development has occurred in area, but impacts to old growth values not notable to the present date	High
48	• Within slide track feature	• Near OGMA candidate #49	High
49	• Adjacent to slide track feature	• Near OGMA candidate #48 • Considered addition of downslope NC AC 9, to build cross-elevational linkage values, but questionable productivity downslope	High
51	• Significant cross-elevational linkage • Some riparian forests associated with Meager Creek	• Large patch that includes representation by all 3 BEC variants (lower portions associated with Meager Creek riparian area and upslope gully)	Very High

ID #	Comments on Biological Values	Other Comments	Rating*
53	• Riparian forest alongside Meager Creek	• OGMA candidate focuses on riparian management area and associated steep terrain • Some recent erosion on downslope side due to Capricorn Creek debris torrents	High
57	• No specific comments	• Bordered on either side by 2 gullies • Complements adjacent OGMA candidates #58,59 and 60 • Didn't include downslope "finger" because it is AC 8 and a very thin corridor	Medium
58	• Adjacent small slide track feature	• Bordered on one side by a gully and the other side by a small slide track feature • Complements adjacent OGMA candidates #59 and 60	High
59	• Adjacent small slide track feature	• Small patch, between OGMA candidates #58 and 60 (definitely include if these 2 larger OGMA candidates are included in the final LU plan)	High
60	• Part of complex with 57-59	• Keep if others are kept	High
61	• No specific comments	• Steep and rocky terrain, but appears to be suitable as an OGMA candidate • Included small area of adjacent NC AC 9	Moderate
63	• Includes wetlands and apparent fisheries sensitive zones (associated with Lillooet River floodplain) • Suspect high fish and wildlife habitat values, which may include moose winter range values	• Immediately downslope of road • Themed as PC but may be viewed as NC given fish riparian overlap • Somewhat sparse old conifer component, therefore it is recommended that a 75% inclusion factor be applied	Very High
64	• Builds on cross-elevational linkage values • Some adjacency with slide track features • Adjacent stream gully (eastern side, with some riparian forest values)	• No aerial review yet • Themed as PC but most may be NC given terrain (gully on eastern side)	High
65	• Bordered on 2 sides by significant slide track features	• No specific comments	Very High
66	• Adjacent slide track features	• No specific comments	Medium
71	• Adjacent slide track features	• No specific comments	Moderate
72	• Narrow finger of old forest surrounded by slide track habitat	• Part of a complex of old forest patches (OGMA candidates #72 to 78) associated with a large and apparently valuable mosaic of sidetracks and adjacent forests	High
73	• Narrow finger of old forest surrounded by slide track habitat	• Part of a complex of old forest patches (OGMA candidates #72 to 78) associated with a large and	High

		apparently valuable mosaic of sidetracks and adjacent forests	

ID #	Comments on Biological Values	Other Comments	Rating*
74	• Large patch, that extends from CWHms1 into MHmm1	• Part of a complex of old forest patches (OGMA candidates #72 to 78) associated with a large and apparently valuable mosaic of sidetracks and adjacent forests	Very High
75	• Small patch directly adjacent to OGMA candidate #74 • Surrounded by slide track habitat	• Part of a complex of old forest patches (OGMA candidates #72 to #78) associated with a large and apparently valuable mosaic of sidetracks and adjacent forests	Very High
76	• Narrow finger of old forest surrounded by slide track habitat	• Part of a complex of old forest patches (OGMA candidates #72 to #78) associated with a large and apparently valuable mosaic of sidetracks and adjacent forests	High
77	• Relatively large patch, that extends from CWHms1 into MHmm1 and is adjacent to slide track habitat	• Part of a complex of old forest patches (OGMA candidates #72 to #78) associated with a large and apparently valuable mosaic of sidetracks and adjacent forests	High
78	• Smaller patch almost contiguous with OGMA candidate #77	• Part of a complex of old forest patches (OGMA candidates #72 to #78) associated with a large and apparently valuable mosaic of sidetracks and adjacent forests	High
80	• Adjacent AC 1 to 3 (adjacent areas appear to be of lower value than some of the slide track features further to the west)	• Includes NC AC 8 • Include OGMA candidates within a few km's to the west (along this hillslope) before including this particular OGMA candidate	Moderate
81	• Area known to be utilized by moose during winter months (a subset of the larger complex of moose winter range habitats associated with Lillooet River floodplain and adjacent upland areas)	• Associated with alluvial fan of South Creek • Western portion appears to be younger forest (typed as AC 1 to 3) with older forest attributes (large vets), so suggest inclusion • May want to refer to this portion as recruitment (small extent overall)	High

ID #	Comments on Biological Values	Other Comments	Rating*
82	• Cross-elevational linkage • South Creek riparian forests, extending from alluvial fan upstream for approximately 2 km	• Steep terrain, with some more sparse and rocky areas especially on the eastern side in the downslope portions (overall, productive forest cover continuous enough to avoid application of an inclusion factor) • OGMA candidate consists of a combination of AC 8 and 9 themed as NC, PC and C but most appears to be NC given the terrain and riparian management issues that apply to this creek	High
83	• Slide track feature downslope • Upslope portion of OGMA candidate overlaps with mountain goat winter range	• Complements OGMA candidate #84 • Didn't include northeastern portion of the associated forest cover polygon or the small patch to the immediate west (between OMGA candidates # 83 and # 84 due to recent forest fire which impacted these stands)	High
84	• Slide track feature downslope • Upslope portion of OGMA candidate overlaps with mountain goat winter range	• Complements OGMA candidate #83 • As noted in regard to OGMA candidate #83, didn't include small patch adjacent to these 2 candidates due to recent fire	High
86	• Slide track features located downslope	• Forest cover somewhat sparse, likely due to steep and rocky site	Medium
88	• Adjacent slide track features	• Some open brushy sites within OGMA candidate, but not extensive enough to warrant consideration of an inclusion factor • Includes some NC AC 8 that appears to be of advanced age	High
89	• Small patch, adjacent to slide track features	• No specific comments	High
90	• Small patch, adjacent to slide track features	• No specific comments	High
91-96	• Large complex of OGMA patches in the headwaters of the South Fork of South Creek, with adjacent sidetracks and riparian forest elements	• Include a small component of NC AC 8 (didn't make sense to exclude, as it is on the stream edge)	Very High
98	• No specific comments	• No specific comments	High
101	• No specific comments	• No specific comments	High
103	• Large patch, with some cross-elevational linkage values (CWHds1 upslope into CWHms1) • Some riparian forest values on downslope edge	• Somewhat steep and rocky, but appears suitable	High

ID #	Comments on Biological Values	Other Comments	Rating*
105	• Adjacent Lillooet River sidechannels • Appears to have fisheries sensitive zones and wetland values (associated with Lillooet River floodplain) • Suspect high fish and wildlife habitat values, which may include moose winter range values	• Appears from aerial review that deciduous component is fairly high (estimate 30 to 40%), but large cedar trees present and habitat values high • Sparse old conifer component, therefore it is recommended that a 75% inclusion factor be applied	Very High
106	• Includes wetlands and apparent fisheries sensitive zones associated with Lillooet River floodplain) • Suspect high fish and wildlife habitat values, which may include moose winter range values • Significant cross-elevational linkage (builds on downslope OGMA candidate #105 Encompasses CWHds1 and CWHms1 •	• Estimate deciduous component is 30 to 40%, but large cedar present and habitat values high • Lower section themed as PC but may be viewed as NC given fish riparian overlap • Upper section somewhat sparse old conifer component, therefore it is recommended that a 75% inclusion factor be applied • and CWHms1	Very High
107	• Riparian forests associated with steep gully	• Included small area of C AC 8 on the north-western edge	High
109	• No specific comments	• No specific comments	
110	• No specific comments	• No specific comments	
111	• No specific comments	• No specific comments	
114	• Part of larger riparian complex	• Important to retain with others	High

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* Note: Rating represents preliminary indication of importance of draft OGMA candidates to LU plan. Intent is to indicate which candidates appear, upon initial review, to be biologically most important. Assuming there are options in a given BEC variant, it can be assumed that a candidate with a Very High rating would likely be preferred over a High or Medium rated candidate. Note that this is a judgement that may not provide a final indication of the value of an individual candidate to the overall plan. For instance, spatial distribution and the intent to disperse OGMAs throughout the landscape is not properly considered in this rating exercise. These ratings should be used for preliminary guidance only.