Sustainable Resource Management Plan

Biodiversity Chapter for Chilliwack Landscape Unit

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Prepared by:

Greg George, RPBio
Forest Ecosystem Specialist
Ministry of Sustainable Resource Management
Coast Region – Chilliwack Office

Lucy Stad, RPF
Planning Forester
Ministry of Sustainable Resource Management
Coast Region – Chilliwack Office

Harry Gill
GIS Analyst
Ministry of Sustainable Resource Management
Coast Region – Surrey Office

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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 Chilliwack Landscape Unit (LU). Specifically, this report will form the biodiversity conservation chapter of the plan. A description of the planning 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 organisation, 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) biodiversity values is recognized as a high priority for the province. LU planning is an important component of the *Forest Practices Code of BC Act (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 important not only 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 Chilliwack Forest District has completed draft LU boundaries and assigned draft Biodiversity Emphasis Options (BEO) in accordance with the direction provided by government. There are 24 LUs within the Chilliwack Forest District. Through a ranking process, the Chilliwack LU was rated as a Low BEO, which 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), in cooperation with the Fraser TSA Cooperative Association, the BC Timber Sales Program and Scott Paper Ltd. Funding was provided by the Forest Investment Account and MSRM.

Input from First Nations will be gathered during consultation (prior to public review) between MSRM and individual First Nations. Comment from the public and other

[1] FPC Biodiversity Guidebook definition. September 1995.
[2] BC Species and Ecosystems Explorer. 2003. Victoria, British Columbia. Available at: http://srmapps.gov.bc.ca/apps/eswp/

agencies will be sought during the 60 day public review and comment period. Refer to the attached map for location of OGMAs and old growth representation from protected areas.

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 Chilliwack Landscape Unit Description

2.1 Biophysical Description

The Chilliwack LU is situated entirely within the Chilliwack River watershed which is a moderate to large tributary of the Fraser River. It's located south-east of Chilliwack and is well represented by three protected areas. The Landscape Unit covers a total area of 65182.9 ha and includes several smaller stream systems tributary to the Chilliwack River itself. Named watersheds within the LU include Liumchen Creek, Tamihi Creek, Slesse Creek, Nesakwatch Creek, Centre Creek, Foley Creek, Chipmunk Creek and Post Creek; several other smaller named and unnamed streams are present. Chilliwack Lake is a moderate sized fresh water lake that heads the main river valley.

Of the total area, 41503.9 ha (63.7%) are within the Crown forested land base, and 15130.4 ha of Crown forest are within the Timber Harvesting Land Base (THLB). The remaining 8548.6 ha (13.1%) are non-forested or non-Crown (rock, alpine tundra, water, private land etc.) and have been excluded from any OGMA contributions and calculations.

The landscape unit is separated into three Ecoregions. A small part at the western end (Cultus Lake) is within the Lower Mainland Ecoregion, which is represented by the Fraser Lowlands ecosection. The central part of the LU is situated within the Cascade Ranges Ecoregion and the Northwestern Cascade Ranges ecosection. The remaining eastern one-third lies within the Pacific Ranges Ecoregion, represented by the Eastern Pacific Ranges ecosection. Climatic conditions in the LU vary most prominently east to west and by elevation. The lower elevation valley bottom areas in the east are characterized by warm, dry summers and moist, cool winters with moderate snowfall; valley bottoms in the west are similar in summer but have moist, mild winters with little snowfall. At higher elevations, summers are short, cool and moist with long, moist and cold winters. Snowfall at higher elevations can be relatively heavy and persistent.

The Chilliwack LU is quite diverse ecologically. There are eight Biogeoclimatic (BEC) subzones or variants, which fall within three natural disturbance types (NDTs)[3]. The two

[3] NDT1 encompasses those ecosystems with rare stand-initiating events. NDT2 includes ecosystems with infrequent stand initiating events. NDT5 is Alpine Tundra or other parkland ecosystems that are not considered forested. For a more complete description of NDTs see the *Biodiversity Guidebook* (1995).

Mountain Hemlock variants – windward and leeward moist maritime (MHmm1, MHmm2) and the Coastal Western Hemlock montane very wet maritime (CWHvm2) lie within NDT 1; while the Coastal Western Hemlock dry maritime (CWHdm), the CWH southern dry submaritime (CWHds1), the CWH southern moist submaritime variant (CWHms1) and the CWH eastern very dry maritime (CWHxm1) fall within NDT2. The landscape unit also has substantial high elevation non-forested areas in NDT5 (Alpine Tundra).

In the lower elevation variants, within NDT1 and 2, the Chilliwack LU has sustained substantial levels of disturbance. Forested stands on lower elevation productive sites (typically on slopes with low to moderate gradient) have been disturbed by past timber harvesting or land clearing. The relatively low levels of old seral forest remaining within these BEC variants reflects this disturbance history.

2.2 Summary of Land Status

Land status within the Chilliwack LU is summarised in Table 1. The Crown forest land base summary is provided in Table 2.

Table 1. The range and distribution of land ownership status for the Chilliwack Landscape Unit.

Code	Ownership Class	Area (ha)	Percent of LU
40	Private and Crown grants	3637.2	4.7
52	Indian reserve	402	0.5
53	Military Reserve	692.3	0.9
60	Crown Ecological Reserve	2284	3.0
61	Crown UREP	501.1	0.7
62	Crown contributing	55931.1	72.6
63	Parks & Ecological Reserves	11581.5	15.0
69	Recreation sites and reserves	2038.6	2.6
99	Crown Misc. Lease	2.3	0.0
	Total Area	77070.1	100.0

Table 2. Distribution of land area in the Chilliwack Landscape Unit on the basis of Biogeoclimatic and Crown Forested Land Base classifications.

BEC Variant	Total Area (ha)	Crown Forested Land Base[1]			Excluded land base[2]
		C (ha)	PC (ha)	NC (ha)	X (ha)
CWHdm	15062.8	7497.4	2688.7	995.8	3881.0
CWHds1	4970.5	816.4	1482.5	1027.0	1644.6
CWHms1	19888.7	9491.9	5371.1	756.0	4269.7
CWHvm2	6202.6	2339.2	2455.4	857.1	550.9
CWHxm1	2443.1	256.2	272.2	8.1	1906.7
MHmm1	1808.0	10.2	1347.9	179.9	270.0
MHmm2	15286.4	2674.0	4152.3	302.4	8157.8
ATunp	11408.7	9.6	636.2	0.0	10763.0
TOTAL	77070.8	23094.9	18406.3	4126.3	31443.7

[1] The Crown Forested Land Base is comprised of Contributing (C), Partial Contributing (PC), and Non-Contributing (NC) areas of forested land. C and PC forest make up the Timber Harvesting Land Base (THLB) whereas the NC areas of forested lands do not contribute to the Allowable Annual Cut. The NC includes areas of Provincial Crown Forest considered inoperable due to one or more constraints (e.g., steep terrain, low productivity, which are netted down 100% during TSR analysis) and protected areas (e.g., Class A Provincial Parks and Ecological Reserves).

[2] The Excluded land base is comprised of areas of lands that are non-forest (e.g., rock, lakes, streams, non-productive brush, glacier) and areas of land that cannot be presumed to be maintained as forested ecosystems (e.g., private land or in the control of non-resource management agencies [e.g., The Federal Department of National Defense]).

3.0 Key Resource Tenure Holders

The general premise applied during the planning process was to identify key resource(s) tenure holdings. This assessment included identification of tenures that are administered by agencies such as the Ministry of Forests (MOF), Ministry of Energy and Mines and Crown corporations such as Land and Water British Columbia. For tenure holders, other than those administered by MOF, the management intent generally is to avoid placement of OGMAs within existing tenures. As for tenures administered by MOF, the management intent is to avoid placement of OGMAs over cutblocks and roads that have received approval status; and to minimize OGMA placement in areas that were identified as future harvest opportunities by licensees.

3.1 Forest Tenure Holders

Within the Chilliwack plan area, several licensees operate within volume based tenures including forest license and timber sale license. The various licensees are: BC Timber Sales Program (administered by MOF), Cattermole Timber Co. Ltd., Tamihi Logging Ltd., Northwest Hardwoods, Scott Paper Ltd., Walter Bell and Probyn Log Ltd. The OGMAs selected do not impact any known approved category “A” cutblocks or roads as approved under a Forest Development Plan. Furthermore, discussions with key licensees have taken place to ensure that the intent of this LU plan is conveyed and impacts on future planned development is minimized.

3.2 Mineral Tenure Holders

There are approximately 22 mineral tenures located across the landscape unit. The selection of OGMAs tried to avoid placement over existing tenure holders. However, some overlap with 13 existing tenures occurred due to their wide spread locations within the Crown forest land base.

The selection of OGMAs followed the intent of avoiding placement over existing tenure holders. Further, it is important to note that the establishment of an OGMA will not have an impact on the status of existing mineral and gas 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.

4.0 Significant Resource Values

4.1 Fish, Wildlife and Biodiversity

Wildlife resources of primary management concern in the Chilliwack LU include: spotted owl, black-tailed deer, mountain goat, Coastal giant salamander, marbled murrelet, fish and some species at risk that are considered "Identified Wildlife"[4]. Many other species occur including forest birds, raptors, small mammals, amphibians and furbearers but their habitat requirements are generally managed within habitat provisions provided for primary species or through access management provisions (e.g. grizzly bear). For example, habitat for spotted owls in the Chilliwack LU is maintained within two Special Resource Management Zones (SRMZ's) which cover approximately 12324 ha of gross forested area (a substantial amount of this is in park). Approximately 57% (7014 ha) of the gross forested area is currently suitable owl habitat (>100 years old forest), with a requirement to recruit another 1243 ha to reach 67% suitable. This owl habitat would support other forest dependent species.

The Chilliwack LU is also an important area for black-tailed deer and mountain goats. Forested winter range habitat for both these species has been identified by MWLAP. All or a portion of the winter habitat areas are being considered for legal establishment as Ungulate Winter Range (UWR) under the FPC according to management plans developed by MWLAP (Jex, 2002; Freeman, 2001 & 2002). Some of the UWR overlaps with Spotted Owl SRMZ and some of each species' habitats have been captured in OGMA. The habitat maintained for ungulates would also benefit other forest dependent species.

[4] Volume 1 of the *Identified Wildlife Management Strategy* includes a list of 36 wildlife species and 4 plant communities that are considered to be at risk. These species or plant communities require special management of critical habitat to maintain or restore populations or distributions. Critical habitat is protected within Wildlife Habitat Areas. See the *Identified Wildlife Management Strategy Volume 1 February 1999* for more information.

Further, all of the Chilliwack River and its major tributaries support anadromous and/or resident salmonid populations. Riparian reserve zones established (as per the FPC) adjacent to these fish streams will help maintain fish and wildlife habitat. Where riparian areas have been logged, habitat will be provided in the future as it re-grows.

Grizzly bears in the Chilliwack LU are part of the threatened North Cascades grizzly bear population unit for which a Recovery Plan has been drafted. Implementation is expected to occur after plan revisions are made and the plan is approved by government. Grizzly bears are also an Identified Wildlife species. Provisions exist within the Identified Wildlife Management Strategy 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 Chilliwack LU. Other species of Identified Wildlife (e.g. northern goshawk, tailed frog) that may be discovered later may receive habitat protection with WHAs as well. In turn, these WHAs will help provide habitat for species not actively managed for.

According to the BC Conservation Data Centre the Chilliwack LU (near Cultus Lake) is the only area in Canada where the Red-listed plant species tall bugbane is known to occur. The plant has medicinal values and has traditionally been used by First Nations for curing aches and pains. It is also known to have anti-inflammatory and sedative properties. Because of the plants rarity and value it has been included in Volume 2 of the Identified Wildlife Management Strategy, Version 2004. A Recovery Team is in place and a recovery strategy is underway. The Recovery Team is planning WHAs, but there not likely to be much overlap with OGMAs since most of the WHAs will encompass younger forest stands.

4.2 Timber Resources

The presence of a substantial timber harvesting land base establishes the importance of timber resource values. Continued access to commercially valuable timber, including future second growth, is a significant concern. First pass harvesting of accessible old growth timber is nearing completion.

Commercially valuable tree species in the Chilliwack LU by elevational gradients are: Douglas-fir, western red cedar and western hemlock at lower elevations. Mid elevation sites are dominated by Douglas-fir and amabilis fir with varying amounts of western red cedar and western hemlock. High elevation forests are dominated by amabilis fir and mountain hemlock with some yellow cedar and sub-alpine fir. Based on forest cover information, Table 3 shows the age composition of forests in the Chilliwack LU. Most of the old forests are located in either International Ridge or Chilliwack Lake parks or the Liumchen ecological reserve.

Table 3. Age distribution of forests within the Chilliwack Landscape Unit.

Age	% of Forested Landbase within Provincial Forest
0-60	36.3
61-140	19.3
141-250	2.5
251+	5.4

Forest management activities occur throughout all phases of forest development. Operational work includes pre-harvest planning, harvesting and stand regeneration. Post harvest activities include planting, brushing, juvenile spacing, pruning and thinning.

4.3 Private Land

Several substantial parcels of private land occur within the Chilliwack LU. Much of the main river valley bottom, particularly at the western end, is private land and has either been cleared for housing or agricultural purposes. The Soowahlie Indian Reserve is located in the north-western corner of this LU near Cultus Lake.

4.4 Water

There are no Community Watersheds within the Chilliwack Landscape Unit.

4.5 Recreation

Cultus Lake and International Ridge parks occupy the western end of the LU while Chilliwack Lake park occurs in the eastern end of the LU. Cultus and Chilliwack Lake parks receive heavy public use by campers, boaters and hikers. Several popular hiking trails extend into International Ridge park. Other high use hiking trails exist throughout the landscape unit. Overall, the Chilliwack LU receives heavy public recreation use. Spring summer and fall activities include: hiking, lake and river fishing, camping, 4 wheel drive and ATV use, sightseeing, hunting, wildlife viewing, helicopter tours etc. Berry and mushroom picking occur and botanical forest products are also collected.
Winter recreational activity (off the main valley road) is normally restricted by seasonal road deactivation and snow accumulation, although fishing, snowmobiling and cross country skiing do occur.

River angling in the mainstem Chilliwack River, below Slesse Creek, is extremely popular and many anglers fish for steelhead, salmon or trout in all months of the year except June. Several lakes support small resident fish that provide angling opportunities for hikers.

There are many Forest Service Recreation Sites in the Chilliwack LU all are extremely popular and busy through the summer months.

4.6 Sub-surface Resource Values

Subsurface resources (minerals, coal, oil, gas and geothermal) and aggregate resources are commodities valuable to the provincial economy. They are, however, difficult to characterise due to their hidden nature. Currently, comprehensive information is available for mineral potential in this area; aggregate potential for this LU has not been rated and no information regarding energy deposits was available to the planning team.

The Ministry of Energy and Mines has rated the metallic mineral potential of this area as moderate to high and the industrial mineral potential as moderate. Mineral Potential classifies the land base based upon the probability of discovering metallic or industrial mineral ore deposits in that area. Resource assessment tracts are based on areas of similar geology when assessed at the 1:250 000 scale. Mineral Potential classification was carried out on each tract with strong input from mineral industry experts and the use of other valuable databases such as MINFILE, exploration assessment reports, regional geochemical survey data, geophysical data, descriptive mineral deposit profiles and deposit models. Techniques used to derive Mineral Potential rankings followed those outlined in the United States Geological Survey Mineral Assessment Methodology[5], with some modifications. Assessments of estimated undiscovered metallic resources were based on gross in place value (GIPV) and processed through the USGS Mark3B Mineral Resource Assessment Monte Carlo simulator[6]. Undiscovered industrial mineral assessments were based on Relative Deposit Value Score (RDVS). RDVS considers commodity unit value, potential markets, deposit grade and tonnage, transportation costs, infrastructure and extraction costs.

5.0 Existing Higher level Plans

Higher Level Plan objectives are one provision under the FPC that enables specific forest resource management objectives to be made legally binding. Legal objectives established under the Landscape Unit plan will be higher level plan objectives. In part of the Chilliwack LU the Spotted Owl Management Plan has been approved and is also being considered for higher level plan status with legal objectives. It is important to note that operational plans must be consistent with higher level plan objectives.

6.0 First Nations

The Chilliwack LU is located within the traditional territory of the Sto:lo Nation, Ch-ihl-Kway-uhk Tribe and the Nlaka'pamux First Nation. There is evidence of traditional use in several areas including trails and Culturally Modified Trees.

Between 1997 and 1999, an Archaeological Overview Assessment model was developed by MOF to indicate where archaeological sites are most likely located. This was done to

[5] Singer, D.A., 1993, Basic concepts in three-part quantitative assessments of undiscovered mineral resources: Nonrenewable Resources, v. 2, n. 2, p. 69-81.

[6] Root, D.H., Scott, W.A. Jr. and Schruben, P (1998): Mark3B Resource Assessment Program for Macintosh; US Geological Survey, USGS Open File Report 98-356.

minimize potential impacts by forestry operations on culturally important areas. The model is useful in predicting the location of habitation sites and high elevation campsites in the sub-alpine. Travel routes are also identified.

The maps produced from the model were reviewed to determine the amount of overlap between potential archaeological sites, travel routes and OGMAs. In the Chilliwack LU, there is low to high overlap between OGMAs and old forest stands that exhibit a moderate to high potential for habitation sites, these sites are primarily located on lower slope or valley bottom areas near lakeshores or streams. The maps also indicated that three OGMAs overlap with archaeological sites. No potential travel routes within the Landscape Unit.

7.0 OGMA Methodology

7.1 Existing Planning Processes

Each LU contains varying amounts of mature/old forested habitat provided by existing processes (e.g. some LUs have spotted owl Special Resource Management Zones, some have protected areas) from which to build on for ecosystem management. The FPC ungulate winter range process, once completed, will also help provide a foundation for ecosystem management. In addition, Wildlife Habitat Areas that may be established in future will also improve connectivity; and in the long term, re-establishment of riparian reserve zones to old forest will improve upon ecosystem integrity. The habitat provided by these various processes, combined with OGMAs provides the fundamental components to achieve a functioning ecosystem.

An important part of the OGMA planning exercise was to ensure that these separate processes complemented each other. For example, OGMAs, where practical, were placed to create larger habitat patches in the vicinity of known spotted owl activity centres. In other cases, OGMAs were placed within or adjacent to ungulate winter range to overlap constraints and to increase patch size. These larger patches then allow greater opportunity to improve connectivity between adjacent patches. The intent is to maintain a series of old forest habitat patches across probable movement corridors to allow wildlife dispersal and gene flow. Species such as deer are particularly susceptible to mortality in winter and connecting or aggregating OGMAs may help facilitate deer movement in addition to benefiting biodiversity. Using this approach with stand level biodiversity measures (e.g. Wildlife Tree Patches) will increase the likelihood of sustaining ecosystems and viable wildlife populations well distributed across their natural range.

7.2 Assessment and Review

OGMAs were selected based on a review of stand attributes in an effort to maximize their value from a biodiversity standpoint while minimizing timber supply impact. Spatial distribution of OGMAs throughout the LU was also a selection criterion. A specific rationale for the selection of each OGMA is shown in Appendix 1. In general,

opportunities to recruit larger patches to provide for forest interior habitat conditions (to the recommended target) were favoured over smaller patches, although this was difficult in this LU. In this search, an effort was extended to minimize the impact on the timber supply by combining areas in the non-contributing (parks, ecological reserves) with areas within the timber harvesting landbase. In addition, a significant number of smaller remnant patches containing old forest were delineated in conformance with the *Landscape Unit Planning Guidebook* (LUPG).

In the Chilliwack Landscape Unit there was insufficient old forest (250+ years) in six of the eight BEC variants to meet OGMA targets. The exceptions being the higher elevation MH mm1 unit and CWH dm unit mostly in park. For the other six units it was necessary to designate younger aged immature and mature stands (i.e. mostly age 101-250 years, with some young forest stands) as recruitment OGMAs. Where possible, mature stands that had old forest attributes (e.g. snags, multi-layered canopy) or high resource values (e.g. spotted owl, deer winter range) were chosen as recruitment OGMAs. In one situation (CWH ms1) a large immature stand in mountain goat winter range was selected.

7.3 Boundary Mapping

OGMA boundaries used natural or recognizable features, such as creeks or roads, wherever possible to ensure they could be located on the ground. OGMAs were also delineated to include complete forest stands (forest cover polygons) wherever possible to reduce operational uncertainty and increase ease of OGMA mapping. OGMAs were mapped using a 1:20000 scale TRIM base, which forms the legal standard for measurement. Procedures for operating within OGMAs are discussed in the OGMA Amendment policy.

7.4 Amendment Policy

An MSRM Coast Region policy has been developed and approved 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, and forms an integral part of this LU plan.

7.5 Mitigation of Timber Supply Impacts

During delineation of OGMAs for priority biodiversity provisions an attempt was made to mitigate the short and long-term impacts on timber supply. For example, OGMAs were delineated first in the non-contributing forest land base (approximately 86% of OGMAs are within the NC land base). Since representation must be at the variant level, the non-contributing land base could not always satisfy old forest requirements. Where this occurred, portions of the timber harvesting land base from most constrained to least constrained were assessed and included as OGMAs. Generally, more THLB was

required in lower elevation variants due to a longer disturbance history and lesser amounts of non-contributing forest land.

OGMAs were chosen in the oldest available age class first, however, old forest stands that were approved or proposed for harvesting on Forest Development Plans (FDP) were excluded from candidate OGMAs following direction outlined in the *Landscape Unit Planning Guide*. Licensees also reviewed the maps and identified future harvesting opportunities so that timber supply impacts could be reduced wherever possible.

8.0 Landscape Unit OGMA Analysis for the Chilliwack LU

The Chilliwack LU was ranked as a Low biodiversity emphasis option through the biodiversity value ranking process completed earlier (see the *Vancouver Forest Region Landscape Unit Planning Strategy*, 1999). This Low designation along with the BEC variant determines the percentage of the Crown forest land base that will be designated as OGMA. Table 4 outlines the total amount of OGMA required and actually established in each variant and from which Crown forest category (i.e. Non Contributing-NC; Timber Harvesting Land Base)[7]. The old growth target figures in Table 4 are derived from Appendix 2 in the *Landscape Unit Planning Guide*. See Appendix 1 for OGMA attributes and a rationale; and the attached map for location of OGMAs.

Table 4. Old Growth Management Area (OGMA) requirements for the Chilliwack Landscape Unit.

BEC Variant	Full OGMA Target (ha)	Established OGMAs (ha)	Delineated OGMAs							
			Non-Contributing (NC)				Part. Contrib. (PC)		Contributing (C)	
			Protected Areas		Non-PA					
			%	ha	%	ha	%	ha	%	ha
CWHdm	1006.0	1012.4	59.2	599.1	29.6	177.3	7.0	71.1	16.3	164.8
CWHds1	299.0	299.7	71.3	213.8	17.6	37.7	16.1	48.1	0.0	0.1
CWHms1	1406.0	1408.9	56.5	796.1	57.0	454.1	0.7	10.2	10.5	148.5
CWHvm2	735.0	737.6	72.2	532.9	21.8	116.1	0.6	4.4	11.4	84.2
CWHxm1	48.0	52.3	21.4	11.2	44.6	5.0	0.0	0.0	69.0	36.1
MHmm1	292.0	297.5	100.0	297.5	0.0	0.0	0.0	0.0	0.0	0.0
MHmm2	1354.0	1361.8	23.5	320.7	275.3	882.8	3.3	44.6	8.3	113.6
Total	**5140**	**5170.2**	**53.6**	**2771.2**	**32.4**	**1673**	**3.5**	**178.5**	**10.6**	**547.4**

NDT 1: CWHvm2, MHmm1, MHmm2.
NDT 2: CWHdm, CWHds1, CWHms1, CWHxm1.

[7] Non Contributing (NC) forest land does not contribute to the Allowable Annual Cut. The Timber Harvesting Land Base (THLB) is made up of Contributing (C) forests and a portion of the Partially Contributing (PC) forests. Partially Contributing forests are "constrained" due to one of several factors such as unstable soils or wildlife habitat, but are still partially available for harvest. Contributing forest is unconstrained and available for timber harvest.

9.0 Wildlife Tree Retention

Wildlife tree retention is managed at the stand level and maintains structural diversity within managed stands by retaining wildlife trees immediately adjacent to or within cutblocks. The WTR percentage by BEC subzone is described in Table A of the *Legal Objectives*. Retention percentages will meet the targets outlined in the LUPG for each BEC subzone.

The retention percentage 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 2 year period. The intent is to provide limited flexibility 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.

10.0 Landscape Unit Plan Objectives

Landscape unit objectives will be legally established within the framework of the FPC and as such will become Higher Level Plan objectives. Other Operational Plans must be consistent with these objectives.

OGMA and WTR Landscape Unit objectives apply only to Provincial forest lands. While park and Crown forest lands outside of provincial forest may contribute to old seral representation, LU Objectives do not apply to these areas.

11.0 Appendices

Appendix 1 – OGMA Summary and Rationale – Chilliwack LU

Appendix 2 – Acronyms

Appendix 3 – Public Consultation Summary

APPENDIX 1: OGMA SUMMARY AND RATIONALE – Chilliwack LU

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
1	MH mm 2	N	6.32	0.00	Near Ling Lake		
2	MH mm 2	N	21.32	0.00	Ling Lake riparian		
3	CWH ms 1	N	8.53	0.00			Bear values in adj. Aval. chutes
3	MH mm 2	N	9.80	0.00			Bear values in adj, aval. chutes
5	CWH ms 1	N	1.86	0.00	5, 6, 7 form larger complex		Bear values in adj, aval. chutes
5	MH mm 2	N	0.71	0.00	5, 6, 7 form larger complex		Bear values in adj, aval. chutes
6	CWH ms 1	N	1.68	0.00	5, 6, 7 form larger complex		Bear values in adj, aval. chutes
6	MH mm 2	N	2.89	0.00	5, 6, 7 form larger complex		Bear values in adj, aval. chutes
7	MH mm2	N	0.56	0.00	Shown on map as ATp, but is forested		Bear values in adj, aval. chutes
7	CWH ms 1	N	0.42	0.00	5, 6, 7 form larger complex		Bear values in adj, aval. chutes
7	MH mm 2	N	8.57	0.00	5, 6, 7 form larger complex		Bear values in adj, aval. chutes
8	CWH ms 1	N	6.87	0.00	8 & 142 form larger complex		Bear values in surrounding area
8	MH mm 2	N	40.01	0.00	8 & 142 form larger complex		Bear values in surrounding area
12	CWH ms 1	N	19.12	0.00	Cutblocks adj. to East and West		
13	MH mm 2	N	16.37	0.00	13 & 17 combine for rip. to upslope link		MGWR
14	CWH ms 1	C	0.03	0.03	Riparian, sliver of Contributing		
14	CWH ms 1	N	4.69	0.00	Riparian		Partial MGWR
14	MH mm 2	C	0.19	0.19	Riparian, sliver of Contributing		
14	MH mm 2	N	3.98	0.00	Riparian		Partial MGWR
15	MH mm 2	N	7.54	0.00			N half is MGWR
16	MH mm 2	N	5.88	0.00	16, 20, 143, 145 combine for larger complex		
17	CWH ms 1	N	6.24	0.00	17 & 13 combine for rip. to upslope link		Very small part in MGWR
18	CWH ms 1	C	11.91	11.91	Larger patch, small amount forest interior	Agreed to by licensees	Recruitment OGMA
18	MH mm 2	C	12.07	12.07	Larger patch, small amount forest interior	Agreed to by licensees	Recruitment OGMA
18	MH mm 2	N	19.60	0.00	Larger patch, small amount forest interior		Recruitment OGMA
19	MH mm 2	N	24.99	0.00	19, 22, 23, 25 form larger complex		Some bear values in surrounding area

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
20	CWH ms 1	N	1.00	0.00	16, 20, 143, 145 combine for larger complex		Bear values in surrounding area
20	MH mm 2	C	6.11	6.11	16, 20, 143, 145 combine for larger complex	Agreed to by licensees	Bear values in surrounding area
20	MH mm 2	N	17.50	0.00	16, 20, 143, 145 combine for larger complex		Bear values in surrounding area
22	MH mm 2	N	3.96	0.00	19, 22, 23, 25 form larger complex		
23	CWH ms 1	N	0.25	0.00	19, 22, 23, 25 form larger complex		
23	MH mm 2	N	4.36	0.00	19, 22, 23, 25 form larger complex		
24	CWH ms 1	N	0.08	0.00	Recruitment OGMA		
24	MH mm 2	N	13.11	0.00	Recruitment OGMA		
25	CWH ms 1	N	8.01	0.00	19, 22, 23, 25 form larger complex		
25	MH mm 2	N	0.42	0.00	19, 22, 23, 25 form larger complex		
26	MH mm 2	N	9.65	0.00	Combines with 29		LTOH
26	MH mm 2	P	22.35	22.35	Combines with 29	Agreed to by licensees	LTOH
28	MH mm 2	N	7.52	0.00	Remnant after wild fire		
29	MH mm 2	N	2.54	0.00	Combines with 26		LTOH
32	MH mm 2	N	14.20	0.00	Flora Lake riparian, rec. values. Park		
33	CWH ds 1	N	9.10	0.00	Lindeman Lake riparian. Park		LTOH
34	CWH ms 1	N	8.21	0.00	Remnant after harvest		
34	MH mm 2	C	0.09	0.09	Remnant after harvest		
34	MH mm 2	N	3.78	0.00	Remnant after harvest		
35	CWH ds 1	N	5.58	0.00	Post Ck riparian, rec. values. Park		LTOH
36	CWH ds 1	N	10.46	0.00	Post Ck riparian. Park		LTOH
36	CWH ms 1	N	1.84	0.00	Post Ck riparian. Park		LTOH
37	MH mm 2	N	56.85	0.00	RF 10%. Large patch		
38	CWH dm	C	55.02	55.02	Riparian, large linear patch. High rec. values. Some recruitment OGMA	Agreed to by licensees	High rip. & fish values in Chilliwack R.
38	CWH dm	N	2.97	0.00	Riparian, large linear patch. High rec. values. Some recruitment OGMA		High rip. & fish values in Chilliwack R.
38	CWH dm	P	2.94	0.29	Riparian, large linear patch. High rec. values. Some recruitment OGMA	Agreed to by licensees	High rip. & fish values in Chilliwack R.

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
39	CWH ds 1	N	10.48	0.00	Park		LTOH
40	CWH ds 1	N	25.88	0.00	Lower Post Ck riparian. Part park.		LTOH, High fish values, CGS
41	CWH ds 1	N	3.03	0.00	41, 44 combine for rip. to upslope link. Park		LTOH, DWR in lower half, CGS
41	CWH ms 1	N	10.33	0.00	41, 44 combine for rip. to upslope link. Park		LTOH, DWR in lower half, CGS
42	CWH ms 1	N	9.95	0.00	Park		LTOH
42	MH mm 2	N	5.75	0.00	Park		Mostly LTOH
43	CWH dm	N	4.94	0.00	Riparian, Recruitment OGMA. Combines with 38		High fish values in Chilliwack River
44	CWH ds 1	N	17.49	0.00	41, 44 combine for rip. to upslope link. Park		LTOH, DWR
46	MH mm 2	N	13.53	0.00			
50	MH mm 2	N	13.36	0.00	High elevation riparian		
51	CWH ms 1	N	19.65	0.00	Park		LTOH
51	MH mm 2	N	7.22	0.00	Park		Partly LTOH
52	CWH ms 1	N	76.72	0.00	Park. Large patch, some forest interior		Almost all LTOH
52	MH mm 2	N	2.26	0.00	Park, Large patch, some forest interior		
53	CWH dm	C	8.37	8.37	Recruitment OGMA, important spatially	Agreed to by licensees	
53	CWH dm	N	6.10	0.00	Recruitment OGMA, important spatially		
53	CWH xm 1	C	11.16	11.16	Recruitment OGMA, important spatially	Agreed to by licensees	
53	CWH xm 1	N	4.99	0.00	Recruitment OGMA, important spatially		
54	MH mm2	N	0.29	0.00	Shown on map as AT but is forested		
54	CWH ms 1	N	11.81	0.00	Larger patch, small amount forest interior		
54	MH mm 2	N	34.11	0.00	Larger patch, small amount forest interior		
55	CWH dm	C	1.38	1.38	Important spatially	Agreed to by licensees	
55	CWH xm 1	C	24.95	24.95	Important spatially, some recruitment OGMA	Agreed to by licensees	
56	CWH ms 1	N	22.43	0.00	Lake riparian, Park		LTOH, some bear values in aval. Chutes, CGS habitat at lake shore
57	CWH ms 1	C	15.45	15.45	Important spatially, only Riparian patch	Agreed to by licensees	
57	CWH ms 1	N	0.55	0.00	Important spatially, only Riparian patch		
58	MH mm 2	N	5.76	0.00	58, 60 combine for important rip. complex		

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
60	MH mm 2	N	13.51	0.00	58, 60 combine for important rip. complex		
62	MH mm 2	N	14.73	0.00	Remnant after harvest		
63	CWH dm	N	34.25	0.00	Recruitment OGMA, large riparian patch. Important spatially		High fish values in Chilliwack River
64	CWH ms 1	N	33.46	0.00	Lake riparian, Park		LTOH
66	CWH dm	N	20.05	0.00	Recruitment OGMA, riparian		High fish and amphibian values
67	CWH dm	C	8.08	8.08	Borden Ck riparian. Important spatially	Agreed to by licensees	High amphibian values
67	CWH vm 2	C	17.40	17.40	Borden Ck riparian. Important spatially	Agreed to by licensees	High amphibian values
68	CWH dm	C	37.62	37.62	Important spatially, only old in area	Agreed to by licensees	DWR, amphibian values in riparian
68	CWH vm 2	C	2.81	2.81	Important spatially, only old in area	Agreed to by licensees	DWR, amphibian values in riparian
69	CWH ms 1	C	13.68	13.68	Some recruitment OGMA	Agreed to by licensees	
69	CWH ms 1	N	8.88	0.00	Some recruitment OGMA		
69	MH mm 2	N	0.78	0.00			
70	CWH ms 1	N	9.49	0.00	70, 71 combine for larger complex		
70	MH mm 2	N	0.92	0.00	70, 71 combine for larger complex		
71	CWH ms 1	N	3.79	0.00	70, 71 combine for larger complex		
71	MH mm 2	N	16.58	0.00	70, 71 combine for larger complex		
72	MH mm 2	C	0.36	0.36		Contrib. is remnant after harvest	
72	MH mm 2	N	19.97	0.00			
73	CWH ms 1	N	24.21	0.00	Park		Almost all LTOH
73	MH mm 2	N	3.11	0.00	Park		Mostly LTOH
74	MH mm 2	N	3.75	0.00	74, 76, 77, 79, 163 combine for larger complex		Some bear values in adj. aval. chutes
75	CWH ms 1	N	10.35	0.00			
76	MH mm 2	C	9.72	9.72	74, 76, 77, 79, 163 combine for larger complex	Agreed to by licensees	
76	MH mm 2	N	3.38	0.00	74, 76, 77, 79, 163 combine for larger complex		
77	MH mm 2	N	2.46	0.00	74, 76, 77, 79, 163 combine for larger complex		
78	MH mm 2	N	2.20	0.00	Small patch of old		

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
79	MH mm2	N	0.59	0.00	Shown on map as AT but is forested		
79	MH mm 2	N	12.39	0.00	74, 76, 77, 79, 163 combine for larger complex		
81	CWH ds 1	N	0.43	0.00	Large patch, lake rip. forest interior, Park		LTOH
81	CWH ms 1	N	103.96	0.00	Large patch, lake rip. forest interior, Park		LTOH
82	MH mm 2	N	0.82	0.00	Small patch of old		
82	MH mm 2	P	5.48	0.55	Small patch of old	Agreed to by licensees	
83	CWH dm	N	25.11	0.00	Park, Recruitment OGMA		LTOH (recruitment)
83	CWH xm 1	N	5.60	0.00	Park, Recruitment OGMA		LTOH (recruitment)
84	CWH vm 2	C	1.01	1.01	Larger patch	Agreed to by licensees	
84	CWH vm 2	N	11.87	0.00	Larger patch		
84	MH mm 2	C	12.79	12.79	Larger patch	Agreed to by licensees	
84	MH mm 2	N	10.32	0.00	Larger patch, High elevation lake riparian		
86	CWH ms 1	N	0.80	0.00	86, 92 form small high elev. complex		
86	MH mm 2	N	2.61	0.00	86, 92 form small high elev. complex		Part MGWR
87	MH mm 2	N	12.28	0.00	Back end Paleface Ck.		
89	CWH ms 1	C	5.69	5.69	89, 96, 97 form small complex	Agreed to by licensees	MGWR, some bear values in adj. area
90	CWH dm	N	2.36	0.00	Park, Recruitment OGMA		LTOH (recruitment)
90	CWH xm 1	N	5.57	0.00	Park, Recruitment OGMA		LTOH (recruitment)
92	CWH ms 1	N	6.42	0.00	86, 92 form small complex		Adjacent to large MGWR
92	MH mm 2	N	3.07	0.00	86, 92 form small complex		Adjacent to large MGWR
93	CWH vm 2	N	50.40	0.00	Large patch, recruitment OGMA, Important spatially		
94	CWH ms 1	N	6.14	0.00	94, 95, 101 combine for larger complex. Park		LTOH, some bear values in adj. area
94	MH mm 2	N	2.21	0.00	94, 95, 101 combine for larger complex. Park		Part LTOH, some bear values in adj. area
95	CWH ms 1	N	13.10	0.00	94, 95, 101 combine for larger complex. Park		LTOH, some bear values in adj. area
95	MH mm 2	N	9.81	0.00	94, 95, 101 combine for larger complex. Park		Small part LTOH, some bear values in adjacent area

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
96	CWH ms 1	N	3.02	0.00	89, 96, 97 form small complex		Some bear values in adj. area, CGS
96	CWH ms 1	P	4.58	0.46	89, 96, 97 form small complex	Agreed to by licensees	East half MGWR, some bear values in adjacent area, CGS
96	MH mm 2	N	2.42	0.00	89, 96, 97 form small complex		MGWR, some bear values in adj. area, CGS
96	MH mm 2	P	1.00	0.10	89, 96, 97 form small complex	Agreed to by licensees	MGWR, some bear values in adj. area, CGS
97	CWH ms 1	C	3.02	3.02	89, 96, 97 form small complex	Agreed to by licensees	Some bear values in adjacent aval. chutes
99	MH mm 2	C	22.61	22.61	99, 103, 108 form large complex. Large patch, forest interior	Agreed to by licensees	
99	MH mm 2	N	47.48	0.00	99, 103, 108 form large complex. Large patch, forest interior		
101	CWH ms 1	N	0.61	0.00	94, 95, 101 combine for larger complex. Park		Some bear values in adjacent area
101	MH mm 2	N	3.59	0.00	94, 95, 101 combine for larger complex. Park		Some bear values in adjacent area
102	MH mm 2	N	5.34	0.00	Park		Mostly LTOH
103	CWH ms 1	N	0.51	0.00	99, 103, 108 form large complex		
103	MH mm 2	N	29.50	0.00	99, 103, 108 form large complex		
104	CWH ms 1	N	19.26	0.00	Lake riparian, Park		LTOH
106	CWH dm	N	17.55	0.00	Important spatially, only patch of older in area. Park		
108	MH mm 2	N	5.59	0.00	99, 103, 108 form large complex		
110	MH mm 2	N	3.22	0.00	110, 111 combine for small complex		
111	MH mm 2	N	6.84	0.00	110, 111 combine for small complex		
114	CWH ms 1	N	0.32	0.00	Surrounds small high elev. lake		
114	MH mm 2	C	0.50	0.50	Surrounds small high elev. lake	Contrib. is remnant after harvest	
114	MH mm 2	N	11.35	0.00	Surrounds small high elev. lake		
116	CWH ms 1	N	22.67	0.00	Larger patch adj. to Intern'l border & North Cascades Nat'l Park. Lake riparian		Some bear values in surrounding area
116	MH mm 2	N	20.97	0.00	Larger patch adj. to Intern'l border & North Cascades Nat'l Park. Lake riparian		Some bear values in surrounding area
118	CWH ms 1	N	0.12	0.00			
118	MH mm 2	N	4.44	0.00			
119	CWH ms 1	N	31.09	0.00	Part recruitment OGMA		

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
122	CWH ms 1	N	0.10	0.00	Small patch adj. to Intern'l border & North Cascades Nat'l Park		Spotted Owl FMA
122	MH mm 2	N	4.75	0.00	Small patch adj. to Intern'l border & North Cascades Nat'l Park		Spotted Owl FMA
124	CWH dm	N	7.13	0.00	Recruitment OGMA, Part Park. Joins with 125 and park for larger complex.		Amphibian values in Riparian. LTOH
124	CWH dm	P	1.55	1.55	Recruitment OGMA, Part Park. Joins with 125 and park for larger complex.	Agreed to by licensees	Amphibian values in Riparian, LTOH
124	CWH vm 2	N	1.03	0.00	Recruitment OGMA, Part Park. Joins with 125 and park for larger complex.		Amphibian values in Riparian, LTOH
125	CWH dm	N	0.13	0.00	Joins with 124 and park for larger complex		Amphibian values in Riparian, LTOH
125	CWH dm	P	8.02	8.02	Joins with 124 and park for larger complex	Agreed to by licensees	Amphibian values in Riparian, LTOH
129	CWH ms 1	N	5.64	0.00	Lake riparian. Adjacent to Intern'l border & North Cascades Nat'l Park		Bear values in surrounding area
129	MH mm 2	N	12.71	0.00	Lake riparian. Adjacent to Intern'l border & North Cascades Nat'l Park		Bear values in surrounding area
130	CWH dm	C	3.31	3.31	Spatially important, only old in area	Agreed to by licensees	
130	CWH ms 1	C	13.54	13.54	Spatially important, only old in area	Agreed to by licensees	
131	MH mm 2	N	8.96	0.00			Some bear values in surrounding area
133	CWH ms 1	C	1.90	1.90	Larger patch	Agreed to by licensees	
133	CWH ms 1	N	1.08	0.00	Larger patch		
133	MH mm 2	C	6.96	6.96	Larger patch	Agreed to by licensees	
133	MH mm 2	N	39.34	0.00	Larger patch		
135	MH mm 2	N	6.13	0.00			
137	CWH ms 1	C	24.34	24.34	Important spatially, recruitment OGMA	Agreed to by licensees, research plots	DWR
138	CWH vm 2	N	0.81	0.00	Larger patch, Park, forest interior		LTOH
138	MH mm 1	N	48.19	0.00	Larger patch, Park, forest interior		LTOH
140	CWH ms 1	C	8.15	8.15	Adjacent to Intern'l border	Agreed to by licensees	
140	CWH ms 1	N	10.22	0.00	Adjacent to Intern'l border	Agreed to by licensees	
142	CWH ms 1	N	15.29	0.00	142 & 8 form larger complex		Bear values in surrounding area
142	MH mm 2	N	7.55	0.00	142 & 8 form larger complex		Bear values in surrounding area
143	MH mm 2	C	14.29	14.29	Larger patch. 16, 20, 143, 145 combine for	Agreed to by licensees	

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
					larger complex		
143	MH mm 2	N	10.57	0.00	Larger patch. 16, 20, 143, 145 combine for larger complex		
143	MH mm 2	P	7.93	0.79	Larger patch. 16, 20, 143, 145 combine for larger complex	Agreed to by licensees	
144	CWH ds 1	N	4.87	0.00	Park. Large patch forest interior. Rec values		LTOH
144	CWH ms 1	N	220.57	0.00	Park. Large patch forest interior. Rec values. Lake riparian to upslope link		LTOH
144	MH mm 2	N	183.12	0.00	Park. Large patch forest interior. Rec values. Riparian to upslope link		Mostly LTOH
144	MH mm 2	P	7.72	7.72	Part of larger patch	Agreed to by licensees	LTOH
145	CWH ms 1	N	1.30	0.00	16, 20, 143, 145 combine for larger complex		
145	MH mm 2	N	4.03	0.00	16, 20, 143, 145 combine for larger complex		
147	CWH ms 1	C	29.01	29.01	Lake riparian to upslope connectivity. Spatially important	Agreed to by licensees	DWR, partial MGWR
147	CWH ms 1	N	9.07	0.00	Lake riparian to upslope connectivity. Spatially important		DWR, partial MGWR
148	CWH dm	C	2.86	2.86	Large patch recruitment OGMA, provide forest interior when older. Part burned	Agreed to by licensees	Partial MGWR, DWR. Spatially important. Riparian to upslope link
148	CWH dm	N	28.57	0.00	Large patch recruitment OGMA, provide forest interior when older. Part burned		Partial MGWR, DWR. Spatially important. Riparian to upslope link
148	CWH ms 1	C	1.27	1.27	Large patch recruitment OGMA, provide forest interior when older. Mostly burned	Agreed to by licensees	MGWR. Partial DWR. Spatially important. Riparian to upslope link
148	CWH ms 1	N	149.57	0.00	Large patch recruitment OGMA, provide forest interior when older. Mostly burned		MGWR. Partial DWR. Spatially important. Riparian to upslope link
148	MH mm 2	N	3.73	0.00	Large patch recruitment OGMA, provide forest interior when older. Burned		MGWR. Spatially important. Riparian to upslope link.
149	CWH ds 1	N	4.29	0.00	Park, riparian to upslope link. Rec values		LTOH
149	CWH ms 1	N	12.03	0.00	Park, riparian to upslope link. Rec values		LTOH
149	MH mm 2	N	1.27	0.00	Park, riparian to upslope link. Rec values		LTOH
151	CWH ds 1	C	0.09	0.09	Recruitment OGMA. Larger patch	Contributing is sliver	Partial MGWR. LTOH (mostly recruitment)
151	CWH ds 1	N	21.76	0.00	Recruitment OGMA. RF: 5 ha applied. Larger patch		Partial MGWR. LTOH (mostly recruitment)
151	CWH ms 1	N	21.13	0.00	Recruitment OGMA. RF: 5 ha applied. Larger aptch		MGWR, LTOH (mostly recruitment)
151	MH mm 2	N	4.37	0.00	Mostly recruitment OGMA. Larger patch		MGWR, LTOH (part recruitment)

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
152	CWH ds 1	P	48.12	48.12	Some recruitment OGMA. Spatially important	Agreed to by licensees	Ford Mtn DWR, LTOH
154	CWH ds 1	N	16.56	0.00	Park, Lake riparian		DWR, LTOH
155	CWH ms 1	N	88.97	0.00	Park, large patch, some forest interior, rip.		LTOH
155	MH mm 2	N	59.40	0.00	Park, large patch, some forest interior, rip.		Partly LTOH
156	CWH ds 1	N	125.41	0.00	Park, lake rip. to upslope link, large patch forest interior, mostly recruitment OGMA		DWR, LTOH, CGS
157	CWH dm	C	29.87	29.87	Recruitment OGMA. Rip. to upslope link. Large patch. Important spatially	Mostly unstable terrain, agreed to by licensees	Amphibian values in riparian area, CGS
157	CWH dm	N	40.13	0.00	Recruitment OGMA. Rip. to upslope link. Large patch. Important spatially		Amphibian values in riparian area, CGS
158	MH mm2	N	2.83	0.00	Shown on map as AT but is forested		
158	CWH dm	C	14.47	14.47	Pierce Ck rip. to upslope link. Rec values	Agreed to by licensees	
158	CWH vm 2	C	7.59	7.59	Pierce Ck rip. to upslope link. Rec values	Agreed to by licensees	
158	CWH vm 2	N	50.87	0.00	Pierce Ck rip. & upland area. Large patch. Rec values		
158	MH mm 2	C	0.95	0.95	Large patch riparian to upslope link. Lake riparian. Rec values	Contributing is sliver	
158	MH mm 2	N	122.29	0.00	Large patch riparian to upslope link. Lake riparian. Rec values		
159	CWH dm	N	32.93	0.00	Recruitment OGMA. Important spatially		High fish values in Chilliwack River
160	MH mm 2	N	6.66	0.00	Park, combines with 155 in large complex, small lake riparian. Rec values		
161	MH mm 2	N	4.92	0.00	Comb. with 158, large complex. Rec value		
163	MH mm 2	C	5.91	5.91	74, 76, 77, 79, 163 combine for larger complex	Agreed to by licensees	Some bear values in adj. aval. chutes
163	MH mm 2	N	12.83	0.00	74, 76, 77, 79, 163 combine for larger complex		Some bear values in adj. aval. chutes
163	MH mm 2	P	0.15	0.02	74, 76, 77, 79, 163 combine for larger complex	Partial Contributing is just sliver	Some bear values in adj. aval. chutes
164	CWH ms 1	N	12.63	0.00			
164	MH mm 2	N	2.25	0.00			
165	CWH dm	N	531.39	0.00	Park, Recruitment OGMA. Large patch forest interior		LTOH (part recruitment), part DWR
165	CWH vm 2	N	60.62	0.00	Park, Recruitment OGMA. Large patch forest interior		LTOH (part recruitment), part DWR

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
165	MH mm 1	N	44.91	0.00	Park, Recruitment OGMA. Large patch forest interior		LTOH
167	MH mm2	N	4.04	0.00	Mapped as AT but is forested. Spatially important. Larger patch		
167	CWH ms 1	C	0.32	0.32	Spatially important. Larger patch	Contributing is sliver	
167	CWH ms 1	N	16.88	0.00	Spatially important. Larger patch		
167	CWH ms 1	P	0.74	0.07	Spatially important. Larger patch		
167	CWH vm 2	C	0.51	0.51	Spatially important. Larger patch	Agreed to by licensees	
167	CWH vm 2	N	2.26	0.00	Spatially important. Larger patch		
167	CWH vm 2	P	0.17	0.02	Spatially important. Larger patch	Partial Contributing is just sliver	
167	MH mm 2	C	11.83	11.83	Spatially important. Larger patch	Agreed to by licensees	
167	MH mm 2	N	22.93	0.00	Spatially important. Larger patch		
168	CWH dm	C	3.84	3.84	Larger patch, rip. to upslope link, recruitment OGMA	Agreed to by licensees (Contrib. is mostly RRZ)	
168	CWH ms 1	C	20.19	20.19	Larger patch, rip. to upslope link, recruitment OGMA	Agreed to by licensees	Part DWR, Part MGWR
168	CWH ms 1	N	41.05	0.00	Larger patch, rip. to upslope link, part recruitment OGMA		Part DWR, Part MGWR
168	CWH ms 1	P	4.80	0.48	Larger patch, rip. to upslope link, part recruitment OGMA	Agreed to by licensees	Part DWR, Part MGWR
168	MH mm 2	N	10.65	0.00	Larger patch, rip. to upslope link, part recruitment OGMA		Small part MGWR
169	MH mm 2	N	4.22	0.00	High elevation, remnant after harvest		
170	CWH dm	N	16.42	0.00	Park. Large patch, forest interior		LTOH
170	CWH vm 2	N	78.26	0.00	Park. Large patch, forest interior		LTOH
170	MH mm 1	N	7.35	0.00	Park. Large patch, forest interior		LTOH
171	CWH ds 1	N	2.56	0.00	Park. Large patch forest interior, riparian to upslope link. Rec values. Adj. to North Cascades Nat'l park		High fish, wildlife & riparian values, LTOH.
171	CWH ms 1	N	104.49	0.00	Park. Large patch forest interior, riparian to upslope link. Rec values. Adj. to North Cascades Nat'l park		High fish, wildlife & riparian values, LTOH.
172	CWH ms 1	N	6.88	0.00	Park, riparian, Rec. values. Combines with 171, 174 for larger complex		High fish, wildlife & riparian values, LTOH.
173	CWH dm	N	6.03	0.00	Park, large patch, forest interior		LTOH, CGS

OGMA #	BEC VARIANT	CONTRIB CLASS	OGMA AREA	THLB AREA	COMMENTS	FDP	WILDLIFE
173	CWH dm	P	25.24	25.24	Part of large patch	Agreed to by licensees	LTOH, CGS
173	CWH vm 2	N	228.65	0.00	Park, large patch forest interior		LTOH, CGS
173	MH mm 1	N	34.95	0.00	Park, large patch forest interior		LTOH, CGS
174	CWH ms 1	N	14.93	0.00	Park, rip., Rec. value. Combines with 172, 174 for larger complex. Adj. to N. Cascades		High fish, wildlife & riparian values, LTOH.
175	CWH dm	N	0.36	0.00	Partly Park. Adj. to large park		LTOH
175	CWH dm	P	1.01	1.01	Partly Park. Adj. to large park	Agreed to by licenses	LTOH
175	CWH vm 2	N	3.64	0.00	Park. Combines with rest of large park		LTOH
177	CWH vm 2	N	85.68	0.00	Park, Large patch, forest interior. Riparian to upslope link		LTOH
177	MH mm 1	N	6.82	0.00	Park, Large patch, forest interior. Riparian to upslope link		LTOH
180	CWH vm 2	N	55.94	0.00	Park. Large patch, forest interior. Some recruitment OGMA. Adj. to intern'l border		LTOH, part DWR
180	MH mm 1	N	122.02	0.00	Park. Large patch, forest interior. Some recruitment OGMA. Adj. to intern'l border		LTOH
181	CWH vm 2	N	18.35	0.00	Park, forest interior		LTOH
181	MH mm 1	N	33.24	0.00	Park, forest interior		Mostly LTOH
182	CWH dm	P	32.35	32.35	Spatially important, limited older in subzone	Agreed to by licenses	LTOH, DWR
182	CWH vm 2	P	4.27	4.27	Spatially important, limited older in subzone	Agreed to by licenses	LTOH, DWR
183	CWH vm 2	C	54.88	54.88	Mostly recruitment OGMA. Larger patch	Agreed to by licenses	
183	CWH vm 2	N	0.53	0.00	Mostly recruitment OGMA. Larger patch		
183	MH mm 2	C	9.21	9.21	Mostly recruitment OGMA. Larger patch	Agreed to by licenses	
183	MH mm 2	N	1.02	0.00	Mostly recruitment OGMA. Larger patch		

Abbreviations: Adj = Adjacent. Rip = Riparian. Aval = avalanche. MGWR = Mountain Goat Winter Range. CGS = Coastal Giant Salamander. DWR = Deer Winter Range. LTOH = Spotted Owl Long Term Owl Habitat. Rec = Recreation. RF = Reduction Factor applied

Appendix 2: Acronyms

AAC	Allowable Annual Cut
BCTS	BC Timber Sales, administered by MOF
BEC	Biogeoclimatic Ecosystem Classification
BEO	Biodiversity Emphasis Option
C	Contributing
CMT	Culturally Modified Tree
CWS	Community Watershed
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
WTP	Wildlife Tree Patch
WTR	Wildlife Tree Retention

Appendix 3: Public Consultation Summary

The 60-day public review and comment period for the Chilliwack Landscape Unit extended from 4 January through to 4 March 2005. Prior to the public consultation period, MSRM staff met with local forest licensees to address their concerns and craft a plan that minimised impacts to timber supply (Section 3.1). Ongoing discussions with the Ministries of Forests and Water, Land and Air Protection, regarding the development of the landscape unit objectives and placement of OGMAs for the Chilliwack LU, took place throughout the course of plan development. MSRM staff advised mineral tenure holders of OGMA placement and landscape unit objectives. An overview of the noteworthy aspects of MSRM's consultations and the specific comments received on the draft plan and LU objectives follows.

Consultations with First Nations
MSRM consulted with three First Nation organisations with traditional territory in the Chilliwack Landscape Unit: the Sto:lo Nation; the Nlaka'pamux Tribal Council; and the Ch-ihl-Kway-uhk Tribe Society. Of these three groups, comments were received from Ch-ihl-Kway-uhk Tribe. The concerns raised by Ch-ihl-Kway-uhk Tribe in this LU revolved around issues of Aboriginal Rights and Title and the protection of culturally important areas, specifically within Sleese Creek. The concerns which were raised fall beyond the scope of LU planning; the Ministry of Forests continues to consult on the broader issues raised. No comments were received from either the Sto:lo Nation nor the Nlaka'pamux Tribal Council.

Comments regarding maximising the overlap between OGMAs and other constrained areas in the THLB
As some time has elapsed between the development of the initial plan and its approval, some licensees are now considering development in areas where OGMA placement was once non-contentious. As well, UWRs and WHAs have since become more defined in their location and extent. MSRM consulted with affected licensees during plan development to agree on OGMA size and placement. Staff used the best information available regarding special management areas within the THLB (e.g., Spotted Owl Special Resource Management Zones, Ungulate Winter Range, and Wildlife Habitat Areas). MSRM has committed to an ongoing process of rationalising OGMA location with other THLB constraints.

Fraser Valley Regional District
Staff from the Fraser Valley Regional District expressed an interest in being informed about LU planning . No specific comments were received during the review and comment period.