

Integrated Land Management Bureau
Coast Region

Draft Salmon Landscape Unit Plan



February 9, 2010

Prepared by:

Ian McDougall, R.P.Bio
Strategic Planning and Operations
Integrated Land Management Bureau,
Campbell River, B.C.

John Deal, R.P.Bio, R.P.F.
Strategic Planning Forester
Western Forest Products Limited
Campbell River, B.C.

Table of Contents

1.0	Introduction	3
2.0	Salmon LU Description	5
2.1	Salmon LU Biophysical Description	5
2.2	Summary of Land Status.....	6
3.0	Key Resource Tenure Holders	7
3.1	Forest Tenure Holders.....	7
3.2	Mining Tenure Holders.....	7
4.0	Significant Resource Values	7
4.1	Fish, Wildlife and Biodiversity.....	7
4.2	Timber Resources	8
4.3	Private Land.....	9
5.0	Existing Higher level Plans	9
5.1	Legally Binding Direction	9
5.1.1.	EFZ 30 Values	10
5.2	Non-binding HLP Direction	10
5.2.1	EFZ 30 Primary Management Objectives.....	10
6.0	First Nations	10
7.0	OGMA Methodology	11
7.1	Integrating other values in OGMA selection.....	11
7.2	Boundary Mapping	11
7.3	Amendment Policy.....	12
7.4	Mitigation of Timber Supply Impacts.....	12
8.0	OGMA Analysis	13
8.1	OGMA Targets	13
8.2	Marbled Murrelet Habitat Analysis	15
9.0	Draft Legal Objectives	15

List of Figures:

Figure 1: Salmon Landscape Unit, Northeast Vancouver Island

List of Tables:

[Appendix 1 Vancouver Island Land Use Plan Higher Level Plan Order](#)
[Appendix 2 Proposed Legal OGMA Map](#)
[Appendix 3 OGMA Patch Size Summary](#)
[Appendix 4 Amendments and Operational Procedures for OGMA](#)

1.0 Introduction

This report describes the biodiversity conservation plan for the Salmon Landscape Unit (LU) and includes the associated legal objectives for old growth retention. A description of the planning unit, discussion on significant resource values and an Old Growth Management Area (OGMA) summary is provided.

Biological diversity 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 endangered². 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 to maintain biodiversity occurs at a variety of levels, all of which are linked hierarchically. The provincial level includes parks and the Protected Area Strategy, while at the regional level, the Vancouver Island Land Use Plan gives guidance and legal direction to finer levels of strategic planning, in this case, landscape and stand level conservation of old growth forests.

Planning for the conservation of OGMA biodiversity values is recognized as a high priority for the province. LU planning is supported by the *Forest and Range Practices Act (FRPA)* and the *Land Act* provides for the legal establishment of objectives to address landscape level biodiversity values.

Implementation of this strategic planning 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 forest 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 Campbell River Forest District has completed LU boundaries for its portion of Vancouver Island and has established Biodiversity Emphasis Options (BEOs) in accordance with policy direction provided by government.

¹ FPC Biodiversity Guidebook, September 1995

² BC Species and Ecosystems Explorer. Victoria, British Columbia, Canada. Available: <http://www.env.gov.bc.ca/atrisk/toolintro.html>

Current government direction requires that priority biodiversity provisions, particularly the delineation of OGMAs, must be undertaken as one of the FRPA objectives required by government. This work was completed by the Ministry of Agriculture and Lands (formerly initiated by the Ministry of Sustainable Resource Management) in conjunction with BC Timber Sales and Western Forest Products (formerly Cascadia Forest Products Limited TFL 39, Weyerhaeuser and previously MacMillan Bloedel Limited). As a replacement for Wildlife Tree Patch Retention policy in the Landscape Unit Planning Guide, the specifications for Wildlife Tree Retention (WTR objectives) are now covered separately under the new *FRPA* Forest Planning and Practices Regulation (FPPR), Part 4, Division 5, Section 66.

<http://www.for.gov.bc.ca/tasb/legsregs/frpa/frparegs/forplanprac/fppr.htm>

Supporting documentation regarding government policy, planning processes and biodiversity concepts are provided in the following documents.

- 1995 *Biodiversity Guidebook*,
<http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/biodiv/biotoc.htm>
- 1999 Landscape Unit Planning Guide (LUPG),
http://ilmbwww.gov.bc.ca/slrp/srmp/Background/lup_landscape.html
- Vancouver Forest Region Landscape Unit Planning Strategy (1999),
Vancouver Forest region Planning Document, Nanaimo, B.C.
- *Vancouver Island Summary Land Use Plan* (Feb. 2000)
http://ilmbwww.gov.bc.ca/slrp/lrmp/nanaimo/vancouver_island/plan/summary_lup/toc.htm
- the associated VILUP Higher Level Plan Order (Dec. 2000),
http://ilmbwww.gov.bc.ca/slrp/lrmp/nanaimo/vancouver_island/docs/HLP_order_final.pdf
- Sustainable Resource Management Planning: Standards for Creating, implementing and Administering Sustainable Resource Management Plans
http://ilmbwww.gov.bc.ca/slrp/lrmp/policiesguidelinesandassessments/docs/SRMP_applied_standards_guide.pdf

Deleted: -

... [1]

2.0 Salmon LU Description

2.1 Salmon LU Biophysical Description

The Salmon LU is situated within the Northern Island Mountains Ecosection on the northeast coast of Vancouver Island. The total landscape unit area is approximately 89,120 ha, of which 83% is productive forest land. This landscape unit is characterized by forests of high productivity found along major riparian systems, e.g., Salmon River, to low productivity, high elevation, alpine forests found in Strathcona Provincial Park and adjacent provincial forest lands. The terrain in this landscape unit is extremely diverse, with broad undulating valleys near the ocean and rugged, steep-sided valleys found farther inland. The highest elevation in this landscape unit is approximately 1850 metres above sea level and is located in Strathcona Provincial Park. The local climate is quite variable with lower elevation areas being dominated by the maritime influence and having cool to warm summers and wet winters. Higher elevation areas receive a greater proportion of their precipitation as snowfall. Average annual precipitation at Duncan Bay, the nearest climate recording center, is 162 centimetres, most of this occurring as rainfall. Based on biogeoclimatic classification it is expected that average annual precipitation within the LU area would be greater than that reported for Duncan Bay.

The location of the Salmon LU on Vancouver Island is shown in figure 1

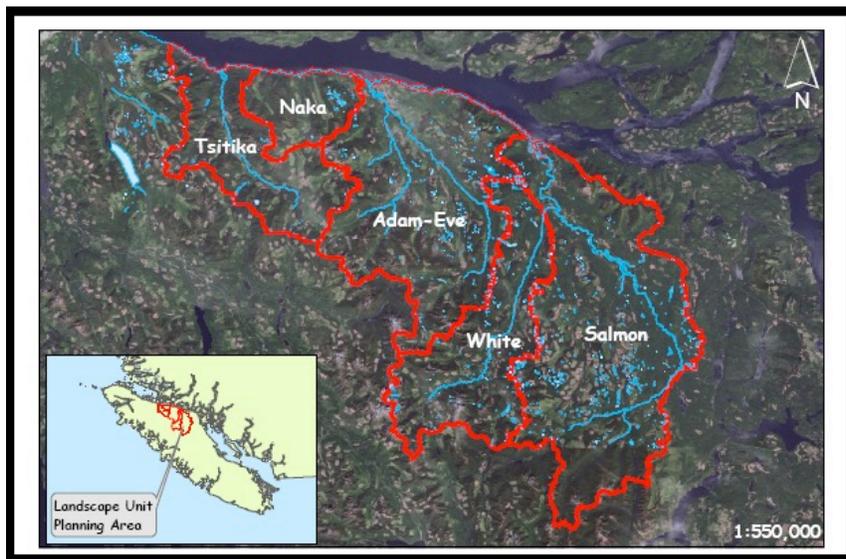


Figure 1 Salmon Landscape Unit, Northeast Vancouver Island

The two major Biogeoclimatic Ecosystem Classification (BEC) zones that cover the Salmon Landscape Unit are the Coastal Western Hemlock (CWH) Zone and the Mountain Hemlock (MH) Zone. Within the CWH in the Salmon LU there are five biogeoclimatic subzone variants. These are the CWHxm2 (very dry maritime), the CWHmm1 (submontane moist maritime), the CWHmm2 (montane moist maritime), the CWHvm1 (submontane very wet maritime), and the CWHvm2 (montane very wet maritime). Within the higher elevation Mountain Hemlock Zone there is one biogeoclimatic subzone variant, classified as the MHmm1 (windward moist maritime). One natural disturbance type (NDT 2)³ is most common, and is associated with the CWHxm2, CWHmm1, and CWHmm2. Historically, these forest ecosystems were usually even-aged, but extended post-fire regeneration periods produced stands with uneven-aged attributes. Wildfires were often of moderate size (> 20 ha), with unburned areas resulting from sheltering terrain features, higher site moisture, or chance. The less common NDT type (NDT 1), is found in the CWHvm1, CWHvm2, and MHmm1 ecosystems, found at higher elevations in this LU. Historically, these forest ecosystems were usually uneven-aged or multi-aged, with regeneration occurring in gaps created by the death of individual trees or small patches of trees. Where wind, fire, or landslides occurred, they were generally small and resulted in irregular edge configurations and landscape patterns.

2.2 Summary of Land Status

Land tenure status within the Salmon LU is summarized in Table 1.

Table 1 Land Tenure Status of the Salmon Landscape Unit

Ownership	Hectares
Western Forest Products TFL 39 BK 2	44,293
BC Timber Sales Strathcona TSA	29,182
Woodlots	2,135
Private	3,475
Strathcona Park	10,038
Total	89,123

³ FPC Biodiversity Guidebook, September 1995

3.0 Key Resource Tenure Holders

Tenure holdings may include forest tenures administered by the Ministry of Forests BC Timber Sales Program and Western Forest Products Limited, mineral tenures administered by the Ministry of Energy, Mines and Petroleum Resources, and other resource tenures administered by the Ministry of Agriculture and Lands. With tenure holders, other than forestry, the planning strategy generally aims to avoid placement of OGMA within existing tenures. With regard to forest tenures, the management intent is to avoid placement of OGMA over cutblocks and roads that have received approval status.

3.1 Forest Tenure Holders

That portion of the Salmon LU outside of Strathcona Provincial Park is covered predominantly by TFL 39, held by Western Forest Products Limited (formerly Cascadia Forest Products, previously Weyerhaeuser Company Limited and prior to that MacMillan Bloedel Limited). BC Timber Sales has a much smaller forest tenure in the southeast corner of the landscape unit. The Salmon Landscape Unit has approximately 67,650 ha of productive forest land outside of Strathcona Park. OGMA were selected to avoid impact to any known approved category “A” cutblocks or roads as approved under an FSP. Extensive iterative review and discussion has taken place to ensure that the intent of this LUP has been conveyed and that impacts on future planned development minimized.

3.2 Mining Tenure Holders

OGMA were mapped in the area based on their availability as non-contributing, or constrained forest. Mining exploration and development activities may be permitted in OGMA. The preference is to proceed with exploration and development in a way that would be sensitive to the old growth values of the OGMA. If exploration and development proceed to the point of significantly impacting old growth values, then the OGMA status would be moved and re-designated elsewhere.

4.0 Significant Resource Values

4.1 Fish, Wildlife and Biodiversity

Anadromous fisheries values are considered high in the Salmon and Memekay river systems. The numerous low gradient streams and rivers in the Salmon LU support an abundance of resident and anadromous fish. Riparian Reserve Zones (RRZs) established as per the *Forest and Range Practices Act* adjacent to these fish streams will help

maintain a significant amount of riparian fish and wildlife habitat. These riparian areas provide additional opportunities to conserve old growth values.

Wildlife resources of primary management concern in the Salmon LU include: eagles, Roosevelt elk, black tailed deer, black bear, the northern Goshawk, *Accipiter gentiles laingi* (nogo) and the marbled murrelet, *Brachyramphus marmoratus* (mamu). Both the northern Goshawk and marbled murrelet are considered as the primary species at risk and are recognized as “Identified Wildlife”⁴ in this landscape unit. In addition to habitat suitable for northern goshawk and marbled murrelet captured in the OGMA process, it is expected that wildlife habitat areas (WHAs) will assist in managing for this species. Many other species occur in the area including numerous forest birds, other raptors, small mammals, amphibians and furbearers, but their habitat requirements are generally managed within a mixture of forested seral stages distributed across the landscape.

4.2 Timber Resources

The timber harvesting land base (THLB) in the Salmon LU is currently estimated to be just over 39,000 ha for Western Forest Products, while the amount of forest in Protected Area and uneconomic/inoperable status is just over xxxxx ha. The high operability factor establishes the importance of the localized timber resource values. Whereas xx % of the THLB has already been harvested, continued access to commercially valuable timber, including currently marketable and future second growth, is a significant economic and social interest. Although harvest of second growth forests will increase over time, especially in low-elevation Douglas-fir leading forests, first pass harvesting of accessible old growth timber will continue for the foreseeable future.

Commercially valuable tree species in the Salmon LU are Douglas-fir, red alder, cottonwood, western red cedar, western hemlock, Amabilis fir, and, at higher elevations, yellow cedar. Based on forest cover information, Table 2 shows the age class distribution of forest within the productive landbase of the Salmon LU. There are currently over 23,000 ha of old growth forest equal to or greater than 225 years or age remaining in the Salmon LU of which approximately 5,900 ha is found within Strathcona Park.

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.

Table 3 Age Class Distribution of Productive Forest Land

Seral Stages by BEC Variant	Early Seral 1 - 60 yrs	Mid Seral 61 -120 yrs	Mature Seral 121 - 224 yrs	Old Seral 225 - 250 yrs	Old Seral 225 + yrs	Old Seral >250 yrs	Total
CWH mm 1	23041	1208	154	206	6664	6458	31066
CWH mm 2	5871	518	205	307	7337	7030	13931
CWH vm1	543	244	38	4	566	563	1391
CWH vm2	334	99	0	0	589	589	1022
CWH xm 2	11305	5583	351	26	963	938	18203
MH mm1	1103	63	15	111	7011	6900	8193
AT unsp	12	0	0	0	49	49	61
Total	42209	7715	764	653	23179	22526	73867

4.3 Private Land

There are 2448 ha of private crown grant land found within the Salmon LU, all of which occurs adjacent to parts of the mainstem Salmon River. No OGMA's have been placed in private land.

5.0 Existing Higher level Plans

5.1 Legally Binding Direction

Legally binding Higher Level Plan (HLP) objectives are one provision that enable specific forest resource management objectives to direct operational planning. Hierarchically, landscape unit objectives must be consistent with established Higher Level Plan Resource Management Zone (RMZ) objectives.

The HLP objectives which apply to the Salmon Enhanced Forestry Zone (EFZ 30) are summarized below and details provided in Appendix 1:

For EFZ 30

- Increase the short term availability of timber by the application of larger cut block sizes, and modified green-up requirements
- Apply modified silvicultural stocking practices where appropriate

- Retain all remaining old growth forest in CWHxm2 until landscape unit objectives for old growth retention or recruitment have been established in accordance with the full old seral target of 9 per cent for the variant.

5.1.1. EFZ 30 Values

The Salmon LU, excluding the provincial parks and private land, is designated as Resource Management Zone 30 under the VILUP HLP Order. The size of the EFZ is approximately 79,000 ha and the overall management direction recognizes the opportunity for increased timber production while maintaining fisheries values and watershed integrity. Further details regarding primary and secondary management objectives are provided in the Vancouver Island Summary Land use Plan

5.2 Non-binding HLP Direction

The Vancouver Island Summary Land Use Plan (VISLUP) includes additional direction for the Salmon LU. Recommended objectives are provided which recognize both timber and non-timber resource values.

5.2.1 EFZ 30 Primary Management Objectives

Primary management objectives for the Enhanced Forestry Zone recommend that the following values be addressed in EFZ 30: timber productivity, community watershed management in the Newcastle Creek Community Watershed, fisheries values, notably in the Salmon and Memekay rivers, wildlife values (ungulate winter range and identified wildlife species), and biodiversity conservation, especially in the CWHxm2. Secondary forest objectives include the need to address recreation associated with major water courses and cave/karst opportunities, visuals associated with the Highway 19 road corridor, harvest rates and hydrology, and recognition of tourism, access, and heritage and cultural values.

6.0 First Nations

The Salmon LU is located within the asserted traditional territory of the Campbell River, Cape Mudge and Comox First Nations. A map depicting the location of their asserted traditional territories may be viewed at the following Web address:

http://maps.bcgov/apps/cbd/html/Ministry/min_main.jsp

7.0 OGMA Methodology

7.1 Integrating other values in OGMA selection

The Salmon LU contains a broad distribution of old seral forest habitat from which to build on for old growth representation. This includes a variety of forest types such as ecologically suitable old growth forest habitats in Strathcona Provincial Park, productive forest ecosystems found within the broad floodplain of the Salmon River, many areas reserved as Ungulate Winter Range, forested areas found within riparian reserve zones and gully complexes, and forested areas historically recognized as inoperable, uneconomic and inaccessible.

There are 38 UWRs found within the Salmon LU. At present, no Wildlife Habitat Areas established to date through legal mechanisms although two WHAs for marbled murrelets are being planned in a western tributary. In general, the selection of OGMAs has attempted to capture coarse filter ecological representation for as many species as possible.

An important part of this LU planning process was to ensure that the proposed OGMAs have been placed throughout different sections of the Salmon LU, and not concentrated in one area. In addition, OGMAs have been designed and selected to include larger patches that will provide interior forest conditions. A well distributed network of OGMAs of various sizes, in conjunction with stand level biodiversity measures, will increase the likelihood of sustaining ecosystems and viable wildlife populations across their natural range.

7.2 Boundary Mapping

OGMA boundaries used natural features wherever possible to ensure they could be located on the ground. In 2008 and 2009, OGMA boundaries were updated using orthorectification on a Geographic Information System (Arc GIS). They were also updated using the new Terrestrial Ecosystem Management forest cover data and were 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 1:20,000 scale TRIM base that forms the legal standard for measurement. Permissible activities for operating within OGMAs are discussed in the OGMA objectives and in the amendment policy.

Further information on strategic land and resource planning including OGMA planning may be viewed on this web site:

<http://ilmbwww.gov.bc.ca/slrp/lrmp/policiesguidelinesandassessments/index.html>

7.3 Amendment Policy

The Ministry of Agriculture and Lands, Coast Region amendment policy gives direction to proponents (forest tenure holders) when modifications to OGMA objectives are required. This Regional policy describes procedures for amending legally established Old Growth Management Areas and serves to guide operations when working in or adjacent to OGMAs. The amendment portion is consistent with Section 4 of the *Forest Practices Code of British Columbia Act*, which allows for the Delegated Decision Maker (DDM) to vary a Landscape Unit objective (i.e. amending the location of an OGMA).

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. Where specified under a legal landscape unit objective, some commonly occurring forestry operations can be exempted from referral to the Ministry of Agriculture and Lands. Major amendment requests, however, cannot be exempted.

The Ministry of Agriculture and Lands amendment policy is provided in Appendix 5.

7.4 Mitigation of Timber Supply Impacts

During delineation of OGMAs to ensure priority biodiversity provisions were completed, efforts were made to mitigate the short and long-term impacts on timber supply. Although OGMA selection first occurred in the non-contributing forest land base, the non-contributing land base did not always satisfy all requirements to address suitable, representation of old forest attributes. Where this proved insufficient to meet the old growth target, additional forested areas were selected from the THLB. The impact to the THLB by Biogeoclimatic Unit is described in Table 3 and Appendix 6.

The expected Timber Harvesting Land Base impact of potential OGMA designation is based on the Regional Landscape Unit Planning Strategy Timber Supply Data (2006) and is compared to the actual impact in Table 3.

Table 3 Estimated THLB Impact of OGMAs Compared with Actual

BEC	Budget (ha)	Actual (ha)
CWHmm1	0	42.7
CWHmm2	0	0.0
CWHvm1	0	263.9
CWHvm2	0	112.0
CWHxm2	0	322.4
MHmm1	0	112.0

In addition to the forested area selected as OGMA, it was recognized that there may be additional areas that would be included as OGMA in the future. Cascadia had committed to including these areas after determining, via field inspection and assessment, that these areas would not be harvested. These areas could become contributory to the OGMA population which may be revised periodically, or when the licensees Forest Stewardship Plan is amended or re-submitted.

Although OGMA were typically chosen in the oldest available age class first, deviation from this direction did occur with the earlier agreement of Weyerhaeuser to capture heavily constrained, younger, and and/or extremely biologically productive forests. This was particularly true in the CWH xm2 where many second growth forests were considered to be biologically superior to some of the non contributing old growth. Forested areas that were approved or proposed for harvesting on Forest Development Plans (FDPs) were excluded from candidate OGMA. It was also attempted to represent and locate the area of OGMA proportional to the area of forested area found within the respective tenure, i.e., TSA or TFL.

Although Strathcona Provincial Park provides a large area of habitat suitable for consideration as old growth representation, the presence of large areas of non-contributing landbase (inoperable forest, UWR etc.) found outside the park area in the Salmon LU rendered this as a partial contribution to the biodiversity conservation strategy. In summary, the park area contributes 5,900 ha of forest aged 225 years old and greater to the overall old seral target, summed across biogeoclimatic units, out of a total area of productive forest in the park of 6,219 ha.

8.0 OGMA Analysis

8.1 OGMA Targets

The Salmon LU was ranked with a “Lower” Biodiversity Emphasis Option (BEO) through the biodiversity value ranking process completed earlier (see the *Vancouver Forest Region Landscape Unit Planning Strategy*, 1999). Recruitment OGMA were acceptable provided the minimum one third old seral targets could be met in each variant. The temporary exception was for the CWH xm2 variant where the VILUP HLP objective 14 required licensees to retain all remaining old growth forest in the CWHxm2 until landscape unit objectives for old growth retention, or recruitment had been established to meet the full old seral target of 9 per cent for the variant.

The “Lower” BEO designation along with the BEC variant determines the percentage of the Crown forest land base that should be designated as OGMA. Table 4 outlines the total amount of OGMA required and tallies the available total productive Crown forest

(i.e. Non Contributing-NC forest versus Timber Harvesting Land Base)⁵. The old growth target percentages in Table 4 are derived from Appendix 2 in the *Landscape Unit Planning Guide*.

Table 4 Old Growth Targets and Old Growth Management Area Summary

TEM Variant	Total Ha in Salmon LSU by TEM Variant	Total Productive Forest Area including Productive in Park	Old Seral Target %	OGMA Target based on Productive Forest	Total Mapped OGMA (no park)	Total Productive Forest in OGMA	Total Productive Forest in OGMA 250 years +	Recruitment forest in OGMA	OG Component 225+ from Productive Park (PAS)	Surplus/Deficit (no park)	surplus with park contributing
T	29	0	0%	0	0	0	0		0		
tc	4	0	0%	0	0	0	0		0		
MAunp	24	0	0%	0	0	0	0		0		
WH mm 1	6884	6463	9%	582	622	586	423	163	66	4	70
WH mm 2	24	19	9%	2	0	0	0	0	4	-2	2
WH vm1	17467	17035	13%	2215	2393	2318	1800	518	644	103	747
WH vm2	23225	21628	13%	2812	1529	1510	1353	157	2703	-1302	1401
WH xm 2	26778	20614	9%	1855	3376	2769	745	2024	0	914	914
IH mm1	14671	8108	19%	1540	762	725	716	9	2483	-815	1668
IH mmp1	17	0	19%	0	0	0	0		0		
	89123	73867			8683	7908	5037		5900	-1098	4802

Table 5 OGMA Age Class Composition

TEM Variant	Age Class 1-40	Age Class 41-60	Age Class 61-80	Age Class 81-120	Age Class 121-224	Age Class 225-250	Age Class > 225	Age Class 250 +	Total Productive Forest in OGMA
CWH mm1	51.54	42.04	0.01	29.58	39.51	1.00	423.51	422.51	586.19
CWH mm2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CWH vm1	265.60	193.52	6.80	2.97	23.24	25.19	1825.40	1800.21	2317.53
CWH vm2	66.13	0.01	16.77	19.16	8.14	47.20	1400.22	1353.02	1510.43
CWH xm2	138.82	943.03	743.26	44.12	146.09	9.14	753.89	744.75	2769.21
MH mm1	0.02	0.00	0.00	0.02	0.00	8.39	724.66	716.27	724.71
MH mmp1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	522.11	1178.60	766.85	95.86	216.98	90.92	5127.68	5036.76	7908.08

⁵ 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.

8.2 Marbled Murrelet Habitat Analysis

MAMU Habitat Rank	LU Total (ha)	OGMA (ha)	% of total
1	3	2	76
2	154	106	68
3	5,058	1,140	23
4	17,132	3,542	21
Total 1-3	5,214	1,247	24

9.0 Draft Legal Objectives

OLD GROWTH MANAGEMENT AREAS

Preamble

The goal of these objectives is to sustain biological diversity at the landscape level. Permissible activities are described to streamline administrative procedures and address operational safety concerns.

First Nations traditional use of forest resources, treaty negotiations or settlements will not be limited by the following objectives.

Legal Objectives – Salmon Landscape Unit

Pursuant to Section 93.4 of the *Land Act*, the following are the landscape unit objectives for the Salmon Landscape Unit.

1. Maintenance or recruitment of old growth forests

Maintain or recruit old growth forests in established Old Growth Management Areas (OGMAs), located in the Salmon Landscape Unit subject to section 2 below. The Salmon OGMAs are shown on the attached map dated month day year (Appendix 3). The boundaries of the established OGMAs are defined by the spatial data set contained in the provincial Land and Resources Data Warehouse (LRDW) accessible through Geo BC at <http://www.geobc.gov.bc.ca>.

2. Minor boundary adjustments and permissible activities within OGMA
 (excluding Ungulate Winter Range and Wildlife Habitat Areas)

(a) Minor OGMA boundary adjustments for operational reasons:

To accommodate operational requirements for timber harvesting and road or bridge construction, the boundary of an OGMA may be adjusted, provided that:

- i) the boundary adjustment does not result in a net loss to the area of the OGMA of more than the greater of one hectare or 10% of the original area,
- ii) road or bridge construction is required to access resource values beyond or adjacent to the OGMA and no other practicable option for road or bridge location exists,
- iii) replacement forest is biologically suitable, of equivalent age, structure and area, and situated, in order of priority, either immediately adjacent to the existing OGMA, or in the same variant and landscape unit as the existing OGMA.

In the case of ii) above, as an alternative to finding replacement area the licensee may permanently deactivate and rehabilitate a temporary road or bridge site within four years after construction.

In recognition of surplus suitable old seral forest located in protected areas or required for species at risk management within the Salmon Landscape Unit, the requirement under iii) above may be waived in the ??? subzones, provided the total old seral forest targets for each biogeoclimatic variant are maintained, as shown in Table A.

Table A: Salmon LU Old Seral Minimum Requirements

BEC Unit	Old Seral Target (ha)
CWH	
CWH	
MHmml	
Total	

(b) Permissible activities within OGMA

- i) Topping or pruning of trees along the boundary to improve wind firmness.
- ii) Timber harvesting to prevent the spread of insect infestations or diseases that pose significant threat to forested areas outside of

- OGMAs. Salvage within OGMAs will be done in a manner that retains as many old growth forest attributes as possible.
- iii) Road maintenance, deactivation, removal of danger trees, or brushing and clearing on existing roads under active tenure within the right-of-way for safety purposes.
 - iv) Felling of guyline clearance, tailhold anchor trees, or danger trees along cutblock boundaries or within the right of way on new road/bridge alignments to meet safety requirements.

OGMA replacement forest is required if the activities in 2 (b) above result in a net loss to the area of the OGMA of more than the greater of one hectare or 10% of the area of the OGMA and the total area of mature and old seral forest maintained in OGMAs plus the contributing old seral forest area in Protected Areas is reduced below the minimum target area outlined in Table A. Replacement forest must be biologically suitable, of equivalent age, structure and area, and situated, in order of priority, either immediately adjacent to the existing OGMA, or in the same variant and landscape unit as the existing OGMA.

3. Map updates

OGMA adjustments and replacements made in accordance with Section 2 must be documented and submitted as digital spatial data to the delegated decision maker at the end of each calendar year. The spatial data set contained in the provincial Land and Resources Data Warehouse (LRDW) will be updated accordingly and the updated map will be accessible through GeoBC at <http://www.geobc.gov.bc.ca>.

References

BC Species and Ecosystems Explorer. 2003. Victoria, British Columbia, Canada. Available: <http://srmaps.gov.bc.ca/apps/eswp/> (September 15, 2003).

Landscape Unit Planning Guide (1999). BC Forest Practices Branch and BC Ministry of Environment, Lands and Parks. Victoria, BC.

Resources Inventory Committee. Species inventory fundamentals: standards for components of B.C.'s biodiversity. No. 1, v.2. November, 1998.

Sustainable Resource Management Planning: A Landscape-level Strategy for Resource Development. Victoria, BC.

Vancouver Island Summary Land Use Plan. 2000. Land Use Co-ordination Office. Victoria, BC.

Vancouver Regional Landscape Unit Planning Strategy, 1999

Appendix 1 VILUP HLP Order

Order Establishing Resource Management Zones and Resource Management Zone Objectives within the area covered by the Vancouver Island Land Use Plan, pursuant to sections 3(1) and 3(2), as well as section 9.1 of the Forest Practices Code of British Columbia Act (the Act)

- I. Pursuant to section 3(1) of the Act, the following zones, as presented on Map 1 (attached), are Resource Management Zones (RMZ):
- A. Special Management Zones (SMZ) 1 through 14 and 17 through 22;
 - B. Resource Management Zones 4, 5, 6, 8, 10, 11, 15, 18, 19, 21, 23, 24, 27, 28, 30, 36, 38, 40, 42, 43, 44, and 47; these RMZ are also referred to as Enhanced Forestry Zones (EFZ);
 - C. Resource Management Zones 7 and 14; these two RMZ are also referred to as General Management Zones (GMZ).
- II. Pursuant to section 3(2) of the Act, the following provisions are Resource Management Zone objectives:
- A. for Special Management Zones 1 through 14 and 17 through 22:**
- 1. Sustain forest ecosystem structure and function in SMZs, by:
 - (a) creating or maintaining stand structures and forest attributes associated with mature⁶ and old⁷ forests, subject to the following:
 - i. the target for mature seral forest should range between one quarter to one third of the forested area of each SMZ⁸; and
 - ii. in SMZs where the area of mature forest is currently less than the mature target range referred to in (i) above, the target amount of mature forest must be in place within 50 years;
 - (b) retaining, within cutblocks⁹, structural forest attributes and elements with important biodiversity functions¹⁰; and

⁶ The mature seral forest is defined as generally 80 to 120 years old or older, depending on species and site conditions. The structure of mature seral forests generally includes canopies that vary vertically or horizontally, or both. The age and structure of the mature seral stage will vary significantly by forest type and from one biogeoclimatic zone to another.

⁷ The old seral forest is defined as generally greater than 250 years old, containing live and dead (downed and standing) trees of various sizes, including large diameter trees, and of various tree species, including broad-leaved trees. The structure of old seral forest varies significantly by forest type and from one biogeoclimatic zone to another.

⁸ Mature seral targets will be established through landscape unit planning. See transition provisions under III.

⁹ Within cutblocks: generally means non-contiguous with cutblock boundaries.

¹⁰ This includes, but is not limited to snags, wildlife trees, downed logs.

- (c) applying a variety of silvicultural systems, patch sizes and patch shapes across the zone, subject to a maximum cutblock size of 5 ha if clearcut, clearcut with reserves or seed tree silvicultural systems are applied, and 40 ha if shelterwood, selection or retention silvicultural systems are applied¹¹.
- 2. Despite subsection 1(c) above, cutblocks larger than 5 or 40 ha, as the case may be, may be approved if harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events and wherever possible, the cutblock incorporates structural characteristics of natural disturbances.
- 3. Pursuant to section 2(1) of the Operational Planning Regulation (OPR)¹², the approval of both the district manager, Ministry of Forests and the designated environment official, Ministry of Environment, Lands and Parks is required for all forest development plans, or parts of forest development plans that relate to areas within the following SMZs: 1, 3, 4, 6, 8, 9, 10, 11, 13, 17, 19, 20 and 21.

B. for Special Management Zones 8, and 13, and parts of Special Management Zones 1, 3 and 11, which are located within landscape units with higher biodiversity emphasis, as shown on Map 2:

- 4. Maintain late-successional habitat elements and attributes of biodiversity¹³ in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation¹⁴.
- 5. Retain late-successional habitat elements and attributes of biodiversity in patches of variable size.

C. for the following Special Management Zones with primary visual resource values: 1, 2, 3, 5, 6, 7, 10, 11, 12, 13, 14, 18, 19 and 22, as shown on Map 3:

- 6. Maintain the visual quality of known scenic areas in accordance with the recommended visual quality classes in the visual landscape inventory, until the district manager establishes visual quality objectives for the areas.

D. for all Enhanced Forestry Zones, as shown on Map 1, save and except the parts of those zones which are designated as community watersheds as defined in section 41(8) of the Act:

- 7. To increase the short-term availability of timber,

(a) a cutblock may be larger than 40 ha pursuant to section 11(2)(a) of the OPR; and

¹¹Maximum cutblock sizes refer to net area to be reforested.

¹² BC Reg. 107/98 O.C. 426/98 - Effective: June 15, 1998.

¹³ This includes, but is not limited to: large diameter (> 60 cm) live, decaying and dead standing trees (providing nest and cavity sites); downed wood, including large diameter pieces (50 to 150 cm); deciduous broad-leaved trees, both in riparian and upland areas.

¹⁴ The level of representation of old seral forest will be applied through landscape unit planning.

(b) pursuant to section 68(4) of the OPR, a cutblock is greened-up if it is adequately stocked and the average height of those trees that are

(i) the tallest tree in each 0.01 ha plot included in a representative sample, and

(ii) a commercially valuable species or other species acceptable to the district manager

is at least 1.3 meters;

unless the district manager determines that a cutblock referred to under (a) or (b) would significantly impact specific hydrological, wildlife, biodiversity, scenic or recreation values.

8. Avoid or mitigate adverse hydrological impacts, which may result from the practices referred to in objective 7, in watersheds with significant watershed sensitivity and significant fisheries values, as determined by the district manager and designated environment official.
9. When proposing the species composition for the purposes of OPR section 39 (3) (o), a person may, pursuant to OPR section 41, select a single species that is ecologically suited to the area, if a mix of species was present on the area before the timber was harvested.
- 9.1 The area that may be subject to selection of a single species pursuant to objective 9 is limited to no more than 20 per cent of the forested area of any variant within a given EFZ.

E. for Resource Management Zones 7 and 11:

10. To avoid severe social and economic consequences, as determined by the district manager and the designated environment official, the full target of 13 per cent for old growth retention in CWHvm1 may be reduced by up to one third provided that ecologically suitable second growth forest is identified to recruit the shortfall¹⁵.

F. for Resource Management Zone 42:

11. Retain old seral forest in CWHvm1 in accordance with the full old seral target of 13 per cent for the variant.
- 11.1 Despite objective 11, up to one third of the old seral target may be recruited from second growth provided that
 - (a) such recruitment is necessary to avoid severe social and economic consequences;
 - (b) such recruitment will not impact the ability to conserve suitable habitat of identified wildlife in accordance with the Identified Wildlife Management Strategy¹⁶; and
 - (c) ecologically suitable second growth forest is identified to recruit the shortfall.¹⁷

¹⁵The targets for retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.

¹⁶ See "Managing Identified Wildlife: Procedures and Measures", Volume 1, February 1999.

¹⁷The targets for retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.

G. for Special Management Zone 10:

12. Retain or recruit old growth forest in CWHxm2 in accordance with the full old seral target of 9 per cent for the variant.

H. for Resource Management Zone 10

13. Retain old seral forest in CWHxm2 in accordance with the full old seral target of 9 per cent for the variant.
13.1 Despite objective 13, up to one third of the old seral target may be recruited from second growth provided that
- (a) such recruitment is necessary to avoid severe social and economic consequences;
 - (b) such recruitment will not impact the ability to conserve suitable habitat of identified wildlife in accordance with the Identified Wildlife Management Strategy¹⁸, and
 - (c) ecologically suitable second growth forest is identified to recruit the shortfall.¹⁹

I. for Resource Management Zone 30:

14. Retain all remaining old growth forest in CWHxm2 until landscape unit objectives for old growth retention or recruitment have been established in accordance with the full old seral target of 9 per cent for the variant.

J. for Resource Management Zones 8, 14, 28 and 43:

15. Retain old growth forests to meet old seral targets²⁰ and marbled murrelet habitat requirements²¹ in the non-contributing²² land base to the fullest extent possible.
16. Beyond retention in the non-contributing land base, retain old forests in the timber harvesting land base, up to the full target amount, if the district manager and the designated environment official determine that such retention is required to maintain critical marbled murrelet habitat²³.

III. Transition

17. Pursuant to section 9.1 of the Act, the following objectives will not be implemented in an area until landscape units and objectives have been established for the area, in accordance with section 4 of the Act:
Objectives 1(a); 4; 5; 10; 11; 11.1; 12; 13; 13.1; 15; and 16.

¹⁸ See "Managing Identified Wildlife: Procedures and Measures", Volume 1, February 1999.

¹⁹ The targets for retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.

²⁰ See "Landscape Unit Planning Guide", March 1999.

²¹ See "Managing Identified Wildlife: Procedures and Measures", Volume 1, February 1999.

²² Non-contributing: the crown forested land base that does not contribute to the annual allowable cut, but does contribute to biodiversity objectives and targets.

²³ Retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.

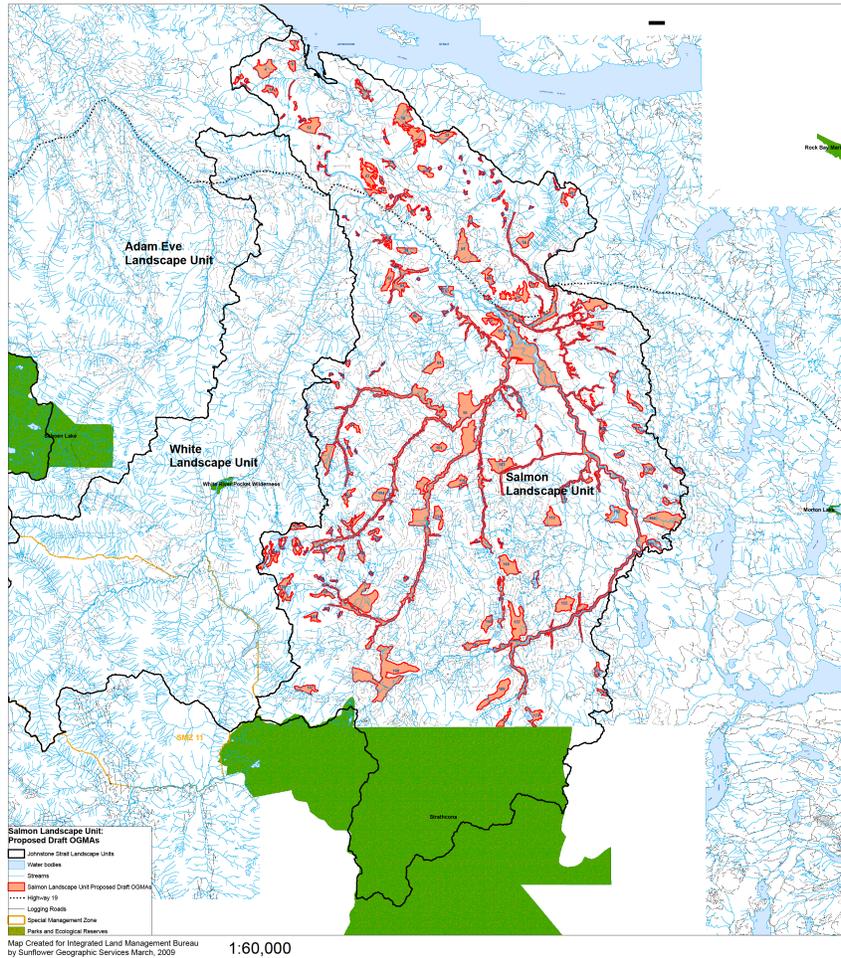
18. In the event that landscape units and objectives are not established in an area within 2 years of the date that this order takes effect, the objectives referred to in paragraph 17 will be implemented in the area.

IV. Filing the Order

This order will be filed with the regional manager of the Vancouver Forest Region and will take effect on December 1, 2000.

Appendix 2. Proposed Legal OGMA Map for the Salmon Landscape Unit

Johnstone Strait Salmon Landscape Unit: Proposed Draft OGMA



Appendix 3. OGMA Patch Size Summary

White OGMA Patch Distribution by Ha			
Patch Size Category in Ha	Total Ha within Patch Size Category	OGMA's per Patch Size	%
2-19	1032.53	124	63
20-49	1318.46	42	21
50-99	733.14	11	6
100-149	597.54	5	3
150-249	1859.33	10	5
250+	2782.05	6	3
	8323.05	198	100

Appendix 4 Amendments and Operational Procedures for Old Growth Management Areas

This Regional advice for OGMA amenders has been developed to: 1) describe Old Growth Management Areas (OGMA) amendment procedures; and 2) to provide advice to operations when working in or adjacent to OGMA's.

This policy does not authorize violation of any other federal or provincial statute or legal objective and does not constitute approval on behalf of any other agency with jurisdiction in this matter. Approval of all amendment proposals submitted to the Integrated Land Management Bureau will be at the decision maker's discretion.

1.0 Administrative Minor and Significant Amendments General Procedures

Administrative Amendments

Administrative amendments are those allowed by the objective without prior approval. These amendments need to be submitted annually before December 31st of each year. They can all be bundled together for a single December submission. All administrative amendments will be reviewed in January/Feb for completeness. An acknowledgement of receipt by ILMB will be sent to the licensee by fax or e-mail once completeness is confirmed. Complete amendments will be sent to GIS for upload into the LRDW in March/April. The Coast Region OGMA administrative amendment form should be used for all administrative amendment submissions.

No amendment is required for correcting mapping errors. For example, proposed development may show potential OGMA overlap or encroachment at a 1:20,000 scale, but is deemed not to occur based on field engineering. The site or operating plan should clearly indicate that there is no overlap between proposed development and OGMA. In other instances, the intended OGMA boundary (e.g. along a stream) may be shown in the wrong location on the legal map as proven by field engineering. If this occurs the prescribing/planning forester should record the discrepancy. Corrections must be made available to ILMB upon request or summarized and submitted annually.

Minor Amendments

A minor amendment is one that does not materially change the original order or its affect on forest and range tenure holders.[[this phrasing is right from the LUOR policy and procedures document](#)] For OGMA as the order applies to all the ones approved by the order the consideration of materially change applies to all the OGMA considered as a whole not to each individual one.

Proponents should submit their requests for amendments in a timely manner so that review/approval can occur without delaying operations. Proponents should recognize if a replacement OGMA is necessary, it must be identified by the proponent and submitted with the amendment application. The replacement OGMA should be in the same biogeoclimatic variant and must have similar or more desirable ecological attributes for conserving biological diversity. These attributes may include: forest interior habitat, patch size, connectivity, suitable tree species, tree height and diameter, stand age, slope, aspect, elevation, stocking, or site index. The replacement area could also be critical habitat for species at risk. The presence of old forest attributes such as multi-layered canopy, vets and moderate to high value wildlife trees in the replacement area will further increase its suitability. Attributes of both the proposed replacement OGMA and original OGMA need to be clearly summarized and submitted with the amendment application. This information must be clearly presented to aid in the review. Complete and accurate submissions will allow faster processing. Incomplete submissions will be returned to the proponent.

Replacement area proposals must be submitted in digital format to the following preferred minimum data standards to expedite the review and approval process: ARC Export file (E00), 1:20000 scale, TRIM base, ALBERS projection, and NAD 83 datum.

ILMB will make every effort to process minor amendments within 10 working days and no greater than 30 days.

Significant Amendments:

A significant amendment is required where the amendment will result in consequential or important variations in the order; for example changes that could have a material effect on forest or range tenure holders. For significant amendments, it will be necessary to undertake public review and comment, First Nations consultation, and any demonstrated achievement of the criteria laid out in regulation.[[this phrasing is right from the LUOR](#)

[policy and procedures document](#) ILMB will make every effort to review major amendments within 120 calendar days. A 60-day public review and comment period will normally be required for major amendments and is included in the 120 day time period. ILMB will review all amendments and notify the submitter as soon as possible if the amendment is considered a significant one requiring public advertisement

: