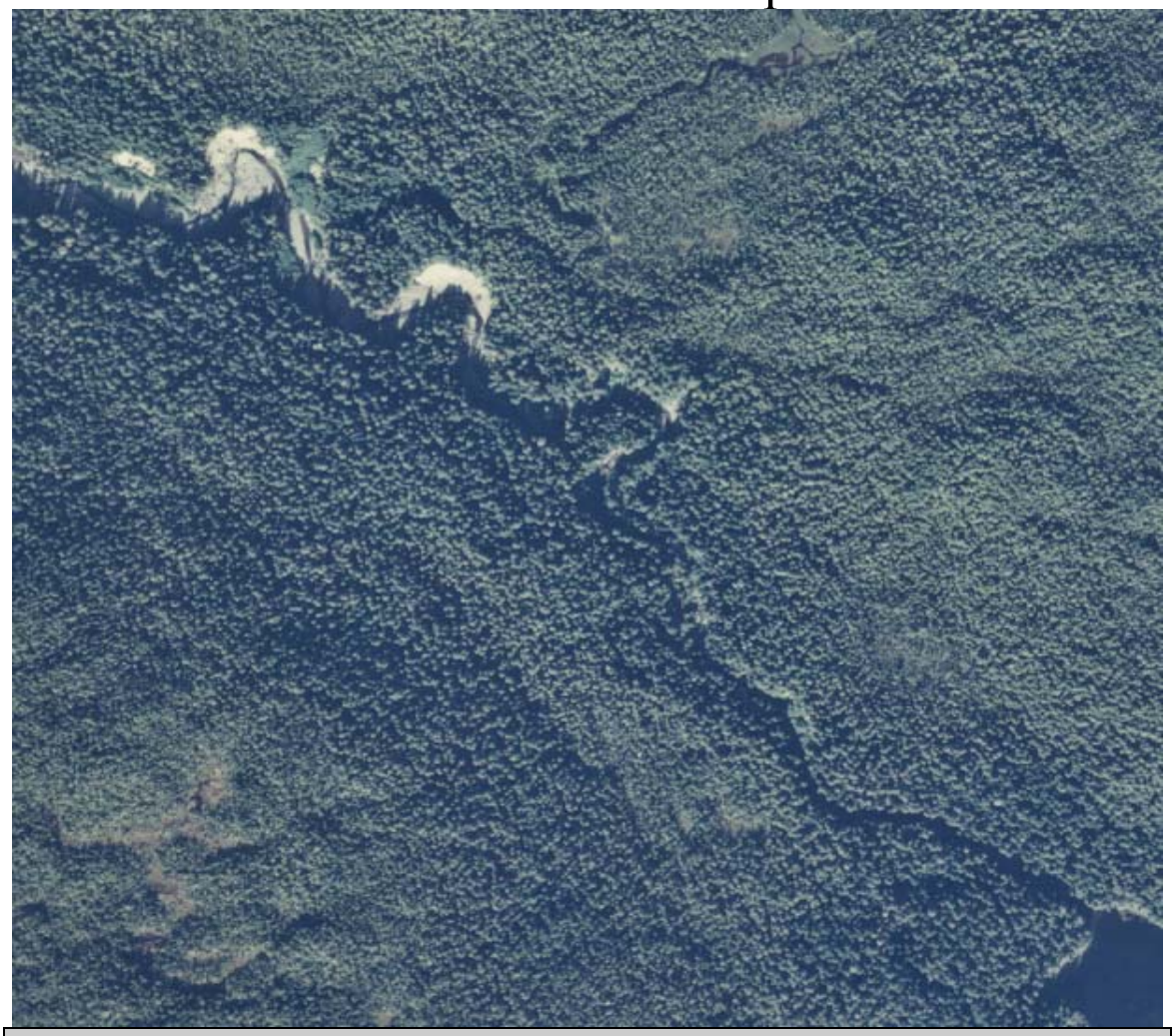
Ministry of Sustainable Resource Management
Coast Region

Biodiversity Chapter for
The Shushartie Landscape Unit



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1.0 Introduction

This report describes the biodiversity conservation plan for the Shushartie 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 and rationale are 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 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 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 OGMA and wildlife tree patch (WTP) biodiversity values is recognized as a high priority for the province. LU planning is supported by the *Forest Practices Code of BC (FPC)* and 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 a variety of endemic wildlife species, 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 of land, 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.

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[1] FPC Biodiversity Guidebook, September 1995

[2] BC Species and Ecosystems Explorer. 2003. Victoria, British Columbia, Canada. Available: http://srmapps.gov.bc.ca/apps/eswp/ (September 15, 2003).

The North Island Central Coast Forest District has completed LU boundaries for the Vancouver Island portion of the forest district and established Biodiversity Emphasis Options (BEOs) in accordance with the direction provided by government. Current government direction requires that priority biodiversity provisions, including the delineation of OGMAs and wildlife tree retention (WTR), be undertaken immediately. This work was completed by Richmond Plywood Corporation in cooperation with the Ministry of Sustainable Resource Management (MSRM). Input was also solicited from other licensees operating in the Shushartie LU.

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://srmwww.gov.bc.ca/rmd/srmp/background/lup_landscape.htm**),**
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://srmwww.gov.bc.ca/rmd/lrmp/vanisle/docs/vislup.pdf

- **the associated VILUP Higher Level Plan Order (Dec. 2000),** http://srmwww.gov.bc.ca/rmd/lrmp/vanisle/vihlp.htm
- **Sustainable Resource Management Planning Framework: A Landscape-level Strategy for Resource Development.** http://srmwww.gov.bc.ca/rmd/srmp/doc/SRMPl-May1-Final-Web1.pdf

2.0 Shushartie LU Description

2.1 Shushartie LU Biophysical Description

The Shushartie LU is situated within the Nahwitti Lowland Ecosection on the northeast corner of Vancouver Island. The total landscape unit area is approximately 15620 ha, of which three quarters is considered productive forest, but with relatively low site productivity compared to many other north island forests. The terrain is low elevation and undulating, with many perched water tables resulting in numerous unproductive forest sites comprised of hemlock pine and cedar bog forests. Some disturbance exists from forest harvesting, but can be viewed as minor relative to the size of the landscape unit and overall limited harvest opportunity. Most of the operable productive forest is located in the Shushartie watershed. Large areas of forest land that do not contribute to the timber harvesting landbase are present elsewhere in the Shushartie LU, including a portion of Cape Scott Provincial Park. The local climate is classified as very wet hypermaritime, with cool, moist summers and wet, mild winters. Average annual precipitation for the Shushartie LU lies within the range of 750 – 3500 mm, with the majority of precipitation occurring in the fall and winter.

Only one biogeoclimatic zone and variant covers the Shushartie LU. The particular Biogeoclimatic Ecosystem Classification (BEC) is the Coastal Western Hemlock (CWH) Zone, very wet hypermaritime (vh1) variant. One natural disturbance type (NDT 1)[3] is dominant, representing mixed conifer, old growth forest ecosystems with uneven-aged stands. Natural regeneration typically occurs after the death of individual trees, or small patches of trees. Some unclassified NDT3 may be present where periodic catastrophic wind disturbances affect larger stands of trees.

A map showing the location of the Shushartie LU in relation to the neighbouring landscape units on northern Vancouver Island is shown in Figure 1.

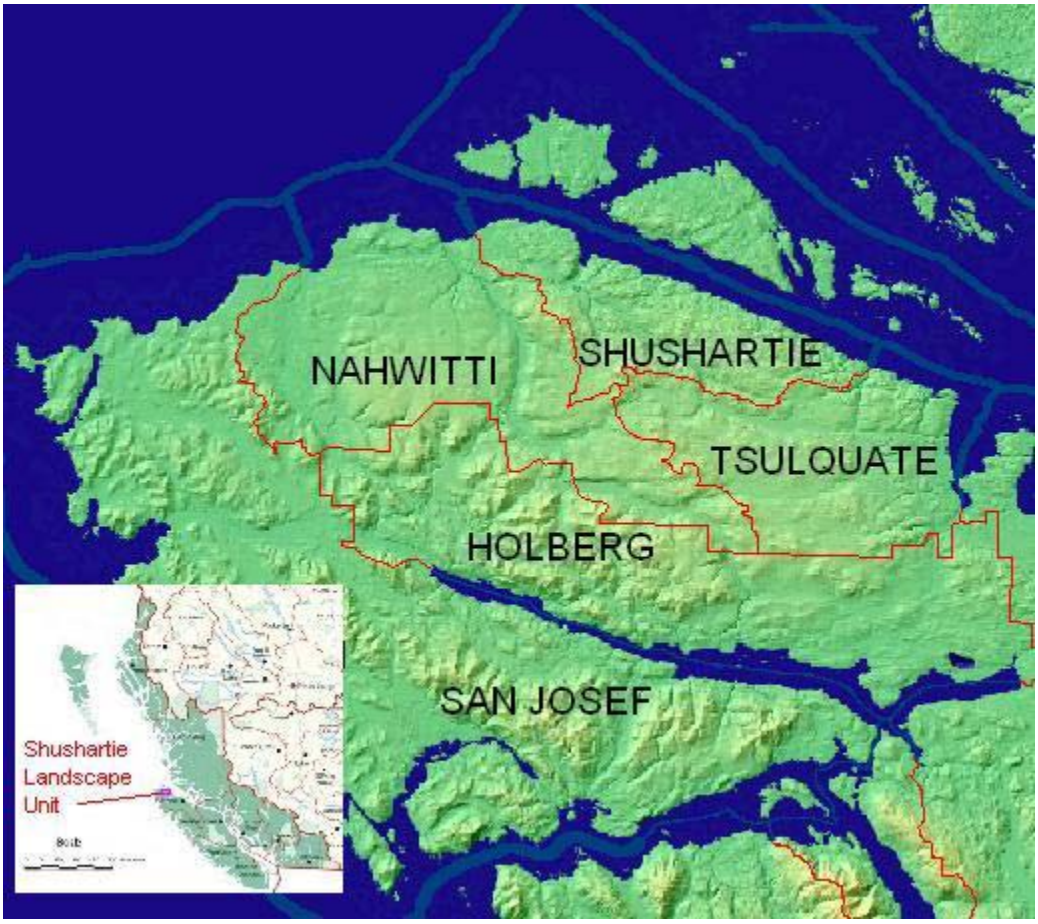

Figure 1 Shushartie Landscape Unit, North Vancouver Island

2.2 Summary of Land Status

Most of the land in the Shushartie landscape unit is Crown provincial forest. Very few small parcels of private land occur within the Shushartie LU. The most

[3] FPC Biodiversity Guidebook, September 1995

noticeable lot is on the coast located at Shushartie Bay. Private Lot # 19 has been included within provincial park designation as a consequence of a land transfer from Weyerhaeuser Company Ltd. In addition, a single private lot in the mid-valley of Ursie Creek has been harvested.

Land status within the Shushartie LU is summarized in Table 1.

Table 1 Land Status of the Shushartie Landscape Unit

Code	Ownership Class	%
40	Private	1
52	Indian reserve	
62	Crown contributing	99
69	Rec. sites and reserves	
	Total area	100

3.0 Key Resource Tenure Holders

Key resource tenure holdings were identified in the planning process. This assessment included identification of forest tenures that are administered by the Ministry of Forests (MoF), and mineral tenures administered by the Ministry of Energy and Mines. Resource tenures also include crown corporations such as B.C. Timber Sales (BCTS) and Land and Water BC (LWBC). In the case with tenure holders, other than forestry, the planning strategy generally aims to avoid placement of OGMAs within existing tenures. As for forest tenures, the management intent is to avoid placement of OGMAs over cutblocks and roads that have received approval status.

3.1 Forest Tenure Holders

Within the plan area there are only volume-based tenures. The main chart area is held by Richmond Plywood Corporation Ltd. (RichPly) and covers the Shushartie watershed. The B.C. Timber Sales Program was apportioned timber volume in Ursie Creek and harvest commenced in 2003 following access development from the Shushartie system. In addition, Goletas Forest Products holds a non-renewable Forest Licence covering the eastern side of the Shushartie LU. The OGMAs selected do not impact any known approved category “A” cutblocks or roads as approved under an FDP. Furthermore, discussion with key licensees has taken place to ensure that the intent of this LUP was conveyed and that impacts on future planned development minimized.

3.2 Mining Tenure Holders

There are no known mining tenures within the Shushartie Landscape Unit.

Exploration and development activities are permitted in OGMAs. 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

Wildlife resources of primary management concern in the Shushartie LU include: black tailed deer, black bear and a small population of Roosevelt Elk. Waterfowl and fisheries values are considered high in the lower Shushartie system. Specifically, fish habitat and coastal waterfowl habitat in the lower Shushartie LU are recognized as special values within the Vancouver Island Land Use Plan's Goletas Channel Special Management Zone (SMZ-1). This SMZ covers approximately 6200 ha of gross forested area in the LU.

Marbled murrelets (mamu) *Branchyramphus marmoratus* and northern goshawks (nogo) *Accipiter gentilis laingi* are the primary 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 for primary species.

Most of the Shushartie River and its major tributaries support resident salmonid populations. Riparian reserve zones established as per the *FPC* adjacent to these fish streams will help maintain fish and wildlife habitat. In addition, expanded old growth habitat retention in riparian areas is a recommended strategy for the Special Management Zone. Therefore, riparian areas can provide additional opportunities to conserve old growth values.

4.2 Timber Resources

The timber harvesting land base in the Shushartie LU, estimated to be less than 2,000 ha in Timber Supply Review II is proportionally small in relation to the amount of forest in Protected Area or uneconomic/inoperable status (over 12,000 ha). This establishes the importance of localized timber resource values, although recent harvest approvals are gaining access to forest areas previously classified as uneconomic/inoperable. Continued

[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.

access to commercially valuable timber, including future second growth, is a significant interest. Relatively low-impact, first pass harvesting of accessible old growth timber will continue for the foreseeable future.

Commercially valuable tree species in the Shushartie LU are western red cedar, western hemlock and yellow cedar. Based on forest cover information, Table 2 shows the age class distribution of old forest within productive landbase of the Shushartie LU.

Table 2. Age Class Distribution of Forest Land, Shushartie LU.

Age Class	% of Forested Landbase within Provincial Forest
1-6	0
7	0.5
8	5.0
9	94.5
Total	100.0

Forest ecosystems in the Shushartie LU are generally less productive compared to other forests on Vancouver Island. Much of the forest in the Shushartie LU has poor to medium site productivity, but there are also significant areas of low site productivity (4726 ha) constituting one third of the forested land base, as well as non-productive forested wetlands (1205 ha).

Forest management activities occur throughout all phases of forest development. Operational work includes pre-harvest planning, harvesting and stand regeneration, while post harvest activities include planting, brushing, and fertilization.

4.3 Recreation Resources

The continuing westward forest road network development in the Shushartie LU provides increased opportunity for public recreational access. Stream angling opportunities provide for prime steelhead fishing in the area and recreational hunting serves as an important annual activity enjoyed by many outdoor enthusiasts on the north island. Most hunters target black bears, deer and cougars. Winter recreational activity is normally restricted by seasonal road deactivation and inclement weather. Trail hiking, wildlife viewing and sight seeing are recognized as significant recreational values in the Shushartie LU.

The eastern end of Cape Scott Provincial Park lies at the northern end of the Shushartie LU. In addition, good recreational opportunities exist at Shushartie Lake. The lower Shushartie River corridor is a potential route for the proposed North Island Trail with

linkages to the adjacent Cape Scott Provincial Park.

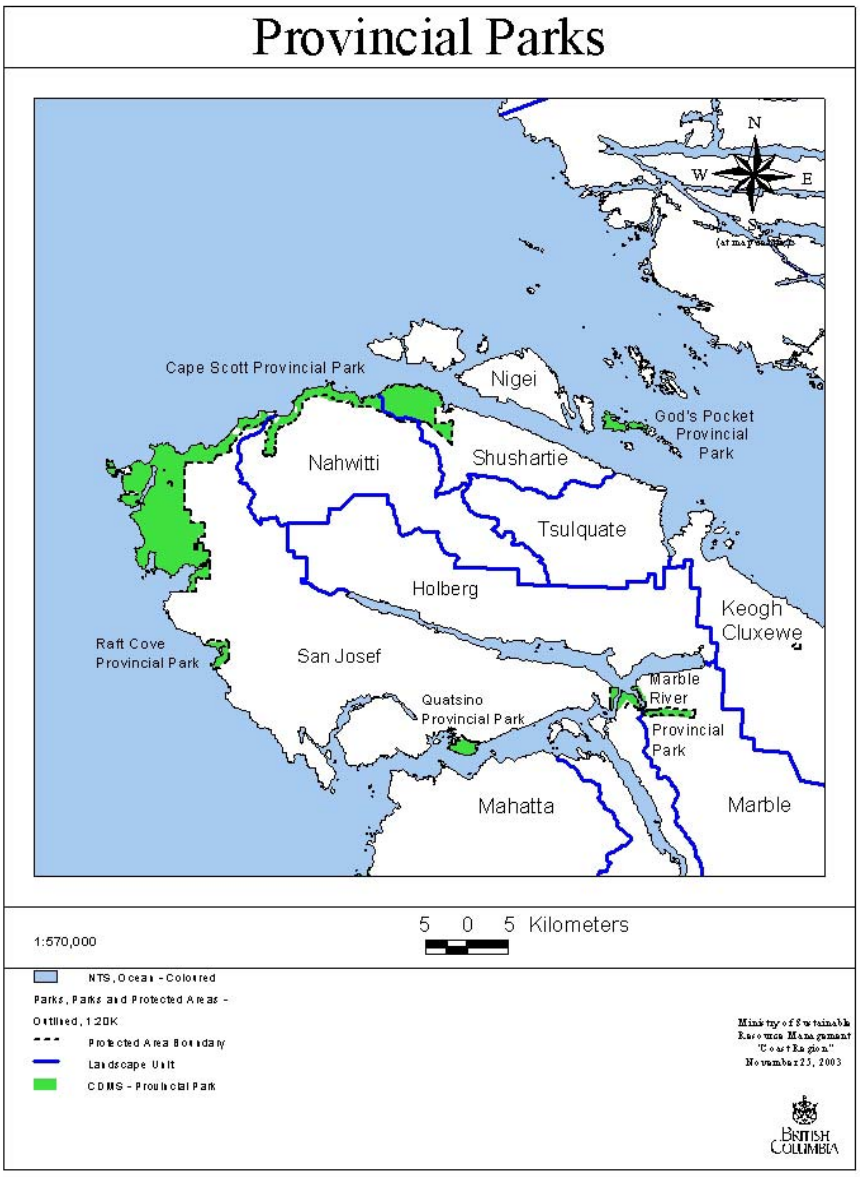

Figure 2 Provincial Parks and Landscape Units, North Vancouver Island

4.4 Visual Resources

Goletas Channel serves as the primary travel corridor for the coastal cruise ship industry. As such, the shoreline viewscapes of the Shushartie Landscape Unit as well as adjacent Nigei Island are considered significant visual features.

5.0 Vancouver Island Land Use Plan

5.1 Resource Management Zones

Following the Vancouver Island Land Use Decision in 1994, the Vancouver Island Resource Targets Project was initiated in 1995 to complete a strategic zoning plan for the island. The project had two main objectives. The first was to complete the delineation of Resource Management Zones (RMZs) based on resource and environmental values, local geographic criteria and public input. The second was to develop primary and secondary management objectives for each zone, with accompanying strategies to guide implementation. The zonation process was designed to address different applications of harvest intensity on forest lands outside of the new and existing protected areas. The three zone classifications, as supported by the Forest Practices Code of B.C. Act, were mapped as Special Management Zones, General Management Zones and Enhanced Forestry Zones.

5.2 Resource Management Zone Location and Values

5.2.1 SMZ 1 Goletas Channel

A large portion of the Goletas Channel Special Management Zone lies along the eastern side of the Shushartie landscape unit and includes a part of the Tsulquate landscape unit around Songhees Creek**.** The remainder of SMZ 1 includes Balaklava Island and the smaller islands surrounding God's Pocket Marine Provincial Park**.** Primary values are listed in the Vancouver Island Summary Land Use Plan as coastal visual and recreational opportunities; fish habitats (lower Shushartie and Songhees River); wildlife habitats (deer and elk winter range as well as coastal waterfowl) and Shushartie River recreational access to Cape Scott Park.

5.2.2 RMZ 2 Shushartie

The portion of the Shushartie landscape unit not covered by the Goletas Channel SMZ and Cape Scott Provincial Park is designated as Resource Management Zone 2 (also known as General Management Zone 2). The total area of RMZ 2 is approximately 5,900 ha. The overall management direction is for high biodiversity conservation and integrated recreation and tourism values with general timber production objectives.

5.3 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 following HLP objectives apply to the Goletas Special Management Zone (SMZ 1) with regard to LU planning:

5.3.1 HLP Objectives

The HLP objectives which apply to the Goletas Channel Special Management Zone (SMZ 1) are summarized below. No specific HLP objectives have been prescribed for the General Management Zone (RMZ 2). Details of the December 2000 HLP order are provided in Appendix 1.

5.3.1.1 SMZ 1 Mature Seral Component:

The target for mature seral forest should range between one quarter to one third of the forested area of each SMZ

5.3.1.2 SMZ 1 Stand Level Biodiversity

Retain, within cutblocks, structural forest attributes and elements with important biodiversity functions;

5.3.1.3 SMZ 1 Ecosystem Representation

- **Maintain late-successional habitat elements and attributes of biodiversity in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation**.

SMZ 1 Silvicultural Systems and Patch Sizes

- **Apply a variety of silvicultural systems, patch sizes and shapes across the zone in block sizes no greater than 5 ha if clearcut, clearcut with reserves or seed tree reserves and no greater than 40 ha if shelterwood, selection or retention systems are applied.**

5.3.1.5. SMZ1 OGMA patch size

- **Retain late-successional habitat elements and attributes of biodiversity in patches of variable size.**

5.3.1.6 SMZ 1 Visual Resources

- **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.**

5.4 Non-binding HLP Direction

5.4.1 Goletas Channel Special Management Zone (SMZ 1)

The Vancouver Island Summary Land Use Plan (VISLUP) includes additional direction for the Shushartie LU. Recommended objectives are provided which recognize significant resource values and opportunities in the Goletas Channel Special Management Zone (SMZ). Overall management guidance states that the coastline and portions of the Shushartie River exhibit multiple recreational and biological values and should be primary targets for special consideration of recreation, visual and tourism resources, as well as fish and wildlife management, including conservation of marbled murrelet nesting habitat. It has been recommended that this zone should become a focal area for old seral forest retention in accordance with the higher level of biodiversity conservation

Management objectives are provided which are considered as policy guidance to address the following special values in the SMZ: visual coastline resources, recreation, tourism (lodge and resort potential), wildlife, biodiversity conservation and timber.

5.4.2 Resource Management Zone 2 (RMZ 2)

The remainder of the Shushartie LU is recognized in the VISLUP as Resource Management Zone 2 (RMZ 2). This zone is tagged with "general" management direction for nine identified values. The exception is noted for biodiversity conservation which is given a "high" management objective. Although the RMZ objective for wildlife is stated to be for general management, the stated intermediate to high values for wildlife, particularly for Roosevelt Elk and marbled murrelets, support a strategy to maintain habitats along riparian areas of rivers and lakes. The selection of five riparian OGMAs in the RMZ is consistent with the VISLUP objective to select riparian management areas for elk and marbled murrelet habitat. These five OGMAs are also complimentary to the specific selection of OGMAs in the adjacent SMZ and are intended to address both ecological representation at the surrogate site series level (comprehensive representation of all slopes, aspects, elevations and forest productivity attributes), as well as capture marbled murrelet potential nesting habitat.

6.0 First Nations

The Shushartie LU is located within the traditional territories of the Kwakiutl and Tlatlasikwala First Nations.

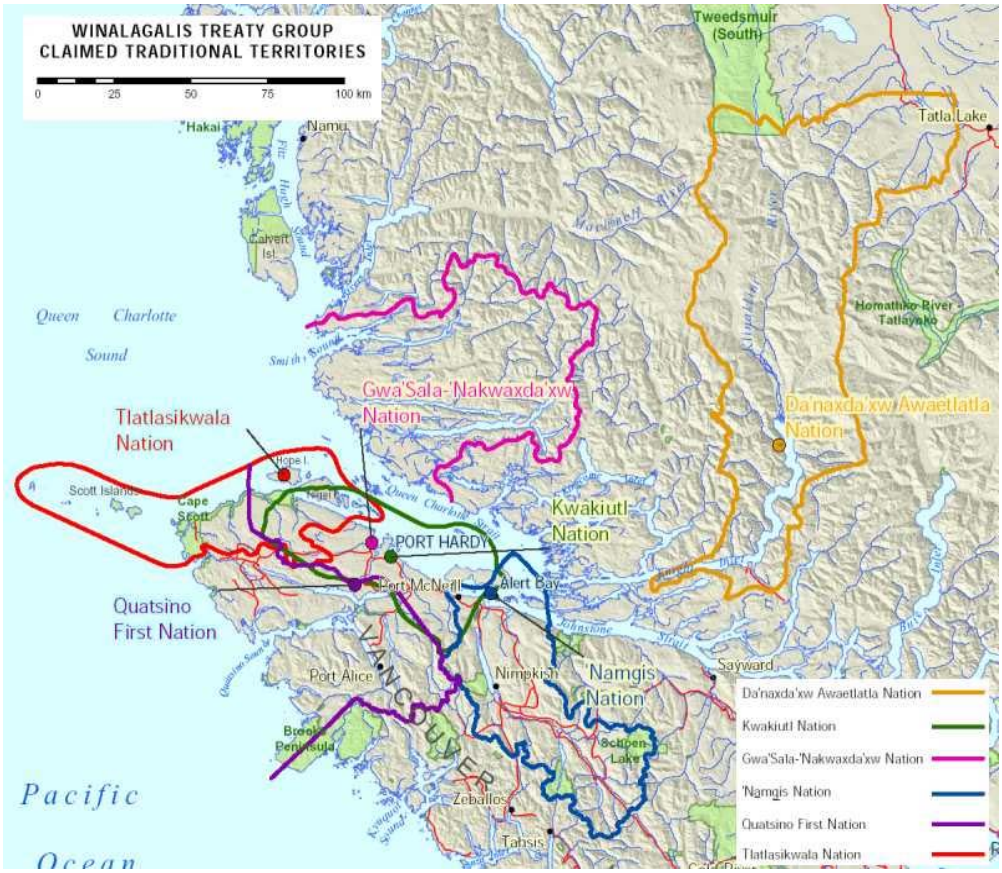

Figure 2: Kwakiutl and Tlatlasikwala First Nations Claimed Traditional Territories

6.1 Kwakiutl

An Archaeological Resource Overview was prepared for the North Island Central Coast Forest District that identified a moderate potential rating for the presence of archaeological sites. The Kwakiutl Nation Traditional Use Sites document lists Shushartie Bay as a known place of traditional use. RichPly has considered the possibility that potential archaeological sites may be located within OGMAs in the Shushartie LU and has reviewed existing forest cover maps with this consideration, but has not identified any at this time.

6.2 Tlatlasikwala

The Tlatlasikwala traditional territory extends from Triangle Island off the west coast of Vancouver Island southeast to Sea Otter Cove near San Josef Bay, then extends in an easterly direction, inclusive of the rivers, head-waters and lakes across the land and ocean from east to west, extending to Pine Island which lies to the north east of Hope Island, and then southward to the Gordon Islands.

Although the Tlatlasikwala traditionally shared the Cape Scott area with the Yutlinuk of the Scott Islands and the Nakumgilisala, after the die off of the Yutlinuk, the remaining two small tribes joined and moved east to occupy Hope Island up until the mid 1950's. The Tlatlisikwala have recently reoccupied Hope Island.

7.0 OGMA Methodology

7.1 Considerations for OGMA Selection

The Shushartie LU contains varying amounts of old seral forest habitat from which to build on for ecosystem management. These include existing forested areas and features such as Cape Scott Provincial Park; riparian reserve zones required under the Forest Practices Code, plus numerous areas of inoperable, uneconomic and inaccessible forest. Specific ungulate winter ranges and Wildlife Habitat Areas have not been previously established, but both structural and topographic features for deer, elk and marbled murrelet habitat have been included in OGMAs.

An important part of the OGMA planning exercise was to ensure that these separate components complemented each other. For example, the proposed OGMAs have been placed throughout different sections of the Shushartie LU, and not concentrated in one area. Some OGMAs are located along several relatively small coastal drainages, and provide suitable habitat potential for marbled murrelet nesting. Still, one large OGMA is located between the outer coast and the central portion of the LU and captures a variety of terrain features including drier southerly aspects, small lake systems, forested knolls and a diversity of small creek systems. Most OGMAs are of sufficient size to provide undisturbed interior forest conditions. Using this approach in addition to stand level biodiversity measures will increase the likelihood of sustaining ecosystems and viable wildlife populations well distributed across their natural range.

7.2 Criteria for OGMA Selection

In general, OGMAs were selected on the basis of providing ecological representation with additional emphasis in providing an opportunity for marbled murrelet nesting. Specifically, OGMAs were selected based on a review of stand attributes in an effort to maximize their value for habitat diversity while minimizing timber supply impacts. The selection rationale is provided in Appendix 3. Ecological representation captured all

known (mapped) site series and is reported in Appendix 4. Some riparian patches were specifically selected in order to capture known constrained areas with likely good potential for marbled murrelet nesting. Further efforts were made to minimize the impact on the timber supply by considering the ecological contribution of old growth areas in Cape Scott Park

7.3 Boundary Mapping

Wherever possible, OGMA boundaries were mapped to follow the most recent forest cover polygon boundaries, or obvious natural terrain features such as creek edges, to ensure they could be easily mapped and readily located on the ground. OGMAs were mapped using a 1:20,000 scale TRIM base. Procedures for operating within OGMAs are discussed in the OGMA objectives and amendment policy.

7.4 Amendment Policy

The MSRM 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). This policy applies to the Coast Region, MSRM and may be updated from time to time.

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 MSRM. Major amendment requests, however, cannot be exempted. The MSRM web site for both the amendment policy and the objectives template are located through the link below:

http://srmwww.gov.bc.ca/cr/srmp/amendments.htm

The OGMAs along the outer coast capture both potential marbled murrelet nesting habitat and visual quality values. Preliminary field reconnaissance of marbled murrelet nesting suitability along the outer Goletas coastal drainages shows some suitable habitat structure, but not in exceptional abundance. When both wildlife inventories and visual quality objectives become better defined, opportunities for OGMA amendments can be better addressed.

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. Although OGMAs were considered first in the non-contributing forest land base, the non-contributing land base did not always satisfy all requirements to address suitable, representative old forest attributes. Where this occurred, portions of the timber harvesting land base from most constrained to least constrained were assessed and included as OGMAs.

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 (FDPs) were excluded from candidate OGMAs. Licensees also reviewed the maps and identified future harvesting opportunities so that timber supply impacts could be reduced wherever possible.

Although the Cape Scott Provincial Park portion of the LU (2911 ha or 25% of the productive forest in the landscape unit) could theoretically provide sufficient hectares of old growth forest to meet the entire OGMA target, as well as the VISLUP higher level plan objective target for mature plus old forest (one quarter to one third mature plus old forest), the need to address the higher level plan objectives for the Goletas Channel Special Management Zone precludes such a single approach. Further, the "Higher" Biodiversity Emphasis Option for the Shushartie LU suggests that a more comprehensive approach to OGMA distribution is warranted, particularly with regard to site series representation. In addition, the Vancouver Island Land Use planning process acknowledged that Special Management Zones might contribute up to a 10% reduction in long term harvest availability in order to protect riparian and other sensitive ecosystems. To address these requirements, OGMAs were selected to provide spatial coverage and ecological representation across the landscape unit. Many areas are either partially or fully constrained to routine harvesting opportunity, due to riparian reserve and management zone considerations, other non-timber resource values, road access limitations and other economic constraints to timber harvest

Despite the considerations above, the total area of OGMA mapped outside Cape Scott Provincial Park is approximately 653 ha below the full old seral target. The deficit is considered to be compensated for by highly suitable old seral forest from the park as further described in Section 8.1.

8.0 OGMA Analysis

8.1 Shushartie Landscape Unit

The Shushartie LU was ranked with a "higher" Biodiversity Emphasis Option (BEO) through the biodiversity value ranking process completed earlier (see the *Vancouver Forest Region Landscape Unit Planning Strategy*, 1999). This BEO designation along with the BEC variant determines the percentage of the Crown forest land base that should be designated as OGMA. Table 3 outlines the total amount of OGMA required in the CWH vh1 variant and tallies the available types of Crown forest (i.e. Non Contributing-NC forest versus Timber Harvesting Land Base)[5]. The old growth target figures in Table 3 are derived from Appendix 2 in the *Landscape Unit Planning Guide*.

Table 3. Old Growth Retention Report for the Shushartie LU.

1	2	3	4	5	6	7	8	9	10
Shushartie Landscape Unit Total Land Area	**BEC Variant (Productive Forest Area)**	**Old Growth Age**	**Old Growth Target for Higher BEO**	**OGMA Mapped**	**% Old Growth in NC**	**% NC within 60 Yrs of being Old**	**% Old THLB**	**% Old within 60 Yrs. THLB**	**% Harvestable area with minimum harvest age of 80**
(ha)					(ha)	(ha)			(8) + (9)
	CWH vh1	250	>19%		83.6%	1.7%	10.6%	3.2%	13.8%
15649	11615.5		2206.9		9713.9	202.3	1232.47	373.5	1605.8
Total	11615.5		2206.9	1554	9713.3	202.3	1232.4	373.5	1605.8

Note ;

Column 3 - Old growth age from tables, App. 2, LUPG.

Column 4 - Old growth target from tables in App. 2, based on BEO.

Column 5 – Old growth mapped outside park

Column 6 --Percent old forest found in non-contributing landbase.

Column 7 – Percent forest that will be old within 60 years found in non-contributing landbase

Column 8 – Percent old and almost old found in THLB.

Column 9 – Percent THLB currently available for harvest (# ha > Minimum harvest age not yet old). Note: TSR 2 data. Current economic operability has expanded

[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.

Table 4. Comparison of Old Growth Targets to Proposed OGMAs

Land Class	BEC Variant	Target (ha)	Proposed Allocation (ha)
Provincial Forest	CWH vh1	-	1554 (mapped)
Cape Scott Park	CWH vh1	-	653 (not mapped)
Total:		2207	2207

Table 4 above compares the full target old seral requirement to that which is proposed. The proposed target is generated from a series of OGMAs within the provincial forest, but outside Cape Scott Park, as well as from an old growth contribution from Cape Scott Park itself. A total of 1554 ha of OGMAs are proposed outside of the park, constituting nearly three quarters of the total old seral target, along with a contribution of the remaining 653 ha from within the park. The park contribution is spatially mapped as approximately 653 ha old growth forest, age class 9, height class 4, but is not established as OGMA. Some of this forest occurs in scattered patches in the Skinner Creek drainage, most occurs in the area covering the mainstem western tributary of the Shushartie River.

A map showing the location of the proposed OGMAs is located in Appendix 2.

Table 5. Wildlife Tree Retention Report for the Shushartie LU.

Landscape Unit (Total Area)	BEC Variant (Productive Forest Area)	Crown Forest	THLB	% Subzone Avail. For Harvest	% THLB Harvest	% WTP Retention When LUs Designated		% WTP Retention When LUs Not Designated
						GMZ	SMZ	
15649	CWH vh1	11615.5	1640.6	14.1	2.1%	0	1	3%

In addition to the initial focus on retention of old growth forests at the landscape level, this plan also proposes to maintain stand structure through retention of wildlife tree patches (WTPs) according to the target defined in Table 5 above. Upon designation of the Shushartie LU by legal order, the WTP target is reduced from 3% to 0% for the General Management Zone and is consistent with policy direction and technical application of the Wildlife Tree Tables in Appendix 3 of the Landscape Unit Planning Guide. However, despite this reduction, the Vancouver Island Land Use Plan Higher Plan Order objective for the SMZ portion of the Shushartie LU requires that within harvest cutblocks, structural forest attributes and elements with important biodiversity functions should be retained. Therefore, a minimum of 1% Wildlife Tree Retention is required to allow the SMZ objective to be met. These attributes and elements can best be determined on site by the prescribing foresters and engineers.

8.2 Legal Objectives for the Shushartie Landscape Unit

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 – Shushartie Landscape Unit

Pursuant to Section 4 of the *Forest Practices Code of British Columbia Act,* the following are the landscape unit objectives for the Shushartie Landscape Unit.

Objective 1 – Old Growth Management Areas

1. Maintenance or recruitment of old growth forests

   Maintain or recruit old growth forests in established Old Growth Management Areas (OGMAs), as shown on the Shushartie Landscape Unit map dated December 17, 2004, subject to section 2 below.

2. Permissible activities within OGMAs

   (a) Minor OGMA boundary adjustments for operational reasons:

   To accommodate operational requirements for timber harvesting and road or bridge construction, OGMAs that are 10 ha or greater in size may have boundaries adjusted, provided that

   i) the boundary adjustment does not affect more than 10 per cent of the area of the OGMA,
   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) suitable OGMA replacement forest of at least equivalent age, structure and area is identified in order of priority, either directly adjacent to the OGMA or, in the same variant and landscape unit as the adjusted OGMA, and
   iv) boundary adjustments and OGMA replacements areas are documented, mapped and submitted to the delegated decision maker at the end of each calendar year.

   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.

(b) Other permissible activities:

i) Boundary pruning of trees to improve wind firmness.
ii) Timber harvesting to prevent the spread of insect infestations or diseases that pose a 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) 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.
v) Construction of rock quarries and gravel pits under authority of forest tenure where the development will be located immediately adjacent to existing roads under tenure and will affect the OGMA by less than 0.5 ha in total.
vi) Small boundary adjustments for operational reasons, or intrusions, other than those specified above, that result in a net loss to the OGMA by less or equal to 0.5 hectare.

OGMA replacement forest is required as a result of the activities above when the total cumulative area affected exceeds 0.5 ha in size. 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. Boundary adjustments and OGMA replacement areas must be documented, mapped and submitted to the delegated decision maker at the end of each calendar year.

Objective 2 – Wildlife Tree Retention

Maintain stand-level structural diversity, by retaining wildlife tree patches (WTPs). Over each five year period, commencing on the date the objectives are established, the target percentage of the harvest area as noted in the table below must be achieved, by each licensee and tenure, through retention of adequate amounts of wildlife tree patches on cutblocks, except minor salvage cutblocks in which harvesting has been completed[6].

In addition:

(1) WTPs must be well distributed across the BEC subzone.
(2) When designated at the operational site plan level, WTPs must be located within or immediately adjacent to a cutblock.
(3) No timber harvesting, including single tree selection is to occur within WTPs, except as noted in (4) below
(4) Salvage of windthrown timber is permitted within WTPs where windthrow impacts 25% to 50% of the dominant or co-dominant stems. Salvage of windthrown timber and harvesting of remaining standing stems is permitted within WTPs where windthrow exceeds 50% of the dominant or co-dominant stems; or where forest health issues pose a significant threat to areas outside the WTP. Where salvage/harvesting is planned and authorized, suitable replacement WTP of at least equivalent quantity must be identified concurrently to achieve the retention target.
(5) WTPs should include, if present, remnant old-growth patches and live or dead veteran trees (excluding danger trees).
(6) WTPs must include representative larger trees for the stand (dbh>average operational cruise) and any moderate to high value wildlife trees if available (excluding danger trees).
(7) BEC subzones and variants will be determined by operational site plan information.
(8) In WTPs with a likelihood of windthrow, pruning and/or topping may be carried out to maintain the integrity of the WTP.

Wildlife Tree Retention in the Shushartie Landscape Unit.

Biogeoclimatic Subzone	% WTP requirement	
	within SMZ 1	Outside SMZ 1
CWH vh (Coastal Western Hemlock, very wet hypermaritime)	1	0

[6] A minor salvage cutblock is defined as less than 2.0 ha of harvesting and/or less than a total volume of 2000 m3 excluding volume harvested from any road clearing width, if the road is required to facilitate the removal of the timber within the minor salvage cutblock.

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Vancouver Regional Landscape Unit Planning Strategy, 1999. Vancouver Forest Region Planning Document, Nanaimo, B.C.

Appendix 1 Vancouver Island Land Use Plan Higher Level Plan 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 mature[7] and old[8] 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 SMZ[9]; 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;

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[7] 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.

[8] 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.

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

(b) retaining, within cutblocks[10], structural forest attributes and elements with important biodiversity functions[11]; and
(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 applied[12].

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.

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 biodiversity[13] in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation[14].

5. Retain late-successional habitat elements and attributes of biodiversity in patches of variable size.

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

[10] Within cutblocks: generally means non-contiguous with cutblock boundaries.
[11] This includes, but is not limited to snags, wildlife trees, and downed logs.
[12] Maximum cutblock sizes refer to net area to be reforested.

[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 shortfall[15].

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 Strategy[16]; and

(c) ecologically suitable second growth forest is identified to recruit the shortfall.[17]

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[15]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.

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

[17]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.

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 Strategy[18]; 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 targets[20] and marbled murrelet habitat requirements[21] in the non-contributing[22] 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 habitat[23].

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.

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[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.

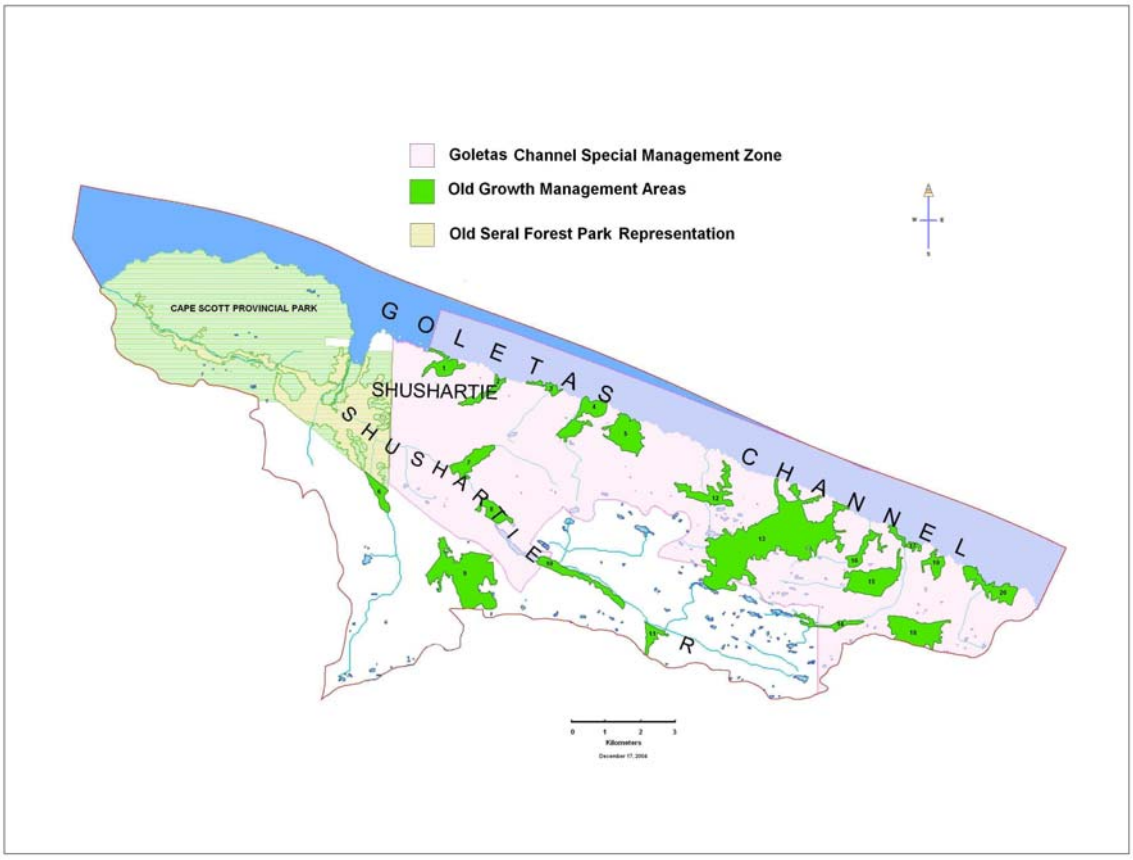
18. In the event that landscape units and objectives are not established in an area within 2 years of the date that this order takes effect, the objectives referred to in paragraph 17 will be implemented in the area.

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: OGMA Map for the Shushartie Landscape Unit



Appendix 3: Shushartie Landscape Unit OGMA Summary and Rationale

OGMA #	Selection Rationale	SMZ/GMZ	Area (ha)
1	Coastal OGMA with RMMPNHS*, but overall low operability potential. Mapped as zonal site series 01 (cedar-hemlock-salal) representing coastal shoreline forest, but may include ocean spray influenced site series 14 (Sitka spruce-Kindbergia).	**SMZ**	**39.8**
2	1.5 km long, narrow (200 m) coastal stream with some RMMPNHS*, good ecological representation of zonal site series 01 and 07 (red cedar-spruce-devil's club) and low harvest/access operability.	**SMZ**	**26.2**
3	Coastal shoreline representation mapped as zonal site series 01, but may include ocean spray influenced site series 14	**SMZ**	**14.5**
4	Coastal shoreline habitat surrounding Gorotisa Point combined with inland habitats, some with RMMPNHS* and very limited harvest opportunity. Good ecosystem representation including site series 01, 03 (red cedar-cypress-salal), 12 (pine-cypress-sphagnum), 13 (red cedar-spruce-skunk cabbage) and possibly 14.	**SMZ**	**62.1**
5	West side of OGMA has core area of four convergent streams with RMMPNHS* and site series 13. Central north slopes capture ecosystem representation and visual quality values as viewed from Goletas Channel	**SMZ**	**83.8**
6	Lower Ursie Creek with good RMMPNHS* plus site series 05 (red cedar-spruce-swordfern).	**GMZ**	**28.3**
7	Shushartie River valley bottom old growth RMMPNHS* includes meander bends and tributary system. Site series 05 and 07 are well represented including site series 09 (medium bench Sitka spruce-red cedar-amabilis fir-Trisetum) along river edge. High fisheries and biodiversity values including upstream fen complex within area of site series 11 (cedar-cypress-Goldthread). Good elk wintering range suitability.	**SMZ**	**46.0**
8	Valley bottom riparian complex surrounding Shushartie Lake on mainstem Shushartie River with RMMPNHS* and site series 02 and 05 represented. East side has upslope southwest aspect and zonal site series 01. Good wintering habitat for elk.	**SMZ**	**28.0**

*** RMMPNHS**: **riparian marbled murrelet potential nesting habitat suitability**

OGMA #	**Selection Rationale**	**SMZ/GMZ**	**Area (ha)**
9	OGMA comprised of hill top forest between Ursie Creek and Shushartie River with potential mamu nesting suitability on steep east side slopes. Complex habitat representation with marginally productive forest types (site series 12). Rated 100% inoperable.	**GMZ**	**213.2**
10	Shushartie River mainstem riparian valley bottom representation with high fisheries and RMMPNHS*. Good wintering habitat suitability for Roosevelt elk	**GMZ**	**53.8**
11	Good wintering habitat for Roosevelt elk plus RMMPNHS and riparian ecosystem representation. Site series 01, 05 and 11.	**GMZ**	**23.4**
12	Low productivity forests represented by site series 02, 03 and 12 plus wetlands, small lakes and streams and marginal zonal 01 forest. Northern end captures small pocket of RMMPNHS* and site series 05/01.	**SMZ**	**60.4**
13	Large area of complex ecosystem representation with very limited harvest operability. 28 ha lies within the GMZ east of Erma Lake and is composed of 23 ha of 921 low site forest (less than 19.5 m tall) and 5 ha of marginal 931 forest (less than 24 m tall). This OGMA has numerous streams, wetlands and pine-cypress bogs plus several small lakes. OGMA 13 captures approximately 6 ha of mapped site series 04 (hemlock-spruce-Lanky moss) *not represented elsewhere in the landscape unit.* Most zonal forests are relatively marginal (23 m tall or less). Additionally, site series 03, 11 and 12 are represented.	**SMZ/GMZ**	**502.7**
14	19 ha of SMZ and 6 ha of GMZ both with good zonal riparian biodiversity representation and RMMPNHS*	**SMZ/GMZ**	**25.1**
15	Central wetlands and streams in broken terrain combined with 20 ha of well-defined east and southeast aspect forest on the eastern edge. Overall low productivity zonal forest consisting predominantly of height class 2 timber. Small dispersed patches of site series 12 (marginal timber) and one very small .5 ha patch of site series 02 (Pine-Cypress-Rhacomitrium).	**SMZ**	**101.6**
16	Incised stream system on west side of OGMA with RMMPNHS*. Site series 13 is well represented along the mainstem riparian zone.	**SMZ**	**32.0**

OGMA #	Selection Rationale	SMZ/GMZ	Area (ha)
17	Small coastal forest fringe surrounding Goletas Bay. Mapped entirely as zonal site series, but may have coastal site series 14.	**SMZ**	**17.3**
18	Predominantly low productivity, gentle slope north aspect cypress-dominated forest with additional hemlock, red cedar and pine plus two small water bodies. Three stream systems (site series 11) drain north to Goletas Creek. Lower slope riparian zone along Goletas Creek may have some RMMPNHS*.	**SMZ**	**105.1**
19	Steep slopes facing Goletas channel include two well-defined streams with some RMMPNHS*. Operable forest with visual constraints. Site series 05 well represented in northern portion of OGMA. Site series 03 represented in and adjacent to upper south west corner of OGMA.	**SMZ**	**27.0**
20	1.75 km long, variable width (100-650 m) coastal forest west of Frankham Point, with complex slope, aspect and elevation	**SMZ**	**63.8**
Total			**1554.1**

Appendix 4: Site Series Representation for CWH vh1

OGMA	CWH vh1 site series	ha
1	1	39.8
2	1	24.341
2	3	0.081
2	7	1.771
2	12	0.004
3	1	14.5
4	1	57.065
4	3	2.971
4	12	0.017
4	13	0.588
5	1	70.211
5	13	13.67
6	1	17.797
6	5	10.56
7	1	17.616
7	5	8.934
7	7	5.32
7	9	1.213
7	11	17.303
7	12	1.397
7	13	0.003
8	1	5.512
8	5	20.523
8	13	1.34
9	1	181.507
9	11	0.599
9	12	25.695
10	1	19.222
10	3	0.02
10	5	36.798
10	11	1.223

OGMA	CWH vh1 site series	ha
11	1	19.57
11	5	5.56
11	7	0.05
11	11	2.88
12	1	38.039
12	3	11.525
12	5	3.436
12	12	3.616
12	13	2.768
13	1	436.265
13	3	21.946
13	4	6.304
13	5	1.21
13	11	7.514
13	12	30.556
14	1	24.977
14	12	0.125
14	13	0.038
15	1	87.877
15	2	0.521
15	12	10.766
16	1	23.592
16	11	0.05
16	12	0.966
16	13	7.402
17	1	17.333
17	5	0.007
18	1	88.091
18	11	15.269
19	1	18.058
19	3	1.057
19	5	7.875
19	11	0.047
20	1	42.306
20	3	1.699
20	13	1.549

Appendix 5: Public Consultation Summary

The Shushartie Landscape Unit Plan was advertised for public review and comment for 60 days from June 30, 2004 to August 29, 2004.

Richply is the principle Forest Licensee and had input to the plan at the commencement of the process, prior to the 60 day public review period (March 31, 2004), during the review period (August 18, 2004) and after the review period (October 6, 2004). Richply's main concern was primarily due to proposed OGMA placement over an undesignated goshawk WHA and one over an unconfirmed deer winter range. Other concerns over OGMAs impacting potential THLB were noted and several deletions subsequently made:

- Approximately 40 ha of potentially operable OGMA were removed from three of the coastal OGMAs without compromising the riparian strips for mamu. In compensation, new OGMA was added between the current OGMAs 11 and 13 to address site series representation of the marginal NP forest types plus a small 6 ha riparian pocket of site series 05 and 01 for mamu.

- Other edits were done as agreed to. This included deleting three OGMAs and modifying several others. In the end, 190 ha of potentially operable forest were removed as OGMA**,** some of which was replaced with constrained forest, or inoperable forest areas.

- The draft OGMA plan consisted of 1633 ha mapped OGMA, with the remainder as park contribution (574 ha).

- The final proposed OGMA plan covers 1554 ha of mapped OGMA with the remainder as park contribution (653). Although the total mapped OGMA difference only appears to be 68 ha, the reconfigurations and adjustments freed up nearly 200 ha of potentially harvestable forest.

BCTS also provided some beneficial input during the review period. Lukwa-Koprino Logging provided no further comment after the advertising period commenced, but were contacted after the advertising period to determine if there were any concerns about revisions to OGMAs in the Goletas Special Management Zone. No concerns were raised.

The only non-licensee contact was from the Carmanah Forest Society requesting a guided review of the LU map. Other priorities dictated that a guided review could not be easily accommodated. The planning map and text were available at the MSRM and MOF regional offices in Nanaimo, the MSRM district office in Campbell River and the MOF district office in Port McNeill.