B.C. Timber Sales
Strait of Georgia Business Area

BCTS
BC Timber Sales
Strait of Georgia

Background Information

Material accompanying the FSP but is not part of the FSP

Strathcona FSP Amendment 8
January 2012

Table of Contents

Table of Contents

1. INTRODUCTION 4

RATIONALE FOR RESULTS OR STRATEGIES 5

1.1 LAND USE OBJECTIVES 5
Objectives Set by Government for the Sayward Landscape Unit 5
Order Establishing Provincial Non-Spatial Old Growth Objectives 5
Vancouver Island Land Use Plan Higher Level Plan Order 6
1.2 OBJECTIVES PRESCRIBED UNDER FRPA S. 149 11
Soils 11
Wildlife 11
Management Protocols for Species at Risk 15
Water, Fish, Wildlife and Biodiversity within Riparian Areas 15
Community Watersheds 16
Wildlife and Biodiversity - Landscape Level and Stand Level 16
Cultural Heritage Resources 17
1.3 OBJECTIVES ESTABLISHED UNDER GOVERNMENT ACTIONS REGULATION 21
Fisheries Sensitive Watersheds 21
Visual Quality 22
1.4 OBJECTIVES CONTINUED UNDER FRPA S. 181 22
Objectives set for Lakeshore Management within the Sayward Landscape Unit 22
Recreation Trail Objective – Sayward Landscape Unit 22
Ungulate Winter Range #U1-004 22

2. STOCKING STANDARDS (FSP S6 AND STOCKING STANDARDS DOCUMENT; APPENDIX 1) 23

3. MEASURES TO PREVENT THE INTRODUCTION AND SPREAD OF INVASIVE PLANTS 26

4 MINISTERIAL ORDERS AND DESIGNATIONS 35

ORDER ESTABLISHING SAYWARD LANDSCAPE UNIT AND OBJECTIVES 35
ORDER ESTABLISHING PROVINCIAL NON-SPATIAL OLD GROWTH OBJECTIVES 36
VANCOUVER ISLAND LAND USE PLAN HIGHER LEVEL PLAN ORDER 41
NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE CAMPBELL RIVER FOREST DISTRICT 46
NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF UNGULATE SPECIES IN THE STRATHCONA TIMBER SUPPLY AREA 51
ORDER ESTABLISHING WHA # 1-085 TO 1-088 AND 1-090 TO 1-096 53
ORDER ESTABLISHING UNGULATE WINTER RANGE #U1-014 54
ORDER DESIGNATING THE JOHN HART LAKE COMMUNITY WATERSHED 56
LETTERS ESTABLISHING THE ARTLISH AND MEMEKAY FISHERIES SENSITIVE WATERSHEDS 57
LETTER ESTABLISHING SCENIC AREAS AND VISUAL QUALITY OBJECTIVES FOR THE CRFD 60
LETTER ESTABLISHING RIPARIAN RESERVE ZONES AND RIPARIAN MANAGEMENT ZONES FOR LAKES 63
LETTER ESTABLISHING A RECREATION TRAIL OBJECTIVE IN THE SAYWARD LU 65

ORDER ESTABLISHING UNGULATE WINTER RANGE #U1-004 67
OGMA ORDER FOR TSITIKA, NAKA, ADAM-EVE, WHITE AND SALMON LU'S 69
ORDER TO IDENTIFY KARST RESOURCE FEATURES 72
ORDER TO IDENTIFY RECREATION RESOURCE FEATURE 73
ADMINISTRATIVE ADJUSTMENTS, AMENDMENTS AND OPERATIONAL PROCEDURES FOR OLD GROWTH MANAGEMENT AREAS COAST REGION 74
1.0 General Procedures for Administrative Adjustments, Minor Amendments and Significant Amendments 74
2.0 OGMA Operational Procedures 76

Background Information

1. INTRODUCTION

In accordance with the Forest and Range Practices Act (FRPA), the Strait of Georgia Business Area has developed a Forest Stewardship Plan (FSP) covering the Vancouver Island portion of the Campbell River Forest District.

The Strathcona FSP shows the location of forest development units (FDUs) and provides results and strategies that BCTS and agreement holders will follow in order to achieve the objectives set by government for various forest and resource values.

In addition to this FSP, BCTS relies upon a number of other tools and guidelines to do business. These include; operational plans, sustainable forest management plans, EMS and SFI certification documents, internal SOPs and District SOPs.

This FSP backgrounder has been developed to assist persons reading the FSP to interpret the document and its applications and to provide further detail regarding the specifics of resource management within each FDU. The backgrounder follows the same structure and headings as the FSP document.

For further information regarding the FSP or background document contact:

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RATIONALE FOR RESULTS OR STRATEGIES

1.1 Land Use Objectives

The Order establishing the Sayward Landscape Unit Plan is included in S. 5.1 of this document.

Objectives Set by Government for the Sayward Landscape Unit

Old Growth Management Areas (OGMA) for the Sayward Landscape Unit (LU) were established on July 1, 2003. The strategy applies to OGMAs and subsequent amendments to OGMAs within the Sayward LU. The strategy commits to no cutblock harvesting within OGMAs legally established within the Sayward LU and to no road construction within OGMAs legally established within the Sayward LU unless no other practicable option exists. Exceptions to this that are included in the strategy are consistent with the exceptions listed in the Sayward Landscape Unit Plan.

To contribute to the conservation of biodiversity, it is the responsibility of the FSP holder to identify wildlife tree retention areas that are consistent with the retention targets as specified in the Sayward Landscape Unit Plan.

The strategy for objective 3 of the Sayward Landscape Unit Plan refers to a Sayward Landscape Unit Spring Forage Map that is to be used as a tool for identifying areas that meet the criteria as set out in the Sayward Landscape Unit Plan. This map is to be used as a guideline and is subject to changes based on what is found in the field based on professional judgement.

Order Establishing Provincial Non-Spatial Old Growth Objectives

The *Order Establishing Provincial Non-Spatial Old Growth Objectives* establishes biodiversity emphasis (BE), old growth objectives specific to each landscape unit as well as clarifying the amount of area available for timber harvesting. As per the preamble of the Order, this order supplements, but does not replace, FPPR S. 9.

Where the *Order Establishing Provincial Non-Spatial Old Growth Objectives* has been issued by Government and where no Landscape Unit Plan exists, BCTS will implement the non-spatial old growth objectives in consideration of the Implementation Policy developed by Ministry of Agriculture and Land (ILMB) to support the Order.

The non-spatial Order expresses a target percentage for old growth retention in the biogeoclimatic (BEC) variant and consequently clarifies the amount of area available for timber harvesting.

The strategy in the FSP for the Order Establishing Provincial Non-Spatial Old Growth Objectives applies to landscape units that do not have legally established OGMAs.

The strategy describes a step-down procedure that reflects the Objectives described in the Order. The old forest retention targets were derived from Table 1: Natural Disturbance Type One of the Notice. The amount of existing old forest that is available for old growth retention is derived from the government's aspatial database (Regional Land Use Plan (RLUP) Version 3.2, August 15, 2005). Table 2 in the FSP text represents a snapshot in time and it is understood that it is the responsibility of BCTS to ensure that any harvesting carried out or authorized by does not result in the amount of old forest available to fall below the targets as per the Old Growth Order. The

Burman, landscape unit has a low biodiversity emphasis option and thus the 2/3 drawdown may be applied as per Provision A5 of the Order. The steps outlined in the strategy are consistent with the Implementation Policy and the Landscape Unit Planning Guide (March 1999), and are clarified below:

- Old forest in the non-contributing land base will not be harvested unless the RLUP database shows that there is other old forest in the non-contributing sufficient to meet the targets.
- Where the RLUP database indicates there is insufficient old forest in the non-contributing land base, harvesting will not occur in any non-contributing old forest or in an area equivalent to the shortfall within the old forest inside the timber harvesting land base (THLB).
- Where the RLUP database indicates there is insufficient old forest in the contributing land base to make up the shortfall, harvesting will not occur in any non-contributing or contributing old forest or in an area equivalent to the remaining shortfall within the mature forest in the non-contributing land base.

In landscape units with a BEO rating of intermediate or high, the strategy allows for younger age classes to be used to meet old growth targets where it can be demonstrated that the younger stands are of equal or better conservation value as per provision A6 of the Order Establishing Provincial Non-Spatial Old Growth Objectives.

As OGMAs are legally established through landscape unit planning, BCTS will amend the Strathcona FSP to incorporate them. Where draft OGMAs are spatially delineated, but have not been legally established, BCTS will work to minimize the amount of road construction or timber harvesting within the draft OGMAs. BCTS will ensure that any timber harvesting that is carried out or authorized by BCTS in the draft OGMAs will not result in the amount of old forest available to fall below the retention targets.

A cooperative approach is taken with the other Licensees in the CRFD to ensure the proposed harvesting does not reduce the amount of old forest available to below that required to meet the retention targets as per the Order. BCTS and the other Licensees have good working relationship with one another and a shared commitment to achieving the intent of the Order. The Licensees participate with both FIA and DFAM informal working groups and communicate on a regular basis regarding landscape level issues.

Vancouver Island Land Use Plan Higher Level Plan Order

The Vancouver Island Land Use Plan, Higher Level Plan (VIHLP) Order (effective December 1, 2000) establishes Resource Management Zones and Resource Management Zone Objectives within the area covered by the Vancouver Island Land Use Plan (VILUP).

Some or all of Special Management Zones (SMZ) 5, 7, 8,10 and 11 and Enhanced Resource Management Zones (EFZ) 15, , 24, 27, 28, and 30 are within the FDUs that are part of this plan.

Many of the objectives specified in the Higher Level Plan (HLP) Order are very narrow and specific. Subsequently, many of the results/strategies are based directly on what is specified in the Higher Level Plan Order objective.

SMZs or EFZs may not be entirely within the area of this FSP. As outlined in the results/strategies, the FSP Holder is responsible only for the portions of the EFZs and SMZs within the FSP.

➢ HLP Order Objective 1(a)

The strategy commits to not harvesting within the South Brooks-Bunsby SMZ (5) Johnstone Strait SMZ (7), Tsitika River SMZ (8), Pinder-Atluck SMZ (10) or the Schoen-Strathcona SMZ (11) if doing so would result in the amount of mature seral forest to fall below 25% of the forested area for each SMZ.

Prior to authorizing or carrying out timber harvesting within the SMZ, the FSP Holder will determine the amount of forested area for each SMZ, and the amount of mature seral forest. Reference to "mature" forests in the Higher Level Plan Order objective is understood to mean mature plus old forest.

The VIHLP Order states: "*mature seral forest is defined as generally 80-120 years or older, depending on species and site conditions". The structure of mature seral forest 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."*

➢ HLP Order Objective 1(b)

The strategy commits to retaining structural forest attributes and elements within SMZs 5,7, 8, 10 and 11. The strategy commits to retaining elements that have important biodiversity functions that could be identified in the wildlife tree patches, riparian management areas, or other areas reserved from harvesting.

<u>Structural Forest Attributes and Elements</u>

Structural forest attributes and elements will be retained through the results/strategies in other portions of this FSP including:

- Wildlife tree retention areas within cutblocks. FPPR S. 66 and 67 set out the requirements for wildlife tree retention areas;
- Coarse woody debris (CWD) retention. FPPR S. 68 sets out the requirement for coarse woody debris retention.
- CWD & wildlife trees can be augmented at the stand level by including these structural forest attributes in streamside reserves, basal area (BA) retention in riparian management zones (RMZs), wildlife tree patches (WTPs) and in partial cut harvesting systems,
- Some riparian management area (RMA) retention as well as other cutblock retention may be non-contiguous within cutblock boundaries and distributed throughout cutblocks.

The result/strategy provides for stand diversity within or adjacent to cutblocks. Limitations placed on cutblock size and silvicultural systems within SMZs will assist in providing horizontal diversity within future stands.

➢ HLP Order Objective 1(c)

The result/strategy commits to applying a variety of patch sizes and shapes across the landscape, specific to the silvicultural system being used for activities within SMZs 5,7, 8, 10 and 11.

Silvicultural Systems

A variety of silvicultural systems are to be applied across the SMZ, and represent a variety of retention levels. The silvicultural system and therefore the degree of retention is determined by site characteristics, and the values that are present in the area when developing site plans. It is expected that each opening will have some level of retention based on these characteristics and values.

Patch Distribution

Patch distribution is described in the Landscape Unit Planning Guide as areas with a similar age, generally within a 20-year range.

An accepted tool for assessing and guiding patch size distribution across a Landscape Unit is a patch size distribution analysis. If one is completed for the FDUs within the FSP, it could provide direction for meeting the distribution of the natural disturbance patterns as described in the Landscape Unit Planning Guidebook (LUPG). Patch size distribution analysis and the subsequent recommendations are focussed on new harvesting or disturbed area 20 years or younger, as denoted by the relevant forest cover inventory label. To complete the analysis, areas may be grouped into units based on Natural Disturbance Types (NDT) and like biogeoclimatic zones.

Varying Levels of Retention

The spatial distribution of dispersed or other forms of retention areas may be varied to take advantage of natural structural diversity. Differences in site conditions between cutblocks – such as the size of riparian and stream buffers and size of buffers for windthrow management – are expected to dictate a variety of retention patch levels and sizes. Site conditions such as topography, windthrow potential, visual management objectives, wildlife constraints and harvest system also affect retention patch levels and shapes.

➢ HLP Order Objective 2

The result/strategy allows for cutlbocks within SMZs 5, 7, 8,10 and 11 to be in excess of 5 and 40 ha, as restricted in VILUP objective 1(c) provided that the cutblock design is carried out to recover timber that was damaged by fire, insects, wind or other similar events wherever possible, the cutblock incorporates structural characteristics of natural disturbances.

The existence of structural characteristics incorporated into the cutblock is verifiable. The strategy applies to road construction and cutblock harvesting activities and issuance of authorities under the control of the FSP Holder.

Salvage of damaged timber may require exceeding the cutblock size described in VILUP Objective 1(c). The size of cutblocks associated with salvage of damaged timber are normally determined considering a variety of factors including:

- the extent of damaged timber;
- the financial viability of recovering the damaged timber;
- present and potential fire hazard; and
- the impacts of the associated forest values.

➢ HLP Order Objectives 4 and 5

The strategy commits to design cutblocks that will retain late-successional habitat elements and attributes of biodiversity as outlined in the objective. The types of retention that are referred to in the strategy are measurable or verifiable. The strategy applies to road construction and cutblock harvesting activities and issuance of authorities under the control of the FSP Holder and/or licensee.

Until Landscape Unit Plans (LU Plans) are completed for the area of the Schoen-Strathcona SMZ, the result/strategy outlines a low risk approach to retaining rare or underrepresented site series within 250 m of the harvested area.

➢ HLP Order Objective 7

The strategy allows for cutblocks within the Tahsish, Burman, Naka, Adam/Eve, Salmon, and Eliza EFZs to exceed 40 hectares as per the objective. Size of the cutblock and the method by which green up is assessed is measurable.

The strategy applies to road construction and cutblock harvesting activities and issuance of authorities under the control of the FSP Holder.

➢ HLP Order Objective 8

The strategy commits to manage to a cumulative low risk threshold for adverse hydrological effects for harvesting activities carried out as a result of objective 7 that are within the EFZ's listed and within a watershed determined by the district manager and designated environment official to have significant watershed sensitivity and significant fisheries values.

The environmental indicators are derived from a Geographic Information System (GIS) map base, information managed within the watershed. The environmental indicator outputs from a GIS (which is primarily area, lengths, and elevation) are measurable or verifiable.

Monitoring by the licensee of equivalent clearcut area has been seen by government as an effective means of managing risks of cumulative hydrological effects of road construction and cutblock harvesting that could result in a material adverse impact on the habitat of the fish species.

1. Additional information for the Delegated Decision Maker to consider:

   a) Relationship to practice requirements, government objectives, and other R/S in the FSP

   Through the FPPR Practice Requirements (e.g. FPPR S. 35, 37, 38, 39, 40, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 72, 73, 74, 75, 76, 79, and 82 which have either direct or indirect effect on cumulative hydrological effects on fish habitat) combined with the management guidelines outlined in this FSP and with the other results/strategies in this FSP, the risk of road construction and cutblock harvesting to fisheries sensitive watersheds can be managed at a level consistent with the objectives set by government.

   b) ECA Indicator

   Components of the *Coastal Watershed Assessment Procedure (CWAP) Guidebook, Second edition, Version 2.1, 1999* may be used when considering cumulative hydrological effects.

   Although ECA is only one indicator of potential cumulative hydrological effects on watershed health, it is a reasonable initial indicator to determine proceeding with additional monitoring. ECA has been used as a limit on watershed units and has been a standard strategy for limiting increases to potential peak flow since the introduction of the CWAP guidebooks (1995, 1999).

   c) Other licensees

   The FSP holder will work in cooperation with other license holders working in the same watershed to ensure that all operations are considered in monitoring.

➢ HLP Order Objective 9 and 9.1

The strategy commits to not planting cutblocks within the EFZ 15, 24, 27, 28 or 30 with a single species that would result in more than 20% of the total harvested area of a variant being reforested using a single species. Areas planted will be reported annually as per FPPR S. 86(3).

The VILUP HLP Order allows for selecting a single species to increase the short-term availability of timber when proposing species composition following harvest. The FSP Holder anticipates that species selection will be based on site specific conditions as determined at the site planning stage. If a single species is to be selected for regenerating an area, no more than 20% of the areas will be planted to a single species.

➢ HLP Order Objective 15 and 16

Old forest retention objectives for EFZ 28 and RMZ 14 will be managed as per the result/strategy for the Order Establishing Provincial Non-Spatial Old Growth Objectives in S. 5.1.2 of this FSP.

Marbled Murrelet habitat requirements as per Objective 15 will be managed through s. 5.2.2 of this FSP (Wildlife).

1.2 Objectives Prescribed Under FRPA S. 149

Soils

The FSP Holder will undertake to comply with FPPR s. 35 and 36. In accordance with FPPR s. 12.1(1), the FSP Holder is exempt from the requirement to specify intended results and strategies set out in FPPR s. 5. The strategy is measurable and verifiable against the practice requirements which are consistent with the objective set by government for soils.

Wildlife

Copies of the Wildlife Notices for the Campbell River Forest District are included in this document. A cooperative approach is taken between the other Licensees and BCTS in the CRFD to ensure the most suitable habitat is accounted for within policy limits. The strategies for rely on the Identified Wildlife Management Strategy Version 2004 (IWMS) to guide the identification of suitable habitat required for the survival of species at risk.

"Queen Charlotte" Goshawk

As per Order dated December 1, 2004, establishing WHAs 1-085 to 1-088 and 1-090 to 1-096; "pursuant to section 7(3) of the *Forest Planning and Practices Regulation* the person(s) required to prepare a forest stewardship plan are hereby exempted from the obligation to prepare results or strategies in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation* for Queen Charlotte Goshawk in the Campbell River Forest District" .

BCTS has established a protocol that outlines the management of "Queen Charlotte" Goshawk nests sites discovered on BCTS operating areas where WHAs are not being considered. A copy of this management protocol is available on the BCTS Strait of Georgia website.

Ungulates – TFL 19 (Now Pacific TSA)

As per Order dated December 14, 2004, establishing UWR #U1-014 "pursuant to section 7(3) of the *Forest Planning and Practices Regulation* the person(s) required to prepare a forest stewardship plan are hereby exempted from the obligation to prepare results or strategies in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation* for the winter survival of ungulates in Tree Farm Licence 19".

Marbled Murrelet

The strategy describes amount, distribution and attributes consistent with the language provided in the Notice. The Notice specifies an amount of suitable nesting habitat equivalent to a net mature timber harvesting landbase impact of 1431 ha. As WHAs have been established within the CRFD since the Notice was issued, the amount available in the THLB has been reduced to 1322 ha. This amount applies to the entire CRFD. Since BCTS Strathcona FSP includes only a portion of the LUs in the CRFD, the amount has been pro-rated.

Prorate Calculation:

The pro-rated amount was determined by dividing the amount of THLB in the FDUs included in the FSP by the amount of THLB in the CRFD. Note that the since BCTS only operates in a portion of the Salmon, Tahsis and Adam/Eve FDUs, the numbers have been adjusted accordingly

in the numerator for this calculation. Areas for this calculation have been derived from the RLUPS database v3.2, dated August 15, 2005. The 2012 major amendment to the Strathcona FSP significantly reduced the size of several FDU's however the THLB amount in FDU's was not recalculated. This will result in an overestimate of murrelet habitat required in some FDU's. BCTS may choose to recalculate the THLB amount within the FDU's in the future if there are changes to the order, or if the over-estimated target is impacting operations.

Calculation of THLB amount in FDUs in FSP:

FDU:	THLB (ha)
Adam/Eve	10957.8[1]
Artlish	5299.1
Burman	13677.8
Gold	33220.8
Kaouk	10092.5
Kashutl	19429.9
Naka	8085.7
Salmon	7840.2[2]
Sayward	48573.7
Tahsis	13046.3[3]
Tlupana	23858.4
Tsitika	18527.3
Kleeptee	8307.2
Tahsish	7275.6
Total THLB in plan	228192.3 ha

Calculation of prorated amount for Marbled Murrelet within BCTS Strathcona FSP:

$$= \frac{\text{The total amount of THLB in the CRFD}}{\text{the total amount of THLB in FDUs in FSP}}$$

$$= \frac{228192.3 \text{ ha}}{509219 \text{ ha}}$$

$$= 45\%$$

Therefore, 45% of the remaining budget for THLB impact of 1322 ha is 595.

The area of suitable habitat can be summarized annually and measured against the area of suitable habitat at the time the Notice was provided. In the case where nesting habitat has been spatially defined, the amount of habitat class 1, 2 and 3 can be documented and the draw down of suitable habitat can be measured to ensure the amount in the Notice is maintained. In recent modeling it has been determined that, although not precisely, the attributes as described in the R/S (age class 8 and 9, height class 4) best predict marbled murrelet habitat. In general these attributes tend to over-estimate the amount of habitat.

[1] total THLB for the Adam Eve LU is 42145.3. Since BCTS FDU only covers 26% of this LU, the THLB amount for the purpose of the prorate has been reduced to 10957.8ha.

[2] total THLB for the Salmon LU is 52268.1. Since BCTS FDU only covers 15% of this LU, the THLB amount for the purpose of the prorate has been reduced to 7840.2ha.

[3] total THLB for the Tahsis LU is 17395. Since BCTS FDU only covers 75% of this LU, the THLB amount for the purpose of the prorating has been reduced to 13046.3 ha.

Where nesting habitat has been spatially defined, the amount of habitat class 1, 2 and 3 can be documented and the draw down of suitable habitat can be measured against the amount in the Notice at the time the time the Notice was provided.

For the case of a Wildlife Habitat Area, the spatial delineation is maintained by government as part of the Order that legally establishes the WHA.

Red-legged Frog

The strategy describes amount, distribution and attributes consistent with the language provided in the Notice. The amount specified in the Notice applies to the entire CRFD. Since BCTS Strathcona FSP includes only a portion of the LUs in the CRFD, the amount has been prorated. The FDUs included in the BCTS Strathcona FSP represent approximately 45% of the landbase, therefore the amounts have been adjusted to represent this. The amount in the Notice is based on the anticipated need for 5 future wildlife habitat areas as per the background information accompanying the Wildlife Notice. The prorated amount is suitable for the establishment of 2 WHAs.

Suitable habitat can be identified at the block level, when riparian classification for streams in and adjacent to proposed road construction and timber harvesting occurs. IWMS 2004 guides the identification of suitable habitat required for the survival of the Red-legged Frog.

BCTS has established a protocol that outlines the management of habitat for the Red-legged Frog, especially breeding sites discovered on BCTS operating areas where WHAs are not being considered. A copy of this management protocol is available on the BCTS Strait of Georgia EMS website.

Keen's Long-eared Myotis

The strategy identifies the amount, distribution and attributes consistent with the Notice. The amount specified in the Notice applies to the entire CRFD. The amount has not been prorated since the target amount is based on the intent to establish 1 WHA as stated in the background information for the Wildlife Notices.

The strategy commits to no road construction or timber harvesting within management areas identified on the FSP maps. IWMS 2004 guides the identification of suitable habitat required for the survival of the Keen's Long-eared Myotis.

Great Blue Heron

The strategy identifies the amount, distribution and attributes consistent with the Notice. The amount specified in the Notice applies to the entire CRFD. Since BCTS Strathcona FSP includes only a portion of the LUs in the CRFD, the amount has been prorated. The FDUs included in the BCTS Strathcona FSP represent approximately 45% of the landbase, therefore the amounts have been adjusted to represent this. The amount in the Notice is based on the anticipated need for 2 future wildlife habitat areas as per the background information accompanying the Wildlife Notice. The prorated amount is suitable for the establishment of 1 WHAs.

If a nesting colony is identified within the FDUs included in the FSP, the strategy commits to no road construction or timber harvesting within those nesting colonies. IWMS 2004 guides the identification of suitable habitat required for the survival of the Great Blue Heron.

Black-tailed Deer and Roosevelt Elk

Ungulate Winter Range #U1-005 and associated general wildlife measures were established on July 20, 2006 under GAR s. 9(2) and 12(1). The Order establishing UWR #U1-005 provides an exemption from the obligation to prepare result or strategies in relation to the objective for the winter survival of ungulates in the Strathcona TSA as per FPPR s. 7(3).

Other

Other identified wildlife species that have not been indicated in the notices can be given consideration for management under FPPR S. 70(2) practices, the location and THLB impact can be described as part FPPR S. 86(2)(d) Annual Reports.

Regionally Important Wildlife

FPPR S. 7(1)(b): No regionally important wildlife species have been identified in an Order as per FPPR S. 7(2)(a).

Management Protocols for Species at Risk

Strait of Georgia Business Area will create Management Protocols for species at risk as required. At the time of this backgrounder management protocols were in place for elk, red-legged frogs, northern goshawks, marbled murrelets, tailed frogs, and Rubus nivalis. These protocols are maintained on the Strait of Georgia EMS website at http://www.for.gov.bc.ca/ftp/TSG/external/!publish/EMS2/Supplements/Species_At_Risk/

Water, Fish, Wildlife and Biodiversity within Riparian Areas

The strategy adopts the riparian widths as specified in FPPR S. 47, 48 and 49 as the primary management strategy. The strategy also allows for alternate widths that offer some flexibility when managing within riparian areas.

When the riparian widths specified in FPPR S. 47 to 49 are adopted by the Holder of the FSP as a result/strategy for establishment of riparian reserves, riparian widths, and management areas, they are measurable or verifiable against the practice requirements.

When the practice requirements specified in FPPR S. 47, 48, or 49 are not considered to be an appropriate management strategy for a site level reserve or management zone, the FSP Holder is responsible for having an written rationale prepared that addresses the windthrow hazard and consequence, sensitive stream protection, environmental sensitivity such as terrain stability class 4 or 5, topography, or worker safety. This rationale forms the basis for operating outside the practice requirements and will be made available to the MFLNRO upon request

The FSP Holder is responsible for tracking variances from the practice requirements relating to riparian areas. At the cutblock level, the FSP Holder has record of such areas. These riparian widths/areas can be measured and verified against those specified within the ecological rationale.

Varying Riparian Widths: Relative Need of Stream Classes, Lakes or Wetlands

The relative need for riparian reserves may be compared between different classes of stream, lake, or wetland. The FSP Holder may consider (but is not limited to) the following components of the ecological rationale when comparing the relative riparian reserve zone needs between stream classes, lakes or wetlands:

- Stream Capacity (FPPR Schedule 1, S. 2(a)(i) and (iv)), i.e. level of use, fry density, spawner density;
- Species at risk (FPPR Schedule 1, S. 2(a)(ii));
- Geomorphic sensitivity indicators (FPPR Schedule 1, S. 2(a)(i), (iii) and (iv));
- Environmental Sensitivity e.g. Es1 and Es2, slopes >60%, or Terrain Classes IV & V;
- Windthrow hazard and consequence (FPPR Schedule 1 S. 2(a)(i), (iii) and (iv))
- Connectivity (FPPR Schedule 1 S. 2(a)(ii))
- Logging history (FPPR Schedule 1 S. 2(b))
- Level of planned harvest (FPPR Schedule 1 S. 2(b))
- Forest/Riparian Health (FPPR Schedule 1 S. 2(a)(ii) and (iii))

Basal Area Retention

It is the view of the FSP Holder that percentage of basal area retention within a riparian management zone should be based on specific site level information rather than a specified number. Basal area retention will be specified in a written rationale prepared by a qualified professional. The amount of basal area retained in a riparian management zone will be assessed based on the factors in FPPR Schedule 1 Section 2.

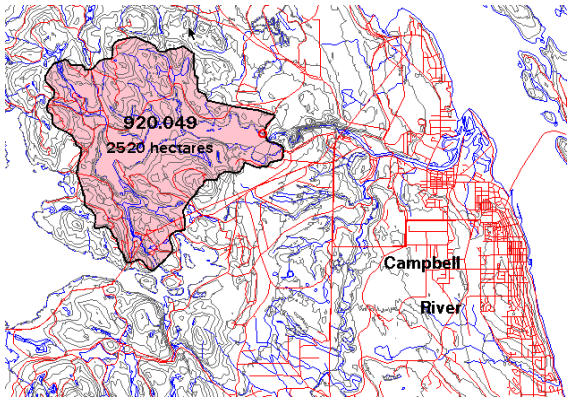
Community Watersheds

There is one community watershed within the FDUs included in the FSP. The FSP includes a strategy for the John Hart community watershed.

John Hart Community Watershed

The strategy that applies to the John Hart community watershed allows for harvesting and road construction. The strategy commits to complying with practice requirements as per s. 59, 60, and 61 of the FPPR.

John Hart Community Watershed – Sayward FDU



Licensed and Unlicensed Water Users

Water licenses are regulated under the Drinking Water Protection Act. As there is no objective that fits within the legal framework of FRPA pertaining to water licenses, the FSP does not include a result/strategy for either licensed or unlicensed water users. BCTS notes that there are both licensed and unlicensed water users within the FDUs included in the FSP. If evidence of water use is found during field work, BCTS will take steps to minimize the material adverse impacts to water quality.

Wildlife and Biodiversity - Landscape Level and Stand Level

Landscape Level

The landscape level strategy adopts the practice requirements as per s. 64 and 65 of the FPPR. The result/strategy is therefore measurable or verifiable against the practice requirements.

Stand Level

The stand level strategy adopts the s. 66 and 67 of the FPPR for landscape Units that do not have legally established Landscape Unit plans. For FDUs that have legally established Landscape Unit Plans, retention targets will be consistent with Wildlife Tree retention targets as specified in the LUP.

Cultural Heritage Resources

It is recognized that as part of government, BCTS has a duty to consult and a desire to develop effective relationships with FNs. Provincially there has been an effort to coordinate First Nations consultation between government agencies. BCTS will follow provincial procedures to ensure that consultation is adequate.
All activities undertaken by BCTS which have the potential to impact First Nations rights including Treaty rights must undergo First Nations consultation at a level adequate to address potential impacts for the project. The FSP Holder is responsible for ensuring that consultation is carried out at the appropriate level, and that any concerns brought forward by First Nations were adequately addressed by BCTS prior to carrying out the activities.
The requirement for referral to applicable First Nations is not to have referrals at any specific time period (ie annual) but that all projects or plans with potential to impact First Nations rights or title must go through adequate consultation prior to the works starting.
Strait of Georgia has also developed a cedar strategy to guide decisions on management of cedar in the Campbell River District.

The CHR Strategy

This strategy outlines a series of steps that address how the FSP Holder will respond to cultural heritage resources (CHR), and potential CHR prior to and during road construction and cutblock harvesting activities under this FSP.

This strategy recognizes the importance of maintaining tangible or spatial ties so that those objects, sites or locations deemed cultural heritage resources can be adequately conserved or protected.

Identification of cultural heritage resources includes adequate referral of potential harvest and road construction activities to First Nations. Subsection 3 does not limit how a potential CHR is identified. Subsection 2 states that identification of site-specific cultural heritage resources includes information sharing and/or consultation with First Nations. It is anticipated that this information will come through a variety of sources including communication, information exchange with First Nations, and MFLNRO.

Information Exchange in Respect of the FSP

Major amendments to the Strathcona FSP will be referred to applicable First Nations for a minimum of 60 days or as stated in any specific consultation agreements (SEA's, FCRSA's). All comments received will be reviewed by BCTS. Comments received will also be reviewed by the MFLNRO decision maker during the review and approval process.

BC Timber Sales understands clearly the importance and value of communication with affected First Nations. BC Timber Sales will follow the terms of any interim measures agreements signed by government as they apply to BCTS. BC Timber Sales will follow the terms of any MOUs in effect or developed within the term of this FSP to which BC Timber Sales is signatory.

In addition, the government has a legal obligation to consult with First Nations on operational plans, and is committed to fulfilling that obligation. Where First Nations and MoFLNRO have negotiated a Forest and Range Consultation and Revenue Sharing Agreement or a Strategic Engagement Agreement they have committed to a consultation process to address administrative and operational decisions and to ensure timely forestry decisions. As and where appropriate, BCTS is an active participant in the process.

Relationship to other R/S in the FSP and Objectives

It is expected that actions taken under this CHR strategy will tie strongly to commitments made and actions taken in respect of other parts of the FSP. Commitments made and actions taken in respect of objectives set by government, Higher Level Plans, Orders, and other planning processes for forest resource values may also contribute to conservation and/or protection of Cultural Heritage Resources.

Cedar and Cypress

BC Timber Sales is aware of the Coast Forest Region *Guidelines for Managing Cedar for Cultural Purposes* (January 2005). BC Timber Sales is also aware that some First Nations are working on strategies for managing cedar within their traditional territories. BC Timber Sales is willing to participate in development of these strategies in concert with First Nations, other licensees, and the Ministry of Forests and Range.

FSP Holder responsibilities

Since a FSP Holder is responsible for the issuance of a timber sales licence, he/she must also assess the adequacy of consultation prior to its issuance. The information-gathering process associated with cultural heritage resources results or strategies will support this overall consultation process.

BCTS Strathcona FSP Cedar Guidance Document

This Guidance Document is part of the Backgrounder to BC Timber Sales' Strathcona Forest Stewardship Plan (FSP), approved March 1, 2007. The purpose of this document is to provide background and clarification to the commitments made in the FSP. The guidance document is not legally binding, and applies only to areas covered by the Strathcona FSP. BCTS encourages other signatories to the Strathcona FSP to follow this guidance.

BCTS Strait of Georgia is committed to conserving a sufficient volume and quality of Western redcedar (*Thuja plicata*) and Yellow-cedar (*Chamaecyparis nootkatensis*) to support First Nations' cultural use based on historical requests for cedar and information from consultation with applicable First Nations groups.

Monumental Cedars:

1. A monumental cedar is defined as; either red or yellow cedar, at least 2m in diameter above the butt flare, with a log at least 12 metres long with a top diameter of at least 1.7m, relatively limb free in at least 2 quadrants. The overall condition of the tree (based on visual characteristics such as broken tops, fluting, scarring, twist, etc) should give a reasonable indication that the first log should be relatively sound and free of major visible flaws. It is recognized that it is difficult to confirm measurements on standing trees, the measurements are for guidance only and it is up to the judgement of the assessor to use both estimated measurements and quality indicators to determine if the tree qualifies as monumental.

2. All large (>2m diameter above butt flare) red and yellow cedars identified during the course of timber reconnaissance or road and block development will be assessed against the above criteria for a monumental tree. All cedars meeting the definition of monumental will be identified (marked) in the field and mapped.

3. The FSP holder (signing authority) will determine whether the monumental tree will be;
    a. retained for potential future cultural use,
    b. harvested and offered to First Nations for cultural use, or
    c. harvested and utilized by the Timber Sale License holder.

    This decision will be based on a number of factors including but not limited to;
    a. Worker safety
    b. Operational constraints
    c. Known First Nations' interests based on recent consultation
    d. Location of tree within setting
    e. Windfirmness of tree
    f. Local abundance of monumental cedars

4. The FSP holder's decision will be documented in the site plan and supporting documentation (BCTS will use the due diligence form for this purpose)

5. Whether the tree is harvested or retained, the location of the tree will be recorded and added to a spatial layer in the BCTS Strait of Georgia database to aid in identifying trees available for future First Nations requests for use and to help determine abundance of large cedars across the landscape. The database record will include;
    a. Species;

b. accessibility;
c. date of assessment;
d. whether the tree was harvested or not; and
e. if harvested - whether the tree was utilized by First Nations or the TSL holder

All other cedars (non-monumentals):

6. Reserves and wildlife tree retention areas / patches should have a species, age & size class composition that is representative of the harvest area. Reserve location and composition will be determined based on a number of values, including potential cultural use.

7. Larger concentrations of cedar of a quality suitable for cultural uses such as bark stripping will be noted during fieldwork. When possible, requests for cedar for bark stripping will be accommodated through access to planned blocks pre-harvest.

8. Reforestation planning will ensure red and yellow cedar will be a component of future stands in accordance with the approved stocking standards as determined by the prescribing forester. Cedar will be planted where it is ecologically appropriate for the site, subject to management considerations including cost of establishment, site suitability, forest health concerns, availability of stock, etc.

9. If First Nations request access to cedar (and have obtained Free Use Permit from Ministry of Forests Lands, and Natural Resource Operations if required) BCTS staff will provide assistance to find suitable trees within current operating areas.

10. BCTS Strait of Georgia will periodically review First Nations requests for cedar to ensure the strategy and its application is meeting the needs of the First Nations and the Business Area.

BCTS Strait of Georgia will engage with any First Nations groups interested in developing their own cedar strategy, and encourages interested First Nations in starting this process.

1.3 Objectives Established Under Government Actions Regulation

Fisheries Sensitive Watersheds

The environmental indicators are measured within the FDU containing a fisheries sensitive watershed and are tracked as Equivalent Clearcut Area (ECA). The Result / strategy requires BCTS to consult a qualified professional prior to carrying out or authorizing a primary forest activity within an area designated as a Fisheries Sensitive Watershed if the ECA is greater than 30%.

The environmental indicators are derived from a Geographic Information System (GIS) map base, information managed within the fisheries sensitive watershed. The environmental indicator outputs from a GIS (which is primarily area, lengths, and elevation) are measurable or verifiable.

Monitoring by the licensee of equivalent clearcut area has been seen by government as an effective means of managing risks of cumulative hydrological effects of road construction and cutblock harvesting that could result in a material adverse impact on the habitat of the fish species.

2. Additional information for the Delegated Decision Maker to consider:

d) Relationship to practice requirements, government objectives, and other R/S in the FSP

Through the FPPR Practice Requirements (e.g. FPPR S. 35, 37, 38, 39, 40, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 72, 73, 74, 75, 76, 79, and 82 which have either direct or indirect effect on cumulative hydrological effects on fish habitat) combined with the management guidelines outlined in this FSP and with the other results/strategies in this FSP, the risk of road construction and cutblock harvesting to fisheries sensitive watersheds can be managed at a level consistent with the objectives set by government.

e) ECA Indicator

Components of the *Coastal Watershed Assessment Procedure (CWAP) Guidebook, Second edition, Version 2.1, 1999* may be used when considering cumulative hydrological effects.

Although ECA is only one indicator of potential cumulative hydrological effects on watershed health, it is a reasonable initial indicator to determine proceeding with additional monitoring. ECA has been used as a limit on watershed units and has been a standard strategy for limiting increases to potential peak flow since the introduction of the CWAP guidebooks (1995, 1999).

f) Other licensees

The FSP holder will work in cooperation with other license holders working in the same watershed to ensure that all operations are considered in monitoring.

Visual Quality

According to the timber supply review for the Strathcona TSA, management for visual quality applies to the Crown forested land within scenic areas. Scenic areas were officially made known and visual quality objectives were established by the District Manager in on December 14, 2005.

The strategy commits road construction and cutblock harvesting to being consistent with the visual quality objectives established within scenic areas within the FDUs. The strategy allows for VQOs to be exceeded in certain circumstances; such as where primary forest activities are related to the harvest of timber that is damaged, destroyed or threatened by fire, insects, disease, wind, or flooding.

BCTS is interested in how VQOs are applied within designated highway corridors. As discussed in the determination rationale, dated December 14, 2005, that accompanied the Order to establish scenic areas and visual quality objectives for the Campbell River Forest District, the VQOs assigned within the specified road/highway corridors do an imperfect job of conveying governments intentions for scenic landscape management. The rationale recommends key design parameters that should be considered where logging is proposed along major corridors. BCTS supports further consultation pertaining to the application of VQOs on the designated highway corridors.

1.4 Objectives Continued Under FRPA s. 181

Objectives set for Lakeshore Management within the Sayward Landscape Unit

The strategy commits to not carrying out or authorizing timber harvesting within 50m of the timbered edge of various lakes unless at least 75% of the forested area surrounding those lakes is greater than 5 metres in height. This strategy is in keeping with the objective set for lakeshore management as part of the Sayward landscape unit plan. Lakeshore management zones to which this strategy applies as shown on the FSP maps.

Recreation Trail Objective – Sayward Landscape Unit

The strategy commits to no road construction or timber harvesting within 10 metres of the running surface of existing trails within the Snowden Forest without prior approval of the designated statutory decision maker. This is in keeping with the recreation objective established as part of the Sayward landscape unit plan.

Ungulate Winter Range #U1-004

The strategy commits to not building roads or harvesting timber within UWR polygons unless a variance to do so first provided by the MoE.

2. STOCKING STANDARDS (FSP S6 AND STOCKING STANDARDS DOCUMENT; APPENDIX 1)

FRPA S. 29(1) states:

A holder of a major licence or community forest agreement who harvests timber to which a Forest Stewardship Plan (FSP) applies must establish in accordance with the plan, the prescribed requirements and the standards, a free growing stand on those portions of the area of the harvest that are in the net are to be reforested.

FPPR S. 44(1) [Free Growing Stands Generally] states:

A person who has an obligation to establish a free growing stand must establish, for areas that have been identified under section 16(1)[stocking standards] as areas to which this section will apply, a stand that

(a) *meets the applicable stocking standards set out in the forest stewardship plan for the area, by the applicable regeneration date specified for the area, and*

(b) *meets the applicable stocking standards and free growing height set out in the forest stewardship plan for the area by a date that is no more than 20 years from the commencement date, unless the minister permits a later date.*

FPPR S. 16 [Stocking Standards] states:

(1.) A person required to prepare a forest stewardship plan must ensure that the plan specifies the situations or circumstances that determine when section 44(1) [free growing stands generally] or section 45 [free growing stands collectively across cutblocks] will apply to an area.

(2.) In specifying a stocking standard under this section, a person who prepares a Forest Stewardship Plan may consider the factors set out in section 6 [factors relating to stocking standards] of Schedule 1.

(3.) A person required to prepare a Forest Stewardship Plan must ensure that the plan specifies, for each of the situations or circumstances specified under subsection (1) where

(a) *Section 44(1)(a) will apply, the regeneration date and stocking standards,*

(b) *Section 44(1)(b) will apply, the free growing height and stocking standards,*

(c) *Section 45(1) will apply, the regeneration date and the stocking standards, and*

(d) *Section 45(2) will apply, the free growing date and the stocking standards, as approved by the chief forester.*

(4.) A person required to prepare a Forest Stewardship Plan must ensure that the plan specifies stocking standards for areas referred to in section 44(4), and the situations or circumstances that determine when the stocking standards will be applied

The stocking standards for this Forest Stewardship Plan in the Stocking Standards have been adopted from previously approved stocking standards and from the Coast/Vancouver Regions Stocking Standard guidelines.

FPPR S. 44(1)(b) applies for late Free Growing Dates. FPPR S. 16(3)(c) and (d) do not apply to this FSP. The criteria outlined in the FSP for stocking standards will be the results. The milestone dates, species composition and minimum heights are all measures used in achieving the desired results.

These standards will contribute to meeting the objectives set by the government of British Columbia. The standards meet the relevant requirements of the *Forest and Range Practices Act* and *Forest Planning and Practices Regulations.*

Silviculture Systems

Commercial thinning will be limited to 2% of the annual Strait of Georgia BCTS volume harvested within the FDUs included in the Strathcona FSP. Majority of volume will be harvested using even-aged management.

Bigleaf Maple Silviculture Regime

Product / Rotation Objective
Site Series CWH xm 05 /07 – 30 cm sawlogs in approx 40-45 years

a) Site Preparation
Mechanical site prep, creation of 1600 –200 plantable spots per hectare, at a spacing of 2.7 meters, with a tolerance of 0.25 meters. Piling of slash in small piles is recommended to improve uniformity of planting. Repression of brush species is an objective.

Chemical site prep – may be required for brush suppression, but only if mechanical site prep is unsuccessful, planting is delayed, or initial plantation failure occurs.

b) Establishment Density
High density management approach, similar to red alder. Planting densities in the range of 1600 – 2000 tph. Uniformity in inter-tree spacing is desirable, to control crown and stem development. Fill plant as necessary to maintain stocking at or above 1300 tph until year 3.

c) Seedling protection
Due to elk browse potential, protection of every seedling is required initially.

d) Brushing
Brushing is not anticipated to be required, providing prompt establishment is achieved. Manual and chemical brushing options exist. In the case of a plantation failure, chemical site prep brushing is an option.

e) Density Regulation
Spacing is not recommended in Bigeaf maple management, due to the species' propensity for epicormic branching, and the resultant degradation of wood quality (K Thomas, personal communication, June 2003). Nevertheless, the role of spacing in this regime will be revisited at free growing.

Red Alder Silviculture Regime
Product / Rotation Objective
Site Series 01 - (site index 20 @ 25 years) - 30 cm sawlogs in approx 35– 40 years
Site Series 05 /07 (site index 24 @ 25 years) – 30 cm sawlogs in approx 30 –35 years

a) Site Preparation
Exposure of mineral soil, and repression of brush species is an objective. Piling of slash recommended to improve uniformity of planting. If planting is delayed, chemical site preparation may be required.

b) Establishment Density
High density management approach. Planting density is 1600 tph. Uniform inter-tree spacing is desirable, in order to control crown development. Fill plant as necessary to maintain stocking at or above 1300 tph.

c) Brushing
Brushing is not anticipated to be required, providing prompt establishment is achieved. Manual and chemical brushing options exist. In the case of a plantation failure, chemical site prep brushing is an option.

d) Density Regulation

Mandatory spacing treatment required in order to maintain diameter growth and product objective. Spacing is considered a basic reforestation obligation, and the free growing assessment windows have been adjusted to reflect this. Target post spacing density will be in the range of 600 - 900 tph, depending upon the stem and stand characteristics. The timing of an initial spacing entry is estimated as follows:

Site series	Age	Diameter (cm)	Height (m)
Medium (01)	10 –12	12-14	10 –12
Good (05 / 07)	10	12-14	10

e) Pruning

Branch pruning optional at time of spacing. Dead branch pruning is the preferred method to maintain high wood quality.

3. MEASURES TO PREVENT THE INTRODUCTION AND SPREAD OF INVASIVE PLANTS

In discussions with Jeff Hallworth, invasive plants specialist for the Ministry of Forests, Lands, and Natural Resource Operations,, Coast Forest Region it was determined that there are 4 key components required in the measures to prevent the introduction and spread of invasive plants:

a) education particular to the key species identified to be of moderate or high risk within the plan area,
b) keeping equipment yards and storage areas free of invasive plants,
c) reporting and monitoring of new incidences, and
d) revegetation of disturbed areas.

There are currently 6 key species of invasive plants within the FDUs included in the Strathcona FSP including; Gorse, Japanese knotweed, Giant knotweed, Scotch broom, Purple loosestrife, and Yellow iris. The measure included in the FSP defines these 6 species as priority invasive plants. During the term of the plan, BCTS will manage for new priority invasive plants as recommended by the MoFR Coast Forest Region invasive plants specialist. BCTS will consider actively managing for the new priority invasive plant species utilizing eradication or management plans within 4 months of the recommendation. The measure to prevent the introduction and spread of invasive plants in the FSP includes commitments that pertain to education, spread of priority invasive plants, reporting, and revegetation of disturbed areas.

Education:

The measure commits the FSP Holder to educate staff in the identification of priority invasive plants that exist or threaten to establish in the plan area. It is anticipated this will include information on designation of invasive plants, and further recommendations on how to proceed if invasive plants are identified in an active area.

Spread of Invasive Plants

A contributing factor to the spread of invasive plants within the influence of BCTS is generally through equipment transportation, especially from areas of known occurrences to areas where the priority invasive plants are not known to occur. If newly introduced priority invasive plants are detected that are likely the result of the FSP Holder's forest practices; the FSP Holder will work with government agencies to develop and implement an eradication or management plan.

Reporting:
The strategy commits the FSP Holder to direct field staff to report new incidences of priority invasive plants.

Revegetation of Disturbed Areas:
The measure commits to re-vegetate using preferred seed disturbed areas known to be at risk to priority invasive plants establishment. Although the measure allows for seeding to occur within one year of completion of activities, it is BCTS intent re-vegetate disturbed areas at risk as soon as is practicable after exposure.

A number of factors lead the Holder of this FSP to the conclusion that additional measures are not reasonable:

- Insufficient inventory of Invasive Plant incidence (what is out there? Species? Extent of colonization?);
- Insufficient research into efficient/effective strategies to limit introduction;
- the level of historic development activity over the last 80 years in most of our areas of operation, even those considered remote (what was original vector?);
- lack of financial support programs similar to those linked to "Industry Outstanding" backlog reforestation (e.g. FRDA, Section 88 FRBC, FIA), especially for inventory and eradication;
- lack of scientific literature concluding cost effective practices for the management of invasive plants;
- lack of consistency of legislative requirements in other sectors (e.g. highway development and maintenance, private quarries, urban development, import restrictions of exotic invasive plants, mining, hydro and pipeline maintenance, etc.); and
- lack of involvement of BCTS in policy development.

Additional information for the Delegated Decision Maker to consider:

a) Consistency with the Legislation

The measures are consistent with FPPR S. 17 and FRPA Part 5, S. 47 because:

For the purpose of determining risk to the forest resources due to invasive plant, three basic forest resource components have been rationalized: tree resources, aquatic resources, and range. Where an invasive plant is known to have specific impact primarily on the range component (which is not found in the stipulated FDU's) then the plant is deemed to be of low risk. Where an invasive plant is estimated to be out-competed by the growth of a forestry plantation, it may be considered to be of low to moderate risk to the tree resource (e.g. baby's breath). However, if the invasive plant may increase the risk of spread of fire (e.g. gorse and scotch broom) it may be listed as a moderate risk to the tree resource. This risk process has been used to manage only for those invasive species that pose risk to the existing resources to be consistent with FRPA Part 5, S. 47.

For the purposes of preventing the introduction or spread of the listed invasive plants, an aggressive grass seed mixture, with a high component of sod forming grasses has been considered to be effective in reducing germination potential of the invasive plants. Regular reclamation mixtures contain a mixture of nitrogen fixing, bunch grass, and sod forming grass seed. The bunch grasses (as the name would imply) grow in bunches, with exposed soil between the plants, allowing for germination points from outside seed sources. The bunch grasses also tend to be short lived (many are annuals), and after a period of time leave additional areas of exposed soil. Sod forming grasses have greater coverage, and aid in reducing potential germination points.

The future use of native plant seed has been considered for the purposes of preventing the introduction or spread of the listed invasive plants. Most reclamation mixtures are made up of agronomic seed (non-native) which tends to be shorter lived, less likely to self-seed, and require greater levels of nutrient augmentation for growth than native grasses. By using native grasses, exposed soil will remain vegetated/covered for greater, long-term effectiveness than the agronomic grasses.

Certified seed has been considered for the purposes of preventing the introduction or spread of the listed invasive plants because of the required low level of contamination (which may include invasive plant seed).

b) Plant Risk Rating

Shade intolerant invasive plant species are considered as low risk, as establishment of a stand of coniferous or deciduous crop trees consistent with the applicable stocking standards will suppress these plants. Risk rating tables will be updated within 36 months of plan approval.

c) References in Measures to “Active” surface areas

An active surface area is understood to mean the running surface of an active road, active pits, quarries, spoil sites and heli-landings etc. The term “active” also includes roads, pits, spoil sites, heli-landings etc. that are intended for use in the near future.

d) Determination of Presence or Absence in the FDU

Determination of presence or absence in the FDU is by local knowledge and the BC government web site http://www.weedsbc.ca.

Where there is no information on the government web sites, the following sources of information were used:

- *Plants of Coastal British Columbia*, Pojar-Mackinnon
- *A Guide to Weeds*, British Columbia
- Http://plants.usda.gov/
- Http://www.ibiblio.org/pfaf/
- http://www.nwcb.wa.gov/
- Http://www.agf.gov.bc.ca/cropprot/
- http://www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm

Table 1 Invasive Plant Species Specified (Invasive Plants Regulation S. 2)

		Interpretation			
Species (Common)	**Species (Latin)**	**Found in FDU**	**Risk to Forest Resources**	**Comments**	**Measures Apply**
Anchusa (common Buglos)	*Anchusa officinalis*	No	Nil	Found on roadsides, dry fields, pastures, and disturbed areas. Invades pastures and hay lands where competing vegetation is sparse. Spread by animal ingestion, wind, vehicles, animal and human feet, redistribution of soils and gravels, and contaminated hay bales.	N/A
Baby's breath	*Gypsophila paniculata*	Yes	Low	Baby's Breath is observed in a wide variety of habitats. Small infestations occur along roadsides, in ditches and vacant lots. Larger infestations are known in pastures and rangeland areas. Most aggressive in areas of low rainfall. Although it will grow in fine textured soils, this soil type retards its root development. Baby's breath depends on stored food reserves in the roots for perennial regrowth, therefore prefers coarser soils where extensive root systems are better able to develop. Baby's Breath is invasive on sub-marginal farm or grazing land. When it escapes cultivation it out-competes native and introduced perennial grasses. Baby's breath infested hay contains reduced crude protein content. It is considered unsightly on vacant lots and along fencelines. Used as a garden ornamental and extensively in the floral industry for bouquets.	N/A
Black knapweed	*Centaurea nigra*	No	Nil	Can infest disturbed rangelands and reduce forage. Spread by infected hay and vehicle undercarriages.	N/A
Blueweed	*Echium vulgare*	No	Nil	Can invade rangelands and pastures. Seeds stick to clothing, animal fur, and feathers. Grows in dry roadsides, disturbed habitats and rocky pastures.	N/A
Brown knapweed	*Centaurea jacea*	No	Nil	Perennial growing to 0.6m, in flower August and September. Requires well drained soil and can grow in nutritionally poor soil. Prefers acidic soil but can grow in very alkaline soil. Very shade intolerant. Grows in grasslands and open woods/cutover areas.	N/A

Species (Common)	Species (Latin)	Found in FDU	Risk to Forest Resources	Comments	Measures Apply
Bull Thistle	*Cirsium vulgare*	Yes	Low	Invades disturbed areas: roadsides, logged forest land, pastures, and barnyards. Common in low to mid elevations in settled areas, primarily in agricultural areas. Heavy infestations can exclude livestock.	N/A
Canada Thistle	*Cirsium arvense*	Yes	Low	Invades disturbed areas: roadsides, river banks, pastures, and barnyards. Common in low to mid elevations in settled areas, primarily in agricultural areas. Somewhat shade intolerant.	N/A
Common Burdock	*Arctium minus*	Yes	Low	Invades disturbed areas: roadsides, ditches, streambanks, pastures, and barnyards. Common in low elevations in settled areas. Burr like seeds are readily dispersed by attaching to animal fur and clothing.	N/A
Common Tansy	*Tanacetum vulgare*	Yes	Low	Invades disturbed areas, stream banks, fields and meadows where it competes aggressively (especially under grazing pressure).	N/A
Dalmatian Toadflax	*Linaria dalmatica*	Yes	Low	Invades disturbed areas (fields, roadsides, gardens, waste places). Common at low to middle elevations in settled area in the southern half of our region. Is similar to Blue Toadflax which is native.	N/A
Diffuse Knapweed	*Centaurea diffusa*	Yes	Low	Chokes out desirable forage for livestock and wildlife and increases soil erosion. Does not tolerate excess moisture well.	N/A
Field Scabious	*Knautia arvensis*	No	Nil	Found on roadsides, pastures, and fields. Competes with forage species and native pastures. Capable of invading undisturbed plant-communities. Once established, it is difficult to eradicate. Sometimes planted as an ornamental and to attract butterflies.	N/A
Giant Knotweed	*Polygonum sachalinense*	Yes	Moderate	Similar to Himalayan and Japanese Knotweed, but larger. Low elevation species that establishes in disturbed areas (especially around human settlements). Will grow in a variety of habitats but is most frequently found adjacent to streams, creeks, roads, in vacant lots or in rights of ways. It is frequently found in areas that are considered moist to wet. Threat to riparian ecology.	N/A

Species (Common)	Species (Latin)	Found in FDU	Risk to Forest Resources	Comments	Measures Apply
Gorse	*Ulex eurpaeus*	Yes	Moderate	Invades open, often disturbed sites (along roads, agricultural sites). Low elevation usually near the ocean in drier areas. Can form impenetrable thickets. Fairly flammable (creates increased fire risk). Southeast portion of Vancouver Island. Water is a common dispersal agent (with many populations near the ocean), as well as animals, birds, and machinery.	Yes
Hoary Alyssum	*Berteroa incana*	No	Nil	Most common in sandy and high gravel content soils. Establishes in dry disturbed habitats, such as roadsides. Tends to increase in forage crops following drought or winter kill. Horses consuming this plant may be troubled with fever, limb edema, and laminitis.	N/A
Hoary Cress	*Cardaria draba*	No	Nil	Highly competitive weed with native vegetation on rangelands.	N/A
Hound's-tongue	*Cynoglossum officinale*	No	Nil	Found on dry sites of pastures, roadsides, and logged forest land. Decreases forage on rangeland and pastures. Barbed seeds cling to animal hair.	N/A
Japanese Knotweed	*Polyugonum cuspidatum*	Yes	Moderate	Similar to Himalayan and Giant Knotweed, but smaller. Low elevation species that establishes in disturbed areas (especially around human settlements). Japanese Knotweed prefers open habitats and does poorly in the under-story of forested areas. It grows in a variety of soil types along roadsides, edges of waterways, neglected gardens and unused areas. It is known to grow in climates experiencing high temperatures and drought. Wetlands and moist, low-lying areas are the most common habitats. Dense stands, capable of crowding out all other vegetation, degrade native plant communities. It spreads quickly, is extremely aggressive and persistent and able to survive severe flooding. It poses a significant threat to areas adjacent to rivers, streams and other shore-lines where it can cause bank erosion. When growing near water, root fragments can be carried down stream to establish new colonies. Escapees from deserted gardens are not uncommon. Threat to riparian ecology.	Yes

Species (Common)	Species (Latin)	Found in FDU	Risk to Forest Resources	Comments	Measures Apply
Leafy spurge	*Euphorbia esula*	No	Nil	Grows in low to mid-elevations, dry roadsides, fields, grasslands, open forests, and disturbed habitats. Invades rangeland and reduces its productivity by producing a compound that actively inhibits growth of other plants.	N/A
Marsh Thistle	*Cirsium palustre*	Yes	Moderate	Well adapted to moist to wet openings, including pastures, bog and fen communities, logged areas and roadsides. Invades moist fields and rangelands, and meadows, where it replaces desirable forage plants for wildlife and livestock. Can form dense populations that can compete tree seedlings planted for reforestation.	Yes
Meadow Hawkweed	*Hieracium pilosella*	All	Low	Creeping herb, 25 cm tall, rosette-based, mat-forming perennial, often in dense colonies that exclude all other vegetation. Each flower stalk carries one large yellow composite flower head. The leaves have long hairs on upper surface. Spreads by above ground stolons-major, primary mode of reproduction is asexual. Does well on dry, nutrient deficient soils. Shade intolerant. Occurs primarily in grasslands, and sometimes river flats and terraces, road sides and forest margins. Considered in some areas to be a threat to pasture land.	N/A
Meadow Knapweed	*Centaurea pratensis*	Yes	Low	Invades rangelands and pastures and can reduce yields in hay fields. Also infests roadsides and disturbed areas where it forms dense stands and hinder regrowth of desirable native species	N/A
Nodding Thistle	*Carduus nutans*	No	Nil	Found along dry roadsides and disturbed habitat. Dispersed by wind, water, wildlife, and livestock.	N/A
Orange Hawkweed	*Hieracium aurantiacum*	Yes	Low	Invades fairly dry open forest and meadows, and disturbed areas (roadsides, gravel pits, clearings, pastures, highway transportation corridors). Mostly South east side of Vancouver Island. Seed spread thought to be primarily by recreationists, pack animals, and hay. Although seeds are plumed, they are not widely dispersed by wind. Rapid spread is cause for concern.	N/A
Oxeye Daisy	*Chrysanthemum leucanthemum*	Yes	Low	Invades disturbed areas, and fields and meadows where is competes aggressively (especially under grazing pressure). Occurs in low to mid-elevations in grasslands, and dry to moist forests. Reduces forage for livestock and wildlife because of its disagreeable taste. Spreads by seed and creeping underground stems.	N/A

Species (Common)	Species (Latin)	Found in FDU	Risk to Forest Resources	Comments	Measures Apply
Perennial pepperweed	*Lepedium latifolium*	No	Nil	Invades dry openings and disturbed sites at low to middle elevations. May be found on beaches, riverbanks, tidal shores, marshy floodplains and valley bottoms, and seasonally wet areas. Prolific seed producer. Seeds dispersed short distances by wind and water. Aggressively colonizes riverbank habitat.	N/A
Puncture vine	*Tribulus terrestris*	No	Nil	Occurs in the dry grasslands of the interior. Also grows along roads, beaches, pastures, dry fields and disturbed habitats. Dispersal is by tiny burr like seeds that attach to animals, clothing, or the tires of vehicles.	N/A
Purple Loosestrife	*Lythrum salicaria*	Yes	Moderate to High	Eurasian species, known as the "beautiful killer" as it effectively displaces native wetland species. Invades marshes, wet meadows, estuaries, stream banks, lake-shores, wet ditches, at low elevations. Can form dense stands that out-compete native vegetation resulting in reduction of plant and animal diversity in wetland and stream ecosystems. Threat to riparian ecology.	Yes
Rush Skeletonweed	*Chondrilla juncea*	No	Nil	Grows in dry grassland zones. Occupies rangelands, roadsides and disturbed habitats at mid-elevations. Dispersed by wind, water, animals, and humans.	N/A
Russian Knapweed	*Acroptilon repens*	No	Nil	Occurs east of the Coast-Cascade mountains in low to mid-elevation grasslands, forests, pastures, and riverbanks. Major problem for agriculture sector.	N/A
Scentless Chamomile	*Matricaria maritima*	Yes	Low	European species established on roadsides and other disturbed areas sporadically throughout our region. Particularly on compacted soils. Low to mid elevation. Can form near monocultures around ponds, streams, and other frequently flooded areas. Germinates in flood conditions, seeds float on water. First infestations often found around watercourses.	N/A
Scotch broom	*Cytisus scoparius*	Yes	Moderate	Open sites, especially on disturbed sites (roadsides, gravel pits, clearings, pastures, highway transportation corridors, hydro and pipelines). Also invades natural meadows and open forest at low elevation. Is a specific risk to the regions "rainshadow flora". Flammable, increases fire hazard. Effective seed for germination.	Yes

Species (Common)	Species (Latin)	Found in FDU	Risk to Forest Resources	Comments	Measures Apply
Scotch Thistle	*Onopordum acanthium*	No	Nil	Found in low elevations along roadsides, ditches, rangelands, and disturbed areas. Can be competitive with native forage plants. Often successful in moist areas such as riverbanks. Seeds disperse mainly by wind, but also in hay, water, and by attaching to fur and clothing.	N/A
Spotted Knapweed	*Centaurea maculosa*	Yes	Low	Widespread in low to mid-elevation grasslands and dry open forests. Shade intolerant. Seed is spread widely by infected hay and vehicle undercarriage.	N/A
St. John's-wort	*Hypericum perforatum*	Yes	Low	Invades moist open sites (meadows, streambanks) and disturbed areas. Low to high elevation. Scattered and common throughout our region. It is a Eurasian perennial weed, and is a serious pest in fields, pastures, and on roadsides and waste areas.	N/A
Sulphur Cinquefoil	*Potentilla recta*	Yes	Low	Mostly restricted to grasslands and dry forest zones. Agricultural concern.	N/A
Tansy ragwort	*Senecio jacobaea*	Yes	Low	Invades disturbed sites, logged over areas, roadsides, clearing, at low to middle elevations. Common on Vancouver Island, but not found in mainland coast areas north of Bute Inlet and south of Kitimat/Skeena. Seeds are dispersed by wind, water, and animals.	N/A
Teasel	*Dipsacus fullonum*	No	Nil	Perennial, reproducing only by seed. Very prickly. Grows in waste areas, meadows, roadsides, and sometimes in cultivated land. Usually in moist areas on coarse soils.	N/A
Yellow Iris	*Iris pseudacorus*	Yes	Low	Found in wetlands in southern BC and Washington. Invades open areas like grassy meadows, fields, pastures, roadsides and logged areas, and open woodland. Low to moderate elevation.	N/A
Yellow starthistle	*Centaurea solstitialis*	No	Nil	Well established in the Pacific Northwest and appears to be spreading. Best adapted to dry sites, mid to high-elevation. Shade intolerant.	N/A
Plumeless Thistle	*Carduus acanthoides*	None	Nil	One of the most aggressive thistles due to its high seed production. Grows in pastures, fields, disturbed habitats, logged areas, and roadsides at mid elevations. Seeds are dispersed primarily by wind.	N/A
Yellow toadflax	*Linaria vulgaris*	No	Nil	Invades fields, roadsides, gardens and waste places. Common in mid elevations in settled areas of the southern half of our region. Abundant on disturbed sites and roadsides mostly in drier parts. Mostly found from the northern extent of the Strait of Georgia and south. Spreads by creeping root systems, and wind.	N/A

4 MINISTERIAL ORDERS AND DESIGNATIONS

Order Establishing Sayward Landscape Unit and Objectives

BRITISH COLUMBIA

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IT'S OUR TIME TO SHINE

File: 17580-02/Sayward

ORDER TO ESTABLISH
A LANDSCAPE UNIT AND OBJECTIVES

SAYWARD LANDSCAPE UNIT

Pursuant to Section 4 of the *Forest Practices Code of British Columbia Act*, I hereby establish the Sayward Landscape Unit, an area located directly north of the community of Campbell River and within the Coast Region, effective July 1, 2003.

The boundaries of the Sayward Landscape Unit are shown on the 1:50,000 scale map titled *Biodiversity and Wildlife*, dated February 3, 2003, attached to this Order.

In addition, I hereby establish objectives for the Sayward Landscape Unit, as attached to this Order, effective July 1, 2003.

(Original signed by)

Wally Eamer
Regional Director
Coast Region
Ministry of Sustainable Resource Management

Date

Attachments: HLP Objectives, Sayward Plan
Sayward LU *Biodiversity and Wildlife* Map

Ministry of Sustainable Resource Management Coast Region
Mailing Address: 2080A Labieux Road Nanaimo BC V9T 6J9
Telephone: 250 751-3100
Facsimile: 250 751-3245
Website: http://www.gov.bc.ca/srm

Order Establishing Provincial Non-Spatial Old Growth Objectives

Order Establishing Provincial Non-Spatial Old Growth Objectives

Order

I. Pursuant to section 4(1) of the *Forest Practices Code of British Columbia Act* (Act), the landscape units listed in Appendix 1, Table 1 are established as landscape units.

II. Pursuant to section 4(2) of the Act, part A of this Order establishes landscape unit objectives for the landscape units listed in Appendix 1, Table 1.

III. This Order does not apply to land contained within a woodlot licence, an area contained in a community forest agreement that is less than 600 hectares, or to areas defined as the 'trust area' as per the *Islands Trust Act* with the exception of Gambier and Anvil Island.

A. Biodiversity emphasis and old growth objectives

1. Biodiversity emphasis for landscape units

For the purpose of implementing objective 2 below, biodiversity emphasis is assigned as listed in Appendix 1, Table 1.

2. Old growth objectives

To contribute to the conservation of biodiversity, licensees[1] must maintain old forest by biogeoclimatic variant[2] within each landscape unit according to the age of old forest and the percentage of old forest retention that is specified in Tables 1 through 4 and the assignment of Natural Disturbance Types outlined in Appendix 3, and subject to provisions 5 through 9 below.

[1] In this Order, "licensee" refers to a party required to prepare a forest development plan under the *Forest Practices Code of British Columbia Act* or a forest stewardship plan under the *Forest and Range Practices Act* with the exception of any agreement holder mentioned in III above.
[2] As approved by the Regional Director of MSRM, see the attached Implementation Policy.

Table 1. Natural Disturbance Type One

Biogeoclimatic Zone	Age of Old Forest	Percent Old Forest Retention in Low Biodiversity Emphasis	Percent Old Forest Retention in Intermediate Biodiversity Emphasis	Percent Old Forest Retention in High Biodiversity Emphasis
CWH[a]	>250yrs	>13	>13	>19
ICH	>250yrs	>13	>13	>19
ESSF	>250yrs	>19	>19	>28
MH	>250yrs	>19	>19	>28

a Some portions of the CWH have a much more frequent disturbance history due to extensive windthrow. Those portions of the CWHvm1, CHWvm2, CWHvh1, and CWHvh2 where wind event occur, should be considered to fall under NDT3.

Table 2. Natural Disturbance Type Two

Biogeoclimatic Zone	Age of Old Forest	Percent Old Forest Retention in Low Biodiversity Emphasis	Percent Old Forest Retention in Intermediate Biodiversity Emphasis	Percent Old Forest Retention in High Biodiversity Emphasis
CWH	>250yrs	>9	>9	>13
CDF	>250yrs	>9	>9	>13
ICH	>250yrs	>9	>9	>13
SBS	>250yrs	>9	>9	>13
ESSF	>250yrs	>9	>9	>13
SWB	>250yrs	>9	>9	>13

Table 3. Natural Disturbance Type Three

Biogeoclimatic Zone	Age of Old Forest	Percent Old Forest Retention in Low Biodiversity Emphasis	Percent Old Forest Retention in Intermediate Biodiversity Emphasis	Percent Old Forest Retention in High Biodiversity Emphasis
BWBS[b]	>100yrs	>13	>13	>19
SBPS	>140yrs	>7	>7	>10
BWBS[c]	>140yrs	>11	>11	>16
SBS	>140yrs	>11	>11	>16
MS	>140yrs	>14	>14	>21
ESSF	>140yrs	>14	>14	>21
ICH	>140yrs	>14	>14	>21
CWH[d]	>140yrs	>11	>11	>16

b BWBS with deciduous prominent

c BWBS with coniferous prominent

d CWH subject to regular extensive wind throw disturbance. See notes under NDT 1 table for a listing of variants.

Table 4. Natural Disturbance Type Four

Biogeoclimatic Zone	Age of Old Forest	Percent Old Forest Retention in Low Biodiversity Emphasis	Percent Old Forest Retention in Intermediate Biodiversity Emphasis	Percent Old Forest Retention in High Biodiversity Emphasis
ICH	>250 yrs	>13	>13	>19
IDF	>250 yrs	>13	>13	>19
PP	>250 yrs	>13	>13	>19

3. Old growth objectives for the Okanagan area

To contribute to the conservation of biodiversity in the Okanagan area[3] licensees must maintain old forest by biogeoclimatic variant within each landscape unit to the amount specified in Appendix 2, Table 1 (Okanagan Old Forest Retention Table), subject to provisions 6-8 below.

4. Old growth objectives for the Merritt area

To contribute to the conservation of biodiversity in the Merritt area[4] licensees must maintain old forest by biogeoclimatic variant within each landscape unit to the amount specified in Appendix 2, Table 2 (Merritt Old Forest Retention Table), subject to provisions 6-8 below.

[3] See Appendix 1 Map 7 Okanagan Timber Supply Area
[4] See Appendix 1 Map 8 Merritt Timber Supply Area

5. **Potential reduction in old forest retention in low biodiversity emphasis areas**

   For landscape units with a low biodiversity emphasis, the old forest retention percent listed in Tables 1-4 may be reduced by up to 2/3, to the extent necessary to address impacts on timber supply.[5]

6. **Use of younger forests to meet old forest objectives**

   In intermediate and high emphasis landscape units where it can be demonstrated that equal or better conservation benefits would result, stands less than the age of old, and preferably mature forest, may contribute to the percentage of old forest retention defined in Tables 1-4.[6]

   In the Okanagan and Merritt areas where it can be demonstrated that equal or better conservation benefits would result, younger stands and preferably mature forest, can be used to meet the area requirements listed in Tables 1 and 2, Appendix 2.

7. **Recruitment and catastrophic natural disturbances**

   In landscape units where there is:

   a. An immediate recruitment situation due to insufficient old forest in a variant; or

   b. An epidemic or catastrophic natural event such as wildfire or insects

   A recruitment strategy approved by the Minister of Sustainable Resource Management or his delegate[7] can be used to meet the requirements of Objective 2, 3 and 4.[8]

8. **Draft old growth management areas**

   Where the Minister of Sustainable Resource Management, his delegate, or a licensee or group of licensees has identified draft old growth management areas, the Minister or delegate may specify in writing that these draft old growth management areas meet the intent of this Order[9].

9. **Pilot project regulation areas**

   For the area encompassed by the Fort St John, Riverside and Stillwater pilot project regulations, the Minister of Sustainable Resource Management or his delegate may specify in writing the sections of the approved Sustainable Forest Management Plan[10], or other approved operational plan as required under the pilot regulation which meets the intent of this Order.

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[5] See Implementation Policy for further guidance on reductions in percent retention in low biodiversity emphasis areas.
[6] See Implementation Policy for further technical information regarding the use of younger stands.
[7] Delegate is defined in the delegation memo from the Minister of SRM to regional directors July 2002 Reference: 29048, and as will be amended from time to time.
[8] See Implementation Policy for guidance on recruitment.
[9] This requires that the draft old growth management areas are retained or managed for old forest values.
[10] Approved is defined in section 39 of the Fort St John Pilot Project regulation.

B. Effective date and future orders

This Order comes into effect June 30, 2004.

For the purposes of the *Forest Practices Code of British Columbia Act*, all new forest development plans and all major amendments to forest development plans submitted 4 months after the effective date of this Order must be consistent with the Order.

This Order does not affect Category A cutblocks approved pursuant to the *Forest Practices Code of British Columbia Act* on or before the effective date.

For the purposes of the *Forest and Range Practices Act,* and despite subsection 16(2) of that Act, all forest stewardship plans submitted after the effective date must be consistent with this Order.

When a new order of the Minister of Sustainable Resource Management or delegate establishes old forest objectives, this Order will, on the effective date of the new order, cease to have effect for the area or areas affected by old forest established in the new order.

Where a new order of the Minister of Sustainable Resource Management or delegate establishes old forest objectives for a portion of a landscape unit that is established under this Order, this Order remains in effect for the portion of the landscape unit for which the new order does not establish old forest objectives.

C. Continuous effect of previously established old growth objectives

This Order does not apply to spatially located old growth management areas or non-spatial old growth objectives established in a higher-level plan prior to the effective date of this Order under either section 3 or section 4 of the *Forest Practices Code of British Columbia Act.*

D. Review of the Order

The Minister of Sustainable Resource Management recognizes that new information will emerge regarding the role of old forest in the maintenance of biodiversity, the efficacy of the objectives in this Order in that regard, and the economic and social implications of old forest and biodiversity conservation. The minister therefore will review this Order no later than March 31, 2007 to assess its effectiveness in achieving government's sustainable resource management goals.

The Honourable George Abbott
Minister of Sustainable Resource Management

Vancouver Island Land Use Plan Higher Level Plan Order

BRITISH COLUMBIA

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[1] and old[2] 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[3]; 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 cutblocks[4], structural forest attributes and elements with important biodiversity functions[5]; 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[6].

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[1] 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.

[2] 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.

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

[4] Within cutblocks: generally means non-contiguous with cutblock boundaries.

[5] This includes, but is not limited to snags, wildlife trees, downed logs.

[6] Maximum cutblock sizes refer to net area to be reforested.

Vancouver Island Land Use Plan
Higher Level Plan Order

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)[7], 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 biodiversity[8] in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation[9].

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
(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;

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

[8] 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.

[9] The level of representation of old seral forest will be applied through landscape unit planning.

Vancouver Island Land Use Plan
Higher Level Plan Order

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[10].

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[11]; and
   (c) ecologically suitable second growth forest is identified to recruit the shortfall.[12]

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*

[10] 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.
[11] See "Managing Identified Wildlife: Procedures and Measures", Volume 1, February 1999.
[12] 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.

Vancouver Island Land Use Plan
Higher Level Plan Order

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[13]; and

(c) ecologically suitable second growth forest is identified to recruit the shortfall.[14]

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[15] and marbled murrelet habitat requirements[16] in the non-contributing[17] 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[18].

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. 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.

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

[14] 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.

[15] See "Landscape Unit Planning Guide", March 1999.

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

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

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

Vancouver Island Land Use Plan
Higher Level Plan Order

The Honourable Jim Doyle
Minister of Forests

24/Oct/00
Date

The Honourable Joan Sawicki
Minister of Environment, Lands and Parks

19/10/00
Date

The Honourable Dan Miller
Minister of Energy and Mines

19/10/00
Date

5

Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Campbell River Forest District

BRITISH COLUMBIA

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE CAMPBELL RIVER FOREST DISTRICT

This Notice is given under the authority of section 7(2) of the *Forest Planning and Practices Regulation* (B.C. Reg. 14/04*)* and 9(3) of the *Woodlot Licence Planning and Practices Regulation* (B.C. Reg. 21/04).

The following Notice includes indicators of the amount, distribution and attributes of wildlife habitat required for the survival of the species at risk outlined in Schedule 1.

Approved Wildlife Habitat Areas are not included in the indicators of amount, distribution and attributes for each of the species outlined in Schedule 1. Considering that approved WHA exist in the area covered by this notice, and consistent with section 7(3) of the *Forest Planning and Practices Regulation*, forest tenure holders are exempt from the obligation to specify a result or strategy in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation*, for those areas under approved Wildlife Habitat Areas. This exemption will be considered for further application as other wildlife related actions are established in the District.

This Notice applies to the Campbell River Forest District, excluding parks and protected areas.

Schedule 1

1) "Queen Charlotte" Goshawk (*Accipiter gentilis laingi*)

Amount:

1. 1743 ha of suitable habitat not exceeding an impact to the mature timber harvesting landbase of 764 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
    - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for "Queen Charlotte" Goshawk in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
    - areas of suitable breeding habitat to minimize overlap between goshawk home ranges (approximately 6-8 km separation).
2. Locate the areas described above within the ecosections and preferred elevations identified in the species account for "Queen Charlotte" Goshawk in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE CAMPBELL RIVER FOREST DISTRICT

Attributes:

1. Use the species account for "Queen Charlotte" Goshawk in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004) to identify the attributes of suitable nesting and foraging habitat and goals for the management of wildlife habitat areas.

2) Marbled Murrelet (*Brachyramphus marmoratus*)

Amount:

1. An amount of suitable nesting habitat equivalent to a net mature timber harvesting landbase impact of 1431 ha.
2. An amount of habitat in the non-contributing landbase equal to the total amount of currently suitable nesting habitat in the non-contributing landbase.
3. Government policy for determining the amount of suitable nesting habitat is provided in the species account for Marbled Murrelet in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
    - areas of suitable nesting habitat of the size and spatial distribution identified in the species account for Marbled Murrelet in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. Locate the areas described above within the ecosections and preferred elevations identified in the species account for Marbled Murrelet in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

1. Use the species account for Marbled Murrelet in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004) to identify the attributes of suitable nesting habitat and goals for the management of wildlife habitat areas.

3) Red-legged Frog (*Rana aurora*)

Amount:

1. 50 ha of suitable habitat not exceeding an impact to the mature timber harvesting landbase of 30 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE CAMPBELL RIVER FOREST DISTRICT

- areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Red-legged Frog in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

2. Locate the areas described above within the ecosections and preferred elevations identified in the species account for Red-legged Frog in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

1. Use the species account for Red-legged Frog in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004) to identify suitable breeding and foraging habitat and goals for the management of wildlife habitat areas.

4) Keen's Long-eared Myotis (*Myotis keenii*)

Amount:

1. 40 ha of suitable habitat not exceeding an impact to the mature timber harvesting landbase of 30 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Keen's Long-eared Myotis in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. Locate the areas described above within the ecosections and preferred elevations identified in the species account for Keen's Long-eared Myotis in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

Attributes:

1. Use the species account for Keen's Long-eared Myotis in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004) to identify important habitat and habitat features and goals for the management of wildlife habitat areas.

5) Great Blue Heron (*Ardea herodias fannini*)

Amount:

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE CAMPBELL RIVER FOREST DISTRICT

1. 160 ha of suitable habitat not exceeding an impact to the mature timber harvesting landbase of 24 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Great Blue Heron in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. Locate the areas described above within the ecosections and preferred elevations identified in the species account for Great Blue Heron in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

Attributes:

1. Use the species account for Great Blue Heron in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004) to identify suitable nesting habitat and goals for the management of wildlife habitat areas.

6) Coastal Tailed Frog (*Ascaphus truei*)

Amount:

1. 80 ha of suitable habitat not exceeding an impact to the mature timber harvesting landbase of 20 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Coastal Tailed Frog in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. Locate the areas described above within the ecosections and preferred elevations identified in the species account for Coastal Tailed Frog in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

1. Use the species account for Coastal Tailed Frog in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004) to identify suitable breeding and foraging habitat and goals for the management of wildlife habitat areas.

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE CAMPBELL RIVER FOREST DISTRICT

Signed this 27 day of July, 2004
Gordon Macatee, Deputy Minister
Ministry of Water, Land and Air Protection

5

Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Ungulate Species in the Strathcona Timber Supply Area

BRITISH COLUMBIA

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE WINTER SURVIVAL OF UNGULATE SPECIES IN THE STRATHCONA TIMBER SUPPLY AREA

This notice is given under the authority of section 7(2) of the *Forest Planning and Practices Regulation* (B.C. Reg. 14/04) and 9(3) of the *Woodlot Planning and Practices Regulation* (B.C. Reg. 21/04).

The following notice includes indicators of the amount, distribution and attributes of wildlife habitat required for the winter survival of the ungulate species outlined in Schedule 1.

This Notice applies as specified within the Strathcona Timber Supply Area, excluding parks and protected areas.

Schedule 1

Strathcona Timber Supply Area

Ungulate Species:
Black-tailed deer, Roosevelt elk and Mountain goat

Amount:
13,280 ha, not exceeding an impact to the timber harvesting landbase of 7448 ha.

Distribution:
The amount of habitat referenced above must be distributed to provide:

I) Black-tailed deer and Roosevelt elk

- Individual winter ranges of suitable size (minimum 40 ha, but where possible > 80 ha). Smaller areas 20-40 ha are generally considered too small, but may be worth maintaining if other larger alternatives do not exist.

- Deer winter ranges located in areas of high capability. Deer winter range capability is usually highly variable in coastal watersheds, and it is always best to locate individual winter ranges in areas of highest capability. In areas of relatively uniform habitat capability, individual deer winter ranges can generally be separated by approximately 2 to 5 km. Distribution will be largely dependent upon deer habitat capability within the watershed, and the size of the individual winter ranges.

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE WINTER SURVIVAL OF UNGULATE SPECIES IN THE STRATHCONA TIMBER SUPPLY AREA

- Suitable distribution of individual elk winter ranges which will be highly variable depending on elk habitat capability within the watershed and the size of the individual winter ranges.

II) Mountain goat

- Winter ranges of the size and spatial distribution typical of ungulate winter ranges for Mountain Goat in the Strathcona TSA

Attributes:

I) Black-tailed deer

Critical black-tailed deer winter habitat includes:

1) Stand structure features providing snow interception cover that results from large, well-developed crowns; small openings within a variable overstorey canopy that averages 50-90% closure; and multiple canopy layers within an understorey of shade tolerant conifers. Old-growth coniferous forest habitats with appropriate topographic features satisfy deer winter range requirements in moderate and deep snow pack zones; minimum 10 m height coniferous forests in the low snowpack zone may suffice.

2) Preferred topographic features: southerly aspects; moderate to steep slopes (40-100%); low-moderate elevations (< 1000 m); minimal shading from adjacent mountains; and presence of rock outcrops or bluffs.

3) Preferred winter forage species: Western redcedar; Douglas-fir; Deer fern; Huckleberry; Salal; and Arboreal lichens.

II) Roosevelt elk

Critical Roosevelt elk winter habitat includes:

1) Stand structure features providing snow interception cover that results from large, well-developed crowns; small openings within a variable overstorey canopy that averages 50-90% closure; and multiple canopy layers within an understorey of shade tolerant conifers. Old-growth coniferous forest habitats with appropriate topographic features satisfy elk winter range requirements in moderate and deep snow pack zones; minimum 10 m height coniferous forests in the low snowpack zone may suffice.

2) Preferred topographic features: low elevation valley bottoms. During deep snow packs (>30cm), moderately steep 10-50% slope southerly aspects at low-moderate elevations

Order Establishing WHA # 1-085 to 1-088 and 1-090 to 1-096

BRITISH COLUMBIA

ORDER – Wildlife Habitat Areas # 1-085 to 1-088 and 1-090 to 1-096

The following order applies to the areas shown in the maps set out in the attached Schedules A and takes effect on the 1 day of Dec, 2004.

This order is given under the authority of sections 9(2) and 10(1) of the *Government Actions Regulation* (B.C. Reg. 17/04) and section 7(3) of the *Forest Planning and Practices Regulation* (B.C. Reg. 14/04).

The Deputy Minister of Water, Land and Air Protection orders that:

1. the wildlife habitat areas shown in the maps set out in the attached Schedules A (# 1-085 to 1-088 and 1-090 to 1-096) are established;
2. the wildlife habitat areas in the attached Schedules A are established for Queen Charlotte Goshawks (*Accipiter gentiles laingi*); and
3. the general wildlife measures outlined in Schedule 1 are established for the wildlife habitat areas in the attached Schedules A
4. pursuant to section 7(3) of the *Forest Planning and Practices Regulation* the person(s) required to prepare a forest stewardship plan are hereby exempted from the obligation to prepare results or strategies in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation* for Queen Charlotte Goshawk in the Campbell River Forest District.

Schedule 1 – General Wildlife Measures

1. *Access*
   - Do not construct roads within WHA unless an exemption is approved by the designated decision maker.
2. *Harvesting and Silviculture*
   - Do not harvest timber or salvage (e.g., cedar) except for traditional aboriginal purposes when an exemption is approved by the designated decision maker.
   - Do not commercial thin, cedar-shake harvest or salal harvest within WHA unless the designated decision maker approves an exemption or harvest of these items is for traditional aboriginal purposes.
3. *Additional Management Considerations*:
   - Minimize disturbance when working adjacent to a WHA between 15 February and 1 September. In general, avoid blasting, road construction, helicopter activity and other prolonged disturbance.

Signed this 1 day of Dec, 2004
Gordon Macatee, Deputy Minister
Ministry of Water, Land and Air Protection

Order Establishing Ungulate Winter Range #U1-014

BRITISH COLUMBIA

ORDER – UNGULATE WINTER RANGE #U1-014

The following order applies to the area identified within the attached Schedule A and takes effect on the 14 day of October, 2004.

This order is given under the authority of sections 9(2) and 12(1) of the *Government Actions Regulation* (B.C. Reg. 17/04).

The Deputy Minister of Water, Land and Air Protection orders that:

1. the ungulate winter range shown in the map set out in the attached Schedule A (#U-1-014) is established;
2. the ungulate winter range in the attached Schedule A is established for black-tailed deer (*Odocoileus hemionus columbianus*) and Roosevelt elk (*Cervus elaphus roosevelti*);
3. the general wildlife measures outlined in Schedule 1 are established for the ungulate winter range in the attached Schedule A; and
4. pursuant to section 7(3) of the *Forest Planning and Practices Regulation* the person(s) required to prepare a forest stewardship plan are hereby exempted from the obligation to prepare results or strategies in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation* for the winter survival of ungulates in Tree Farm Licence 19.

Schedule 1 – General Wildlife Measures

1. Road construction is not to occur within the designated ungulate winter ranges unless there is no other practicable option and an exemption is approved by the MWLAP designated authority.

2. An exemption is not required for road maintenance, road deactivation, felling of danger trees or brushing and clearing on existing roads within the UWR. These activities will be conducted in a manner that does not result in a material adverse impact on the ungulate winter range habitat within the designated ungulate winter range.

3. Harvesting is not to occur within the designated ungulate winter ranges unless an exemption is approved by the MWLAP designated authority. An exemption would be considered for the purposes of enhancing the quality of the winter range.

4. An exemption is not required for harvesting within the designated ungulate winter ranges when it is required to address worker safety: felling of danger trees, felling for guy line anchors, felling of tail hold anchor trees within an UWR along adjacent cutblock boundaries. Harvesting will be conducted in a manner that does not result in a material

adverse impact on the ungulate winter range habitat within the designated ungulate winter ranges.

5. Trees that must be felled within an UWR will be left onsite to provide coarse woody debris, unless the felled tree lies outside the UWR.

6. Salvage harvesting is not to occur within the designated ungulate winter ranges unless an exemption is approved by the MWLAP designated authority.

Signed this 14 day of December, 2004
Gordon Macatee, Deputy Minister
Ministry of Water, Land and Air Protection

Page 2 of 2

Order Designating the John Hart Lake Community Watershed

Order To Designate a Community Watershed

John Hart Lake Community Watershed

Pursuant to section 41(10) of the *Forest Practices Code of British Columbia Act,* the watershed area flowing into John Hart Lake as indicated on the attached Exhibit A, located in the Campbell River Forest District, has been designated by the Regional Manager of the Vancouver Forest Region, with the agreement of a designated environment official of the Ministry of Environment, Lands and Parks, as a community watershed. The area is to be known as the John Hart Lake Community Watershed.

The designated area meets the following criteria:

a) the area that is all or part of the drainage area above the most downstream point of diversion for a water use that is for human consumption and is licensed under the *Water Act* for a domestic or waterworks purpose, and

b) which, in the opinion of the regional manager, Ministry of Forests, and the regional director, Ministry of Environment, Lands and Parks, should be designated as community watersheds.

Upon designation as a community watershed by the Regional Manager, crown land within this area is subject to the regulations of the *Forest Practices Code of B.C. Act* that pertain to community watersheds.

The boundaries of the John Hart Lake community watershed are shown on the 1:40 000 scale map dated, May 9, 2001 attached as Exhibit A.

This order is effective May 29, 2001.

(original signed by)

July 23, 2001

K.A. Collingwood, R.P.F.
Regional Manager
Vancouver Forest Region

File:12290-20/John Hart Lake

Letters Establishing the Artlish and Memekay Fisheries Sensitive Watersheds

BRITISH COLUMBIA

ORDER – FISHERIES SENSITIVE WATERSHEDS – VANCOUVER ISLAND

The following order applies to the areas identified within the attached Schedule A as Fisheries Sensitive Watersheds and takes effect on the 28th day of December, 2005.

This order is given under the authority of sections 14(1) and 14(2) of the *Government Actions Regulation* (B.C. Reg. 582/2004).

The Deputy Minister of Environment orders that:

1. the fisheries sensitive watersheds shown in the map set out in the attached Schedule A (labeled: F-1-001, F-1-002, F-1-003, F-1-004, F-1-005, F-1-006, F-1-007, F-1-008, F-1-009, F-1-010, and F-1-011,) is established;
2. the objectives outlined in Schedule 1 are established for the fisheries sensitive watersheds in the attached Schedule A;
3. the special management of watersheds established by this order is required to protect the habitat of anadromous salmonids, including steelhead (*Oncorhynchus mykiss)* and cutthroat trout (*Oncorhynchus clarki*) (hereafter referred to as fish);
4. revisions to this order will be carried out where information is made available to demonstrate that a watershed does not require special management of the amount, timing and distribution of primary forest activities to prevent material adverse effects on fish or fish habitat; and
5. where there is any discrepancy between a fisheries sensitive watershed boundary as shown in the attached Schedule A map and the GIS file (**tfswa_bc**), the centre point of the boundary as detailed in the GIS file will take precedent. Where there still may be a discrepancy, the land area encompassed by the height-of-land that defines the boundary of the watershed described in Schedule A, will be the area of land identified as the Fisheries Sensitive Watershed.

Schedule 1 – Fisheries Sensitive Watershed

The Deputy Minister of Environment is satisfied that:

1. The areas of land comprising the watersheds listed in Schedule A have significant downstream fisheries values and significant watershed sensitivity.
2. The areas of land comprising the watersheds listed in Schedule A require special management to:
    - Conserve the natural hydrological conditions, natural stream bed dynamics and stream channel integrity.

- Conserve the quality, quantity and timing of water flow consistent with the needs of fisheries values.
- Prevent cumulative hydrological effects that would have a material adverse effect on fish and fish habitat.

3. For each of the areas of land identified by this Order as Fisheries Sensitive Watersheds, the provisions of the *Forest Planning and Practices Regulation,* or another enactment, do not specifically provide for the special management of the matters set out in item 2 above.

Therefore, Deputy Minister of Environment orders that:

1. The areas of land comprising the watersheds in the attached Schedule A are identified as Fisheries Sensitive Watersheds, and
2. The objective set out in Schedule B is established for each of the Fisheries Sensitive Watersheds named in the attached Schedule A:

Signed this 19th day of Dec, 2005

Chris Trumpy, Deputy Minister
Ministry of Environment

Schedule A – Gazetted Names of Fisheries Sensitive Watersheds (FSW)

Gazetted (FSW) Name[1]	Forest District	GIS FSW Identifier[2]	Watershed Code[2]
Artlish River	Campbell River	F-1-001	9306711
Effingham River	South Island	F-1-002	9301964
Escalante River	South Island	F-1-003	9304808
Gordon River	South Island	F-1-004	9300547
Hatton Creek	South Island	F-1-005	93007170025700388
Hemmingsen Creek	South Island	F-1-006	93005380022100344
Klanawa River	South Island	F-1-007	9300755
Macktush Creek	South Island	F-1-008	930147
Memekay River	Campbell River	F-1-009	920725300358
Nahmint River[3]	South Island	F-1-010	9301508
Toquart River	South Island	F-1-011	9302305

[1] The gazetted name of a creek or river at the lowest (downstream) point in the named fisheries sensitive watershed.

[2] For the purposes of this Order, the current GIS fisheries sensitive watershed polygon information is based on 1:50,000 scale BC Watershed Atlas (Watershed Code) boundaries. These will be replaced with 1:20,000 scale BC Corporate Watershed Base (CWB) polygon boundaries and associated watershed codes as they become available in 2006.

[3] The watershed area above the confluence of the Nahmint River with Nahmint Lake.

Schedule B – Objective for Fisheries Sensitive Watersheds named in Schedule A

For each of the Fisheries Sensitive Watersheds identified by this Order, the objective is to provide, within the normal forest rotation, special management of the amount, timing and distribution of primary forest activities, in order to:

i) conserve the natural hydrological conditions, natural stream bed dynamics and integrity of stream channels in the Fisheries Sensitive Watershed,

ii) conserve the quality, quantity and timing of water flows required by fish in the Fisheries Sensitive Watershed, and

iii) prevent the cumulative hydrological effects of primary forest activities in the Fisheries Sensitive Watershed from resulting in a material adverse impact on the fish habitat of the watershed.

Letter Establishing Scenic Areas and Visual Quality Objectives for the CRFD

BRITISH COLUMBIA

File: 16290-20

December 14, 2005

Dear Reader:

Establishment of Scenic Areas and Visual Quality Objectives for the Campbell River Forest District

Pursuant to Section 2(2)(a) of the *Forest and Range Practices Act*, I have been delegated the authority to establish scenic areas and visual quality objectives.

Pursuant to Section 7(1) of the *Government Actions Regulation (GAR)*, I hereby establish scenic areas for the Campbell River Forest District (CRFD) as depicted by all polygons that have a designated visual quality objective on the attached maps, numbered 1 through 7, titled *Campbell River Forest District - Scenic Areas and Visual Quality Objectives*, December 14, 2005. These scenic areas reflect adjustments and corrections to the scenic areas originally made known in my letters of October 2, 2001, and February 26, 2003.

Also, pursuant to Section 7(2) of the *GAR*, I hereby establish visual quality objectives (VQOs) for the Campbell River Forest District as shown on the attached maps, numbered 1 through 7, titled *Campbell River Forest District - Scenic Areas and Visual Quality Objectives*, December 14, 2005. These VQOs cancel and replace those established under the Sayward Landscape Unit Plan on February 26, 2003, as well as the October 2, 2001, visual quality classes which were continued as VQOs pursuant to Section 17 of the GAR.

These VQOs apply as mapped to all Crown lands in the CRFD, and also as mapped to all Schedule A private lands forming part of *Forest Act* tenures in the CRFD.

Yours truly,

Rory Annett, R.P.F.
District Manager
Campbell River Forest District

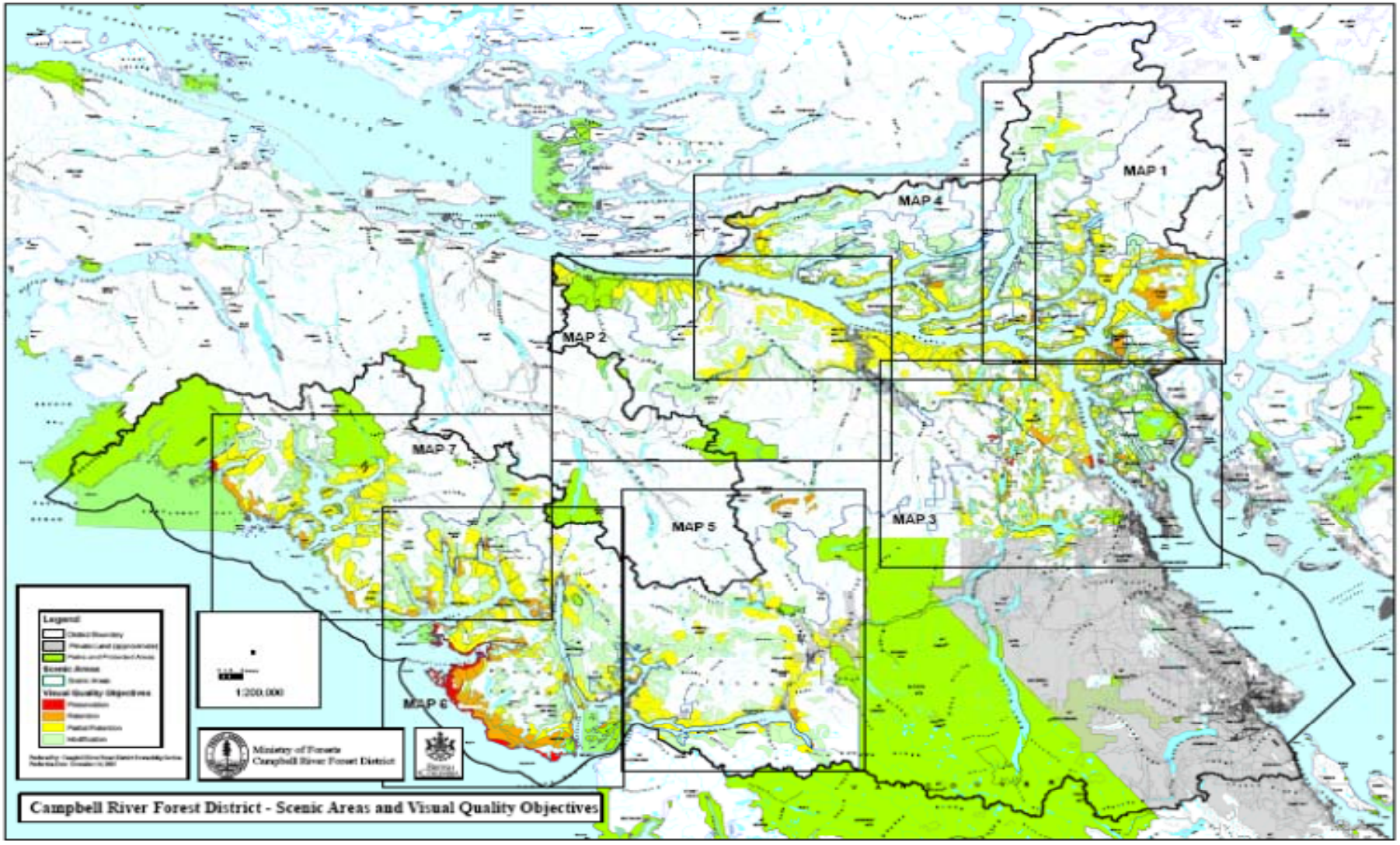
Attachments: *Campbell River Forest District - Scenic Areas and Visual Quality Objectives*, maps 1 through 7, December 14, 2005

Page 1 of 2

Ministry of Forests and Range | Campbell River Forest District | Location: 370 S. Dogwood St., Campbell River | Mailing Address: 370 S. Dogwood St. Campbell River, BC V9W 6Y7
Tel: (250) 286-9300
Fax: (250) 286-9490

Reader

pc: All District Licensees
Lindsay Jones, Ministry of Agriculture & Lands, Nanaimo
Ministry of Sustainable Resource Management, Nanaimo


MAP 1
MAP 2
MAP 3
MAP 4
MAP 5
MAP 6
MAP 7
Legend:
1:200,000
Ministry of Forests
Campbell River Forest District
Campbell River Forest District - Scenic Areas and Visual Quality Objectives

Letter Establishing Riparian Reserve Zones and Riparian Management Zones for Lakes

BRITISH COLUMBIA

File: 12600-20/Sayward

February 26, 2003

Dear Reader:

Re: Establishing Riparian Reserve Zones and Riparian Management Zones for Lakes

Pursuant to section 64 of the *Forest Practices Code Act (FPC) Operational and Site Plan Regulation,* I Rory Annett, District Manager for the Campbell River Forest District establish riparian reserve zones (RRZs) for those lakes located within the Sayward landscape unit which are identified on the attached map titled *Lakeshore Management*. Those lakes which are not identified for establishment of an RRZ, on the attached map, will continue to comply with the default *FPC* riparian reserve zones, or other provisions as they may be under the *Forest and Range Practices Act*.

Please note that this process is designed to complement and co-ordinate with other formal processes associated with the Sayward plan, such as the declaration of Higher Level Plan Objectives.

The management objective for established RRZs is as follows:

To manage for fisheries values within those areas noted as Riparian Reserve Zones as shown on the Sayward Landscape Unit map, titled Lakeshore Management by:

- *Prohibiting timber harvesting, including salvage, unless such activities occur within established recreation sites and/or trails and are complementary to the recreation setting and experience as determined by the Statutory Decision Maker;*
  and
- *Prohibiting road construction unless no other practicable options exist as determined by the Statutory Decision Maker.*

Also, pursuant to section 64 of the *Forest Practices Code Act (FPC) Operational and Site Plan Regulation,* I Rory Annett, District Manager for the Campbell River Forest District establish riparian management zones (RMZs) for the following lakes within the Sayward landscape unit: McIvor, Beaver, Comeback, Hemp, Lawnchair, Lily, Little Mud, Pocket, Reed, Sedge, Shadow, Smolt, Star, and Whistlepunk.

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Ministry of Forests
Campbell River Forest District
Location: Campbell River, BC
Mailing Address: 370 South Dogwood Street Campbell River, BC V9W 6Y7
Tel: (250) 286-9300
Fax: (250) 286-9490

Sayward – Establishment of RRZs & RMZs

The management objective for established RMZs is as follows:

To ensure that for a distance of 50 metres from the timbered edge surrounding the following lakes within the Sayward Landscape Unit: McIvor, Beaver, Comeback, Hemp, Lawnchair, Lily, Little Mud, Pocket, Reed, Sedge, Shadow, Smolt, Star, and Whistlepunk, that no more than 25% of the forested area be less than 5 metres in height.

If you have any questions about the establishment of these RRZs or RMZs, please contact myself for clarification.

Yours truly;

_____ _____

Rory Annett
District Manager
Campbell River Forest District

Date

cc. Dick Heath, WLAP, Vancouver Island Region
Wally Eamer, MSRM, Coast Region

Attachments: Sayward Landscape Unit Plan – map of *Lakeshore Management*.

Letter Establishing A Recreation Trail Objective in the Sayward LU

BRITISH COLUMBIA

File: 12600-20/Sayward

February 26, 2003

Dear Reader:

ORDER TO ESTABLISH
A RECREATION TRAIL OBJECTIVE

SAYWARD LANDSCAPE UNIT

Pursuant to Section 6 of the *Forest Practices Code of British Columbia Act*, I hereby establish a recreation trail objective for the Sayward Landscape Unit, as attached to this Order, effective July 1, 2003

The boundaries of the Sayward Landscape Unit are shown on the 1:50,000 scale map titled *Recreation Constraints*, which is attached to this Order.

(Original signed by)

_____ _____

Rory Annett
District Manager
Campbell River Forest District
Ministry of Forests

Date

Attachments: Sayward Landscape Unit Plan – Higher Level Plan Objective,.
Sayward LU map.

cc. Dick Heath, WLAP, Vancouver Island Region
Wally Eamer, MSRM, Coast Region

Page 1 of 2

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Ministry of Forests
Campbell River Forest District
Location: Campbell River, BC
Mailing Address: 370 South Dogwood Street Campbell River, BC V9W 6Y7
Tel: (250) 286-9300
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Sayward_ Order to Establish Rec Trail Objective

Higher Level Plan Objectives for the Sayward Landscape Unit

Objective 1

Harvesting and/or road building within 10 m of the running surface of existing trails within the Snowden Forest, as shown on the Sayward Landscape Unit Map titled, Recreation Constraints, requires the prior approval of the Designated Statutory Decision Maker.

Order Establishing Ungulate Winter Range #U1-004

BRITISH COLUMBIA

ORDER – UNGULATE WINTER RANGE #U1-004

On being satisfied that the establishment of the ungulate winter range dealt with in this order is necessary to meet the habitat requirements of the ungulate species, and that the management objectives dealt with in this order are necessary to maintain the ungulate species within those areas, and under the authority of section 69 (1) (a) and (b) of the Operational and Site Planning Regulation, B.C. Reg. 107/98, the Deputy Minister of Water, Land and Air Protection orders that

1. the ungulate winter range shown in the map set out in the attached Schedule A (#U1-004) is established;
2. the ungulate winter range referred to in section 1 is approved for black-tailed deer (*Odocoileus hemionus columbianus*) and Roosevelt elk (*Cervus elaphus roosevelti*); and
3. the following practices are established as management objectives inside the ungulate winter range referred to in section 1:

Goal

To maintain or enhance the existing combination of topographic and vegetative features within the designated ungulate winter ranges.

Management Objectives

Objective 1

Road construction is not to occur within the designated ungulate winter ranges unless there is no other practicable option, the quality of the winter ranges will not be significantly affected and a variance is approved by the MWLAP Statutory Decision Maker or designate.

Objective 2

Harvesting is not to occur within the designated ungulate winter ranges unless a variance is approved by the MWLAP Statutory Decision Maker or designate. A variance would only normally be considered for the purposes of enhancing the quality of the winter range.

Objective 3

Salvage harvesting is not to occur within the designated ungulate winter ranges, unless a variance is approved by the MWLAP Statutory Decision Maker or designate.

Objective 4

Road maintenance, road deactivation, felling of danger trees or brushing and clearing on existing roads within the UWR is allowed. Where required to address worker safety, felling of danger trees, felling for guy line anchors, felling of tail hold anchor trees within an UWR is allowed along adjacent cutblock boundaries. Any trees that must be felled within an UWR will be left

ORDER – UNGULATE WINTER RANGE #U1-004

onsite to provide coarse woody debris, unless the felled tree lies outside the UWR. The holder of TFL 39 Block 2 will ensure that UWR values are maintained and incorporated when addressing worker safety concerns.

Signed this 17 day of Dec, 2003
Gordon Macatee, Deputy Minister
Ministry of Water, Land and Air Protection

OGMA order for Tsitika, Naka, Adam-Eve, White and Salmon LU's

PROVINCE OF BRITISH COLUMBIA

Ministry of Agriculture and Lands

Ministerial Order

Land Use Objectives for Old Growth Management Areas (OGMAs) within the Tsitika, Naka, Adam-Eve, White and Salmon Landscape Units situated on northern Vancouver Island within the Campbell River Forest District.

Part 1 - Interpretation

1. Pursuant to Section 93.4 of the *Land Act,* the following objectives are established as land use objectives for the purposes of the *Forest and Range Practices Act* and apply to OGMAs within the Tsitika, Naka, Adam-Eve, White and Salmon Landscape Units shown on the map attached as Schedule 1.
2. Nothing in, under or arising out of this order either abrogates or derogates from any aboriginal rights, aboriginal title or treaty rights of any applicable First Nation, nor relieves the Province of any obligation to consult with any applicable First Nation.
3. Where an objective refers to an area shown on a map and the area is also defined by a spatial dataset, the area as defined by the spatial dataset will apply. All spatial datasets are available at http://www.geobc.gov.bc.ca.
4. In the event of any inconsistency between the location of an OGMA boundary as described in a spatial data set and the actual location as determined in the field, the latter shall apply.

Part 2 - Objectives

5. Objectives for Old Growth Management Areas

   (1) Maintain or recruit old growth forests in established Old Growth Management Areas, as shown on the map attached as Schedule 1, subject to subsections (2) to (6) below.

(2) Despite subsection 1, timber harvesting and road or bridge construction are permitted within OGMAs, provided that:
- i) the area of the OGMA that is subject to timber harvesting or road or bridge construction does not exceed the greater of one hectare or 10% of the area of the OGMA,
- ii) replacement forest is identified which is
  - i. biologically suitable
  - ii. of equivalent age, structure and area, and,
  - iii. situated in order of priority, either immediately adjacent to the OGMA, or adjacent to another OGMA in the same variant and landscape unit as the existing OGMA, and
- iii) road or bridge construction, if applicable, is required to access resource values beyond or adjacent to the OGMA and no other practicable option for road or bridge location exists.

(3) For the purposes of subsection (2)(b) and (c), as an alternative to identifying replacement area, a temporary road or bridge site may be permanently deactivated and rehabilitated within four years after construction.

(4) Within OGMAs, the following activities are permitted:
- a) First Nations traditional use of trees or understory plants.
- b) Topping or pruning of trees along boundaries to improve wind firmness.
- c) 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.
- d) 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.
- e) Felling for 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.
- f) Silvicultural habitat enhancement in recruitment OGMAs.
- g) Trail and site maintenance or development, and silvicultural treatments to address public safety associated with the management and operation of recreation sites and trails.

(5) Replacement forest is required if the total area of an OGMA that is subject to the activities pursuant to subsection (4) exceeds the greater of one hectare or 10% of the area of the OGMA. Replacement forest must be biologically suitable, of equivalent age, structure and area, and situated, in order of priority, either immediately adjacent to the OGMA, or adjacent to another OGMA in the same variant and landscape unit as the OGMA.

(6) OGMA adjustments and replacements made in accordance with subsections (2) to (5) must be documented and submitted as digital spatial data to the delegated decision maker at the end of each calendar year.

Part 3 - Effective Date and Transition

6. Application of this order

(1) This order and the land use objectives in this order take effect on the date that notice of this order is published in the Gazette.

(2) The period of time under section 8 of the *Forest and Range Practices Act* is two years.

H MacKnight — 26 July 2010

Heather MacKnight, MCIP
Regional Executive Director
Integrated Land Management Bureau
Coast Region

Date

4

ORDER TO IDENTIFY KARST RESOURCE FEATURES

BRITISH COLUMBIA

File: 16400-06

Date: May 30, 2007

ORDER TO IDENTIFY KARST RESOURCE FEATURES
FOR THE

CAMPBELL RIVER FOREST DISTRICT

Pursuant to Section 5 of the *Government Actions Regulation of the Forest and Range Practices Act* (FRPA), I hereby identify the following surface or subsurface elements of a karst system as resource features wherever they are found within the Campbell River Forest District, effective June 30, 2007.

- Karst caves
- Significant surface karst features
- The important features and elements within very high or high vulnerability karst terrain

Rory Annett, District Manager
Campbell River Forest District
Ministry of Forests

May 30/2007
Date

Ministry of Forests | Campbell River Forest District | Location: 370 South Dogwood Street, Campbell River, BC V9W 2Y7 | Mailing Address: 370 South Dogwood Street, Campbell River, BC V9W 6Y7 | Tel: (250) 286-9300 | Fax: (250) 286 9490

ORDER TO IDENTIFY RECREATION RESOURCE FEATURE

BRITISH COLUMBIA

File:16310-01

April 12, 2006

Dear Reader:

Order to Identify Recreation Resource Features
For the Campbell River Forest District

Pursuant to Section 5 of the *Government Actions Regulation* of the *Forest and Range Practices Act* (FRPA), I hereby identify the following recreation resource features within the Campbell River Forest District, as depicted by the attached maps titled *Campbell River Forest District Identified Recreation Resource Features Locator*, maps 1 through 8 [April 12, 2006].

April 12/2006

Rory Annett, District Manager
Campbell River Forest District
Ministry of Forests

Attachment: *Campbell River Forest District Identified Recreation Resource Features Locator* maps 1-8, April 12, 2006

pc: All District Licensees

Ministry of Forests | Campbell River Forest District | Location: 370 South Dogwood Street Campbell River, BC V9W 8Y7 | Mailing Address: 370 South Dogwood Street Campbell River BC V9W 8Y7
Tel: (250) 286-9300
Fax: (250) 286-9490

Administrative Adjustments, Amendments and Operational Procedures for Old Growth Management Areas Coast Region

This regional advice is provided for those practitioners needing to make alterations to legally established Old Growth Management Areas (OGMAs) and has been developed to:
1) Describe procedures for adjusting, or amending OGMAs; and
2) To provide operational advice to anyone working adjacent to, or within OGMAs.

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 discretion of the delegated decision maker (DDM) (District Managers).

1.0 General Procedures for Administrative Adjustments, Minor Amendments and Significant Amendments

1.1 Administrative Adjustments

Administrative adjustments to OGMAs are those allowed by the established legal objectives and will not require DDM approval (District Managers). In general, they allow small boundary adjustments to be made based on ground-truthing and layout design of adjacent harvest operations. The proponent prescribing an adjustment to an OGMA must address the principle of no net loss by adding suitable replacement forest area to the OGMA, or to a nearby OGMA, in the same variant and landscape unit. These adjustments need to be submitted to the District annually before December 31st of each year. Typically, multiple administrative adjustments will be combined into a single submission annually. All administrative adjustments should be reviewed in January-February for completeness. If the criteria are met for an administrative amendment in the submission then it is sent on to Region for update of the data layer. This usually happens in March-April.

1.2 Mapping Error Corrections

The correction of mapping errors does not require DDM approval. For example, proposed harvesting or road 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 an adjacent OGMA. In other instances, the intended OGMA boundary (e.g. along a stream) may be shown to be in the wrong location on the original approved legal map as proven by subsequent field engineering. If this occurs, the prescribing/planning forester should record the discrepancy. Corrections would then be summarized and submitted to annually as part of the administrative amendment package.

1.3 Minor Amendments (also see page 32 section 7.2 of the Land Use objectives Regulation: Policy and procedures (LUOR P and P) this process builds from that Provincial level advice)

Minor amendments require approval by the DDM. A minor amendment is one that does not materially change the original order, or its effect on forest and range tenure holders. The consideration of "materially change" applies to the landscape unit's entire suite of OGMAs 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 that OGMAs may overlap with other legal designations, most notably Ungulate Winter Ranges and Wildlife Habitat Areas and it is their responsibility to ensure compliance with all legal requirements.

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 suitable ecological attributes for conserving biological diversity. These attributes may include: tree species and sub-canopy complexity, tree height and diameter, stand age, stocking and site index, slope, aspect, elevation, patch size, forest interior habitat and connectivity. The replacement area could also be critical habitat for species at risk. The presence of old forest attributes such as multi-layered canopies, 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.

Replacement area proposals must be submitted in digital format to allow updating of the Provincial data layer.

Note: minor amendments may be subject to consultation with First Nations. The DDM will consider this when committing to meeting timelines. Licensees can help to expedite the review process by sharing information about proposed minor amendments with applicable First Nations and obtaining feedback during the process. This preliminary review should help improve the efficiency of government's subsequent consultation efforts.

1.4 Significant Amendments (see page 32 section 7.3 of the LUOR P and P)

A significant amendment is required where one or more OGMA alterations will result in consequential and substantive variations to the order; for example, a proposed alteration, or deletion of one or more OGMAs that would have a material effect on forest or range tenure holders, public access opportunity, First Nations traditional use, or disturbance to significant ecological values. For significant amendments, it will be necessary for Districts to undertake public review and comment, including First Nations and inter-agency consultation and provide the demonstrated achievement of the criteria laid out in regulation to the delegated decision maker. Demonstrated achievement is essentially the rationale for approval relative to the tests in the Land Use Objectives Regulation accompanied by the licensee's supporting documentation.

Districts 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. Districts will review all amendments and notify the submitter as soon as possible if the amendment is considered a significant one requiring advertisement and public review.

2.0 OGMA Operational Procedures

The following clarifies how OGMAs will be reviewed when certain events or activities occur. Operational procedures to guide activities adjacent to OGMAs are also described.

2.1 Periodic review

The distribution of OGMAs may be reviewed periodically to ensure their ecological suitability through time. This would occur at the delegated decision maker's discretion, or as the result of an event that significantly altered the OGMAs, or the total area of productive Crown forested land (e.g. catastrophic fire, landslides, windthrow, disease, insect outbreaks). In the event that the natural disturbance is considered a threat to forested areas outside OGMAs (as determined by a qualified person and brought to the attention of the DDM), control measures may be implemented and relocation of the OGMA may occur.

2.2 OGMA boundaries and ground-truthing

OGMA boundaries do not have to be legally surveyed. To deal with a discrepancy between an OGMA boundary and actual on-the-ground development, the following may be proposed to accommodate areas that may be left between harvest boundaries and the OGMA. Where approved or proposed developments are located in close proximity to established OGMAs (e.g. within 50 m) and the final development results in a forested leave area (suitable for OGMA) adjacent to the OGMA boundary, the leave area could be added to the OGMA. The DDM should be notified regarding an opportunity to amend the OGMA boundary.

2.3 Right-of-Ways

The cleared portion of the right-of-way for new road or new bridge construction within an OGMA must be as narrow as possible with due regard for all safety issues.

2.4 Wildlife trees and safety requirements

When a conflict arises between operational activities and high value wildlife trees in an OGMA, the preference is where practicable to retain high value wildlife trees by establishing no work zones or by altering the road/bridge alignment. Any danger trees that are felled as a result of exemptions from the legal objectives or amendments are to be left on the ground to provide a source of coarse woody debris, unless safety dictates otherwise.

2.5 Changes to the Crown Forest Land Base

Significant reductions to the available Crown Forest Land Base (CFLB) within a landscape unit will trigger the requirement to update the OGMA layer to reflect the land base reduction since the OGMA targets are based on a percentage of the total available CFLB. Such changes will likely be processed as significant amendments. For example, removal of CFLB for urban development, mining or some other uses which results in the land being permanently alienated or altered to a non-forested state. Changes in ownership of the land such as First Nations treaty settlements will also trigger updates.