



**Coast Mountains Resource
District
Forest Stewardship Plan
Replacement
2016 - 2021**

**For Operations in the
Coast Mountains Resource District:**

**Cascadia TSA (including TFL 1), Kalum
TSA, Nass TSA, North Coast TSA and
Pacific TSA (including TFL 41)**

**Administered by
BC Timber Sales
Skeena Business Area**

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BC Timber Sales – Skeena Business Area**

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Pacific TSA (including TFL 41)

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1 APPLICATION OF THIS FSP

1.1 The Licence Holder

The Holder of this Forest Stewardship Plan (FSP) is the BC Timber Sales Manager (TSM) for the Skeena Business Area, and where applicable, by extension, the holder of a Timber Sale License (TSL) or Road Permit (RP) granted by the TSM under the jurisdiction of this FSP. All references in the plan to BCTS harvesting, BCTS operations and BCTS activities refer to activities authorized by the TSM.

1.2 Introduction

BC Timber Sales (BCTS) Skeena has prepared this FSP for the areas to be managed under its operations within the Coast Mountains Resource District. The FSP describes

- the planned areas of interest (known as Forest Development Units or FDUs) that will contain harvesting and road activities, and
- the strategies and results for each FDU that are consistent with applicable legislation and objectives set by government.

The results and strategies must be measurable or verifiable: this will allow the Delegated Decision Maker¹ to evaluate whether consistency with the objectives is being achieved.

Preparation of an FSP is a requirement of the *Forest and Range Practices Act* (FRPA), which was enacted on January 31, 2004. The FRPA and its associated regulations identify objectives and/or prescribe requirements for the following forest values:

- | | |
|------------------------------------|-------------------------------|
| • Soils | • Cultural Heritage Resources |
| • Timber (including Forest Health) | • Recreation Resources |
| • Wildlife | • Resource Features |
| • Water | • Visual Quality |
| • Fish | • Forage |
| • Biodiversity | |

1.3 Description of the Skeena Business Area of BC Timber Sales

BC Timber Sales was founded in April 2003 with a mandate to be the cost and price benchmark for timber harvested from public land in British Columbia. BC Timber Sales manages approximately 20% of the annual provincial Crown harvest through 12 Business Areas and has an operational presence in 33 locations. The Skeena Business Area has its main office in Terrace, BC, with a field office in Hazelton, B.C. The Skeena Business Area of BC Timber Sales encompasses the Coast Mountains Resource District, and the Kispiox and Cassiar Timber Supply Areas. The bulk of these areas are within the Northwest Mountain Pricing Unit with the exception of the North Coast TSA, which is in the Coastal Pricing Unit.

The total annual allowable cut apportionment administered by the Skeena Business Area is 1,011,712m³ and, at the time of submission, the annual apportionment within the area of this FSP is 754,979m³. BCTS' operating areas are spread throughout the district, from Kotsinta Creek in the north to the Aristazabel Island in the south. The area of the plan covered by this FSP is restricted to the Coast Mountains

¹ For this FSP, the Delegated Decision Maker is the District Manager of the Coast Mountains Resource District, Ministry of Forests, Lands and Natural Resource Operations

Resource District, and has been split into three (3) Forest Development Units (FDUs): the Kalum South FDU; the Nass FDU and the North Coast FDU. The FDU boundaries are shown on the following overview map.

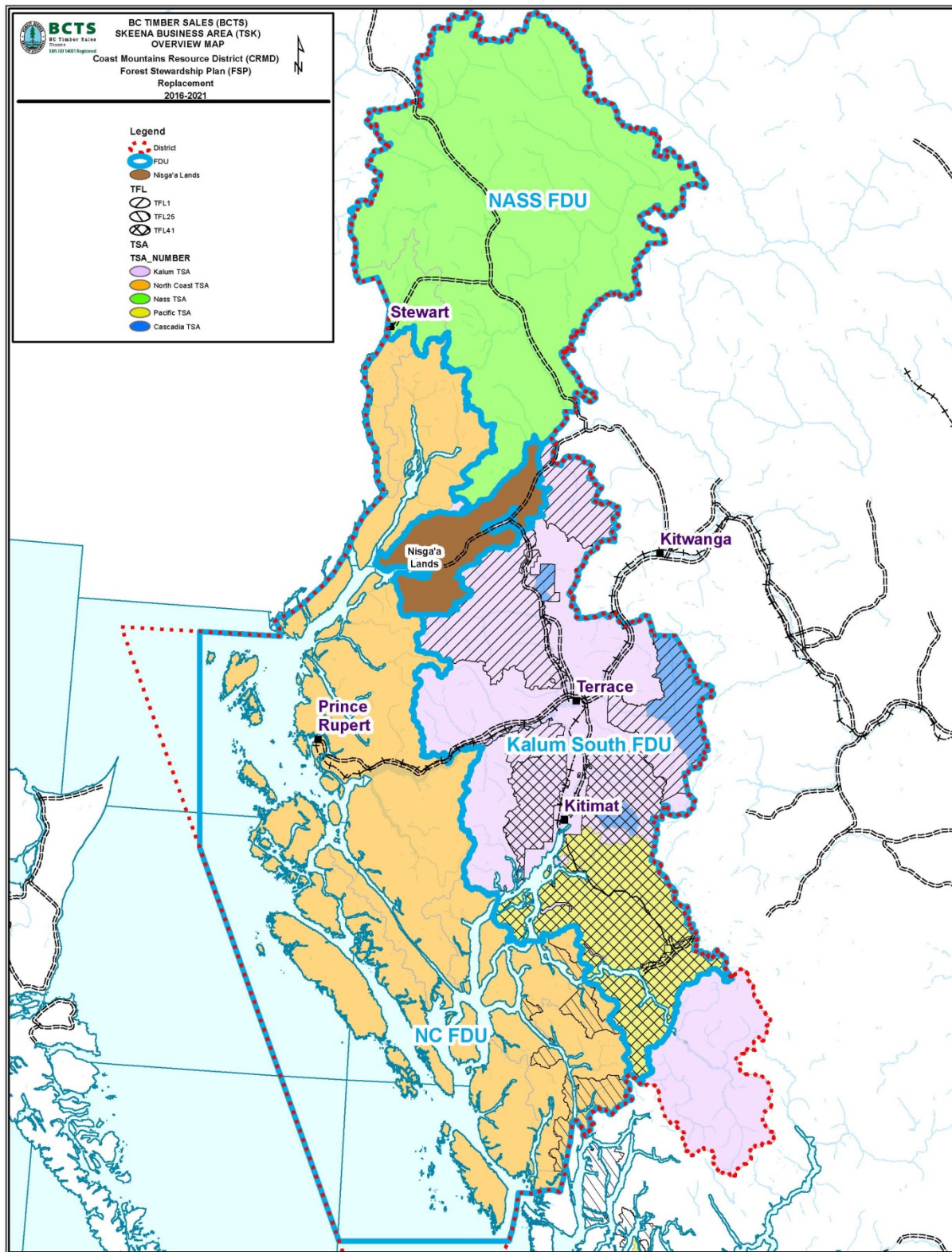


Figure 1: Overview Map

1.4 Term of the Plan

The term of this plan is for five years commencing on the date of approval by the Delegated Decision Maker (DDM).

1.5 Forest Development Units

This FSP includes three distinct planning areas, which are identified as Forest Development Units (FDUs) and shown on the overview map above (Figure 1).

The FSP includes a separate chapter (section) for each Forest Development Unit. The FDUs (with the exception of the Nass FDU) have been established to be consistent with existing land use order boundaries:

The **Kalum South FDU** includes the geographic area subject to the Land Use Objectives from the Kalum Sustainable Resource Management Plan (April 28, 2006).

The **Nass FDU** includes the geographic area of the Nass TSA and is, in part, subject to the Nass South SRMP LUOR Order (February 25, 2016)

The **North Coast FDU** reflects the boundaries of the North Coast TSA (excluding TFL 25) and is subject to the Great Bear Rainforest Order (January 28, 2016)

A complete set of maps, showing Forest Development Units, Landscape Units, Special Management Zones, and other elements relevant to the application of this FSP are included with this plan in Appendix X.

1.6 First Nation Consultation and Information Sharing

BCTS will consult in accordance with the Treaties, First Nations consultation protocols or agreements that are in effect at the time of consultation. In the absence of such agreements, BCTS will be consistent with current provincial consultation procedures.

1.7 Interpretation

All references to the Forest and Range Practices Act, or to FRPA, mean the *Forest and Range Practices Act* (SBC 2002, s.69, consolidated to July 28, 2015).

All references to the Forest Planning and Practices Regulation, or to "FPPR", mean the *Forest Planning and Practices Regulation* (BC Reg 177/2014, consolidated to September 22, 2014) as it was on September 1st 2015.

All references to the Government Actions Regulation, or to GAR, mean the *Government Actions Regulation* (BC Reg 582/2004, effective Dec 13, 2004) as it was on September 1st 2015.

All references to the Land Act mean the *Land Act* (Chapter 245[RSBC 1996], effective March 18 2013) as it was on September 1st 2015.

All references to the Central and North Coast Order, or CNCO, mean the *Central and North Coast Ministerial Land Use Order* (December 2007, as amended March 27, 2009).

All references to the Central Coast Land and Resource Management Plan, or CCLRMP, mean the *Central Coast Land and Resource Management Plan* (May 2004).

All references to the Kalum Land and Resource Management Plan, or Kalum LRMP, mean the *Kalum Land and Resource Management Plan* (May 2002).

All references to the Kalum Sustainable Resource Management Plan, or Kalum SRMP, mean the *Kalum Sustainable Resource Management Plan* (April 28, 2006).

All references to the Nass South SRMP LUOR Order mean the *Nass South Land Use Objectives Regulation Order Sustainable Resource Management Plan (February 25, 2016)*.

All references to the Great Bear Rainforest Order, or GBRO, mean the *Great Bear Rainforest Order (January 28, 2016)*.

Unless otherwise noted, statements and information provided are current to March 31, 2016. Every effort has been made to ensure that current data have been used in map generation and analyses: i.e. current to March 31, 2016.

1.8 Content Requirements

The required content in a FSP is described in the *Forest and Range Practices Act (FRPA)* and the *Forest Planning and Practices Regulation (FPPR)*.

The basic requirements are:

- A map that shows the boundary of proposed and approved Forest Development Units (FDUs). *FRPA section 5(1) (a)*. There are three FDUs:
 - o **Kalum South FDU**
 - o **Nass FDU**
 - o **North Coast FDU**
- Details of the lands within these FDUs are shown in the formal FSP maps, as described in **Section 5.1.26**
- A description of the strategies and/ or results necessary to be consistent with applicable legislation, and with Objectives that have been set by government. *FRPA s. 5(1) (b)*. The strategies and results are described in **Sections 2, 3 and 4**. In this FSP, within each Chapter and for the applicable FDU, the reference table that precedes each Objective identifies the practice requirements that the TSM will adopt within the period of the FSP.
- A description or a map showing the following where it exists on the FSP area. *FPPR s. 14(2) & (3)*:

o Ungulate Winter Range	o Community Watersheds
o Wildlife Habitat Areas	o Old Growth Management Areas
o Fisheries Sensitive Watersheds	o Areas where timber harvest is prohibited
o Lakeshore Management Zones	o Timber Sale Licenses and Road Permits granted by the Timber Sales Manager
o Scenic Areas	
o L1 Lakes	

This information is provided on the FSP maps as described in **Section 5.1.25**

- Description of the Stocking Standards that will apply on the FDUs (*FPPR s. 16*). Described in **Section 5.1.2 to 5.1.19**
- Effect of Approval of the FSP **Section 5.1.20**
- Where applicable, address:
 - o Invasive plants (*FPPR s. 17*) **Section 5.1.21**
 - o Natural range barriers (*FPPR s. 18*) **Section 5.1.22**

- The cumulative effect of multiple FSPs in an area (FPPR s. 19) **Section 5.1.23**
- Information on public review and advertisement, as well as efforts to meet with First Nations, must also be provided (FRPA s. 18 and FPPR s. 21, s. 22) **Tabs 1, 2, 3 and 4**
- Signature by an authorized representative of the licensee (FRPA s. 5(3)). **Title page**

1.9 Explanation of Objectives, Strategies, and Results

Objectives are descriptions of overall goals to be achieved. Objectives can vary from place to place, depending on the circumstances of the area. The FRPA defines three types of objectives:

Objectives set in regulation: Objectives set in regulation (enabled under section 149 of the FRPA, and set under sections 5 to 10 of the FPPR), are intended to provide goalposts for managing and protecting FRPA values. Results and/or strategies in operational plans must address and be consistent with these objectives.

Objectives enabled by regulation: Objectives enabled by regulation (sections 56, 149.1 to 150.3, and 181 of the FRPA, and Part 1, Division 2 of the *Government Actions Regulation*) are the second type of objective set by government. The appropriate minister (as authorized in the legislation) may designate areas, establish objectives for these areas, and establish other things, such as measures or features. In some cases, different ministers are responsible for designating an area and setting objectives within that area. These objectives guide effective forest management for specific resource values at the local level. Objectives enabled by regulation come into effect through government actions outlined in sections 2 to 4 of the *Government Actions Regulation*. Objectives enabled by regulation by a minister must be consistent with any applicable established objectives. When establishing these objectives, the minister must consider the impact of the proposed objective on the provincial timber supply as well as the cumulative impact on rights granted to timber, woodlot, or range agreement holders. Once a new objective has been in place for at least four months, new operational plans (including forest stewardship plans) must contain results and/or strategies to address the new objective, if the objective is applicable to the area under the plan. Existing operational plans must be amended within two years, unless a different time frame is specified in the order under section 8 of the FRPA, to address the new objective if it is applicable to the area under the plan.

For example, in the Coast Mountains Resource District, Orders have established Landscape Units and Old Growth targets, Identified Species at Risk and Ungulate Species, and established Wildlife Habitat Areas. The *Supporting Document* to this FSP provides more detailed discussion of these items.

Land-use objectives: Land-use objectives (established or carried forward (grand-parented) under the Land Act and sections 3 to 5 of the FPC), guide agreement-holders in preparing results and/or strategies in operational plans and are key to maintaining environmental and economic values. They are also a mechanism for bringing forward existing and new objectives, which are developed under regional and sub-regional planning processes, into the FRPA. Land-Use objectives are objectives specific to a certain area that have been established through a Landscape Unit Plan or some sort of higher-level plan such as a Land and Resource Management Plan or Sustainable Resource Management Plan. The Minister of FLNRO sets these objectives.

This plan includes land use objectives from the following sources (Section **SD1.1** of the *Supporting Document* to this FSP provides further discussion of these plans):

- **The Kalum Sustainable Resource Management Plan (SRMP)** was approved April 28, 2006, using the cabinet-approved Kalum Land and Resource Management Plan (LRMP) as its basis. The objectives within the SRMP are considered land-use objectives under the FRPA.
- **The Nass South Sustainable Resource Management Plan (SRMP) LUOR Order** (February 25, 2016) legally establishes a portion of the land use objectives in the Nass South SRMP that was approved in 2012. The Nass South SRMP is a landscape level plan

developed to address sustainable management of land, water and resources in the southern portion of the Nass Timber Supply Area (TSA) through collaboration with the Gitanyow and Nisga'a Lisims Government (NLG). The area is approximately 600,000 hectares in size and is located in the southern portion of the Nass Timber Supply Area.

- The **Great Bear Rainforest Order (GBRO)** (January 28, 2016) replaces the 2007 South Central Coast and Central North Coast land use orders, as amended in 2009 and 2013. The intent of the Order is to improve maintenance and protection of First Nation forest and cultural values, increase long term protection of aquatic ecosystems, biodiversity and wildlife and to provide for stable social and economic benefits for First Nations and others living and dependent upon the plan area.

Strategies are:

- measurable or verifiable steps or practices that will be carried out in order to achieve consistency with a particular established objective, and
- the situations or circumstances that determine where in a forest development unit the steps or practices will be applied.

Results are:

- measurable or verifiable outcomes in respect of a particular established objective, and
- the situations or circumstances that determine where in a forest development unit the outcomes will be applied.

Note: As per 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 approved Wildlife Habitat Areas.

Under the FPPR there are practices described that must be followed. However, there are additional practice requirements that are optional if in the FSP there are strategies or results provided for the objectives that also meet the intent of the practice. Conversely, some of these optional practice requirements, if committed to in the FSP, may relieve the TSM from having to provide strategies or results for certain objectives. These "default" practice requirements are considered to achieve some of the objectives set by government. It is up to the TSM to indicate whether the strategies and results in the FSP allows the FSP to be exempted from following these optional practice requirements, or whether, by following certain practice requirements, the FSP may not require strategies or results for certain objectives. More information on the objectives, strategies, and results and how they relate to the forest values can be found in the *Supporting Document* to this FSP.

Within the FSP, each Objective, Result and Strategy has been numbered for reference purposes. Each Result or Strategy applies to a specific objective and this relationship has been indicated by the numbering system, for example Strategy 2.2.2.1 relates to Objective 2.2.2.

1.10 Parts of this Document that Comprise the Forest Stewardship Plan

In accordance with the FRPA, the only parts of this document that are considered to be the Forest Stewardship Plan are:

- The title/signature page
- The results, strategies, and identification of which eligible forest practice requirements have been exempted, as described in **Sections 2, 3 and 4**;
- The additional information provided, discussed, or referenced in **Section 5**; and
- The 1:100,000 scale maps indicating the FDUs as attached as part of **Appendix X**.

A separate document has been prepared which provides supporting information for this plan. This “Supporting Document” is not considered part of the Forest Stewardship Plan.

1.11 Acronyms or Terms

Acronyms used in the FSP or Supporting Document are as follows:

AFR:	Aboriginal Forest Resources
AHF:	Aboriginal Heritage Features
AIA:	Archaeological Impact Assessment
AOA:	Archaeological Overview Assessment
ATV:	All Terrain Vehicles
BA:	Basal Area
BCTS:	British Columbia Timber Sales
BEC:	Biological, Ecological, and Climatic; or Biogeoclimatic Ecosystem Classification
C&E:	Compliance and Enforcement
CDC:	Conservation Data Center
CMRD:	Coast Mountains Resource District
CMT:	Culturally Modified Tree
CWD:	Coarse Woody Debris
CWH:	Coastal Western Hemlock
DDM:	Delegated Decision Maker
DFO:	Fisheries and Oceans Canada
ECA:	Equivalent Clearcut Area
EMS:	Environmental Management System
FDP:	Forest Development Plan
FDU:	Forest Development Unit
FL:	Forest License
FLNRO:	Ministry of Forests, Lands and Natural Resource Operations
FLTC:	Forestry License to Cut
FPPR:	Forest Planning and Practices Regulation
FRPA:	Forest and Range Practices Act
FSP:	Forest Stewardship Plan
GAR:	Government Actions Regulation
GBR:	Great Bear Rainforest
GWM:	General Wildlife Measure
ICH:	Interior Cedar-Hemlock
LRD:	Landscape Reserve Design
LRMP:	Land and Resource Management Plan
LUOR:	Land Use Order Regulation
LU:	Landscape Unit
MC:	Monumental Cedar
MH:	Mountain Hemlock
NCMP:	North Coast Marine Plan (2015)
MoFR:	Ministry (or Minister) of Forests and Range
NDT:	Natural Disturbance Type
NAR:	Net Area to be Reforested
NRFL:	Non-Renewable Forest License
NSR:	Not sufficiently restocked

OGMA:	Old Growth Management Area
OSBG:	Objectives set by Government
Period of the FSP:	The 5 year period commencing on the day of approval of the BCTS-Skeena Business Area CMRD FSP Replacement 2016-2021
QP:	Qualified Professional
RIC:	Resource Inventory Committee
RMA:	Riparian Management Area
RMZ:	Riparian Management Zone
RPBio:	Registered Professional Biologist
RPF:	Registered Professional Forester
RRZ:	Riparian Reserve Zone
SP:	Site Plan
SRMP:	Sustainable Resource Management Plan
TFL:	Tree Farm License
TRP:	Total Resource Plan
TSA:	Timber Supply Area
TSM:	Timber Sales Manager Skeena Business Area
TSFA:	Terrain Stability Field Assessment
TSK:	BC Timber Sales – Skeena Business Area
TSL:	Timber Sale License
UWR:	Ungulate Winter Range
VIA:	Visual Impact Assessment
VQO:	Visual Quality Objective
VSC:	Visual Sensitivity Class
WAP:	Watershed Assessment Procedure
WHA:	Wildlife Habitat Area
WTP:	Wildlife Tree Patch

1.12 Objectives, Results, and Strategies

This section describes the objectives set by government (OSBG), the strategies to carry out, and the results to be achieved to ensure that BCTS activities within the FDUs are consistent with applicable legislation and with the OSBG. This information is described in a table that is generally organized to follow the order of objectives as described in the FPPR: soils, timber, wildlife, riparian areas, fisheries sensitive watersheds, community watersheds, biodiversity, visual quality, and cultural heritage resources. After each objective, a reference table is provided that identifies which of the FPPR practice requirements are eligible for exemption (and that relate to the objective), and which are being “exempted” (i.e. will no longer apply to activities under this FSP), or “not exempted” (i.e. the practice requirements continue to apply).

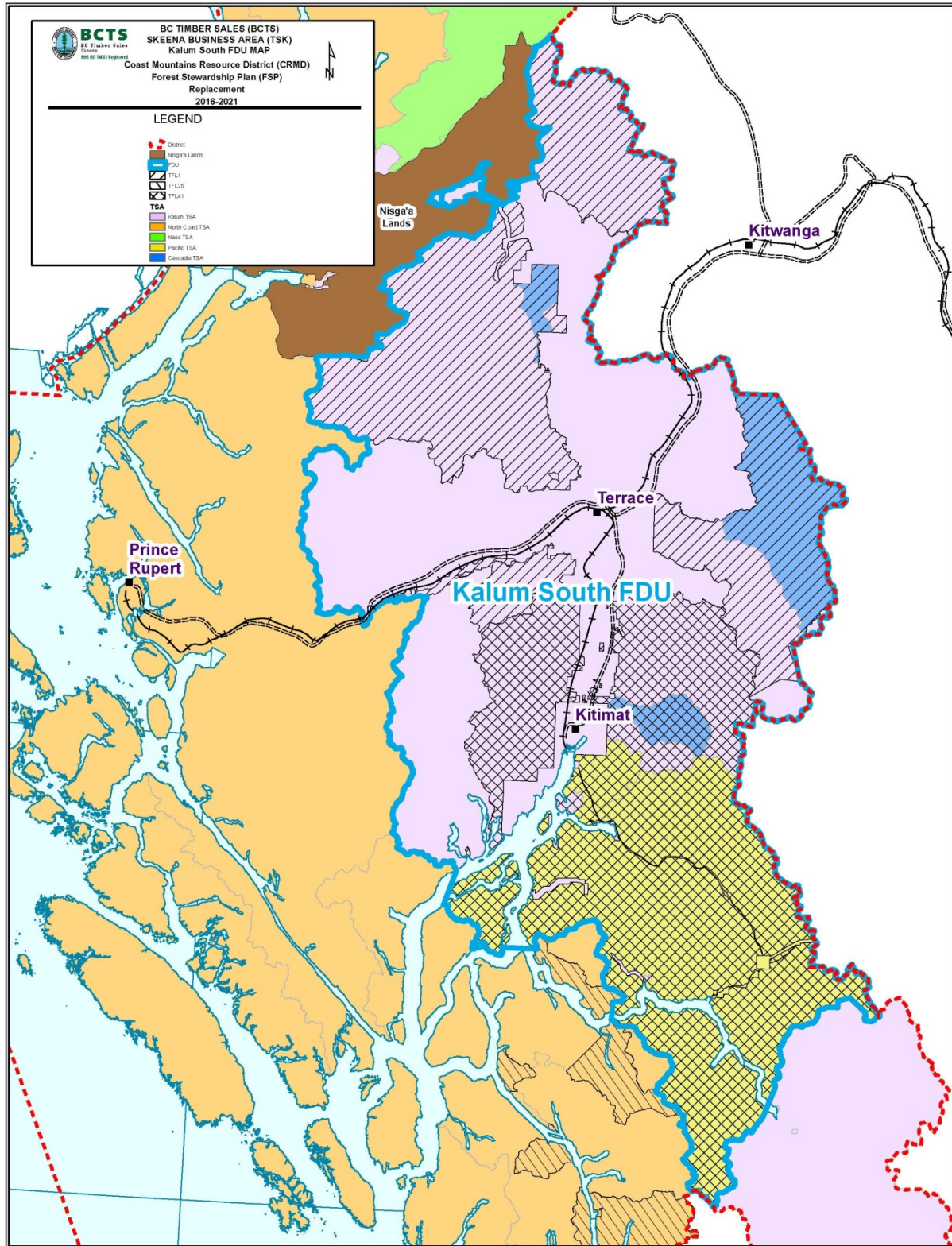


Figure 2: Kalum South FDU Key Map

2 KALUM SOUTH FDU

The Kalum South Forest Development Unit (FDU) is a single unit that encompasses the Cascadia TSA, TFL 1, the Kalum TSA, the Pacific TSA and TFL 41. BC Timber Sales' annual allowable cut apportionment within this FDU is 436,669 m³. The objectives, results and strategies in this chapter apply to the area within the Kalum South FDU (Figure 2).

Objectives for this FDU are derived from the FRPA and the Kalum Sustainable Resource Management Plan (April 28, 2006).

2.1 Soils

Reference Information	
Type of Objective	1. Objective set in regulation: FPPR s. 5 2. Objectives enabled by regulation: N/A 3. Land –Use Objectives: Kalum SRMP Objective 17
Effective Date	1. January 31, 2004 2. N/A 3. April 28, 2006
Mandatory Practice Requirements from the FPPR	FPPR ss. 37, 38, 39, & 40
Practice Requirement(s) Eligible for Exemption	FPPR ss. 35 & 36 Decision: Adopt FPPR ss. 35 & 36

2.1.1 Objective: Soils

FPPR s. 5: *The objective set by government for soils is, without unduly reducing the supply of timber from British Columbia's forests, conserve the productivity and hydrologic function of soils.*

2.1.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 35 and 36 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR sections 35 and 36 apply to the holder's primary forest activities carried out during the term of the plan.

2.2 Timber

Reference Information	
Type of Objective	1. Objectives set in regulation: FPPR s.6 : FRPA s.149 2. Objectives enabled by regulation: GAR s.5 (d) 3. Land –Use Objectives: N/A
Effective Date	1. January 31, 2004 2. January 31, 2004 3. N/A
Mandatory Practice Requirements from the FPPR	FPPR ss. 41,42,43,44,45,46

Reference Information	
Practice Requirement(s) Eligible for Exemption	NA

2.2.1 **Objective: Timber**

FPPR s 6: *The objectives set by government for timber are to,*

- (a) maintain or enhance an economically valuable supply of commercial timber from British Columbia's forests,*
- (b) ensure that delivered wood costs, generally, after taking into account the effect on them of the relevant provisions of this regulation and of the Act, are competitive in relation to equivalent costs in relation to regulated primary forest activities in other jurisdictions and,*
- (c) ensure that the provisions of this regulation and of the Act that pertain to primary forest activities do not unduly constrain the ability of a holder of an agreement under the Forest Act to exercise the holder's rights under the agreement.*

2.2.1.1 STRATEGY

During the period of this FSP the TSM will:

- 1) Refer to available spatial data of known and existing research installations with information from the BC Geographic Warehouse (BCGW), at web address:
<http://catalogue.data.gov.bc.ca/dataset/growth-and-yield-samples-all-status>
- 2) Prior to harvesting, incorporate protective buffers (disturbance free zones) with a minimum radius of 50 meters around established permanent sample plots and research installations, unless alternative measures are determined to be necessary to adequately protect the sample from resource development;
- 3) Notify a BCTS timber sale license or road permit holder, through the site plan, of the location of known sample plots and research installations within the area covered by the site plan.
- 4) Make known to the appropriate FLNRO staff whenever any unidentified permanent sample plots or research installations are found during the course of operational planning and resource development, and
- 5) Incorporate buffered research installations and permanent sample plots into one or more of the following:
 - a. Riparian Reserve Zones;
 - b. Riparian Management Zones;
 - c. Wildlife Tree Retention Areas;
 - d. Old Growth Management Areas; and/or,
 - e. Any other area constrained for non-timber values.

2.2.2 **Objective: Timber**

Kalum SRMP Objective 6: *"Maintain the natural composition of dominant tree species across each landscape unit and throughout the rotation.*

2.2.2.1 RESULT

During the period of this FSP the TSM will ensure that BCTS blocks with a reforestation obligation are reforested to:

- 1) at least the minimum stocking with species identified in the stocking standards as per the BEC classification referenced in Appendix A that apply to this FSP; and
- 2) meet the regeneration delay, free growing heights, and free growing dates as described in the stocking standards (Appendix A) that apply to this FSP.

2.3 Wildlife

Reference Information	
Type of Objective	<ol style="list-style-type: none"> 1. Objective set in regulation: FPPR s.7(1) 2. Objectives enabled by regulation: GAR ss 9, 10, 11, 12, 13 3. Land–Use Objectives: Kalum SRMP Objectives 5, 8, 9,11 and 12
Effective Date	<ol style="list-style-type: none"> 1. January 2004 2. a) <i>Ungulate Winter Range #6-001 Mountain Goat Kalum TSA : November 24, 2005</i> b) <i>Coastal Tailed Frog WHAs Order #6-058 and #6-059 and #6-060 to #6-067: March 28, 2006</i> c) <i>Ungulate Winter Range #6-009 Moose Kalum TSA, Cascadia TSA, Pacific TSA, TFL 1 and TFL 41 : April 21, 2015</i> d) <i>Notice- Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Kalum Forest District: December 30, 2004</i> 3. April 2006
Mandatory Practice Requirements from the FPPR	FPPR ss 69, 70
Practice Requirement(s) Eligible for Exemption	N/A

2.3.1 Objective: Wildlife

FPPR s. 7(1): *The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for*

- (a) *the survival of species at risk,*
- (b) *the survival of regionally important wildlife, and*
- (c) *the winter survival of specified ungulate species.*

2.3.1.1 RESULT

With respect to Marbled Murrelet, the TSM adopts Result 2.6.1.1 (OGMAs within the Kowesas LU) and Result 2.6.3.1 (Kalum SRMP OGMAs outside of the Kowesas LU) during the period of this FSP.

2.3.1.2 STRATEGY

With respect to Marbled Murrelet, the TSM adopts Strategy 2.6.2.1(Patch size and seral stage distribution) during the period of this FSP.

2.3.2 **Objective: Grizzly Bear**

Kalum SRMP Objective 11: *Maintain natural level of forage supply for grizzly bears in the watersheds identified on Map 7 [in SRMP] by:*

- (a) providing an adequate supply of berry feeding;*
- (b) maintaining natural levels of forage supply as present in old growth forests;*
- (c) on the rich and wetter sites implement regeneration and free to grow standards consistent with Table 8. Vary from these standards based on site specific factor, provided parts a) and b) in this objective will be achieved; and,*
- (d) within McKay-Davies and Copper watersheds, no more than 30% of the forested land base, excluding hardwood, will be between 25 and 100 years old.*

2.3.2.1 RESULT

To maintain a natural level of forage supply for grizzly bears, the TSM during the period of the FSP will ensure that stocking standards for the site associations described in Table 8 of the Kalum SRMP will be met when free-growing is declared for BCTS blocks harvested in Grizzly Bear Identified Watersheds². The minimum size for a silvicultural treatable unit is at least one hectare for pure sub-hygric to sub-hydric sites or two hectares of non-contiguous sub-hygric to sub-hydric sites with ecosystem complexes where the individual sites are greater than 0.25 ha and such sites comprise more than 20% of the ecosystem complex area. The minimum size for a willow or red-osier dogwood complex is one hectare for pure willow and/or red-osier dogwood sites and two hectares of noncontiguous willow and/or red-osier dogwood sites within ecosystem complexes where the individual sites are greater than 0.25 ha and such sites comprise 20% or more of the ecosystem complex sites.

2.3.2.2 RESULT

To maintain a natural level of forage supply for Grizzly Bears, the TSM will ensure, during the period of the FSP, that BCTS does not carry out or authorize harvesting operations within the Copper or the McKay-Davies Grizzly Bear Watersheds (as shown on the Kalum SRMP Map 7) if:

- 1) More than 30% of the forested land base, excluding hardwoods, is between 25 and 100 years old within the Cascadia TSA portion of the Copper Grizzly Bear Watershed or within the McKay-Davies Grizzly Bear Watershed, or
- 2) An analysis indicates that having more than 30% of the area within the Cascadia TSA portion of the Copper Grizzly Bear Watershed will not result in the 30% threshold being exceeded for the entire Grizzly Bear watershed and other tenure holders will not be unduly impacted.

2.3.2.3 RESULT

- 1) Where Grizzly Bear wildlife habitat areas WHAs are established through an Order under the *Government Actions Regulation* the General Wildlife Measures stated in the Order will be adhered to and the TSM is exempt from the Results stated in point 3 below.
- 2) Despite (1) above, where the TSM has been granted an exemption under FPPR section 92(1) from the General Wildlife Measures stated in the Order, the TSM will apply wildlife measures and any conditions set out in the exemption approval.

² As shown on the Kalum SRMP Map 7

- 3) Where Grizzly Bear Wildlife Habitat Areas (WHA's) have not been designated through an Order under the Land Act, for those WHA's in draft GAR Order #6-287, the TSM will ensure BCTS operations, during the period of the FSP, will maintain mature and old-growth conditions within the WHA polygons and will only harvest timber and/or construct road within the WHA polygon under the following circumstances:
- a. A field assessment completed by a QP determines the WHA has been inaccurately mapped,
 - b. The road and/or harvest serves operational or safety requirements, including guyline or tailholds, or limits impacts on adjacent environmental values. Cumulative impacts will not exceed:
 - i. 1 hectare of productive forest area in WHA's with >10 ha and ≤50 ha productive forests area,
 - ii. 2 hectares of productive forest area in WHA's with >50 ha and ≤100 ha productive forests area, or
 - iii. The greater of 3 ha or 1% of productive forest area in WHA's with > 100 ha of productive forest area
- or,
- c. BCTS operations will follow the recommendations from a report prepared by a QP who has determined the conditions under which the WHA's ability to provide adequate levels of forage supply will not be compromised by harvest, and
 - d. No pesticides will be applied within a WHA.

2.3.3 **Objective: Wildlife Movement**

Kalum SRMP Objective 8: *Maintain forest stand structure and function for continued wildlife movement through the level pass between the Kiteen (Ksi Gahlt'in) and Cedar drainages identified on Map 5 [of the Kalum SRMP].*

- Within polygon "A", retain 100 % of forested area.
- Within polygon "B", timber harvesting will be limited to partial cutting systems.

2.3.3.1 RESULT

During the period of this FSP the TSM will ensure that, for BCTS operations, within the identified area through the level pass between the Kiteen and Cedar drainages as shown Map 5 of the Kalum SRMP:

- 100% of the forested area located in polygon "A" is retained.
- Within polygon "B", timber harvesting is limited to partial cutting systems.

2.3.4 **Objective: Wildlife Movement**

Kalum SRMP Objective 9: *Maintain forest stand structure and function to facilitate wildlife movement, in the level pass between the Williams and Thomas/Clore watersheds identified on Map 5 [of the Kalum SRMP].*

2.3.4.1 RESULT

- 1) During the period of this FSP the TSM will ensure that BCTS activities within the "Williams and Thomas/Clore SRM" wildlife connectivity corridor identified on Map 5 of the Kalum SRMP for the maintenance of wildlife movement options in the low level pass between the Williams and Thomas/Clore are limited to;

- a. providing or maintaining access to timber that the TSM has determined would be otherwise isolated; or
- b. removal of trees threatened or infested by insects, disease, or fire where there is a risk to forests or forested land outside of the corridor
- c. fire control

2.3.5 **Objective: Wildlife – Special Management Zones**

Kalum SRMP Objective 12: *Maintain wildlife habitat and biodiversity within the Lakelse River Special Resource Management Zone* [Map 8 of the Kalum Sustainable Resource Management Plan].

- *In Subzone 1 – no harvesting of timber or blowdown salvage will occur.*
- *In Subzone 2 – early seral stage target is a maximum of 27%; the maximum opening size is 15 hectares; a minimum 15 % retention within the cut blocks is required to add structural diversity; and in any five year planning cycle at least 50% of the volume harvested is to be harvested by using a selection silviculture system.*

2.3.5.1 RESULT

During the period of this FSP the TSM will ensure that for BCTS operations within the areas identified as Special Resource Management - Lakelse subzones as shown on Map 8 of the Kalum SRMP:

- 1) In Subzone 1:
 - a. No harvesting or road construction within the subzone area unless the TSM determines, with a rationale prepared, kept on file and a copy provided to the CMRD Manager, that harvesting or road construction is necessary for control of insects, disease, or fire.
- 2) In Subzone 2:
 - a. Early seral stage (i.e. less than 40 years) is less than 27% of the subzone area.
 - b. Maximum opening size is less than 15 hectares (net), and retention (WTRA and other reserves) is at least 15% of gross block area.
 - c. At least 50% of the timber volume BCTS harvests during the period of this FSP within this subzone shall be partial cutting systems.

2.4 Water, Fish and Biodiversity within Riparian Areas

Reference Information	
Type of Objective	<p><u>Water:</u> Objectives set in regulation: FPPR s. 8 Objectives enabled by regulation: GAR s 6</p> <p><u>Fish:</u> Objectives set in Regulation: FPPR s. 8, 8.1and 12.3 Objectives enabled by Regulation: GAR s 14 and 15 Land-Use Objectives: N/A</p> <p><u>Biodiversity:</u> Objectives set in Regulation: FPPR s. 8 Objectives enabled by Regulation: N/A Land-Use Objectives: NA</p>
Effective Date	<p>FPPR and GAR: January 31, 2004 Kalum SRMP: April 28, 2006</p>

Reference Information	
Mandatory Practice Requirements from the FPPR	FPPR ss 47, 48, 49, 50, 51(2), 54 & 58
Practice Requirement(s) Eligible for Exemption	FPPR ss. 47, 48, 49, 50(1), 51(1,3) 52(2) 53, 55, 56 & 57
	Decision: Adopt FPPR ss. 47, 48, 49, 50(1) 51(1,3) 52(2) 53, 55, 56 & 57

2.4.1 **Objective: Water, Fish and Biodiversity**

a. FPPR s 8: *The objective set by government for water, fish, wildlife and biodiversity within riparian areas is, without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.*

b. FPPR s 8.1: *Until December 31, 2005 the objective set by government for fish habitat in fisheries sensitive watersheds is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities in the fisheries sensitive watershed from resulting in a material adverse impact on the habitat of the fish species for which the fisheries sensitive watershed was established.*

2.4.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 47, 48, 49, 50(1), 51(1,3) 52(2) 53, 55, 56 and 57 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR 47, 48, 49, 50(1), 51(1,3) 52(2) 53, 55, 56 and 57 of the FPPR apply to the holder's primary forest activities carried out during the term of the plan.

2.4.1.2 RESULT

During the period of this FSP the TSM will ensure that the percentage of total basal area retained as standing trees in riparian management zones within BCTS blocks will be:

- a. A minimum of 20% on S1, S2 and S3 streams;
- b. A minimum of 10% on S4 and S5 streams;
- c. No basal area retention is necessary on S6 streams and
- d. A minimum of 10% on all Wetlands and Lakes.

2.5 Water in Community Watersheds

Reference Information	
Type of Objective	1.Objectives set in regulation: FPPR s. 8.2 2.Objectives enabled by regulation: N/A 3.Land Use Objectives: Kalum SRMP Objective 17
Effective Date	1. January 31, 2004 2. N/A 3. N/A
Mandatory Practice Requirements from the FPPR	FPPR ss. 58, 62 ,63

Practice Requirement(s) Eligible for Exemption	FPPR ss. 59, 60, 61
	Decision: Adopt FPPR ss. 59, 60,61

2.5.1 **Objective: Community Watersheds**

FPPR s. 8.2: *The objective set by government for water being diverted for human consumption through a licensed waterworks in a community watershed is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities within the community watershed from resulting in*

- (a) a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or*
- (b) the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment required under*
 - (i) an enactment, or*
 - (ii) the license pertaining to the waterworks.*

(3) The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.

2.5.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 59, 60 and 61 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR sections 59, 60 and 61 apply to the holder's primary forest activities carried out during the term of the plan.

2.5.2 **Objective: Community Watersheds**

Kalum SRMP Objective 17: *Maintain the quality, quantity, and natural flow regimes of water in watersheds identified on Map 9 as newly established Community Watersheds. Ensure a clearcut equivalency of less than 20% of the watershed area in sub-basins larger than 250 hectares, unless a different threshold is determined as being more appropriate as a measure of maintenance of natural flow regimes.*

2.5.2.1 RESULT

During the period of this FSP the TSM will ensure that within the following Established Community Watersheds:

- Deep Creek
- Drake Creek
- Gitzyon Creek
- Wathl Creek
- Eneeksagilaguaw Creek
- Ksa Miintl Am Hawak Creek
- Rosswood (Clear Creek)
- Usk (Skovens Brook)
- Kleanza (Singlehurst Creek)
- Gossen (Gossen Creek)

- Hatchery Creek

BCTS' activities will not commence where Equivalent Clear-cut Area (ECA)³ exceeds:

- 1) A threshold of 20% for sub-basins larger than 250 ha; or
- 2) For sub-basins smaller than 250 ha, the ECA may exceed the threshold of 20% only if the overall ECA for the entire community watershed basin is less than 20%, or
- 3) Where an assessment is conducted by a QP on a basin or sub-basin of an Established Community Watershed, and;
 - a. the assessment determines an ECA threshold for a basin or sub basin greater than the thresholds identified in (1) or (2) and that new threshold is determined as an appropriate measure of maintenance of natural flow regimes, or
 - b. the assessment identifies a different threshold or a parameter to be a more appropriate measure for maintenance of natural flow regimes

2.6 Biodiversity

Reference Information	
Type of Objective	Objectives set in regulation: FPPR ss. 8, 9 and 9.1 Objectives enabled by regulation: <i>Order establishing Provincial Non-Spatial Old Growth Objectives</i> (applies to the Kowesas LU) Land-Use Objectives: Kalum SRMP Objectives 1, 2,3, 4, 7,10, 13 and 14
Effective Date	FPPR and GAR: January 31, 2004 Old Growth Order: June 30 2004 Kalum SRMP: April 28, 2006
Mandatory Practice Requirements from the FPPR	FPPR s. 68
Practice Requirement(s) Eligible for Exemption	FPPR ss. 64 ,65, 66, 67 Decision: Adopt FPPR ss. 67 Decision: Exempt FPPR ss. 64, 65 as per FPPR s 12.4 (Strategy 2.6.21 and Result 2.6.2.2 applies) and FPPR s 66 as per FPPR s 12.5 (Result 2.9.9.1 applies)

2.6.1 Objective: Biodiversity - Landscape Level

a. FPPR s. 8: *The objective set by government for water, fish, wildlife and biodiversity within riparian areas is, without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.*

b. FPPR s. 9: *The objective set by government for wildlife and biodiversity at the landscape level is, without unduly reducing the supply of timber from British Columbia's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape.*

³ Consistent with the *Watershed Assessment Guidebook* (2nd Ed, version 2.1 April 1999), or with another process determined to be acceptable by a Qualified Professional.

2.6.1.1 RESULT

During the period of this FSP the TSM will ensure that BCTS does not harvest within the draft Old Growth Management Areas (OGMAs) as identified in the draft *Kowesas Sustainable Resource Management Plan* (October 2006) within the Kowesas LU other than for insect or disease control measures that are necessary to mitigate severe damage to the habitat attributes in the OGMAs, or other forest values in the landscape, or in accordance with strategy 2.6.4.2.

2.6.1.2 RESULT

During the period of this FSP the TSM will undertake to comply with section 67 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR section 67 applies to the holder's primary forest activities carried out during the term of the plan.

2.6.2 **Objective: Biodiversity - Landscape Level**

a. Kalum SRMP Objective 1: *Maintain a range of forest seral stages by biogeoclimatic variant, within each landscape unit, consistent with Tables 1, 2 and 3 [of the Kalum Sustainable Resource Management Plan].*

b. Kalum SRMP Objective 7: *Attain a landscape pattern of patchiness that, over a long term, reflects the natural disturbance patterns as per Table 7 [of the Kalum Sustainable Resource Management Plan].*

2.6.2.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) Areas harvested by BCTS will be of a size and distribution that emulates the historical temporal and spatial distribution of the Natural Disturbance Types (NDTs) for the forests within the Kalum South FDU area.
- 2) Areas harvested by BCTS will move towards the patch size and seral stage distribution targets that are in place for the NDTs. An analysis will be calculated separately for each LU that overlaps the Kalum South FDU, in accordance with items 3 and 4 below.
- 3) Temporal: Conduct seral stage analysis by LU and natural disturbance type
 - a. Determine proportional representation of the LUs within the Kalum South FDU
 - b. Determine representation with respect to sensitive areas
 - c. Determine need for actions to address seral stage imbalances, based on the applicable land use objective(s)*
 - d. If necessary, prepare action plan(s) to address seral stage imbalances and implement the action plan
- 4) **Spatial:** Analyze patch size distribution by LU and natural disturbance type
 - a. Determine proportional representation of existing patch sizes within the Kalum South FDU
 - b. Determine target patch size distribution for the Kalum South FDU
 - c. Determine need for actions to address patch size imbalances, based on the applicable land use objective(s)*
 - d. If necessary, prepare action plan(s) to address patch size distribution imbalances and implement the action plan.
- 5) Prepare a summary of the seral stage and allowable patch size distribution analysis results within the Kalum South FDU

* In the Kalum South FDU the applicable land use objective is the Kalum SRMP (April 2006) with the exception of the Kowesas LU where the applicable land use objective is the Old Growth Order (June 2004), unless superseded by a new land use objective.

2.6.2.2 RESULT

During the period of this FSP the TSM will ensure that:

- 1) Every three years, by June 1st, a report summarizing the status of the patch and seral distribution within the FDU area will be completed by the TSM. The most recent update to the analysis was completed in 2015. The report will reflect projected changes (i.e. planned harvest) for at least the upcoming five year period. Where this report indicates movement away from the target* levels, a rationale will be prepared that describes management strategies for moving towards the target* levels.
- 2) Within a specified period after the approval of this FSP, harvest activities under this FSP are shown to be static or moving toward the target* levels for these areas. This specified period shall be five (5) years for each Landscape Unit, unless otherwise determined by mutual agreement between the TSM and the CMR District Manager.

* Target levels for Landscape Units and Special Resource Management Zones are from the Kalum SRMP.

2.6.3 **Objective: OGMAs**

Kalum SRMP Objective 3: *Maintain or recruit old seral stage forest, reflective of the full range of ecosystems, including some with interior forest conditions, throughout each rotation within the Old Growth Management Areas (OGMAs) shown on Map 4 [of the Kalum Sustainable Resource Management Plan]. Forest harvesting activities in the OGMAs are limited to insect or disease control measures that are necessary to mitigate severe damage to the habitat attributes in the OGMAs, or other forest values in the landscape.*

2.6.3.1 RESULT

During the period of this FSP the TSM will ensure that BCTS does not harvest within the Old Growth Management Areas (OGMAs) shown on Map 4 of the Kalum Sustainable Resource Management Plan other than for insect or disease control measures that are necessary to mitigate severe damage to the habitat attributes in the OGMAs, or other forest values in the landscape, or in accordance with strategy 2.6.4.2

2.6.4 **Objective: OGMAs**

Kalum SRMP Objective 4: *Provide operational flexibility in managing OGMAs by allowing up to 10 hectares or 10% of the individual OGMA area, whichever is less, to be disturbed for one or more of the following purposes:*

- *allowing road development where no practicable alternative exist;*
- *to better reflect physical features that were intended to form the actual boundaries of the OGMA;*
- *to improve harvest boundary alignment in a way that will contribute to the maintenance of the OGMA;*
- *to address a compelling forest health issue; or,*
- *to shift the location of the contiguous area of the OGMA to improve the retention of old forest attributes as identified through field assessment.*

The allowable disturbance described above is conditional upon a forest agreement holder identifying and reserving from harvesting an alternative area(s) within the same BEC variant within a landscape unit, provided the alternative area:

- *is of equal or greater extent in total than the area to be disturbed; and,*
- *will result in equal or greater retention of key old forest attributes that are understood to be important for biodiversity conservation.*

2.6.4.1 RESULT

During the period of this FSP the TSM will ensure that BCTS operations will not exceed 10 hectares or 10% of an individual Old Growth Management Area (OGMA), whichever is less, to be disturbed for one or more of the following purposes:

- 1) allowing road development where no practicable alternative exist;
- 2) to better reflect physical features that were intended to form the actual boundaries of the OGMA;
- 3) to improve harvest boundary alignment in a way that will contribute to the maintenance of the OGMA;
- 4) to address a compelling forest health issue; or,
- 5) to shift the location of the contiguous area of the OGMA to improve the retention of old forest attributes as identified through field assessment.

2.6.4.2 STRATEGY

During the period of this FSP the TSM will ensure that the process of amending OGMA's will follow the approved *Old Growth Management Area (OGMA) Amendment Policy – Skeena Region (February 9, 2011)* and as may be amended from time to time.

2.6.5 **Objective: Biodiversity - Seral Stage Forest**

Kalum SRMP Objective 2: *Maintain old seral stage forest within each undeveloped watershed⁴ ...listed in Table 4 [of the Kalum Sustainable Resource Management Plan] and shown on Map 3 [of the Kalum Sustainable Resource Management Plan] consistent with Table 5 [of the Kalum Sustainable Resource Management Plan]*

2.6.5.1 STRATEGY

During the period of this FSP, prior to BCTS harvesting within an Undeveloped Watershed (UW) the TSM will:

- 1) Determine the amount of old seral stage forest that exists within the portion of the UW that falls within the Kalum South FDU.
- 2) Subject to section (3), if the amount of old seral stage forest is equal to or exceeds the minimum targets for the Biogeoclimatic Ecological Classification (BEC) site series⁵ described in Objective 2 (Table 5) of the Kalum SRMP, no further action is required.
 - a. If the amount is below the minimum targets, and if there is insufficient old seral stage forest, designate old seral stage forest recruitment areas to capture the BEC site series.

⁴ Jesse, Emsley, Wathlsto, Hugh, Brim, Wahoo, and Owyacumish

⁵ Site series may be represented through Predictive Ecosystem Mapping, or some other surrogate as agreed to by the CMRD Manager

- b. For BEC site series that amount to less than 10 ha in a UW, the targets will not apply.
 - c. If the UW includes a conservancy area the entire UW area will be assessed for old seral stage forest
- 3) Section 2 does not apply to a road if
- a. The road is necessary to access timber beyond the occurrence of a BEC site series that is below the minimum threshold if that timber would otherwise be isolated from harvest, and
 - b. Terrain conditions such as slope, gradient or terrain stability constrain road locations and dictate that sections of road enter and leave a BEC site series that is below the minimum threshold to access timber that otherwise would be isolated from harvest, or
 - c. No practicable alternative exists.

2.6.6 **Objective: Biodiversity - Rare Plant Communities**

Kalum SRMP Objective 10: *Conserve rare plant communities on the Skeena Islands identified on Map 6 [of the Kalum Sustainable Resource Management Plan]*

2.6.6.1 RESULT

During the period of this FSP the TSM will ensure that within the Skeena Islands Area as shown on Map 6 of the Kalum SRMP:

- 1) BCTS harvest operations will be in accordance with guidance mutually agreed between representatives of BCTS and the FLNRO representative*, or
- 2) BCTS harvest operations will be conducted as follows:
 - a. For forest types** identified as “High” conservation value***, no harvesting will occur, other than for road construction necessary to access other areas.
 - b. For forest types** identified as “Medium” conservation value***, harvesting will be for deciduous trees only (other than incidental harvest of coniferous trees for road construction or safety purposes), employing small-patch harvesting (openings less than 5 ha). At least 70% of the area will be maintained at a mid-seral (or older) stage, and at least 30% of the areas will be at a mature or older seral stage. A minimum 50m conservation reserve will be maintained around all back channels
 - c. For forest types** identified as “Low” conservation value***, at least 30% of the area will be maintained at a mid-seral (or older) stage. A minimum 50m riparian reserve will be maintained around back channels including all wildlife trails associated with back channels.

* FLNRO representative is the Ecosystem Specialist or Ecosystem Biologist

** Forest types are limited to CWHws1/07; CWHws1/08; CWHvm1/09; CWHvm1/10

*** As shown on Map 6 of the Kalum SRMP

2.6.7 **Objective: SRMZ**

Kalum SRMP Objective 13: *Maintain biological diversity and ecosystem representation within the Upper Kitsumkalum Valley by not harvesting timber within the Upper Kitsumkalum SRMZ [Map 8 of the Kalum Sustainable Resource Management Plan]. Road construction is acceptable to access timber outside of SRMZ where there is no other practicable route solution*

2.6.7.1 RESULT

During the period of this FSP the TSM will ensure BCTS does not harvest with the Upper Kitsumkalum SRMZ as shown on Map 8 of the Kalum SRMP. Where access is required to the timber harvesting land base beyond the Upper Kitsumkalum Special Resource Management Zone (SRMZ), and where the only practicable way to provide for this access is by building road in or through the SRMZ, a rationale will be prepared by the TSM, kept on file and a copy provided to the CMRD Manager prior to a Timber Sale License issuance or Road Permit application. This rationale will detail why the road is required in or through the Upper Kitsumkalum SRMZ, including what options were evaluated.

2.6.8 **Objective: Biodiversity - Fens**

Kalum SRMP Objective 14: *Conserve uncommon reticulated fens (Map 8 of the Kalum Sustainable Resource Management Plan) within the Miligit Valley area.*

2.6.8.1 RESULT

During the period of this FSP the TSM will ensure that no BCTS harvesting or road construction will occur within the uncommon reticulated fens in the Miligit Creek Sensitive Area, as shown on Map 8 of the Kalum SRMP.

2.6.9 **Objective: Wildlife Trees**

a. FPPR s. 9.1: *The objective set by government for wildlife and biodiversity at the stand level is, without unduly reducing the supply of timber from British Columbia's forests, to retain wildlife trees.*

b. Kalum SRMP Objective 5: *Maintain structural diversity in managed stands by retaining wildlife tree patches in each cut block, over the rotation, consistent with the targets in Table 6 [of the Kalum Sustainable Resource Management Plan]. Shift or vary targets shown in Table 6 [of the Kalum Sustainable Resource Management Plan] among cut blocks within a cut block aggregate⁶ based on risks to biodiversity.*

2.6.9.1 RESULT

During the period of this FSP the TSM will:

- 1) Maintain structural diversity in managed stands by retaining wildlife tree retention areas (WTRA) within each cut block, over the rotation, by following the targets in Table 6 [of the *Kalum Sustainable Resource Management Plan*]. Shifting or varying WTRA targets shown in Table 6 among cut blocks within a cut block aggregate⁶ will be based on the risk to biodiversity.
- 2) Allow natural processes (insect, diseases, blowdown) to occur within WTRA's within cutblocks or cutblock aggregates unless infestation or infection in the WTRA threatens to spread to adjacent forested areas. Where intervention is required, treatment will retain a diversity of structural attributes consistent with 1. above or a suitable replacement WTRA will be located.
- 3) Not harvest timber from a WTRA unless trees on the net area to be reforested of the cutblock to which the WTRA area relates have developed attributes that are consistent with a mature seral condition except where:
 - a. harvesting is required to access timber that otherwise would be isolated from harvest beyond the WTRA area; or
 - b. terrain conditions such as slope, gradient, or terrain stability constrain road locations and dictate that sections of a road enter and leave the WTRA to access timber that otherwise would be isolated from harvest; or

⁶Cut block aggregate: A group of cut blocks which are within 10 kilometers radius of each other and where the Site Plan for these blocks refers to the fact that they are a cut block aggregate

- c. no practicable alternative exists
- 4) Prior to harvesting within a WTRA, BCTS will identify and establish a replacement WTRA area with similar stand characteristics to the WTRA planned for harvest and will ensure that the associated Site Plan is amended to account for the reconfiguration.

2.7 Visual Quality

Reference Information	
Type of Objective	<ol style="list-style-type: none"> 1. Objectives set in regulation: FPPR s 9.2(2) 2. Objectives enabled in regulation: GAR 7(1), 7(2) and 17 3. Kalum SRMP Objectives 15 and 16
Effective Date	<ol style="list-style-type: none"> 1. FPPR: January 31 2004 2. Kalum District Manager's letters dated January 7 1997, September 8 1998 and March 23 2000 established VQOs and designated Scenic Areas in the Kalum District. 3. April 28, 2006
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

2.7.1 **Objective: Visual Quality - Scenic Areas**

FPPR s. 9.2(2): *The objective set by government in relation to visual quality for a scenic area, that*

- (a) was established on or before October 24, 2002, and*
- (b) for which there is no visual quality objective is to ensure that the altered forest landscape for the scenic area*
- (c) in visual sensitivity class 1 is in either the preservation or retention category,*
- (d) in visual sensitivity class 2 is in either the retention or partial retention category,*
- (e) in visual sensitivity class 3 is in either the partial retention or modification category,*
- (f) in visual sensitivity class 4 is in either the partial retention or modification category, and*
- (g) in visual sensitivity class 5 is in either the modification or maximum modification category.*

2.7.1.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) A visual impact assessment (VIA) will be carried out by a QP in accordance with the methodology identified in the Visual Impact Assessment Guidebook (<https://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/visual/htoc.htm#cont>) and will be attached or referred to in the Site Plan for BCTS blocks that are located within known scenic areas and that are identified with a Visual Quality Objective (VQO).
 - a. Visual Sensitivity Classes will be treated as having VQOs as follows:
 - i. VSC 1 = Retention
 - ii. VSC 2 = Partial Retention
 - iii. VSC 3 and 4 = Modification

iv. VSC 5 = Maximum Modification

- 2) The visual impact assessment will :
 - a. review the visual landscape from selected viewpoints (see below for viewpoint selection and criteria)
 - b. describe how the visual design conforms with the VQO.
- 3) The block design, at the date of TSL issuance, will reflect the visual design as described in the visual assessment.
- 4) Viewpoints are identified as follows:
 - a. As shown on the FSP maps (as amended from time to time), or
 - b. At a point along a travel corridor that allows for an extended viewing experience, or
 - c. At a place, along a travel corridor, that persons can stop for an extended viewing experience.

For the purpose of 4 (b) and (c) “extended viewing experience” means greater than 60 seconds uninterrupted view at the posted/normal speed limit. A travel corridor is defined as a route, highway or waterway used by the public to travel from one geographic area to another.

- 5) An exemption has been provided by the CMRD Manager where catastrophic damage such as wind-throw, fire, disease, or pest damage occurs and any timber harvest by BCTS would cause the scale criteria for a VQO to be exceeded. Where practicable, road location and/or block design will be modified to mitigate impact to the visual condition by incorporating visual design elements. Visual design elements include cut-block shape, size, pattern and retention of wildlife trees (patches and/or single trees).

2.7.2 **Objective: Visual Quality - Upper Copper River**

Kalum SRMP Objective 15: *Maintain a feeling of remoteness and pristine viewscape on the Upper Copper River (Zymoetz River) above the Limonite Creek (within the Kalum SRMP area). The following are practice requirements:*

- (a) permit only one bridge crossing at any time; and,
- (b) retain a minimum of 100 meters no harvest reserve on both sides of the river. Less than 100 meters reserve is acceptable where this makes “best” operational/environmental practice, or for other site specific-reasons, provided the objective is met.

2.7.2.1 STRATEGY

During the period of this FSP the TSM will ensure that on the Upper Zymoetz (Copper) River (i.e. upstream of the confluence with Limonite Creek within the Kalum SRMP area):

- 1) BCTS will have no more than one active bridge crossing on the Upper Zymoetz (Copper) River (i.e. upstream of the confluence with Limonite Creek within the Kalum SRMP area)
- 2) BCTS will establish a 100 m reserve along either side of the river, or less if “Preservation” visual quality can be achieved from viewpoints on the river bank or on the waterway, as described/ determined in a Site Plan for the area where the reserve is less than 100 m (All distances are measured in slope distance).

2.7.3 **Objective: Visual Quality - Sue Channel**

Kalum SRMP Objective 16: *Maintain the visual quality of the area visible from the Sue Channel/Hawkesbury Island protected area [Map 8 of the Kalum Sustainable Resource Management Plan] by:*

- *applying single tree or group selection silviculture system; and,*
- *limiting the maximum opening size to 1-2 tree lengths.*

2.7.3.1 STRATEGY

During the period of this FSP the TSM will maintain the visual quality of the area visible from the Sue Channel/Hawkesbury Island protected area (Map 8 of the Kalum Sustainable Resource Management Plan) by applying single tree or group selection silviculture system; and limiting the maximum opening size to 1-2 tree lengths.

2.8 Cultural Heritage Resources

Reference Information	
Type of Objective	1. Objectives set in regulation: FPPR s 10 2. Objectives enabled by regulation: N/A 3. Land-Use objectives: N/A
Effective Date	1. January 31 2004 2. N/A 3. N/A
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

2.8.1 **Objective: Cultural Heritage Resources**

FPPR s. 10: *The objective set by government for Cultural Heritage resources is to conserve, or, if necessary, protect cultural heritage resources that are:*

- (a) the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and*
- (b) not regulated under the Heritage Conservation Act.*

2.8.1.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) A Cultural Heritage Resource Evaluation (CHRE) will be completed on all BCTS blocks and roads before harvesting or construction activities are authorized or mechanical site preparation activities are prescribed. A CHRE is defined as a process conducted by field and office persons, consisting of the following steps:
 - a. Complete an initial review of all proposed blocks and roads in relation to known information regarding the location, nature and extent of cultural heritage resources and document the results.

- b. Provide the results of the initial review to potentially affected First Nations identified through the Consultative Areas Database (CAD). Request of the First Nations any additional information regarding cultural heritage resources that may be present and potentially affected by the proposed blocks and roads or mechanical site preparation activities.
 - c. Complete a field evaluation for the presence of cultural heritage resources and record information related to the location, nature and extent of any cultural heritage resources that are identified.
 - d. Evaluate the direct impact of the planned development on the cultural heritage resources identified, if any.
 - e. If necessary, following consultation, prepare recommendations in order to conserve, mitigate impacts, or, as required, protect the cultural heritage resource at the location, considering:
 - i. the relative value or importance of the cultural heritage resource to a traditional use by an aboriginal people;
 - ii. if the cultural heritage resource is of continuing importance to the First Nations;
 - iii. the historical extent of the traditional use of the cultural heritage resource; and,
 - iv. the impact on the FSP holders government granted timber harvesting rights of conserving or protecting the cultural heritage resource.
- 2) All BCTS harvesting, road construction, and mechanical site preparation activities will follow the recommendations given in the Cultural Heritage Resource Evaluation referred to in (1) above, that are practicable and are required to conserve or, if necessary, protect a cultural heritage resource if it is of continuing importance to the First Nations.
- 3) For previously unidentified cultural heritage resources encountered during harvesting, road construction, or mechanical site preparation activities, the TSM will:
- a. stop the activity to the extent necessary to protect the cultural heritage resource until a Cultural Heritage Resource Evaluation (with respect to the previously unidentified feature) is carried out; and,
 - b. ensure that BCTS harvesting, road construction, or mechanical site preparation activities continue in a manner that follows the recommendations given in the Cultural Heritage Resource Evaluation referred to in (a) above, that are practicable and are required to conserve or, if necessary, protect a cultural heritage resource if it is of continuing importance to the First Nations.

2.8.1.2 STRATEGY

During the period of this FSP the TSM will ensure that for any block with western redcedar (*Thuja plicata*) or yellow-cedar (*Chamaecyparis nootkatensis*), First Nations' removal of these species from retention areas (including WTRAs or Riparian Management Zones⁷ (RMZs) for cultural purposes can occur as follows:

- no more than 5% of co-dominant/ dominant stems within a WTRA are removed, with no more than 10% of stems within a given hectare, unless the Site Plan describes how the WTRA is able to retain its function; and

⁷ Removal of stems from within Riparian Reserve Zones will be as per the *Forest Planning and Practices Regulation* – currently, removal for cultural purposes is not an allowed activity within RRZs.

- removal of co-dominant/ dominant stems from within a RMZ area must be consistent with the RMZ retention described in Result 2.4.1.1, unless the Site Plan describes how the RMZ is able to retain its function; and
- To address safety issues there is a signed letter of collaboration between authorized representatives of a First Nation and the TSL holder, with a copy of that letter provided to the TSM and the CMR District Manager, that will permit FN's removal of western redcedar (*Thuja plicata*) or yellow-cedar (*Chamaecyparis nootkatensis*) from within an area within an active cutting authority that is held by BCTS or one of its licensees.

2.9 Recreation Trails and Sites

Reference Information	
Type of Objective	1. Objective set in regulation: FRPA ss. 56, 180 & 181 2. Objectives enabled by regulation:, GAR s. 5(f), 5(g) 3. Land Use Objectives: N/A
Effective Date	1. January 31 2004 2. a) Order to Establish Objectives for a Recreation Site, Recreation Trail, or Interpretive Site (July 25, 1997). b) Order to Establish Objectives for a Recreation Site, Recreation Trail, or Interpretive Site (November 8, 1996). 3. N/A
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

2.9.1 **Objective: Interpretive Forest Sites, Recreation Sites and Recreation Trails**

The recreation objectives are identified in the Orders associated with the established interpretive forest sites, recreation sites and recreation trails.

2.9.1.1 RESULT

During the period of this FSP the TSM will ensure that on the following recreation trails with established objectives:

- Big Cedar Recreation Trail
- Bonney Lake Portage Recreational Trails
- Clearwater Lakes Recreation Site
- Hai Lake Recreation Trail
- Maroon Mountain Recreation Trail
- Mt. Elizabeth Recreation Trail
- Onion Lake Recreation Trail
- Onion Lake Recreation Ski Trails
- Pine Lake Recreation Trail
- Robinson Ridge Recreation Trail
- Sterling Mountain Recreation Trail
- Thornhill Mountain Recreation Trail

- 1) No disturbance by BCTS harvesting, road construction, or silviculture activities to natural vegetation occurs within 10 m of trail centerline other than for a required crossing unless the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail grants an exemption for that activity.
- 2) Development activities that occur from 10 meters to 50 meters either side of trail centerline:
 - a. will only occur after the planned activity has been approved by the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail and
 - b. the authorized development activities comply with the conditions of the approval.
- 3) The trail location is re-established if the crossing disturbs it. Alternatively, the trail can be relocated away from the crossing. The trail crossing, re-establishment, or trail relocation will require approval by the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail.
- 4) A trail crossing is deactivated once it is no longer required.

2.9.1.2 RESULT

During the period of this FSP the TSM will ensure that on the following Recreation Sites with established objectives:

- Clearwater Lakes Recreation Site
- Deception Lake Recreation Site
- Glory Hole Recreation Site
- Pine Lake Recreation Site
- Red Sand Lake Interpretive Forest Site
- West Lake Recreation Site

No disturbance⁸ to areas within 10 m of lake shorelines, river, stream, or creek-banks, or marine foreshore. (This only applies to sites where an RRZ is not in existence). The remainder of the area within the recreation sites will be reserved from disturbance other than where BCTS and the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the site agree the disturbance will be for the improvement of the recreation experience, or where action or access is required to prevent or address potential losses due to fire, wind, or forest health factors.

2.9.1.3 RESULT

During the period of this FSP the TSM will ensure that for the following trails:

- Big Cedar Recreation Trail
- Onion Lake Recreation Ski Trails
- Robinson Ridge Recreation Trail
- Sterling Mountain Recreation Trail

No BCTS motorized activity* from June 1 to October 31, except as follows:

⁸ From activities related to BCTS' road construction, harvesting or silviculture activities.

- BCTS Motorized activity for silviculture or planning activities (or for access to silviculture or planning activities) is acceptable if the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the site grants an exemption for the activity.

*with the exception for the Onion Lake Recreation Ski trails where there will be no motorized BCTS activity within the winter months under snow conditions.

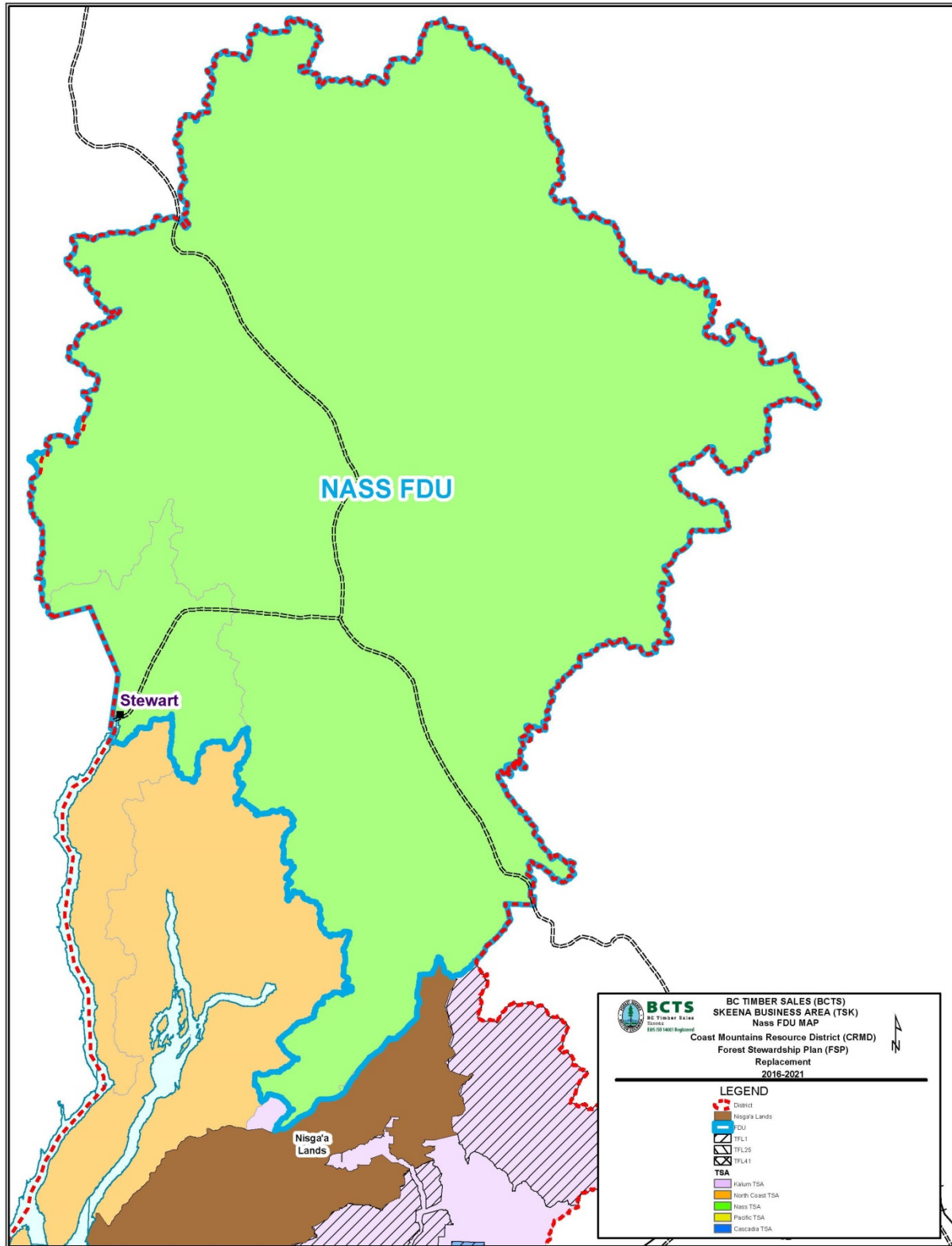


Figure 3: Nass FDU Key Map

3 NASS FDU

The Nass Forest Development Unit (FDU) is a single unit that encompasses the entire Nass TSA. The Nass FDU covers the operations of BCTS – Skeena Business Area including Timber Sale Licences (TSLs) issued by the Timber Sales Manager. BCTS pricing and operating areas are spread throughout the entire Nass TSA providing a good timber type representation “*to market Crown timber to establish market price and capture the value of the asset for the public*”. BC Timber Sales’ annual allowable cut apportionment within the Nass TSA is 238,511 m³. The objectives, results and strategies in this chapter apply to the area within the Nass FDU (Figure 3).

The objectives for the Nass FDU derive from the FRPA and, in part, the Nass South SRMP LUOR Order (February 25, 2016).

3.1 Soils

Reference Information		
Type of Objective	1. Objectives set in regulation: FPPR s.5 2. Objectives enabled by regulation: N/A 3. N/A	
Effective Date	1. January 31, 2004 2. N/A 3. N/A	
Mandatory Practice Requirements from the FPPR	FPPR ss. 37, 38, 39, 40	
Practice Requirement(s) Eligible for Exemption	FPPR ss. 35, 36	Decision: Adopt FPPR ss. 35 & 36

3.1.1 Objective: Soils

FPPR s.5: *The objective set by government for soils is, without unduly reducing the supply of timber from British Columbia’s forests, to conserve the productivity and the hydrologic function of soils.*

3.1.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 35 and 36 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR sections 35 and 36 apply to the holder’s primary forest activities carried out during the term of the plan.

3.2 Timber

Reference Information	
Type of Objective	1. Objective set in regulation: FPPR s.6, FRPA s. 149 2. Objectives enabled by regulation: 3. Land –Use Objectives: N/A
Effective Date	1. January 31, 2004 2. N/A 3. N/A
Mandatory Practice Requirements from the FPPR	FPPR ss. 41,42, 43, 44, 45,46
Practice Requirement(s) Eligible for Exemption	NA

3.2.1 **Objective: Timber**

FPPR s. 6: *The objectives set by government for timber are to,*

- (a) maintain or enhance an economically valuable supply of commercial timber from British Columbia's forests, and*
- (b) ensure that delivered wood costs, generally, after taking into account the effect on them of the relevant provisions of this regulation and of the Act, are competitive in relation to equivalent costs in relation to regulated primary forest activities in other jurisdictions and,*
- (c) ensure that the provisions of this regulation and of the Act that pertain to primary forest activities do not unduly constrain the ability of a holder of an agreement under the Forest Act to exercise the holder's rights under the agreement.*

3.2.1.1 RESULT

During the period of this FSP, the TSM will ensure that BCTS blocks with a reforestation obligation are reforested to:

- 1) At least the minimum stocking with species identified in the stocking standards as per the BEC classification referenced in Appendix A that apply to this FSP; and
- 2) Meet the regeneration delay, free growing heights, and free growing dates as described in the stocking standards (Appendix A) that apply to this FSP.

3.2.1.2 RESULT

The TSM will ensure that during the period of this FSP, BCTS does not carry out any timber harvesting or road building activities within the proposed Gitanyow treaty settlement lands (as shown on Nass South SRMP Map 17) unless otherwise agreed to with Gitanyow.

3.2.1.3 STRATEGY

During the period of this FSP the TSM will:

- 1) Refer to available spatial data of known and existing research installations with information from the BC Geographic Warehouse (BCGW), at web address:
<http://catalogue.data.gov.bc.ca/dataset/growth-and-yield-samples-all-status>
- 2) Prior to harvesting, incorporate protective buffers (disturbance free zones) with a minimum radius of 50 meters around established permanent sample plots and research installations, unless alternative measures are determined to be necessary to adequately protect the sample from resource development;
- 3) Notify a BCTS timber sale license or road permit holder, through the site plan, of the location of known sample plots and research installations within the area covered by the site plan.
- 4) Make known to the appropriate FLNRO staff whenever any unidentified permanent sample plots or research installations are found during the course of operational planning and resource development, and
- 5) Incorporate buffered research installations and permanent sample plots into one or more of the following:
 - a. Riparian Reserve Zones;
 - b. Riparian Management Zones;
 - c. Wildlife Tree Retention Areas;
 - d. Old Growth Management Areas; and/or,
 - e. Any other area constrained for non-timber values.

3.3 Wildlife

Reference Information	
Type of Objective	<ol style="list-style-type: none"> Objectives set in regulation: FPPR s. 7(1) Objectives enabled by regulation: GAR sections 9,10,11,12, 13 Land Use Objectives: Nass South SRMP LUOR Order Objectives 22,23,24,25,26,27,28,29,30,31,32
Effective Date	<ol style="list-style-type: none"> <ol style="list-style-type: none"> January 31, 2004 <i>Notice- Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Kalum Forest District</i>: December 30, 2004 <ol style="list-style-type: none"> <i>Ungulate Winter Range (mountain goat) - #U-6-002 Nass TSA and Upper Portion of Ningunsaw and Unuk Watershed</i>: December 12, 2008. <i>UWR #6-018 Moose Nass TSA</i>: September 17, 2014. <i>Order-Specified Area #6-282 Grizzly Bear – Nass Timber Supply Area</i>: October 20, 2014. <i>Ministerial Order Land Objectives Order Nass South Sustainable Resource Management Plan Area</i>: February 25, 2016
Mandatory Practice Requirements for the FPPR	FPPR ss. 69, 70
Practice Requirement(s) Eligible for Exemption	N/A

3.3.1 Objective: Wildlife

FPPR s. 7(1): *The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for*

- (a) the survival of species at risk;*
- (b) the survival of regionally important wildlife; and*
- (c) the winter survival of specified ungulate species.*

3.3.1.1 STRATEGY

With respect to Marbled Murrelet, the TSM adopts Strategies 3.7.1.1 (Patch Size Distribution and Seral Stage), 3.7.7.1(OGMA), 3.7.8.1(Ecosystem Network-Hydroriparian Zone), 3.7.9.1 (Ecosystem Network-Structural Connectivity), and 3.7.10.1(Ecosystem Network-Buffer) during the period of this FSP.

3.3.1.2 RESULT

With respect to Marbled Murrelet, the TSM adopts Result 3.7.1.2 (Patch Size Distribution and Seral Stage) during the period of this FSP.

3.3.2 Objective: Goshawk

a. Nass South SRMP LUOR Order Objective 24: *Maintain nesting and post-fledging habitats at known goshawk nest areas, in order to support continued use of and reproduction in those areas.*

- b. Nass South SRMP LUOR Order Objective 25: *Maintain all known goshawk nest and post-fledging areas.*
- c. Nass South SRMP LUOR Order Objective 26: *Between February 15 and August 15, around any active goshawk nest, maintain a 500-metre buffer in which there are no mechanical activities allowed. Mechanized activities mean road construction and timber harvesting / mechanized silviculture activities.*
- d. Nass South SRMP LUOR Order Objective 27: *Between February 15 and August 15, around any active goshawk nest, maintain a 200-metre buffer in which there are no forestry-related human activities allowed, unless no practicable alternative exists. Forestry-related human activities include log hauling and those activities not identified as mechanized activities.*
- e. Nass South SRMP LUOR Order Objective 28: *Maintain foraging habitat around known goshawk nest and post-fledging areas.*
- f. Nass South SRMP LUOR Order Objective 29: *Maintain at least 30% of the perimeter around known goshawk nests and post-fledging areas so that it is directly connected by mature or old forests to a comparable forest in the foraging area. A foraging area is the hunting territory typically used by a pair of goshawks. Where the perimeter is less than 30%, forests that are available will be used, and the most suitable adjacent forest will be allowed to mature over time to provide connectivity, as determined by a qualified professional.*
- g. Nass South SRMP LUOR Order Objective 30: *Maintain $\geq 60\%$ mature and old forest structure and function within determined foraging areas around known goshawk nest and post-fledging areas. Where at least 60% does not currently exist, forests that are available will be used. Suitable forest areas adjacent to foraging areas must be maintained as recruitment areas to provide the mature and old structure and function over time.*

3.3.2.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) When BCTS operations are planned to occur within 2 km of known goshawk nest sites:
 - a. a written assessment of the breeding and foraging area associated with the nest site is completed by a QP.
 - b. the QP will provide BCTS with a report containing recommended mitigative actions that are consistent with the Objectives contained in 3.3.2.a, 3.3.2.b, 3.3.2.c, 3.3.2.d, 3.3.2.e; and
 - c. the TSM will ensure that the recommendations outlined in the report are implemented.
- 2) When BCTS road construction and timber harvesting/mechanized silviculture activities are planned to occur within 500 m of a known nest sites between February 15 and August 15:
 - a. A written assessment of the nest site will be completed by a QP to determine if the nest is active.
 - b. if the assessment indicates that the goshawk nest is active, the TSM will not carry out any road construction and timber harvesting/mechanized silviculture activities within 500 meters of the active nest between February 15 and August 15 or alternative dates if specified by the QP in the written assessment.
- 3) If BCTS forestry related human activities (log hauling and non-mechanized activities) are planned to occur within 200 m of a known nest site between February 15 and August 15:
 - a. A written assessment of the nest will be completed by a QP to determine if the nest is active.

- b. if the assessment indicates that the goshawk nest is active, the TSM will not carry out any forestry related human activities (log hauling and those activities not identified as mechanized activities) within 200 meters of the active nest between February 15 and August 15.

3.3.3 **Objective: Special Habitats for General Wildlife**

Nass South SRMP LUOR Order Objective 31: *Maintain effectiveness⁹ of riparian habitats adjacent to wetlands in polygons identified as Special Habitats for General Wildlife on Schedule J* [of the Nass South SRMP LUOR Order].

3.3.3.1 RESULT

During the period of this FSP the TSM will ensure that BCTS operations maintain the effectiveness of riparian habitats adjacent to wetlands¹⁰ in polygons identified as Special Habitats for General Wildlife as shown on the Nass South SRMP LUOR Order Map J by retaining 100% of the forested area of the hydriparian zone.

3.3.4 **Objective: Special Habitats for General Wildlife**

Nass South SRMP LUOR Order Objective 32: *Retain 100% of the forested area of the hydriparian zone for each polygon identified as Special Habitats for General Wildlife on Schedule J* [of the Nass South SRMP LUOR Order], *except where no practicable alternative access exists to access or harvest timber that is outside the hydriparian zone; to mitigate a safety concern; or where required to negate impacts on adjacent forest values from a compelling forest health issue.*

3.3.4.1 RESULT

During the period of this FSP the TSM will ensure that BCTS operations will retain 100% of the forested area of the hydriparian zone for each polygon identified as Special Habitats for General Wildlife on Nass South SRMP LUOR Order Schedule J., except where no practicable alternative exists to:

- access or harvest timber that is outside the hydriparian zone.
- mitigate a safety concern.
- negate impacts on adjacent forest values from a compelling forest health issue.

3.3.5 **Objective: Fur-Bearers**

a. Nass South SRMP LUOR Order Objective 22: *Minimize impacts to known high value fisher and wolverine habitats.*

b. Nass South SRMP LUOR Order Objective 23: *Maintain known fisher and wolverine denning sites.*

3.3.5.1 RESULT

During the period of this FSP the TSM:

- 1) adopts results 3.7.1.2 (Patch Size Distribution Seral Stage) and 3.7.2.1 (Wildlife Trees) as a result for Objective 3.3.5.a and 3.3.5.b; and will
- 2) provide a 100 m no-harvest boundary around known fisher and wolverine maternal den sites when harvesting or road construction is considered in the vicinity unless alternate direction is provided by a Qualified Professional.

⁹ "Effectiveness" means the continued use of a habitat by species that historically utilized it.

¹⁰ For the purpose of Result 3.3.3.1, "wetlands" refers to the specific habitats mapped as Special Habitats for General Wildlife, and is not meant to equate to the definition of "wetland" found in the FPPR.

3.3.5.2 STRATEGY

During the period of this FSP the TSM adopts strategy 3.7.1.1 (Patch Size Distribution and Seral Stage) as a strategy for Objective 3.3.5.a and 3.3.5.b.

3.4 Water and Riparian

Reference Information		
	Inside Nass South SRMP LUOR Order Area	Outside Nass South SRMP LUOR Order Area
Type of Objective	1.Objectives set by regulation: FPPR s. 8, 8(1) 2.Objectives enabled by regulation: N/A 3. Land Use Objectives: Nass South SRMP LUOR Order Objectives 1,2,3,4,5,6,7,8,37,38	1. Objectives set by regulation: FPPR s. 8, 8(1) 2. Objectives enabled by regulation: N/A 3. Land-use Objectives: N/A
Effective Date	1. January 31, 2004 2. N/A 3. February 25, 2016	1. January 31, 2004 2. N/A 3. N/A
Mandatory Practice Requirements from the FPPR	FPPR ss. 47(1,2,3,7,8) 48(1,2,6,7) 49(1,4,5) 50(2,3) 51(2), 54 & 58	FPPR ss. 47(1,2,3,7,8) 48(1,2,6,7) 49(1,4,5) 50(2,3) 51(2), 54 & 58
Practice Requirement(s) Eligible for Exemption	FPPR ss. 47(4,5,6) 48(3,4,5) 49(2,3) 50(1) 51(1,3) 52(2) 53, 55, 56 & 57	FPPR ss. 47(4,5,6) 48(3,4,5) 49(2,3) 50(1) 51(1,3) 52(2) 53, 55, 56 & 57
	Decision: Exempt FPPR ss. 47, 48, 49, as per FPPR s. 12.31 (Results 3.4.3.1, 3.4.4.1 and 3.4.5.1 apply). Adopt FPPR ss. 50(1) 51(1,3) 52(2) 53, 55, 56 & 57	Decision: Adopt FPPR ss. 47, 48, 49, 50(1) 51(1,3) 52(2) 53, 55, 56 & 57

3.4.1 Objective: Hydrologic Stability of Watersheds

Nass South SRMP LUOR Order Objective 1: *Maintain the hydrologic stability of watersheds identified in Schedule B [of the Nass South SRMP LUOR Order] so that the thresholds identified in Schedule B1 [of the Nass South SRMP LUOR Order] are not exceeded, except where a hydrologic assessment is completed by a qualified professional prior to any harvesting that would cause the thresholds to be exceeded and that subsequent activities are conducted in a manner that is consistent with the results of the assessment.*

3.4.1.1 RESULT

During the period of this FSP the TSM will ensure that a Hydrologic Assessment is completed, and will ensure that Timber Sales Licences adopt the associated recommendations of a QP prior to the advertising of a Timber Sale Licence that would cause the thresholds identified in Appendix V to be exceeded. This result does not apply to cut blocks that are: approved under section 196(1) of the *Forest and Range Practices Act*; declared areas under section 14(4) of the *Forest Planning and Practices Regulation*; or have an issued Timber Sales License prior to the date of the approval of this FSP.

3.4.2 **Objective: Water and Riparian – Riparian Features**

FPPR s 8: *The objective set by government for water, fish, wildlife and biodiversity within riparian areas is, without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas*

3.4.2.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 47(4,5,6) 48(3,4,5) 49(2,3) 50(1) 51(1,3) 52(2) 53, 55, 56 & 57 of the FPPR for areas outside the area of the Nass South SRMP LUOR Order. The TSM will notify each holder of a timber sale license or road permit outside the area of the Nass South SRMP LUOR Order that FPPR sections 47(4,5,6) 48(3,4,5) 49(2,3) 50(1) 51(1,3) 52(2), 53, 55, 56 and 57 apply to the holder's primary forest activities carried out during the term of the plan.

3.4.2.2 RESULT

During the period of this FSP the TSM will undertake to comply with sections 50(1) 51(1, 3) 52(2) 53, 55, 56 & 57 within the area of the Nass South SRMP LUOR Order. The TSM will notify each holder of a timber sale license or road permit inside the area of the Nass South SRMP LUOR Order that FPPR sections 50(1) 51(1,3) 52(2), 53, 55, 56 and 57 apply to the holder's primary forest activities carried out during the term of the plan.

3.4.3 **Objective: Water and Riparian – Riparian Features**

a. Nass South SRMP LUOR Order Objective 2: *Maintain the ecological functioning of streams, rivers, wetland complexes and lakes, including those that do not support populations of fish.*

b. Nass South SRMP LUOR Order Objective 3: *Ensure that industrial forestry activity on all rivers and streams does not cause significant consequences for fish habitat or human water consumption from channel bank erosion, channel aggradation, degradation or dewatering, or change in channel morphology.*

c. Nass South SRMP LUOR Order Objective 4: *Maintain reserve zones and management zones around riparian features identified in Schedule C [of the Nass South SRMP LUOR Order] for all rivers, streams, lakes and wetlands.*

3.4.3.1 RESULT

During the period of the FSP, for BCTS operations within the area of the Nass South SRMP LUOR Order, the TSM will ensure that riparian reserves and riparian management zones around riparian features associated within BCTS cutblocks comply with the targets listed in Table 3-1.

Table 3-1: Retention Targets in Riparian Reserve Zones (RRZ) and Riparian Management Zones (RMZ)

Riparian Class	Reserve Zone Width ¹ - Minimum (m)	Retention - Minimum (%)	Management Zone Width ¹ - Minimum (m)	Retention - Minimum (%)
<u>Streams:</u>				
S1 Large Rivers (≥ 100m width)	As per Objectives for Biodiversity regarding the Ecosystem Network, and Objectives for Water Management Units and General Wildlife.			
S1, S2,S3 and Specific Rivers	As per Objectives for Biodiversity regarding the Ecosystem Network. Specific Rivers are: Kinskuch River – Ksi Ginsgox, Nass River – K’alii Aksim Lisims, Bell-Irving River, White River, Paw Creek, Axnegrelga Creek, Brown Bear Creek, Bear River, American Creek, Bitter Creek and Upper Hoan Creek			
S1 (other than Large and Specific Rivers)	50	100	20	0
S2	30	100	20	0
S3	20	100	20	0
S4	0	n/a	30	0
S5	0	n/a	30	0
S6	0	n/a	20	0
<u>Wetlands:</u>				
W1*	10	100	40	0
W2	Not applicable: no W2 in the Nass South SRMP LUOR Order area			
W3*	0	n/a	30	0
W4	Not applicable: no W4 in the Nass South SRMP LUOR Order area			
W5*	10	100	40	0
<u>Lakes:</u>				
L1	10	100	20	0
L2	Not applicable: no L2 in the Nass South SRMP LUOR Order area			
L3	n/a	n/a	30	0
L4	Not applicable: no L4 in the Nass South SRMP LUOR Order area			
Note: RRZ and RMZ retention percentage means the percentage of naturally occurring pre-harvest forest basal area and structure of mature and old forest that occupies (or historically occupied) the site				
¹ Width will be measured in slope distance				
*Excluding those wetlands identified as Special Habitat for General Wildlife in Schedule J				

3.4.4 **Objective: Large Woody Debris**

- a. Nass South SRMP LUOR Order Objective 5: *Retain blowdown within riparian reserve zones and/or riparian management zones as large woody debris for all rivers, streams, lakes, and wetlands.*
- b. Nass South SRMP LUOR Order Objective 6: *Maintain naturally deposited large woody debris in rivers and streams in riparian classes S1 to S4, except where necessary to satisfy safety considerations.*
- c. Nass South SRMP LUOR Order Objective 7: *Ensure that when new roads and trails are built, ground water is allowed to reach natural ground water receiving sites.*

3.4.4.1 RESULT

During the period of this FSP the TSM adopts the following results for BCTS operations within the Nass FDU:

- 1) Blowdown within the RRZ and RMZ of BCTS TSLs will be retained as large woody debris.
- 2) For rivers and streams within BCTS TSLs, in riparian classes S1 to S4, large woody debris that would not naturally be in the channel will not be added, and naturally deposited large woody debris will not be removed, except where necessary to satisfy safety considerations.
- 3) Sufficient drainage structures will be installed on new BCTS roads and trails to conduct groundwater towards natural groundwater receiving sites to ensure groundwater will not run into surface water, and that the subsurface water will reach natural ground water receiving sites.

3.4.5 **Objective: Floodplains and Alluvial Fans**

Nass South SRMP LUOR Order Objective 8: *Maintain the functional integrity of all floodplains and alluvial fans.*

3.4.5.1 STRATEGY

During the period of this FSP the TSM will ensure:

- 1) That a QP will design/prescribe recommendations to ensure the functional integrity of all floodplains and alluvial fans within areas of BCTS operations; and
- 2) That BCTS operations adopt the recommendations.

3.4.6 **Objective: Water Management Units**

- 1) Nass South SRMP LUOR Order Objective 37: *Ensure proper hydrological functioning*¹¹ of:
 - a. *each stream, wetland and lake within a Water Management Unit identified on Schedule K [of the Nass South SRMP LUOR Order];*

and

 - b. *each local and downstream stream receiving water from a cutblock within a Water Management Unit identified on Schedule K [of the Nass South SRMP LUOR Order].*
- 2) Nass South SRMP LUOR Order Objective 38:
 - a. *Retain 100% of the forested area of the hydriparian zone of each stream, wetland and lake within a Water Management Unit as shown on Schedule K [of the Nass South LUOR Order], unless harvesting is required to address compelling forest health issues or as set out in b).*
 - b. *Cutblocks may overlap a Water Management Unit as shown on Schedule K [of the Nass South SRMP LUOR Order] by no more than 200 meters or 50% of any individual cutblock area, whichever is less, provided that the riparian management practices applicable to the forest land base outside a Water Management Unit are maintained.*

¹¹ "proper hydrological functioning" means the ability of a stream, river, wetland or lake and its riparian area to: withstand normal peak flood events without experiencing accelerated soil loss, channel movement or bank movement; filter runoff; and store and safely release water. It also means the ability of riparian habitat to: maintain an adequate root network or large woody debris supply; provide shade; and reduce bank microclimate change, and have fish habitat in streams and riparian areas that are fully connected so that fish habitat is not lost or isolated as a result of some management activity.

3.4.6.1 RESULT

- 1) During the period of this FSP the TSM will ensure the proper hydrological functioning of the areas described in Objectives 3.4.6 (1.a), 3.4.6 (1.b), and 3.4.6 (2.a) by ensuring that:
 - a. within areas of BCTS operations, 100% of the forested area of the hydriparian zone of each stream, wetland and lake within a Water Management Unit as shown on Nass South SRMP Schedule K is retained, unless harvesting is required to address compelling forest health issues or as set out in 2).
- 2) BCTS TSLs may overlap a Water Management Unit as shown on Nass South SRMP LUOR Order Schedule K by no more than 200 metres or 50% of any individual TSL cutblock area, whichever is less, provided that the riparian management practices applicable to the forest land base outside a Water Management Unit is maintained.

3.5 Fish

Reference Information		
Type of Objective	1. Objectives set in regulation: FPPR s. 8, 8.1 2. Objectives enabled by regulation: N/A 3. Land Use Objectives: Nass South SRMP LUOR Order Objectives 33, 34	
Effective Date	1. January 31, 2004 2. N/A 3. February 25, 2016	
Practice Requirement(s) Eligible for Exemption	FPPR ss. 55, 56, 57	Decision: Adopt FPPR ss.55, 56, 57

3.5.1 **Objective: Fish Habitat in Fisheries Sensitive Watersheds**

FPPR s. 8.1: (2) Until December 31, 2005 the objective set by government for fish habitat in fisheries sensitive watersheds is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities in the fisheries sensitive watershed from resulting in a material adverse impact on the habitat of the fish species for which the fisheries sensitive watershed was established.

(3) The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.

3.5.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 55, 56 and 57 of the FPPR when designated fisheries sensitive watersheds are established within this FDU. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR sections 55, 56 and 57 apply to the holder's primary forest activities carried out during the term of the plan.

3.5.2 **Objective: Indigenous Fish Populations**

a. Nass South SRMP LUOR Order Objective 33: *Maintain habitat for indigenous fish populations.*

b. Nass South SRMP LUOR Order Objective 34: *Maintain the functional integrity of fish-bearing streams, rivers and lakes.*

3.5.2.1 RESULT

During the period of this FSP the TSM will address the potential impacts of BCTS harvesting and road construction activities to fish bearing streams, rivers and lakes through the adoption of:

- Result 3.4.4.1 (Large Woody Debris), 3.4.2.1 (Riparian Features), 3.4.3.1 (Riparian Features), and 3.4.6.1 (Water Management Units)

3.5.2.2 STRATEGY

During the period of this FSP the TSM will address the potential impacts of BCTS harvesting and road construction activities to fish bearing streams through the adoption of:

- Strategies 3.7.8.1(Ecosystem Network-Hydroriparian Zone), 3.7.9.1(Ecosystem Network-Structural Connectivity), 3.7.10.1 (Ecosystem Network-Buffer), and 3.4.5.1 (Floodplains and Alluvial Fans).

3.6 Water in Community Watersheds

Reference Information		
Type of Objective	1.Objectives set in regulation: FRPR s.8.2 2.Objectives enables by regulation: N/A 3.Land Use Objectives: N/A	
Effective Date	1. January 31, 2004 2. N/A 3. N/A	
Mandatory Practice Requirements from the FPPR	FPPR ss. 58, 60(1), 62 ,63	
Practice Requirement(s) Eligible for Exemption	FPPR ss. 59, 60(2), 61	Decision: Adopt FPPR ss. 59, 60(2),61

3.6.1 **Objective: Water in Community Watersheds**

FPPR s. 8.2: *The objective set by government for water being diverted for human consumption through a licensed waterworks in a community watershed is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities within the community watershed from resulting in*

- (a) a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or*
- (b) the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment required under*
 - (i) an enactment, or*
 - (ii) the licence pertaining to the waterworks.*

(3) The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.

3.6.1.1 RESULT

There are no designated Community Watersheds in this FDU. At the time that Community Watersheds are established, during the period of this FSP the TSM will undertake to comply with sections 59, 60(2) and 61 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR sections 59, 60(2) and 61 apply to the holder's primary forest activities carried out during the term of the plan.

3.7 Biodiversity

Reference Information		
Applicable Area	Within Nass South SRMP LUOR Order Area	Outside Nass South SRMP LUOR Order Area
Type of Objective	1. Objectives set in Regulation: FPPR s. 9, 9.1 2. Objectives enabled by Regulation: N/A 3. Land Use Objectives: Nass South SRMP LUOR Order Objectives 9,10,11,12,13,14,15,16,17, 18,19,20	1. Objectives set in Regulation: FPPR s. 9, 9.1 2. Objectives enabled by Regulation: Order Establishing Provincial Non-Spatial Old Growth Objectives 3. N/A
Effective Date	1. January 31, 2004 2. N/A 3. February 25, 2016	1. January 31, 2004 2. June 30, 2004 3. TBD
Mandatory Practice Requirements from the FPPR	FPPR ss.68	FPPR ss.68
Practice Requirement(s) Eligible for Exemption	FPPR ss. 64, 65, 66, 67	FPPR ss. 64, 65, 66, 67
	Decision: Adopt FPPR s 67 Exempt FPPR ss.64, 65, and 66 as per FPPR s. 12.5, 12.6 (Strategy 3.7.1.1 and Results 3.7.1.2 and 3.7.3.1 apply)	Decision: Adopt FPPR ss.66, 67. Exempt FPPR ss.64, 65 as per FPPR s.12.5

3.7.1 Objective: Patch and Seral Distribution

a. FPPR s.9: *The objective set by government for wildlife and biodiversity at the landscape level is, without unduly reducing the supply of timber from British Columbia's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape.*

b. Nass South SRMP LUOR Order Objective 9: *Maintain a landscape pattern of patchiness that, over the long term, reflects the natural disturbance pattern within the forested area of each Landscape Unit, as per Schedule D [of the Nass South SRMP LUOR Order].*

c. Nass South SRMP LUOR Order Objective 16: *Maintain a range of forest seral stages as per Schedule G [of the Nass South SRMP LUOR Order].*

3.7.1.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) Areas harvested by BCTS will be of a size and distribution that emulates the historical temporal and spatial distribution of the Natural Disturbance Types (NDTs) for the forests within the Nass FDU area.
- 2) Areas harvested by BCTS will move towards the patch size and seral stage distribution targets* that are in place for the NDTs. An analysis will be calculated separately for each LU that overlaps the Nass FDU, in accordance with items 3 and 4 below.

- 3) **Temporal:** Conduct seral stage analysis by LU and natural disturbance type
 - a. Determine proportional representation of the LUs within the Nass FDU
 - b. Determine representation with respect to sensitive areas
 - c. Determine need for actions to address seral stage imbalances, based on the applicable land use objective(s)*
 - d. If necessary, prepare action plan(s) to address seral stage imbalances and implement the action plan.
- 4) **Spatial:** Analyze patch size distribution by LU and natural disturbance type
 - a. Determine proportional representation of existing patch sizes within the Nass FDU
 - b. Determine target patch size distribution for the Nass FDU
 - c. Determine need for actions to address patch size imbalances, based on the applicable land use objective(s)*
 - d. If necessary, prepare action plan(s) to address patch size distribution imbalances and implement the action plan.
- 5) Prepare a summary of the seral stage and allowable patch size distribution analysis results within the Nass FDU

3.7.1.2 RESULT

During the period of this FSP the TSM will ensure that:

- 1) Every three years, by June 1st, a report summarizing the status of the patch and seral distribution within the FDU area will be completed by the TSM. The most recent update to the analysis was completed in 2015. The report will reflect projected changes (i.e. planned harvest) for at least the upcoming five year period. Where this report indicates movement away from the target* levels, a rationale will be prepared that describes management strategies for moving towards the target* levels.
- 2) Within a specified period after the approval of this FSP, harvest activities under this FSP are shown to be static or moving toward the target* levels for these areas. This specified period shall be five (5) years for each Landscape Unit, unless otherwise determined by mutual agreement between the TSM and the CMR District Manager.

*The Patch Size Distribution targets and Seral Stage targets are as follows:

- a. Patch Size Distribution for all Landscape Units within the Nass FDU is identified in Appendix VIII.
- b. Seral Stage Condition targets for Landscape Units within the area covered by the Nass South SRMP LUOR Order are specified in Appendix VII.
- c. Seral Stage Condition targets for Landscape Units outside the area covered by the Nass South SRMP LUOR Order will be as per the Biodiversity Emphasis Options listed in Table 3-2 and fully described in the *Biodiversity Guidebook 1995*.

Table 3-2: Biodiversity Emphasis Options for Landscape Units outside the Area of the Nass South SRMP LUOR Order

Landscape Unit	Biodiversity Emphasis Option
Craven	Intermediate

Landscape Unit	Biodiversity Emphasis Option
Muskaboo	Low
Nass River Kalum	High
Oweegee	Low
Sallysout	Low
Taylor-Damdochax	Intermediate

3.7.2 **Objective: Wildlife Trees**

FPPR s. 9.1: *The objective set by government for wildlife and biodiversity at the stand level is, without unduly reducing the supply of timber from British Columbia's forests, to retain wildlife trees.*

3.7.2.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 66 and 67 of the FPPR outside the area of the Nass South SRMP LUOR Order, and FPPR section 67 within the area of the Nass South SRMP LUOR Order. The TSM will notify each holder of a timber sale license or road permit to which the plan relates when FPPR sections 66 and/or 67 apply to the holder's primary forest activities carried out during the term of the plan.

3.7.3 **Objective: Wildlife Trees**

Nass South SRMP LUOR Order Objective 10: *Maintain or recruit structural diversity in managed stands by retaining at least 3.5% of each proposed cutblock and at least 7% of proposed cutblocks aggregated on an annual basis, as wildlife tree retention areas, over the rotation.*

3.7.3.1 RESULT

During the period of this FSP the TSM will ensure that BCTS operations:

- 1) Maintain or recruit structural diversity in managed stands by retaining at least 3.5% of each proposed cutblock and at least 7% of proposed cutblocks aggregated on an annual basis, as wildlife tree retention areas, over the rotation.
- 2) Allow natural processes (insect, diseases, blowdown) to occur within WTRA's unless infestation or infection in the WTRA threatens to spread to adjacent forested areas. Where intervention is required, treatment will retain a diversity of structural attributes comply with (1) above or a suitable replacement WTRA will be located.
- 3) BCTS will not harvest timber from a WTRA unless trees on the net area to be reforested of the cutblock to which the WTRA area relates have developed attributes that comply with a mature seral condition except where:
 - a. harvesting is required to access timber that otherwise would be isolated from harvest beyond the WTRA area; or
 - b. terrain conditions such as slope, gradient, or terrain stability constrain road locations and dictate that sections of a road enter and leave the WTRA to access timber that otherwise would be isolated from harvest; or
 - c. no practicable alternative exists.

Prior to harvesting within a WTRA, BCTS will identify and establish a replacement area with similar stand characteristics to the WTRA planned for harvest, and will ensure that the associated Site Plan is amended to account for the reconfiguration.

3.7.4 **Objective: Red and Blue - Listed Species**

a. Nass South SRMP LUOR Order Objective 11: *Retain 100% of the area and basal area of red-listed ecological communities¹², as listed on Schedule E [of the Nass South SRMP LUOR Order], except where:*

- (a) required to access timber that otherwise would be isolated from harvest beyond the core area;*
- (b) terrain conditions such as slope, gradient, or terrain stability constrain road locations and dictate that sections of road enter and leave red-listed ecological communities to access timber that otherwise would be isolated from harvest; or*
- (c) no practicable alternative exists.*

b. Nass South SRMP LUOR Order Objective 12: *Retain a windfirm, forested buffer around the red-listed ecological communities¹⁴ listed on Schedule E [of the Nass South SRMP LUOR Order], as required to maintain the conditions of soil chemistry, moisture, temperature, and light that define and sustain the ecosystem except where:*

- (a) required to access timber that otherwise would be isolated from harvest beyond the core area;*
- (b) terrain conditions such as slope, gradient, or terrain stability constrain road locations and dictate that sections of road enter and leave red-listed ecological communities to access timber that otherwise would be isolated from harvest; or*
- (c) no practicable alternative exists.*

c. Nass South SRMP LUOR Order Objective 13: *Retain at least 70% of the area or basal area of each blue-listed ecological community¹³ within a cutblock as listed on Schedule F [of the Nass South SRMP LUOR Order].*

3.7.4.1 RESULT

During the period of this FSP the TSM will ensure that, during the development of cutblocks and roads under the authority of BCTS:

- 1) Field development personnel review planned harvest areas (including roads) for the occurrence of red-listed¹⁴ or blue-listed¹⁵ plant communities and will map any readily identifiable occurrences:
 - a. larger than 0.25 ha that occur as a distinct unit, or
 - b. larger than 1.0 ha that occur as the dominant ecosystem within an ecosystem mosaic
- 2) 100% of the area and basal area of each occurrence of a red-listed ecological community is retained unless:
 - a. Disturbance is required to access timber that otherwise would be isolated from harvest beyond the core area;
 - b. Terrain conditions such as slope, gradient, or terrain stability constrain road locations and dictate that sections of road enter and leave red-listed ecological communities to access timber that otherwise would be isolated from harvest; or
 - c. No practicable alternative exists

¹² the required minimum size of a red-listed ecological community is 0.25 ha. Where the community exists as the dominant component of a complex, the minimum size of the complex is 1 ha

¹³ the required minimum size of the blue listed ecological community is 0.25 ha. Where the community exists as the dominant component of a complex, the minimum size of the complex is 1 ha.

¹⁴ Red-listed plant communities are as described on Schedule E of the Nass South SRMP LUOR Order and the Conservation Data Center website when accessed on the day the original Site Plan is signed.

¹⁵ Blue-listed plant communities are as described on Schedule F of the Nass South SRMP LUOR Order and the Conservation Data Center website when accessed on the day the original Site Plan is signed.

A windfirm forested buffer will be placed around identified red listed ecological communities as required to maintain the conditions of soil chemistry, moisture, temperature, and light that define and sustain the ecosystem except for the instances listed in 3.7.4.1 2a, 2b, and 2c.

- 3) At least 70% of the area or basal area of each occurrence of blue-listed ecological community is retained.

3.7.5 **Objective: Natural Species Composition**

Nass South SRMP LUOR Order Objective 14: *Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand levels by ensuring that all cutblocks at the free-growing stage will have a diversity of species ecologically appropriate to the site.*

3.7.5.1 RESULT

During the period of this FSP the TSM adopts Result 3.2.1.1(Stocking standards) for BCTS blocks with a reforestation obligation.

3.7.6 **Objective: Natural Species Composition**

Nass South SRMP LUOR Order Objective 15: *Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand levels by ensuring that where an area larger than one contiguous hectare is harvested and it is composed of more than 50% deciduous trees by basal area, it will either be regenerated with a similar deciduous stand or will be replaced at a different location on a similar site series by regenerating an existing coniferous stand with similar deciduous species.*

3.7.6.1 STRATEGY

During the period of this FSP the TSM will reforest harvested areas associated with BCTS operations that are greater than one contiguous hectare, which originally had more than 50% deciduous trees by basal area, with a similar deciduous leading stand.

3.7.7 **Objective: Old Growth Management Areas**

Nass South SRMP LUOR Order Objective 17: *Retain 100% of the forested area within Old Growth Management Areas as identified on Schedule H [of the Nass South SRMP LUOR Order].*

3.7.7.1 STRATEGY

During the period of this FSP the TSM will not harvest within the OGMA's as shown on Nass South SRMP LUOR Order Schedule H, without first completing an amendment as per the process described in the approved *Old Growth Management Area (OGMA) Amendment Policy – Skeena Region (February 9, 2011)* and as may be amended from time to time.

3.7.8 **Objective: Ecosystem Network**

Nass South SRMP LUOR Order Objective 18: *Retain 100% of the forested area of the hydriparian zone within Ecosystem Network, as identified on Schedule I [of the Nass South SRMP LUOR Order]. Acceptable rationales for amending the Ecosystem Network are identified in Schedule I1 [of the Nass South SRMP LUOR Order].*

3.7.8.1 STRATEGY

During the period of this FSP the TSM will ensure that during BCTS operations, 100% of the forested area of the hydriparian zone within the Ecosystem Network identified on Nass South SRMP LUOR Order Schedule I is retained. Acceptable rationales for amending the Ecosystem Network are identified in Table 3-3, *Rationale for Amending the Ecosystem Network*.

Table 3-3: Rationale for Amending the Ecosystem Network

Acceptable Rationale for Amendment	Major ¹⁶ or Minor ¹⁷ Amendment	Allowable Amendment
1. Access issues that were overlooked or unknown during the initial Ecosystem Network delineation, where no practicable alternative exists (refer to Biodiversity Measure 7.2).	Minor	<ul style="list-style-type: none"> To establish an appropriate road width through the Ecosystem Network.
2. To account for cut blocks in place prior to the establishment of the Ecosystem Network, including those: <ul style="list-style-type: none"> approved under section 196(1) of the <i>Forest and Range Practices Act</i>; as declared areas under section 14(4) of the <i>Forest Planning and Practices Regulation</i>; or that have a cutting permit in place 	Minor	<ul style="list-style-type: none"> To the edge of the cut block, temporarily, to allow timber harvest. Return to original location following completion of timber harvest and silvicultural responsibilities.
3. To address a compelling forest health issue (e.g. a forest pest or disease is established in the Ecosystem Network and spreads to the point where it threatens adjacent values and resources outside the Ecosystem Network).	Minor	<ul style="list-style-type: none"> To the extent necessary to eliminate the threat to the land and water adjacent to the Ecosystem Network.
4. New data and information such as ground truthing of the hydroriparian zone ¹⁸ , new resource inventories, First Nations cultural sites and updated wildlife mapping. Notwithstanding the exceptions detailed under items 1 to 3 above, in no case will the Ecosystem Network be smaller than the hydroriparian zone.	Major for the following rivers: <ul style="list-style-type: none"> Kinskuch River, Nass River, Bell-Irving River, White River, Paw Creek, Axnegrelga Creek, Brown Bear Creek Minor for all other portions of the EN.	<ul style="list-style-type: none"> To improve the degree to which the Ecosystem Network captures values for First Nations, provides habitat for wildlife, or generally benefits biodiversity. To increase the accuracy of the Ecosystem Network in terms of how it maps the hydroriparian zone.

3.7.9 Objective: Ecosystem Network

Nass South SRMP LUOR Order Objective 19: *Maintain structural connectivity in the Ecosystem Network, as identified on Schedule I [of the Nass South SRMP LUOR Order] except where:*

¹⁶ "major amendment to an Ecosystem Network" means that wherever identified as a major amendment to an Ecosystem Network in Schedule I1, forest licensees must follow the amendment procedures as described for Old Growth Management Areas.

¹⁷ "minor amendment to an Ecosystem Network" means that wherever identified as a minor amendment to an Ecosystem Network in Schedule I1, forest licensees can make amendments to the Ecosystem Network in the field, and then notify the applicable First Nation afterwards.

¹⁸ The hydroriparian zone is defined as the area that extends to the edge of the influence of water on land, or land on water, as defined by plant communities (including high bench or dry floodplain communities) or landforms, plus one and one-half site specific tree heights horizontal distance (Hydrioriparian Planning Guide, Coast Information Team, Jan. 30, 2004). Landforms include:

- The stream channel, lake or wetland and adjacent riparian ecosystem, where no floodplain exists.
- The full width of the floodplain for streams
- Adjacent active fluvial units
- Up to the top of the inner gorge or where slopes become less than 50% for reaches of streams that are gullied, or are in a ravine or canyon
- Immediately adjacent unstable slopes (class IV and V terrain) where it is located such that a surcharge of sediment may be delivered to the stream, lake or wetland.

- 1) *Required to access timber beyond the Ecosystem Network that would otherwise be isolated from harvest;*
- 2) *Required to access timber that would otherwise be isolated from harvest due to terrain conditions such as slope, gradient or terrain stability that constrain road locations and dictate that sections of road enter and leave the Ecosystem Network; or*
- 3) *no practicable alternative exists.*

3.7.9.1 STRATEGY

During the period of this FSP the TSM will ensure that BCTS operations maintain structural connectivity in the Ecosystem Network as shown on Nass South SRMP LUOR Order Schedule I except where:

- 1) Required to access timber beyond the Ecosystem Network that would otherwise be isolated from harvest;
- 2) Required to access timber that would otherwise be isolated from harvest due to terrain conditions such as slope, gradient or terrain stability that constrain road locations and dictate that sections of road enter and leave Ecosystem Network; or
- 3) Where no practicable alternative exists.

3.7.10 **Objective: Ecosystem Network**

Nass South SRMP LUOR Order Objective 20: *Retain a 100 m wide buffer around the Ecosystem Network as identified on Schedule I that meets the following forest conditions:*

- 1) *Continuous forest cover*
- 2) *Small discontinuous canopy gaps*
- 3) *≥70% structure and function¹⁹ retained, including large, old trees, snags, and coarse woody debris*
- 4) *Multi-canopy levels, multi-aged forest*
- 5) *0% permanent road access, except where, for ecological or economic reasons, no other alternative is possible.*

3.7.10.1 STRATEGY

During the period of this FSP the TSM will ensure that BCTS operations retain a 100 m wide buffer around the Ecosystem Network as depicted on Nass South SRMP LUOR Order Schedule I. The buffer will meet the following forest conditions:

- 1) Continuous forest cover
- 2) Small discontinuous canopy gaps
- 3) ≥70% structure and function¹⁹ retained, including large, old trees, snags, and coarse woody debris
- 4) Multi-canopy levels, multi-aged forest
- 5) 0% permanent road access, except where, for ecological or economic reasons, no other alternative is possible.

¹⁹ Any harvest unit within the buffer portions of the EN will, within the buffer, retain ≥70% of the naturally occurring mature and old forest structure (live trees, range of diameter classes, snags, coarse woody debris, tree species etc.) of the harvest unit measured either as basal area (M²) or forest area (hectares). No further harvesting may occur within the harvest unit (within the EN buffer area) until such time as the harvested portion has returned to a mature or older condition (ie. ICH 100 years, ESSF 120 years).

3.8 Visual Quality

Reference Information	
Type of Objective	1.Objectives set if regulation: FPPR s 9.2(2) 2.Objectives enabled in regulation: GAR 7(1), 7(2) and 17 3.Land Use Objectives: N/A
Effective Date	1. FPPR: January 31, 2004 2. Kalum District Manager's letters dated January 7 1997, September 8 1998 and March 23 2000 established VQOs and designated Scenic Areas in the Kalum District. 3. N/A
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

3.8.1 Objective: Visual Quality

FPPR s. 9.2(2): *The objective set by government in relation to visual quality for a scenic area, that*

(a) was established on or before October 24, 2002, and for which there is no visual quality objective is to ensure that the altered forest landscape for the scenic area

(b) in visual sensitivity class 1 is in either the preservation or retention category,

(c) in visual sensitivity class 2 is in either the retention or partial retention category,

(d) in visual sensitivity class 3 is in either the partial retention or modification category,

(e) in visual sensitivity class 4 is in either the partial retention or modification category, and

(f) in visual sensitivity class 5 is in either the modification or maximum modification category.

3.8.1.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) A visual impact assessment (VIA) be carried out by a QP in accordance with the methodology identified in the Visual Impact Assessment Guidebook (<https://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/visual/htoc.htm#cont>) and will be attached or referred to in the Site Plan for BCTS blocks that are located within known scenic areas and that are identified with a Visual Quality Objective (VQO).
 - a. Visual Sensitivity Class will be treated as having VQOs as follows:
 - i. VSC 1 = Retention
 - ii. VSC 2 = Partial Retention
 - iii. VSC 3 and 4 = Modification
 - iv. VSC 5 = Maximum Modification
- 2) The visual impact assessment will :
 - a. review the visual landscape from selected viewpoints (see below for viewpoint selection and criteria)
 - b. describe how the visual design conforms with the VQO.
- 3) The block design, at the date of TSL issuance, will reflect the visual design as described in the visual assessment.
- 4) Viewpoints are identified as follows:
 - a. As shown on the FSP maps (as amended from time to time), or

- b. At a point along a travel corridor that allows for an extended viewing experience, or
- c. At a place, along a travel corridor, that persons can stop for an extended viewing experience.

For the purpose of 4 (b) and (c) “extended viewing experience” means greater than 60 seconds uninterrupted view at the posted/ normal speed limit. A travel corridor is defined as a route, highway or waterway used by the public to travel from one geographic area to another.

- 5) An exemption has been provided by the CMRD Manager where catastrophic damage such as wind-throw, fire, disease, or pest damage occurs and any timber harvest by BCTS would cause the scale criteria for a VQO to be exceeded. Where practicable, road location and/or block design will be modified to mitigate impact to the visual condition by incorporating visual design elements. Visual design elements include cut-block shape, size, pattern and retention of wildlife trees (patches and/or single trees).

3.9 Cultural Heritage Resources

Reference Information	
Type of Objective	1. Objectives set in regulation: FPPR s. 10 2. Objectives enabled by regulation: N/A 3. Land Use Objectives: Nass South SRMP LUOR Order Objective 35
Effective Date	1. January 31, 2004 2. N/A 3. February 25, 2016
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

3.9.1 Objective: Cultural Heritage Resources

a. FPPR s. 10: *The objective set by government for Cultural Heritage resources is to conserve, or, if necessary, protect cultural heritage resources that are:*

- (a) the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and*
- (b) not regulated under the Heritage Conservation Act.*

b. Nass South SRMP LUOR Order Objective 35: *Preserve cultural heritage resources and cultural sites, including culturally modified trees, trails, cache pits, house pits, grave sites, fishing sites, pictograph sites, smoke houses, cabins, and camping sites.*

3.9.1.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) A Cultural Heritage Resource Evaluation (CHRE) will be completed on all BCTS blocks and roads before harvesting or construction activities are authorized or mechanical site preparation activities are prescribed. A CHRE is defined as a process conducted by field and office persons, consisting of the following steps:
 - a. Complete an initial review of all proposed blocks and roads in relation to known information regarding the location, nature and extent of cultural heritage resources and document the results.

- b. Provide the results of the initial review to potentially affected First Nations identified through the Consultative Areas Database (CAD). Request of the First Nations any additional information regarding cultural heritage resources that may be present and potentially affected by the proposed blocks and roads or mechanical site preparation activities.
 - c. Complete a field evaluation for the presence of cultural heritage resources and record information related to the location, nature and extent of any cultural heritage resources that are identified.
 - d. Evaluate the direct impact of the planned development on the cultural heritage resources identified, if any.
 - e. If necessary, following consultation, prepare recommendations in order to conserve, mitigate impacts, or, as required, protect the cultural heritage resource at the location, considering:
 - i. the relative value or importance of the cultural heritage resource to a traditional use by an aboriginal people;
 - ii. if the cultural heritage resource is of continuing importance to the First Nations;
 - iii. historical extent of the traditional use of the cultural heritage resource; and,
 - iv. the impact on the FSP holders government granted timber harvesting rights of conserving or protecting the cultural heritage resource.
- 2) All BCTS harvesting, road construction, and mechanical site preparation activities will follow the recommendations given in the Cultural Heritage Resource Evaluation referred to in (1) above, that are practicable and are required to conserve or, if necessary, protect a cultural heritage resource if it is of continuing importance to the First Nations.
- 3) For previously unidentified cultural heritage resources encountered during harvesting, road construction, or mechanical site preparation activities, the TSM will:
- a. stop the activity to the extent necessary to protect the cultural heritage resource until a Cultural Heritage Resource Evaluation (with respect to the previously unidentified feature) is carried out; and,
 - b. ensure that BCTS harvesting, road construction, or mechanical site preparation activities continue in a manner that follows the recommendations given in the Cultural Heritage Resource Evaluation referred to in (a) above, that are practicable and are required to conserve or, if necessary, protect a cultural heritage resource if it is of continuing importance to the First Nations.

3.9.2 **Objective: Cedar**

Nass South SRMP LUOR Order 36: *Maintain a sustainable source of cedar for the applicable First Nation to practice their traditional, cultural and subsistence uses.*

3.9.2.1 STRATEGY

During the period of this FSP the TSM will maintain a sustainable source of cedar for First Nations by ensuring that:

Where practicable, western redcedar (*Thuja plicata*) or yellow-cedar (*Chamaecyparis nootkatensis*) within BCTS Timber Sale Licences are retained in retention areas (including WTRAs or Riparian Management Zones (RMZs)). First Nations' removal of these species from retention areas (including WTRAs or Riparian Management Zones²⁰ (RMZs) for cultural purposes can occur as follows:

- No more than 5% of co-dominant/ dominant stems within a WTRA are removed, with no more than 10% of stems within a given hectare, unless the Site Plan describes how the WTRA is able to retain its function; and
- Removal of co-dominant/ dominant stems from within a RMZ area must be consistent with the RMZ retention described in Result 3.4.1.1, unless the Site Plan describes how the RMZ is able to retain its function; and
- To address safety issues there is a signed letter of collaboration between authorized representatives of a First Nation and the TSL holder, with a copy of that letter provided to the TSM and the CMR District Manager, that authorizes FN's removal of western redcedar (*Thuja plicata*) or yellow-cedar (*Chamaecyparis nootkatensis*) from within an area within an active cutting authority that is held by BCTS or one of its licensees.

3.10 Botanical Forest Resources

Reference Information	
Type of Objective	1. Objective set in regulation: 2. Objectives enabled by regulation: 3. Land Use Objectives: Nass South SRMP LUOR Order Objective 21
Effective Date	1. N/A 2. N/A 3. February 25, 2016
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

3.10.1 Objective: Pine Mushroom Resources

Nass South SRMP LUOR Order Objective 21: *Maintain at least 50% of the productive pine mushroom (Tricholoma magnivelare) sites²¹, in forest ages ranging from 80 to 200 years²².*

3.10.1.1 STRATEGY

During the period of this FSP, the TSM will adopt Strategy 3.7.1.1(Patch Size Distribution and Seral Stage) and Result 3.7.1.2 (Patch Size Distribution and Seral Stage) for BCTS operations.

3.10.1.2 STRATEGY

During the period of this FSP the TSM will ensure that productive pine mushroom sites associated with BCTS operations are maintained through the following actions:

²⁰ Removal of stems from within Riparian Reserve Zones will be as per the Forest Planning and Practices Regulation – currently, removal for cultural purposes is not an allowed activity within RRZs.

²¹ Productive pine mushroom sites means sites that are generally pine- or hemlock-leading stands below 800 metres elevation in the following site series: ICHmc1/01b, ICHmc2/01b and CWHws2/03. The minimum size of area to be considered is 0.3 ha for homogeneous site series and 1 ha for site series complexes.

²² If future research shows that silviculture systems (other than clearcut harvesting) can perpetuate pine mushroom production, the areas having these silviculture systems will contribute to meeting the objective.

- 1) BCTS will identify and map productive pine mushroom sites at the stand level during the ecological site mapping stage of operational planning.
- 2) If harvesting or road construction is proposed within the identified and mapped productive pine mushroom sites, 100% of the identified productive pine mushroom area will be addressed through the Site Plan to ensure that, at a minimum, 50% of the identified productive pine mushroom area will be maintained.

3.11 Recreation Trails and Sites

Reference Information	
Type of Objective	1. Objective set in regulation: FRPA ss. 56, 180 & 181 2. Objectives enabled by regulation: GAR s. 5(f), 5(g) 3. Land Use Objectives: N/A
Effective Date	1. January 31 2004 2. a. Order to Establish Objectives for a Recreation Site, Recreation Trail, or Interpretive Site (July 25, 1997). b. Order to Establish Objectives for a Recreation Site, Recreation Trail, or Interpretive Site (November 8, 1996). 3. N/A
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

3.11.1 **Objective: Interpretive Forest Sites, Recreation Sites and Recreation Trails**

The Recreation objectives are identified in the Orders associated with the recreation sites and trails listed in Table 3-4.

3.11.1.1 STRATEGY

- 1) During the period of this FSP the TSM will ensure that on the Recreation Trails with established objectives identified in Table 3-4:
 - a. No disturbance by BCTS harvesting, road construction, or silviculture activities to natural vegetation occurs within 10 m of trail centerline other than for a required crossing unless the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail grants an exemption for that activity.
 - b. Development activities that occur from 10 meters to 50 meters either side of trail centerline:
 - i. will only occur after the planned activity has been approved by the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail and
 - ii. the authorized development activities comply with the conditions of the approval.
 - c. A crossing of the trail is permitted if the crossing is required to access productive forest land that would otherwise be isolated and
 - d. The trail location is re-established if the crossing disturbs it. Alternatively, the trail can be relocated away from the crossing. The timing of the trail crossing, re-establishment, or trail relocation will require approval by the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail.
 - e. A trail crossing is deactivated once it is no longer required.

3.11.1.2 STRATEGY

During the period of this FSP the TSM will ensure that for the Recreation Sites with established objectives identified in Table 3-4 that there will be no disturbance²³ to areas within 10 m of lake shorelines, river-, stream-, or creek-banks, or marine foreshore. (This only applies to sites where an RRZ is not in existence). The remainder of the area within the recreation sites will be reserved from disturbance other than where BCTS and the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the site agree the disturbance will be for the improvement of the recreation experience, or where action or access is required to prevent or address potential losses due to fire, wind, or forest health factors.

Table 3-4: Recreation Sites and Trails

FDU	Site/Trail	File # 16660	Date of Establishment
Nass	Bonney Lake Recreation Site	04	July 25, 1997
	Bonney Lake Portage Recreational Trails	04	July 25, 1997
	Jigsaw Lake Recreation Site	04	Nov 8, 1996

²³ From activities related to BCTS' road construction, harvesting or silviculture activities.

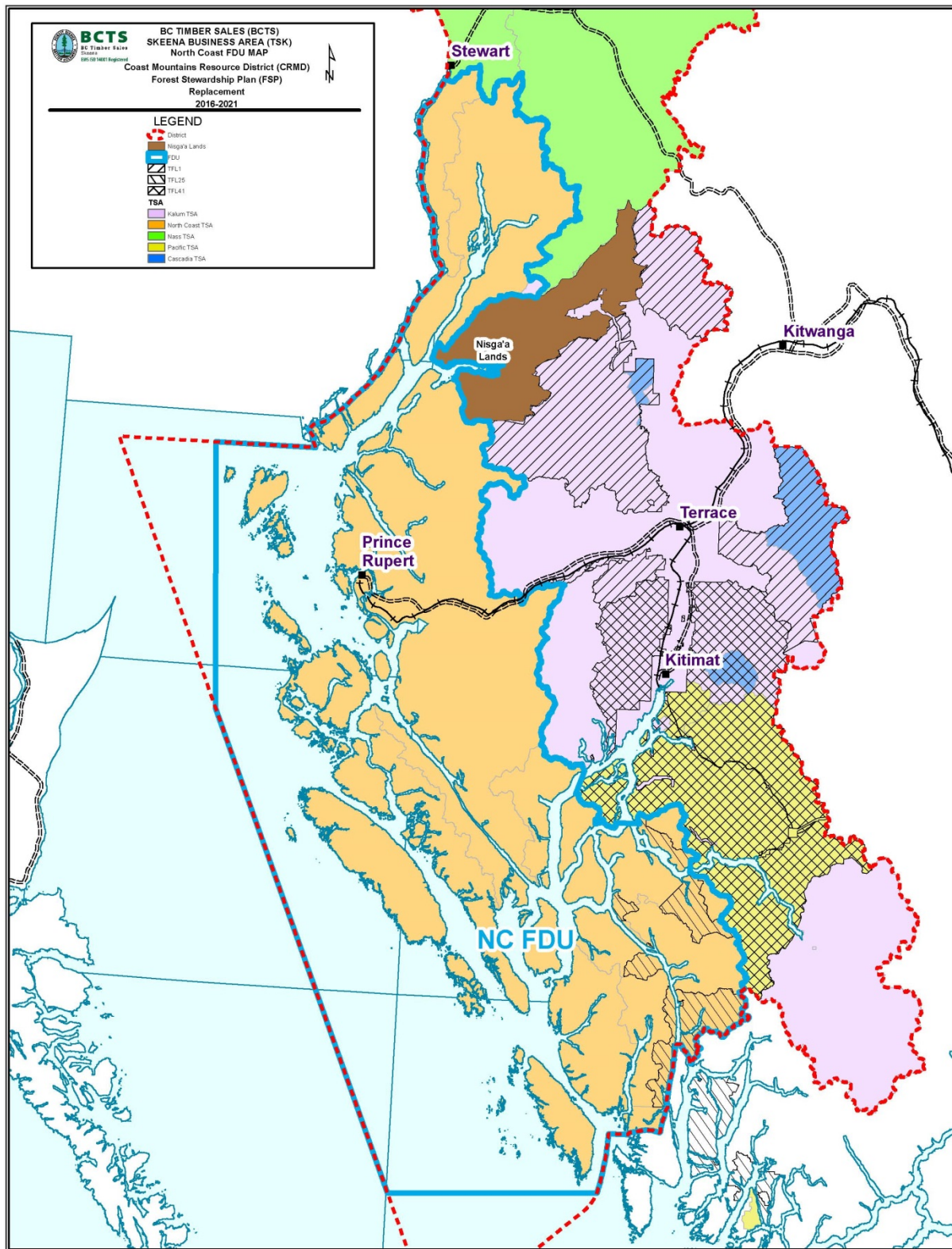


Figure 4: North Coast FDU Key Map

4 NORTH COAST FDU

The North Coast Forest Development Unit (NC FDU) is a single unit that encompasses the North Coast TSA and excludes Tree Farm License (TFL) # 25. BC Timber Sales' annual allowable cut apportionment within NC TSA is 79,799 m³. BCTS' operations may occur within any portion of the FDU specified by this FSP. The objectives, results and strategies in this chapter apply to the area within the North Coast FDU (Figure 4).

Objectives for the NC FDU derive from the overarching FRPA and the Great Bear Rainforest Order (January 28, 2016).

4.1 Soils

Reference Information		
Type of Objective	1. Objective set in regulation: FPPR s. 5 2. Objectives enabled by regulation: NA 3. Land-Use objectives: N/A	
Effective Date	1. January 31, 2004 2. N/A 3. N/A	
Mandatory Practice Requirements from the FPPR	FPPR ss. 37, 38, 39, & 40	
Practice Requirement(s) Eligible for Exemption	FPPR ss. 35 & 36	Decision: Adopt FPPR ss. 35 & 36

4.1.1 Objective: Soils

FPPR s. 5: *The objective set by government for Soils is, without unduly reducing the supply of timber from BC's forests, conserve the productivity and hydrologic function of soils.*

4.1.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 35 and 36 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR sections 35 and 36 apply to the holder's primary forest activities carried out during the term of the plan.

4.2 Timber

Reference Information		
Type of Objective	1. Objective set in regulation: FPPR s.6; FRPA s. 149 2. Objectives enabled by regulation: N/A 3. Land-Use objectives: N/A	
Effective Date	1. January 31, 2004 2. N/A 3. N/A	
Exempted Areas	Protected Areas including National and Provincial Parks, Biodiversity, Mining, Tourism Areas (BMTA)	
Mandatory Practice Requirements from the FPPR	FPPR ss. 41,42, 43, 44, 45,46	
Practice Requirement(s) Eligible for Exemption	NA	

4.2.1 **Objective: Timber**

FPPR s. 6:

The objectives set by government for timber are to,

- (a) maintain or enhance an economically valuable supply of commercial timber from British Columbia forests, and*
- (b) ensure that delivered wood costs, generally, after taking into account the effect on them of the relevant provisions of this regulation and of the Act, are competitive in relation to equivalent costs in relation to regulated primary forest activities in other jurisdictions and,*
- (c) ensure that the provisions of this regulation and of the Act that pertain to primary forest activities do not unduly constrain the ability of a holder of an agreement under the Forest Act to exercise the holder's rights under the agreement.*

4.2.1.1 RESULT

During the period of this FSP the TSM will ensure that BCTS blocks with a reforestation obligation are reforested to:

- 1) at least the minimum stocking with species identified in the stocking standards as per the BEC classification referenced in Appendix A that apply to this FSP; and
- 2) meet the regeneration delay, free growing heights, and free growing dates as described in the stocking standards (Appendix A) that apply to this FSP.

4.2.1.2 STRATEGY

During the period of this FSP the TSM will:

- 1) Refer to available spatial data of known and existing research installations with information from the BC Geographic Warehouse (BCGW), at web address:
<http://catalogue.data.gov.bc.ca/dataset/growth-and-yield-samples-all-status>
- 2) Prior to harvesting, incorporate protective buffers (disturbance free zones) with a minimum radius of 50 meters around established permanent sample plots and research installations, unless alternative measures are determined to be necessary to adequately protect the sample from resource development;
- 3) Notify a BCTS timber sale license or road permit holder, through the site plan, of the location of known sample plots and research installations within the area covered by the site plan.
- 4) Make known to the appropriate FLNRO staff whenever any unidentified permanent sample plots or research installations are found during the course of operational planning and resource development, and
- 5) Incorporate buffered research installations and permanent sample plots into one or more of the following:
 - a. Riparian Reserve Zones;
 - b. Riparian Management Zones;
 - c. Wildlife Tree Retention Areas;
 - d. Old Growth Management Areas; and/or,
 - e. Any other area constrained for non-timber values.

4.3 Wildlife

Reference Information	
Type of Objective	1. Objective set in regulation: FRPA s. 7(1) 2. Objectives enabled by regulation: GAR ss: 9, 10, 11, 12, 13; 3. Land Use Objectives: Great Bear Rainforest Order Objectives: 18, 19 and 20
Effective Date	1. FPPR; January 31, 2004 2. GAR; December 13, 2004 (a) Goat UWR # 6-010; August 8, 2012 (b) Moose UWR # 6-014; April 22, 2015 (c) Goshawk WHA # 6-003; February 10, 2005 (d) Marbled Murrelet WHA # 6-153 to 6-188, 6-280 and 6-281; June 29, 2010 Coastal Tailed Frog WHA # 6-056 and 6-057; March 17, 2005 (e) Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the North Coast Forest District, December 30, 2004 (f) Notice – Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Winter Survival of Ungulate Species in the North Coast Forest District, January 10, 2011 3. January 28, 2016
Mandatory Practice Requirements from FPPR	FPPR ss 69 and 70
Practice Requirement(s) Eligible for Exemption	NA

4.3.1 Objective: Wildlife

FPPR s. 7(1):

The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for

- (a) the survival of species at risk,*
- (b) the survival of regionally important wildlife, and*
- (c) the winter survival of specified ungulate species.*

4.3.1.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) When BCTS operations are planned to occur within 2 km of known Queen Charlotte Goshawk nest sites:
 - a. a written assessment of the breeding and foraging area associated with the nest site is completed by a Qualified Professional (QP).
 - b. the QP will provide BCTS with a report containing recommended mitigative actions; and
 - c. the TSM will ensure that the recommendations outlined in the report are implemented.
- 2) Queen Charlotte Goshawk habitat will be captured as a specific outcome of Landscape Reserve Designs (LRD's) completed by the TSM, in a manner that follows the 2016 Landscape Reserve design Methodology provided by government.

4.3.2 Objective: Wildlife - Grizzly Bear Habitat

Great Bear Rainforest Order; Part 2, Division 5 – Wildlife 18. Objectives for Grizzly Bear Habitat:

(1) *Maintain 100% of class 1 grizzly bear habitat shown in Schedule D; and*

(2) *Maintain 50% of class 2 grizzly bear habitat shown in Schedule D.*

(3) *Despite subsection (1), class 1 grizzly bear habitat polygons shown in Schedule D may be altered or harvested, provided that:*

(a) there has been First Nation Engagement with Applicable First Nations;

(b) a Qualified Professional:

(i) completes an assessment that identifies the characteristics of the habitat and linkages, where appropriate, to other grizzly bear habitat; and

(ii) confirms that the alteration or harvesting will result in no net loss of class 1 grizzly habitat and connectivity and no functional loss of habitat connectivity; and

(c) measures are implemented that will ensure the alteration or harvesting will not cause a material adverse impact to the suitability of the class 1 grizzly bear habitat.

(4) *Despite subsection (1), class 1 grizzly bear habitat polygons may be altered or harvested for road access or to address a safety concern, provided that:*

(a) there has been First Nation Engagement with Applicable First Nations;

(b) there is no other practicable alternative for road access or other infrastructure, or the alteration or harvesting is required to address a safety concern;

(c) the road right-of-way clearing width is the minimum safe width necessary to accommodate the road; and

(d) measures are implemented that, to the extent practicable, will ensure the alteration or harvesting will not cause a material adverse impact to the suitability of the class 1 grizzly bear habitat.

4.3.2.1 RESULT

During the period of this FSP the TSM will undertake to comply with the Great Bear Rainforest Order, Objective 18 (1) through (4).

4.3.3 Objective: Wildlife – Grizzly and Black Bear Dens

Great Bear Rainforest Order; Part 2, Division 5 – Wildlife 19. Objectives for Grizzly and Black Bear Dens:

(1) *Protect grizzly Bear Dens and black Bear Dens.*

(2) *Adjacent to grizzly Bear Dens, maintain a Reserve Zone with a minimum width of 50 metres.*

(3) *Despite subsections (1) and (2), alteration or removal of:*

(a) a black Bear Den; or

(b) a grizzly Bear Den or its Reserve Zone, or both, may occur, provided that:

(c) there has been First Nation Engagement with Applicable First Nations;

(d) the alteration or removal is required for road access or to address a safety concern and there is no practicable alternative; and

(e) the alteration or removal does not occur during the winter hibernation season.

(4) *In addition to subsections (1) and (2), adjacent to any Reserve Zone required in subsection (2), maintain a Management Zone with an average width equal to 1.0 Tree Length, measured from the outer edge of the Reserve Zone, to protect the integrity of the Reserve Zone.*

(5) Within the Management Zone required under subsection (4), alteration or removal of trees may occur outside of the winter hibernation season to:

- (a) accommodate operational requirements for road and bridge construction, where no practicable alternative exists;*
- (b) accommodate road maintenance and deactivation, the removal of danger trees, and brushing and clearing within the right-of-way, for safety purposes, on any existing road under active tenure; or*
- (c) mitigate the impact of windthrow.*

(6) All found Bear Dens must be documented and this documentation must be submitted to the Applicable First Nations and the Province of British Columbia at the end of each calendar year.

4.3.3.1 RESULT

During the period of this FSP the TSM will undertake to comply with the Great Bear Rainforest Order, Objective 19 (1) through (6).

4.3.4 **Objective: Wildlife – Kermode Habitat**

Great Bear Rainforest Order; Part 2, Division 5 – Wildlife 20. Objectives for Kermode Habitat:

(1) To maintain Kermode bear habitat, within the Kermode stewardship areas shown in Schedule R:

- (a) Maintain a maximum of 30% early seral forest and 40% mid seral forest;*
- (b) Maintain a maximum 70% crown closure within managed stands by the declaration of free-growing; and*
- (c) do not alter critical black bear habitat.*

(2) Despite subsection (1)(c), up to 5% of a critical black bear habitat occurrence may be altered if there is no practicable alternative for road access or other infrastructure, or to address a safety concern, provided there has been First Nation Engagement with Applicable First Nations.

4.3.4.1 RESULT

- 1) During the period of this FSP and within the Kermode Stewardship Areas as shown in Schedule 'R' of the GBRO, in the event of planned BCTS harvesting activities, the TSM:
 - a. will maintain a maximum of 30% early seral forest and 40% mid seral forest;
 - b. will maintain a maximum 70% crown closure within managed stands by the declaration of free-growing. The Wildlife Forage Area stocking standards set out in Table A2 of the FSP, will apply to the Kermode Stewardship Area; and
 - c. will not alter critical black bear habitat except in accordance with section d. Critical black bear habitat is defined as a bear den, Type 1 Aquatic Habitat Reserve Zone areas and avalanche chutes. Bear dens will be managed in accordance with Strategy 4.3.3.1. Avalanche chutes will be buffered by a minimum 50 metre width management zone on each side of the chute, within which a minimum of 50% of the basal area present is to be retained on each side.
 - d. may alter up to 5% of a critical black bear habitat occurrence if there is no practicable alternative for road access or other infrastructure, or to address a safety concern, provided there has been First Nation Engagement with Applicable First Nations. First Nation Engagement will occur as per Strategy 4.8.2.1.

4.4 Water, Fish and Biodiversity within Riparian Areas

Reference Information		
Type of Objective	<p><u>Water:</u> Objectives set in regulation: FPPR s. 8</p> <p><u>Fish:</u> Objectives set in regulation: FPPR s. 8 Objectives enabled by regulation: NA Land-Use Objectives: GBR Objectives: 10, 11, 12, 13, 14 and 15</p> <p><u>Biodiversity:</u> Objectives set in regulation: FPPR ss. 8, 9 and 9.1 Objectives enabled by regulation: NA Land-Use Objectives: GBR Objectives: 15</p>	
Effective Date	<p>FPPR: January 31, 2004 GAR: December 13, 2004 GBR Order: January 28, 2016</p>	
Mandatory Practice Requirements from the FPPR	<p>Water and Fish: FPPR ss. 54 & 58 Biodiversity: NA</p>	
Practice Requirement(s) Eligible for Exemption	<p>FPPR ss FPPR ss. 47,48, 49, 50,51, 52(2) 53, 55, 56 & 57</p>	<p>Decision: Adopt: FPPR ss. 47,48, 49, 50, 51, 52(2) and 53 except within areas addressed under GBRO Objectives 11, 12, 13 and 15 (where results 4.4.3.1, 4.4.4.1, 4.4.5.1 and 4.4.7.1 apply) Adopt: FPPR ss 55, 56 and 57</p>

4.4.1 Objective: Water, Fish and Biodiversity

- a. FPPR s 8: *The objective set by government for water, fish, wildlife and biodiversity within riparian areas is, without unduly reducing the supply of timber from British Columbia's forests, to conserve, at the landscape level, the water quality, fish habitat, wildlife habitat and biodiversity associated with those riparian areas.*
- b. FPPR s 8.1: *Until December 31, 2005 the objective set by government for fish habitat in fisheries sensitive watersheds is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities in the fisheries sensitive watershed from resulting in a material adverse impact on the habitat of the fish species for which the fisheries sensitive watershed was established.*

4.4.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with FPPR ss. 55, 56 and 57. Outside of the areas covered under GBRO objectives 11, 12, 13 and 15 (where results 4.4.3.1, 4.4.4.1, 4.4.5.1 and 4.4.7.1 apply) the TSM will also undertake to comply with FPPR ss. 47, 48, 49, 50, 51, 52(2) and 53. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that these sections apply to the holder's primary forest activities carried out during the term of the plan.

4.4.1.2 RESULT

During the period of this FSP the TSM will ensure that the percentage of total basal area retained as standing trees in riparian management zones within BCTS blocks (with the exception of those areas addressed in Result 4.4.3.1(Type 2 Aquatic Habitat), Result 4.4.5.1 (Forested Swamps) and Result 4.4.7.1 (Active Fluvial Units)) will be:

- a. A minimum of 20% on S1, S2 and S3 streams;

- b. A minimum of 10% on S4 and S5 streams;
- c. No basal area retention is necessary on S6 streams and
- d. A minimum of 10% on all Wetlands and Lakes.

4.4.2 **Objective: Important Fisheries Watershed**

Great Bear Rainforest Order: Part 2, Division 3 – Aquatic Habitats 10. Objectives for Important Fisheries Watersheds:

(1) Maintain hydrological and fluvial processes in watersheds within the range of natural variation by maintaining an Equivalent Clearcut Area of less than 20% in each of the Important Fisheries Watersheds shown in Schedule E.

(2) Despite subsection (1), an Equivalent Clearcut Area of more than 20% may be maintained provided that:

- (a) there has been First Nation Engagement with Applicable First Nations;*
- (b) a coastal watershed assessment or similar assessment of watershed sensitivity to forest development disturbance is completed by a Qualified Professional;*
- (c) an amount, type and distribution of forest cover sufficient to sustain natural hydrological and fluvial processes within the watershed is maintained; and*
- (d) the effectiveness of the management strategies implemented pursuant to subsection (2)(c) are monitored.*

4.4.2.1 RESULT

- 1) During the period of this FSP the TSM will undertake to comply with GBR Order Part 2, Division 3, Objectives 10 (1) and (2) for Important Fisheries Watersheds.
- 2) Where there are other licence holders operating in a watershed that have committed to sharing this information, the TSM will communicate and share information as necessary, and to the extent practicable, in order to ensure that the Equivalent Clearcut Area (ECA) limits are not exceeded by BCTS operations based on the information available at the time of analysis.

4.4.3 **Objective: Type 1 Aquatic Habitat**²⁴

Great Bear Rainforest Order: Part 2, Division 3 – Aquatic Habitats 11. Objectives for Type 1 Aquatic Habitat:

(1) Protect and maintain Type 1 Aquatic Habitats by, in a Development Area, maintaining an adjacent Reserve Zone with a minimum width of 1.5 Tree Lengths and do not alter or harvest the forest in the Reserve Zone unless there is no practicable alternative.

(2) Despite subsection (1), the width of the Reserve Zone may be decreased at specific locations to address site characteristics and values, provided that:

- (a) a decrease is no more than 0.5 Tree Lengths; and*
- (b) there is no net loss of Reserve Zone area required in subsection (1) in the Development Area.*

(3) Despite subsections (1) and (2), the width of the Reserve Zone may be decreased, at specific locations to address site characteristics and values, by more than 0.5 Tree Lengths provided that:

²⁴ As defined in the Great Bear Rainforest Order, Part 2, Division 1.

- (a) *there has been First Nation Engagement with Applicable First Nations;*
- (b) *there is no net loss of Reserve Zone area required in subsection (1) in the Development Area;*
- (c) *an aquatic habitat assessment has been prepared by a Qualified Professional that specifies measures:*
 - (i) *to maintain the geomorphic and hydroriparian characteristics of the stream channel;*
 - (ii) *to maintain the life cycle needs of fish in affected stream reaches;*
 - (iii) *to maintain local terrestrial habitat needs and linkages to other reserves; and*
 - (iv) *to minimize loss of trees in the Reserve Zone from windthrow; and*
- (d) *the measures in subsection (3)(c) are implemented.*

(4) Despite subsections (1), (2) and (3), for the lower portion of the Kimsquit River and its tributaries identified in Schedule P maintain a Reserve Zone with a width of 150 metres on each side of the Natural Boundary, unless there is no reasonable or practicable alternative for future road access, other infrastructure, or to address a safety concern. Existing road access and infrastructure is exempt from this reserve provision.

(5) Where some or all of the forest required in subsections (1) and (2) has been previously altered or harvested, to the extent practicable, recruit or create Functional Riparian Forest in the Reserve Zone in the shortest time practicable.

4.4.3.1 RESULT

During the period of this FSP the TSM will undertake to comply with GBR Order Part 2, Division 3, Objectives 11 (1) through (5) for Type 1 Aquatic Habitats.

4.4.4 **Objective: Type 2 Aquatic Habitat**²⁵

Great Bear Rainforest Order: Part 2, Division 3 – Aquatic Habitats 12. Objectives for Type 2 Aquatic Habitat:

(1) Maintain the natural ecological function of Type 2 Aquatic Habitat by, in a Development Area, retaining 90% of the forest in an adjacent Management Zone with a minimum width of 1.5 Tree Lengths.

(2) Despite subsection (1), the width of the Management Zone in any Development Area may be decreased by up to 0.5 Tree Lengths to address site characteristics, provided there is no net loss of Management Zone area within the Development Area.

(3) Despite subsections (1) and (2), the width of the Management Zone may be increased or decreased by more than 0.5 Tree Lengths and alteration or harvesting within the Management Zone may occur provided that:

- (a) *there has been First Nation Engagement with Applicable First Nations;*
- (b) *there is no net loss of Management Zone area required in subsection (1) in the Development Area;*
- (c) *an aquatic habitat assessment has been prepared by a Qualified Professional that specifies measures:*
 - (i) *to maintain the geomorphic and hydroriparian characteristics of the stream channel;*
 - (ii) *to maintain the life cycle needs of fish in affected stream reaches;*
 - (iii) *to maintain local terrestrial habitat needs and linkages to other reserves; and*
 - (iv) *to minimize loss of trees in the Reserve Zone from windthrow; and*
- (d) *measures in subsection (3)(c) are implemented.*

²⁵ As defined in Great Bear Rainforest Order, Part 2, Division 1 (January 28, 2016).

(4) Where some or all of the forest required in subsections (1), (2) and (3) has been previously altered or harvested, to the extent practicable, recruit or create Functional Riparian Forest in the Management Zone in the shortest time practicable.

4.4.4.1 RESULT

During the period of this FSP the TSM will undertake to comply with GBR Order Part 2, Division 3, Objectives 12(1) through (4) for Type 2 Aquatic Habitats.

4.4.5 **Objective: Forested Swamps**²⁶

Great Bear Rainforest Order: Part 2, Division 3 – Aquatic Habitats 13. Objectives for Forested Swamps:

(1) Maintain the ecological characteristics and function of Forested Swamps.

(2) Within Development Areas, adjacent to Forested Swamps greater than 0.25 hectares, retain 70% of the Functional Riparian Forest in a Management Zone with a minimum width of 1.5 Tree Lengths.

(3) Despite subsection (2), the width of the Management Zone adjacent to a Forested Swamp may be decreased by up to 0.5 Tree Lengths to address site specific values.

(4) Despite subsections (2) and (3), the width of the Management Zone may be decreased by more than 0.5 Tree Lengths and additional harvesting within the Management Zone may occur provided that:

(a) there has been First Nation Engagement with Applicable First Nations;

(b) A Forested Swamp assessment has been prepared by a Qualified Professional that specifies measures:

(i) to maintain local terrestrial habitat needs and linkages to other reserves; and

(ii) to minimize loss of trees in the Management Zone from windthrow; and

(c) measures in subsection (4)(b) are implemented.

(5) Where some or all of the forest within the Management Zone required in subsections (2), (3) and (4) has been previously altered or harvested, to the extent practicable, recruit or create Functional Riparian Forest in the Management Zone in the shortest time practicable.

4.4.5.1 RESULT

During the period of this FSP the TSM will undertake to comply with GBR Order Part 2, Division 3, Objectives 13 (1) through (5) for Forested Swamps.

4.4.6 **Objective: Upland Stream Areas**

Great Bear Rainforest Order: Part 2, Division 3 – Aquatic Habitats 14. Objectives for Upland Streams:

(1) Maintain the hydrological and fluvial processes in the portion of Watershed Planning Units occupied by Upland Streams.

(2) For the purposes of subsection (1), in the portion of the Watershed Planning Unit where Upland Streams occur, maintain a minimum of 70% of the forest as Functional Riparian Forest.

(3) For the purposes of subsection (2), preferentially allocate the Functional Riparian Forest to encompass:

(a) Upland Streams that flow into Type 1 Aquatic Habitat and Type 2 Aquatic Habitat and that pose a moderate to high risk of sediment transport;

²⁶ As defined in Great Bear Rainforest Order, Part 2, Division 1.

- (b) Upland Stream reaches with unique microclimate or other rare ecological or sensitive geomorphological characteristics;*
- (c) Upland Stream reaches with known tailed frog habitat; and*
- (d) other Upland Streams that flow into Type 1 Aquatic Habitat and Type 2 Aquatic Habitat;*

(4) Despite subsection (2), in the portion of the Watershed Planning Unit where Upland Streams occur, less than 70% of the forest may be maintained as Functional Riparian Forest provided that:

- (a) there has been First Nation Engagement with Applicable First Nations;*
- (b) a coastal watershed assessment or similar assessment of watershed sensitivity to forest development disturbance is completed by a Qualified Professional;*
- (c) an amount, type and distribution of forest cover sufficient to sustain natural hydrological and fluvial processes within the portion of the watershed where Upland Streams occur is maintained; and*
- (d) the effectiveness of the management strategies implemented pursuant to subsection (4)(c) are monitored.*

4.4.6.1 RESULT

- 1) During the period of this FSP the TSM will undertake to comply with GBR Order Part 2, Division 3, objectives 14 (1) through (4) for Upland Streams Areas.
- 2) Where there are other licence holders operating in a watershed that have committed to sharing this information, the TSM will communicate and share information as necessary, and to the extent practicable, in order to ensure that the Upland Stream Area limits are not exceeded by BCTS operations based on the information available at the time of analysis.

4.4.7 **Objective: Active Fluvial Units**

Great Bear Rainforest Order: Part 2, Division 3 – Aquatic Habitats 15. Objectives for Active Fluvial Units:

(1) Reserve all forest on Active Fluvial Units.

(2) Adjacent to Active Fluvial Units, retain a minimum of 90% of the forest in a Management Zone with an average width of 1.5 Tree Lengths.

(3) Despite subsections (1) and (2), forest on an Active Fluvial Unit may be altered or harvested, and less than 90% of the forest in the Management Zone may be retained, to allow for road access or to address a safety concern, provided that:

- (a) there has been First Nation Engagement with Applicable First Nations;*
- (b) no practicable alternative to access a Development Area is available;*
- (c) an Active Fluvial Unit assessment has been prepared by a Qualified Professional that:*
 - (i) specifies measures to maintain stream flow patterns and flow capacity and geomorphic stability of the Active Fluvial Unit for roads or other infrastructure; or*
 - (ii) where the removal of 4 or more live trees is proposed for safety reasons, provides an assessment of the potential impact on geomorphic stability; and*
- (d) the measures in subsection (3)(c) are implemented in a manner that will maintain the flow patterns, flow capacity and geomorphic stability of the Active Fluvial Unit.*

(4) Where some or all of the forest required to be retained in subsections (1) and (2) has been previously altered or harvested, to the extent practicable, recruit or create Functional Riparian Forest on the Active Fluvial Unit in the shortest time practicable.

4.4.7.1 RESULT

During the period of this FSP the TSM will undertake to comply with GBR Order Part 2, Division 3, Objectives 15 (1) through (4) for Active Fluvial Units.

4.5 Community Watersheds

Reference Information		
Type of Objective	1.Objectives set in regulation: FRPA s.150; FPPR s. 8.2 2.Objectives enabled by regulation: N/A 3.Land Use Objectives: N/A	
Effective Date	1. January 31, 2004 2. N/A 3. N/A	
Mandatory Practice Requirements from the FPPR	FPPR ss. 58, 62 ,63	
Practice Requirement(s) Eligible for Exemption	FPPR ss. 59, 60, 61	Decision: Adopt FPPR ss. 59, 60,61

4.5.1 **Objective: Community Watersheds**

FPPR s. 8.2:

(1) In this section, "**community watershed**" means a community watershed

- (a) that is continued under section 180 (e) of the Act, and
- (b) for which a water quality objective has not been
 - (i) continued under section 181 of the Act, or
 - (ii) established under the Government Actions Regulation.

(2) The objective set by government for water being diverted for human consumption through a licensed waterworks in a community watershed is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities within the community watershed from resulting in

- (a) a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or
- (b) the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment required under
 - (i) an enactment, or
 - (ii) the licence pertaining to the waterworks.

(3) The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.

4.5.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with sections 59, 60 and 61 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR sections 59, 60 and 61 apply to the holder's primary forest activities carried out during the term of the plan.

4.6 Biodiversity

Reference Information		
Type of Objective	<u>Biodiversity:</u> 1. Objectives set in regulation: FPPR ss 9, 9.1 2. Objectives enabled by regulation: N/A 3. Land-Use Objectives: GBR Objectives: 4, 5, 6, 7, 16 and 17	
Effective Date	1. FPPR: January 31, 2004 2. N/A 3. GBR Order: January 28, 2016	
Mandatory Practice Requirements from the FPPR	FPPR ss.68	
Practice Requirement(s) Eligible for Exemption	FPPR ss. 64,65 ,66,67	Decision: Adopt FPPR s 67 Exempt FPPR ss 64, 65, 66 as per FPPR s 12.5

4.6.1 **Objective: Biodiversity – Landscape Level**

a. FPPR s. 9:

The objective set by government for Wildlife and Biodiversity at the Landscape Level is, without unduly reducing the supply of timber from British Columbia's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape.

4.6.1.1 RESULT

During the period of this FSP the TSM will undertake to comply with section 67 of the FPPR. The TSM will notify each holder of a timber sale license or road permit to which the plan relates that FPPR section 67 applies to the holder's primary forest activities carried out during the term of the plan.

4.6.2 **Objective: Biodiversity – Landscape Level**

Great Bear Rainforest Order: Part 1, Division 3 – Biodiversity 4. Objectives for ecological representation:

(1) *Maintain landscape level biodiversity as follows:*

(a) *For each Site Series Group in the order area, maintain a distribution of forest stand ages that will achieve the Old Forest Representation Targets listed in Column "A" in Schedule G by no later than 2264;*

(b) *For each Site Series Group in the order area, retain an amount of Old Forest equal to or greater than the order area Minimum Old Forest Retention Levels listed in Column "B" in Schedule G and*

(c) *For the purposes of subsections (1)(a) and (1)(b), for each Site Series Group in a Landscape Unit, retain a minimum of 30% of the total forest area of the Site Series Group as Old Forest.*

(2) *Despite subsection (1)(c), harvesting of Old Forest in a Site Series Group in a Landscape Unit may occur where less than 30% of the total forest area of the Site Series Group in the Landscape Unit is Old Forest, provided that:*

(a) *within the Landscape Unit area:*

(i) *alteration or harvesting is required for road access, other infrastructure, or to address a safety concern, where there is no practicable alternative; or*

(ii) *the lesser of 20% of the total forest area or the Minimum Old Forest Retention Level specified in Schedule F is maintained as Old Forest; and*

(b) *The aggregate area of Old Forest in the order area harvested under subsection (2)(a) following the date of establishment of this order does not exceed 18,650 hectares.*

(3) For each Site Series Group listed in Schedule L, in the Landscape Units listed in Schedule K, up to 5% of the area required to meet the minimum Old Forest requirements specified in subsection (1)(c) or (2)(a)(ii) can be met in forest that is not Old Forest where this results in an improved ecological outcome.

(4) Where there is not enough Old Forest available to meet the targets in subsections (1)(b) and (1)(c), or as a result of subsection (2), recruit forest to meet the Old Forest requirements by no later than 2264.

(5) Despite subsections (1)(c) and (2)(a)(ii), for each Site Series Group listed in Schedule L, up to 5% of the area required to meet the minimum Old Forest requirements specified in subsections (1)(c) or (2)(a)(ii) may be met in Old Forest in a higher level Site Series Group in the same variant.

(6) Despite subsections (1)(c), (2)(a)(ii), and (5), for each Site Series Group listed in Schedule M, and despite subsection (1)(a) for each Site Series Group in the CWHxm2, CWHdm and CWHmm1 biogeoclimatic variants, up to 5% of the combined area of each Site Series Group in the Thurlow, Fulmore, Gray and Estero Landscape Units required under subsections (1)(c) and (2) to meet the target for that Site Series Group may be met in an equal or higher level Site Series Group listed in Schedule M in any of the four Landscape Units.

4.6.2.1 STRATEGY

During the period of this FSP the TSM will:

- 1) Coordinate with other Holders of FSPs and a G2G Operational Implementation Committee (OPIC), to the extent practicable, to obtain results that undertake to comply with the Order area objectives, in Landscape Units (LUs) and between and among Holders of FSPs.
- 2) For the Order Area:
 - a. Use the non-binding table "Implementation Guidance Table – Old Forest Targets by Landscape Unit" as an aid or starting point in the achievement of the legally specified site series group old forest requirements for the Order area.
 - b. Reach agreement on specifying targets or specifying proportions of the Order area ecological representation and managed forest objectives, the flexibility in GBRO ss. 4(2)-4(6), and allocate to the LUs; and update targets on an agreed period or as required.
 - c. If fair and effective agreement cannot be reached: the TSM will apply the Implementation Guidance Table until agreement is reached and will notify the other Licensees; or will request the Minister to act under FPPR s. 19.
- 3) For the lands to which the Order applies in each LU in which the TSM has active planning or operations during the period of this FSP, the TSM will:
 - d. Apply strategies 1) and 2) above.
 - e. Reach agreement on targets or proportions of ecological representation and managed forest, the flexibility in the GBRO ss. 4(2)-4(6), identify drawdowns and small surpluses, between and amongst Licensees, and update targets annually or as agreed, including a process of incorporation for any new inventory classification.
 - f. If fair and effective agreement cannot be reached: in the interim, the Licensee(s) may proportion the LU representation targets by total forest area and proportion the minimum old forest targets among licensees, identifying small surpluses, and inform the other Licensees ; or, the Holder(s) of the FSP may request the Minister to act under FPPR s. 19.
- 4) Take no action in any LU in respect of the objective until such time as the TSM is active with planning or operations in the LU.

- 5) Upon the TSM becoming active with planning or operations in the LU, the TSM will take action as under Strategies 1-3 above.

4.6.3 **Objective: Landscape Reserve Designs**

Great Bear Rainforest Order: Part 1, Division 3 – Biodiversity 5. Objectives for Landscape Reserve Designs:

(1) For each Landscape Unit in the order area, prepare a Landscape Reserve Design that:

(a) addresses the Minimum Old Forest Retention Levels specified in sections 4(1)(c) and 4(2), the Old Forest Representation Targets specified in sections 4(1)(a) and 4(1)(b) and the Managed Forest area specified in section 6(1)(a); and

(b) to the extent practicable simultaneously contributes to the protection and stewardship of:

(i) Aboriginal Heritage Features, Aboriginal Forest Resources, and Aboriginal Tree Use; and

(ii) Red-Listed Plant Communities, Blue-Listed Plant Communities, habitat important for species at risk, ungulate winter range, and habitat for regionally important wildlife including, but not limited to, mountain goats, grizzly bears, northern goshawks, tailed frogs, and marbled murrelets.

(2) For the purposes of subsection (1)(a), when preparing a Landscape Reserve Design, the provisions in sections 4(3), 4(5) and 4(6) shall apply.

(3) No commercial timber harvesting is permitted in a Landscape Reserve Design.

(4) For the purposes of subsection (1):

(a) complete Landscape Reserve Designs within five years of the date of establishment of this order in those Landscape Units where harvesting is occurring or planned to commence within 5 years; or

(b) complete Landscape Reserve Designs prior to declaring areas or prior to the application for a road permit or cutting permit in those Landscape Units where harvesting is currently not occurring or is not planned to commence within 5 years.

(5) Despite subsection (1)(a), for each Site Series Group in a Landscape Unit, a percentage of the Old Forest Representation Targets specified in section 4(1)(a) equivalent to 75% of the Average Operational Landbase Netdown for that Site Series Group is not required to be spatially defined until 2264.

(6) Holders of licenses or tenures with an allowable annual cut of less than 20,000 cubic metres per year are exempt from subsections (1) and (4).

(7) For the purposes of subsection (1), where because of harvest history or landscape characteristics or where not practicable to meet Minimum Old Forest Retention Levels in a Landscape Reserve Design:

(a) forest that is not Old Forest may be included in the Landscape Reserve Design; and

(b) establish Temporary Old Forest Reserves outside of the Landscape Reserve Design, with an area sufficient to meet the Landscape Unit Minimum Old Forest Retention Level.

(8) Despite subsection (3), thinning and silvicultural treatments are permitted in Landscape Reserve Designs to expedite restoration to Old Forest structural characteristics.

(9) Old Forest in a Site Series Group within a Temporary Old Forest Reserve established under subsection (7)(b) may be harvested when:

(a) in the Type 1 Restoration Landscape Units referenced in section 7(1)(a), there has been

sufficient recruitment of Old Forest in that Site Series Group to meet Old Forest Representation Targets within a Landscape Reserve Design; or
(b) in any Landscape Unit not referenced in section 7(1)(a), an equivalent area of younger forest in that Site Series Group in a Landscape Reserve Design in that Landscape Unit becomes Old Forest.

(10) A Landscape Reserve Design may be altered or modified to address new information provided that:

- (a) a Qualified Professional develops an alternative Landscape Reserve Design;
- (b) the alternative Landscape Reserve Design meets the requirements of subsections (1) and (5); and
- (c) any area removed from the altered Landscape Reserve:
 - (i) where none of the flexibility provisions in sections 4(3), 4(5) and 4(6) apply, is replaced with an equivalent area of forest in the same Site Series Group, and that is in the same seral stage or has similar stand structural characteristics; or
 - (ii) where a flexibility provision in section 4(3), 4(5) or 4(6) applies, is replaced with an equivalent area of forest, comply with that flexibility provision.

4.6.3.1 STRATEGY

- 1) During the period of this FSP the TSM will coordinate with other Licensees and a G2G Operational Implementation Committee (OPIC), to the extent practicable, to obtain results that undertake to comply with the Order area objectives, in Landscape Units and between and among Licensees.
- 2) During the period of this FSP the TSM will:
 - a. use the non-binding table "Implementation Guidance Table – Old Forest Targets by Landscape Unit" as an aid or starting point in the achievement of the legally specified site series group old forest requirements for the Order area.
 - b. reach agreement on specifying targets or specifying proportions of the Order area ecological representation and managed forest objectives, the flexibility in 4(2)-4(6), and allocate to the Landscape Units; and update targets on an agreed period or as required.
 - c. if fair and effective agreement cannot be reached: will apply the Implementation Guidance Table until agreement is reached and notify the other Licensees; or will request the Minister to act under FPPR s 19.
- 3) During the period of this FSP the TSM will, for the lands to which the Order applies, in each Landscape Unit in which the TSM has tenures with active planning or operations:
 - a. apply strategies 1 and 2.
 - b. reach agreement on targets or proportions of ecological representation and managed forest, the flexibility in 4(2)-4(6), identify drawdowns and small surpluses, and procedures for managing Landscape Reserves, between and amongst Licensees; and update targets annually or as agreed, including a process of incorporation for any new TEM/VRI inventory classification.
 - c. if fair and effective agreement cannot be reached: in the interim, the TSM may proportion the LU representation targets by total forest area, and proportion the minimum old, between Licensees, identifying small surpluses, and inform the other Licensees, and may not develop Landscape Reserves established by other Licensees; or, the TSM may request the Minister to act under FPPR s 19.
- 4) During the period of this FSP the TSM will participate in designing LRDs and Restoration Zones that are consistent with Order objectives, and will:
 - a. design a single LRD with all Licensees in the Landscape Unit (including those that are exempt from leading an LRD).
 - b. complete LRDs within the Order's timelines, and designate Restoration Zones within the Order timelines, unless there are no planned operations within the Landscape Unit.

- c. agree as necessary on methods for altering or modifying LRDs (eg. Order Part 1 s 5(3), 5(10) and related LRD guidance), that will be consistent with meeting proportional targets and avoiding undue constraints between Licensees.
- 5) During the period of this FSP the TSM will ensure BCTS' operations follow the agreed upon target allocations or specified proportions of the ecological representation targets and the managed forest targets, in:
- a. the landscape units in which BCTS operates and in the LRD when completed;
 - b. the areas of the timber harvesting rights granted by the government to BCTS;
 - c. areas to which the LUO applies.
- 6) During the period of this FSP the TSM will ensure that BCTS operations follow the 2016 Landscape Reserve Design methodology and the 2016 Framework for Landscape Reserve Design provided by government.

4.6.4 **Objective: Restoration Zones and Restoration Landscape Units**

Great Bear Rainforest Order: Part 1, Division 3 – Biodiversity 7. Objectives for Restoration Zones and Restoration Landscape Units:

(1) Restore landscape level biodiversity in Landscape Units with extensive past forest development activity by:

(a) Within Landscape Reserve Designs in each Type 1 Restoration Landscape Unit listed in Schedule H, designating a minimum of 30% of each Site Series Group as a Restoration Zone within two years of the date of establishment of this order, or as soon as practicable thereafter; and

(b) Within Landscape Reserve Designs in each Type 2 Restoration Landscape Unit listed in Schedule H, designating a minimum of 30% of each Site Series Group as a Restoration Zone prior to any development activity that will result in more than 30% of the Landscape Unit area being within Site Series Groups containing less than 30% total Old Forest.

(2) For the purposes of subsections (1)(a) and (1)(b), when designating a Restoration Zone within a Landscape Reserve Design, the provisions in sections 4(3), 4(5) and 4(6) shall apply.

(3) The boundaries of a Restoration Zone may be altered or modified to address new information, provided that:

(a) a Qualified Professional develops an alternative Landscape Reserve Design;

(b) the alteration or modification is required to address an operational access, infrastructure or safety issue and there is no practicable alternative;

(c) the alteration or modification maintains or improves ecological outcomes;

(d) any area removed from the Restoration Zone:

(i) where none of the flexibility provisions in sections 4(3), 4(5) and 4(6) apply, is replaced with an equivalent area of forest in the same Site Series Group, and that is in the same seral stage or has similar stand structural characteristics; or

(ii) where a flexibility provision in section 4(3), 4(5) or 4(6) applies, is replaced with an equivalent area of forest, comply with that flexibility provision;

(e) any area removed from the Restoration Zone for safety reasons that does not also maintain or improve ecological outcomes must be replaced with an equivalent area of forest, comply with the flexibility provisions in sections 4(3), 4(5) and 4(6); and

(f) the boundary alteration for an individual Restoration Zone in a Landscape Unit does not exceed 10 hectares in a calendar year.

(4) Despite subsection (3)(f), a boundary alteration for an individual Restoration Zone in a Landscape Unit may exceed 10 hectares per year provided that a documented rationale for the alteration is prepared by a Qualified Professional.

4.6.4.1 RESULT

During the period of this FSP the TSM will undertake to comply with GBR Order Part 1, Division 3, Objectives 7 (1) through (4) for Restoration Zones and Restoration Landscape Units and the TSM will undertake to comply with the 2016 Landscape Reserve Design methodology provided by government.

4.6.5 **Objective: Biodiversity – Managed and Natural Forest**

Great Bear Rainforest Order: Part 1, Division 3 – Biodiversity 6. Objectives for Managed Forest and Natural Forest:

(1) Identify and maintain in the order area:

- (a) an area of Managed Forest of 550,032 hectares that is or will be available for timber harvest; and*
- (b) a Natural Forest area that continues to grow older over time subject to natural disturbance and non - forest tenure activity, and has an area of 3,108,876 hectares.*

4.6.5.1 RESULT

During the period of this FSP the TSM will follow Strategy 4.6.3.1 to identify and maintain the amount of hectares required to meet Managed Forest and Natural Forest commitments.

4.6.6 **Objective: Biodiversity – Red-Listed and Blue-Listed Plant Communities**

Great Bear Rainforest Order: Part 2, Division 4 – Biodiversity 16. Objectives for Red-Listed and Blue Listed Plant Communities:

(1) Protect each occurrence of a Red-Listed Plant Community during a primary forest activity as per Schedule N.

(2) Despite subsection (1), up to 5% of each occurrence of a Red-Listed Plant Community may be disturbed if there is no practicable alternative for road access, other infrastructure or to address a safety concern.

(3) Reserve a minimum of 70% of each occurrence of a Blue-Listed Plant Community during a primary forest activity or reserve a minimum of 70% of the total area of each Blue-Listed Plant Community within a Landscape Unit as per Schedule O.

4.6.6.1 STRATEGY

During the period of this FSP the TSM will ensure that BCTS operations will:

- 1) Reserve from harvest or alteration, each occurrence of Red-Listed Plant Communities (as per schedule N).
- 2) Despite strategy (4.6.6.2), if no practicable alternative exists for road access or other necessary infrastructure, or in order to address a safety concern, 5% of each occurrence of a Red-listed Plant Community may be disturbed.
- 3) If a Red-Listed Plant Community must be disturbed:
 - a. a map detailing the extent of the occurrence must be produced, showing the area to be disturbed, and an estimated disturbance percentage calculated;

- b. the disturbance must be minimized to the extent practicable;
 - c. measures must be put into place to ensure that the disturbance does not adversely affect the remaining Red-Listed Plant Community, and;
 - d. The sum of all disturbances must not exceed the 5% threshold to the original plant community occurrence.
- 4) The TSM will reserve from harvest or alteration, Blue Listed Plant Communities (as per Schedule O):
 - a. at least 70% of each occurrence during primary forest activities, or
 - b. a minimum of 70% of the total area within a Landscape Unit.
- 5) If a Blue-Listed Plant Community is to be disturbed by BCTS operations the TSM will ensure:
 - a. the extent and size of the occurrence must be determined, and estimated disturbance percentage calculated;
 - b. measures must be put into place to ensure that the disturbance does not adversely affect the remaining Blue-Listed Plant Community;
 - c. The reserved area must be 70% of the original occurrence size.
 - d. R/S (5)(b) requires collaboration with other license holders in the Landscape Unit (if any). Measures must be employed to ensure that the reserved area does not become less than 70% of the total Blue-Listed Plant Community area across the Landscape Unit, including a mapped inventory.
 - i. It may be difficult to locate all occurrences of plant communities over a Landscape Unit. An inventory of *known* Blue-Listed Plant Communities shall be maintained. If R/S (5)(b) is to be employed, a reserve area of 70% must be maintained for the areas of *known* occurrences, and as new occurrences are identified, the inventory is updated and reserve size calculated over the Landscape Unit as a whole;
 - ii. Disturbances calculated in R/S (5)(a) are included in the calculation and inventory of (b).

4.6.7 **Objective: Biodiversity – Stand Retention**

Great Bear Rainforest Order: Part 2, Division 4 – Biodiversity 17. Objectives for Stand Retention:

(1) Maintain forest structure and diversity at the stand level:

- (a) by maintaining a minimum of 15% of the Cutblock area as Stand Retention; and*
- (b) in Cutblocks 20 hectares or greater in size, by distributing a minimum of 50% of the Stand Retention within the Cutblock except in:*
 - (i) second growth stands where a windthrow hazard assessment indicates a moderate or higher biophysical hazard for windthrow; and*
 - (ii) Old Forest stands where local knowledge has identified the potential for catastrophic inflow or outflow winds*

(2) To the extent practicable, include the following within Stand Retention:

- (a) Aboriginal Forest Resources that are maintained or enhanced by retention in a mature or older forest;*
- (b) habitat elements important for species at risk, ungulate winter range, and regionally important wildlife;*
- (c) representation of ecosystems and plant communities listed in Schedule N and Schedule O;*

- (d) Functional Riparian Forest adjacent to Active Fluvial Units, Forested Swamps, fen and marsh wetlands and Upland Streams with unique features or moderate or higher risk of sediment transport;
- (e) western redcedar and yellow cedar for future Aboriginal Tree Use;
- (f) western yew;
- (g) within restoration landscape units, remnant patches of Old Forest in Site Series Groups where less than 30% of the total forest area is Old Forest ; and
- (h) wildlife trees and coarse woody debris.

4.6.7.1 RESULT

During the period of this FSP the TSM will undertake to comply with GBR Order Part 2, Division 4, Objectives 17(1) through (2) for Stand Retention. When calculating Stand Retention, the formula shall be: Stand Retention % = Retention Area / (NAR + Permanent Access Structures).

4.7 Visual Quality

Reference Information	
Type of Objective	Objectives set in regulation: FPPR s 9.2(2) Objectives enabled by regulation: GAR 7(1), 7(2) and 17 Land-Use objectives: N/A
Effective Date	FPPR : January 31, 2004 GAR: May 18 2006 Land Use objectives: N/A Scenic Areas and Visual Quality Objectives for Skeena Corridor; Inside Passage; Portland / Work Channel; Douglas Channel / Gribbell Island
Exempted Areas	N/A
Practice Requirement(s) Eligible for Exemption	N/A
Mandatory Practice Requirements from the FPPR	N/A

4.7.1 Objective: Visual Quality

FPPR s. 9.2(2): *The objective set by government in relation to visual quality for a scenic area, that*

- (a) *was established on or before October 24, 2002, and*
- (b) *for which there is no visual quality objective is to ensure that the altered forest landscape for the scenic area*
- (c) *in visual sensitivity class 1 is in either the preservation or retention category,*
- (d) *in visual sensitivity class 2 is in either the retention or partial retention category,*
- (e) *in visual sensitivity class 3 is in either the partial retention or modification category,*
- (f) *in visual sensitivity class 4 is in either the partial retention or modification category, and*
- (g) *in visual sensitivity class 5 is in either the modification or maximum modification category.*

4.7.1.1 STRATEGY

During the period of this FSP the TSM will ensure that the area within Visual Polygon "AA" (as identified on the FSP maps) that is visible from the village of Gingolx, (as represented by a viewpoint shown on the FSP map with coordinates 54° 59' 34" North and 129° 57' 26" West) will be treated as having a Visual Quality Objective (VQO) of Partial Retention with respect to BCTS operations.

4.7.1.2 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) A visual impact assessment (VIA) be carried out by a QP in accordance with the methodology identified in the Visual Impact Assessment Guidebook (<https://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/visual/htoc.htm#cont>) and will be attached or referred to in the Site Plan for BCTS blocks that are located within known scenic areas and that are identified with a Visual Quality Objective (VQO).
 - a. Visual Sensitivity Classes will be treated as having VQOs as follows:
 - i. VSC 1 = Retention
 - ii. VSC 2 = Partial Retention
 - iii. VSC 3 and 4 = Modification
 - iv. VSC 5 = Maximum Modification
- 2) The visual impact assessment will :
 - a. review the visual landscape from selected viewpoints (see below for viewpoint selection and criteria)
 - b. describe how the visual design conforms with the VQO.
- 3) The block design, at the date of TSL issuance, will reflect the visual design as described in the visual assessment.
- 4) Viewpoints are identified as follows:
 - a. As shown on the FSP maps (as amended from time to time), or
 - b. At a point along a travel corridor that allows for an extended viewing experience, or
 - c. At a place, along a travel corridor, that persons can stop for an extended viewing experience.

For the purpose of 4 (b) and (c) “extended viewing experience” means greater than 60 seconds uninterrupted view at the posted/ normal speed limit. A travel corridor is defined as a route, highway or waterway used by the public to travel from one geographic area to another.

- 5) An exemption has been provided by the CMRD Manager where catastrophic damage such as wind-throw, fire, disease, or pest damage occurs and any timber harvest by BCTS would cause the scale criteria for a VQO to be exceeded. Where practicable, road location and/or block design will be modified to mitigate impact to the visual condition by incorporating visual design elements. Visual design elements include cut-block shape, size, pattern and retention of wildlife trees (patches and/or single trees).

4.8 Cultural Heritage Resources

Reference Information	
Type of Objective	Objectives set in regulation: FPPR s 10 Objectives enabled by regulation: NA Land-Use objectives: Great Bear Rainforest Order: 3, 4, 5, 6, 7, 8 and 9
Effective Date	FPPR: January 2004 Objectives enabled by Regulation: NA GBR Order: January 28, 2016

Exempted Areas	N/A
Practice Requirement(s) Eligible for Exemption	N/A
Mandatory Practice Requirements from the FPPR	N/A
Practice Requirement(s) Eligible for Exemption	N/A

4.8.1 **Objective: Cultural Heritage Resources**

FPPR s. 10:

The objective set by government for Cultural Heritage resources is to conserve, or, if necessary, protect cultural heritage resources that are:

- (a) the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and*
- (b) not regulated under the Heritage Conservation Act.*

4.8.1.1 STRATEGY

During the period of this FSP the TSM will ensure that for BCTS operations the strategies specified for each Objective of the Great Bear Rainforest Order: Part 2 – Division 2 First Nations are followed. These specifically are: Strategies 4.8.2.1, 4.8.3.1, 4.8.4.1, 4.8.7.1 and 4.8.8.1.

4.8.1.2 RESULT

During the period of this FSP the TSM will ensure that for BCTS operations the results specified for each Objective of the Great Bear Rainforest Order: Part 2 – Division 2 First Nations are followed. These specifically are: Results 4.8.5.1 and 4.8.6.1.

4.8.2 **Objective: First Nation Information Sharing and Engagement**

Great Bear Rainforest Order: Part 2, Division 2- First Nations 3. Objective for First Nation Information Sharing and Engagement:

- (1) For the purpose of implementing and achieving the intent of the objectives in this land use order conduct First Nation Engagement with Applicable First Nations.*

4.8.2.1 STRATEGY

During the period of this FSP, and for any areas where BCTS forest development operations are planned for authorization, the TSM will:

- 1) Determine all potentially affected First Nations as identified through the Consultative Areas Database (CAD), and
 - a. Follow all applicable procedures or protocols related to First Nations Information Sharing and Engagement on proposed forest development activities that have been agreed to by the applicable First Nation and the TSM or the Province of BC or;
 - b. Where no agreement is in place, follow the Province of BC's "Updated Procedures for Meeting Legal Obligations When Consulting First Nations" or any Ministerial Direction provided to the TSM.
- 2) Review and consider applicable land use plans and agreements and outcomes of previous consultation in the area to identify potential First Nations values and interests that may be affected by proposed forestry activities, and share the results of that review with the applicable First Nations.

- 3) Request to meet and communicate with the applicable First Nations on at least an annual basis when BCTS has planned operations within that First Nations traditional territory. Prior to such a meeting, or in the absence of a meeting, the TSM will provide information that identifies and describes the nature and timing of planned forest development activities (including the provision of 1:20,000 scale maps). The TSM will engage with the applicable First Nations to identify, understand and discuss their interests and values that may be affected by the proposed forestry activities.
- 4) Communicate to First Nations when there are no operations planned in their traditional territory in the upcoming year.
- 5) Upon First Nations' request:
 - a. Provide detailed site planning and assessment information that was prepared during the development of BCTS' proposed activities that is relevant to the interests and values expressed by the applicable First Nations, and
 - i. the TSM will request additional information from the applicable First Nations regarding the interests and values the First Nation has in relation to the proposed activities and management strategies;
 - ii. the TSM will request to meet and communicate with the designated representatives of the applicable First Nations to discuss the identified interests and values and seek to reach agreement on potential modifications or adjustments to BCTS' proposed activities; and,
 - iii. before auction of a TSL, the TSM will prepare and provide a written summary of the engagement process to the designated representatives of the applicable First Nations that includes a communication summary (dates, communication methods and discussion) and a description of the identified issues, how they were addressed and the recommendations to the TSM.

4.8.3 **Objective: Cultural Heritage Resources**

Great Bear Rainforest Order: Part 2, Division 2- First Nations 4. Objective for Identification of Aboriginal Forest Resources and Aboriginal Heritage Features:

(1) In Development Areas, through field reconnaissance or field assessments and First Nation Engagement as appropriate in areas proposed for road building or harvesting, identify Aboriginal Forest Resources, Aboriginal Heritage Features, Historical Culturally Modified Trees, Contemporary Culturally Modified Trees, Monumental Cedar and Cultural Cedar Stands.

4.8.3.1 STRATEGY

During the period of this FSP the TSM will ensure that:

- 1) During First Nations Information Sharing and Engagement conducted during the period of this FSP and for areas proposed by BCTS for road building or harvesting, information will be requested by the TSM regarding the location of any known Aboriginal Forest Resources, Aboriginal Heritage Features, Historical Culturally Modified Trees, Contemporary Culturally Modified Trees, Monumental Cedar, and Cultural Cedar Stands.
- 2) During operational planning phases within areas proposed by BCTS for road building or harvesting, the TSM will carry out a field reconnaissance or field assessment to identify and locate features listed in section (1) and their estimated quantity and location will be recorded and shared with applicable First Nations as a part of subsequent First Nations Information Sharing and Engagement with the applicable First Nation.

3) For the purposes of this FSP, a Monumental Cedar shall be defined through First Nations Information Sharing and Engagement.

4.8.4 **Objective: Aboriginal Forest Resources**

Great Bear Rainforest Order: Part 2, Division 2- First Nations 5. Objective for Aboriginal Forest Resources:

(1) Maintain or enhance Aboriginal Forest Resources in a sufficient quantity and manner necessary to support Applicable First Nations' present and future stewardship and use of those resources.

(2) Despite subsection (1), Aboriginal Forest Resources may be harvested or altered in order to meet silvicultural obligations, provided there has been First Nation Engagement with Applicable First Nations.

4.8.4.1 STRATEGY

During the period of this FSP and for any areas where BCTS forest development operations are planned for authorization, the TSM will:

- 1) Request information from applicable First Nations regarding the location, relative abundance or quantity and manner necessary to support the present and future stewardship and use of those resources.
- 2) Assess all Identified Aboriginal Forest Resources in relation to the direct impact of the planned forest development operations on the present and estimated future quantity, accessibility and degree of use and importance of the Identified Aboriginal Forest Resources.
- 3) Conduct First Nations Information Sharing and Engagement with the applicable First Nation and will, if necessary, determine and implement management strategies to conserve, mitigate impacts to, or if necessary protect the Aboriginal Forest Resources, considering:
 - i. the relative value or importance of the Aboriginal Forest Resources to a traditional use by an aboriginal people;
 - ii. if the Aboriginal Forest Resources is of continuing importance to the First Nations;
 - iii. the historical extent of the traditional use of the Aboriginal Forest Resources; and,
 - iv. the impact of conserving or protecting the Aboriginal Forest Resources on the FSP holders government granted timber harvesting rights or ability to meet silvicultural obligations.

4.8.5 **Objective: Aboriginal Heritage Features**

Great Bear Rainforest Order: Part 2, Division 2- First Nations 6. Objective for Aboriginal Heritage Features:

(1) In Development Areas, protect Type 1 Aboriginal Heritage Features.

(2) Adjacent to Type 1 Aboriginal Heritage Features, maintain a Reserve Zone with a minimum width of 200 metres, measured from the edge of the Type 1 Aboriginal Heritage Feature, to protect the Type 1 Aboriginal Heritage Feature.

(3) Despite subsections (1) and (2), the Type 1 Aboriginal Heritage Feature and the Reserve Zone may be modified with the support of, or lack of objection from, the Applicable First Nations.

(4) Despite subsections (2) and (3), the Reserve Zone may be modified when:

(a) alternative measures are implemented to avoid, mitigate or otherwise address impacts on the Type 1 Aboriginal Heritage Feature;

- (b) there has been First Nation Engagement with Applicable First Nations regarding the alternative measures; and*
- (c) the modification is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative.*

(5) In Development Areas, protect Type 2 Aboriginal Heritage Features.

(6) Adjacent to Type 2 Aboriginal Heritage Features, maintain a Reserve Zone with a minimum width of 1 Tree Length measured from the edge of the feature, and a Management Zone with an average minimum width of 0.5 Tree Lengths measured from the outer edge of the Reserve Zone to protect the Type 2 Aboriginal Heritage Feature from site-specific local hazards and windthrow.

(7) Despite subsections (5) and (6), the Type 2 Aboriginal Heritage Feature and its Reserve Zone and Management Zone may be modified with the support of, or lack of objection from, the Applicable First Nation.

(8) Despite subsections (5), (6) and (7), the Type 2 Aboriginal Heritage Feature may be altered or removed and the Reserve Zone and Management Zone may be modified when:

- (a) alternative measures are implemented to avoid, mitigate or otherwise address impacts on the Type 2 Aboriginal Heritage Feature;*
- (b) there has been First Nation Engagement with Applicable First Nations regarding the alternative measures; and*
- (c) the alteration or removal is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative.*

4.8.5.1 RESULT

During the period of this FSP the TSM will ensure that BCTS operations will:

- 1) In Development Areas, protect Type 1 Aboriginal Heritage Features.
- 2) Adjacent to Type 1 Aboriginal Heritage Features, maintain a Reserve Zone with a minimum width of 200 metres, measured from the edge of the Type 1 Aboriginal Heritage Feature, to protect the Type 1 Aboriginal Heritage Feature.
- 3) Despite subsections (1) and (2), the Type 1 Aboriginal Heritage Feature and the Reserve Zone may be modified with the support of, or lack of objection from, the Applicable First Nations.
- 4) Despite subsections (2) and (3), the Reserve Zone may be modified when:
 - a. alternative measures are implemented to avoid, mitigate or otherwise address impacts on the Type 1 Aboriginal Heritage Feature;
 - b. there has been First Nation Engagement with Applicable First Nations regarding the alternative measures; and
 - c. the modification is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative.
- 5) In Development Areas, protect Type 2 Aboriginal Heritage Features.
- 6) Adjacent to Type 2 Aboriginal Heritage Features, maintain a Reserve Zone with a minimum width of 1 Tree Length measured from the edge of the feature, and a Management Zone with an average minimum width of 0.5 Tree Lengths measured from the outer edge of the Reserve Zone to protect the Type 2 Aboriginal Heritage Feature from site-specific local hazards and windthrow.
- 7) Despite subsections (5) and (6), the Type 2 Aboriginal Heritage Feature and its Reserve Zone and Management Zone may be modified with the support of, or lack of objection from, the Applicable First Nation.

- 8) Despite subsections (5), (6) and (7), the Type 2 Aboriginal Heritage Feature may be altered or removed and the Reserve Zone and Management Zone may be modified when:
 - a. alternative measures are implemented to avoid, mitigate or otherwise address impacts on the Type 2 Aboriginal Heritage Feature;
 - b. there has been First Nation Engagement with Applicable First Nations regarding the alternative measures; and
 - c. the alteration or removal is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative.

4.8.6 **Objective: Culturally Modified Trees**

Great Bear Rainforest Order: Part 2, Division 2- First Nations 7. Objective for Historical Culturally Modified Trees:

(1) In Development Areas, protect Historical Culturally Modified Trees

(2) Adjacent to Historical Culturally Modified Trees, maintain a Management Zone of sufficient width and design to protect the Historical Culturally Modified Trees from site-specific local hazards and windthrow.

(3) Despite subsections (1) and (2), the Historical Culturally Modified Tree and the Management Zone may be modified with the support of, or lack of objection from, the Applicable First Nation.

(4) Despite subsections (1), (2) and (3), a Historical Culturally Modified Tree and the adjacent Management Zone may be altered or harvested if there has been First Nation Engagement with Applicable First Nations; and

(a) alteration or harvesting is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative; or

(b) protection of all of the Historical Culturally Modified Trees in the cutting permit area or timber sale licence area would make harvesting economically unviable

4.8.6.1 RESULT

During the period of this FSP the TSM will ensure that BCTS operations will:

- 1) In Development Areas, protect Historical Culturally Modified Trees
- 2) Adjacent to Historical Culturally Modified Trees, maintain a Management Zone of sufficient width and design to protect the Historical Culturally Modified Trees from site-specific local hazards and windthrow
- 3) Despite subsections (1) and (2), the Historical Culturally Modified Tree and the Management Zone may be modified with the support of, or lack of objection from, the Applicable First Nation
- 4) Despite subsections (1), (2) and (3), a Historical Culturally Modified Tree and the adjacent Management Zone may be altered or harvested if there has been First Nation Engagement with Applicable First Nations; and
 - a. alteration or harvesting is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative; or
 - b. protection of all of the Historical Culturally Modified Trees in the road permit area or timber sale licence area would make harvesting economically unviable.

4.8.7 **Objective: Aboriginal Tree Use**

Great Bear Rainforest Order: Part 2, Division 2- First Nations 8. Objective for Aboriginal Tree Use:

- (1) Maintain a sufficient volume and quality of western redcedar, yellow cedar and other tree species to support the Applicable First Nations' present and future Aboriginal Tree Use.*
- (2) In Cedar Stewardship Areas, maintain, and recruit as necessary, Monumental Cedar, western redcedar and yellow cedar in a quantity sufficient to support the Applicable First Nations' present and future Aboriginal Tree Use.*
- (3) Within Development Areas, retain Monumental Cedar with windfirm buffers, and Cultural Cedar Stands, in a quantity sufficient to support the Applicable First Nations' present and future Aboriginal Tree Use.*
- (4) Despite subsection (3), a Monumental Cedar and its windfirm buffer, or a Cultural Cedar Stand, may be altered or harvested provided that there has been First Nation Engagement with Applicable First Nations; and*
 - (a) it has been determined that the Monumental Cedar or Cultural Cedar Stand is not suitable or is not required for a cultural cedar use;*
 - (b) the Monumental Cedar or Cultural Cedar Stand will be provided to the Applicable First Nation;*
 - (c) the harvesting is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative; or*
 - (d) retention of all of the Monumental Cedar and Cultural Cedar Stands in the Cutblock area would make harvesting economically unviable.*
- (5) Within a Cutblock, for the first 15% of the pre-harvest stand retained in Stand Retention as specified in section 17(1), design Stand Retention to maintain mature and old western redcedar and yellow cedar representative of the pre-harvest stand.*

4.8.7.1 STRATEGY

During the period of this FSP the TSM will:

- 1) Request information from each First Nation that is the subject of First Nations Information Sharing and Engagement regarding the present and future amounts, quality, and uses of western red cedar, yellow cedar and other tree species that are considered required by the First Nation to support their Aboriginal Tree Use requirements.
- 2) Consider all information provided by First Nations and the TSM will determine target present and future amounts and quality of western red cedar, yellow cedar and other tree species that are considered required by the First Nation to support their Aboriginal Tree Use requirements.
- 3) Assess the volume and quality of western red cedar, yellow cedar and other tree species that are currently available from areas that are restricted or unavailable for commercial timber harvesting, which may include:
 - a. Biodiversity, Tourism and Mining Areas (BTMAs);
 - b. Special Forest Management Areas (SFMAs);
 - c. Stand Retention areas,
 - d. Cedar Stewardship Areas; or
 - e. Landscape Reserve Design areas that have been designated for no commercial timber harvest to meet biodiversity objectives.
 - f. Conservancies.

- 4) Identify other areas within the North Coast FDU, including within BCTS Development Areas, if the determined target volume and quality of western red cedar, yellow cedar and other tree species (as per point 2.) cannot be met within the areas listed in point 3.
- 5) In Cedar Stewardship Areas, maintain, and recruit as necessary, Monumental Cedar, western red cedar and yellow cedar in a quantity sufficient to support the Applicable First Nations' present and future Aboriginal Tree Use.
- 6) Within Development Areas, retain Monumental Cedar with windfirm buffers, and Cultural Cedar Stands, in a quantity sufficient to support the Applicable First Nations' present and future Aboriginal Tree Use.
- 7) Despite subsection (6), a Monumental Cedar and its windfirm buffer, or a Cultural Cedar Stand, may be altered or harvested provided that there has been First Nation Engagement with Applicable First Nations; and
 - a. it has been determined that the Monumental Cedar or Cultural Cedar Stand is not suitable or is not required for a cultural cedar use;
 - b. the Monumental Cedar or Cultural Cedar Stand will be provided to the Applicable First Nation;
 - c. the harvesting is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative; or
 - d. retention of all of the Monumental Cedar and Cultural Cedar Stands in the cutblock area would make harvesting economically unviable.
- 8) Within a cutblock, for the first 15% of the pre-harvest stand retained in Stand Retention, design Stand Retention to maintain mature and old western red cedar and yellow cedar representative of the pre-harvest stand.

4.8.8 **Objective: Retention of Western Yew**

Great Bear Rainforest Order: Part 2, Division 2- First Nations 9. Objective for Retention of Western Yew:

(1) In Development Areas, retain western yew trees.

(2) Despite subsection (1), western yew trees may be altered or harvested if:

- (a) alteration or harvesting is required to accommodate operational requirements for road and bridge construction and there is no practicable alternative; or*
- (b) the retention of all western yew trees in a Cutblock would make harvesting economically unviable and measures are implemented to provide for use of the altered or harvested western yew trees by Applicable First Nations.*

(3) Where practicable, include western yew trees in Stand Retention.

(4) All areas retained or managed in accordance with subsections (1), (2) and (3) must be documented and submitted as digital spatial data at the end of each calendar year to the Applicable First Nation and the Province of British Columbia.

4.8.8.1 STRATEGY

During the period of this FSP the TSM will ensure that:

During the period of this FSP and within all areas planned by BCTS for harvesting, the TSM will:

- 1) Observe for and record the location of all occurrences of western yew trees and western yew tree patches that are within the planned harvest area, during the course of primary forest development planning activities that are conducted in the field, including cut block reconnaissance and design and timber cruising activities. A western yew tree is defined as a western yew that is greater than 2 m in height. A western yew patch is defined as 5 or more individuals where each yew tree is within 5 metres of another yew tree and each yew tree is a minimum of 2 metres tall.
- 2) Retain all occurrences of western yew patches within a stand level retention area, unless:
 - a. alteration or harvesting is required to accommodate operational requirements for road and bridge construction and there is no practicable alternative; or
 - b. the retention of all western yew patches in the planned harvest area would make harvesting economically unviable and measures are implemented to provide for the use of the altered or harvested western yew trees by Applicable First Nations.

A protective buffer will be included in the retention area and it will be designed to provide canopy cover for all of the individual yew trees within the patch.

- 3) Retain a minimum of 50 % of all recorded occurrences of individual western yew trees that are greater than 2 m in height within stand level retention unless alteration or harvesting is required to accommodate operational requirements for road and bridge construction and there is no practicable alternative.
- 4) Report to applicable First Nations as digital spatial data at the end of each calendar year the occurrence locations and management actions taken for all recorded western yew trees and western yew tree patches.

4.9 Recreation Trails and Sites

Reference Information	
Type of Objective	Objectives set in regulation: FRPA ss 56, 180 & 181 Objectives enabled by regulation: GAR: s. 5 (f) and (g) Land-Use Objectives: N/A
Effective Date	FRPA: January 2004 GAR: December 13, 2004 Land Use Objectives: N/A
Practice Requirement(s) Eligible for Exemption	N/A
Mandatory Practice Requirements from the FPPR	N/A

4.9.1 **Objective: Interpretive Forest Sites, Recreation Sites and Recreation Trails**

The recreation objectives are identified in the Orders associated with the recreation sites and trails listed in Table 4-1.

As of December 1, 2015, the following are established interpretive forest sites, recreation sites and recreation trails that have Higher Level Plan Objectives and are within North Coast FDU:

Table 4-1: Established Interpretive Forest Sites, Recreation Sites and Recreation Trails

FDU	Site/ Trail	File #16660-20	Date of Establishment
North Coast	Gwunya Recreation Site	0610	December 29, 2005
North Coast	Maple Bay Recreation Site	0614	December 29, 2005
North Coast	Butze Rapids Recreation Trail	0619	November 2, 2004
North Coast	Mt Mclean Recreation Trail	6575	June 1, 2005
North Coast	Tall Tree Recreation Trail	103294	May 6, 2015

4.9.1.1 STRATEGY

During the period of this FSP the TSM will ensure that for BCTS activities in proximity to the Tall Tree Trail, Mt. Mclean Recreation Trail and Butze Rapids Trail:

- 1) No disturbance by BCTS harvesting, road construction, or silviculture activities to natural vegetation occurs within 10 m of trail centerline other than for a required crossing unless the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail grants an exemption for that activity.
- 2) Development activities that occur within from 10 meters to 50 meters either side of trail centerline:
 - a. will only occur after the planned activity has been approved by the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail and
 - b. the authorized development activities will comply with the details of the approval.
- 3) A crossing of the trail is permitted if the crossing is required to access productive forest land that would otherwise be isolated and
- 4) The trail location is re-established if the crossing disturbs it. Alternatively, the trail can be relocated away from the crossing. The timing of the trail crossing, re-establishment, or trail relocation will require approval by the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the trail.
- 5) A trail crossing is deactivated once it is no longer required.

4.9.1.2 STRATEGY

During the period of this FSP the TSM will ensure that for the Gwunya Recreation Site and Maple Bay Recreation Site there will be no disturbance²⁷ to areas within 10 m of lake shorelines, river-, stream-, or creek-banks, or marine foreshore. (This only applies to sites where an RRZ is not in existence). The remainder of the area within the recreation sites will be reserved from disturbance other than where BCTS and the Delegated Decision Maker (e.g. Recreation Officer) for the Ministry responsible for the site agree the disturbance will be for the improvement of the recreation experience, or where action or access is required to prevent or address potential losses due to fire, wind, or forest health factors.

²⁷ From activities related to BCTS' road construction, harvesting or silviculture activities.

5 ADDITIONAL FSP INFORMATION

In addition to the objectives, strategies, and results, there are several other items to be shown or addressed in the FSP.

5.1.1 *Areas under Cutting Authority (TSL, FSR, RP)*

The FSP maps and Appendices III and IV indicate the blocks that are currently issued under a Timber Sales Licence (TSL) and Forest Service Roads (FSR) that are under the control of BC Timber Sales.

5.1.2 *Stocking Standards*

The stocking standards have been developed to ensure site specific criteria are applied for the establishment of healthy, valuable, and ecologically suited trees on areas harvested by BC Timber Sales that have a reforestation obligation. The Tables in Appendix A1 identify the applicable stocking standards by BEC zone, subzone, variant and site series and include the applicable regeneration date, free growing date and height.

Tables describing the stocking standards that apply on the FDU's in this FSP are provided in Appendix A. The stocking standards in Appendix I include:

- Table A1: Standards for even-aged management, including species, regeneration dates, stocking required at regeneration, free-growing heights, and required stocking at free-growing for the site series that occur within the FSP area;
- Table A2: Standards for wildlife forage areas;
- Table A3: Multi-storey standards;
- Table A4: Standards for Single Entry Dispersed Retention (SEDRSS);
- Table A5: Damage criteria for SEDRSS stands;
- Table A6: Climate Change Adaptation stocking standards;
- Table A7: Footnotes; footnotes apply to Tables A1, A2, A3 and A4; and
- Table A8: Footnotes for Spruce leader weevil stocking standards

Additional criteria and opportunity for variation from stocking standards in Appendix I are provided below to address circumstances that occur in the natural environment and management priorities identified within this FSP.

5.1.3 *Application of Stocking Standards*

General applications are as follows:

- 1) Stocking standards are applicable across all FDU's unless otherwise stated.

The late free growing date is 20 years for all standards units.

Free Growing can be declared no earlier than 12 months after completion of harvest, except for stands prescribed with SEDR stocking standards where Free Growing can be declared no earlier than 24 months after completion of harvest.

Where a standards unit is comprised of a complex of 2 or more ecological classifications, the standards unit(s) will be managed according to the dominant site series. Where wildlife forage areas preside the area is to be stratified for a separate standards unit.

For the purposes of FPPR s 46.11(2), for an area to be considered mappable its minimum dimension must be at least 40 metres.

5.1.4 ***Even-aged Stocking Standards***

Even-aged management stocking standards set out in Appendix I Table A1 apply to silviculture systems when;

- two or less distinct age classes of crop trees will be created within a stand,
- the basal area of layer 1 and layer 2 trees are 10m² or less, and
- opening patches must be 0.25ha or larger with a minimum width of 50m.

If a single subsequent harvest entry on the stand is planned within 20 years, even-aged management will apply. This option would be utilized when implementing seed tree systems or similar management regimes.

Even-aged management silviculture systems include clearcut, clearcut with reserves, seed tree, shelterwood, and patch cut (where the openings created meet the above definition).

5.1.5 ***Wildlife Forage Stocking Standards***

Wildlife forage stocking standards set out in Appendix I Table A2 apply to areas with specific ecological classifications within Grizzly Bear Identified Watersheds (GBIW) shown on Map 7 of the Kalum SRMP. These stocking standards may also be applied to important forage areas for other species in accordance with conditions in a GAR Order or recommendations from a Qualified Registered Professional. Management of grizzly bear habitat will be focused on the grizzly bear identified watersheds, and will occur by maintaining forage within critical habitats. This means cluster planting and/or reduced stocking in richer, wetter ecosystems. Generally, when ecosystem classification identifies a complex that contains a treatable unit the area will be included in a standards unit that manages for grizzly bear habitat. A treatable unit is at least one hectare for pure sub-hygic to sub-hydric sites or two hectares of non-contiguous sub-hygic to sub-hydric sites with ecosystem complexes where the individual sites are greater than 0.25 ha and such sites comprise more than 20% of the ecosystem complex area. The minimum size for a willow or red-osier dogwood complex is one hectare for pure willow and/or red-osier dogwood sites and two hectares of noncontiguous willow and/or red-osier dogwood sites within ecosystem complexes where the individual sites are greater than 0.25 ha and such sites comprise 20% or more of the ecosystem complex sites.

5.1.6 ***Multi-Storey Stocking Standards***

Multi-storey stocking standards set out in Appendix 1 Table A3 apply to uneven-aged silvicultural systems when;

- Layer 1 + Layer 2 basal area is >10m²/ha, and
- Crop trees consist of three or more distinct age classes.

Multi-storey stocking standards set out in Table A3 may apply to even-aged silvicultural systems when;

- Layer 1 + Layer 2 basal area is ≤ 10m²/ha, and
- Crop trees consist of two distinct age classes where one layer must be layer 1 or 2.

5.1.7 ***Single Entry Dispersed Retention Stocking Standards***

Single Entry Dispersed Retention Stocking Standards (SEDRSS) is a stocking standard for the dispersed retention silvicultural system for coastal forest types. SEDR is only to be applied where higher level objectives cannot be met by other silvicultural systems. SEDRSS set out in Appendix I Table A4 apply to even-aged silvicultural systems where retained trees and new regeneration contribute towards a stand's

reforestation obligation without application of stand structure objectives. SEDRSS stands retain a dispersed Residual Basal Area (RBA) ranging from 11 to 39 m² per hectare and create a suitable regeneration environment to maintain crop trees that will contribute to stand value for potential future harvest.

5.1.7.1 STRATIFICATION CRITERIA FOR STANDS UNSUITABLE FOR SEDRSS

- 1) Areas $\geq$ 1.0 ha. Equal to or less than 10m²/ha of Dispersed Retention (1) (Open stands, clearcuts or stands with low levels of dispersed retention): Remove from the SU and treat with an Even-aged Stocking Standard;
- 2) Areas $\geq$ 1.0 ha with $\geq$ 40 m²/ha of Dispersed Retention (full stocking of ecologically suitable species with no openings > 0.1 ha. in size): Defined as an Intermediate cut (with no regeneration obligations) requiring a separate stocking standard;
- 3) Areas $\geq$ 0.25 ha Uncut: (large areas of reserved stems where no harvested or disturbance has occurred): Remove from SU and map as a Grouped Retention SU, classify as Group Reserve, removed from NAR and report in RESULTS; and
- 4) Areas $\geq$ 1.0 ha. Broadleaf leading: SEDRSS is designed for conifer management only.

5.1.8 ***Selection of Well-Spaced Stems***

Trees that are selected as well-spaced are being chosen to form part of a future crop, so they must be of sufficient health and form that they can be utilized as crop trees at the time of harvest. Crop trees may be utilised in the future as sources of lumber, veneer, or fibre.

Trees must be in good health, and of good form and vigour.

The following qualifiers apply to the criteria for good health, good form and good vigour:

- The assessment of health, form and vigour applies only at the time of Free Growing, and
- The criteria are specific to even-aged managed stands, and to layers 3 and 4 in uneven-aged managed stands, and
- The criteria do not apply to broadleaf species.

The criteria for good health, good form and good vigour are as follows:

- Appendix I Table A5-1 and Figures A5-1 to A5-4 in the Establishment to Free Growing Guidebook - Prince Rupert Forest Region, version 2.3, May 2000, with the following exception:
- For Pine that is infected by Dothistroma: the "Defoliation Free Growing Damage Standard for Determinate Growth Conifers" March 2, 2005.

5.1.9 ***Free Growing Crop Trees - Criteria for Evaluating Health, Form and Vigour***

In addition to stocking standards in Appendix A, for a well-spaced crop tree to be considered Free Growing it must be in good health, and have good colour, form and vigour in accordance with criteria set out in Appendix 5 of the *Establishment to Free Growing Guidebook – Prince Rupert Forest Region, version 2.3, May 2000 (Appendix 9 revised October 2007)*.

For multi-storied stands:

- The acceptability standards for advanced regeneration and residual mature and pole layer crop trees are in Appendix 10 of the Establishment to Free Growing Guidebook - Prince Rupert Forest Region, version 2.3, May 2000.

- Criteria of Layer 1 and 2 trees are:
 - o Trees must meet the damage criteria of Table 4 of the Tree Wounding and Decay Guidebook (February 1997) , and
 - o Hw trees must not be subject to a dwarf mistletoe infection rating of 4 or more, as described in Table A5, Figure 2, and
 - o Trees must have at least 20% continuous live crown.

5.1.10 **Minimum Horizontal Inter-Tree Distance (MITD)**

The MITD between well-spaced trees is two (2.0) metres, but this can be reduced for site-specific circumstances identified in the Site Plan, as follows:

The MITD between well-spaced trees is two (2.0) metres, but this can be reduced for site-specific circumstances identified in the Site Plan, as follows:

- 1.6 metres immediately adjacent to any stream or riparian area, natural non-productive area or unplantable slash,
- 1.6 metres on hygric or sub-hydric sites,
- 1.6 metres where trees are less than 10 meters from a permanent access structure,
- 1.6 metres where cluster planting is required to avoid planting within 5 meters of infected, stumps in areas that have Tomentosus root disease,
- 1.0 metres for Layer 4 of multi-layer and SEDR stands where planting has occurred to allow stump planting,
- 1.0 metres where cluster management is prescribed in identified high-value and moderate-value wildlife forage areas,
- 1.0 metres on colluvial or talus sites,
- 1.0 metres on mechanically mounded sites, and
- 0.0 metres between Layer 1 trees in multi-storey and SEDR stands.

5.1.11 **Free Growing Crop Trees – Criteria for Evaluating Competition**

In addition to stocking standards in Appendix I, for a well-spaced crop tree to be considered Free Growing it must be growing unimpeded from competing herbs, shrubs, or other trees, in accordance with assessment methods set out in Appendix 9 of the *Establishment to Free Growing Guidebook – Prince Rupert Forest Region, version 2.3, May 2000 (Appendix 9 revised October 2007)*, with the following modified criteria:

- Species eligible for selection as well-spaced crop trees are not competing vegetation.
- The minimum percentage height above competing brush in order to be free growing is as follows:

% Height above competing brush:	100%	125%	150%
Applies to:	ICH	ESSF, MH	All Others

Note: competing brush is defined as deleterious species that are over-topping crop trees or have the potential to overtop crop trees.

5.1.12 **Broadleaf**

Broadleaf (deciduous) species are noted in the Stocking Standards, and will be used as follows:

- Cottonwood (Act) is a commercial species and will be considered a preferred or acceptable species as noted in the stocking standards in Appendix A
- Alder (Dr) is a commercial species and where utilized from a stand where alder was a leading species ($\geq 30\%$ of original stand composition) alder will be considered a preferred or acceptable species as noted in the stocking standards in Appendix A.
- Where a Site Plan has identified management for a component of broadleaves, broadleaves (other than cottonwood, or alder as noted in the previous bullet) may be used as a preferred or acceptable species. The original species composition of broadleaves for these broadleaf management areas must be $\geq 30\%$.

5.1.13 **Riparian Management Considerations**

- Aspen, birch, and cottonwood are not considered competing vegetation within riparian management areas of a stream, lake or wetland.
- Herbaceous vegetation within 5 m of a S4, S5 or S6 stream is not considered competing vegetation.

5.1.14 **Biogeoclimatic Transition Zones**

Standards units that are on a transitional site occurring between ecological classifications will be managed to the standard of the dominant BEC subzone. The prescribed stocking standard may be modified to include components of the standard associated with the sub-dominant BEC subzone(s). Such site-specific modifications to stocking standards will be supported by a rationale documented in the Site Plan and by means of an approved variation.

5.1.15 **Wildfire Management**

Site plans developed for blocks within established boundaries of the Rosswood, Jackpine Flats, and Lakelse Lake Fire Management Areas will be managed using the established stocking standards of Appendix A. FMA's will be determined by the Wildfire Management Branch or within approved District Fire Management Plans. To reduce the available forest fuels of new forests the target densities should be increased and genetically improved stock planted to promote self-pruning. Deciduous species can be utilized according to the species composition section of the standards in Appendix A1.

In addition to density and species management, fuel loading will be reduced by burning roadside debris piles. Debris can also be distributed so it is discontinuous.

5.1.16 **Extension of Regeneration Delay Date**

The regeneration delay period for a Standards Unit may be extended by an amount not exceeding four (4) years to a maximum of seven (7) years regeneration delay in circumstances where a TSL has been extended by the Timber Sales Manager. The regeneration delay period extension is to be compliant with the extension period applied to the TSL term.

5.1.17 **Climate Change**

To accommodate a changing climate it is expected that tree species suited to lower elevations will migrate upwards in elevation and tree species at lower latitudes will move north. Douglas-fir and Western Larch which are non-indigenous species to the ICHmc2, SBSdk and SBSmc2 sites will be classed as acceptable species only if approved in the *Chief Forester's Standards for Seed Use*. The maximum amount of non-indigenous species will be 10% collectively across the landscape.

Table A6 - "Climate Change Adaptation" in Appendix I will be used when reforesting with non-indigenous species on an Approved Variation basis. Site-specific modifications will be supported by a rationale documented in the Site Plan.

5.1.18 ***Addition of Species to Stocking Standards***

The *Chief Forester's Standards for Seed Use* may be amended from time to time to change or add transfer limits for specific species. Where such changes occur, the species may be added to prescribed stocking standards as an acceptable species on a site-specific basis within geographic and other limitations set out in the Chief Forester's Standards for Seed Use. Such site-specific modifications to stocking standards will be supported by a rationale documented in the Site Plan.

5.1.19 ***Crown Closure within Kermode Stewardship Areas***

During the period of this FSP the TSM will ensure that all BCTS standards units harvested after September 30, 2009 and within a Kermode Stewardship Area, will meet the Wildlife Forage stocking standards in Appendix I Table A2 with the **exception** of the maximum crown closure requirements of these stocking standards. Alternatively a maximum crown closure of 70% will apply.

5.1.20 ***Standard Units/ Silviculture Surveys Stratification***

Within each site plan a block may be subdivided into a series of standards units (SU). BEC zones and site series often form the basic unit of stratification. Within each SU, standards such as maximum site disturbance, silviculture system and stocking standards are the same. The minimum standards units area is to be 1.0ha with a minimum polygon size of 0.5ha within a standards unit. The average minimum dimension of a standards unit is to be 40 meters. These criteria also apply to silviculture surveys when stratifying within a standards unit. These criteria do not apply to opening patches less than 1.0ha.

5.1.21 ***Effect of Approval of the FSP***

In accordance with FPPR s. 14, Appendix II identifies those blocks and roads that are declared under section 14(4) of the FPPR or identified as section 196 blocks under the FRPA.

In accordance with FRPA section 197(5), BCTS specifies that it may choose to amend the stocking standards for silviculture prescriptions or site plans that are already in existence to conform to this FSP.

This FSP does not apply to cutblocks or roads in cutting authorities issued by the Timber Sales Manager and identified in Appendices III and IV.

5.1.22 ***Invasive Plants***

The following are measures required, in accordance with FPPR s. 17, for control of invasive plant species identified in the *Invasive Plants Regulation*:

- 1)
 - a. If, as a result of primary forest activities authorized by the TSM during the period of this FSP, more than 0.10 contiguous hectare (excluding road prism) of mineral soil has been exposed by a BCTS road, trail, or landing construction, maintenance or deactivation; or through forest floor displacement during, site preparation or debris disposal in and following harvest of a cutblock to which this FSP applies, and such disturbance is likely to result in the introduction or spread of invasive plants, the TSM will, within nine months of completion of the above listed activity, ensure the seeding of seed in the disturbed area. All sites that have been seeded will be inspected within 24 months of seeding to assess the efficacy of the seeding treatment and will be subsequently re-seeded if necessary to promote vegetative cover of the site.

- b. The seed mix used for the purposes of paragraph (1a) will: either be the Canada No. 1 Forage Mix or an Erosion Control mix, as deemed suitable taking into account site level considerations such as proximity to range tenure areas, concerns over human-wildlife interactions and soil erodibility.

BCTS field personnel, in the course of their duties, will make note of occurrences of invasive plants, and will report new occurrences of invasive plant species through the on-line Report-A-Weed wizard found at http://webmaps.gov.bc.ca/imf5/imf.jsp?site=mofr_iapp&startup=raw

5.1.23 ***Natural Range Barriers***

In relation to section 18 of the FPPR, during the period of this FSP and within the FSP area the TSM will:

- 1) at least 180 days before BCTS harvests a cutblock or constructs a road that is located within an area subject to a range agreement, inform the holder of that range agreement of the harvesting or construction; and
- 2) request information on the presence of, location and nature of any natural range barriers that may be partially or fully rendered ineffective; and
- 3) seek input on appropriate mitigative measures that may be taken; and
- 4) make reasonable efforts to come to an agreement with that holder on mitigation measures, and implement:
 - a. mitigation measures in accordance with that agreement; or,
 - b. reasonable mitigation measures as soon as practical after the harvesting or construction, if an agreement referred to above is not reached.

5.1.24 ***Cumulative Effect of Multiple FSPs***

Where applicable, the FSP must address the cumulative effect of multiple FSPs in an area (FPPR s. 19). There are a number of other approved FSPs that have overlap with the FDUs within BCTS Coast Mountains District FSP Amendment #2:

Kalum South FDU:

- Kalum Ventures Ltd. – Non-Renewable Forest Licence A73726 and Forestry Licence To Cut A77424 and A91358
- Kitselas Forest Products Ltd. - Non-Renewable Forest Licences A73377 and A90733 and Forestry Licences To Cut A77426 and A91360
- Coast Tsimshian Resources - TFL 1 and FL A16835
- Haisla Resources LP – FLTC A7551, A86739 and A94428
- Skeena Sawmills – TFL 41 and FL A16885
- A&A Trading Ltd – FL A16836
- Terrace Community Forest

Nass FDU:

- Canada Resurgence Ltd.- FL A16884
- Skeena Sawmills - A16882

North Coast FDU:

- Gitga'at Forestry Inc. – FL A71731

- Gitxaala Forest Products – FL A82886
- International Forest Products Limited – FL A16841
- Metlakatla Development Corporation – FL A77961 (expired)
- Metlakatla Forestry LP – FL A75816
- Sonora Logging Limited – FL A16837 and A16838
- Triumph Timber Limited – FL A16820

The strategies and results from all of these FSPs have been compared, and activities under the FSPs are not inconsistent with each other. The FSPs also share similar approaches to landscape level issues, including proportionality for old growth and seral stage analyses, so are comply with each other in this respect as well.

5.1.25 ***Referral and Public Review Summary***

Details regarding referral of this Forest Stewardship Plan to agencies and First Nations, the public review process of the FSP, and any subsequent revisions to the FSP, will be described in detail in the supporting document to this FSP.

5.1.26 ***Maps***

The Forest Stewardship Plan maps are provided separately from the Forest Stewardship Plan text. The FSP maps are provided at a scale of 1:100,000. The maps show the critical content requirements as described in section 5(1) (a) of the *Forest and Range Practices Act*, and section 14 of the *Forest Planning and Practices Regulation*.

There are three Forest Development Units in the FSP. They are shown on the maps and are identified as:

The Kalum South FDU – includes the Cascadia TSA and TFL 1, the Kalum TSA, the Pacific TSA and TFL 41

The Nass FDU – consists of the Nass TSA

The North Coast FDU – consists of the North Coast TSA and excludes TFL 25# and Nisga'a Core Lands.

The FDUs were chosen primarily to match Land Use Orders areas: the Kalum SRMP for the Kalum South FDU, the Nass South SRMP LUO for the majority of the Nass FDU and the Great Bear Rainforest LUO for the North Coast FDU.

6 SUPPORTING DOCUMENTATION

The information that supports or was used in the development of this FSP is contained in a separate document entitled the BC Timber Sales Skeena Supporting Document for the Coast Mountains Resource District Forest Stewardship Plan Replacement 2016-2021 and contains:

- information directly related to the strategies and results,
- general descriptions and discussion of issues that should add clarity and context to the enforceable strategies and results noted in this Forest Stewardship Plan with respect to the eleven forest values that have been identified in the Forest and Range Practices Act;
- a description of the sources of information used in preparing this Forest Stewardship Plan;
- Public, Agency, and First Nation referral, comment, review, and response information

Appendix I – Stocking Standards

Stocking Standards

Table A1: Even –aged Regeneration and Free Growing standards;
Table A2: Wildlife Forage Areas standards;
Table A3: Multi-layer management standards;
Table A4: Single Entry Dispersed Retention Stocking Standards (SEDRSS);
Table A5: Free Growing Damage Criteria for Single Entry Dispersed Retention Stocking Standard managed stands; and
Table A6: Climate Change Adaptation.

Footnotes

Table A7: Footnotes for Stocking standards.
Table A8: Spruce Leader Weevil standards footnotes.

Figures

Figure 5: Spruce Leader Weevil Hazard Map BCTS Skeena

Table A1. Even-aged Stocking Standards

In the following tables: “Biogeoclimatic unit” or “BEC classification” means the zone, subzone, variant and site series described in the most recent field guide published by the Ministry of Forests, Lands and Natural Resources for the identification and interpretation of ecosystems, as applicable to a harvested area. MIN” or “Min” means minimum, “Max” means maximum.

I.D. #	BEC Classification		Regeneration Guide							Free Growing Guide	
			Species			Stocking (well-spaced/ha)			Regen Delay (Max yrs)	Min. Height	
	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1004656	BWBSdk1	01	Pli Sw ³²	BI Sb	At ^a Ep ^a	1200	700	600	7	Pli	1.60
1004657	BWBSdk1	02*	Pli	Sw Sb	At ^a	1000	500	400	7	Others	0.80
1004658	BWBSdk1	03	Pli	Sw ²⁸	At ^a	1200	700	600	7	Pli	1.20
1004659	BWBSdk1	04	Pli Sb ⁵⁰	Sw ³²	At ^a	1200	700	600	7	Others	0.60
1004660	BWBSdk1	05	Pli Sw	BI Sb	At ^b Ep ^b	1200	700	600	7	Pli	1.60
1004661	BWBSdk1	06	Pli Sw ³²	BI Sb	Act ^a At ^a	1200	700	600	7	Others	0.80
1004662	BWBSdk1	07	Pli ¹ Sb ¹ Sw ^{1,32}	BI ⁵⁰	Ep ^a At ^a	1200	700	600	7	Pli	1.60
1004663	BWBSdk1	08	Sw ^{1,32}	Pli ¹ BI ⁵⁰ Sb	Act ^b At ^a Ep ^a	1000	500	400	4	Others	0.80
1004664	BWBSdk1	09*	Sb ¹ Sw ^{1,32}	Pli ¹		400	200	200	4	Pli	1.20
1004665	BWBSdk1	10*	Sb ¹ Sw ^{1,32}	Pli ¹		400	200	200	4	Others	0.60
1004666	BWBSdk1	11*	Sb ¹ Sw ¹	Pli ¹	Act ^a At ^a	400	200	200	4	Pli	1.20
	BWBSdk1	31	non-forested			-	-	-	-	Others	0.60
	BWBSdk1	32	non-forested			-	-	-	-	-	-
	BWBSdk1	81	non-forested			-	-	-	-	-	-
1004667	BWBSdk2	01	Pli Sw ³²	Sb	At ^a Ep ^a	1200	700	600	7	Pli	1.60
1004668	BWBSdk2	02*	Pli	Sb Sw	At ^a	1000	500	400	7	Others	0.80
1004669	BWBSdk2	03	Pli Sb ⁵⁰	Sw ³²	At ^a	1200	700	600	7	Pli	1.20
1004670	BWBSdk2	04	Pli Sb Sw	Lt	At ^a	1000	500	400	4	Others	0.60
1004671	BWBSdk2	05	Pli Sw ³²		At ^b Ep ^b	1200	700	600	7	Pli	1.60
1004672	BWBSdk2	06	Sw ^{1,32}	Sb Pli ¹ Lt ¹	Act ^b At ^a Ep ^a	1000	500	400	4	Others	0.80
1004673	BWBSdk2	07*	Lt ¹ Sb ¹ Sw ^{1,32}	Pli ¹		400	200	200	4	Pli	1.20
1004674	BWBSdk2	08*	Lt ¹ Sb ¹ Sw ^{1,32}			400	200	200	4	Others	0.60
	BWBSdk2	31	non-forested			-	-	-	-	All	0.60
	BWBSdk2	32	non-forested			-	-	-	-	-	-
	BWBSdk2	81	non-forested			-	-	-	-	-	-
1004675	CWHvh2	01	Cw Hw YcPlc ¹⁶	Ba ¹⁸ Ss ^{4,18,}	Dr ^a	900	500	400	6	Hw Ss Plc	2.0
										Cw Yc	1.5
										Ba	1.4
										Others	1.0
1004676	CWHvh2	02	Cw Yc Plc	Hw		400	200	200	3	Plc	1.4
										Others	1.0

I.D. #	BEC Classification		Regeneration Guide							Free Growing Guide	
			Species			Stocking (well-spaced/ha)			Regen Delay (Max yrs)	Min. Height	
	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1004677	CWHvh2	03	Cw Hw Yc Plc	Ss ⁴		800	400	400	6	Hw Pl Others	1.8 1.4 1.0
1004678	CWHvh2	04	Cw Hw Ba Ss ⁵⁶ Yc ¹⁶		Dr ^a	900	500	400	6	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1004679	CWHvh2	05	Cw Hw ¹⁹ Ba Ss ⁵⁶ Yc ¹⁶		Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1004680	CWHvh2	06	Cw Hw ¹⁹ Ba Ss ⁵⁶ Yc ¹⁶		Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1049795	CWHvh2	07	Cw Ba Ss ⁵⁶ , Hw ^{2,19} Yc ¹⁶		Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1004682	CWHvh2	08	Cw Ba Ss ⁵⁶	Hw	Dr ^b	900	500	400	3	Hw Ss Cw Ba Others	2.0 1.5 1.4 1.0
1004683	CWHvh2	09	Cw ¹ Ba ¹ Ss ^{1,56}	Hw	Dr ^b	900	500	400	3	Hw Ss Cw Ba Others	2.0 1.5 1.4 1.0
1004684	CWHvh2	11	Cw ¹ Hw ¹ Yc ¹ Plc ¹		Dr ^a	800	400	400	3	Hw Pl Others	1.8 1.4 1.0
1004685	CWHvh2	12	Cw ¹ Yc ¹ Plc ¹			400	200	200	3	Pl Others	1.4 1.0
1004686	CWHvh2	13	Cw ¹ Yc ¹ Plc ^{1,16} Ss ^{16,56} Hw ¹⁹	Ba Hm	Dr ^a	900	500	400	6	Ss Hw Others	2.0 1.8 1.0
1004687	CWHvh2	14	Ss ⁵⁶	Cw Plc Hw	Dr ^a	400	200	200	3	Ss Hw Pl Others	2.0 1.8 1.4 1.0
1004688	CWHvh2	15	Ss ⁵⁶	Cw Hw	Dr ^a	900	500	400	3	Hw Ss Cw Others	2.0 1.5 1.0
1004689	CWHvh2	16	Ss ⁵⁶	Cw Plc	Dr ^a	400	200	200	3	Ss Pl Others	2.0 1.4 1.0
1004690	CWHvh2	17	Cw Ss	Hw Yc	Dr ^a	900	500	400	3	Hw Ss Cw Yc Others	2.0 1.5 1.0
1004691	CWHvh2	18	Cw ¹ Ss ^{1,56}			400	200	200	3	Ss Cw	2.0 1.5
1004692	CWHvh2	19	Cw ¹ Ss ^{1,56}			400	200	200	3	Ss Cw	2.0 1.5
	CWHvh2	31	non-forested			-	-	-	-	-	-
	CWHvh2	32	non-forested			-	-	-	-	-	-
	CWHvh2	33	non-forested			-	-	-	-	-	-
1049807	CWHvm1	01	Hw ¹⁹ Ba ¹⁸ Cw, Ss ^{7,18,56}	Yc ^c	Dr ^a	900	500	400	6	Hw, Ss Cw, Yc Others	2.00 1.50 1.40

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	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1049808	CWHvm1	02*	Plc Cw Hw	Fdc ²² Yc ^c		400	200	200	3	Hw, Plc Others	1.40 1.00
1049810	CWHvm1	03	Cw Hw	Fdc ²² Yc ^c Pl		800	400	400	6	Hw Pl Others	1.4 1.0
1049812	CWHvm1	04	Hw ¹⁹ Ba Cw Ss ⁵⁶	Yc ^c	Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1049813	CWHvm1	05	Hw ¹⁹ Ba Cw Ss ⁵⁶	Yc ^c	Act Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1049814	CWHvm1	06	Hw ¹⁹ Ba ¹⁸ Cw Ss ^{7,18,56}	Yc ^c	Dr ^a	900	500	400	6	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
	CWHvm1	07	Not in this area			-	-	-	-	-	-
1004699	CWHvm1	08	Hw ^{2,19} Ba Cw Ss ⁵⁶		Act ^b Dr ^b	900	500	400	3	Hw Ss Cw Ba Others	2.0 1.5 1.4 1.0
1049816	CWHvm1	09	Cw Hw ^{2,19} Ba Ss ^{12,56}		Act ^b Dr ^b	900	500	400	3	Hw Ss Cw Ba Others	2.0 1.5 1.4 1.0
1004701	CWHvm1	10	Cw ¹ Ss ^{1,12,56}	Ba ¹	Act ^b Dr ^b	900	500	400	3	Ss Cw Ba Others	2.0 1.5 1.4 1.0
1049818	CWHvm1	12	Cw ¹ Hw ¹ Yc ¹	Pl ¹ Hm Ss		800	400	400	3	Hw Pl Hm Others	1.4 0.8 1.0
1049819	CWHvm1	13*	Cw ¹ Plc ¹ Yc ¹	Hw ^{1,30}		400	200	200	3	Pl Others	1.4 1.0
1049820	CWHvm1	14	Cw ¹ Ba ¹	Pl ¹ Hw ¹ Ss ¹ Yc ¹		800	400	400	3	Ss Hw Others	1.4 1.0
1049822	CWHvm2	01	Hw ¹⁹ Ba Cw ¹⁶ Yc Ss ^{4,12,56}	Hm ^{13,15}	Dr ^a	900	500	400	6	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1049823	CWHvm2	02*	Cw Yc Plc	Hw ¹² Hm		400	200	200	3	Hw Pl Cw Yc Hm	1.8 1.4 1.0
1004707	CWHvm2	03	Cw Hw	Hm ¹³ Plc Yc		800	400	400	6	Hw Pl Cw Yc Hm	1.8 1.4 1.0
	CWHvm2	04	Not in this area								
1049824	CWHvm2	05	Hw ¹⁹ Ba Cw ¹⁶ Yc ¹³ Ss ⁵⁶	Hm ¹³	Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1049825	CWHvm2	06	Hw ¹⁹ Ba Cw ¹⁶ Yc Ss ^{7,56}	Hm ¹³	Dr ^a	900	500	400	6	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0

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	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1049826	CWHvm2	08	Hw ^{2,19} Ba Cw ¹⁶ Yc Ss ⁵⁶	Hm ¹³	Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba Others	2.0 1.5 1.4 1.0
1004711	CWHvm2	09	Cw ¹ Hw ¹ Yc ¹	Plc ¹ Hm ¹		800	400	400	3	Hw Pl Cw Yc Hm	1.8 1.4 1.0 0.8
1004712	CWHvm2	10*	Plc ¹ Yc ¹	Hm		400	200	200	3	Pl Yc Hm	1.4 1.0 0.8
1049827	CWHvm2	11	Cw ¹ Yc ¹ Ss ¹⁵⁶ Ba Hw	Hm ¹		800	400	400	3	Hw Ss Others	1.8 1.4 1.0
1004714	CWHwm	01	Ba ^{16,50} Hw Ss ⁵⁶	Cw ^{12,13} Hm ^{12,13} Yc ^{12,13}	Dr ^a	900	500	400	6	Hw Ss Cw Yc Ba Hm	2.0 1.4 1.0
1004715	CWHwm	02	Cw ^{16,50} Hw Plc	Hm ^{12,13}	Dr ^a	900	500	400	6	Hw Pl Cw Hm	2.0 1.4 1.0
1004716	CWHwm	03	Ba ^{16,50} Ss ⁵⁶ Hw	Cw Yc ^{12,13}	Act ^a Dr ^a	900	500	400	3	Hw Ss Cw Yc Ba	2.0 1.4
1004717	CWHwm	04	Ss ⁵⁶ Hw	Ba Cw Yc ^{12,13}	Act ^a Dr ^b	900	500	400	3	Hw Ss Cw Yc Ba	2.0 1.4
1004718	CWHwm	05	Ba ^{16,50} Ss ⁵⁶ Hw	Cw	Act ^b Dr ^b	900	500	400	3	Hw Ss Cw Ba	2.0 1.4
1004719	CWHwm	06	Ba ^{1,16,50} Ss ^{1,56}	Cw ¹	Act ^b Dr ^b	900	500	400	3	Ss Cw Ba	2.0 1.4
	CWHwm	07*	no conifers			-	-	-	-		
1004720	CWHwm	08	Cw ^{1,16} Plc ¹ Yc ¹ Hw ¹	Hm ^{12,13}	Act ^a Dr ^a	900	500	400	6	Hw Pl Cw Yc Hm	2.0 1.4
1004721	CWHwm	09	Cw ^{1,16,50} Ss ^{1,56}	Yc ¹ Hw ¹ Hm	Act ^a Dr ^a	800	400	400	3	Hw Ss Cw Yc	1.4 1.0
1004722	CWHwm	10*	Plc ¹ Yc ¹	Cw ¹ Hw		400	200	200	3	Pl Cw Yc	1.4 1.0
	CWHwm	31	non-forested			-	-	-	-		
	CWHwm	32	non-forested			-	-	-	-		
	CWHwm	51	non-forested			-	-	-	-		
1049828	CWHws1	01	Hw ¹⁹ Ba Cw Sxs ⁵⁶	Pl	Dr ^a	900	500	400	6	Hw, Pl Sxs Others	2.00 2.00 1.40
1004724	CWHws1	02*	Plc Hw	Cw ^c		600	400	400	6	Hw, Pl Others	1.40 1.00
1049829	CWHws1	03	Hw Plc Cw			900	500	400	6	Hw, Pl Others	2.00 1.40
1049830	CWHws1	04	Hw ²¹⁹ Ba Cw Sxs ⁵⁶		Act ^a Dr ^a	900	500	400	3	Hw, Pl Sxs Others	2.00 2.00 1.40
1049831	CWHws1	05	Hw ¹⁹ Ba Cw Sxs ^{7,56}		Dr ^a	900	500	400	6	Hw, Sxs Others	2.00 1.40
1049832	CWHws1	06	Hw ²¹⁹ Ba Cw Sxs ⁵⁶		Act ^a Dr ^b	900	500	400	3	Hw, Sxs Others	2.00 1.40

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	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1049833	CWHws1	07	Hw ^{12,19} Ba ¹ Cw ^{12,56} Sxs ^{12,56}		Act ^b	900	500	400	3	Hw, Sxs Others	2.00 1.40
1049834	CWHws1	08	Ba ¹ Cw ¹ Hw ¹⁹	Hw Sxs ¹	Act ^b Dr ^b	900	500	400	3	Sxs Others	2.00 1.40
	CWHws1	09*	no	conifers	Act ^a Dr ^a	-	-	-	-	All	1.40
1004731	CWHws1	10*	Plc ¹	Cw ^{1,c} Hw		400	200	200	3	Hw, Pl Cw	1.40 1.00
1004732	CWHws1	11	Cw ¹ Sxs ^{1,56}	Ba ¹ Hw ¹	Act ^a Dr ^a	800	400	400	3	Hw, Sxs Others	1.40 1.00
1004733 new# tba	CWHws2	01	Sxs ⁵⁶ Hw ¹ Ba Cw ⁵⁶	Bl ¹² Plc Hw	Dr ^a	900	500	400	6	Pl Hw Others	2.00 1.30 1.00
1004734	CWHws2	02*	Plc Hw	Cw Hm ¹³		600	400	400	6	Pl Others	1.40 0.80
1004735	CWHws2	03	Hw Plc	Hm ¹³ Cw	Dr ^a	900	500	400	6	Pl Hw Others	2.00 1.30 1.00
1004736	CWHws2	04	Sxs ⁵⁶ Hw ¹ Ba Cw ⁵⁶	Bl ¹² Hm ¹³	Act ^a Dr ^a	900	500	400	3	Hw Others	1.30 1.00
1004737	CWHws2	05	Sxs ⁵⁶ Hw ¹ Ba Cw ⁵⁶	Bl ¹²	Dr ^a	900	500	400	6	Hw Others	1.30 1.00
1004738	CWHws2	06	Sxs ⁵⁶ Hw ¹ Ba Cw ⁵⁶	Bl ¹²	Act ^a Dr ^a	900	500	400	3	Hw Others	1.30 1.00
1004739	CWHws2	07	Sxs ⁵⁶ Hw ¹ Ba Cw	Bl ¹²	Act ^b Dr ^b	900	500	400	3	Hw Others	1.30 1.00
1004740	CWHws2	08	Sxs ⁵⁶ Hw ¹ Ba ¹ Cw ¹	Bl ¹²	Act ^b Dr ^b	900	500	400	3	All	1.00
	CWHws2	09	no	conifers	Act ^a Dr ^a					All	1.40
1004741	CWHws2	10*	Plc ¹	Cw ¹ Hm Hw		400	200	200	3	Pl Others	1.40 0.80
1004742	CWHws2	11	Cw ¹ Sxs ^{1,56}	Hw ¹ Ba ¹	Act ^a Dr ^a	800	400	400	3	All	0.80
1004743	ESSFmc	01	Bl Sx	Pli ³⁴		1200	700	600	7	Pli Others	1.60 0.80
1004744	ESSFmc	02*	Pli	Bl Sx		1000	500	400	7	Pli Others	1.20 0.60
1004745	ESSFmc	03*	Pli	Bl Sx		1000	500	400	7	Pli Others	1.20 0.60
1004746	ESSFmc	04	Pli Bl Sx			1200	700	600	7	Pli Others	1.60 0.80
1004747	ESSFmc	05	Bl Sx	Pli ³⁴		1200	700	600	4	Pli Others	1.60 0.80
1004748	ESSFmc	06	Bl Sx	Pli ³⁴		1200	700	600	4	Pli Others	1.60 0.80
1004749	ESSFmc	07	Bl Sx ³²			1200	700	600	4	Pli Others	1.60 0.80
1004750	ESSFmc	08*	Bl Sx ³²			1000	500	400	4	All	0.60
1004751	ESSFmc	09	Bl ¹ Sx ^{1,32}			1000	500	400	4	All	0.60
1004752	ESSFmc	10	Bl ¹ Sx ^{1,32}			1000	500	400	4	All	0.60
Tba-127	ESSFmc	31	non-	forested		-	-	-	-	-	-
Tba-128	ESSFmc	51	non-	forested		-	-	-	-	-	-
1004753	ESSFmk	01	Bl Se	Ba ¹⁷ Hm Pli ³⁴		1200	700	600	7	Pli Others	1.60 0.80
1004754	ESSFmk	02*	Pa Pli	Bl Hm Se		1000	500	400	7	Pli Others	1.20 0.60
1004755	ESSFmk	03*	Pa Pli	Bl Hm Se Ba ¹⁷		1200	700	600	7	Pli Others	1.60 0.80

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	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1004756	ESSFmk	04	Bl Se	Ba ¹⁷ Hm Pli ³⁴		1200	700	600	4	Pli Others	1.60 0.80
1004757	ESSFmk	05	Bl Se ³²	Hm Ba ¹⁷		1200	700	600	4	Pli Others	1.60 0.80
1004758	ESSFmk	06	Bl ¹ Se ^{1,32}	Hm Ba		1000	500	400	4	All	0.80
1004759	ESSFmk	07	Bl ¹ Se ^{1,32}	Ba		1000	500	400	4	All	0.80
Tba-136	ESSFmk	31	non-forested			-	-	-	-	-	-
Tba-137	ESSFmk	51	non-forested			-	-	-	-	-	-
1004760	ESSFmv3	01	Bl Se	Pli ³⁴		1200	700	600	4	Pli Others	1.60 0.80
1004761	ESSFmv3	02*	Pli ³⁴	Se ²⁸ Bl ²⁸		1000	500	400	4	Pli Others	1.20 0.60
1004762	ESSFmv3	03	Bl Se	Sb Pli ³⁴		1000	500	400	4	Pli Others	1.20 0.60
1004763	ESSFmv3	04	Bl Se	Pli ³⁴		1200	700	600	4	Pli Others	1.60 0.80
1004764	ESSFmv3	05	Bl Se	Pli ³⁴		1200	700	600	4	Pli Others	1.60 0.80
1004765	ESSFmv3	06	Bl Sx	Pli ³⁴		1200	700	600	7	Pli Others	1.60 0.80
1004766	ESSFmv3	07	Bl ¹ Se ^{1,32}	Pli ^{1,34}		1000	500	400	4	Pli Others	1.20 0.60
1004767	ESSFwv	01	Bl Se	Hm Hw Pli ³⁴		1200	700	600	7	Pli Others	1.60 0.80
1004768	ESSFwv	02*	Pli	Bl Hm Se		1000	500	400	7	Pli Others	1.20 0.60
1004769	ESSFwv	03*	Pli	Bl Hm Se Hw		1200	700	600	7	Pli Others	1.60 0.80
1004770	ESSFwv	04	Pli Bl	Se Hm		1200	700	600	7	Pli Others	1.60 0.80
1004771	ESSFwv	05	Bl Se	Hm Hw Pli ³⁴		1200	700	600	4	Pli Others	1.60 0.80
1004772	ESSFwv	06	Bl Se ³²	Hm Hw		1200	700	600	4	Pli Others	1.60 0.80
1004773	ESSFwv	07*	Bl Se ³²	Hm Hw		1000	500	400	4	All	0.60
1004774	ESSFwv	08	Bl ¹ Se ^{1,32}			1000	500	400	4	All	0.60
1004775	ESSFwv	09	Bl ¹ Se ^{1,32}			1000	500	400	4	All	0.60
Tba-154	ESSFwv	31	non-forested			-	-	-	-	-	-
Tba-155	ESSFwv	51	non-forested			-	-	-	-	-	-
1049835	ICHmc1	01	Bl ²⁹ Ba ⁵⁰ Hw ³² Sx ⁵⁶	Pli	At ^a Ep ^a	1200	700	600	7	Pli Others	2.00 1.00
1004777	ICHmc1	02*	Pli	Bl Hw ³²	At ^a	1000	500	400	7	Pli Others	1.40 0.80
1004778	ICHmc1	03	Bl ²⁹ Ba ⁵⁰ Hw ³² Sx ⁵⁶	Pli	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004779	ICHmc1	04	Bl ²⁹ Ba ⁵⁰ Sx ⁵⁶ Hw ³²	Pli	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004780	ICHmc1	05	Ba ⁵⁰ Sx ^{1,56} Bl ^{1,29}		Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004781	ICHmc1	06	Ba ⁵⁰ Sx ^{1,56} Bl ^{1,29}	Hw ^{1,32}	Act ^a	1000	500	400	4	All	0.80
Tba-162	ICHmc1	31	non-forested			-	-	-	-	-	-
1049836	ICHmc1a	01	Ba ⁷ Hw ³² Sx ⁵⁶	Bl ⁵⁰ Pli	At ^a Ep ^a	1200	700	600	7	Pli Others	2.00 1.00
1004783	ICHmc1a	02	Hw ³² Ba ⁵⁰ Sx ⁵⁶	Bl ⁵⁰ Pli	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00

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1004784	ICHmc1a	03	Hw ³² Ba ⁵⁶ Sx ⁵⁶	Pli ⁵⁰ Pli		1200	700	600	4	Pli Others	2.00 1.00
1004785	ICHmc2	01	Hw ³² Sx ⁵⁶ Cw ³²	Ba ⁵⁰ Pli ²⁹ Bl ²⁹	At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004786	ICHmc2	02*	Pli	Bl Hw Ba ⁵⁰	At ^a	1000	500	400	7	Pli Others	1.40 0.80
1004787	ICHmc2	03	Cw ³² Hw ³² Sx ⁵⁶	Bl ²⁹ Pli ²⁹ Ba ⁵⁰	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004788	ICHmc2	04	Cw ³² Sx ⁵⁶	Bl ²⁹ Hw ³² Pli ²⁹ Ba ⁵⁰	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004789	ICHmc2	05	Cw ^{1,32} Sx ¹⁵⁶	Ba ⁵⁰ Bl ^{1,29} Hw ^{1,32} Pli ¹	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004790	ICHmc2	06	Cw ^{1,32} Sx ¹⁵⁶	Ba ⁵⁰ Bl ^{1,29} Hw ^{1,32}	Act ^b At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004791	ICHmc2	07	Ba ⁵⁰ Bl ^{1,29} Sx ¹⁵⁶ Cw ^{1,32}	Hw ^{1,32}	Act ^a At ^a Ep ^a	1000	500	400	4	Pli Others	1.40 1.00
1004792	ICHmc2	08*	Sb ¹ Sx ^{1,32,56}	Pli ¹		400	200	200	4	Pli Others	1.40 0.80
Tba-174	ICHmc2	31	non-	forested		-	-	-	-	-	-
Tba-175	ICHmc2	32	non-	forested		-	-	-	-	-	-
1004793	ICHmc2	51	Pli Hw	Bl ^{28,29} Sx ²⁸ Ba ⁵⁰	At ^a Ep ^a	1200	700	600	4	Pli Others	2.00 1.00
1004794	ICHmc2	52	Hw ³² Sx ⁵⁶ Cw ³²	Pli ²⁹ Ba ⁵⁰	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004795	ICHmc2	53	Hw ³² Sx ⁵⁶ Cw ³²	Pli ²⁹ Ba ⁵⁰	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004796	ICHmc2	54	Cw ³² Sx ⁵⁶	Bl ²⁹ Hw ³² Pli ²⁹ Ba ⁵⁰	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004797	ICHvc	01	Bl Hw ³²	Hm ⁵⁰ Sx ³⁴	Act ^a At ^a Ep ^a	1200	700	600	4	All	1.00
1004798	ICHvc	02	Bl Hw ³²	Hm ⁵⁰ Pli ³⁹ Sx ³⁴	At ^a Ep ^a	1200	700	600	4	Pli Others	2.00 1.00
1004799	ICHvc	03	Bl Sx ^{34,56}	Hw	Act ^a At ^a Ep ^a	1200	700	600	4	All	1.00
1004800	ICHvc	04	Bl ¹ Sx ^{1,34,56}		Act ^b At ^a Ep ^a	1200	700	600	4	All	1.00
1004801	ICHvc	05	Bl ¹ Sx ^{1,32,34,56}		Act ^b At ^b	1200	700	600	4	All	1.00
1004802	ICHvc	06	Bl ¹ Sx ^{1,32,34,56}		Act ^a At ^a Ep ^a	1000	500	400	4	All	0.80
Tba-186	ICHvc	31	non-	forested		-	-	-	-	-	-
1004803	ICHvc	51*	Bl Sx ^{34,56}			1000	500	400	3	All	0.80
1004804	ICHvc	52*	Bl Sx ^{34,56}			400	200	200	3	All	0.80
1004805	ICHwc	01	Bl Hw ³² Sx ⁵⁶	Pli	Act ^a At ^a Ep ^a	1200	700	600	4	Pli Others	2.00 1.00
1004806	ICHwc	02*	Pli	Bl Hw	At ^a	1000	500	400	7	Pli Others	1.40 0.80
1004807	ICHwc	03	Bl Hw ³² Sx ^{28,56}	Pli	At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004808	ICHwc	04	Bl Sx ⁵⁶	Hw ³²	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004809	ICHwc	05	Bl Sx ⁵⁶	Hw ³²	Act ^a At ^b Ep ^b	1200	700	600	4	All	1.00
1004810	ICHwc	06	Bl ¹ Sx ^{1,56}	Hw ^{1,32}	Act ^b At ^b Ep ^b	1200	700	600	4	All	1.00
1004811	ICHwc	07	Sx ^{1,56} Bl ¹	Hw ^{1,32} Pli ¹		1000	500	400	4	Pli Others	1.40 0.80

I.D. #	BEC Classification		Regeneration Guide							Free Growing Guide	
			Species			Stocking (well-spaced/ha)			Regen Delay (Max yrs)	Min. Height	
	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1004812	ICHwc	08	Bl ¹ Sx ^{1,56}	Hw ^{1,32}	Act ^a At ^a Ep ^a	1000	500	400	4	All	0.80
Tba-197	ICHwc	31	non-forested			-	-	-	-	-	-
Tba-198	ICHwc	32	non-forested			-	-	-	-	-	-
1004813	ICHwc	51	Bl Sx ⁵⁶			1000	500	400	4	All	0.80
1004814	ICHwc	52	Bl ¹ Sx ^{1,56}			400	200	200	3	All	0.80
1049837	MHm1	01	Ba Hm ¹⁵	Hw ¹⁴ Cw ¹⁴ Yc ¹⁵		900	500	400	7	All	1.0
1019390	MHm1	02*	Hm Yc	Ba		800	400	400	4	All	0.8
1049838	MHm1	03	Ba Hm Yc	Hw		900	500	400	4	All	1.0
1049839	MHm1	04	Ba Hm Yc	Hw		900	500	400	7	All	1.0
1049841	MHm1	05	Ba Yc Hm	Hw		900	500	400	4	All	1.0
1049842	MHm1	06*	Hm Yc	Ba		800	400	400	7	All	0.8
1004821	MHm1	07*	Ba Yc Hm			900	500	400	4	All	1.0
1004822	MHm1	08*	Hm Yc	Hw Ba		400	200	200	4	All	0.8
1004823	MHm1	09*	Hm Yc	Ba Hw		800	400	400	4	All	0.8
	MHm1	31	non-forested			-	-	-	-	-	-
	MHm1	51	non-forested			-	-	-	-	-	-
1049843	MHm2	01	Ba Hm ¹⁵	Bl ^{15,50} Hw ¹⁴ , Cw ¹⁴ Yc ^{15,17,50}		900	500	400	7	All	1.00
1004825	MHm2	02*	Hm	Yc ^{17,50} Ba Bl ⁵⁰		800	400	400	4	All	0.80
1004826	MHm2	03	Ba Hm	Yc ^{17,50} Bl ⁵⁰		900	500	400	4	All	1.00
1004827	MHm2	04	Ba Hm	Yc ^{17,50} Bl ⁵⁰		900	500	400	7	All	1.00
1004828	MHm2	05	Ba Hm	Yc ^{17,50} Bl ⁵⁰		900	500	400	4	All	1.00
1004829	MHm2	06*	Hm ¹	Yc ^{17,50}		800	400	400	7	All	1.00
1004830	MHm2	07*	Ba ¹	Yc ^{1,17,50} Hm ¹		900	500	400	4	All	1.00
1004831	MHm2	08*	Hm ¹	Ba Bl ^{1,50} Yc ^{1,17,50}		400	200	200	4	All	0.80
1004832	MHm2	09*	Hm ¹	Ba ¹ Yc ^{1,17,50}		800	400	400	4	All	0.80
	MHm2	31	non-forested			-	-	-	-	-	-
	MHm2	51	non-forested			-	-	-	-	-	-
1004833	MHwh1	01	Ba Hm Yc	Cw ¹ Hw ¹ Ss ¹		900	500	400	7	All	1.0
1004834	MHwh1	02*	Hm Yc	Cw ¹		400	200	200	4	All	0.8
1004835	MHwh1	03	Hm Yc	Cw ¹ Ss ¹		900	500	400	7	All	1.0
1004836	MHwh1	04	Hm Yc	Cw ¹ Ba Hw ¹		900	500	400	7	All	1.0
1004837	MHwh1	05	Ba Yc	Cw ¹ Hm Hw ¹ Ss ¹		900	500	400	4	All	1.0
1004838	MHwh1	06*	Hm ¹ Yc ¹	Ba ¹ Ss ¹		800	400	400	7	All	0.8
1004839	MHwh1	07*	Ba ¹ Yc ¹	Cw ¹ Hm ¹ Ss ¹		900	500	400	4	All	1.0
1004840	MHwh1	08*	Hm ¹ Yc ¹	Ba ¹ Hw ¹		400	200	200	4	All	0.8
1004841	MHwh1	09*	Yc ¹	Cw ¹ Hw ¹ Ba Hm ¹		800	500	400	4	All	0.8

I.D. #	BEC Classification		Regeneration Guide							Free Growing Guide	
			Species			Stocking (well-spaced/ha)			Regen Delay (Max yrs)	Min. Height	
	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
	MHwh1	31	non-forested			-	-	-	-	-	-
1004842	SBPSmc	01	Pli	Sb Sx	At ^a	1200	700	600	7	Pli	1.60
										Others	0.80
1004843	SBPSmc	02*	Pli	Sb Sx	At ^a	1000	500	400	7	Pli	1.20
										Others	0.60
1004844	SBPSmc	03	Pli	Sb Sx	At ^a	1200	700	600	7	Pli	1.60
										Others	0.80
1004845	SBPSmc	04*	Pli Sb Sx ^{32, 56}		At ^a	1000	500	400	4	Pli	1.20
										Others	0.60
1004846	SBPSmc	05	Sx ^{1, 32, 56}	Sb Pli ¹	Act ^a	1000	500	400	4	Pli	1.20
										Others	0.60
1004847	SBPSmc	06	Sx ^{1, 32, 56}	Sb Pli ¹	Act ^a	1000	500	400	4	Pli	1.20
										Others	0.60
1004848	SBPSmc	07*	Pli ¹ Sb ¹ Sx ^{1, 32, 56}			400	200	200	4	Pli	1.20
										Others	0.60
Tba-240	SBPSmc	31	non-forested			-	-	-	-		
Tba-241	SBPSmc	32	non-forested			-	-	-	-		
1004849	SBSdk	01	Pli Sx ⁵⁶	Fdi ^{9, 18}	At ^b Ep ^b	1200	700	600	7	Pli	2.00
										Fdi	1.40
										Others	1.00
1004850	SBSdk	02*	Pli	Sx ²⁸	At ^a Ep ^a	1000	500	400	7	Pli	1.40
										Others	0.80
1004851	SBSdk	03*	Pli	Sx ²⁸ Sb ²⁸	At ^a	1200	700	600	7	Pli	2.00
										Others	1.00
1004852	SBSdk	04	Fdi Pli Sx ^{28, 56}		At ^a Ep ^b	1200	700	600	7	Pli	2.00
										Fdi	1.40
										Others	1.00
1004853	SBSdk	05	Pli Sx ^{28, 56}	Fdi ^{9, 18}	At ^b Ep ^b	1200	700	600	7	Pli	2.00
										Fdi	1.40
										Others	1.00
1004854	SBSdk	06	Pli Sx ⁵⁶	Fdi ^{9, 18}	Act ^b At ^b Ep ^b	1200	700	600	4	Pli	2.00
										Others	1.00
1004855	SBSdk	07	Sx ^{1, 32, 56}	Pli ¹	Act ^a At ^a Ep ^a	1000	500	400	4	Pli	1.40
										Others	0.80
1004856	SBSdk	08	Sx ^{1, 32, 56}		Act ^b At ^b Ep ^b	1200	700	600	4	Pli	2.00
										Others	1.00
1004857	SBSdk	09*	Pli ¹ Sb ¹	Sx ¹		400	200	200	4	Pli	1.40
										Others	0.80
1004858	SBSdk	10*	Pli ¹ Sb ¹ Sx ^{1, 32, 56}			400	200	200	4	Pli	1.40
										Others	0.80
Tba-252	SBSdk	31	non-forested			-	-	-	-	-	-
Tba-253	SBSdk	32	non-forested			-	-	-	-	-	-
Tba-254	SBSdk	81	non-forested			-	-	-	-	-	-
Tba-255	SBSdk	82	non-forested			-	-	-	-	-	-
1004859	SBSmc2	01	Pli Sx ⁵⁶	Bl ²⁹	At ^b	1200	700	600	7	Pli	1.60
										Others	0.80
1004860	SBSmc2	02*	Pli	Bl Sx ³²	At ^a	1000	500	400	7	Pli	1.20
										Others	0.60
1004861	SBSmc2	03	Pli Sx ^{32, 56}	Bl ²⁹ Sb	At ^a	1200	700	600	7	Pli	1.60
										Others	0.80
Tba-259	SBSmc2	04	Not in this area		At ^a	1200	700	600	4	Pli	1.60
										Others	0.80
1004862	SBSmc2	05	Pli Sx ⁵⁶	Bl ²⁹	Act ^b At ^b	1200	700	600	4	Pli	1.60
										Others	0.80
1004863	SBSmc2	06	Pli Sx ⁵⁶	Bl ²⁹	Act ^a At ^b	1200	700	600	4	Pli	1.60
										Others	0.80
1004864	SBSmc2	07*	Pli Sb Sx ^{32, 56}	Bl	At ^a	1000	500	400	4	Pli	1.20
										Others	0.60

I.D. #	BEC Classification		Regeneration Guide							Free Growing Guide	
			Species			Stocking (well-spaced/ha)			Regen Delay (Max yrs)	Min. Height	
	Zone/SZ	Series	Preferred (p)	Acceptable (a)	Broadleaf (p) or (a), as per footnotes	Target	MIN pa	MIN p		Species	Ht (m)
1004865	SBSmc2	08	Pli Sx ⁵⁶	Bl ²⁹	Act ^a At ^b	1200	700	600	4	Pli Others	1.60 0.80
1004866	SBSmc2	09	Sx ⁵⁶ Bl ²⁹	Pli	Act ^a At ^b	1200	700	600	4	Pli Others	1.60 0.80
1004867	SBSmc2	10	Sx ^{1,32,56} Bl ^{1,29}	Pli ¹	Act ^a At ^a	1000	500	400	4	Pli Others	1.20 0.60
Tba-266	SBSmc2	11	Not in this area			1000	500	400	4	Pli Others	1.20 0.60
1004868	SBSmc2	12*	Sb ¹ Sx ^{1,32,56}	Pli ¹ Bl ¹		400	200	200	4	Pli Others	1.20 0.60
Tba-268	SBSmc2	31	non-forested			-	-	-	-	-	-
1004869	SBSwk3	01	Pli Sx ⁵⁶	Bl ²⁹	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004870	SBSwk3	02	Pli	Bl ²⁹ Sx ²⁸		1000	500	400	7	Pli Others	1.40 0.80
1004871	SBSwk3	03	Fdi ¹⁶ Pli Sx ^{28,56}		At ^a Ep ^a	1200	700	600	7	Pli Fdi Others	2.00 1.40 1.00
1004872	SBSwk3	04	Pli Sx ⁵⁶	Bl	At ^b Ep ^b	1200	700	600	7	Pli Others	2.00 1.00
1004873	SBSwk3	05	Pli	Sb Sx	At ^a	1200	700	600	7	Pli Others	2.00 1.00
1004874	SBSwk3	06	Pli Sx ⁵⁶	Bl ²⁹	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004875	SBSwk3	07	Sx ^{32,56}	Pli Bl ²⁹	Act ^a At ^b Ep ^b	1200	700	600	4	Pli Others	2.00 1.00
1004876	SBSwk3	08	Sx ^{1,32,56}	Pli ¹ Bl ^{1,29}	Act ^b At ^b	1000	500	400	4	Pli Others	1.40 0.80

Table A2: Wildlife Forage Areas stocking standards

I.D. #	BEC Classification		Regeneration Guide (Notes 1, 2)			
			Stocking (well-spaced/ha) Note 3			Regen Delay (Max yrs) (Note 5)
	Zone/SZ	Series	Target	MIN pa	MAX (Note 4)	
Wildlife forage areas - Devil's club						
1004883	CWHvm1	08	600	400	660	6
1004884	CWHvm2	08	600	400	660	6
1004885	CWHws1	06	600	400	660	6
1004886	CWHws2	06	600	400	660	6
Wildlife forage areas - Skunk cabbage						
1004887	CWHvm1	14	400	200	440	6
1004888	CWHvm2	11	400	200	440	6
1004890	CWHws1	11	400	200	440	6
1019430	CWHws2	11	400	200	440	6
Wildlife forage areas - Salmonberry & red-osier dogwood						
1004891	CWHvm1	09	500	200	550	6
1004892	CWHvm1	10	500	200	550	6
1004893	CWHws1	07	500	200	550	6
1004894	CWHws1	08	500	200	550	6
1004895	CWHws2	07	500	200	550	6
1004896	CWHws2	08	500	200	550	6

Note 1: Preferred and acceptable species (both conifer and broad-leaf), Free-growing assessment, Tree Height - Same as the stocking standards for the ecosystem as described in Table A1.

Note 2: Minimum Inter-tree Spacing - As per stocking standards section 5.1.10.

Note 3: Well-Spaced stems - "Well spaced" does not apply to forage gaps when cluster management is identified as a stand level strategy in the site plan.

Note 4: Maximum stocking - If the stand exceeds the maximum density set in the prescription at free growing but does not exceed 4000sph, the stand will be assessed to ensure there are sufficient gaps to provide forage for wildlife. Sufficient forage gaps will be considered to be greater than 20% gaps across the Standards Unit. To test if adequate gap creation exists, a minimum of 20% (per standards unit) of the randomly systematic established plots (50m²) must contain less than or equal to one conifer (> 50 cm height), or the equivalent of 200 stems per ha. If the results of the Free Growing survey show there is insufficient forage gaps or that the total stems per ha exceeds 4000sph a spacing treatment to meet the forage objective will be implemented.

Note 5: Maximum Stocking in Kermode Stewardship Areas - Within Kermode Stewardship Areas, Note 5 replaces Note 4. If the stand exceeds the maximum density set in the prescription at free growing but does not exceed 4000sph, the stand will be assessed to ensure there are sufficient gaps to provide forage for wildlife. Sufficient forage gaps will be considered to be greater than 30% gaps across the Standards Unit. To test if adequate gap creation exists, a minimum of 30% (per standards unit) of the randomly systematic established plots (50m²) must contain less than or equal to one conifer (> 50 cm height), or the equivalent of 200 stems per ha. If the results of the Free Growing survey show there is insufficient forage gaps or that the total stems per ha exceeds 4000sph a spacing treatment to meet the forage objective will be implemented.

Note 6: Regen Delay - Consider shortening the regen delay period if brush hazard is such that the full regen delay period will prevent stocking from being achieved.

If the area is planted or spaced then cluster distribution management from page 97 and 98 of *Silviculture Guidelines and Practices for Maintaining or Recruiting Key Habitat Objectives, 2004* will be used as a best management practice. (http://www.env.gov.bc.ca/fia/documents/mca_silvbmp.pdf)

Table A3: Multi-layered Stocking Standards

Target from Table A1 standards (stems/ha)	Layer**	Stocking (well-spaced stems/ ha)			Regeneration delay* (Max years)
		Target preferred (p) & acceptable (a)	p & a	P	
1200 Stocking standards ID #: 1004877	1	600	300	250	7
	2	800	400	300	7
	3	1000	500	400	7
	4	1200	700	600	7
1000 Stocking standards ID #: 1004878	1	400	200	200	7
	2	600	300	250	7
	3	800	400	300	7
	4	1000	500	400	7
900 Stocking standards ID #: 1004879	1	400	200	200	7
	2	500	300	250	7
	3	700	400	300	7
	4	900	500	400	7
800 Stocking standards ID #: 1004880	1	300	150	150	7
	2	400	200	200	7
	3	600	300	300	7
	4	800	400	400	7
600 Stocking standards ID #: 1004881	1	300	150	150	7
	2	400	200	200	7
	3	500	300	300	7
	4	600	400	400	7
400 Stocking standards ID #: 1004882	1	200	100	100	7
	2	300	125	125	7
	3	300	150	150	7
	4	400	200	200	7
* Regeneration Delay: Maximum regen delay for uneven-aged management is 7 years. Regen delay can be met immediately following harvest if the residual stand has no significant damage or pest problems and meets minimum stocking standards.					
**Stand Layer Definition Layer 1 Mature trees >= 12.5 cm dbh Layer 2 Pole trees 7.5 cm to 12.4 cm dbh Layer 3 Sapling trees >= 1.3 m height to 7.4 cm dbh Layer 4 Regeneration trees < 1.3 m height					

Table A4. Single Entry Dispersed Retention Stocking Standards (SEDRSS)

		Regeneration Guide									Free Growing Guide	
		Species	Site Occupancy						Regen Delay (max yrs)	MITD		
Biogeoclimatic Classification	Layer			Moderate Retention	High Retention						Species	Height (m)
CWHvh2 01 Associated standards id # 1049844	Residual Layer (L1) (≥ 12.5 dbh) (BA m ² /ha)	As per Table A1 for the ecosystem	0-10 m ² /ha	11-15 m ² /ha	16-22 m ² /ha	23-28 m ² /ha	29-39 m ² /ha	≥ 40 m ² /ha	(note 3)	N/A	N/A	
	Regen Layer (L2-L4) WS/FG /ha. TSS – Target MSS - Minimum)	As per Table A1 for the ecosystem	900 TSS 500 MSS	800 TSS 400 MSS	700 TSS 300 MSS	500 TSS 200 MSS	400 TSS 100 MSS	0	(note 3)	L1 Drip line or 2.0 m (L2-L4)	As per Table A1 for the ecosystem	As per Table A1 for the ecosystem

These SEDRS standards are to be applied to cedar hemlock stands with a site index of 18 to 30. For selection of well spaced and free growing crop trees when using SEDRSS, trees must be in good health and of good form and vigour as described in the Silviculture Surveys Procedures Manual, April 2015. The stocking standard parameters in the FSP Tracking System and RESULTS has been limited to one ID number as it is unknown as to which BEC subzones, site series and basal area category will be used for applying SEDRSS. In the FSPTS the associated standards ID is 1049844, the BEC is CWHvh2 01 and the basal area grouping is 16 - 22 m²/ha (mid-point is 19). If the basal area retention is lower or higher (i.e.: 11 - 15 m²/ha, 23 - 28 m²/ha) for the CWHvh2 01 or a different site series entirely is required other approved FSP SEDRSS stocking standard ID's will be developed as needed. Using this standards ID and the "Approved Variation" process within a standards unit all necessary data fields will be updated that apply, such as changes to but not limited to the following: species combinations, target and minimum densities, heights for layer 2,3,and 4; MITD, mid-point basal area for layer one (1). All adjustments made using the approved variation button within a standards unit will be consistent with the approved FSP stocking standards.

Notes:

- 1) Preferred and Acceptable species by site series will be according to the standards in Table A1.

- 2) The Dripline is defined as *“the vertical boundary of the outside of the outer live foliage of the overstorey tree”*. An understory tree is considered outside the Dripline if *“the main stem pith of the understorey stem is outside of the Dripline as defined above”*. Overstorey stems (regardless if counted as a crop tree) inside and *outside* of survey plots are used to determine the Dripline.
- 3) Declaration of the Regeneration Free Growing Obligation is to be two years or greater after the completion of harvest for layer 1 and 2 trees. Regeneration and Free Growing Obligations are otherwise to follow the due dates in Table A1.
- 4) Acceptable guidance is to list the minimum heights as 75% of the heights for each species on a given site series. There may be situations where this reduced minimum height has not been achieved, but the understory stems meet all other criteria. In this situation a forest professional can use Forest Planning and Practices Regulation (FPPR) section 97.1 to indicate the obligation has been met and provide a rationale that indicates the crop trees are well established, free from vegetative competition and are not expected to be impacted by a forest health agent.

Table A5: FG Damage Criteria for Single Entry Dispersed Retention Stands Layer 1 ≥ 12.5 cm DBH

For selection of well-spaced crop trees they must be in good health and of good form and vigor such that the trees can reach the next stand entry and be in fair to good condition for harvesting.

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:		Possible damage agents & codes	Comments
		Hw, Ba, Bg, Bl, Cy, Fdc, Ss, Pw, Pl	Cw		
Stem	Wound	<ul style="list-style-type: none"> Wound girdles >33% stem circumference, or One wound >400 cm² on stem, or Wound on major root within 1 m of stem, or Tree has gouge in stem. 	<ul style="list-style-type: none"> No criteria 	fire NB, windthrow NW, sunscald NZ, logging TL, mechanical TT.	A wound is defined as an injury in which the cambium is dead (e.g., sunscald) or completely removed from the tree exposing the sapwood. Measure the wound across the widest point of the exposed sapwood (or dead cambium when the tree is damaged by sunscald). Healed over wounds (=scars) are acceptable.
Stem	Decay	<ul style="list-style-type: none"> Any pathological indicator(s) are present. This may include conk, blind conk, frost crack, or rotten branches. 		various decay fungi DD.	
Stem	Bark Mining	<ul style="list-style-type: none"> Any of the following signs are visible: pitch tubes, boring dust, exit holes on bark surface, galleries under the bark. 	<ul style="list-style-type: none"> No criteria 	Douglas-fir beetle IBD, Ips pini IBI, Pityogenes & Pityophthorus IBP	<p>Note: pitch tubes can be associated with trees that have successfully repelled bark beetles, bark must be removed above pitch tube to confirm successful attack (successful galleries will be filled with frass and not pitch, contain adult beetles and/or larval galleries).</p> <p>Stressed trees are susceptible to secondary bark and twig beetles.</p>

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:		Possible damage agents & codes	Comments
		Hw, Ba, Bg, Bl, Cy, Fdc, Ss, Pw, Pl	Cw		
Stem	Deformation (including crook, fork and dead or broken top)	<ul style="list-style-type: none"> A crook displaces the portion of the stem above the defect by >50% from the line of growth formed by the stem below the point of defect in the bottom 2/3rds of the stem only. A fork occurs above stump height in the bottom 2/3rds of the stem only. 	<ul style="list-style-type: none"> No criteria 	frost NG, hail NH, snow NY, drought ND, logging TL, mechanical TT, Dwarf mistletoes (see below).	<p>Cw: Unacceptable as a contributing Crop Tree if assessed as unable to produce > 50% Merchantable Volume in the first 10 m. log length – defined as either: 1. <u>Utility Grade</u> – At least a solid 8 inch shell – Shake and Shingle and /or 2. <u>Higher Grade</u> – Complete solid wood – Saw Logs</p> <p>Note: Field guidance procedures and photo examples for the estimation of merchantable Cw volume are identified in Appendix 1 of SEDRSS Implementation Guide - February, 2014.</p>
		<ul style="list-style-type: none"> A dead or broken top extends more than 20% of the stem length or the live crown is removed. 	<ul style="list-style-type: none"> A dead tree with no live foliage the stem is unable to produce > 50% merchantable volume. 		
Stem	Dwarf Mistletoe Infection	<ul style="list-style-type: none"> Hawksworth rating >3, or severe stem infections (major swelling or deformity) present. 	<ul style="list-style-type: none"> No criteria 	hemlock dwarf mistletoe DMH	The Hawksworth rating system is described in the FPC <i>Dwarf Mistletoe Management Guidebook</i> or refer to Figure 2 at the end of this Table. For SEDRSS, this rating system will only apply to the tree/plot assessment level, and not at the stand level.
Foliage	Defoliation	<p>For defoliating insects:</p> <ul style="list-style-type: none"> > 80% of foliage has been removed, lost or damaged due to insect defoliation. <p>For foliar diseases:</p> <ul style="list-style-type: none"> > 50% of foliage has been removed, lost or damaged 	<ul style="list-style-type: none"> No criteria 	defoliators ID, foliage diseases DF	
Foliage	Live Crown Vigour	<ul style="list-style-type: none"> Stems < 17.5 cm dbh - < 30% live crown due to poor vigour. Stems ≥ 17.5 cm dbh - < 20% live crown due to poor vigour. 	<ul style="list-style-type: none"> A dead tree with no live foliage 		Percent live crown is the length of continuous green foliage on a tree expressed as a percentage of its total height.
Roots	Root Disease	<ul style="list-style-type: none"> Sign(s) or definitive combinations of symptoms of root disease are observed 	<ul style="list-style-type: none"> For Cw, there is no criterion for net down calculation - considered not susceptible or low susceptibility. 	armillaria root disease DRA, laminated root rot DRL, annosus root disease DRN.	Signs are direct evidence of the pathogenic fungus including fruiting bodies, distinctive mycelium or rhizomorphs. Symptoms include foliar thinning or chlorosis, pronounced resin flow near the root collar, reduced recent leader growth, a distress cone crop, and wood decay or stain. Symptoms alone are not usually sufficient to identify root disease. Both signs and symptoms may be detected from old stumps, root balls, or other post-harvest remains.

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:		Possible damage agents & codes	Comments
		Hw, Ba, Bg, Bl, Cy, Fdc, Ss, Pw, Pl	Cw		
		<ul style="list-style-type: none"> Infected conifer or stump found in plot. See Table Y for well-spaced tree net down calculation by layer. 		armillaria root disease DRA, laminated root rot DRL, annosus root disease DRN.	<p>Example: How to apply net down for root disease. If root disease-infected trees are found in the plot:</p> <ol style="list-style-type: none"> Determine the number of healthy, well-spaced trees in each layer using the prescribed minimum inter-tree distance (MITD) (e. g., 3 layer 1, 3 layer 3 and 4 layer 4 = 10 healthy, well-spaced) ignoring the M-value; Count the number of infected trees (e. g., 1 layer 1 tree and 1 layer 3 tree); Working from the uppermost layer down, apply the multiplier in Table Y to each lower layer. Subtract the resultant from each layer in turn, for susceptible species only (e. g., if all trees are susceptible, 1 infected layer 1 tree removes 1 healthy, well-spaced layer 1 tree plus 3 layer 3 trees plus 4 layer 4 trees). Note the effects are cumulative, not exclusive and lower layers do not affect higher layers; <p>Calculate the remaining healthy, well-spaced trees once all removals due to infected trees are completed (e. g. $10 - 8 = 2$). The result is the maximum number of free growing trees tallied for the plot.</p>

TABLE Y. Deductions from numbers of acceptable well-spaced uninfected stems for trees infected by root disease in layered stands.

Tree layer with infected tree(s) or stumps	Multiplier used to determine number of acceptable trees to be deducted from:			
	Layer 1	Layer 2	Layer 3	Layer 4
Layer 1	Deduct BA of infected layer 1 from Crop BA	2	3	4
Layer 2		2	2	3
Layer 3			2	2
Layer 4				2

Table A5: Free Growing Damage Criteria, Layers 2, 3, 4

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host Species	Possible damage agents & codes	Comments
Stem	Wound	<ul style="list-style-type: none"> Wound girdles >25% stem circumference, or One wound >10% the length of stem 	All	fire NB, windthrow NW, sunscald NZ, logging TL, mechanical TT.	A wound is defined as an injury in which the cambium is dead (e.g., sunscald) or completely removed from the tree exposing the sapwood. Measure the wound across the widest point of the exposed sapwood (or dead cambium when the tree is damaged by sunscald). Healed over wounds (=scars) are acceptable.
Stem	Decay	<ul style="list-style-type: none"> Any pathological indicator(s) are present. This may include conk, blind conk, frost crack, or rotten branches. 	All	various decay fungi DD.	
Stem	Bark Mining	<ul style="list-style-type: none"> Any of the following signs are visible: pitch tubes, boring dust, exit holes on bark surface, galleries under the bark. 	All	Douglas-fir beetle IBD, Ips pini IBI, Pityogenes & Pityophthorus IBP	<p>Note: pitch tubes can be associated with trees that have successfully repelled bark beetles, bark must be removed above pitch tube to confirm successful attack (successful galleries will be filled with frass and not pitch, contain adult beetles and/or larval galleries).</p> <p>Stressed trees are susceptible to secondary bark and twig beetles.</p>
Stem	Deformation (including crook, fork and dead or broken top)	<ul style="list-style-type: none"> The pith is horizontally displaced more than 30 cm from the point of defect and originates above 30 cm from the point of germination 	All	defoliators ID, white pine (spruce) weevil IWS, lodgepole pine terminal weevil IWP, cattle AC, deer AD, elk AE, moose AM, frost NG, hail NH, snow NY, drought ND, logging TL, mechanical TT, Dwarf mistletoes (see below).	
		<ul style="list-style-type: none"> The tree leader has been killed three or more times in the last 5 years (weevil only) 	Ss		This criterion applies only for terminal weevil damage.
		<ul style="list-style-type: none"> The tree has two or more leaders with no dominance expressed after five years growth and the fork originates above 30 cm from the point of germination. The tree has a dead or broken top at a point that is > 3cm in diameter. The tree has a flat top (umbrella like) form and no distinct leader. 	All		Leader dominance occurs when the tallest leader is at least 5 cm taller than the second tallest leader. See Figure 1 on Damage Types at the end of this Table..

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host Species	Possible damage agents & codes	Comments
Stem	Lean and Sweep	<ul style="list-style-type: none"> The tree leans >30° from the vertical with or without growth correction. 	All	Flooding NF, snow NY, slides NS, wind NW, mechanical TM	
Stem	Lean and Sweep	<ul style="list-style-type: none"> The tree leans >30° from the vertical with or without growth correction. 	All	Flooding NF, snow NY, slides NS, wind NW, mechanical TM	
Stem	Infection (includes cankers and galls)	<ul style="list-style-type: none"> Any infection occurs on the stem. 	All	white pine blister rust DSB, atopellis canker DSA, Dwarf mistletoes (see below).	Note: Wounds caused by rodent feeding around rust cankers should have stem rust recorded as the causal agent.
Branch	Infection (cankers)	<ul style="list-style-type: none"> An infection occurs on a live branch less than 60 cm from the stem. 	Pw, Pl, Py	white pine blister rust DSB, comandra blister rust DSC, stalactiform blister rust DSS.	
Branch	Galls	<ul style="list-style-type: none"> A gall rust infection occurs on a live branch less than 5 cm from the stem. 	Pl, Py	western gall rust DSG.	
Foliage	Defoliation	<ul style="list-style-type: none"> >60% tree foliage has been removed by hemlock looper 	Hw	Hemlock looper IDL	
		<ul style="list-style-type: none"> > 80% of foliage has been removed, lost or damaged due to insect defoliation. 	All other	defoliators ID	
		<ul style="list-style-type: none"> > 50% of foliage has been removed, lost or damaged due to foliar disease. 	All	foliage diseases DF	
Foliage	Live Crown Vigour	<ul style="list-style-type: none"> <30% live crown present due to poor vigour. 			Percent live crown is the length of continuous green foliage on a tree expressed as a percentage of its total height.
Stem or Branch	Adelgid Gouting	<ul style="list-style-type: none"> Any adelgid gouting occurs on a stem or branch. 	Ba, Bg, Bl	balsam woolly adelgid IAB.	Gouting is defined as excessive swelling on a branch or shoot caused by balsam woolly adelgid, and is often accompanied by misshapen needles and buds. It is most common on branch tips and at nodes near the ends of branches. Consult a recent distribution map to identify the geographic extent of this pest.
Stem or Branch	Dwarf Mistletoe Infection	<ul style="list-style-type: none"> Any infection occurs on the stem or a live branch, or A susceptible tree is located within 10 m of the bole of a higher layer tree that is infected with dwarf mistletoe. 	Hw	hemlock dwarf mistletoe DMH	Note: To confirm infection, the surveyor must observe mistletoe aerial shoots or basal cups on regeneration or on live or dead fallen brooms.

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host Species	Possible damage agents & codes	Comments
Roots	Root Disease	<ul style="list-style-type: none"> Sign(s) or definitive combinations of symptoms of root disease are observed 	All	armillaria root disease DRA, laminated root rot DRL, annosus root disease DRN.	<p>Signs are direct evidence of the pathogenic fungus including fruiting bodies, distinctive mycelium or rhizomorphs. Symptoms include foliar thinning or chlorosis, pronounced resin flow near the root collar, reduced recent leader growth, a distress cone crop, and wood decay or stain. Symptoms alone are not usually sufficient to identify root disease. Both signs and symptoms may be detected from old stumps, root balls, or other post-harvest remains.</p>
		<ul style="list-style-type: none"> Infected conifer or stump found in plot. See Table Y for well-spaced tree net down calculation by layer. 	All	armillaria root disease DRA.	<p>Example: How to apply net down for root disease.</p> <p>If root disease-infected trees are found in the plot:</p> <p>4. Determine the number of healthy, well-spaced trees in each layer using the prescribed minimum inter-tree distance (MITD) (e. g., 3 layer 1, 3 layer 3 and 4 layer 4 = 10 healthy, well-spaced) ignoring the M-value;</p> <p>5. Count the number of infected trees (e. g., 1 layer 1 tree and 1 layer 3 tree);</p> <p>6. Working from the uppermost layer down, apply the multiplier in Table Y to each lower layer. Subtract the resultant from each layer in turn, for susceptible species only (e. g., if all trees are susceptible, 1 infected layer 1 tree removes 1 healthy, well-spaced layer 1 tree plus 3 layer 3 trees plus 4 layer 4 trees). Note the effects are cumulative, not exclusive and lower layers do not affect higher layers;</p> <p>Calculate the remaining healthy, well-spaced trees once all removals due to infected trees are completed (e. g. $10 - 8 = 2$). The result is the maximum number of free growing trees tallied for the plot.</p>

Location of Damage	Type of Damage	Tree being assessed is UNACCEPTABLE if:	Host Species	Possible damage agents & codes	Comments
		<ul style="list-style-type: none"> Infected conifer or stump found in plot. See Table Y for well-spaced tree net down calculation by layer. 	All	armillaria root disease DRA.	<p>Example: How to apply net down for root disease. If root disease-infected trees are found in the plot:</p> <p>7. Determine the number of healthy, well-spaced trees in each layer using the prescribed minimum inter-tree distance (MITD) (e. g., 3 layer 1, 3 layer 3 and 4 layer 4 = 10 healthy, well-spaced) ignoring the M-value;</p> <p>8. Count the number of infected trees (e. g., 1 layer 1 tree and 1 layer 3 tree);</p> <p>9. Working from the uppermost layer down, apply the multiplier in Table Y to each lower layer. Subtract the resultant from each layer in turn, for susceptible species only (e. g., if all trees are susceptible, 1 infected layer 1 tree removes 1 healthy, well-spaced layer 1 tree plus 3 layer 3 trees plus 4 layer 4 trees). Note the effects are cumulative, not exclusive and lower layers do not affect higher layers;</p> <p>Calculate the remaining healthy, well-spaced trees once all removals due to infected trees are completed (e. g. 10 – 8 = 2). The result is the maximum number of free growing trees tallied for the plot.</p>
		<ul style="list-style-type: none"> Infected conifer or stump found in plot. See Table Y for well-spaced tree net down calculation by layer. 	Fd, Ba, Bg	laminated root rot DRL.	<p>Note: Bl, Cw, Pl, Pw, and broadleaf species are considered not susceptible for survey purposes only</p>
		<ul style="list-style-type: none"> Infected conifer or stump found in plot. See Table Y for well-spaced tree net down calculation by layer. 	Ba, Hw, Ss	annosus root rot DRN.	<p>Note: Bg, Bl, Cw, Cy, Fd, Hm, Pl, Pw, and broadleaf species are considered not susceptible for survey purposes only.</p>

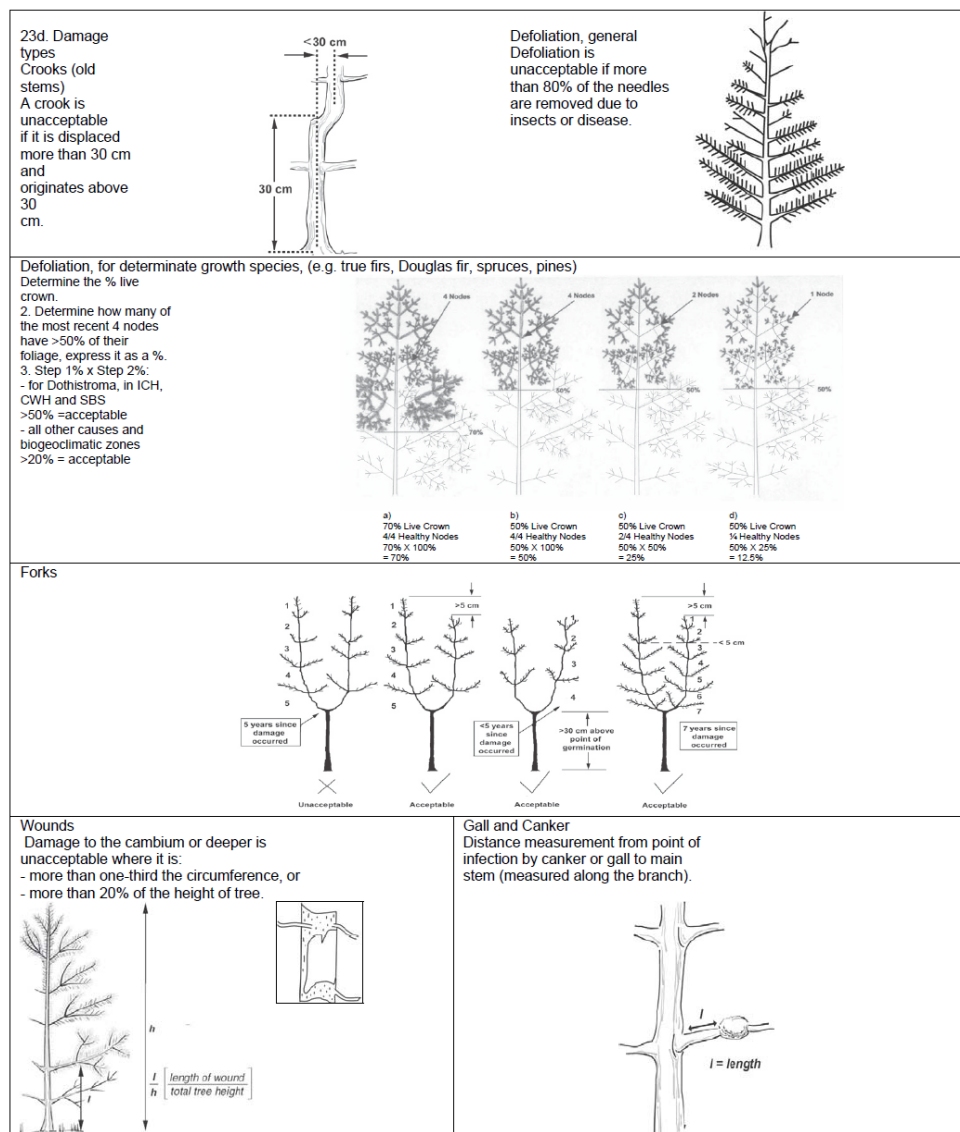


Figure 1 (left) Free Growing Damage Types
Figure 2: Hawksworth, Dwarf Hemlock Mistletoe

Instructions	Example
Step 1 Divide live crown into thirds.	If this third has no visible infections, its rating is (0).
Step 2 Rate each third separately. Each third should be given a rating of 0, 1, or 2 as described below: (0) no visible infections (1) light infection (1/2 or less of total number of branches in the third infected) (2) heavy infection (more than 1/2 total number of branches in the third infected).	If this third is lightly infected, its rating is (1). If this third is heavily infected, its rating is (2).
Step 3 Add ratings of thirds to obtain rating for total tree.	The tree in this example gets a rating of: 0 + 1 + 2 = 3.

Note: for coastal western hemlock, a descriptor for stem swellings can be added after the numerical rating using:

N = minor stem swelling (25% of the stem circumference affected)
M = major stem swelling (>25% of the stem circumference affected).

Only a major stem swelling is recorded if there are both major and minor swellings. For example, a hemlock with a mistletoe rating of 4 and one or more major stem infections would be coded 4M.

On a tree or stand basis, light infection is a rating of 1 to 2; moderate is 3 to 4; and severe is 5 to 6. For a stand, the rating is calculated as the average rating of all infected trees. Incidence is the percentage of susceptible trees infected by dwarf mistletoe.

Table A6: Climate Change Adaptation²⁸

This table will be used for when Douglas-fir (Fd) and Western Larch (Lw) will be managed within a standards unit. It will be implemented by means of an approved variation. These species are excluded from the Appendix I Table A1 stocking standards. For the other species below they have been integrated into the Table A1 stocking standards.

Species	Present Category	Suggested Category	Recommendation	Decision	Footnotes
ICHmc2/ site series 01a, 03, 04					
Fd	Absent	Minor (acceptable)	Acceptable	Promote	Well drained somewhat drier soils. Avoid areas where there is potential of cold/air ponding.
Lw	Absent	Minor (acceptable)	Acceptable	Promote	Southern aspects and moist drained soils preferred. Avoid areas where there is potential of cold/air ponding.
ICHmc2/ site series 01b					
Fd	Absent	Minor	Acceptable	Promote	Southern aspects and moist drained soils preferred. Avoid areas where there is potential of cold/air ponding.
SBSdk/ site series 01, 04, 06, 07a					
Fd	Absent	Minor (acceptable)	Acceptable	Promote	Well drained somewhat drier soils. Avoid areas where there is potential of cold/air ponding.
Lw	Absent	Minor (acceptable)	Acceptable	Promote	Southern aspects and moist drained soils preferred. Avoid areas where there is potential of cold/air ponding.
SBSdk/ site series 03, 05					
Fd	Absent	Minor	Acceptable	Promote	Well drained somewhat drier soils. Avoid areas where there is potential of cold/air ponding.
Lw	Absent	Minor	Acceptable	Promote	Southern aspects and moist drained soils preferred. Avoid areas where there is potential of cold/air ponding.
SBSmc2/ site series 01, 05, 06					
Fd	Absent	Minor (acceptable)	Acceptable	Promote	Well drained somewhat drier soils. Avoid areas where there is potential of cold/air ponding.
Lw	Absent	Minor (acceptable)	Acceptable	Promote	Southern aspects and moist drained soils preferred. Avoid areas where there is potential of cold/air ponding.
SBSmc2/ site series 03					
Fd	Absent	Minor	Acceptable	Promote	Well drained somewhat drier soils. Avoid areas where there is potential of cold/air ponding.
Lw	Absent	Minor	Acceptable	Promote	Southern aspects and moist drained soils preferred. Avoid areas where there is potential of cold/air ponding.
CWHvm2/ site series 01					
Hm	Minor FSP is acc	Minor	Acceptable	Demote	Use at upper elevations
Yc	Acceptable FSP is pref	Minor	Acceptable	Demote	Use at lower elevations
MHmm1/01					
Cw	Absent	Acceptable	Acceptable	Promote	Use in lower elevations
Hm	Preferred	Acceptable	Preferred	Demote	Use at upper elevations
*Hw	Absent	Acceptable	Acceptable	Promote	Use at lower elevations
Yc	Preferred	Acceptable	Acceptable	Demote	Use at upper elevations
Ss	Absent	Minor	Acceptable	Promote	Trial basis at lower elevations; use Sxs in interior transition areas

²⁸ "Updates to the Reference Guide for FDP Stocking Standards 2014 Climate-Change Related Stocking Standards" Draft

Species	Present Category	Suggested Category	Recommendation	Decision	Footnotes
MHmm2/01					
Bl	Minor (FSP is acc	Minor	Acceptable	Demote	Use at upper elevations
Hm	Preferred	Acceptable	Preferred	Demote	Use at upper elevations
Yc	Acceptable	Acceptable	Acceptable	Demote	Use at upper elevations
*Cw	Absent	Minor	Acceptable	Promote	Use at lower elevations
*Hw	Absent	Acceptable	Acceptable	Promote	Use at lower elevations

* These species were added to Appendix I, Table A1.

Table A7: Footnotes for Stocking Standards in Tables A1, A2, A3 and A4;

Standards* footnotes to "Preferred" or "Acceptable" species	
a	Species is limited in productivity, reliability and/or feasibility, and subject to Section 4.010.9 of this FSP , may only be considered as "acceptable".
b	Species constitutes a productive, reliable, and feasible regeneration option, and subject to Section 4.010.9 of this FSP , may be considered as "preferred".
c	Within Cedar Stewardship Areas (as identified in the Schedule to the Central and North Coast Order), Red Cedar and Yellow Cedar may be considered "preferred" species.
16	Restrict to a maximum of 25% of well-spaced stocking
56	Spruce content restricted to the percentage described in Table A8a and A8b below for well-spaced and free growing trees on a standards unit due to leader weevil. Footnote 56 will apply to all spruce in BEC units in A8a.

*These footnotes are part of the Stocking Standards and are measurable, verifiable, and enforceable

Advisory** footnotes to "Preferred" or "Acceptable" species within Tables A1 and A2	
1	Elevated microsites are preferred
2	Suitable on thick forest floors
3	Restricted to coarse-textured soils
7	Restricted to nutrient-medium sites
9	Restricted to southerly aspects
10	Most suited to southern portion of biogeoclimatic unit
12	Suitable on cold air drainage sites
14	Restricted to lower elevations of biogeoclimatic unit
15	Restricted to upper elevations of biogeoclimatic unit
17	Restricted to western portion of biogeoclimatic unit in region
18	Suitable as a minor species in salal-dominated sites (e.g. less than 30%)
19	Limit Hw to a maximum of 50% of well spaced stocking at Free Growing
22	Restricted to southern Gardner Canal – Kitlope area (i.e. where Douglas-fir could occur naturally)
28	Limited by moisture deficit
29	Risk of heavy browsing by moose
32	Limited by growing-season frosts
34	Risk of snow damage
44	Suitable in areas with stronger maritime influence
50	Restricted to sites where the species occurs as a major species in a pre-harvest, natural stand
Note: The following do not exist as footnotes: 4-6, 8, 11,13, 20-21, 23, 24-27, 30, 31, 33, 35, 36-43, 45-49, 51-55	

**These footnotes are provided as advice to a prescribing Forest Professional, and are not to be interpreted as a measurable, verifiable, or enforceable part of the Stocking Standards.
All Cw and Yc are at risk for deer browse and all Hw, Hm, and Spruce are at risk for porcupine damage.
The Forest Professional is to assess the associated risk for these tree species at the site.

Table A 8a. Spruce Leader Weevil Hazard Ratings by BEC (See Figure 5)

Hazard Rating		
Low (1-10%) ^A	Moderate (11-30%) ^A	High (> 31%) ^A
CWH vh2 ICHmc1, mc1a ICHmc2 360m+ ICHvc	CWHvm1 (north) CWHvm2 (north) ICHmc2 0-360m	CWHws1 0-400m
^B CWHvm1 (south)	CWHws1 400m+	
^B CWHvm2 (south)	CWHws2 (north)	
^B CWHws2 (south)	SBPSmc	
	SBSdk, mc2, wk3	

^A The percentage range associated with each hazard rating is the estimated amount of IWS found in non-resistant, natural stands based on the best available information (historical and site assessments).

^B Defined as South of latitude 53° 43' 32" (North end of Maitland Island).

Table A8b. Maximum % of Spruce by Hazard (“A” is A class orchard seed and B+ is naturally genetic improved seed)

Low		Moderate		High	
<i>Natural or non-resistant</i>	<i>Resistant stock type planted</i>	<i>Natural or non-resistant</i>	<i>Resistant stock type planted</i>	<i>Natural or non-resistant</i>	<i>Resistant stock type planted</i>
60% **40%	“A” No restriction	30%	“A” No restriction	20%	“A” 60%
	B+ , Sxs or identified provenances No restriction		B+ , Sxs or identified provenances 40%		B+ , Sxs or identified provenances 40%

**Ss

Identified provenances are those have been proven to be resistant. See supporting document for further information.

BEC - Biogeoclimatic Ecosystem Classification			
CWH Coastal Western Hemlock zone		MH Mountain Hemlock zone	
vh2	very wet hypermaritime subzone, central variant	mm1	moist maritime subzone, windward variant
vm	very wet maritime subzone	mm2	moist maritime subzone, leeward variant
vm1	very wet maritime subzone, submontane variant	mmp	moist maritime subzone, parkland variant
vm2	very wet maritime subzone, montane variant	wh1	wet hypermaritime subzone – windward variant
wm	wet maritime subzone	whp	wet hypermaritime subzone – parkland variant
ws1	wet submaritime subzone, submontane variant		
ws2	wet submaritime subzone, montane variant		
Conifer Tree Species		Broadleaf Tree Species	
“Ba” means amabilis fir “Bl” means subalpine fir; “Cw” means western red cedar; “Hm” means mountain hemlock; “Hw” means western hemlock;		“Pl” means lodgepole pine; “Ss” means sitka spruce; “Sx” or “Sxs” means hybrid or interior spruce; “Yc” means yellow cedar.	
		“Act” means black cottonwood; “At” means trembling aspen; “Dr” means red alder “Ep” means common paper birch;	

The terms Ss, Sx and Sxs are used interchangeably as the terms are a reflection of the seed registration and not indicative of the genetic material.

Spruce Leader Weevil Hazard Map BCTS Skeena

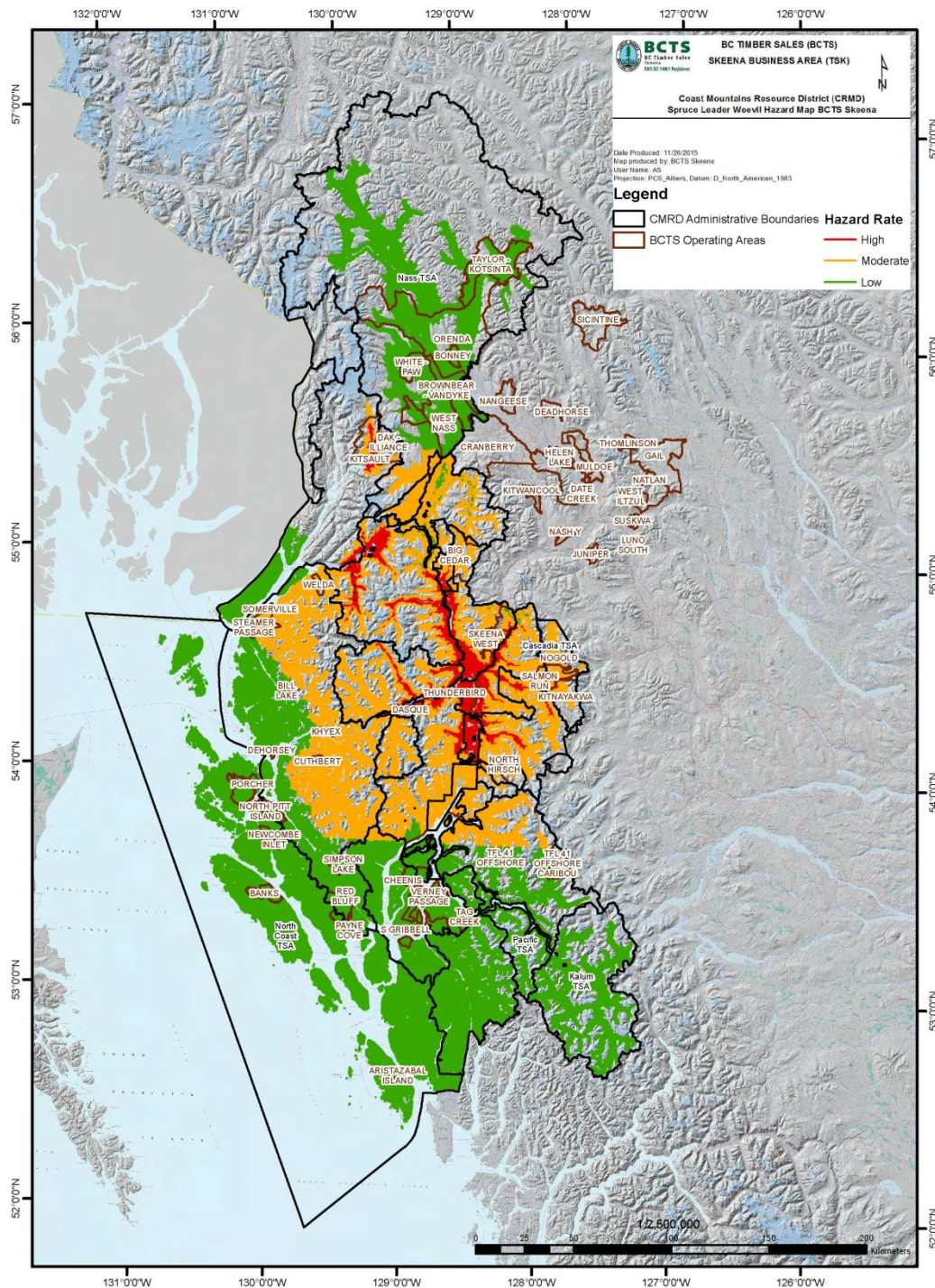


Figure 5: Spruce Leader Weevil Hazard Map BCTS Skeena

Appendix II – FRPA Declared 14(4) and Section 196 Areas

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A58241	C	Crow Lagoon - A25561F	103J069/70	196(1) Approved
A50591	1	Thunderbird	103I047	196(1) Approved
A53169	1	Tag Creek -A53697F	103H048	196(1) Approved
A53169	2	Tag Creek -A53697F	103H048/038	196(1) Approved
A64079	1	Deep Creek	103I058	196(1) Approved
A64106	2	Upper White River	103P084	196(1) Approved
A64106	1	Upper White River	103P084	196(1) Approved
A64986	1	Fishtrap Bay (Cheenis Ck)	103H055/056	196(1) Approved
A64986	2	Fishtrap Bay (Cheenis Ck)	103H055/056	196(1) Approved
A77633	2	Monkey Beach	103H046	196(1) Approved
A77633	1	Monkey Beach	103H046	196(1) Approved
A77633	4	Monkey Beach	103H046	196(1) Approved
A77859	1	Meziadin	103P094	196(1) Approved
A80317	16	Verney Passage - A52939F	103H056	196(1) Approved
A80317	1	Verney Passage - A52939F	103H056	196(1) Approved
A80317	4	Verney Passage - A52939F	103H056	196(1) Approved
A80317	12	Verney Passage - A52939F	103H056	196(1) Approved
A87104	2	Upper White River	103P094	196(1) Approved
A92768	VPmp021B	Verney Passage - A52939F	103H056	196(1) Approved
A92768	VPmp001	Verney Passage - A52939F	103H056	196(1) Approved
A92768	VPmp003	Verney Passage - A52939F	103H056	196(1) Approved
A92768	VPmp008	Verney Passage - A52939F	103H056	196(1) Approved
A92768	VPmp009	Verney Passage - A52939F	103H056	196(1) Approved

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A92768	VPmp017	Verney Passage - A52939F	103H056	196(1) Approved
A92768	VPmp019	Verney Passage - A52939F	103H056	196(1) Approved
A92768	VPmp20A&B	Verney Passage - A52939F	103H056	196(1) Approved
A92768	VPmp022	Verney Passage - A52939F	103H056	196(1) Approved
!Planningb	A56346_A	Crow Lagoon - A25561F	103J069	196(1) Approved
A58241	A,B	Crow Lagoon - A25561F	103J069/70	196(1) Approved
!Planningb	A56346_B	Crow Lagoon - A25561F	103J069	196(1) Approved
A58241	D	Crow Lagoon - A25561F	103J069	196(1) Approved
A53192	1	Tag Creek -A53697F	103H038	196(2) Approved
A77634	K	Monkey Beach	103H046/103H056	196(2) Approved
A53203	C	Goat Harbour - A46652F	103H037	196(2) Approved
A53203	B	Goat Harbour - A46652F	103H037	196(2) Approved
A77634	B	Monkey Beach	103H056	196(2) Approved
A77634	I	Monkey Beach	103H046	196(2) Approved
A58520	F	Tag Creek -A53697F	103H038/048	196(2) Approved
A53203	A	Goat Harbour - A46652F	103H037	196(2) Approved
A69862	A	Porcher Inlet - A53698F	103G098	196(2) Approved
A53203	G	Goat Harbour - A46652F	103H037	196(2) Approved
!Planningb	NCpo003	Porcher Inlet - A53698F	103G098	196(2) Approved
!Planningb	NCpo001	Porcher Inlet - A53698F	103G099	196(2) Approved
!Planningb	NCpo005	Porcher Inlet - A53698F	103G098	196(2) Approved
!Planningb	NCpo002	Porcher Inlet - A53698F	103G098	196(2) Approved
A77634	C	Monkey Beach	103H046	196(2) Approved
A77634	H	Monkey Beach	103H046	196(2) Approved
A77634	J	Monkey Beach	103H046	196(2) Approved

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A58520	D	Tag Creek -A53697F	103H038	196(2) Approved
A58520	E	Tag Creek -A53697F	103H048	196(2) Approved
!Planningb	NCta001	Tag Creek -A53697F	103H038	196(2) Approved
A69862	B	Porcher Inlet - A53698F	103G098	196(2) Approved
!Planningb	NCpo004	Porcher Inlet - A53698F	103G098	196(2) Approved
A53203	E	Goat Harbour - A46652F	103H037	196(2) Approved
A53203	F	Goat Harbour - A46652F	103H037	196(2) Approved
A77634	E	Monkey Beach	103H046	196(2) Approved
A77634	G	Monkey Beach	103H046	196(2) Approved
A58520	C	Tag Creek -A53697F	103H038	196(2) Approved
A58520	A	Tag Creek -A53697F	103H048	196(2) Approved
A53203	D	Goat Harbour - A46652F	103H037	196(2) Approved
A77634	D	Monkey Beach	103H046	196(2) Approved
A77634	F	Monkey Beach	103H046	196(2) Approved
A58520	B	Tag Creek -A53697F	103H048	196(2) Approved
A85174	1	Thunderbird	103I047	Block Declared
A64097	1	Skeena West	103I089	Block Declared
A64102	1	Williams Creek Area	103I049	Block Declared
A56484	3	Thunderbird	103I048	Block Declared
A86363	TEth017	Thunderbird	103I038	Block Declared
A85517	1	Skeena West	103I079	Block Declared
A64097	3	Skeena West	103I089	Block Declared
A85649	TEsw016	New Skeena West	103I079	Block Declared
A85595	TEbc015	Big Cedar	103P007	Block Declared
A85594	TEbc008	Big Cedar	103P007	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A85649	TEsw046	New Skeena West	103I079	Block Declared
A80500	1	Dasque	103I035	Block Declared
A77838	1	Skeena West	103I089	Block Declared
A64097	4	Skeena West	103I089	Block Declared
A80514	1	Skeena West	103I089	Block Declared
A64097	2	Skeena West	103I089	Block Declared
!Planningb	77851-2	Thunderbird	103I037	Block Declared
A56484	2	Thunderbird	103I048	Block Declared
A49460	1	Thunderbird	103I047	Block Declared
A84694	1	Skeena West	103I089	Block Declared
A50585	1	Skeena West	103I089	Block Declared
A56484	1	Thunderbird	103I048	Block Declared
A81413	1	Rosswood / Leanto Ck	103I067	Block Declared
A64304	1	Miscellaneous Kalum	103I067	Block Declared
A85649	TEsw051	Skeena West	103I079	Block Declared
A89837	1	Rosswood / Leanto Ck	103I087	Block Declared
A77687	1	Thunderbird	103I047	Block Declared
A80514	3	Skeena West	103I079	Block Declared
!Planningb	77851-1	Thunderbird	103I037	Block Declared
A83098	1	Skeena West	103I079	Block Declared
!Planningb	50588-2	Skeena West	103I079	Block Declared
!Planningb	50588-1	Skeena West	103I079	Block Declared
A64103	1	Williams Creek Area	103I039	Block Declared
A85596	TEbc019	Big Cedar	103P007	Block Declared
A85595	TEbc014	Big Cedar	103P007	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A85649	TEsw017	New Skeena West	103I079	Block Declared
A85594	TEbc009	Big Cedar	103P017	Block Declared
A80514	4	Skeena West	103I079	Block Declared
A64124	1	Skeena West	103I089	Block Declared
A65308	1	Thunderbird	103I037	Block Declared
A80642	2	Skeena West	103I079	Block Declared
A80642	1	Skeena West	103I089	Block Declared
A77853	1	Big Cedar	103P006	Block Declared
A85595	TEbc012	Big Cedar	103P007	Block Declared
A54540	1	Kwinageese/Brown Bear FSR Area	104A016	Block Declared
A83088	3	West Nass	103P076	Block Declared
A61016	1	Harper FSR Area	103P076	Block Declared
!Planningb	64065-1	Kwinageese/Brown Bear FSR Area	104A017/027	Block Declared
A64111	1	Kwinageese/Brown Bear FSR Area	104A007	Block Declared
A64112	1	Kinskuch	103P075	Block Declared
A64117	1	Bonney Lakes Area	103P097	Block Declared
A68142	1	Kwinageese/Brown Bear FSR Area	104A016	Block Declared
A68149	1	Van Dyke	103P077	Block Declared
A64104	TEkn003b	Kinskuch	103P065	Block Declared
A80513	TEbb009	Kwinageese/Brown Bear FSR Area	103P086/087	Block Declared
A80513	TEbb010	Kwinageese/Brown Bear FSR Area	103P086	Block Declared
A64104	TEkn003	Kinskuch	103P065	Block Declared
A83096	TEor030	Orenda	103P096	Block Declared
A83096	TEor031	Orenda	103P086/096	Block Declared
A80513	TEor033	Orenda	103P086	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A88207	TEwn018	West Nass	103P076	Block Declared
A84151	TEwn019	West Nass	103P056	Block Declared
A85593	TEwn023	West Nass	103P066	Block Declared
A84151	TEwn024	West Nass	103P056	Block Declared
A84152	TEwn025	West Nass	103P076	Block Declared
A83089	1	West Nass	103P066	Block Declared
A77852	4	Kinskuch	103P075	Block Declared
A77852	3	Kinskuch	103P074/075	Block Declared
A77860	1	Upper White River	103P095	Block Declared
A80524	2	Kwinageese/Brown Bear FSR Area	104A007	Block Declared
!Planningb	64114-4	Kwinageese/Brown Bear FSR Area	103P086	Block Declared
A61019	2	Harper FSR Area	103P076	Block Declared
A85593	TEwn014	West Nass	103P066/067	Block Declared
A83096	1	Orenda	103P086	Block Declared
A80526	TEor011	Orenda	103P086/096	Block Declared
A84148	1	Orenda	104A005	Block Declared
A64119	2	Kwinageese/Brown Bear FSR Area	104A007	Block Declared
!Planningb	2	Bonney Lakes Area	104A006	Block Declared
A64122	2	Bonney Lakes Area	103P096	Block Declared
A56444	1	Harper FSR Area	103P056	Block Declared
!Planningb	64122-3	Bonney Lakes Area	103P096	Block Declared
A61019	1	Harper FSR Area	103P076	Block Declared
A87104	1	Upper White River	103P094	Block Declared
A64114	1	Kwinageese/Brown Bear FSR Area	103P086	Block Declared
A64115	1	Orenda	103P096	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A64115	2	Orenda	103P096	Block Declared
A64120	1	Kwinageese/Brown Bear FSR Area	103P097	Block Declared
A64121	1	Kwinageese/Brown Bear FSR Area	104A007	Block Declared
A68145	2	Van Dyke	103P077	Block Declared
A68145	1	Van Dyke	103P077	Block Declared
A68146	1	Van Dyke	103P077	Block Declared
A68150	1	Van Dyke	103P077	Block Declared
A68150	2	Van Dyke	103P077	Block Declared
A68364	1	Harper FSR Area	103P056	Block Declared
A68147	1	Van Dyke	103P077	Block Declared
A84150	TEbb002	Kwinageese/Brown Bear FSR Area	103P096	Block Declared
A83090	2	West Nass	103P075	Block Declared
A77852	2	Kinskuch	103P074	Block Declared
A64111	2	Kwinageese/Brown Bear FSR Area	104A007	Block Declared
A77852	5	Kinskuch	103P075	Block Declared
A64108	2	Kinskuch	103P065	Block Declared
A64114	2	Kwinageese/Brown Bear FSR Area	103P086	Block Declared
A64114	3	Kwinageese/Brown Bear FSR Area	103P086	Block Declared
A83093	1	Orenda	103P096/95	Block Declared
A83095	1	Orenda	103P096	Block Declared
A83094	1	Orenda	104A015	Block Declared
A84149	TEor023	Orenda	103P096	Block Declared
A61016	2	Harper FSR Area	103P076	Block Declared
A43384	1	Bonney Lakes Area	103P096	Block Declared
A83090	1	West Nass	103P075	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A83088	1	West Nass	103P076	Block Declared
A83088	2	West Nass	103P076	Block Declared
A88207	1	West Nass	103P066/076	Block Declared
A88207	TEwn017	West Nass	103P076	Block Declared
A80525	TEor035	Orenda	103P086/096	Block Declared
A80525	TEor036	Orenda	103P086/096	Block Declared
A84149	TEor040	Orenda	103P096	Block Declared
A83089	TEwn020	West Nass	103P066	Block Declared
A84151	TEwn021	West Nass	103P066	Block Declared
A84151	TEwn022	West Nass	103P066	Block Declared
A83093	2	Orenda	103P096	Block Declared
A77852	1	Kinskuch	103P074	Block Declared
A77857	1	Upper White River	103P084	Block Declared
A64108	1	Kinskuch	103P065	Block Declared
A64119	1	Kwinageese/Brown Bear FSR Area	104A007	Block Declared
A64122	1	Bonney Lakes Area	103P096	Block Declared
A84152	TEwn005	West Nass	103P076	Block Declared
A80524	1	Kwinageese/Brown Bear FSR Area	104A007	Block Declared
A84150	TEor022	Orenda	103P097	Block Declared
A92768	VPmp012A	Verney Passage - A52939F	103H056	Block Declared
A92768	VPmp012B	Verney Passage - A52939F	103H056	Block Declared
A92768	VPmp012C	Verney Passage - A52939F	103H056	Block Declared
!Planningb	VPmp012D	Verney Passage - A52939F	103H056	Block Declared
!Planningb	NCgo A	Goat Harbour - A46652F	103H037	Block Declared
A69859	2	Porcher Inlet - A53698F	103G098	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A70465	1	Porcher Inlet - A53698F	103G099	Block Declared
A87060	1	Kennedy Island - A46439F	103J010	Block Declared
A89318	VPmp122-1	Verney Passage - A52939F	103H056	Block Declared
!Planningb	NCgo C	Goat Harbour - A46652F	103H037	Block Declared
!Planningb	CCcc003	Captain Cove - A27583F	103G080	Block Declared
A69859	1	Porcher Inlet - A53698F	103G098	Block Declared
A87685	2	Banks Island - A53696F	103G050	Block Declared
A87685	4	Banks Island - A53696F	103G050	Block Declared
A87685	3	Banks Island - A53696F	103G050	Block Declared
A87685	1	Banks Island - A53696F	103G050	Block Declared
A87060	2	Kennedy Island - A46439F	103J010	Block Declared
A92768	6	Verney Passage - A52939F	103H056	Block Declared
A70465	3	Porcher Inlet - A53698F	103G098/103G099	Block Declared
A70465	2	Porcher Inlet - A53698F	103G099	Block Declared
!Planningb	NCgo D	Goat Harbour - A46652F	103H037	Block Declared
!Planningb	NCgo E	Goat Harbour - A46652F	103H037	Block Declared
!Planningb	CCcc001	Captain Cove - A27583F	103G080	Block Declared
!Planningb	CCcc004	Captain Cove - A27583F	103G080	Block Declared
!Planningb	CCcc002	Captain Cove - A27583F	103G080	Block Declared
A77634	A	Monkey Beach	103H046	Block Declared
A89318	VPmp123-1	Verney Passage - A52939F	103H056	Block Declared
A89318	VPmp123-2	Verney Passage - A52939F	103H056	Block Declared
!Planningb	NCgo B	Goat Harbour - A46652F	103H037	Block Declared
A92224	012	Hawkesbury Island Kalum	103H066/103H076	Block Declared
A92224	004	Hawkesbury Island Kalum	103H076	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A92224	003	Hawkesbury Island Kalum	103H076	Block Declared
A92224	011	Maitland Island	103H076	Block Declared
A92224	002	Hawkesbury Island Kalum	103H076	Block Declared
A92224	001	Hawkesbury Island Kalum	103H076	Block Declared
A92224	009	Maitland Island	103H076	Block Declared
A92224	005	Hawkesbury Island Kalum	103H076	Block Declared
A92224	006	Hawkesbury Island Kalum	103H076	Block Declared
!Planning_Pacif	OFfa001	Falls River	103H078/088	Block Declared
!Planning_Pacif	OFho004	Horetzky Creek	093E051	Block Declared
A93070	008	Heysham Creek	103H066/067	Block Declared
A93070	016	Heysham Creek	103H066	Block Declared
!Planning_Pacif	OFka001	Kildala Arm	103H088	Block Declared
!Planning_Pacif	OFke011	Kemano River	103H060	Block Declared
A93068	002	Barrie Creek	103H049	Block Declared
A93068	001	Barrie Creek	103H049	Block Declared
!Planning_Pacif	8	Dala River	103H088	Block Declared
!Planning_Pacif	10	Dala River	103H089	Block Declared
!Planning_Pacif	OFda012	Dala River	103H099	Block Declared
A93070	009	Heysham Creek	103H0067	Block Declared
A93068	004	Barrie Creek	103H049	Block Declared
!Planning_Pacif	OFse004	South Seekwyakin Creek	093E051	Block Declared
!Planning_Pacif	OFse007	South Seekwyakin Creek	093E041	Block Declared
A93068	003	Barrie Creek	103H049	Block Declared
A92224	007	Hawkesbury Island Kalum	103H076	Block Declared
!Planning_Pacif	OFfa004	Falls River	103H088/078	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A92224	008	Hawkesbury Island Kalum	103H066	Block Declared
A92224	010	Hawkesbury Island Kalum	103h076	Block Declared
A92226	1	Dala River	103H088	Block Declared
A93070	017	Heysham Creek	103H067	Block Declared
!Planning_Pacif	OFeg009	Eagle Bay	103H087	Block Declared
A92226	2	Dala River	103H088/089	Block Declared
!Planning_Pacif	OFse012	South Seekwyakin Creek	093E042	Block Declared
A85520	1	Kitnayakwa	093L041	Block Declared
A85597	TEki014	Kitnayakwa	093L041	Block Declared
A79854	3	Rosswood / Leanto Ck	103I096/097	Block Declared
A85597	TEki010	Kitnayakwa	093L041	Block Declared
A85520	2	Kitnayakwa	093L041	Block Declared
A79854	1	Rosswood / Leanto Ck	103I097	Block Declared
A79854	2	Rosswood / Leanto Ck	103I087/097	Block Declared
A64091	2	Limonite	093L051	Block Declared
A85258	1	Kitnayakwa	093L041	Block Declared
A64076	1	Limonite	093L051	Block Declared
A64091	1	Limonite	093L051	Block Declared
A84155	1	Lower Skeena	103I035	Block Declared
A78679	2	Kitnayakwa	093L041	Block Declared
A64092	2	Limonite	093L051	Block Declared
A85258	2	Kitnayakwa	093L041	Block Declared
A78678	1	Kitnayakwa	093L041	Block Declared
A78678	2	Kitnayakwa	093L041	Block Declared
A78679	1	Kitnayakwa	093L041	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A78679	3	Kitnayakwa	093L031	Block Declared
A85192	002	Hugh Creek	103H077	Block Declared
A85192	003	Hugh Creek	103H077	Block Declared
A86030	3	Hugh Creek	103H077	Block Declared
A85521	1	North Hirsch	103I009	Block Declared
A85521	2	North Hirsch	103I009	Block Declared
A85521	3	North Hirsch	103I009	Block Declared
A64099	1	Hawkesbury Island Kalum	103H066	Block Declared
A64099	3	Hawkesbury Island Kalum	103H066	Block Declared
A64099	4	Hawkesbury Island Kalum	103H066	Block Declared
A85192	014	Hugh Creek	103H077	Block Declared
A85193	8	Eagle Bay	103H087	Block Declared
A86030	1	Hugh Creek	103H077	Block Declared
A85193	2	Eagle Bay	103H077/087	Block Declared
A84030	25	Dala River	103H099	Block Declared
A86733	1	Dala River	103H089	Block Declared
A77629	2	Heysham Creek	103H066	Block Declared
A77629	3	Heysham Creek	103H066	Block Declared
A77629	1	Heysham Creek	103H066	Block Declared
A64099	2	Hawkesbury Island Kalum	103H066	Block Declared
A85192	015	Hugh Creek	103H077	Block Declared
A81677	7	Eagle Bay	103H087	Block Declared
A77635	4	Eagle Bay	103H087	Block Declared
A77635	8	Eagle Bay	103H087	Block Declared
A85192	008	Hugh Creek	103H077	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A83717	1	Kildala Arm	103H087	Block Declared
A84030	13	Dala River	103H099	Block Declared
A86973	1	Caribou Creek	093E061	Block Declared
A86734	1	Dala River	103H088	Block Declared
A86733	2	Dala River	103H089	Block Declared
A64087	1	North Hirsch	103I009	Block Declared
A77635	3	Eagle Bay	103H077	Block Declared
A86030	2	Hugh Creek	103H077	Block Declared
A86734	2	Dala River	103H089	Block Declared
A86734	3	Dala River	103H089	Block Declared
A87582	4	Hawkesbury Island Kalum	103H066	Block Declared
A87582	2	Hawkesbury Island Kalum	103H066	Block Declared
A85519	1	Kitnayakwa	093L051	Block Declared
A85518	1	Big Cedar	103P006/103P007	Block Declared
A86362	002	South Hirsch	103I009	Block Declared
A79850	TEki015	Kitnayakwa	093L041	Block Declared
A79849	TEki009	Kitnayakwa	093L032	Block Declared
A86361	TEIm002	Limonite	093L051	Block Declared
A86361	TEIm005	Limonite	093L051	Block Declared
A79855	1	Miscellaneous Kalum	103I066	Block Declared
A79855	2	Miscellaneous Kalum	103I066	Block Declared
!PlanningC	TEsm003	Miscellaneous Kalum	103P028	Block Declared
A92955	001	North Hirsch	103I009	Block Declared
A64094	1	Limonite	093L051	Block Declared
A86310	1	Lower Skeena	103I045	Block Declared

Licence ID	Block ID	Geographic Region	Mapsheet	Plan Status
A64093	3	Limonite	093L051	Block Declared
A92955	002	North Hirsch	103I009	Block Declared
!PlanningC	TEsm002	Miscellaneous Kalum	103P028	Block Declared
!PlanningC	TEsm001	Miscellaneous Kalum	103P028	Block Declared
A86361	TElm006	Limonite	093L051	Block Declared
A92225	001	South Hirsch	103I018	Block Declared
A79849	TEki016	Kitnayakwa	093L041	Block Declared
A64069	TElm013	Limonite	093L051	Block Declared
A64094	2	Limonite	093L051	Block Declared
!PlanningC	TElm032	Limonite	093L051	Block Declared

Appendix III – Issued Road Permits

Permit ID	Section ID
R18004	C
R18118	A
R18324	A
R18324	B
R18369	A
R18666	A
R18711	A
R18711	B
R18978	A
R18978	B
R19040	A
R19040	B
R19040	C
R19040	D
R19063	A
R19063	B
R19063	C
R19063	D
R19063	E
R19063	F
R19179	A
R19179	B
R19179	C
R19179	D
R19271	A
R19271	B
R15737	A
R16084	A
R16763	A
R16860	A
R16860	B
R17107	A
R17818	A
R17876	A
R17876	B
R17990	A
R17990	B
R18004	A
R18004	B

Permit ID	Section ID
R19438	A
R19686	A
R19686	B
R19686	C
R19736	A
R19739	A
R19744	A
R19746	A
R19820	A
R19820	B
R19820	C
R19983	A
R19998	A
R19998	B
R20012	A
R20012	B
R20093	A
R20315	01
R20315	02
R20315	03
R20350	A
R20350	B
R20350	C
R20375	A
R20667	A
R20667	B
R20667	C
R20667	D

Appendix IV – Issued Timber Sale Licences

Licence ID	Block ID	Management Unit
A93068	002	Barrie Creek
A93068	004	Barrie Creek
A93068	001	Barrie Creek
A93068	003	Barrie Creek
A92768	VPmp008	Verney Passage -A52939F
A92768	VPmp017	Verney Passage -A52939F
A92768	6	Verney Passage -A52939F
A92768	VPmp001	Verney Passage -A52939F
A92768	VPmp019	Verney Passage -A52939F
A92768	VPmp022	Verney Passage -A52939F
A92768	VPmp012A	Verney Passage -A52939F
A92768	VPmp003	Verney Passage -A52939F
A92768	VPmp009	Verney Passage -A52939F
A92768	VPmp012B	Verney Passage -A52939F
A92768	VPmp012C	Verney Passage -A52939F
A92768	VPmp021B	Verney Passage -A52939F
A92768	VPmp20A&B	Verney Passage -A52939F
A92226	2	Dala River
A92226	1	Dala River
A92225	001	South Hirsch
A92224	002	Hawkesbury Island Kalum
A92224	005	Hawkesbury Island Kalum
A92224	001	Hawkesbury Island Kalum
A92224	012	Hawkesbury Island Kalum
A92224	006	Hawkesbury Island Kalum
A92224	003	Hawkesbury Island Kalum

Licence ID	Block ID	Management Unit
A92224	007	Hawkesbury Island Kalum
A92224	008	Hawkesbury Island Kalum
A92224	004	Hawkesbury Island Kalum
A92224	010	Hawkesbury Island Kalum
A92224	011	Maitland Island
A92224	009	Maitland Island
A92207	1	Dala River
A87060	1	Kennedy Island -A46439F
A87060	2	Kennedy Island -A46439F
A86361	TEIm006	Limonite
A86361	ROW	Limonite
A86361	TEIm002	Limonite
A86361	TEIm005	Limonite
A86030	2	Hugh Creek
A86030	3	Hugh Creek
A86030	1	Hugh Creek
A85649	TEsw017	New Skeena West
A85649	TEsw046	New Skeena West
A85649	TEsw016	New Skeena West
A85649	RoW	New Skeena West
A85649	TEsw051	Skeena West
A85596	ROW	Big Cedar
A85596	TEbc019	Big Cedar
A85595	TEbc015	Big Cedar
A85595	TEbc014	Big Cedar
A85595	TEbc012	Big Cedar
A85519	1	Kitnayakwa
A85519	ROW	Kitnayakwa

Licence ID	Block ID	Management Unit
A83097	1	Big Cedar
A83097	TEbc037	Big Cedar
A83097	TEbc038	Big Cedar
A83096	1	Orenda
A83096	TEor031	Orenda
A83096	TEor030	Orenda
A82732	1	Dennison
A80525	TEor036	Orenda
A80525	TEor035	Orenda
A79855	2	Miscellaneous Kalum
A79855	1	Miscellaneous Kalum
A79852	TEsw048	New Skeena West
A79850	TEki015	Kitnayakwa
A79849	TEki016	Kitnayakwa
A79849	TEki009	Kitnayakwa
A75435	TEbc013	Big Cedar
A75435	TEbc025	Big Cedar
A75434	TEth022	Thunderbird
A75434	TEth008	Thunderbird
A75434	TEth029	Thunderbird
A68150	3	Van Dyke
A68150	1	Van Dyke
A68150	2	Van Dyke
A68146	1	Van Dyke
A64093	3	Limonite
A50591	1	Thunderbird

Appendix V – Equivalent Clearcut Area (ECA) Thresholds for Watersheds

Map ID	Base Watershed (WSD) Unit Code and Order	Unit Name	ECA Threshold %
1	KINRWSD000020 - 3	Meziadin River tributary (contains Yaakin Lk)	25
2	KINRWSD000025 - 3	White River tributary 1 (west of Femur Lk)	35
3	KINRWSD000030 - 3	White River tributary 2 (west of Scrub Lk)	35
4	KINRWSD000033 - 3	Niska Creek	25
5	KINRWSD000035 - 4	Kinskuch River	25 (in ICHmc1/in Plan area)
6	KINRWSD000036 - 3	Outlet of Arbor Lake	25
7	KSHRWSD000010 - 3	Bear River tributary (east of Le Sueur Crk)	25 (in CWHwm)
8	KSHRWSD000011 - 3	Le Sueur Creek	25 (in CWHwm)
9	KSHRWSD000012 - 3	grouped(1) Bitter Creek	25 (in CWHwm)
9	KSHRWSD000013 - 4	grouped(1) Bitter Creek	25 (in CWHwm)
9	KSHRWSD000014 - 3	grouped(1) Bitter Creek	25 (in CWHwm)
9	KSHRWSD000015 - 3	grouped(1) Bitter Creek	25 (in CWHwm)
10	KSHRWSD000016 - 3	Glacier Creek	25 (in CWHwm and MHun separately)
11	LBIRWSD000112 - 3	Bell-Irving River tributary 4 (east flank on Mt. Bell-Irving)	30 (in ICH)
12	LBIRWSD000113 - 3	Bell-Irving River tributary 3 (east flank on Mt. Bell-Irving)	30 (in ICH)
13	LBIRWSD000122 - 3	Bell-Irving River tributary 2 (east flank on Mt. Bell-Irving)	30 (in ICH)
14	LBIRWSD000125 - 3	Bell-Irving River tributary 1 (east flank on Mt. Bell-Irving)	30 (in ICH)
15	LNARWSD000008 - 4	Tchitin River	30 (in ICHmc1 and CWHws2 separately/in Plan area)
16	LNARWSD000010 - 8	Nass River tributary 1 (east of Kinskuch confluence)	30 (in ICHmc1/in Plan area)
17	LNARWSD000020 - 3	Kshadin Creek tributary (west of Taylor Lk)	25 (in ICHmc1 and CWHws2 collectively/in Plan area)
18	NASRWSD000040 - 5	Kwinageese River	20 (in Plan area)
19	NASRWSD000049 - 3	Nass River tributary 5 (across river from Meziadin Junction)	30
20	NASRWSD000066 - 4	grouped (2) Bonney Creek (unit also contains Alpha Lk)	25 (in Plan area)

Map ID	Base Watershed (WSD) Unit Code and Order	Unit Name	ECA Threshold %
20	NASRWSD000069 - 3	grouped (2) Bonney Creek (unit also contains Alpha Lk)	25 (in Plan area)
21	NASRWSD000072 - 3	Wolverine Creek	30
22	NASRWSD000073 - 4	grouped(3) Axnegrelga Creek (unit also contains Hughan and Jigsaw Lks)	20 (in Plan area)
22	NASRWSD000074 - 3	grouped(3) Axnegrelga Creek (unit also contains Hughan and Jigsaw Lks)	20 (in Plan area)
22	NASRWSD000076 - 4	grouped(3) Axnegrelga Creek (unit also contains Hughan and Jigsaw Lks)	20 (in Plan area)
23	NASRWSD000075 - 3	Kitanweliks Creek	30
24	NASRWSD000077 - 5	Paw Creek	30
25	NASRWSD000078 - 3	Van Dyke Creek	30
26	NASRWSD000079 - 3	Brown Bear Creek	20 (in Plan area)
27	NASRWSD000081 - 4	Little Paw Creek	30
28	NASRWSD000082 - 3	Axnegrelga Creek tributary (west of Brown Bear Lk)	20
29	NASRWSD000083 - 3	Outlet of Noordam Lake	35
30	NASRWSD000084 - 3	Nass River tributary 4 (east of Kinskuch Peak)	35
31	NASRWSD000086 - 4	Nass River tributary 2 (contains Abbi Lk)	35
32	NASRWSD000088 - 3	Nass River tributary 3 (across river from Sideslip Lk)	35

Appendix VI – Biodiversity Emphasis Options for Landscape Units outside the Nass South SRMP LUOR Order Area

Landscape Unit	Biodiversity Emphasis Option
Craven	Intermediate
Muskaboo	Low
Nass River Kalum	High
Oweegee	Low
Sallysout	Low
Taylor-Damdochax	Intermediate

Appendix VII – Nass South SRMP LUOR Order Seral Stage Targets

Landscape Unit	Biodiversity Emphasis Option	Biogeoclimatic Ecosystem Classification	Seral Stages	Age (yrs)	Forest Area (%)
Bear	Intermediate	CWHwm	Early	<40	<30
			Mature + Old	>80	>36
			Old	>250	>13
		ESSFwv	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		MHmm2	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		MHun	Early	<40	<17
			Mature + Old	>120	<22
			Old	>250	>36
Bowser	Low	ESSFwv	Early	<40	n/a
			Mature + Old	>120	>19
			Old	>250	>19
		ICHvc	Early	<40	n/a
			Mature + Old	>100	>17
			Old	>250	>13
Brown Bear	Low	ESSFwv	Early	<40	n/a
			Mature + Old	>120	>19
			Old	>250	>19
		ICHmc1	Early	<40	n/a
			Mature + Old	>100	>15
			Old	>250	>9
Cambria Icefield	Low	ESSFwv	Early	<40	n/a
			Mature + Old	>120	>19
			Old	>250	>19
		MHmm2	Early	<40	n/a
			Mature + Old	>120	<19
			Old	>250	>19
Kinskuch	Intermediate	ESSFwv	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		ICHmc1	Early	<40	<36
			Mature + Old	>100	>31
			Old	>250	>9

Landscape Unit	Biodiversity Emphasis Option	Biogeoclimatic Ecosystem Classification	Seral Stages	Age (yrs)	Forest Area (%)
		ICHvc	Early	<40	<30
			Mature + Old	>100	>34
			Old	>250	>13
Kwinamuck	Low	CWHws2	Early	<40	n/a
			Mature + Old	>80	>17
			Old	>250	>9
		ICHmc1	Early	<40	n/a
			Mature + Old	>100	>15
			Old	>250	>9
		MHmm1	Early	<40	n/a
			Mature + Old	>120	>19
			Old	>250	>19
		MHmm2	Early	<40	n/a
			Mature + Old	>120	>19
			Old	>250	>19
Madley	Intermediate	ESSFwv	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		ICHmc1	Early	<40	<36
			Mature + Old	>100	>31
			Old	>250	>9
		ICHvc	Early	<40	<30
			Mature + Old	>100	>34
			Old	>250	>13
Tchitin	High	CWHws2	Early	<40	<27
			Mature + Old	>80	>51
			Old	>250	>13
		ESSFwv	Early	<40	<17
			Mature + Old	>120	>54
			Old	>250	>28
		ICHmc1	Early	<40	<27
			Mature + Old	>100	>46
			Old	>250	>13
		MHmm2	Early	<40	<17
			Mature + Old	>120	>54
			Old	>250	>28
Tintina	Low	ESSFwv	Early	<40	n/a
			Mature + Old	>120	>19
			Old	>250	>19
		ICHmc1	Early	<40	n/a

Landscape Unit	Biodiversity Emphasis Option	Biogeoclimatic Ecosystem Classification	Seral Stages	Age (yrs)	Forest Area (%)
			Mature + Old	>100	>15
			Old	>250	>9
		ICHvc	Early	<40	n/a
			Mature + Old	>100	>17
			Old	>250	>13
White	Intermediate	ESSFwv	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		ICHmc1	Early	<40	<36
			Mature + Old	>100	>31
			Old	>250	>9
		ICHvc	Early	<40	<30
			Mature + Old	>100	>34
			Old	>250	>13
		MHmm2	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
Wildfire	Intermediate	ESSFwv	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		ICHvc	Early	<40	<30
			Mature + Old	>100	>34
			Old	>250	>13

Appendix VIII – Nass South SRMP LUOR Order Patch Size Distribution Targets

Natural Disturbance Type (NDT)	Biogeoclimatic (BEC) Zone Variant	Percentage of Forest Area within a Landscape Unit		
		<i>Small patches (<40 ha)</i>	<i>Medium patches (40 to 80 ha)</i>	<i>Large patches (80 to 250 ha)</i>
NDT 1	CWHwm	30 to 40	30 to 40	20 to 40
	ESSFwv	30 to 40	30 to 40	20 to 40
	ICHvc	30 to 40	30 to 40	20 to 40
	MHm ₂	30 to 40	30 to 40	20 to 40
	MHun	30 to 40	30 to 40	20 to 40
NDT 2	ICHmc ₁	30 to 40	30 to 40	20 to 40

Appendix IX – Summary of Wildlife Management Direction

Species Summary by Management Unit:		Kalum TSA	
Species	HLP Objectives/Approved UWR & WHA/SAR Notices	Kalum LRMP Kalum SRMP	Approved UWR & WHA Species at Risk Notices
Black Bear			
Black-tailed Deer			
Bull Trout			
Caribou			
Coastal Tailed Frog			WHA#6-058 & 059.pdf S. 7 Notice AsTr
Eulachon		X	WHAs 6-060 to 6-067
Grizzly Bear		X	Draft - see link below S. 7 Notice UrAr
Gyr Falcon			
Kermodei Bear			
Marbled Murrelet		X	S. 7 Notice BrMa
Marten / Fisher / Wolverine			
Moose		X	UWR U-6-009.pdf S. 7 Notice AIAI
Mountain Goat		X	http://www.env.gov.bc.ca/wld/documents/uwr/uwr_u6_001.pdf S. 7 Notice OrAm
Amendment			http://www.env.gov.bc.ca/wld/documents/uwr/u-6-001_Amendment_ord.pdf
Amendment			http://www.env.gov.bc.ca/wld/documents/uwr/u-6-001_order_amendment06_May10.pdf
Mule Deer / White-tailed Deer		X	
Northern Goshawk		X	WHF - Nest Site
Queen Charlotte Goshawk			
Stone Sheep			
Trumpeter Swans		X	

Species Summary by Management Unit:		Nass TSA	
Species HLP Objectives/Approved UWR & WHA/SAR Notices			
	Nass South SRMP	Approved UWR & WHA	Species at Risk Notices
BlackBear			
Black-tailed Deer			
Bull Trout			
Caribou			
Coastal Tailed Frog			
Eulachon			
Grizzly Bear	X	WHA # 6-282.pdf	
Gyr Falcon			
Kermodei Bear			
Marbled Murrelet			
Marten / Fisher / Wolverine	X		
Moose	X	UWR6-018 GAR-order Sept17.pdf	
Mountain Goat	X	UWR-#6-002.pdf	
Amendment			
Amendment			
Mule Deer / White-tailed Deer			
Northern Goshawk	X	WHF - Nest Site	
Queen Charlotte Goshawk			
Stone Sheep			
Trumpeter Swans			

Species Summary by Management Unit:		North Coast TSA	
Species	HLP Objectives/Approved UWR & WHA/SAR Notices	Central and North Coast Order	
		North Coast LRMP	Approved UWR & WHA
BlackBear		X	
Black-tailed Deer		X	
Bull Trout			
Caribou			
			WHAs 6-056 & 057
Coastal Tailed Frog			WHA boundaries
Eulachon			
Grizzly Bear		X	Proposed WHA NC
Gyrfalcon			
Kermodei Bear		X	
Marbled Murrelet		X	WHAs 6-153 to 188; 280-281
Marten / Fisher / Wolverine			
Moose		X	UWR #6-014
			S. 7 Notice AIAI
Mountain Goat		X	UWR U-6-010 Order.pdf
			S. 7 Notice OrAm
	Amendment		
	Amendment		
Mule Deer / White-tailed Deer		X	
Northern Goshawk		X	
Queen Charlotte Goshawk		X	Data Sensitive
Stone Sheep			S. 7 Notice AcGe-La
Trumpeter Swans			

Species Summary by Management Unit:		TFL 1 / Cascadia TSA	
HLP Objectives/Approved UWR & WHA/SAR Notices			
Species	Kalum LRMP Kalum SRMP	Approved UWR & WHA	Species at Risk Notices
BlackBear			
Black-tailed Deer			
Bull Trout			
Caribou			
			S. 7 Notice AsTr
Coastal Tailed Frog			
Eulachon			
Grizzly Bear	X	Draft WHA #6- 287 Order	S. 7 Notice UrAr
Gyr Falcon			
Kermodei Bear			
Marbled Murrelet			S. 7 Notice BrMa
Marten / Fisher / Wolverine			
Moose	X	Order #U 6-009	S. 7 Notice AIAI
Mountain Goat	X	UWR#6-001	S. 7 Notice Or Am
Amendment			
Amendment			
Mule Deer / White-tailed Deer	X		
Northern Goshawk	X	WHF - Nest Site	
Queen Charlotte Goshawk			
Stone Sheep			
Trumpeter Swans	X		

Species Summary by Management Unit:		TFL 41 / Cascadia and Pacific TSA's	
Species	HLP Objectives/Approved UWR & WHA/SAR Notices	Kalum LRMP Kowesas SRMP Kalum SRMP	Approved UWR & WHA
			Species at Risk Notices
BlackBear			
Black-tailed Deer			
Bull Trout			
Caribou			
			S. 7 Notice AsTr
Coastal Tailed Frog			
Eulachon	X		
Grizzly Bear	X	Draft WHA #6- 287 Order	S. 7 Notice UrAr
Gyr Falcon			
Kermodei Bear			
Marbled Murrelet	X		S. 7 Notice BrMa
Marten / Fisher / Wolverine			
Moose	X	Order #U 6-009	S. 7 Notice AIAI
Mountain Goat	X	UWR#6-001	S. 7 Notice OrAm
Amendment			
Amendment			
Mule Deer / White-tailed Deer	X		
Northern Goshawk	X	WHF - Nest Site	
Queen Charlotte Goshawk			
Stone Sheep			
Trumpeter Swans	X		

Appendix X – FSP Maps (1:100,000 scale)

Maps are attached