

BCTS Strait of Georgia Business Area



South Central Coast Forest Stewardship Plan

FSP ID #: 626

Submitted: September 14, 2016

Forest Stewardship Plan Holder: BC Timber Sales

Revised to September 7, 2016

THIS PAGE INTENTIONALLY LEFT BLANK

Signature of Person Required to Prepare Plan

Signature & Seal of RPF, Plan Preparer

Lindley Little, RPF 4333
Planning Forester
BC Timber Sales, Strait of Georgia Business Area

  September 13, 2016.

Signature Date

Holder(s) of this FSP:

Don Hudson
Timber Sales Manager
BC Timber Sales, Strait of Georgia Business Area

 September 14, 2016

Signature Date

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

Signature of Person Required to Prepare Plan	iii
Signature & Seal of RPF, Plan Preparer	iii
Holder(s) of this FSP:	iii
1.0 INTRODUCTION	1
1.1 Forest Stewardship Plan – General Comments.....	1
2.0 INTERPRETATION	1
2.1 Tenses	1
2.2 Definitions	1
2.3 Abbreviations.....	5
2.4 Objectives Cancelled	6
2.5 First Nations Engagement, Consultation and Information Sharing	6
3.0 SUBMISSION DATE, TERM AND COMMENCEMENT	6
3.1 Submission Date	6
3.2 Term (FRPA Section 6(1))	6
3.3 Commencement Date	6
4.0 HOLDER, EXTENSION OR TERMINATION OF THIS FSP	7
4.1 Holder	7
4.2 FSP Extension or Termination	7
5.0 FSP MAP (FRPA SEC. 5 (1)(A) & FPPR SEC. 14): FDUS & DESIGNATIONS IN EFFECT	7
5.1 Details Concerning FDUs Identified (FPPR section 14(1)(a)).....	7
5.2 Designations in Effect (FPPR section 14(3) and <i>Land Act</i> section 93.4)	7
6.0 OBJECTIVES IN EFFECT, RESULTS OR STRATEGIES	7
6.1 Biodiversity	8
6.1.1 Objectives for Ecological Representation	8
6.1.2 Objectives for Landscape Reserve Designs	9
6.1.3 Objectives for Managed Forest and Natural Forest	10
6.1.4 Objectives for Restoration Zones and Restoration Landscape Units	10
6.1.5 Objectives for Red-Listed and Blue-Listed Plant Communities	13

6.1.6	Objectives for Stand Retention	14
6.2	First Nation Cultural Resources	15
6.2.1	Objectives for First Nation Information Sharing and Engagement	15
6.2.2	Objectives for Identification of Aboriginal Forest Resources and Aboriginal Heritage Features	17
6.2.3	Objective for Aboriginal Forest Resources	17
6.2.4	Objectives for Aboriginal Heritage Features	19
6.2.5	Objectives for Historical Culturally Modified Trees	21
6.2.6	Objectives for Aboriginal Tree Use.....	22
6.2.7	Objectives for Retention of Western Yew.....	24
6.3	Aquatic Habitat	26
6.3.1	Objectives for Important Fisheries Watersheds	26
6.3.2	Objectives for High Value Fish Habitat.....	27
6.3.3	Objectives for Aquatic Habitat that is not High Value Fish Habitat	28
6.3.4	Objectives for Forested Swamps.....	31
6.3.5	Objectives for Upland Stream areas	32
6.3.6	Objectives for Active Fluvial Units.....	34
6.4	Wildlife	35
6.4.1	Objectives for Grizzly Bear Habitat	35
6.4.2	Objectives for Grizzly and Black Bear Dens	36
6.5	Objectives Prescribed Under Legislation (FRPA section 149; FPPR sections 5-10).....	38
6.5.1	Objectives set by Government for Soils (FPPR section 5)	38
6.5.2	Objectives Set by Government for Wildlife (FPPR section 7)	38
6.5.3	Objectives Set by Government for Water, Fish, Wildlife and Biodiversity in Riparian Areas (FPPR section 8).41	
6.5.6	Objectives set by government for Wildlife and Biodiversity (FPPR sections 9 and 9.1)	43
6.5.7	Objectives set by Government for Cultural Heritage Resources (FPPR section 10).....	44
6.6	Objectives Prescribed Under Legislation for Visual Resources (GAR section 17).....	44
6.7	Resource Features Identified Under GAR (GAR Section 5)	45
7.0	MEASURES SET BY GOVERNMENT	46
7.1	Measure set by Government to Prevent the Introduction and Spread of Invasive Plants (FRPA section 47 and FPPR section 17).....	46
7.2	Measures Set by Government Related to Range Barriers (FPPR section 18)	47
8.0	EVEN-AGED STOCKING STANDARDS (FPPR SECTION 44).....	48
8.1	Species Selection.....	48
8.2	Stocking Standards.....	49
8.3	Regeneration Date and Free Growing Timeline	49
8.4	Situations or Circumstances that determine whether Free Growing is assessed on a block basis or across blocks:.....	49

8.5	Minor Species at Free Growing	49
	APPENDIX 1: FSP MAP AND IDENTIFICATION OF FDUS	50
	APPENDIX 2: EVEN-AGED STOCKING STANDARDS	51

1.0 INTRODUCTION

1.1 Forest Stewardship Plan – General Comments

The area to which this Forest Stewardship Plan applies is within the Strathcona Timber Supply Area, within the Campbell River Natural Resource District.

2.0 INTERPRETATION

2.1 Tenses

In this FSP, the singular includes the plural and the plural the singular, unless the context indicates otherwise.

2.2 Definitions

The following definitions from the Great Bear Rainforest Order (GBRO) are hereby adopted for the purposes of this FSP. The Schedules listed herein are those appurtenant to the GBRO.

"aboriginal forest resource" means a forest plant resource listed in Schedule J, or other forest plant resource identified by First Nations during First Nation Engagement, that is utilized for food, social, medicinal or ceremonial purposes;

"aboriginal heritage feature" means an artefact, feature, or site of the general types listed in Schedule I, other than a Contemporary Culturally Modified Tree or a Historical Culturally Modified Tree, that is known, is found, or is identified during First Nation Engagement and is important to the cultural practices, knowledge or heritage of a First Nation;

"aboriginal interests" means the asserted or proven aboriginal rights or aboriginal title or the treaty rights of an Applicable First Nation in the order area;

"aboriginal tree use" means the use of Monumental Cedar, other cedar or other tree species to fulfill the domestic needs of the Applicable First Nation for such things as shelter, transportation, tools, fuel, and art, but does not include the use of Monumental Cedar, other cedar or other tree species for purposes of commercial production or sale;

"active fluvial unit" means an active floodplain, where water flows over land in a normal flood event, and includes low and medium benches and the hydrogeomorphic zone of an active fan;

"applicable first nation" means any first nation with an asserted or established aboriginal right, aboriginal title or treaty right to the area under consideration;

"average operational landbased netdown" means the area-weighted average percentage of the aspatial timber harvesting land base netdown percentages for a Site Series Group in a landscape unit;

"bear den" means a den identified by a Qualified Professional that is suitable for winter hibernation and maternity;

- "blue-listed plant community"** means a plant community listed in Schedule O that is Sufficiently Established and meets the age, stand structure and area criteria described in Schedule O;
- "cedar stewardship area"** means an area identified in Schedule Q, or a similar area that is identified by First Nations through First Nation Engagement that is for the purpose of maintaining, enhancing and providing access to cedar for cultural use;
- "contemporary culturally modified tree"** means a tree that was modified less than eighty years ago by First Nations people as part of their cultural use of the tree;
- "critical spawning and rearing area"** means a highly productive or potentially highly productive fish habitat, where alteration to the structure and composition of the area is reasonably likely to reduce the reproductive success for invertebrates, and anadromous and resident fish species;
- "cultural cedar stand"** means three or more Monumental Cedars or Contemporary Culturally Modified Trees where each tree is within 30 metres of another Monumental Cedar or Contemporary Culturally Modified Tree;
- "cutblock"** means an area within which a tenure holder is authorized to harvest timber, as identified in a cutting permit, timber sale license or other cutting authority;
- "development area"** means an area in a watershed defined by the boundaries shown on a site plan or multiple site plans where an annual or multi-year project of timber harvesting and road construction is planned or carried out, and includes any Stand Retention, Management Zones, Reserve Zones, mapped reserves or other areas where timber harvesting is restricted or managed pursuant to this order or the *Forest and Range Practices Act* and the regulations made under that Act;
- "equivalent clearcut area"** means an indicator that quantifies the percentage of the forested portion of a watershed that has been altered by harvesting, fires, insects or disease and has not recovered to a state of Hydrologically Effective Greenup;
- "first nation engagement"** means reasonable efforts to communicate, share information, engage in dialogue, and identify and resolve issues with Applicable First Nations and includes provision and consideration of all relevant information about potential impacts on Aboriginal Interests;
- "forested swamp"** means a forested mineral wetland or a forested peatland with standing or gently flowing nutrient rich water in pools or channels where the water table is usually at or near the surface of the wetland or peatland, not including poorly drained areas transitional to uplands where folisolic growing substrate (that is, folic material derived from the litter of trees and lesser vegetation of upland sites) occupies 50% or more of the site or hydromorphic organic matter (organic material accumulated under saturated conditions) and wetland species hydrophytes occupy less than 50% of the site area;
- "functional riparian forest"** means forest that has reached Hydrologically Effective Greenup and that also contains some large trees adjacent to streams to provide for large organic debris;
- "high value fish habitat"** means Critical Spawning And Rearing Areas for anadromous and non-anadromous fish that are any of the following:
- (a) Estuaries that have eel grass beds or salmonid and eulachon rearing areas;

- (b) wet flood plains that are main channel salmonid and eulachon spawning habitat or off channel habitat used for rearing and spawning;
- (c) marine interface areas that are shallow intertidal areas, kelp beds, herring spawning areas, or shellfish beds;
- (d) High Value Fish Stream Channels; or
- (e) marsh, fen wetlands, or portions of lakes larger than .25 hectares with known sockeye salmon lakeshore spawning activity;

"high value fish stream channel" means a fish stream channel with typically all of the following characteristics:

- (a) spawning quality non-compacted gravel substrate;
- (b) stream is prone to moving laterally beyond its active channel;
- (c) riparian vegetation is critical to limit bank erosion and channel widening;
- (d) highly productive fish habitat;
- (e) large woody debris is important for channel structure and habitat features; and
- (f) sensitive to disturbance of adjacent riparian forest;

"historical culturally modified tree" means a tree that was modified more than eighty years ago by first nations people as part of their cultural use of the tree;

"hydrologically effective greenup" means the height, stocking density and crown closure at which the hydrologic conditions of a harvested site are restored to near pre-harvest conditions with the regrowth of new forest at the site;

"important fisheries watershed" means a watershed area identified in Schedule E, but not including watersheds composed entirely of S5 or S6 streams flowing directly to the ocean;

"landscape reserve" means an area in a Landscape Unit where commercial harvesting is not permitted;

"landscape reserve design" means a system of Landscape Reserves in a Landscape Unit which is designed to meet requirements for Old Forest representation, and simultaneously contribute to protection of Aboriginal Heritage Features, Aboriginal Forest Resources and other land use objectives;

"landscape unit" means a Landscape Unit within the order area shown in Schedule A;

"managed forest" means the area of productive forest that is or will be available for timber harvest;

"management zone" means an area referred to in this order for the protection of a feature and that specifies direction on the alteration, removal, recruitment or management of trees;

"minimum old forest retention level" means the minimum percentage of the total forest area in a Site Series Group to be retained as Old Forest for the order area shown in Column "B" of Schedule G;

"monumental cedar" means a large old western redcedar tree or a large old yellow cedar tree that has the attributes necessary to fulfill the Aboriginal Tree Use needs of the Applicable

First Nation primarily for totem poles, canoes, or long beams and poles to build longhouses, community halls or similar community structures;

"natural boundary" means the visible high water mark, or bankfull width, of any lake, river, stream or other body of water where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark on the soil of the bed of the body of water a character distinct from that of its banks, in vegetation, as well as in the nature of the soil itself;

"natural forest" means the area of productive forest that is not Managed Forest;

"old forest" means any of the following:

- (a) a stand of trees 250 years or older;
- (b) an old, structurally complex stand comprised mainly of climax species where older seral remnants may still be present in the upper canopy and typically have:
 - (i) standing snags;
 - (ii) rotting logs on the ground; and
 - (iii) patchy understories; or
- (c) a stand of trees that has reached the climax state for the ecosystem it is found in where trees naturally cycle at an age less than 250 years;

"old forest representation target" means a long term Old Forest Representation Target for a Site Series Group for the order area shown in Column "A" in Schedule G;

"qualified professional" means an applied scientist or technologist, acting alone or together with another professional, if:

- (a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, is acting under that association's code of ethics and is subject to disciplinary action by that association; and
- (b) the individual is acting within that individual's area of expertise;

"red-listed plant community" means a plant community listed in Schedule N that is Sufficiently Established and meets the age, stand structure and area criteria described in Schedule N;

"reserve zone" means an area referred to in this order where commercial timber harvesting and road building are not permitted unless otherwise specified in the order;

"restoration zone" means a zone established within a Restoration Landscape Unit Landscape Reserve Design that is established for the purpose of restoration of old forest structural attributes;

"site series" means sites capable of producing the same late seral or climax plant communities within a biogeoclimatic subzone or variant;

"site series group" means Site Series or Site Series Group listed in Schedule S;

"stand retention" means small patches of trees and understory vegetation that are located in a Cutblock or contiguous to a Cutblock;

"sufficiently established" means, a Red-Listed Plant Community or Blue-Listed Plant Community most commonly associated with late mature or Old Forest stand characteristics, with the exception of floodplains, or a Red-Listed Plant Community or Blue-Listed Plant Community found in a stand not defined as Old Forest but with a

complex, open stand structure, along with a quantity and distribution of indicator plants for the listed community, that constitutes an element occurrence with a good or better viability rank;

“temporary old forest reserve” means a temporary spatially defined Old Forest reserve outside of Landscape Reserve Designs where timber harvesting will not take place during the period of time that the Temporary Old Forest Reserve, or portion thereof, is in effect;

“type 1 restoration landscape unit” means a Landscape Unit listed as a Type 1 Restoration Landscape Unit in Schedule H;

“type 2 restoration landscape unit” means a Landscape Unit listed as a Type 2 Restoration Landscape Unit in Schedule H;

“tree length” means a distance equal to the height of the dominant trees at time of harvest in the forest stands within or adjacent to a feature; and

“upland stream” means a stream with a slope greater than 5% and that is classified as an S4, an S5 or an S6 stream.

The following definition from the Forest Planning and Practices Regulation (FPPR) is hereby adopted for the purposes of this FSP.

“primary forest activity” means one or more of the following:

- (a) timber harvesting;
- (b) silviculture treatments;
- (c) road construction, maintenance and deactivation.

2.3 Abbreviations

The following abbreviations are provided for reference:

BCTS – means BC Timber Sales

DBH – means Diameter at Breast Height

DM – means District Manager

DDM – means Delegated Decision Maker

EBM – means Ecosystem Based Management

GAR – means Government Actions Regulation of the *Forest and Range Practices Act*

GBRO – means Great Bear Rainforest Order

FDU(s) – means Forest Development Unit(s)

FPPR – means Forest and Range Practices Regulation of the *Forest and Range Practices Act*

FRPA – means *Forest and Range Practices Act*

FSP – means Forest Stewardship Plan

IWMS – Identified Wildlife Management Strategy

LR and LRD – means Landscape Reserve and Landscape Reserve Design, respectively

LU – means Landscape Unit

LUO – means Land Use Order

NAR – means Net Area to Reforest
OGMA(s) – means Old Growth Management Area(s)
PAS – means Permanent Access Structures
RMA – means Riparian Management Area
RMZ – means Riparian Management Zone
RRZ – means Riparian Reserve Zone
TEM – means Terrestrial Ecosystem Mapping
THLB – means Timber Harvesting Land Base
TSA – means Timber Supply Area
TSL – means Timber Sale Licence
UWR – means Ungulate Winter Range
VRI – means Vegetation Resource Inventory
WHA – means Wildlife Habitat Area(s)
WTP and WTRA – means Wildlife Tree Patch and Wildlife Tree Retention Area, respectively

2.4 Objectives Cancelled

If an objective for which a result or strategy is included within this FSP is cancelled by approval by government, then the result or strategy within this FSP concerning the cancelled objective is no longer applicable effective the date of the cancellation of the objective.

2.5 First Nations Engagement, Consultation and Information Sharing

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

3.0 SUBMISSION DATE, TERM AND COMMENCEMENT

3.1 Submission Date

The submission date of this FSP is **September 14, 2016**.

3.2 Term (FRPA Section 6(1))

The term of this FSP is five years beginning on the commencement date.

3.3 Commencement Date

The commencement date for this FSP is **February 23, 2017**.

4.0 HOLDER, EXTENSION OR TERMINATION OF THIS FSP

4.1 Holder

The Holder of this FSP is BCTS and any other licence holder or their representative who enters into a written agreement with BCTS and is amended onto this plan.

4.2 FSP Extension or Termination

This FSP may be extended after the commencement date according to applicable legislation. Alternatively, this FSP may be terminated by the Holder if it is replaced with another approved FSP.

5.0 FSP MAP (FRPA SEC. 5 (1)(a) & FPPR SEC. 14): FDUS & DESIGNATIONS IN EFFECT

The FSP map illustrates the FDUs and the applicable land use designations that are in effect on the date of submission and that intersect with FDUs defined for the FSP area. Refer to Appendix 1 for a more detailed FSP map.

5.1 Details Concerning FDUs Identified (FPPR section 14(1)(a))

Four FDUs are identified for the FSP area: Fulmore, Gray, Estero, and Thurlow. Maps forming part of this FSP will depict FDU boundaries.

5.2 Designations in Effect (FPPR section 14(3) and *Land Act* section 93.4)

The following list illustrates the various designations in effect four months prior to the submission of the FSP and applicable to the FSP area as required by FPPR section 14(3). Designations generally restrict or prohibit industrial primary forest activities and include:

- As per FPPR 14(3)(a): **Ungulate Winter Range UWR U1-005** for the Fulmore FDU, designated May 16, 2007
- As per FPPR 14(3)(e): **Scenic areas as established by the DM** for all FDU, designated December 14, 2005
- As per FPPR 14(3)(h): **Commercial timber harvesting prohibited, grizzly bear habitat**, for the Gray, Fulmore and Estero FDUs, designated January 28, 2016

6.0 OBJECTIVES IN EFFECT, RESULTS OR STRATEGIES

Section 1 of FRPA defines objectives set by government to include objectives set by government under section 93.4 of the *Land Act*. On January 28, 2016, the GBRO was proclaimed by the provincial government of BC. This FSP is a replacement of the BCTS Loughborough FSP #138.

6.1 Biodiversity

6.1.1 Objectives for Ecological Representation

GBRO Part 1, Division 3 – Biodiversity Objective 4

- (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;*
 - (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; and*
- (3) *for each Site Series Groups listed in Schedule L, in the Landscape Units listed in Schedule K, up to 5% of 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 subsection (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.

6.1.2 Objectives for Landscape Reserve Designs

GBRO Part 1, Division 3 – Biodiversity Objective 5

- (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, consistent with that flexibility provision.*

6.1.3 Objectives for Managed Forest and Natural Forest

GBRO Part 1, Division 3 – Biodiversity Objective 6

- (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.*

6.1.4 Objectives for Restoration Zones and Restoration Landscape Units

GBRO Part 1, Division 3 – Biodiversity Objective 7

- (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, consistent 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, consistent 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.*

FDU	Result or Strategy
All	<p>GBRO Part 1, s.4. Objectives for Ecological Representation GBRO Part 1, s.5. Objectives for Landscape Reserve Designs GBRO Part 1, s.6. Objectives for Managed Forest and Natural Forest GBRO Part 1, s.7. Objectives for Restoration Zones and Restoration Landscape Units</p> <p>1. The FSP Holder will coordinate with other Holders of FSPs and a Government-to-Government (G2G) Operational Implementation Committee (OPIC), to the extent practicable, to obtain results consistent with the GBRO area objectives, in</p>

	<p>Landscape Units and between and among holders of FSPs.</p> <ol style="list-style-type: none"> 2. For the GBRO Area, the FSP Holder will: <ol style="list-style-type: none"> 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 with the Holders of FSPs in the Order area and the G2G OPIC on specifying targets or specifying proportions of the Order area for ecological representation and managed forest objectives, the flexibility in GBRO section 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 with the holders of FSPs in the Order area and the G2G OPIC cannot be reached, will: apply the Implementation Guidance Table until agreement is reached and notify the other Holders; or request the Minister to act under FPPR section 19. 3. For the lands to which the GBRO applies, in each Landscape Unit in which the FSP Holder issues tenures with active planning or operations, the FSP Holder will: <ol style="list-style-type: none"> a. Apply strategy (1) and (2); b. Reach agreement on targets of proportions of ecological representation, natural forest, and managed forest, the flexibility in GBRO section 4(2) – 4(6), identify drawdowns and small surpluses, and procedures for managing Landscape Reserves, between and amongst Holders of FSPs; and update targets annually or as agreed, including a process of incorporation for any new TEM/VRI inventory; c. If fair and effective agreement cannot be reached: in the interim, the FSP Holder may proportion the Landscape Unit representation targets by total forest area, and proportion the minimum old between holders of FSPs, identifying small surpluses, and inform the other holders, and may not develop Landscape Reserves established by other holders; or, the FSP Holder may request the Minister to act under FPPR section 19. 4. The FSP Holder will participate in the Landscape Reserve Design (LRD) process and Restoration Zones that are consistent with GBRO objectives, and will: <ol style="list-style-type: none"> a. Design a single Landscape Reserve layer with all Holders of FSPs in the Landscape Unit (including those that are exempt from leading an LRD); b. Complete Landscape Reserves 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 Landscape Reserves (eg. Order Part 1 subsection 5(3), 5(10) and related LRD guidance), that will be consistent with meeting proportional targets and avoiding undue constraints between holders of FSPs. 5. The operations of the holder of this FSP will be consistent with meeting the agreed upon target allocations or specified proportions of the ecological
--	--

	<p>representation targets and the managed forest targets in:</p> <ol style="list-style-type: none"> The Landscape Units in which the holder of the FSP operate and in the Landscape Reserves when completed; The areas of the timber harvesting rights granted by the government to the holder of the FSP; Areas to which the LUO applies.
--	---

6.1.5 Objectives for Red-Listed and Blue-Listed Plant Communities

GBRO Part 3, Division 4 – Biodiversity Objective 16

- (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.*

FDU	Result or Strategy
All	<p>The FSP holder will:</p> <ol style="list-style-type: none"> Carry out or authorize primary forest activities in a manner that will reserve from harvest or alteration each occurrence of Red-Listed Plant Communities (as per Schedule N). Despite subsection (1), up to 5% of each known occurrence of a Red-Listed Plant Community within the Landscape Unit may be disturbed if there is no practicable alternative for road access, other infrastructure or to address a safety concern and will be documented in the Site Plan for the development. Reserve a minimum of 70% of each known 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 the Landscape Unit as per Schedule O and will be documented in the Site Plan for the development. Windthrow adjacent to known occurrences of Red-Listed and Blue-Listed Plant Communities will be assessed, and managed to mitigate risk of windthrow impact to the retained Plant Community areas. Windthrow management prescriptions will be assessed on a site-specific basis by a qualified professional(s) and be documented in the Site Plan associated with the development.

6.1.6 Objectives for Stand Retention

GBRO Part 3, Division 4 – Biodiversity Objective 17

- (1) *Maintain forest structure and diversity at the stand level:*
 - (a) *by maintaining a minimum of 15% of a 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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none">1. The FSP holder will, during primary forest activities, maintain forest structure and diversity at the stand level as reported in the Site Plan for the development:<ol style="list-style-type: none">a. by maintaining a minimum of 15% of a Cutblock area as Stand Retention; andb. in cutblocks 20 hectares or greater in size, by distributing a minimum of 50% of the Stand Retention within the Cutblock, except in:<ol style="list-style-type: none">i. second growth stands where a windthrow hazard assessment indicates a moderate or higher biophysical hazard for windthrow; andii. 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:

	<ol style="list-style-type: none"> 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. <p>3. The percentage of stand retention shall be determined as a percentage of the sum of the Net Area to Reforest and area of Permanent Access Structures: Stand Retention % = Retention Area / (NAR + PAS) .</p>
--	---

6.2 First Nation Cultural Resources

6.2.1 Objectives for First Nation Information Sharing and Engagement

GBRO Part 3, Division 2 – First Nations, Objective 3

- (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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. For the purpose of implementing and achieving the intent of the objectives in the GBRO, the FSP Holder will conduct First Nation Engagement, including consultation, with Applicable First Nations. <u>Identify applicable First Nation(s):</u> 2. The Applicable First Nation(s) will be identified by the FSP Holder, through referring to the First Nations Consultative Boundaries through the Consultative Areas Database (CAD)¹, as updated from time to time. <u>Engagement – Where Formal Agreement Exists:</u> 3. First Nation Information Sharing and Engagement, including consultation, will be as agreed upon by signatories of Strategic Engagement Agreements² (SEA), treaties,

¹ <http://maps.gov.bc.ca/ess/sv/cadb/>

² For example: the Nanwakolas Strategic Engagement Agreement

	<p>protocols, or other agreements pertaining to First Nation Information Sharing and Engagement between the Applicable First Nations and the FSP Holder or the Province.</p> <p><u>Future Agreements:</u></p> <p>4. In addition to (2), where requested by the Applicable First Nation(s), the FSP Holder will make reasonable efforts to build additional agreement with Applicable First Nation(s) in the plan area, detailing how and when Engagement will occur. Existing agreements may be revised as mutually agreed upon by both parties.</p> <p><u>Engagement – Where No Formal Agreement Exists:</u></p> <p>5. Where no formal agreement or protocol exists defining Engagement between the Province or FSP Holder and the applicable First Nation(s), the “<i>Updated Procedures for Meeting Legal Obligations When Consulting First Nations</i>”³, or Ministerial Direction will be followed when conducting First Nation Engagement.</p> <p><u>Implementation:</u></p> <p>6. The FSP Holder will conduct First Nation Information Sharing and Engagement:</p> <ul style="list-style-type: none"> a. Periodically, prior to the planning of proposed road construction and timber harvesting activities, or at an interval which is mutually agreed upon by the FSP Holder and the Applicable First Nation(s); b. To share information/consult on operational plans⁴ as agreed to through engagement in (3), (4) and (5) to request information on values and share information and management strategies regarding other objectives detailed throughout the GBRO requirements in this FSP, in particular Aboriginal Forest Resources, Aboriginal Heritage Features, Historically Culturally Modified Trees, Contemporary Culturally Modified Trees, Monumental Cedar and Cultural Cedar Stands. <p><u>Record keeping:</u></p> <p>7. The FSP Holder will keep records of all Engagement efforts.</p> <p><u>Reporting:</u></p> <p>8. Reporting to Applicable First Nation(s) will be undertaken consistent with existing or future formal protocols, where they exist, and as amended from time to time. Where no formal agreement exists, reporting will be determined as requested via First Nation Engagement.</p>
--	---

³ www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/first-nations/legal_obligations_when_consulting_with_first_nations.pdf

⁴ May include: development/operational/projection area maps (cutblocks, roads, log dumps), site-specific plans, professional rationales, other site-specific information pertaining to a Development Area

6.2.2 Objectives for Identification of Aboriginal Forest Resources and Aboriginal Heritage Features

GBRO Part 3, Division 2 – First Nations, Objective 4

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.

FDU	Result or Strategy
All	<p>The FSP Holder will:</p> <ol style="list-style-type: none">1. Request information during First Nations Engagement regarding the location of any known individual or groups of Aboriginal Forest Resources, Aboriginal Heritage Features, Historical Culturally Modified Trees, Contemporary Culturally Modified Trees, Monumental Cedar, and Cultural Cedar Stands. <p>Where a specific protocol or agreement exists for the identification of Aboriginal Forest Resources, Aboriginal Heritage Features, Historical Culturally Modified Trees, Contemporary Culturally Modified Trees, Monumental Cedar or Cultural Cedar Stands, that protocol or agreement will be followed.</p> <ol style="list-style-type: none">2. Seek to define desirable attributes for field identification of Monumental Cedar through Engagement with Applicable First Nations.3. Field identify and record the location of Aboriginal Forest Resources, Aboriginal Heritage Features, Historical Culturally Modified Trees, Contemporary Culturally Modified Trees, and Cultural Cedar Stands through field reconnaissance or field assessments as appropriate and agreed to by Applicable First Nations through First Nations Engagement.

6.2.3 Objective for Aboriginal Forest Resources

GBRO Part 3, Division 2 – First Nations, Objective 5

- (1) *Maintain or enhance Aboriginal Forest Resources in sufficient quantity and manner 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.*

FDU	Result or Strategy
All	<p>The FSP Holder will:</p> <ol style="list-style-type: none"> 1. Where Engagement with Applicable First Nations has determined that the maintenance or enhancement of Aboriginal Forest Resources is required, maintain or enhance Aboriginal Forest Resources as listed in GBRO Schedule J in sufficient quantity and manner 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. <p><u>Identification:</u></p> <ol style="list-style-type: none"> 3. Through First Nation Engagement with Applicable First Nations, request information on their present and future needs assessments and stewardship assessments for Aboriginal Forest Resources and suggest management options; <p>Where a specific protocol or agreement exists for the identification and/or management of Aboriginal Forest Resources that protocol or agreement will be followed.</p> <p><u>Assessment:</u></p> <ol style="list-style-type: none"> 4. Where Engagement with Applicable First Nations has determined that the maintenance or enhancement of Aboriginal Forest Resources is required, assess Aboriginal Forest Resources in relation to the risk from forest practices by using FPPR Schedule 1 Factors⁷, information gathered through (3), and knowledgeable sources including First Nations' traditional use studies, qualified persons. <p><u>Management:</u></p> <ol style="list-style-type: none"> 5. Where an Aboriginal Forest Resource species requires specific management in order to meet (1), the FSP Holder will seek information and advice from Applicable First Nations, qualified persons on proposed management options before implementing them. 6. Where practicable, make reasonable efforts to assist Applicable First Nations' access to Aboriginal Forest Resources should they request it throughout timber harvesting, road building, or post-harvest activities.

⁷ http://www.bclaws.ca/civix/document/id/complete/statreg/14_2004#schedule1

6.2.4 Objectives for Aboriginal Heritage Features

GBRO Part 3, Division 2 – First Nations, Objective 6

- (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 Nation.*
- (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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. In Development Areas, The FSP Holder will protect Type 1 Aboriginal Heritage Features, as defined by Schedule I of the GBRO. 2. The FSP Holder will, 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 FSP Holder may modify the Type 1 Aboriginal Heritage Feature and the Reserve Zone, with the support of, or lack of objection from, the Applicable First Nation(s). 4. Despite subsections (2) and (3), FSP Holder may modify the Reserve Zone when: <ol style="list-style-type: none"> 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; c. as requested by Applicable First Nations, final Reserve Zone width and design will be guided by (b), during or prior to layout; and d. 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, the FSP Holder will protect Type 2 Aboriginal Heritage Features, as defined by Schedule I of the GBRO. 6. Adjacent to Type 2 Aboriginal Heritage Features, the FSP Holder will 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 FSP Holder may modify the Type 2 Aboriginal Heritage Feature and its Reserve Zone and Management Zone with the support of, or lack of objection from, the Applicable First Nation(s). 8. Despite subsections (5), (6) and (7) , the FSP Holder may alter or remove the Type 2 Aboriginal Heritage Feature and modify the Reserve Zone and Management Zone when: <ol style="list-style-type: none"> 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; c. as requested by Applicable First Nations, final Reserve Zone width and design will be guided by (b), during or prior to layout; and d. the alteration or removal is required for road access, other infrastructure, or to

	address a safety concern and there is no practicable alternative.
--	---

6.2.5 Objectives for Historical Culturally Modified Trees

GBRO Part 3, Division 2 – First Nations - Objective 7

- (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 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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. In Development Areas, the FSP Holder will protect Historical Culturally Modified Trees. 2. Adjacent to Historical Culturally Modified Trees, the FSP Holder will 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 FSP Holder may modify the Historical Culturally Modified Tree and the Management Zone with the support of, or lack of objection from, the Applicable First Nation(s). 4. Despite subsections (1), (2) and (3), the FSP Holder may alter or harvest the Historical Culturally Modified Tree and the Management Zone if there has been First Nation Engagement with Applicable First Nations; and <ol style="list-style-type: none"> 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.

6.2.6 Objectives for Aboriginal Tree Use

GBRO Part 3, Division 2, First Nations - Objective 8

- (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' Aboriginal Tree Use.*
- (4) *For the purposes of 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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. The FSP Holder will 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, the FSP Holder will 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. <i>At the time of Plan approval, no Cedar Stewardship areas are located within the plan area.</i> 3. Within Development Areas, the FSP Holder will retain Monumental Cedar with windfirm buffers and Cultural Cedar Stands in a quantity sufficient to support the Applicable First Nations' Aboriginal Tree Use. 4. Despite (3), the FSP Holder may alter or harvest a Monumental Cedar and/or its windfirm buffer, or a Cultural Cedar Stand, provided that there has been First

	<p>Nation Engagement with Applicable First Nations; and</p> <ol style="list-style-type: none"> it has been determined that the Monumental Cedar or Cultural Cedar Stand is not suitable or is not required for a cultural cedar use; the Monumental Cedar or Cultural Cedar Stand will be provided to the Applicable First Nation; the harvesting is required for road access, other infrastructure, or to address a safety concern and there is no practicable alternative; or retention of all of the Monumental Cedar and Cultural Cedar Stands in the Cutblock area would make harvesting economically unviable. <p>5. Within a Cutblock, for the first 15% of the pre-harvest stand retained in Stand Retention as specified in section 17(1), the FSP Holder will design Stand Retention to maintain mature and old western redcedar and yellow cedar representative of the pre-harvest stand.</p> <p><u>Identification:</u></p> <ol style="list-style-type: none"> The strategies in (7) through (14) apply only if the FSP Holder is conducting primary forest activities within an Applicable First Nation's traditional territory. The FSP Holder will, through First Nation Engagement, request information from the Applicable First Nation(s)' needs assessments to build a shared understanding of sufficient volume and quality of western red cedar, yellow cedar and other tree species as well as monumental cedar for present and future Aboriginal Tree Use needs. <p>Where a specific protocol or agreement exists for the identification and/or management of Aboriginal Tree Use, that protocol or agreement will be followed.</p> <p><u>Assessment:</u></p> <ol style="list-style-type: none"> Where information is provided in (7), the information will be used to build an agreed method, within an agreed timeframe, for assessing the supply of trees needed for present and future Aboriginal Tree Use within the Applicable First Nations' asserted traditional territory in the FSP area. Assessment results from (8) will be completed and shared as agreed to with the Applicable First Nation(s). Where information has not been provided in (7), the FSP Holder will seek to use best available information to complete the assessment in (9) and share the results with the Applicable First Nation(s). <p><u>Management and Implementation:</u></p> <ol style="list-style-type: none"> If requested, the FSP Holder will assist the Applicable First Nation(s) to identify accessible monumental cedar from areas restricted or unavailable for commercial timber harvesting before identifying monumental cedar from operable areas. If a short term need for monumental cedar is identified, the FSP Holder will take reasonable steps to field-identify and retain monumental cedar areas near developments so they are available and readily accessible to meet the Applicable
--	--

	<p>First Nations' short term Aboriginal Tree Use needs.</p> <p>12. If requested, the FSP Holder will support Applicable First Nation(s) in the development of an Aboriginal Tree Use strategy by providing assessments or other information as requested.</p> <p>13. If requested by Applicable First Nation(s) during Engagement, final Reserve Zone (windfirm buffers) width and design will be guided by Information Sharing and Engagement with the Applicable First Nation prior to or during layout.</p>
--	--

6.2.7 Objectives for Retention of Western Yew

GBRO Part 3, Division 2, First Nations - Objective 9

- (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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. Subject to (3)(c), the FSP Holder will only consider for retention or management: <ol style="list-style-type: none"> a. western yew having the size or characteristics as defined through First Nation Engagement with Applicable First Nation(s); b. western yew 2 meters in height or taller (if not defined as per (a)); c. western yew as per (1)(a) and (1)(b) where primary forest activities are proposed. 2. Subject to (3)(c), in Development Areas, retain western yew trees. 3. Despite (2), western yew trees may be altered or harvested by the FSP holder if: <ol style="list-style-type: none"> a. Alteration or harvesting is required to accommodate operational requirements for road and bridge construction and there is no other 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 Nation(s); c. Engagement with Applicable First Nations has determined that no retention is

	<p>required within the development area.</p> <p>4. Where practicable, the FSP Holder will retain western yew in Stand Retention.</p> <p>5. All areas to be retained or managed in accordance with (1), (2), (3) and (4) and recorded as per (6), must be documented and submitted by the FSP Holder as follows:</p> <ul style="list-style-type: none"> a) as digital spatial data; b) on a TSL basis; c) at the end of the calendar year in which the inventory in (6) was undertaken; d) to the Applicable First Nation(s); and e) to the Province of British Columbia. <p><u>Identification and Assessment:</u></p> <p>6. Where primary forest activities are proposed, the FSP Holder will conduct a field assessment to identify and locate western yew subject to (1), to the extent practicable, and their pre-harvest locations will be recorded.</p> <p><u>Implementation and Mitigation:</u></p> <p>7. Subject to 3(c), if it is not practicable for the FSP Holder to situate all retained western yew subject to (1) within Stand Retention:</p> <ul style="list-style-type: none"> a. Western yew that is not retained in Stand Retention will be left as standing single stems within the harvest area to the extent practicable; b. If, in the case that western yew must be altered or harvested by the FSP holder: <ul style="list-style-type: none"> i. they shall be left on site and efforts shall be made to limit damage, and; ii. the applicable First Nation(s) will be notified, prior to road deactivation, of the harvest area and the general location of the yew stems such that they might have the opportunity to use the western yew for cultural purposes. <p>8. Stand Retention in (4), where practicable, shall be sufficient in size and shape that the western yew is reasonably protected from direct sunlight.</p>
--	--

6.3 Aquatic Habitat

6.3.1 Objectives for Important Fisheries Watersheds

GBRO Part 3, Division 3, Aquatic Habitat – Objective 10

- (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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none">1. The FSP Holder will maintain hydrological and fluvial processes in watersheds within the range of natural variation by ensuring the Equivalent Clearcut Area is less than 20%, as of the date of advertising of each timber sale, in each of the Important Fisheries Watersheds shown in Schedule E.2. Despite subsection (1), the FSP Holder may advertise timber sales in Important Fisheries Watersheds with an Equivalent Clearcut Area of more than 20% provided that:<ol style="list-style-type: none">a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1 in which the Qualified Professional rationale in (b) is shared;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; andd. the effectiveness of the management strategies implemented pursuant to subsection (2)(c) are monitored.

6.3.2 Objectives for High Value Fish Habitat

GBRO Part 3, Division 3, Aquatic Habitat – Objective 11

- (1) *Protect and maintain High Value Fish Habitat 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 the total minimum Reserve Zone area in the Development Area.*
- (3) *Despite subsections (1) and (2), the width of the Reserve Zone may be decreased by more than 0.5 Tree Lengths provided that:*
 - (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 Klinaklini River and its tributaries identified in Schedule P, and for the lower portion of Viner Creek identified in Schedule P, maintain a Reserve Zone with a width of 100 metres on each side of the Natural Boundary, unless there is no 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 under subsections (2) and (3) has been previously altered or harvested, to the extent practicable, recruit or create Functional Riparian Forest in the Reserve Zone in the shortest time possible.*

FDU	Result or Strategy
All	<ol style="list-style-type: none">1. The FSP Holder will protect and maintain High Value Fish Habitat in a Development Area by maintaining an Adjacent Reserve Zone with a minimum width of 1.5 Tree Lengths and not altering or harvesting 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

	<p>locations to address site characteristics and values, provided that:</p> <ul style="list-style-type: none"> a. a decrease is no more than 0.5 Tree Lengths; and b. there is no net loss of the total minimum Reserve Zone area in the Development Area. <p>3. Despite subsections (1) and (2), the width of the Reserve Zone may be decreased by more than 0.5 Tree Lengths provided that:</p> <ul style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1 in which the Qualified Professional rationale in (c) is shared; 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: <ul style="list-style-type: none"> i. to maintain the geomorphic and hydriparian 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. <p>4. Where some or all of the forest required under subsections (2) and (3) has been previously altered or harvested, the FSP Holder will, to the extent practicable, recruit or create Functional Riparian Forest in the Reserve Zone in the shortest time possible.</p>
--	---

6.3.3 Objectives for Aquatic Habitat that is not High Value Fish Habitat

GBRO Part 3, Division 3, Objective 12

(1) Maintain the natural ecological function of aquatic habitat that is not High Value Fish Habitat by, adjacent to the following aquatic habitat in a Development Area:

(a) S1 to S3 streams that are not High Value Fish Habitat;

(b) lakes greater than 0.25 hectares; and

(c) marsh and fen wetlands greater than 0.25 hectares;

retaining 90% of the forest in a 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 (1) in the Development Area;*
 - (c) *a fish 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.*
- (4) *Despite subsections (1), (2) and (3), a forest stewardship plan may comply with the provisions for the management of riparian management areas in accordance with the Forest and Range Practices Act and the regulations made thereunder, including Part 4, Division 3 of the Forest Planning and Practices Regulation, as of December 31, 2014, for S1 to S3 streams and for lakes, and marsh and fen wetlands greater than 0.25 hectares.*
- (5) *Alteration or harvest within the riparian management area described in subsection (4) may occur provided that:*
- (a) *there has been First Nation Engagement with Applicable First Nations;*
 - (b) *functional Riparian Forest sufficient to maintain stream bank stability and stream channel integrity is retained;*
 - (c) *indicators to be tracked have been identified to evaluate the effectiveness of the recommended riparian strategies; and*
 - (d) *the effectiveness of representative riparian strategies using identified indicators is evaluated.*
- (6) *Where some or all of the forest required in subsections (1) or (4) has been previously altered or harvested, to the extent practicable, recruit or create Functional Riparian Forest in the Management Zone or riparian management area in the shortest time practicable.*

FDU	Result or Strategy
All	<p>1. The FSP Holder will maintain the natural ecological function of aquatic habitat that is not High Value Fish Habitat by, adjacent to the following aquatic habitat in a Development Area:</p> <ul style="list-style-type: none"> a. S1 to S3 streams that are not High Value Fish Habitat; b. lakes greater than 0.25 hectares; and

	<p>c. marsh and fen wetlands greater than 0.25 hectares; retaining 90% of the forest in a Management Zone with a minimum width of 1.5 Tree Lengths.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1 in which the Qualified Professional rationale in (c) is shared; b. there is no net loss of Management Zone area required in (1) in the Development Area; c. a fish habitat assessment has been prepared by a Qualified Professional that specifies measures: <ul style="list-style-type: none"> i. to maintain the geomorphic and hydriparian 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. <p>4. Despite subsections (1), (2) and (3), a forest stewardship plan may comply with the provisions for the management of riparian management areas in accordance with the <i>Forest and Range Practices Act</i> and the regulations made thereunder, including Part 4, Division 3 of the Forest Planning and Practices Regulation, as of December 31, 2014, for S1 to S3 streams and for lakes, and marsh and fen wetlands greater than 0.25 hectares.</p> <p>5. The FSP Holder may alter or harvest within the riparian management area described in subsection (4), provided that:</p> <ul style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1; b. Functional Riparian Forest sufficient to maintain stream bank stability and stream channel integrity is retained; c. indicators to be tracked have been identified to evaluate the effectiveness of the recommended riparian strategies; and d. the effectiveness of representative riparian strategies using identified
--	--

	<p>indicators is evaluated:</p> <ul style="list-style-type: none"> i. indicators to be evaluated will be identified in the Site Plan and will address factors identified in FPPR Schedule 1 at a minimum. <p>6. Where some or all of the forest required in subsections (1) or (4) has been previously altered or harvested, the FSP Holder will, to the extent practicable, recruit or create Functional Riparian Forest in the Management Zone or riparian management area in the shortest time practicable.</p>
--	---

6.3.4 Objectives for Forested Swamps

GBRO Part 3, Division 3, Objective 13

- (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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. The FSP Holder will maintain the ecological characteristics and function of Forested Swamps. 2. Within Development Areas, adjacent to Forested Swamps greater than 0.25 hectares, the FSP Holder will 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: <ol style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1 in which the Qualified Professional rationale in (b) is shared; b. A Forested Swamp assessment has been prepared by a Qualified Professional that specifies measures: <ol style="list-style-type: none"> 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, the FSP Holder will, to the extent practicable, recruit or create Functional Riparian Forest in the Management Zone in the shortest time practicable.

6.3.5 Objectives for Upland Stream areas

GBRO Part 3, Division 3, Objective 14

- (1) *Maintain the hydrological and fluvial processes in the portion of Important Fisheries Watersheds shown in Schedule E that is occupied by Upland Streams.*
- (2) *For the purposes of subsection (1), within the Important Fisheries Watersheds shown in Schedule E, in the portion of the watershed 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 High Value Fish Habitat and fish habitat that is not High Value Fish Habitat and that pose a moderate to high risk of sediment transport;*
 - (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 High Value Fish Habitat and fish habitat that is not High Value Fish Habitat;*
- (4) *Despite subsection (2), in the portion of the Important Fisheries Watershed 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.*

FDU	Result or Strategy
	<ol style="list-style-type: none"> 1. The FSP Holder will maintain the hydrological and fluvial processes in the portion of Important Fisheries Watersheds shown in Schedule E that is occupied by Upland Streams. 2. For the purposes of subsection (1), within the Important Fisheries Watersheds shown in Schedule E, in the portion of the watershed where Upland Streams occur, the FSP Holder will 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: <ol style="list-style-type: none"> a. Upland Streams that flow into High Value Fish Habitat and fish habitat that is not High Value Fish Habitat and that pose a moderate to high risk of sediment transport; 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 High Value Fish Habitat and fish habitat that is not High Value Fish Habitat. 4. Despite subsection (2), in the portion of the Important Fisheries Watershed where Upland Streams occur, the FSP Holder may maintain less than 70% of the forest as Functional Riparian Forest provided that: <ol style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1 in which the Qualified Professional rationale in (b) is shared; b. a coastal watershed assessment or similar assessment of watershed sensitivity

	<p>to forest development disturbance is completed by a Qualified Professional;</p> <p>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</p> <p>d. the effectiveness of the management strategies implemented pursuant to subsection (4)(c) are monitored.</p>
--	--

6.3.6 Objectives for Active Fluvial Units

GBRO Part 3, Division 3, Objective 15

- (1) *Retain a minimum of 90% of the Functional Riparian Forest on Active Fluvial Units.*
- (2) *Despite subsection (1), less than 90% of the forest on an Active Fluvial Unit 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 (2)(c) are implemented in a manner that will maintain the flow patterns and flow capacity and geomorphic stability of the Active Fluvial Unit.*
- (3) *Where some or all of the forest required to be retained in subsection (1) 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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. The FSP Holder will retain a minimum of 90% of the Functional Riparian Forest on Active Fluvial Units. 2. Despite subsection (1), less than 90% of the forest on an Active Fluvial Unit may be retained to allow for road access or to address a safety concern, provided that: <ol style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1 in which the Qualified Professional rationale in (c) is shared; 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: <ol style="list-style-type: none"> i. specifies measures to maintain stream flow patterns and flow capacity and

	<p>geomorphic stability of the Active Fluvial Unit for roads or other infrastructure; or</p> <p>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</p> <p>d. the measures in subsection (2)(c) are implemented in a manner that will maintain the flow patterns and flow capacity and geomorphic stability of the Active Fluvial Unit.</p> <p>3. Where some or all of the forest required to be retained in subsection (1) has been previously altered or harvested, The FSP Holder will, to the extent practicable, recruit or create Functional Riparian Forest on the Active Fluvial Unit in the shortest time practicable.</p>
--	---

6.4 Wildlife

6.4.1 Objectives for Grizzly Bear Habitat

GBRO Part 3, Division 4, Objective 18

- (1) *Maintain 100% of class 1 grizzly bear habitat shown in Schedule D.*
- (2) *Despite subsection (1), class 1 grizzly bear habitat polygons 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.*
- (3) *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) *that 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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. The FSP Holder will maintain 100% of class 1 grizzly bear habitat shown in Schedule D. 2. Despite subsection (1), the FSP Holder may alter or harvest class 1 grizzly bear habitat polygons, provided that: <ol style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1 in which the Qualified Professional rationale in (b) is shared; b. a Qualified Professional: <ol style="list-style-type: none"> 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. 3. Despite subsection (1), the FSP Holder may alter or harvest class 1 grizzly bear habitat polygons for road access or to address a safety concern, provided that: <ol style="list-style-type: none"> a. there has been First Nation Engagement with Applicable First Nations consistent with FSP Section 6.2.1; 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. that 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.

6.4.2 Objectives for Grizzly and Black Bear Dens

GBRO Part 3, Division 3, Objective 19

- (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 if the den is occupied.*
- (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.*

FDU	Result or Strategy
All	<ol style="list-style-type: none"> 1. The FSP Holder will protect grizzly Bear Dens and black Bear Dens. 2. Adjacent to grizzly Bear Dens, the FSP Holder will maintain a Reserve Zone with a minimum width of 50 metres. 3. Despite subsections (1) and (2), the FSP Holder may alter or remove: <ol style="list-style-type: none"> 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 consistent with FSP Section 6.2.1; 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 if the den is occupied. 4. In addition to subsections (1) and (2), adjacent to any Reserve Zone required in subsection (2), the FSP Holder will 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), the FSP Holder may

	<p>alter or remove trees outside of the winter hibernation season to:</p> <ol style="list-style-type: none"> accommodate operational requirements for road and bridge construction, where no practicable alternative exists; 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 mitigate the impact of windthrow. <p>6. The FSP Holder will document all found Bear Dens, and will submit documentation to Applicable First Nations and the Province of British Columbia at the end of each calendar year.</p>
--	---

6.5 Objectives Prescribed Under Legislation (FRPA section 149; FPPR sections 5-10)

6.5.1 Objectives set by Government for Soils (FPPR section 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.

FDU	Result or Strategy
All	The FSP Holder will undertake to comply with soil disturbance and permanent access structure limits prescribed in sections 35 and 36 of the FPPR. In accordance with FPPR section 12.1(1) and 12.1(5), the FSP Holder is exempt from the requirement to specify intended results and strategies set out in FPPR section 5.

6.5.2 Objectives Set by Government for Wildlife (FPPR section 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) *A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection (1) only if the Minister of Water, Land and Air Protection, or a designated official, notifies the person of the applicable*
 - (a) *species referred to in subsection (1), and*
 - (b) *indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).*

- (3) *If satisfied that the objective set out in subsection (1) is addressed, in whole or in part, by an objective in relation to a wildlife habitat area or an ungulate winter range, a general wildlife measure, or a wildlife habitat feature, the minister responsible for the Wildlife Act must exempt a person from the obligation to specify a result or strategy in relation to the objective set out in subsection (1) to the extent that the objective is already addressed.*
- (4) *On or after December 31, 2004, a notice described in subsection (2) must be given at least 4 months before the forest stewardship plan is submitted for approval.*

FDU	Species	Result or Strategy
All	“Queen Charlotte” Goshawk (<i>Accipiter gentilis laingi</i>)	An Order has been issued establishing WHA for Queen Charlotte Goshawk as per FPPR. 7(3); therefore, no strategy is required.
All	Red-legged frog (<i>Rana aurora</i>)	<ol style="list-style-type: none"> 1. The holder(s) of this FSP will not carry out or authorize road construction or cutblock harvesting as per subsection 2 of this strategy. 2. When suitable habitat is identified, area(s) will be delineated that meets the following criteria: <ol style="list-style-type: none"> a. Amount: to a maximum of 50 ha of which no more than 30 ha will be in the mature THLB; and b. Distribution: The suitable habitat within the range of the species that is presently occupied by the species as described in the accounts and measures of IWMS 2004; and c. Attributes: exhibits attributes as described in the Notice.
All	Keen’s Long-eared Myotis (<i>Myotis keenii</i>)	<ol style="list-style-type: none"> 1. The holder of this FSP will not carry out or authorize road construction or cutblock harvesting as per subsection 2 of this strategy. 2. When suitable habitat is identified, area(s) will be delineated that meet the following criteria: <ol style="list-style-type: none"> a. Amount: to a maximum of 40 ha of which no more than 30 ha will be in the mature THLB; and b. Distribution: The suitable habitat within the range of the species that is presently occupied by the species as described in the accounts and measures of IWMS 2004; and c. Attributes: exhibits attributes as described in the Notice

FDU	Species	Result or Strategy
All	Great Blue Heron (<i>Ardea herodias fannini</i>)	<ol style="list-style-type: none"> 1. The holder of this FSP will not carry out or authorize road construction or cutblock harvesting as per subsection 2 of this strategy. 2. When suitable habitat is identified, area will be delineated that meets the following criteria: <ol style="list-style-type: none"> a. Amount: to a maximum of 160 ha of which no more than 24 ha will be in the mature THLB; and b. Distribution: The suitable habitat within the range of the species that is presently occupied by the species as described in the accounts and measures of IWMS 2004; and c. Attributes: exhibits attributes as described in the Notice.
All	Coastal Tailed Frog (<i>Ascaphus truei</i>)	<ol style="list-style-type: none"> 1. The holder of this FSP will not carry out or authorize road construction or cutblock harvesting as per subsection 2 of this strategy. 2. When suitable habitat is identified, area(s) will be delineated that meets the following criteria: <ol style="list-style-type: none"> a. Amount: to a maximum of 80 ha of which no more than 20 ha will be in the mature THLB; and b. Distribution: The suitable habitat within the range of the species that is presently occupied by the species as described in the accounts and measures of IWMS 2004; and c. Attributes: exhibits attributes as described in the Notice.
All	Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	<ol style="list-style-type: none"> 1. Within areas to which the Notice for the Campbell River Forest District (dated July 7, 2004) established under section 7(2) of the FPPR applies, the holder(s) of this FSP will not carry out or authorize the harvest of timber within Marbled Murrelet habitat as identified through the following process: <ol style="list-style-type: none"> a. Where a detailed survey (as described in <i>Standard Methods for Identifying Marbled Murrelet Habitat in British Columbia Using Air Photo Interpretation and Low-level Aerial Survey</i> whereby suitable habitat is defined as Class 1,2, or 3 Marbled Murrelet habitat), has been conducted by a qualified professional: <ol style="list-style-type: none"> i. An amount equal to the amount of suitable nesting habitat in the non-contributing land base in the FDU's in the FSP at the time the Notice was issued; and ii. Up to a maximum net mature timber harvesting land base impact proportional to the District maximum of

		<p>1431 ha;</p> <p>b. Where detailed survey has not been conducted (suitable nesting habitat is defined as age class 8 or 9 that is height class 4 or greater):</p> <p>i. An amount equal to the amount of suitable nesting habitat in the non-contributing land base in the FDU's in the FSP at the time the Notice was issued; and</p> <p>ii. Up to a maximum net mature timber harvesting land base impact proportional to the District maximum of 1431 ha.</p> <p>2. For the purpose of this result/strategy, "non-contributing land base" is as described in the Timber Supply Review: Strathcona Timber Supply Area" dated January 1, 2000.</p>
--	--	---

Ungulate Winter Ranges (UWR)

Black Tailed Deer (*Odocoileus hemionus columbianus*)

UWR U-1-005 for the Campbell River Natural Resource District has been established by an Order by the Minister for the FSP area. This UWR Order exempts the FSP Holder from the requirement to specify a result or strategy. The FSP Holder will comply with the legal requirements of the Order.

Wildlife Habitat Areas (WHA)

The Holder will comply with the legal requirements of the Orders establishing WHAs, including the applicable General Wildlife Measures, for the FSP area.

6.5.3 Objectives Set by Government for Water, Fish, Wildlife and Biodiversity in Riparian Areas (FPPR section 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.

FDU	Result or Strategy
All	<p>1. For riparian classes, the FSP Holder adopts the regulation defaults prescribed by FPPR sections 47, 48 and 49.</p> <p>2. For areas of timber harvesting or road construction carried out or authorized by the FSP Holder adjacent to:</p> <p>a. high value fish habitat, or</p> <p>b. adjacent to aquatic habitat that is not high value fish habitat including S1 to S3 streams, lakes greater than 0.25 hectares, and marsh and fen wetlands greater</p>

	<p>than 0.25 hectares;</p> <p>The FSP Holder will follow Results and Strategies identified in sections 6.3.2 and 6.3.3 of this FSP, which reflect Part 3, Division 3, Objectives 11 and 12 of the GBRO.</p> <ol style="list-style-type: none"> 3. For restrictions in a RMA, the FSP Holder adopts the default practice requirements described in FPPR section 50. 4. For restrictions in a RRZ, the FSP Holder adopts the default practice requirements described in FPPR section 51, subject to results and strategies required to meet objectives set by government under the GBRO for EBM. 5. For restrictions in a RMZ, unless specific EBM, wildlife and/or biodiversity values are identified in a RMA, retention of trees within the RMZ requiring a RRZ will be based on a risk assessment of damage to the RRZ caused by windthrow and subject to the following: Where there is a: <ol style="list-style-type: none"> a) Low risk of windthrow damage after harvesting, retention of trees within the RMZ is not required; b) Moderate or high risk of windthrow damage after harvesting, retention will vary from 0 – 100% of the trees within the RMZ. Where unmapped aggregates of less than 0.25ha and/or dispersed single stem retention is used the FSP Holder will maintain the criteria for even aged management of < 8m²/ha of basal area retention; c) Retention applied in subsections (a) and (b) will also consider the integrity of the stream bank, channel or waterbody and determine if additional retention is required to protect these features. d) A qualified professional will complete the risk assessment and determination based on a site level evaluation. 6. For restrictions in a RMZ; unless an amount of retention has been specified as per Division 3 Part 3 of the GBRO (FSP sections 6.3.2, 6.3.3, 6.3.4, 6.3.5, and 6.3.6), or wildlife and/or biodiversity values are identified in a RMA, the FSP Holder may authorize or carry out cutblock harvesting that includes harvesting in a RMZ. The level of retention within the RMZ will: <ol style="list-style-type: none"> a) reflect the factors in FPPR Schedule 1 section 2; and b) be specified by a qualified professional in a written rationale, prepared prior to commencement of the harvesting.
--	---

FPPR Section 8.1 – Fisheries Sensitive Watersheds

There are no fisheries sensitive watersheds described in Schedule 2 of the FPPR section 8.1 within the FSP area. Therefore, no result or strategy is required.

FPPR Sec 8.2 – Community Watersheds

There are no community watersheds prescribed by legislation and within the FSP area. Therefore, no result or strategy is required.

6.5.6 Objectives set by government for Wildlife and Biodiversity (FPPR sections 9 and 9.1)

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.

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.

FDU	Result or Strategy
All	<ol style="list-style-type: none">1. The FSP Holder adopts the default practice requirements described in FPPR sections 64 and 65 concerning wildlife and biodiversity at the landscape level; and2. The FSP Holder adopts the default practice requirements described in FPPR sections 66 and 67 concerning wildlife and biodiversity at the stand level, except, with respect to FPPR section 12.5(2), where:<ol style="list-style-type: none">a. a tree must be felled to safely establish one or more tail-holds or guy-line tiebacks in a wildlife tree retention area to facilitate adjacent cable logging operations; orb. a tree, or trees, within a wildlife tree retention area is modified (pruned or topped) to maintain the integrity of that wildlife tree retention area;c. timber may be harvested in a WTRA or WTP, where the licensee specifies one or more replacement WTRA that provide an area, number of trees, or habitat, that is equivalent to the portion of the WTRA from which the timber is being harvested.3. The percentage of stand retention shall be determined as a percentage of the sum of the Net Area to Reforest and area of Permanent Access Structures: $\text{Stand Retention \%} = \text{Retention Area} / (\text{NAR} + \text{PAS})$.

6.5.7 Objectives set by Government for Cultural Heritage Resources (FPPR section 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.*

FDU	Result or Strategy
All	Results and strategies for cultural heritage resources are described section 6.2 of this FSP - First Nation Cultural Resources.

6.6 Objectives Prescribed Under Legislation for Visual Resources (GAR section 17)

Scenic areas for the Campbell River Natural Resource District were established by the District Manager on December 14, 2005 under GAR S. 7(1).

Categories of visually altered forest landscape as defined in FPPR s 1.1.

FDU	Result or Strategy
All	<ol style="list-style-type: none">1. For the purposes of this result/strategy, a “significant public viewpoint”, as that term is used in the definition of “altered forest landscape” means a view point on water or on land:<ol style="list-style-type: none">a. Where a large number of people traditionally congregate which may be a viewpoint in a park, highway pullout or rest stop, or city center; orb. Included in the most current Visual Landscape Inventory; orc. Determined to be important by a qualified professional.2. Road construction and/or timber harvesting carried out or authorized by the FSP Holder within scenic areas established on December 14, 2005 within the Campbell River Natural Resource District, will be consistent with:<ol style="list-style-type: none">a. The visual quality objectives as established by the District Manager on December 14, 2005; andb. The categories of visually altered forest landscape as defined in FPPR section 1.1 as of the date the timber sale is advertised.3. The FSP Holder will make application to the DDM for exemption to carry out or authorize timber harvesting or road construction that would result in an alteration

	<p>greater than specified in subsection 1 of this strategy where:</p> <ul style="list-style-type: none"> a. Timber harvesting or road construction are related to the harvesting of timber that is damaged, destroyed or threatened by fire, insects, disease, wind, flooding or other similar factors where the cutblock or road design, to the extent practicable, will: <ul style="list-style-type: none"> i. Mimic naturally occurring landscape characteristics; and ii. Retain timber that is not damaged, destroyed or threatened where safe, and operationally practicable to do so.
--	--

6.7 Resource Features Identified Under GAR (GAR Section 5)

The karst system elements noted below have been identified as resource features, wherever they are found, within the Campbell River Forest District, by an Order dated May 30, 2007.

This identified resource feature is subject to practice requirements. No result or strategy is required as objectives have not been established for the management of the resource feature.

Where applicable within the Plan area, the Holder will adhere to the requirements of FPPR s. 70(1), to not damage or render ineffective a resource feature, with respect to the following karst system elements that have been identified as resource features:

- a) karst caves;
- b) significant surface karst features; and
- c) important features and elements within very high or high vulnerability karst.

7.0 MEASURES SET BY GOVERNMENT

7.1 Measure set by Government to Prevent the Introduction and Spread of Invasive Plants (FRPA section 47 and FPPR section 17)

For the purpose of section 47 (Invasive plants) of the Act, a person who prepares a forest stewardship plan must specify measures in the plan to prevent the introduction or spread of species of plants that are invasive plants under the Invasive Plants Regulation, if the introduction or spread is likely to be the result of the person's forest practices.

FDU	Measure
All	<p>1. In these measures “applicable area” means an area where:</p> <ul style="list-style-type: none"> a. it is likely that forest practices carried out or authorized by the FSP Holder will result in introduction or spread of invasive plants; b. there is a moderate to high risk invasive plants are likely to germinate on soil exposed that is a result of the FSP Holder’s forest practices under this FSP; c. it is reasonably expected that grass would grow on these exposed sites; d. it is reasonably foreseeable that revegetation with grass seed would materially reduce the likelihood of invasive plant germination; and e. the FSP Holder has not deemed the area to be an active surface area where primary forest activities are occurring. <p>“preferred seed” means seed with the following attributes:</p> <ul style="list-style-type: none"> a. high sod-forming content, except in areas that are planted with tree seedlings; b. has been certified by the Canadian Seed Growers Association that the seed; c. meets Common #1 Forage Grade or better standards for varietal purity established by the Association for seed of that kind of species (Seeds Act, Seeds Regulation S. 2(1)); and d. is of native origin. <p>“priority invasive plants” refers to gorse, Japanese knotweed, Giant knotweed, Scotch broom, purple loosestrife, and yellow iris, consistent with section 2 of the Invasive Plants Regulation, which may be found within the plan area.</p> <p>2. If the FSP Holder carries out a primary forest activity in an applicable area, the holder of the FSP will:</p> <ul style="list-style-type: none"> a. Confirm previously reported locations of invasive plants within the plan area using the most current recognized provincial database; b. Distribute information to field staff on invasive plants that exist or threaten to establish within the plan area;

	<ul style="list-style-type: none"> c. Direct field staff to report previously unreported incidences of invasive plants and enter them into the most current recognized provincial database. <p>3. If the FSP Holder carries out or authorizes a forest practice in an applicable area, the FSP Holder, within two growing seasons of completing the activity authorized in the timber sale license or cutting permit, will:</p> <ul style="list-style-type: none"> a. Seed areas of exposed soil that exceed 0.1 contiguous hectares, excluding the road prism, that have been disturbed by primary forest activities authorized by the FSP holder, recognizing that spring and fall are optimum times to revegetate, and giving preference to preferred seed that is: <ul style="list-style-type: none"> i. Readily available; ii. Comparable in cost to agronomic mixtures; and iii. Comparable in effectiveness to agronomic mixtures; and b. Concurrent with silviculture surveying, monitor for re-seeding requirements on accessible, applicable areas. <p>4. If priority invasive plants are detected during post-harvest monitoring that have likely established as the result of the FSP Holder's forest practices, the FSP Holder will work with government agencies to;</p> <ul style="list-style-type: none"> a. Develop a plan to mitigate the spread; and b. Implement the plan.
--	---

7.2 Measures Set by Government Related to Range Barriers (FPPR section 18)

There are no range tenures established within the FSP area and that overlap with the plan area; therefore, no result or strategy is required.

8.0 EVEN-AGED STOCKING STANDARDS (FPPR SECTION 44)

The stocking standards outlined in Appendix 2 apply to the Net Area to be Reforested (NAR) of areas harvested identified by standards units, subject to this FSP. The stocking standards, regeneration dates and free growing heights are to be interpreted in conjunction with professionally designed, signed and sealed Site Plans required by the FPPR section 34 prior to the commencement of harvesting activities. Tables 1, 2, 3 and 4 of Appendix 2 specify Species Selection, Target Stocking, Minimum Stocking and Free Growing Heights.

The following standards apply to blocks and/or standards units (SU) where even-aged management is planned.

8.1 Species Selection

Species selection to determine compliance with section 44(1) of the FPPR will be based on the ecosystem classification. Species which are considered ecologically suitable and commercially valuable for each site series are listed in Tables 1 – 3 of Appendix 2.

Western hemlock (*Tsuga heterophylla*, Hw) is found throughout the area. Hemlock dwarf mistletoe is a significant management concern because of its ability to spread from the overstorey into canopy openings created by harvesting. Management efforts are directed to limiting this spread potential rather than to eradication. When indicated at the site plan level by the prescribing forester, the following techniques will be employed to limit the spread and/or reduce the incidence in the regenerating stand:

- locating perimeter falling boundaries to include heavily infected trees within the cutblock and designing retention patches or other reserves to exclude heavily infected trees;
- 3 meter knock down of mistletoe-infected HwBa regeneration;
- regeneration of alternative immune species within 20 metres of any infection source, be it an infected edge or an individual infected tree;
- Hw will not contribute to stocking if within 20 metres of any infection source; be it an infected edge or an individual infected tree.

Sitka spruce (*Picea stichensis*) is susceptible to white pine weevil. Therefore, Sitka spruce (Ss) is limited to a minor component of 20% of the target stocking standard in areas of moderate and high risk spruce weevil damage, unless weevil resistant stock is planted. If weevil resistant stock is planted, in areas of moderate and high risk spruce weevil damage, the use of Ss or Engelmann spruce (Se) to meet the minimum stocking standards (MSS) is not limited. Ss must display a healthy leader and meet minimum height requirements to be accepted as a crop tree at free growing.

True Firs (*Abies spp.*) are at risk of future infestation by the Balsam woolly adelgid. These trees will not be managed in pure plantations. Where listed as a preferred species, true firs will not contribute more than 30% towards the target stocking standard (TSS).

Yellow Cedar (*Chamaecyparis nootkatensis*, Yc) is a high valued species that can move from “acceptable” to “preferred” status depending on micro-climate, cold air drainage and presence on site (preharvest stand, adjacent stands). Prescribing foresters doing Site Plans will make the decision on acceptability on a site specific basis.

8.2 Stocking Standards

The attached Appendix 2 includes identification numbers which will pertain to standards units within the area under this FSP.

Where the holder(s) of the FSP proposes uneven aged stocking standards for an area to be harvested, application for an amendment to this FSP will be submitted.

8.3 Regeneration Date and Free Growing Timeline

The regeneration delay is as noted in the Appendix and the free growing date will be 20 years (tracked to the date of harvest commencement on a Standard Unit by Standard Unit basis).

8.4 Situations or Circumstances that determine whether Free Growing is assessed on a block basis or across blocks:

FPPR section 44(1) applies in all situations or circumstances under the FSP where a free growing stand is required to be established under FRPA section 29.

8.5 Minor Species at Free Growing

To promote diversity, a commercially viable coniferous species not listed in the tables in Appendix 2 may be accepted as a free growing tree up to a limit of 5% of the target stocking if the height is greater than, or equal to, the tallest minimum height listed among the ecologically suitable species for that site series.

APPENDIX 1: FSP MAP AND IDENTIFICATION OF FDUs

APPENDIX 2: EVEN-AGED STOCKING STANDARDS

ID	REF	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES								STOCKING W/S (SPH)			MIN INTER TREE (M)	RG DELAY	COMMENTS
		ZONE	SZ/ VARIANT	SITE SERIES	1	HT (Min)	2	HT (Min)	3	HT (Min)	4	HT (Min)	1	HT (Min)	2	HT (Min)	3	HT (Min)	4	HT (Min)	TARGET P&A	MIN P&A	MIN P			
1051352	Fdc 1	CWH	xm1 xm2	01,04	FDC	3							CW	1.5	PW	2.5					900	500	400	2	3	Pw comment applies.
1051355	Fdc 2	CWH	xm1 xm2	05,07	FDC	4	CW	2	BG	3.5			PW	2.5							900	500	400	2	3	Pw and true firs comments apply.
1051373	Fdc 3(t)	CWH	xm1 xm2	01,04	FDC	3	CW	1.5					PW	1.5	HW	2					900	500	400	2	3	Pw and true firs comments apply. Hw is considered preferred on 01 site series only. (t) Refers to Western Hemlock (Hw) footnote on managing Hw natural regeneration as preferred alongside planted Fdc regeneration.
1051374	Fdc 4	CWH	xm1 xm2	03	FDC	2	PW	3.5					CW	1	PL	1.25					800	400	400	1.5	3	Pw comment applies
1051376	Fdc 5(t)	CWH	xm1 xm2	05,07	FDC	4	CW	2	BG	3.5			PW	2.5	HW	2	BA	3.5			900	500	400	2	3	Pw and true fire comments apply. Bg is considered preferred on 07 site series only. (t) Refers to Western Hemlock (Hw) footnote on managing Hw natural regeneration as preferred alongside planted Fdc regeneration.
1051377	Fdc 6	CWH	xm1 xm2	06	FDC	3	CW	1.5	HW	2			PW	2.5							900	500	400	2	6	Pw comment applies.
1051378	Fdc 7	CWH	xm1 xm2	02	FDC	2	PL	1.25													400	200	200	1	3	
1051379	Dr 1	CWH	xm1 xm2	01(f), 06	DR	4															1200	700	700	2	2	Max density does not apply to deciduous management. (f) Refer to Broadleaf Management Strategy.
1051380	Dr 2	CWH	xm1 xm2	05,07 08,13	DR	4							MB	4							1200	700	700	2	2	Max density does not apply to deciduous management. Refer to Broadleaf Management Strategy
1051381	Dr 3	CWH	xm1 xm2	12	DR	4															1200	700	700	2	2	Max density does not apply to deciduous management. Refer to Broadleaf Management Strategy (Restriction #8).
1051382	Act 1	CWH	xm1 xm2	08,09 13,14	ACT	4															1200	900	900	2	2	Max density does not apply.
1051383	Act 2	CWH	xm1 xm2	10	ACT	4															400	200	200	1	2	Max density does not apply.
1051384	Act 3	CWH	xm1 xm2	15	ACT	4															900	600	600	1	2	Max density does not apply

ID	REF	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES								STOCKING W/S (SPH)			MIN INTER TREE (M)	RG DELAY	COMMENTS
		ZONE	SZ/ VARIANT	SITE SERI ES	1	HT (Min)	2	HT (Min)	3	HT (Min)	4	HT (Min)	1	HT (Min)	2	HT (Min)	3	HT (Min)	4	HT (Min)	TAR GET P&A	MIN P&A	MIN P			
1051385	Mb1	CWH	xm1 xm2	10	MB	4															1400	1000	1000	1	2	Max density does not apply to deciduous management. Refer to Broadleaf Management Strategy (Restriction #8).
1051386	RR1	CWH	xm1 xm2	01,0 4 05,0 7	CW	2	PW	3.5													900	500	400	2	3	Pw comment applies. No site prep option.
1051387	RR2	CWH	xm1 xm2	01,0 4	CW	2	PW	3.5	FDC	3											900	500	400	2	3	Pw comment applies. Site prep option.
1051388	RR3	CWH	xm1 xm2	05,0 7	CW	2	PW	3.5	FDC	4	BG	3.5									900	500	400	2	3	Pw and true fires comments apply. Site prep option.
1051389	RR4	CWH	xm1 xm2	03	PW	3.5															800	400	400	1.5	3	Pw comment applies. No site prep, dry site option.
1051390	RR5	CWH	xm1 xm2	06	CW	1.5							PW	2.5							900	500	400	1.5	6	Pw comment applies. No site prep, wet site option.
1051391	08	CWH	xm1 xm2	08	BG	3.5	CW	2					SS	1.5							900	500	400	2	3	Bg may be accepted up to 50% of the MSS pa.
1051392	11	CWH	xm1 xm2	11	PL	2.5							CW	1	PW	2.5					400	200	200	1	3	Pw comment applies.
1051393	12	CWH	xm1 xm2	12	CW	1							HW	2	PW	2.5	SS	1.5			500	400	300	1	3	Pw comment applies.
1051394	13	CWH	xm1 xm2	13	BG	3.5	CW	2					FDC	4	SS	1.5					800	400	400	1.5	3	Bg may be accepted up to 50% of the MSS pa. Acceptance of Fdc limited to elevated mounds.
1051395	14	CWH	xm1 xm2	14	BG	3.5	CW	2					SS	1.5							800	400	400	1	3	Bg may be accepted up to 50% of the MSS pa.
1051396	15	CWH	xm1 xm2	15	CW	2															500	300	300	1	3	
1051397	CT1	CWH	xm1 xm2	01,0 5 07	FDC								HW		CW		PW				330	330	300			
1051398	CT2	CWH	xm1 xm2	01,0 5 07	FDC		HW		CW				PW								330	330	300			
1051399	CT3	CWH	xm1 xm2	01,0 5 07	FDC								HW		CW		PW				300	300	250			
1051400	CT4	CWH	xm1 xm2	01,0 5 07	FDC								HW		CW		PW				400	400	350			

ID	REF	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES								STOCKING W/S (SPH)			MIN INTER TREE (M)	RG DELAY	COMMENTS
		ZONE	SZ/ VARIANT	SITE SERIES	1	HT (Min)	2	HT (Min)	3	HT (Min)	4	HT (Min)	1	HT (Min)	2	HT (Min)	3	HT (Min)	4	HT (Min)	TARGET P&A	MIN P&A	MIN P			
1051401	HwBa1	CWH	vm1	01	HW	3	BA	1.75	CW	1.5			FDC	3	YC	1.5					900	500	400	2	6	Fdc acceptable on SSE to WSW aspects, or where present and performing well in pre-harvest stand, and on roadside and rehabilitated temporary access structures with exposed soils. Yc acceptable where present and performing well in pre-harvest stand.
1051402	HwBa2	CWH	vm1	06	HW	3	BA	1.75	CW	1.5			SS	3	YC	1.5					900	500	400	2	6	Ss comment applies. Yc acceptable where present and performing well in pre-harvest stand.
1051403	CwHw1	CWH	vm1	03	CW	1	HW	2					FDC	2	YC	1.5					800	400	400	1.5	6	Fdc acceptable on SSE to WSW aspects, or where present and performing well in pre-harvest stand, and on roadside and rehabilitated temporary access structures with exposed soils. Yc acceptable where present and performing well in pre-harvest stand.
1051404	CwHw2	CWH	vm1	04	CW	1.5	HW	3					FDC	3	BA	1.75	YC	1.5			900	500	400	2	3	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils. Yc acceptable where present and performing well in pre-harvest stand.
1051405	BaCw1	CWH	vm1	05	BA	1.75	CW	1.5					HW	3	FDC	3	YC	1.5			900	500	400	2	3	Fdc acceptable on SSE to WSW aspects, or where present and performing well in pre-harvest stand, and on roadside and rehabilitated temporary access structures with exposed soils. Yc acceptable where present and performing well in pre-harvest stand.
1051406	BaCw2	CWH	vm1	07/08/09	BA	2.25	CW	2					HW	4	SS	4	YC	1.5			900	500	400	2	3	Hw acceptable on well developed Mor humus with LFH > 10cm thick. Yc acceptable where present and performing well in pre-harvest stand. Ss comment applies.
1051407	CwSs	CWH	vm1	14	CW	1.5							HW	3	SS	3	YC	1.5			800	400	400	1.5	3	All species on elevated microsites only. Yc acceptable where present and performing well in pre-harvest stand. Ss comment applies.
1051408	FdcHw	CWH	vm1	01/03	FDC	3	HW	3	CW	1.5			BA	1.75	YC	1.5					900	500	400	2	3	Fdc preferred on SSE to SSW aspects or where present and performing well in pre-harvest stand. Yc acceptable where present and performing well in the pre-harvest stand.

ID	REF	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES								STOCKING W/S			MIN INTE R TREE (M)	RG DEL AY	COMMENTS
		ZONE	SZ/VARI ANT	SITE SERI ES	1	HT (MI N)	2	HT (MI N)	3	HT (MI N)	4	HT (MIN)	1	HT (MIN	2	HT(MIN)	3	HT (MI N	4	HT(MIN)	TARGE T P&A (SPH)	MIN P&A (SPH)	MIN P (SPH)			
1051409	Coll1	CWH	vm1	01/03	HW	2.5	CW	1	BA	1.75			FDC	2.5							600	300	300	1	6	Fdc acceptable on SSE to SSW aspects only. Ba is preferred on 01 sites only. Heavy colluvium where planting sites are limited and/or talus slopes.
1051410	Coll2	CWH	vm1	04/05/06	HW	3	CW	1.5	BA	1.75			FDC	3							600	300	300	1	6	Fdc acceptable on SSE to SSW aspects in lower portion of variant only (<750m). Heavy colluvium where planting sites are limited and/or talus slopes.
1051411	HwBa3	CWH	vm2	01/06	HW	2.5	BA	1.75	CW	1.5			YC	1.5	FDC	1.5					900	500	400	2	6	Yc is preferred in the upper portions of the variant and on north aspects, cool air drainage, cool air drainage areas or based on performance on site. Fdc comment applies.
1051412	CwHw3	CWH	vm2	03/04	CW	1	HW	1.75					YC	1	BA	1.5	FDC	1.5			800	400	400	1.5	6	Ba is limited to 04 sites only. Fdc on SSE to WSW aspects up to 750meters in elevation.
1051413	BaCw3	CWH	vm2	05	BA	1.75	CW	1.5					HW	2.5	YC	1.5	FDC	1.5			900	500	400	2	3	Yc is preferred in the upper portions of the variant and on north aspects, cool air drainage, cool air drainage areas or based on performance on site. Fdc comment applies.
1051414	BaCw4	CWH	vm2	07/08	BA	2.25	CW	2					HW	3.5	YC	2	SS	4			900	500	400	2	3	Hw acceptable on well developed Mor humus with LFH > 10cm thick. Yc is preferred in the upper portions of the variant and on north aspects, cool air drainage areas or based on performance on site. SS limited to 20% target stocking due to weevil risk.
1051415	CwYc1	CWH	vm2	09/11	CW	1	YC	1					HW	1.75							800	400	400	1.5	3	All species on elevated microsites only.
1051416	Coll 3	CWH	vm2	01/03/04	HW	1.75	CW	1	YC	1			FDC	1.5	BA	1.5					600	300	300	1	6	Fdc acceptable on SSE to SSW aspects in lower portion of variant only. Heavy colluvium where planting sites are limited and/or talus slopes.
1051417	Coll 4	CWH	vm2	05/06	HW	2.5	CW	1.5	YC	1.5	BA	1.75									600	300	300	1	6	Heavy colluvium where planting sites are limited and/or talus slopes.
1051418		CWH	mm1	01	FDC	3	HW	2					CW	1.5							900	500	400	2	6	
1051419		CWH	mm1	02	PL	1.25							FDC	2							800	400	400	1.5	6	
1051420		CWH	mm1	03	FDC	2							CW	1							800	400	400	2	3	
1051421		CWH	mm1	04	FDC	2							PW	2.5	CW	1					800	400	400	1.5	3	Pw comment applies.

ID	RE F	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES								STOCKING W/S			MIN INTE R TREE (M)	RG DEL AY	COMMENTS
		ZONE	SZ/VAR IANT	SITE SERI ES	1	HT (MI N)	2	HT (MI N)	3	HT (MI N)	4	HT (MIN)	1	HT (MIN	2	HT(MIN)	3	HT (MI N	4	HT(MIN)	TARGE T P&A (SPH)	MIN P&A (SPH)	MIN P (SPH)			
1051422		CWH	mm1	05	FDC	3	CW	1.5					PW	2.5							900	500	400	2	3	Pw comment applies.
1051423		CWH	mm1	06	CW	1.5	HW	2					FDC	3							900	500	400	2	6	
1051424		CWH	mm1	07	CW	2	FDC	4					HW	2.5	BA	1					900	500	400	2	3	
1051425		CWH	mm1	08	BA	1	CW	2					SS	4							900	500	400	1.5	3	True firs comment applies. Ba may be accepted up to 50% of the Mss pa.
1051426		CWH	mm1	09	CW	2							BA	1							900	500	400	1.5	3	
1051427		CWH	mm1	11	PL	1.25							CW	1							400	200	200	1	3	
1051428		CWH	mm1	12	CW	1															800	400	400	1.5	3	
1051429	01	CWH	mm2	01	FDC	2.25	CW	1	YC	1	HW	1.25	HM	1	BA	0.75					900	500	400	2	6	Fdc is preferred only on steep southerly aspects, where local climate is warmer/drier than normal, and it's application is based on presence in the local area.
1051430	01f	CWH	mm2	01	HM	1	HW	1.25	YC	1	CW	1	BA	0.75							900	500	400	2	6	Standard represents site type dominated by thick (>20cm) mor humus form and / or soils of the folisolic order.
1051431	02	CWH	mm2	02	FDC	1.5	PL	1.25					CW	0.75							800	400	400	2	6	
1051432	03	CWH	mm2	03	FDC	1.5	HW	1					CW	0.75	YC	0.75	HM	1			800	400	400	2	3	
1051433	04	CWH	mm2	04	FDC	1.5							CW	0.75	YC	0.75	HW	1			900	500	400	2	3	
1051434	05	CWH	mm2	05	FDC	2.25	YC	1	CW	1			BA	0.75	HM	1	HW	1			900	500	400	2	3	Fdc is considered preferred only on steep southerly aspects, and it's application is based on the presence in the local area.
1051435	06	CWH	mm2	06	HW	1.25	YC	0.75	CW	0.75			BA	0.75	HM	1	FDC	2.25			900	500	400	2	6	
1051436	07	CWH	mm2	07	HW	1	CW	1.25					BA	0.75	HM	0.75	YC	0.75			800	400	400	2	3	

ID	REF	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES								STOCKING W/S			MIN INTE R TREE (M)	RG DEL AY	COMMENTS
		ZONE	SZ/VAR IANT	SITE SERI ES	1	HT (MI N)	2	HT (MI N)	3	HT (MI N)	4	HT (MIN)	1	HT (MIN	2	HT(MIN)	3	HT (MI N	4	HT(MIN)	TARGE T P&A (SPH)	MIN P&A (SPH)	MIN P (SPH)			
1051437	08	CWH	mm2	08	CW	1.25	YC	1.25					BA	1	FDC	3	HW	1.75			900	500	400	2	3	
1051438	09	CWH	mm2	09	PL	1.25							YC	0.75							400	200	200	2	3	
1051439	10	CWH	mm2	10	CW	0.75							YC	0.75							800	400	400	1.5	3	
1051440		CWH	dm	01	FDC	3	HW	3	CW	1.5			PW	2.5							900	500	400	2	3	Pw comment applies Ss comment applies
1051441		CWH	dm	02	PL	1.25	FDC	2													400	200	200	1.5	3	
1051442		CWH	dm	03	FDC	2							CW	1	HW	2					800	400	400	2	3	
1051443		CWH	dm	04	FDC	3							CW	1.5	PW	2.5					900	500	400	2	3	Pw comment applies
1051444		CWH	dm	05	FDC	4	CW	2					PW	2.5	BG	3.5	HW	4			900	500	400	2	3	Pw comment applies
1051445		CWH	dm	06	CW	1.5	HW	3					FDC	3							900	500	400	2	6	
1051446		CWH	dm	07	FDC	4	CW	2	BG	3.5			HW	4							900	500	400	1.5	3	True firs comment applies
1051447		CWH	dm	08	BG	3.5	CW	2													900	500	400	1.5	3	True firs comment applies. Bg may be accepted up to 50% of MSS pa.
1051448		CWH	dm	09	CW	2							BG	3.5							900	500	400	1.5	3	
1051449		CWH	dm	11	PL	1.25															400	200	200	1.5	3	
1051450		CWH	dm	12	CW	1							HW	2	PW	2.5	SS	3			800	400	400	2	3	Pw comment applies Ss comment applies
1051451		CWH	dm	13/1 4	BG	3.5	CW	2					FDC	4							900	500	400	1.5	3	True firs comment applies
1051452		CWH	dm	15	CW	1.0															800	400	400	1.5	3	
1051453	Fdc 1	CWH	xm 2	01/0 4	FDC	3							HW	2	CW	1.5					900	500	400	2.0	3	

ID	REF	BEC			PREFERRED SPECIES								ACCEPTABLE SPECIES								STOCKING W/S			MIN INTE R TREE (M)	RG DEL AY	COMMENTS
		ZONE	SZ/V ARIA NT	SITE SERIES	1	HT (MI N)	2	HT (MI N)	3	HT (MI N)	4	HT (MIN)	1	HT (MIN	2	HT(MIN)	3	HT (MI N	4	HT(MIN)	TARGE T P&A (SPH)	MIN P&A (SPH)	MIN P (SPH)			
1051454	Fdc 2	CWH	xm 2	05/07	FDC	4	CW	2		BG	3.5										900	500	400	2.0	3	
1051455	CwHw 4	CWH	xm 2	06	CW	1.5	HW	2					FDC	3							900	500	400	2.0	6	Fdc acceptable on raised microsites only
1051456	CwBg	CWH	xm 2	08/13/ 14	CW	1.5	BG	3.5					BA	3.5							900	500	400	1.5	3	
1051457	Fdc/H w	CWH	xm 2	01	HW	2.0	FDC	3					CW	1	PW	2.5					900	500	400	2.0	3	Pw comment applies
1051459	Dr 4	CWH	vm 1	06/01/ 05/07/ 08/09	DR	4.0															1200	700	700	2.0	2	Maximum density does not apply to deciduous management. Refer to broadleaf management strategy.
1051460	HmBa 1	MH	mm1	01/03/ 04	HM	1	BA	.6	YC	1			SE	1							900	500	400	1.5	7	Limit Se to less than 20% of target stocking.
1051461	BaYc 1	MH	mm1	05/07	BA	.6	YC	1					HM	1							900	500	400	1.5	4	Elevated microsites on 07 site series
1051463	HmYc 1	MH	mm1	02	HM	.8	YC	.8					SE	.8	BA	.6					800	400	400	1.5	4	Limit Se to less than 20% of target stocking.
1051464	HmYc 2	MH	mm1	06	HM	.8	YC	.8					BA	.6							800	400	400	1.5	7	
1051466	Spruce 1	CWH	xm1 xm2	08	BG	3.5	CW	2	SS	1.5											900	500	400	2	3	Bg may be accepted up to 50% of the MSS pa. Ss comment applies.
1051469	Spruce 2	CWH	xm1 xm2	13	BG	3.5	CW	2	SS*	1.5*			FDC	4	SS	3.0					800	400	400	1.5	3	Bg may be accepted up to 50% of the MSS pa. Acceptance of Fdc limited to elevated mounds Ss comment applies.
1051472	Spruce 3	CWH	xm1 xm2	14	BG	3.5	CW	2	SS*	1.5*			SS	3.0							800	400	400	1	3	Bg may be accepted up to 50% of the MSS pa Ss comment applies.
1051474	Spruce 4	CWH	vm1	07/08/ 09	BA	2.25	CW	2	SS	4			HW	4	YC	1.5					900	500	400	2	3	Hw acceptable on well developed Mor humus with LFH > 10cm thick. Ss comment applies. Yc acceptable where present and performing well in pre-harvest stand.
1051488	Spruce 5	CWH	vm1	14	CW	1.5			SS	3			HW	3							800	400	400	1.5	3	All species on elevated microsites only. Ss comment applies.
1051489	Spruce 6	CWH	mm1	08	BA	1	CW	2	SS	4											900	500	400	1.5	3	True firs comment applies. Ba may be accepted up to 50% of the Mss pa. Ss comment applies.

*If weevil-resistant stock is used, as per Sitka Spruce (Ss) Stocking Standards *Additional Standards/Comments* below.

Reference Notes for Stocking Standards

This section sets out the stocking standards which will be applied in site plans throughout the term of the FSP.

Tree Species

'Ba' is amabilis fir
'Bg' is grand fir
'Cw' is western red cedar
'Fdc' is coastal Douglas fir
'Hm' is mountain hemlock
'Hw' is western hemlock
'Pl' is lodgepole pine
'Pw' is white pine
'Ss' is sitka spruce
'Se' is engelmann spruce
'Yc' is yellow cedar
'Dr' is red alder
'Mb' is bigleaf maple
'Act' is black cottonwood

'Biogeoclimatic unit' or 'BGC classification' means the zone, subzone, variant and site series described in the most recent field guide published by the Ministry of Forests for the identification and interpretation of ecosystems, as applicable to a harvested area.

'MIN' or 'Min' means minimum
'RR' means Root Rot
'CT' means Commercial Thin

The above tables are to be used in conjunction with the following restrictions on acceptance of species and other conditions.

Additional Standards/Comments

True Firs (*Abies spp.*)

Due to the risk of future infestation by the Balsam woolley adelgid, true firs will not be managed in pure plantations. Except as noted in the tables, where listed as a preferred species, true firs will not contribute more than 30% towards the target-stocking standard (TSS).

Pine

Western white pine (Pw)

Western white pine is a highly productive species with the potential for application to a wide range of site series in the CWHxm. However, due to disease risks associated with *Cronartium ribicola*, this potential is severely limited. Even with intensive management, and genetically resistant stock, survival is at risk at any point in the rotation. The following outlines the application of Pw as a preferred and acceptable species:

Preferred species status – several root disease stocking standards identify Pw as a preferred species. This will apply to sites where, due to terrain constraints, site preparation treatments are not physically possible. On dry sites, Pw will be managed in pure stands with intensive management (pruning to a minimum height of 2 meters with no less than 30% residual live

crown). The minimum free growing height has been modified to 3.5 meters to reflect this. Due to the survival risk even with pruning, the management intention will be to minimize the amount of area under pure western white pine management.

Acceptable Species Status - the intent is to establish a component and manage the risk of mortality. In this case, branch pruning will not be a commitment, but may take place in conjunction with a stand pruning treatment, subject to the availability of funding.

Douglas Fir (Fdc)

Douglas fir is accepted or preferred on relatively warm, well-drained sites across the CWHvm1, and the lowest portions of the CWHvm2. Additional standards have been inserted into the table, where applicable, which restrict or allow the acceptance of Fdc (ie. Fdc is acceptable on SSE to WSW aspects, or where naturally occurring in the preharvest stand and performing well, and on roadside and other areas with disturbed soils).

The tables also include a Fdc/Hw regime that can be applied on CWHvm1 01/03 sites where conditions are suitable (ie. well drained, south aspects, and mineral soil availability).

Phellinus weirii root rot is a significant indigenous pest in Douglas-fir management. The goal of management efforts is to limit the incidence to natural endemically low levels.

Forest Level Assessment

At the forest level, local knowledge is drawn upon to identify areas where root disease is prevalent. Where deemed appropriate and cost effective, root disease surveys over large areas are completed. These surveys are then used to identify specific areas for potential forest health treatment.

Stand Level Assessment

Management of root diseases begins with recognition of above ground symptoms during pre-harvest reconnaissance. BCTS engineers, foresters and some of our contractors are trained to recognize root disease at the early stages of cutblock development. Ocular identification and incidence estimates at this stage trigger more detailed assessments if deemed necessary.

Site Plans detail the management techniques for controlling root rot on a site-specific basis. The preferred option is to harvest, de-stump, and regenerate with coniferous species including Douglas-fir. Other options may include conversion to red alder or western white pine without de-stumping.

Sitka Spruce (Ss)

Sitka spruce leader weevil damage is a concern throughout the FSP area. If weevil-resistant planting stock is not used this species is limited to a minor component of 10% of the target stocking standard. Sitka spruce must display a healthy leader and meet minimum height requirements to be accepted as a crop tree at free growing.

When weevil-resistant planting stock is used, a substantially higher percentage of spruce is possible. If improved "A" Seed is used (from selected orchard-grown, weevil-resistant trees (R+87)), up to half of the stand could be planted with Sitka spruce in moderate- or high-hazard areas. If "B+" seed is used (from naturally resistant stands (R+64)), exercise caution; only about a third of the stand should be planted with Sitka spruce.

Yellow Cedar/Cypress (Yc)

Yellow Cedar/Cypress is a high valued species that can move from “acceptable” to “preferred” status depending on micro-climate and other factors. The tables indicate where and within which regimes it is possible to interchange between Western Red Cedar (Cw) and Yc.

Western Hemlock (Hw)

The CWHxm2 within the GBR South TSA represents the northern limit, and the wettest portion, of the variant. It also occurs in transition to the CWHmm1 and CWHvm1. Within this geographic area of the variant, western hemlock is highly productive both in pure stands as well as in mixtures with Douglas-fir.

Due to site characteristics such as thick forest floors or aspect, BCTS may exercise the option to manage natural Hw regeneration as a major component (as a preferred species). This is expected to occur predominately in conjunction with artificial regeneration of Douglas fir. The standards tables reflect this option, and identify it with the suffix “t” (transition).

Hemlock dwarf mistletoe is a significant forest health concern because of its ability to spread from the overstorey into canopy openings created by harvesting. Management efforts are directed to limiting this spread potential rather than to eradication. When indicated at the site plan level by the prescribing forester, the following techniques may be employed to limit the spread and /or reduce the incidence in the regenerating stand:

- Locating perimeter falling boundaries to include heavily infected trees within the cutblock, and designing retention patches or other reserves to exclude heavily infected trees;
- where existing stand structure permits it, selectively harvesting edges to remove infected trees;
- 3 meter knock down of advance, mistletoe-infected Hw regeneration;
- regeneration of alternative immune species within 20 meters of infected edges.

Management Strategies for Heavy Colluvium or Talus Slope sites.

The stocking tables include four separate regimes for sites that are typically difficult to regenerate due to accumulations of rock colluvium or talus slopes. The timber on these sites is often of high quality, and of sufficient volumes to justify an economic logging chance. However, regenerating these sites is difficult due to limited plantable spots and/or a lack of suitable seedbed for natural regeneration. Stocking densities have been lowered accordingly to account for these conditions.

Broadleaf Management Strategy

BCTS has pursued conversion of deciduous stands in the GBR South TSA. There are also virtually no immature stands on line for future opportunities. In recognition of this, BCTS may manage for the regeneration of broadleaf timber crops on a limited portion of the landbase, where the

combination of economic and site factors make it a viable option up to a maximum of 20 ha/year.

Sites will be selected for their contribution to the achievement of the following objective(s):

- root disease amelioration
- addressing localized age class imbalances
- tree species diversity
- wildlife habitat
- visual resource management, as a component of total chance planning and /or visual rehabilitation.

Red alder will be the primary species under management, and a proposed sawlog silviculture regime is included. Trials with Bigleaf maple may be pursued to gain experience in its management on a very limited basis. Black cottonwood will be rarely regenerated due to low market value and limited end product uses. Sites selected for red alder management will generally be moist to wet, nutrient medium to very rich. Its application on zonal sites, as listed in the Stocking Standards tables, will be targeted at the fresh, nutrient poor to medium component of the series (4 / B – C), denoted as 01(f).

High Elevation Forestry

Regeneration difficulties are directly related to climatic exposure (wind and snow), depth of snow pack and short growing season within the Mountain Hemlock Zone. Minimum inter-tree spacing is reduced, as shown in the table, to account for natural clumpiness of regeneration in most cases. Micro-climatic factors such as aspect, presence of cold air drainage, exposure to wind, and elevation must be taken into consideration during cutblock planning. Decisions will be made on cutblock size and silviculture system for each development area such that regeneration objectives and specifically stocking standards can be met. The application of Engelmann Spruce as a minor component must be used with caution as it is being extended beyond its normal range. However, some success has been demonstrated on other areas within the MHmm1 and CWHmm. It will only be used on a “trial basis”, initially until local knowledge, success, and reliability can be realized.

Minimum Horizontal Inter-Tree Spacing

The Provincial stocking standard guidelines were developed on the assumption of a 2.0 meter minimum inter-tree spacing. In some cases the BCTS stocking standards vary this to a minimum value of less than 2.0 meters. Generally, this reduction is directed towards site series where management experience has shown this to be required. Typically, this involves sites with one or more of the following characteristics:

- Sites dominated by colluvium, those occurring as mosaics with non-productive rock (site series 02 / bedrock), and morainal sites with a high coarse fragment content (site series 03).
- Very moist to wet sites (site series 06 / 07) where irregularly spaced natural mounds are the most productive microsites, often occurring in mosaic with natural non productive
- Wet sites (site series 12) where irregularly spaced mounds are the only productive microsites.
- Roadside debris piles that do not represent a significant loss of productive site (i.e. are less than 50m² ground surface area), or pose a stability concern or fire hazard will, as a general

rule, will remain untreated. For ground based harvest systems in second growth stands, an attempt will be made to leave these small piles dispersed throughout the cutblock. Minimum stocking standards will be maintained in these areas with and intertree spacing of 1.0m around slash piles or heavy slash accumulations. For heavy road side slash accumulations, site preparation is the priority and will focus on rearranging the slash to achieve target stocking.

Note that these standards are considered a minimum in terms of a free growing sampling parameter. As such, they will be applied only where site conditions dictate that a deviation from the provincial standard is required, and therefore should not be construed as a standard of management. The objective will be to manage to the provincial target of 2.0 meters.

Regeneration Date

Regeneration date has been shortened in the case of deciduous management to reflect the critical nature of early plantation establishment.