B.C. Timber Sales
Strait of Georgia Business Area

Loughborough
Forest Stewardship Plan
FSPTS # 138

Original approved August 24, 2007
Consolidated to Amendment # 1 effective April 1, 2008 (LUO)
Consolidated to Amendment # 2 effective February 17, 2009 (mamu strategy)
Consolidated to Amendment # 3 effective November 26, 2009 (SCC Order amendment)
Consolidated to February 1, 2013 request to extend term, administrative adjustments

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FSP Amendment #4

1. **Date of Submission**

The date of submission of this Forest Stewardship Plan (FSP) Administrative Adjustments and extension of term is **February 1, 2013**.

2. **Term of the FSP (FRPA s .6(1)(a))**

The term of this FSP is 5 years from the date of commencement which is August 24, 2007.

3. **Commencement of Term (FRPA s. 6(1)(b))**

The Commencement Date for the term of this FSP is August 24, 2007. A request is made under *FRPA section 6(2)* to extend the term for 5 years, commencing August 24, 2012, ending August 24, 2017.

4. **Map (FRPA s. 5(1)(a)) and (FPPR s. 14)**

The attached FSP maps 1 and 2 show the boundaries of the forest development units (FDUs) under this FSP. The maps also show the areas that are excluded from the FDUs and from this FSP. This FSP includes the Fulmore, Gray, Estero, and Thurlow, Landscape Units. The established Landscape Unit boundaries have been used as FDUs for this FSP, except on the North edge of the Fulmore LU where the FDU boundary equals the TFL 25 boundary.

Maps associated with Amendment # 3 have been updated to reflect updated grizzly bear polygons.

4.1 Protection of Cutblocks and Roads from FDP to FSP (FRPA s. 196(1), FPPR s.110, (FPPR s. 14(1)(c))

The attached FSP maps show the cutblocks and roads that were included in Forest Development Plans (FDP) that are within an FDU under this FSP and were considered approved under FRPA s.196(1) at the time the original FSP was submitted, including those cutblocks referred to in FPPR s.110. These above mentioned blocks are all included in an FDU and covered under this FSP. Section 196 cutblocks from the TSL A64729 are included on this amendment.

4.2 Designations in Effect at Date of Submission of this FSP Amendment #3 (FPPR s.14(3)) and Land Act s. 93.4

The FSP maps illustrate the designations and content requirements described in FPPR s.14(3) that were in effect on the Date of Submission of Amendment #1, including, for ease of reference, the designations listed in Table 1, below.

Table 1. FPPR 14(3) Designations for Loughborough FSP Amendment #3

FPPR 14 (3)(a) Ungulate Winter Ranges	**LU**	**Date Designated**
UWR U1-005	Fulmore	May 16, 2007

FPPR 14 (3)(b) Wildlife Habitat Areas	**LU**	**Date Designated**
None Designated		
FPPR 14 (3)(c) Fisheries Sensitive Watersheds	**LU**	**Date Designated**
None Designated		
FPPR 14 (3)(d) Lakeshore Management Zones	**LU**	**Date Designated**
None Designated		
FPPR 14 (3)(e) Scenic Areas	**LU**	**Date Designated**
Scenic areas as established by the District Manager	All	December 14, 2005
FPPR 14 (3) (f) L1 Lake	**LU**	**Date Designated**
None Designated		
FPPR 14 (3) (g) Community Watersheds	**LU**	**Date Designated**
None Designated		
FPPR 14 (3)(h) Old Growth Management Areas	**LU**	**Date Designated**
None Designated		
FPPR 14 (3)(i) Commercial Timber Harvesting Prohibited	**LU**	**Date Designated**
Central Coast Designated Area No. 2	Estero	May 11, 2006

4.3 Areas Within FDU's Subject to a Road Permit or Timber Sale Licence But Not **Subject to this FSP Amendment #3(FPPR s. 14 (3)(k))**

For the purposes of FPPR s.14(3)(k), the FSP maps identify the areas that are subject to a road permit or Timber Sale Licence in effect prior to approval of the FSP. The Forest Practice Code of British Columbia Act (FPC) and regulations will continue to apply to these permits as per FRPA s.197(7).

5. Results and Strategies

5.1 Land Use Objectives (FPPR s.1 definition)

5.1.1 Order Establishing South Central Coast Land Use Objectives (SCCO)

The South Central Coast Order came into effect August 2, 2007. Land Use Objectives have been established and subsequently amended by order pursuant to section 93.4 of the Land Act.

5.1.2 Objectives for Landscape Level Biodiversity (SCCO s.14)

1)

a) For each site series surrogate in a landscape unit, retain an amount of old forest equal to an amount of old forest equal to or greater than the landscape unit default target listed in schedule 4 (using site series surrogate targets listed in Schedule 4(b)), except where alteration or harvesting is required for road access, other infrastructure, or to address a safety concern.

b) For each site series surrogate listed in Schedule 4(c), also maintain an amount of old forest equal to or greater than that specified for each site series surrogate listed in Schedule 4(c).

c) In addition to (1a) above, for those site series surrogates listed in Schedule 4(d), retain an additional amount of old growth forest within each of the landscape units listed equal to or greater than the area (ha) for each site series surrogate.

d) In order to satisfy the requirement in 14 (1)(c), a qualified professional may identify and retain the amount of old growth forest for each site series surrogate identified in Schedule 4(d) in any of the landscape units identified in schedule 4 that are within the area covered by their Forest Stewardship Plan.

2)

a) As an alternative to 14(1)(a), for each site series, or grouping of site series in a landscape unit, retain an amount of old forest equal to or grater than the landscape unit default target listed in Schedule 4, (using site series or site series grouping targets listed in Schedule 4(a), except where alteration or harvesting is required for road access, other infrastructure, or to address a safety concern.

b) As an alternative to 14(1)(b), for each site series or site series grouping in Schedule 4(e) also maintain an amount of old forest equal to or greater than that specified for each site series or site series grouping listed in Schedule 4(e).

3) Where there is less than the default old forest target available in a landscape unit required in 14(1) or 14(2) as the case may be, to the extent practicable, recruit forest to meet the representation requirements within 250 years.

4) Maintain, in each landscape unit, to the extent practicable, less than 50% of each site series or site series surrogate for each of the landscape units listed in Schedule 4 in mid-seral forest age classes.

5) *Where there is more than 50% of any site series or site series surrogate for each of the landscape units listed in Schedule 4 in mid-seral age classes, then, to the extent practicable, reduce the mid-seral age classes in that site series or site series surrogate in that landscape unit to less than 50% within 80 years.*

6) *Despite subsection (1)(a), (2)(a), and (3) less that the default target amount of old forest may be retained in a landscape unit after:*
   a) *information-sharing or consultation with the First Nation(s);*
   b) *a landscape unit habitat assessment for species at risk and regionally important wildlife is completed by a qualified professional;*
   c) *old forest is retained to provide sufficient habitat to sustain species at risk and regionally important wildlife, based on the assessment in (6)(b);*
   d) *old forest is retained to meet the risk managed target in Schedule 4; and*
   e) *an adaptive management plan is developed and implemented to the extent practicable.*

7) *To the extent practicable, include within old forest retention areas, stands of monumental cedar for future cultural cedar use, red and blue-listed plant communities, habitats important for species at risk, ungulate winter range, and regionally important wildlife, including, but not limited to:*
   a) *Mountain goats;*
   b) *Grizzly bears;*
   c) *Northern goshawks;*
   d) *Tailed frogs; and*
   e) *Marbled murrelets.*

Definitions:

"mid-seral" means a stand of trees 40 years or older but less than:
   a) *80 years for the Coastal Western Hemlock biogeoclimatic zone;*
   b) *100 years for the Interior Cedar – Hemlock biogeoclimatic zone;*
   c) *120 years for the Engelmann Spruce – Subalpine Fir biogeoclimatic zone; and*
   d) *120 years for the Mountain Hemlock biogeoclimatic zone.*

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

"old forest" means a stand of trees 250 years or older.

"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, acting under that association's code of ethics and subject to disciplinary action by that association; and*
   b) *The individual is acting within that individual's area of expertise.*

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:
   a) *Watershed assessment;*
   b) *Adaptive management plan; and*
   c) *Site specific information*

"adaptive management plan" means, for the purposes of this Order, a monitoring or research initiative that is developed and implemented during the operational planning and primary forestry activity phase to examine the outcomes of management strategies and practices that vary from default requirements.

FDU	Result or Strategy
All	1. Subject to subsection 3 of this strategy, the holder(s) of the FSP will not carry out or authorize timber harvesting or road construction if doing so would result in the amount of old forest existing to drop below: a) the old forest retention targets as specified in Schedule 4 of the SCCO using site series surrogate targets listed in Schedule 4 (b), except where alteration or harvesting is required for road access, other infrastructure, or to address a safety concern; b) the old forest retention targets as specified in Schedule 4(c) of the SCCO for those site series surrogates listed in Schedule 4(c); and c) the amount of old forest retention targets as in Schedule 4(d) of the SCCO for those site series surrogates listed in Schedule 4(d), subject to subsection 2. 2. The amount of old growth forest required to satisfy the target amounts as specified in Schedule 4 (d) for landscape units identified in Schedule 4(d) that are within the FDU's of the FSP may be identified, by a qualified professional, within any or all of the FDU's included in this FSP. 3. As an alternative to: a) section 1 (a) of this strategy, the holder(s) of the FSP will not carry out or authorise timber harvesting or road construction if doing so would result in the amount of old forest existing to drop below the old forest retention targets as specified in Schedule 4 of the SCCO using site series or site series grouping targets listed in Schedule 4 (a), except where alteration or harvesting is required for road access, other infrastructure, or to address a safety concern b) section 1(b) of this strategy, the holder(s) of the FSP will not carry out or authorise timber harvesting or road construction if doing so would result in the amount of old forest existing to drop below the old forest retention targets as specified in Schedule 4 of the SCCO using site series or site series grouping targets listed in Schedule 4 (e). 4. Where there is insufficient old forest to meet the retention targets as per subsection 1, 2, or 3of this strategy, prior to carrying out or authorizing the harvest of timber, the holder(s) of the FSP, will to the extent practicable, prepare a recruitment strategy that will meet the retention targets within 250 years. 5. The holder(s) of the FSP will not carry out or authorize primary forest activities within any of the site series surrogate listed in the applicable Schedule as per section 1, 2 or 3 of this strategy, of this strategy, if doing so would result in the amount of mid-seral forest in that site series or site series surrogate to be greater than 50%, to the extent practicable. 6. If the amount of mid-seral forest in a site series surrogate listed in the applicable Schedule as per section 1, 2, or 3 of this strategy in a landscape unit that is included in this FSP exceeds 50%, the holder(s) of the FSP will, in cooperation with other FSP holders, reduce the amount of mid-seral forest in a site series surrogate to less than 50% within 80 years, to the extent practicable.

FDU	Result or Strategy
	7. Despite sections 1(a), 3 or 4 of this strategy, if the amount of existing old forest within a landscape unit is less than the specified retention target as listed in the applicable Schedule as per section 1, 2, or 3 of this strategy, the holder(s) of the FSP will not carry out or authorize timber harvesting or road construction until after: a) Information-sharing or consultation has taken place with the applicable First Nation(s); b) A landscape unit habitat assessment for species at risk and regionally important wildlife is completed by a qualified professional; c) Old forest is retained to provide sufficient habitat to sustain species at risk and regionally important wildlife, based on the assessment in section 7(b) of this strategy; d) Old forest is retained to meet the risk managed target in Schedule 4; e) An adaptive management plan is developed and implemented to the extent practicable. 8. If the holder(s) of the FSP is involved in delineating old forest retention areas, the holder(s) of the FSP stands or monumental cedar for future cultural cedar use, red and blue-listed plant communities, habitats important for species at risk, ungulate winter range, and regionally important wildlife will be included to the extent practicable. 9. Subsection 3 and 4 of this strategy take effect on December 30, 2009.

5.1.3 Order Establishing Provincial Non-Spatial Old Growth Objectives

The Order Establishing Non-spatial Old Growth Objectives (effective June 30, 2004) (the Old Growth Order) clarifies the amount of area available for timber harvesting. The Old Growth Order is not in effect for the area to which the old forest objectives apply as established as part of the South Central Coast Order, as specified in Part B of the Old Growth Order.

5.2 Objectives prescribed under FRPA s. 149 and the South Central Coast Order(SCCO)

5.2.1 Wildlife and Biodiversity (FPPR s. 9 and 9.1)

➢ Landscape Level (FPPR S. 9)

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

The holder(s) of the FSP will undertake to comply with FPPR s. 64 and 65. In accordance with FPPR s. 12.1(3) and 12.1(7), the holder(s) of the FSP is exempt from the requirement to specify intended results and strategies set out in FPPR s. 9.

➢ Stand Level (FPPR s. 9.1)

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

5.2.2 Objectives for Stand Level Retention (SCCO s. 16)

1. Maintain forest structure and diversity at the stand level:

a) by establishing stand retention equal to or greater than 15% of the cutblock; and

b) in cutblocks 15 hectares or greater in size where a clearcut silvicultural system is used, by distributing 50% of the stand retention within the cutblock, except in second growth stands where a windthrow hazard assessment indicates a high biophysical hazard for windthrow.

2.To the extent practicable, include the following within stand retention:

a.habitat elements important for species at risk, ungulate winter range, and regionally important wildlife;

b.representation of ecosystems and plant communities that are red-listed or blue-listed in the watershed and landscape.

c.functional riparian forest adjacent to active fluvial units, forested swamps, fen and marsh wetlands and upland streams with unique climate and other characteristics;

d.Western red cedar and Yellow cedar in a range of diameters representative of the preharvest stand and important for future cedar use; and

e.wildlife trees and coarse woody debris.

Definitions:

"stand retention" means a forested area that is located:

a) in a cutblock or contiguous to a cutblock where a clearcut silvicultural system is used; or

b) in a cutblock where a partial cut silvicultural system is used.

"functional riparian forest" means forest that has reached hydrologically effective green-up and that also contains some large trees adjacent to streams to provide for large organic debris.

"hydrologically effective green-up" means the stage in the process of hydrologic recovery of a disturbed area at which a regenerating stand of trees has sufficient height, stocking density and canopy closure to prevent the hydrologic response of the disturbed area from causing material, adverse changes in hillside hydrology, stream channel condition, or stream flows;

FDU	**Result or Strategy for Objectives for Stand Level Retention (SCCO s. 16) & Stand Level (FPPR s. 9.1)**
All	1. The holder(s) of the FSP adopts s. 66 and 67 of the FPPR. 2. Where the holder(s) of the FSP carries out or authorizes timber harvesting the holder(s) of the FSP will ensure that the total amount of stand level retention identified is : a) Equal to or greater than 15% of the cutblock area[2] and to the extent practicable, includes the following: i) habitat elements important for species at risk, ungulate winter range, and regionally important wildlife; ii) representation of ecosystems and plant communities that are red-listed or blue-listed in the watershed and landscape. iii) functional riparian forest adjacent to active fluvial units, forested swamps, fen and marsh wetlands and upland streams with unique climate and other characteristics; iv) Western red cedar and Yellow cedar in a range of diameters representative of the preharvest stand and important for future cultural cedar use; and v) wildlife trees and coarse woody debris. 3. In cutblocks that are 15 hectares or greater in size where a clearcut silviculture system is used, the holder(s) of the FSP will ensure that at least 50% of the stand retention, is retained within the cublock boundaries, except where a windthrow hazard assessment indicated a high biophysical hazard for windthrow.

[2] Cutblock area for the purposes of the result/strategy means the net area to be reforested plus the road within the block. The cutblock area excludes WTP's, reserves, retention areas and non-productive areas.

5.2.3 Soils (FPPR s. 5)

The objective set by government for soils is, without unduly reducing the supply of timber from British Columbia's forests, to conserve the productivity and the hydrological function of soils.

The holder(s) of this FSP will undertake to comply with FPPR s. 35 and 36. In accordance with FPPR s. 12.1(1) and 12.1(5), the holder(s) of this FSP is exempt from the requirement to specify intended results and strategies set out in FPPR s. 5.

5.2.4 Wildlife (FPPR s. 7)

1. *The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for*
   a) *the survival of species at risk,*
   b) *the survival of regionally important wildlife, and*
   c) *the winter survival of specified ungulate species.*
2. *A person required to prepare a FSP must specify a result or a strategy in respect of the objective stated under subsection (1) only if the minister responsible for the Wildlife Act gives notice to 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 a 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 FSP is submitted for approval.*

Pursuant to s. 7(3) of the FPPR, persons required to prepare an FSP are exempt from the obligation of preparing a result or strategy in relation to the objective set out in FPPR s. 7(1) for the Queen Charlotte Goshawk within the CRFD as noted in the Order establishing WHA 1-085 to 1-088 and 1-090 to 1-096 dated December 1, 2004.

Ungulate Winter Range #U1-005 and associated general wildlife measures were established on June 20, 2006 and replaced on May 16, 2007 under GAR s. 9(2) and 12(1). The Order establishing UWR #U1-005 provides an exemption from the obligation to prepare result or strategies in relation to the objective for the winter survival of ungulates in the Strathcona TSA as per FPPR s. 7(3).

FDU	Species	Result or Strategy
All	Marbled Murrelet *(Brachyramphus marmoratus)*	1. Within areas to which the Notice for the Campbell River Forest District (dated July 7, 2004) established under s. 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

FDU	Species	Result or Strategy
		through the following process: a) Where a detailed survey (as described in *Standard Methods for Identifying Marbled Murrelet Habitat in British Columbia Using Air Photo Interpretation and Low-level Aerial Survey whereby* suitable nesting habitat is defined as Class 1, 2 or 3 Marbled Murrelet habitat), has been conducted by a qualified professional 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 of 139 ha, or b) Where a detailed survey has not been conducted (suitable nesting habitat is defined as age class 8 or 9 that is height class 4 or greater.): 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) 139 ha of suitable nesting habitat in the timber harvesting land base; and 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.

FDU	Species	Result or Strategy
All	Red-legged Frog *(Rana aurora)*	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: 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.

FDU	Species	Result or Strategy

FDU	Species	Result or Strategy
All	Keen's Long–eared Myotis *(Myotis keenii)*	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: 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 *(Ardea herodias fannini)*	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 will be delineated that meets the following criteria: a) Amount: to a maximum of 80 ha of which no more than 12 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	Coastal Tailed Frog *(Ascaphus truei)*	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: 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.

5.2.5 Objectives for Grizzly Bear Habitat (SCCO s. 17)

1. *Maintain grizzly bear habitat as set out in Schedule 2, except as provided in 17(2), 17(3) and 17(4).*

2. *Despite 17(1), grizzly bear habitat referred to in 17(1) may be altered or harvested after:*

   a) *obtaining from a qualified professional confirmation that the disturbance will not cause a material adverse impact to the suitability of the grizzly bear habitat;*

   b) *to the extent practicable, preparing and implementing an adaptive management plan; and*

   c) *engaging in information-sharing or consultation with the applicable First Nation.*

3. *Despite 17(1), grizzly bear habitat referred to in 17(1) may be altered or harvested after:*

   a) *obtaining from a qualified professional confirmation that the disturbance will not cause a material adverse impact to the suitability of the grizzly bear habitat;*

   b) *the alteration or harvesting is required to accommodate minor boundary adjustments to a proposed cutblock and will impact less than 5% of the area of a polygon set out in Schedule 2; and*

   c) *engaging in information sharing or consultation with the applicable First Nation.*

4. *Despite 17(1), grizzly bear habitat referred to in 17(1) may be altered or harvested after:*

   a) *A qualified professional has determined that:*

      i) *There is not other practicable alternative for road access, the road-right-of-way clearing width is the minimum safe width necessary to accommodate the road, and, to the extent practicable, avoids of minimizes any material adverse impact to grizzly bear habitat;*

      ii) *There is not other practicable alternative for other infrastructure; or*

      iii) *The alteration or harvesting is required to address a safety concern; and*

   b) *engaging in information sharing or consultation with the applicable First Nation.*

Definitions:

"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, acting under that association's code of ethics and subject to disciplinary action by that association; and*
- *b) the individual is acting within that individual's area of expertise.*

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:

a) Watershed assessment;
b) Adaptive management plan; and
c) Site specific information

FDU	Result or Strategy

All	1. Subject to subsection 2, the holder of the FSP will not carry out or authorize timber harvesting or road construction in grizzly bear habitat areas as identified in Schedule 2, except as specified in section 2, of this strategy.
	2. The holder(s) of the FSP may alter or harvest grizzly bear habitat areas identified in Schedule 1 after:
	a) Consistent with s. 17(2) of the SCCO;
	i) Obtaining from a qualified professional confirmation that the disturbance will not cause a material adverse impact to the suitability of the grizzly bear habitat;
	ii) To the extent practicable preparing and implementing an adaptive management plan; and
	iii) Engaging in information sharing or consultation with the applicable First Nation; or
	
	b) Consistent with s. 17(3) of the SCCO;
	i) Obtaining from a qualified professional confirmation that the disturbance will not cause a material adverse impact to the suitability of the grizzly bear habitat;
	ii) The alteration or harvesting is required to accommodate minor boundary adjustments to a proposed cutblock and will impact less than 5% of the area of a polygon set out in Schedule 2 of the SCCO; and
	iii) Engaging in information sharing or consultation with the applicable First Nation; or
	
	c) Consistent with s. 17(4) of the SCCO;
	i) A qualified professional has determined that:
	(1) There is no other practicable alternative for road access, the road-right-of-way clearing width is the minimum safe width necessary to accommodate the road, and, to the extent practicable, avoids or minimizes any material adverse impact to grizzly bear habitat.
	(2) There is no other practicable alternative for other infrastructure; or
	(3) The alteration or harvesting is required to address a safety concern; and
	
	ii) Engaging in information sharing or consultation with the applicable First Nation.

5.2.6 Objectives for Red-Listed and Blue-Listed Plant Communities (SCCO s. 15)

1. Protect each occurrence of a red-listed plant community during a primary forest activity.

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. Protect at least 70% of each occurrence of a blue-listed plant community in Schedule 6 during a primary forest activity or protect at least 70% of each type of blue-listed plant community that occurs in a landscape unit.

Definitions:
"blue-listed plant communities" means plant communities set out in Schedule 6.

"red-listed plant communities" means plant communities set out in Schedule 5.

FDU	Result or Strategy
all	1. Where a red-listed plant community[3] has been identified[6] or mapped[7] that is equal to or greater than 0.25 hectares[4] in size, the holder(s) of the FSP; a) will not carry out or authorize primary forest activities within the identified occurrence, or b) may disturb the identified occurrence by up to 5% of the occurrence area provided there is no other practicable alternative for road access, other infrastructure or to address a safety concern. 2. Where a blue-listed plant community[5] has been identified[6] or mapped[7] that is equal to or greater than 0.25 hectares in size, the holder(s) of the FSP a) will not carry out or authorize primary forest activity within the occurrence area if doing so would result in ≥ 30% of the occurrence to be harvested, or b) will not carry out or authorize timber harvesting if doing so would result in ≥30% of each type of blue-listed plant community that occurs over a landscape unit to be harvested.

5.2.7 Objectives for Important Fisheries Watersheds (SCCO s. 8)

1. Maintain an equivalent clearcut area of less than 20% in important fisheries watersheds as set out in the areas shown in Schedule 3.

2.Despite subsection (1),an equivalent clearcut area of more than 20% may be maintained after:

a) information-sharing or consultation with the applicable First Nation;

b) a coastal watershed assessment or similar assessment of watershed sensitivity to forest development disturbance is completed by a qualified professional;

c) maintaining an amount, type and distribution of forest cover that is sufficient to sustain natural hydrological and fluvial processes, based on the assessment in subsection 2(b); and

[3] red-listed plant communities are plant communities that are rare, threatened or extirpated in British Columbia and area set out in Schedule 5 of the Ministerial Order for the South Central Coast as advertised on August 2, 2007
[4] The EBM 2007 Operational Guidebook recommends a minimum stratification size of 0.25 ha for red-listed and blue-listed plant communities.
[5] blue-listed plant communities are plant communities that are of special concern in British Columbia and are set out in Schedule 6 of the Ministerial Order for the South Central Coast as advertised on August 2, 2007.

[6] identified occurrences are meant to denote where terrestrial ecosystem mapping to standards defined in the document *Standards for Terrestrial Ecosystem Mapping In B.C. (RIC 1998* does not exist.
[7] mapped occurrences are meant to denote where terrestrial ecosystem mapping to standards defined in the document *Standards for Terrestrial Ecosystem Mapping In B.C. (RIC 1998)* does exist.

d) to the extent practicable, an adaptive management plan is developed and implemented.

Definitions:

"equivalent clearcut area" means an indicator that quantifies the percentage of the forested portion of a watershed where the hydrologic response resulting from alteration of the forest by harvesting, fires, insects and disease is equivalent to the hydrologic response to a clearcut.

"important fisheries watersheds" means watershed areas identified in Schedule 3, except watersheds composed of S5 and S6 streams, as defined in the Forest and Range Practices Act flowing directly into the ocean.

"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, acting under that association's code of ethics and subject to disciplinary action by that association; and
b) The individual is acting within that individual's area of expertise.

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:

a) Watershed assessment;
b) Adaptive management plan; and
c) Site specific information

"adaptive management plan" means, for the purposes of this Order, a monitoring or research initiative that is developed and implemented during the operational planning and primary forestry activity phase to examine the outcomes of management strategies and practices that vary from default requirements.

5.2.8 Objectives for Upland Streams. (SCCO s. 12)

1. *For the watersheds in schedule 3, maintain 70% or more of the forest, in the portion of the watershed where upland streams occur, as functional riparian forest.*

2. *For the purposes of subsection (1), allocate retention to include upland stream reaches with unique microclimate or other rare ecological or geomorphological characteristics.*

3. *Despite subsection(1), less than 70% of the forest in the portion of the watershed occupied by upland streams may be maintained as functional riparian forest after:*

    (a) information sharing or consultation with the applicable First Nation

    (b) a coastal watershed assessment or similar assessment of watershed sensitivity to forest development disturbance is completed by a qualified profesional;

    (c) maintain amount, type and distribution of forest cover that is sufficient to sustain natural and hydrological and fluvial processes, based on the assessment in subsection (3)(b); and

(d) developing and implementing an adaptive management plan to the extent practicable,.

Definitions:

"upland streams: means streams with a slope greater than 5% that are classified as S4 to S6 in section 47 of the Forest Planning and Practices Regulation.

"functional riparian forest" means forest that has reached hydrologically effective green-up and that also contains some large trees adjacent to streams to provide for large organic debris.

"hydrologically effective green-up" means the stage in the process of hydrologic recovery of a disturbed area at which a regenerating stand of trees has sufficient height, stocking density and canopy closure to prevent the hydrologic response of the disturbed area from causing material, adverse changes in hillside hydrology, stream channel condition, or stream flows;

"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, acting under that association's code of ethics and subject to disciplinary action by that association; and*
- *b) The individual is acting within that individual's area of expertise.*

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:

- *a) Watershed assessment;*
- *b) Adaptive management plan; and*
- *c) Site specific information*

"adaptive management plan" means, for the purposes of this Order, a monitoring or research initiative that is developed and implemented during the operational planning and primary forestry activity phase to examine the outcomes of management strategies and practices that vary from default requirements.

FDU	**Result or Strategy for Important Fisheries Watersheds & Upland Streams**
All	1. The holder(s) of the FSP will not carry out or authorize timber harvesting or road construction in a watershed that has been identified in Schedule 3 of the SCCO as an important fisheries watershed, a) if that watershed has an ECA of ≥20%; or, b) if proposed activities will result in < 70% of the forest in the portion of the important fisheries watershed where upland streams occur, being functional riparian forest, unless: (i) information sharing or consultation with the applicable First Nation has taken place; (ii) a coastal watershed assessment or similar assessment of watershed sensitivity

FDU	Result or Strategy for Important Fisheries Watersheds & Upland Streams
	to forest development disturbance has been completed by a qualified professional; (iii) the amount, type and distribution of forest cover that is sufficient to sustain natural hydrological and fluvial processes based on the assessment in 1(b)(ii) is maintained; and (iv) to the extent practicable, an adaptive management plan is developed and implemented . 2. In respect of important fisheries watersheds, the holder(s) of the FSP will: a) Share pertinent information with other FSP holders operating within the affected important fisheries watershed. b) make the results from the assessment conducted as per section 1(b) available to other FSP holders. 3. Where functional riparian forest in the portion of the watershed occupied by upland streams, is to be retained to meet subsection 1(a) or (b), the holder(s) of the FSP will allocate retention to include upland stream reaches with unique microclimate or other rare ecological or geomorphological characteristics.

5.2.9 Objectives for High Value Fish Habitat (SCCO s. 9)

1. *Adjacent to high value fish habitat, maintain a reserve zone with a width, on average, of 1.5 times the height of the dominant trees, and do not alter or harvest the forest in the reserve zones unless there is no practicable alternative.*

2. *For the purposes of subsection (1), the width of the reserve zone in any one location may be increased or decreased by up to 0.5 tree heights to address site specific values, including reserving critical habitat for species at risk.*

3. *Where some or all of the forest within the reserve zone required under subsection (1) has been previously altered or harvested, recruit functional riparian forest in that reserve zone, to the extent practicable.*

4. *Despite section (1) above, for the lower portion of the Klinaklini River, and Viner Creek, identified in Schedules 7(a) and 7(b), maintain a reserve zone 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, subject to information-sharing or consultation with the applicable First Nation. Current road access and infrastructure is exempt from this reserve provision.*

5. *Within the areas identified in the Allison Landscape Unit as set out in Schedule 7c, until March 31, 2014, and where an adaptive management plan is developed and implemented, apply the reserve zone in section (1) above to critical spawning and rearing areas for anadromous fish runs only.*

5.2.10 Objectives for Aquatic Habitat That is Not High Value Fish Habitat (SCCO s. 10)

1. *Adjacent to the following aquatic habitat:*
   a) S1 to S3 streams as defined in the Forest and Range Practices Act;
   b) lakes greater than 0.25 ha; and

c) marsh and fen wetlands greater than 0.25 ha

Retain 90% of the functional riparian forest in a management zone width on average, of 1.5 times the height of the dominant trees.

2. *The width of the management zone in subsection (1) may be increased or decreased by 0.5 tree heights, in any one location, to address site specific values, including reserving critical habitat for species at risk.*

3. *Despite subsection (1) and (2), a FSP may comply with the provisions for the management of riparian management areas in accordance with the Forest and Range Practises Act and the regulations made thereunder, including section 8 of the Forest Planning and Practises Regulation, for S1 to S3 streams and lakes, and marsh and fen wetlands greater than 0.25 ha.*

4. *Before altering or harvesting within the riparian management area described in subsection (3):*

   a) ascertain and retain the amount of functional riparian forest sufficient to maintain stream bank stability and stream channel integrity;

   b) develop and implement an adaptive management plan to the extent practicable and

   c) engage in information sharing or consultation with the applicable First Nation.

5. *Where some or all of the forest required in subsection (1) or in subsection(3) has been previously altered or harvested, to the extent practicable, recruit functional riparian forest in that management zone or area.*

<u>Definitions</u>:

"high value fish habitat" means critical spawning and rearing for anadromous and nonanadromous fish including:

(a) estuaries (including eel grass beds, and salmonid and eulachon rearing areas);

(b) wet flood plains (including main channel salmonid and eulachon spawning habitats, and off channel habitat used for rearing and spawning); and

(c) marine interface areas (including, shallow intertidal areas, kelp beds, herring spawning areas, and other nearshore habitats used by marine invertebrates for reproduction and rearing).

"hydrologically effective green-up"means the stage in the process of hydrologic recovery of a disturbed area at which a regenerating stand of trees has sufficient height, stocking density and canopy closure to prevent the hydrologic response of the disturbed area from causing material, adverse changes in hillside hydrology, stream channel condition, or stream flows;

"functional riparian forest" means forest that has reached hydrologically effective green up and that also contains some large trees adjacent to streams to provide for large organic debris.

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:

a) Watershed assessment;
b) Adaptive management plan; and
c) Site specific information

"adaptive management plan" means, for the purposes of this Order, a monitoring or research initiative that is developed and implemented during the operational planning and primary forestry activity phase to examine the outcomes of management strategies and practices that vary from default requirements.

5.2.11 Water, Fish, Wildlife and Biodiversity Within Riparian Areas (FPPR s. 8)

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

5.2.12 Stream, Lake and Wetland Riparian Classes (FPPR S. 47, 48, and 49)

FDU	**Result or Strategy for High Value Fish Habitat (SCCO s. 9) , Aquatic Habitat that is not High Value Fish Habitat, (SCCO s. 10) & Water, Fish, Wildlife and biodiversity within Riparian Areas** (FPPR s. 8)
All	1. For areas of timber harvesting or road construction carried out or authorized by the holder(s) of the FSP: a) adjacent to high value fish habitat: i) the riparian reserve zone (RRZ) width will be, on average, 1.5 times the height of the dominant trees, ii) the riparian management zone (RMZ) will be as specified in FPPR S. 47(4), 48(3) and 49(2), and iii) the riparian management area (RMA) will be the combined distance of the RRZ and the RMZ as specified in subsection 1 a) (i) and (ii); b) adjacent to aquatic habitat that is not high value fish habitat including S1 to S3 streams[8], lakes greater than 0.25 hectares, and marsh wetlands[9] and fen wetlands[10] greater than 0.25 hectares: i) the management zone will be, on average, 1.5 times the height of the dominant trees and 90% of the functional riparian forest will be retained within that management zone, and c) adjacent to: i) S4 that are not high value fish habitat, ii) S5 and S6 streams, and iii) wetlands, excluding marsh and fen wetlands greater than 0.25 hectares the width of the RRZ , RMZ and RMA will be as specified in FPPR S. 47(4) and 49(2);

[8] As defined in s. 47 of the FPPR.

[9] marsh wetlands are semi-permanent to seasonally flooded mineral wetlands dominated by emergent grass-like vegetation. Extension Note 45 "The Ecology of Wetland Ecosystems" by A. Banner and W. MacKenzie. March 2000.

[10] fen wetlands are peatland ecosystems that receive nutrient and water inputs from groundwater. fen wetlands have a large complement of plant species indicating mineral rich conditions. Extension Note 45 "The Ecology of Wetland Ecosystems" by A. Banner and W. MacKenzie. March 2000.

	2. Despite subsection 1, the holder(s) of the FSP may specify a width different than that required as per subsection 1(a)(i) and 1(b)(i) in any one location, provided that the difference does not exceed 0.5 tree heights and is required to address site specific values including reserving critical habitat for species at risk. 3. Despite subsection 1, for the purposes of 1(a)(ii),and (c), the holder(s) of the FSP may specify a riparian width different than that specified in 1. of this result/strategy, provided that: i)Any increase or decrease in width from section 1 of this result/strategy is specified in a written rationale signed by a qualified professional, prior to the commencement of the primary forest activity, and ii) Any increase or decrease in riparian reserve would maintain or increase the effectiveness and/or functioning of the riparian reserve and will be in accordance with the written rationale consistent with the Factors in Schedule 1 S. 2 of the FPPR. 4. Despite subsection 1(b)(i), the holder(s) of the FSP may specify an RMZ consistent with that specified in s. 47, 48 or 49 of the FPPR subject to subsection 5 of this result/strategy. 5. The holder(s) of the FSP may alter or harvest within the riparian management area specified in subsection 4 provided that the following have occurred: a) ascertain and retain the amount of functional riparian forest sufficient to maintain stream bank stability and stream channel integrity; b) to the extent practicable, develop and implement an adaptive management plan and monitor environmental impacts during any primary forest activity; and c) engage in information sharing or consultation with the applicable First Nation. 6. Where some or all of the forest required as specified in subsection 1a)(i), 1b)(ii) and 4 has been previously altered or harvested, the holder(s) of the FSP will recruit functional riparian forest in that reserve zone or management zone, to the extent practicable. 7. The holder(s) of the FSP will not alter or harvest the forest in the reserve zone as specified in subsection 1(a)(i), unless there is no other practicable alternative. 8. The holder(s) of the FSP will adopt FPPR s. 50, 51 and 52(2) as those sections were on the date of submission of this FSP as a result or strategy.

5.2.13 Retention in a Riparian Management Zone (FPPR S. 12(3))

FDU	Result or Strategy
All	1. If the holder(s) of the FSP authorizes or carries out cutblock harvesting that includes harvesting in a riparian management zone (RMZ), the level of retention within the riparian management zone will : a) reflect the factors in FPPR Schedule 1 s.2; and b) be specified by a qualified professional in a written rationale, prepared prior to commencement

FDU	Result or Strategy
	of the harvesting. except where an amount of retention has been specified to in s. 5.2.12 of the FSP.

5.2.14 Objectives for Forested Swamps (SCCO s. 11)

1. *Adjacent to forested swamps greater than 0.25 ha, retain 70% of the functional riparian forest in a management zone with a width, on average, equal to 1.5 times the height of the dominant trees.*

2. *For the purposes of subsection (1), the width of the management zone in any one location may be increased or decreased up to 0.5 tree heights to address site specific values, including reserving critical habitat for species at risk.*

3. *Despite subsection (1), an additional 10% of the forest in the management zone adjacent to the forested swamp may be altered or harvested where:*

   a) Alteration or removal is required for road access, other infrastructure , or to address a safety concern; or
   b) Where 70% retention would make harvesting the cutblocks economically unviable.

4. *Before altering or harvesting the functional riparian forest pursuant to subsection (3):*

   a) ascertain and retain the amount of functional riparian forest sufficient to maintain the integrity of the forested swamp;
   b, develop and implement an adaptive management plan to the extent; and
   c) engage in information sharing or consultation with the applicable First Nation.

5. *Where some or all of the forest within the management zone required in subsection (1), has been previously altered or harvested, to the extent practicable, recruit functional riparian forest in that management zone.*

Definitions:

"forested swamp" means a forested mineral wetland or a forested peatland with standing or gently flowing nutrient rich water in pools or channels and the water table is usually at or near the surface of the wetland or peatland. It does not include poorly drained areas transitional to uplands where Folisolic growing substrate(ie: 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 green up and that also contains some large trees adjacent to streams to provide for large organic debris.

"hydrologically effective green-up" means the stage in the process of hydrologic recovery of a disturbed area at which a regenerating stand of trees has sufficient height, stocking density and canopy closure to prevent the

hydrologic response of the disturbed area from causing material, adverse changes in hillside hydrology, stream channel condition, or stream flows;

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:

a) Watershed assessment;
b) Adaptive management plan; and
c) Site specific information

"adaptive management plan" means, for the purposes of this Order, a monitoring or research initiative that is developed and implemented during the operational planning and primary forestry activity phase to examine the outcomes of management strategies and practices that vary from default requirements.

FDU	Result or Strategy
All	1. For areas of timber harvesting or road construction carried out or authorized by the holder(s) of the FSP that are adjacent to forested swamps that are greater than 0.25 ha, the holder of the FSP will: a) Retain 70% of the functional riparian forest in a management zone with a width, on average, equal to 1.5 times the height of the dominant trees, of b) retain 60% of the functional riparian forest in a management zone with a width, on average, equal to 1.5 times the height of the dominant trees where: i) alteration or removal is required for road access, other infrastructure or to address a safety concern, or ii) where 70% retention would make harvesting the cutblocks economically unviable. 2. Despite subsection 1, the holder(s) of the FSP may specify a width different that that required as per subsection 1 in any one location, provided that the difference does not exceed 0.5 tree heights and is required to address site specific values, including reserving critical habitat for species at risk. 3. Before altering or harvesting the functional riparian forest under section 1(b) of this stratetgy, the holder(s) of this FSP will: a) Ascertain and retain the amount of functional riparian forest sufficient to maintain the integrity of the forested swamp; b) Develop and implement an adaptive management plan to the extent practicable; and c) Engage in information sharing or consultation with the applicable First Nation. 4. Where some or all of the forest required as specified in subsection 1 has been previously altered or harvested, the holder(s) of the FSP will recruit functional riparian forest in that management zone, to the extent practicable.

5.2.15 Objectives for Active Fluvial Units (SCCO s. 13)

1. *Retain 90% of the functional riparian forest on active fluvial units.*

2. *Despite subsection (1), up to an additional 10% of the forest on an active fluvial unit may be altered or harvested in accordance with subsection (3).*

3. *Before altering or harvesting the functional riparian forest pursuant to subsection (2):*

   a) *ascertain and retain the amount of functional riparian forest sufficient to maintain bank stability and channel integrity on the active fluvial unit;*

   b) *, develop and implement an adaptive management plan to the extent practicable; and*

   c) *engage in information-sharing or consultation with the applicable First Nation.*

Definitions:

"active Fluvial Unit" ("AFU") 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.

"functional riparian forest" means forest that has reached hydrologically effective green-up and that also contains some large trees adjacent to streams to provide for large organic debris

"hydrologically effective green-up" means the stage in the process of hydrologic recovery of a disturbed area at which a regenerating stand of trees has sufficient height, stocking density and canopy closure to prevent the hydrologic response of the disturbed area from causing material, adverse changes in hillslope hydrology, stream channel condition, or stream flows.

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:

a) Watershed assessment;
b) Adaptive management plan; and
c) Site specific information

"adaptive management plan" means, for the purposes of this Order, a monitoring or research initiative that is developed and implemented during the operational planning and primary forestry activity phase to examine the outcomes of management strategies and practices that vary from default requirements.

FDU	Result or Strategy
All	1. The holder(s) of the FSP will not carry out or authorize timber harvesting or road construction through functional riparian forest on an active fluvial units except where: a) the proposed activity will result in less than 10% of the functional riparian forest on the active fluvial unit being disturbed, or

FDU	Result or Strategy
	b) the proposed activities will result in greater than 10% but less than 20% of the functional riparian forest on an active fluvial unit being disturbed, provided that: (1) the amount of natural riparian forest that is sufficient to maintain bank stability and channel integrity on the active fluvial unit is retained; (2) develop and implement an adaptive management plan to the extent practicable; and (3) information-sharing or consultation with the applicable First Nation has occurred.

5.2.16 First Nations (SCCO s. 3,4,5,6,7.)

Objectives for First Nations' Traditional Forest Resources (Objective 3)

1. *Maintain traditional forest resources in a manner that supports First Nations' food, social, treaty and ceremonial use of the forest.*

Objectives for First Nations' Traditional Heritage Features (Objective 4)

1. *Protect traditional heritage features, other than culturally modified trees, and include a management zone of sufficient size to protect the integrity of the traditional feature.*

2. *Despite subsection (1), a traditional heritage feature, other than a cultural modified tree, may be altered or removed when, through information sharing or consultation with the applicable First Nation it is determined that:*

   a) the traditional heritage feature is not of continuing importance to the First Nation or:

   b) the alteration or removal is required for road access, other infrastructure, or to address a safety concern.

3. *Where information-sharing or consultation under subsection (2(b)) with the applicable First Nation identifies a material adverse impact to a traditional heritage feature that is of continuing importance to the applicable First Nation and there is no practicable alternative, identify specific measures to address or seek to accommodate the material adverse impact.*

Objectives for Culturally Modified Trees (Objective 5)

1. *In areas proposed for road construction and harvesting, identify and protect culturally modified trees and include a management zone of sufficient size to protect the integrity of culturally modified trees.*

2. *Despite subsection (1), a culturally modified tree may be altered or harvested when, through information sharing or consultation with the applicable First Nation, it is determined that:*

   a) the culturally modified tree is not of continuing importance to the First Nation; or

b) alteration or harvesting is required for road access, other infrastructure, or to address a safety concern; or

c) protection of all the culturally modified trees in the cutblock would make harvesting the cutblock economically unviable;

3. Where information sharing or consultation under subsection (2(b) and (c)) with the applicable First Nation identifies a material adverse impact to a culturally modified tree that is of continuing importance to the applicable First Nation and there is no practicable alternative, identify specific measures to address or seek to accommodate the material adverse impact.

4. Reserve culturally modified tree areas, at the landscape and stand level, where practicable, through information sharing or consultation with the applicable First Nation.

Objectives for Monumental Cedar (Objective 6)

1. Maintain a sufficient volume and quality of monumental cedar to support the applicable First Nation's present and future cultural cedar use of monumental cedar, following information sharing or consultation with the applicable First Nation, and to the extent practicable.

2. For the purposes of subsection (1) in areas where road construction and timber harvesting are proposed, identify and reserve monumental cedars where information sharing with the applicable First Nation has indicated the monumental cedar may be suitable for cultural cedar use.

3. Despite subsection (1) and (2), a monumental cedar may be harvested when, through information-sharing or consultation with the applicable First Nation, it is determined that:

a) The monumental cedar is not suitable or required for a cultural cedar use; or

b) The monumental cedar will be provided to the applicable First Nation; or

c) Harvesting the monumental cedar is required for road access, other infrastructure, or to address a safety concern.

4. Where information-sharing or consultation under subsection (3) with the applicable First Nation identifies a material adverse impact to a monumental cedar that is identified as being suitable for cultural use by the applicable First Nation, and there is no practicable alternative, identify specific measures to address or seek to accommodate the material adverse impact.

Objectives for Stand Level Retention of Western Red and Yellow Cedar (Objective 7)

1. Maintain a sufficient volume and quality of Western red cedar and Yellow cedar to support the applicable First Nation's cultural cedar use of Western red cedar and yellow cedar, to the extent practicable.

2. For the purposes of subsection (1), and where Cedar Stewardship Areas have been identified maintain and recruit western red cedar and yellow cedar in the Cedar Stewardship Areas to support the applicable First Nations' use of Western red cedar and Yellow cedar.

3. *Within a cutblock for the first 15% of the pre-harvest stand retained in stand level retention, as specified in section 16(1), design aggregate and dispersed stand retention to maintain a range of diameters of mature and old western red cedar and yellow cedar representative of the pre-harvest stand.*

Definitions:

"Traditional forest resources" means monumental cedar and other wild plant foods, botanical medicines and forest resources that are utilized by a First Nation for food, social or ceremonial purposes, and includes wildlife;

"Traditional heritage features" means culturally modified trees and other archaeological and historical artifacts, sites and locations that are important to the cultural practices, knowledge and heritage of a First Nation, but not including traditional forest resources.

"Culturally modified tree" means a tree that has been modified by First Nations people as part of their cultural use of the tree.

"culturally modified tree area" means an area where more than 10 culturally modified trees are all found within one tree length of each other.

"cedar stewardship areas" means areas identified in Schedule 8.

"cultural cedar use" means the use of monumental cedar or other cedar 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 or other cedar for purposes of sale, trade, barter, financing, or the production of assets.

"monumental cedar" means a large old Western red cedar tree or a large old yellow cedar tree that will fulfill the domestic needs of the applicable First Nation for cultural cedar use;

"information sharing or consultation" means information sharing by a person required to prepare a FSP or consultation by the Province, or both, as the context requires, when requested by the applicable First Nation for any applicable:

a) Watershed assessment;
b) Adaptive management plan; and
c) Site specific information

"adaptive management plan" means, for the purposes of this Order, a monitoring or research initiative that is developed and implemented during the operational planning and primary forestry activity phase to examine the outcomes of management strategies and practices that vary from default requirements.

FDU	Result or Strategy
All	1. The holder(s) of the FSP will periodically refer to applicable First Nations, areas identified for potential timber harvesting and road construction, if any, and request information respecting traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area within the identified areas. 2. Where information pertaining to traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area are identified as a result of information sharing

FDU	Result or Strategy
	or consultation including that referred to in subsection 1, the holder(s) of the FSP will evaluate through information sharing or consultation the nature and extent of possible site-specific traditional forest resources, traditional heritage features, and culturally modified trees and/or culturally modified tree area identified, including making reasonable efforts to share information or consult with the applicable First Nation in respect of the possible traditional forest resources, traditional heritage features, and culturally modified trees and/or culturally modified tree area. 3. The holder(s) of the FSP , when designing a cutblock or road, will identify a) the portion of the area occupied by traditional forest resources, traditional heritage features, and culturally modified trees and/or culturally modified tree area, b) the nature of the traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area c) whether or not the traditional forest resource are to be maintained, and/or whether or not the traditional heritage features, culturally modified trees and/or culturally modified tree area are to be protected, d) if the traditional forest resources need to be maintained, and/or if the traditional heritage features, culturally modified trees and/or culturally modified tree areas are to be protected, what constraints, if any, are to apply to the forest practices carried out on the area, and e) if constraints are required to protect culturally modified trees, a management zone of sufficient size to maintain and/or protect the integrity of the traditional heritage features, culturally modified trees will be established. 4. For each traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area that has been identified to be maintained and/or protected under subsection 3 the holder(s) of the FSP will carry out or authorize a person to carry out a forest practice only to the extent that the forest practice does not damage or render ineffective the traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area. 5. The holder(s) of the FSP, may alter or remove traditional heritage features and/or culturally modified trees that have been identified to be maintained under subsection 3 after information-sharing or consultation with the applicable First Nation determines that: a) The traditional heritage feature(s), and/or culturally modified trees that is not of continuing importance to the First Nation; b) Alteration or harvesting is required for road access, other infrastructure, or to address a safety concern; c) Protection of all of the culturally modified trees in the cutblock would make harvesting the cutblock economically unviable; and 6. Where information-sharing or consultation under subsection 5 (b) or (c) or 9, identifies a material adverse impact to a traditional heritage feature that is of continuing importance to the applicable First Nation and there is no practicable alternative, the holder(s) of the FSP will identify specific measures to address or seek to accommodate the material adverse impact.

FDU	Result or Strategy
	7. If during the normal course of forestry operations a previously unidentified monumental cedar, traditional heritage features, culturally modified trees and/or culturally modified tree area is encountered, the holder(s) of the FSP will: a) require operations within the cutblock or road to cease or be modified to the extent necessary to protect the monumental cedar, traditional forest resources, traditional heritage features, culturally modified trees and/or culturally modified tree area, b) modify the design of the cutblock or road to the extent necessary to conform with subsection 3 of this strategy, and c) authorize operations to resume within the cutblock or road to the extent that the operations are consistent with the modified design where required. 8. The holder(s) of the FSP will maintain a sufficient volume and quality of monumental cedar to support the applicable First Nations present and cultural cedar use of monumental cedar by identifying and reserving from harvest monumental cedars where information-sharing with the applicable First Nation has indicated that the monumental cedar may be suitable for cultural cedar use. 9. The holder(s) of the FSP may harvest monumental cedar(s) identified in subsection 8, provided that information-sharing or consultation with the applicable First Nation determines that: a) The monumental cedar is not suitable or required for a cultural use; or b) The monumental cedar will be provided to the applicable First Nation; or c) Harvesting the monumental cedar is required for road access, other infrastructure, or to address a safety concern; 10. In a cutblock where the pre harvest stand contains sufficient mature and old Western red cedar and yellow cedar, the holder(s) of the FSP will design aggregate and dispersed stand retention to maintain 15% of the existing mature and old Western red cedar and yellow cedar representative of the pre-harvest stand.

5.2.17 Cultural Heritage Resources (FPPR s. 10)

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

(a) the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and

(b) not regulated under the Heritage Conservation Act.

Section 1(2) of the South Central Coast Land Use Objective Order states "In accordance with section 5 of the Land Use Objective Regulation, the objective made in section 10 of the FPPR under the FRPA is disclosed as being in conflict with the South Central Coast Order.

The holder of the FSP is exempt from specifying a result or strategy for S. (b) of the objective for FPPR 10 in relation to the objective described in this Division, as per S. 12(4) of the FPPR, to the extent that doing so would conflict with the land use objective.

All	1. Objective (a) of the FPPR S. 10 objective is being met through Section 5.2.16 First Nations (SCCO s. 3,4,5,6,7.)

5.3 Objectives Established under Government Actions Regulation (GAR)

5.3.1 Visual Quality

Scenic Areas for the Campbell River Forest District were established by the District Manager on December 14, 2005 under GAR s. 7(1). Visual Quality Objectives for the Campbell River Forest District were established by the District Manager on December 14, 2005 under GAR s. 7(2).

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

FDU	Result or Strategy
All	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 land: 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; or b) included in the most current Visual Landscape Inventory; or, c) determined to be important by a qualified professional. 2. Road construction and/or timber harvesting carried out or authorized by the holder(s) of the FSP within scenic areas established on December 14, 2005 within the Campbell River Forest District, will be consistent with: a) the visual quality objectives as established by the District Manager on December 14, 2005; and b) the categories of visually altered forest landscape as defined in FPPR s. 1.1. 3. The holder(s) of the FSP will make application to the decision maker for exemption to carry out or authorize timber harvesting or road construction that would result in an alteration greater than specified in subsection 1 of this strategy where: 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: i) mimic naturally occurring landscape characteristics; and ii) retain timber that is not damaged, destroyed or threatened where safe, and operationally practicable.

6. Stocking Standards

The attached Appendix A 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.

6.1 Situations or Circumstances that determine whether Free Growing is Assessed on a Block Basis or Across Blocks

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

6.2 Regeneration Date and Stocking Standards, Free Growing Height

The Stocking Standards specify the regeneration date, free growing height and stocking standards for the situations or circumstances where FPPR S. 44(1) applies.

6.3 Situations or Circumstances that Determine when FPPR S. 44(4) and the Standards Applicable Under FPPR S.16(4) Applies

If the holder(s) of the FSP carries out or authorizes harvesting of special forest products, intermediate cuts or commercial thinning from an area within the Strathcona Timber Supply Area, the stocking standards in Appendix 1 of the FSP will be maintained on the area for twelve months following the completion of the harvesting.

7. Measures to Prevent the Introduction and Spread of Invasive Plants

Measures to Prevent the Introduction and Spread of Invasive Plants (FRPA s.47, FPPR s.17)

FRPA s. 47 requires that:

A person carrying out a forest practice or a range practice must carry out measures that are

(a) specified in the applicable operational plan, or

(b) authorized by the minister

to prevent the introduction or spread of prescribed species of invasive plants.

FPPR s. 17

For the purpose of section 47 [invasive plants] of the Act, a person who prepares a FSP 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	Result or Strategy

All	1. In these measures **"applicable area"** means an area where a) it is likely that forest practices carried out or authorized by the holder(s) of this FSP and/or the holder(s) of this FSP 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 a person'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 holder(s) of this FSP has not deemed the area to an active surface area. **"preferred seed"** means seed with the following attributes: 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; i) 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 ii) is of native origin. **"Priority invasive plants"** includes Gorse, Japanese Knotweed, Giant Knotweed, Scotch Broom, Purple Loosestrife, Yellow Iris. Additional priority invasive plants may be added to this list based on recommendations from the Coast Forest Region invasive plants specialist. 2. The holder(s) of the FSP will: a) distribute information to field staff on priority invasive plants that exist or threaten to establish within the plan area, b) direct field staff to report new incidences of priority invasive plants, c) update risk rating tables within 36 months of plan approval. 3. If the holder(s) of the FSP carries out or authorizes a forest practice in an applicable area the holder(s) of this FSP and/or the holder(s) of the FSP, within one year of completing the activity authorized in the timber sale licence or cutting permit, will: a) seed contiguous areas of exposed soil that exceed 0.1 ha giving preference to preferred seed that is: i) readily available, ii) comparable in cost to agronomic mixtures, and iii) comparable in effectiveness to agronomic mixtures; and 4. If newly introduced priority invasive plants are detected that are likely the result of the holder(s) of this FSP's forest practices; the holder(s) of the FSP will work with government agencies to; a) develop an eradication or management plan; and b) implement the eradication or management plan.

8. Signatures of Persons Required to Prepare Plan

RPF Signature: _____

Name: Kathryn Willis, R.P.F.

Position: Planning Forester, BC Timber Sales, Strait of Georgia Business Area

Date: Feb 21 2013

Holder(s) of this FSP Signature: _____

Name: Don Hudson

Position: Timber Sales Manager, BC Timber Sales, Strait of Georgia Business Area

Date: February 21, 2013

9.APPENDIX 1 Even Aged FSP Stocking Standards

Stocking Standards BC Timber Sales Loughborough FSP (Strait of Georgia Business Area)

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
10149 51	Fdc 1	CWH	xm1 xm2	01,04	FDC	3							CW	1.5	PW	2.5					900	500	400	2	3	Pw comment applies.
10149 52	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.
10149 53	Fdc 3	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 restriction #6 (Transition zones)
10149 54	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
10149 55	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 restriction #6 (Transition zones)
10149 56	Fdc 6	CWH	xm1 xm2	06	FDC	3	CW	1.5	HW	2			PW	2.5							900	500	400	2	6	Pw comment applies.
10149 57	Fdc 7	CWH	xm1 xm2	02	FDC	2	PL	1.25													400	200	200	1	3	
10149 58	Dr 1	CWH	xm1 xm2	01(f), 06	DR	10															900	600	600	2	2	Max density does not apply to deciduous management. (f) Refer to Broadleaf Management Strategy (Restriction #8).
10149 59	Dr 2	CWH	xm1 xm2	05,07 08,13	DR	10							MB	10							900	600	600	2	2	Max density does not apply to deciduous management. Refer to Broadleaf Management Strategy (Restriction #8)
10149 60	Dr 3	CWH	xm1 xm2	12	DR	10															900	600	600	1	2	Max density does not apply to deciduous management. Refer to Broadleaf Management Strategy (Restriction #8).
10149 61	Act 1	CWH	xm1 xm2	08,09 13,14	ACT	4															1200	900	900	2	2	Max density does not apply.

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
1014962	Act 2	CWH	xm1 xm2	10	ACT	4															400	200	200	1	2	Max density does not apply.
1014963	Act 3	CWH	xm1 xm2	15	ACT	4															900	600	600	1	2	Max density does not apply
1014964	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).
1014965	RR1	CWH	xm1 xm2	01,04 05,07	CW	2	PW	3.5													900	500	400	2	3	Pw comment applies. No site prep option.
1014966	RR2	CWH	xm1 xm2	01,04	CW	2	PW	3.5	FDC	3											900	500	400	2	3	Pw comment applies. Site prep option.
1014967	RR3	CWH	xm1 xm2	05,07	CW	2	PW	3.5	FDC	4	BG	3.5									900	500	400	2	3	Pw and true fires comments apply. Site prep option.
1014968	RR4	CWH	xm1 xm2	03	PW	3.5															800	400	400	1.5	3	Pw comment applies. No site prep, dry site option.
1014969	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.
1014970	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.
1014971	11	CWH	xm1 xm2	11	PL	2.5							CW	1	PW	2.5					400	200	200	1	3	Pw comment applies.
1014972	12	CWH	xm1 xm2	12	CW	1							HW	2	PW	2.5	SS	1.5			500	400	300	1	3	Pw comment applies.
1014973	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.
1014974	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.
1014975	15	CWH	xm1 xm2	15	CW	2															500	300	300	1	3	
1014976	CT1	CWH	xm1 xm2	01,05 07	FDC								HW		CW		PW				330	330	300			
1014977	CT2	CWH	xm1 xm2	01,05 07	FDC		HW		CW				PW								330	330	300			

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
1014978	CT3	CWH	xm1 xm2	01,05 07	FDC								HW		CW		PW				300	300	250			
1014979	CT4	CWH	xm1 xm2	01,05 07	FDC								HW		CW		PW				400	400	350			
1014980	HwBa1	CWH	vm1	01	HW	3	BA	1.75	CW	1.5			FDC	3							900	500	400	2	6	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.
1014981	HwBa2	CWH	vm1	06	HW	3	BA	1.75	CW	1.5			SS	3							900	500	400	2	6	Ss comment applies
1014982	CwHw1	CWH	vm1	03	CW	1	HW	2					FDC	2							800	400	400	1.5	6	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.
1014983	CwHw2	CWH	vm1	04	CW	1.5	HW	3					FDC	3	BA	1.75					900	500	400	2	3	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.
1014984	BaCw1	CWH	vm1	05	BA	1.75	CW	1.5					HW	3	FDC	3					900	500	400	2	3	Fdc acceptable on SSE to WSW aspects, roadside and rehabilitated temporary access structures with exposed soils.
1014985	BaCw2	CWH	vm1	07/08 /09	BA	2.25	CW	2					HW	4	SS	4					900	500	400	2	3	Hw acceptable on well developed Mor humus with LFH > 10cm thick. Ss comment applies.
1014986	CwSs	CWH	vm1	14	CW	1.5							HW	3	SS	3					800	400	400	1.5	3	All species on elevated microsites only. Ss comment applies.
1014987	FdcHw	CWH	vm1	01/03	FDC	3	HW	3	CW	1.5			BA	1.75							900	500	400	2	3	SSE to WSW aspect.
1014989	Coll 1	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.
1014990	Coll 2	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.

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
1014991	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.
1014992	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 750meteres in elevation.
1014993	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.
1014994	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.
1014995	CwYc1	CWH	vm2	09/11	CW	1	YC	1					HW	1.75							800	400	400	1.5	3	All species on elevated microsites only.
1014996	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.
1014997	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.
1015002		CWH	mm1	01	FDC	3	HW	2					CW	1.5							900	500	400	2	6	
1015003		CWH	mm1	02	PL	1.25							FDC	2							800	400	400	1.5	6	
1015004		CWH	mm1	03	FDC	2							CW	1							800	400	400	2	3	
1015005		CWH	mm1	04	FDC	2							PW	2.5	CW	1					800	400	400	1.5	3	Pw comment applies.

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
1015006		CWH	mm1	05	FDC	3	CW	1.5					PW	2.5							900	500	400	2	3	Pw comment applies.
1015007		CWH	mm1	06	CW	1.5	HW	2					FDC	3							900	500	400	2	6	
1015008		CWH	mm1	07	CW	2	FDC	4					HW	2.5	BA	1					900	500	400	2	3	
1015009		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.
1015010		CWH	mm1	09	CW	2							BA	1							900	500	400	1.5	3	
1015011		CWH	mm1	11	PL	1.25							CW	1							400	200	200	1	3	
1015012		CWH	mm1	12	CW	1															800	400	400	1.5	3	
1015013	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.
1015014	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.
1015015	02	CWH	mm2	02	FDC	1.5	PL	1.25					CW	0.75							800	400	400	2	6	
1015016	03	CWH	mm2	03	FDC	1.5	HW	1					CW	0.75	YC	0.75	HM	1			800	400	400	2	3	
1015017	04	CWH	mm2	04	FDC	1.5							CW	0.75	YC	0.75	HW	1			900	500	400	2	3	
1015018	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.
1015020	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	
1015022	07	CWH	mm2	07	HW	1	CW	1.25					BA	0.75	HM	0.75	YC	0.75			800	400	400	2	3	

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
1015023	08	CWH	mm2	08	CW	1.25	YC	1.25					BA	1	FDC	3	HW	1.75			900	500	400	2	3	
1015025	09	CWH	mm2	09	PL	1.25							YC	0.75							400	200	200	2	3	
1015027	10	CWH	mm2	10	CW	0.75							YC	0.75							800	400	400	1.5	3	
1015029		CWH	dm	01	FDC	3	HW	3	CW	1.5			PW	2.5							900	500	400	2	3	Pw comment applies Ss comment applies
1015032		CWH	dm	02	PL	1.25	FDC	2													400	200	200	1.5	3	
1015033		CWH	dm	03	FDC	2							CW	1	HW	2					800	400	400	2	3	
1015034		CWH	dm	04	FDC	3							CW	1.5	PW	2.5					900	500	400	2	3	Pw comment applies
1015035		CWH	dm	05	FDC	4	CW	2					PW	2.5	BG	3.5	HW	4			900	500	400	2	3	Pw comment applies
1015036		CWH	dm	06	CW	1.5	HW	3					FDC	3							900	500	400	2	6	
1015037		CWH	dm	07	FDC	4	CW	2	BG	3.5			HW	4							900	500	400	1.5	3	True firs comment applies
1015038		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.
1015039		CWH	dm	09	CW	2							BG	3.5							900	500	400	1.5	3	
1015040		CWH	dm	11	PL	1.25															400	200	200	1.5	3	
1015041		CWH	dm	12	CW	1							HW	2	PW	2.5	SS	3			900	500	400	2	3	Pw comment applies Ss comment applies
1015042		CWH	dm	13/14	BG	3.5	CW	2					FDC	4							900	500	400	1.5	3	True firs comment applies
1015043		CWH	dm	15	CW	2															900	500	400	1.5	3	
1017171	Fdc 1	CWH	Xm 2	01/04	FDC	3							HW	2	CW	1.5					900	500	400	2.0	3	

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
1017172	Fdc 2	CWH	Xm 2	05/07	FDC	4	CW	2		BG	3.5										900	500	400	2.0	3	
1017173	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
1017174	CwBg (t)	CWH	Xm 2	08/13 /14	CW	1.5	BG	3.5					BA	3.5							900	500	400	1.5	3	
1017175	Fdc/Hw (t)	CWH	Xm 2	01	HW	2.0	FDC	3					CW	1	PW	2.5					900	500	400	2.0	3	Pw comment applies
1017176	Dr 4	CWH	Vm 1	06/01 /05/0 7/08/ 09	DR	8															900	600	600	1.5	2	Maximum density does not apply to deciduous management. Refer to broadleaf management strategy.
1017177	HmBa 1	MH	mm	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.
1017178	BaYc 1	MH	mm	05/07	BA	.6	YC	1					HM	1							900	500	400	1.5	4	Elevated microsites on 07 site series
1017179	HmYc 1	MH	mm	02	HM	.8	YC	.8					SE	.8	BA	.6					800	400	400	1.5	4	Limit Se to less than 20% of target stocking.
1017180	HmYc 2	MH	mm	06	HM	.8	YC	.8					BA	.6							800	400	400	1.5	7	
	Spruce	CWH	xm1 xm2	08	BG	3.5	CW	2	SS	3.0											900	500	400	2	3	Bg may be accepted up to 50% of the MSS pa. Ss comment 4b applies.
	Spruce	CWH	xm1 xm2	13	BG	3.5	CW	2					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 4b applies..
	Spruce	CWH	xm1 xm2	14	BG	3.5	CW	2					SS	3.0							800	400	400	1	3	Bg may be accepted up to 50% of the MSS pa Ss comment 4b applies..
	Spruce	CWH	vm1	07/08 /09	BA	2.25	CW	2	SS	4			HW	4							900	500	400	2	3	Hw acceptable on well developed Mor humus with LFH > 10cm thick. Ss comment 4b applies.
	Spruce	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.

ID	Silv Strat Ref	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist.	Delay	Additional Standards/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 (sph)	Min P&A (sph)	Min P (sph)	(m)		
	Spruce	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 4b applies.

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. These stocking standards have all been previously approved in FDPs, with the exception of including Fdc as an acceptable species in the CWHvm2 01, 04, 05, and are otherwise presented without alteration in this text.

Stocking standards for deciduous species are considered experimental and are based on advice from scientific experts in the field of deciduous management. An interim red alder silviculture regime is presented for reference purposes, and the stocking standards should be evaluated in it's context.

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

'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

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

Additional Standards/Comments

1. True Firs

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).

2. 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 CWH xm. 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.

3. 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 restricts or allows the acceptance of Fdc (ie. Fdc is acceptable on SSE to WSW aspects 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 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.

4. Sitka Spruce (Ss)

Sitka spruce leader weevil damage is a concern throughout the FSP area. 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.

4 b Sitka Spruce (Ss) (Amendment #3)

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.

5. 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.

6. Western Hemlock

The CWH xm2 within the Strathcona TSA represents the northern limit, and the wettest portion, of the variant. It also occurs in transition to the CWH mm1 and CWH vm1. 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 it ability to spread from the overstory 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,
- 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.

7. 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 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.

8. Broadleaf Management Strategy

The BCTS has pursued conversion of deciduous stands in the Strathcona TSA, and there is a deciduous forest licence applicable to the area. 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).

9. 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 Englemann 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.

10. 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 base 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.

11. Regeneration Date

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