

Campbell River Natural Resource District

Campbell River Forest Stewardship Plan

BC Timber Sales, Strait of Georgia Business Area

0898322 B.C. Ltd./ K'omoks First Nation (holder of FL A91958)
0898322 B.C. Ltd./ K'omoks First Nation (holder of NRFL A94482)



BCTS
BC Timber Sales
Strait of Georgia

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Campbell River Forest Stewardship Plan

1. Application of this FSP (FRPA s. 3(4))

This Forest Stewardship Plan (FSP) has been prepared by BC Timber Sales Strait of Georgia Business Area on behalf of the licensees listed under Table 1, Application of the Campbell River FSP.

Table 1: Application of the Campbell River FSP.

Licences	Forest Tenure Holder	Applicable FDUs
N/A Operations within: <ul style="list-style-type: none"> North Island TSA, Sayward Block North Island TSA, Kyuquot Block Pacific TSA block 9,18,19, 20 	BC Timber Sales – Strait of Georgia Business Area	all
Operations within: <ul style="list-style-type: none"> FL A91958 NRFL A94482 	0898322 BC Ltd. / K'omoks First Nation	Salmon North

2. Definitions

The following terms and abbreviations used throughout the FSP are hereby defined and provided for reference:

BCTS means BC Timber Sales

BEC or **BCG** means Biogeoclimatic

BEO means Biodiversity Emphasis Option

CP means Cutting Permit

Cutblock means an area within which a tenure holder is authorized to harvest timber, as identified in a cutting permit, timber sale licence, or other cutting authority¹

DDM means Delegated Decision Maker

EFZ means an 'enhanced forestry zone' under the Vancouver Island Land Use Plan and related Higher Level Plan Order

FDU means Forest Development Unit

FDP means Forest Development Plan

FPC means the *Forest Practices Code of British Columbia Act*

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

¹ As defined in recently approved Provincial regulation:

https://www.for.gov.bc.ca/TASB/SLRP/LRMP/Nanaimo/CLUDI/GBR/Orders/GBR_LUO_Signed_29Jan2016.pdf

FRPA means the *Forest and Range Practices Act*

FSP means Forest Stewardship Plan

FSW means Fisheries Sensitive Watershed

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

GWM(s) means General Wildlife Measure(s)

HLP means Higher Level Plan

IRM means Integrated Resource Management

LU means Landscape Unit

LUP means Landscape Unit Plan

NAR means Net Area to be Reforested

OGMA(s) means Old Growth Management Area(s)

OSPR means Operational and Site Planning Regulation of the *Forest Practices Code of British Columbia Act*

PAS means Permanent Access Structures

Qualified Professional² means an applied scientist or technologist, acting alone or together with another professional, if:

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

RMZ in reference to riparian matters means a 'riparian management zone'; in the context of the Vancouver Island Land Use Plan and related Higher Level Plan Order means a 'resource management zone'

R/S means Result/Strategy

SMZ means a 'special management zone' under the Vancouver Island Land Use Plan and related Higher Level Plan Order

SRMP means Sustainable Resource Management Plan

THLB means Timber Harvesting Landbase

TSL means Timber Sale Licence

UWR means an Ungulate Winter Range

VILUP means Vancouver Island Land Use Plan and related Higher Level Plan Order

² As defined in recently approved Provincial regulation:

https://www.for.gov.bc.ca/TASB/SLRP/LRMP/Nanaimo/CLUDI/GBR/Orders/GBR_LUO_Signed_29Jan2016.pdf

WHA means a Wildlife Habitat Area

Wildlife tree means a tree that provides wildlife habitat and assists in the conservation of stand level biodiversity (FPPR s. 1(1))

Wildlife tree patch(es) is the same as **wildlife tree retention area(s)**, which is defined in FPPR S. 1(1)

Wildlife tree retention area(s) means an area occupied by wildlife trees that is located in a cutblock, in an area that is contiguous to a cutblock, or in an area that is sufficiently close to the cutblock that the wildlife trees could directly impact on, or be directly impacted by, a forest practice carried out in the cutblock (FPPR s. 1(1))

WTP(s) means Wildlife Tree Patch(es)

WTR and **WTRA(s)** mean Wildlife Tree Retention and Wildlife Tree Retention Area(s), respectively

3. Relevant Date for Legislation and Objective References

In this FSP, unless the FSP specifies otherwise, a reference to legislation, an established objective, a notice under s. 7(2) of the FPPR, a designation or a species to which such a notice or established objective applies, an establishment of an area referred to in s. 14(3)(a) to (i) of the FPPR or an order made by Government means that legislation, established objective, notice, designation, area, or order as it was on the date the FSP commences .

4. Changes to Legislation

If legislation referred to in this FSP is renamed or a provision of legislation referred to in this FSP is renumbered, the reference in this FSP is to be construed as a reference to the provision as renamed or renumbered, as the case may be.

5. Objectives Cancelled

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

6. Term and Commencement of the FSP (FRPA s. 6(1)(a), s. 6(1)(b) and s. 6(2))

The date of submission, and date of approval, of this FSP is listed on the cover page. The effective date of this FSP is listed on the cover page. This FSP may be extended after the effective date according to applicable legislation.

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

The 1:20000 FSP maps show the boundaries of the Forest Development Units (FDUs) under this FSP. This FSP includes operations of FSP signatories in the Sayward, Salmon, Adam/Eve, Naka, Tsitika, Gold, Burman, Tahsish, Artlish, Kashutl, Kaouk, Simms, Upper Campbell, White and Eliza Landscape Units (LUs). Refer to Appendix 2 for a link to the FSP Maps.

Any roads or road corridors identified on the British Columbia, Canada and Maa-nulth consensus maps dated March 11, 2005 (or as subsequently amended) that are to be excluded from Maa-nulth treaty land are included in the FDUs.

7.1 Protection of Cutblocks and Roads from FDP to FSP (FRPA s. 196(1) or (2), FPPR s.110, FPPR s. 14(1)(c))

Cutblocks and roads included in Forest Development Plans (FDP) as shown in the FSP maps that are within a FDU under this FSP and considered approved under FRPA s.196(1) or (2), including those cutblocks referred to in FPPR s.110.

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

The FSP maps show the designations and requirements described in FPPR s.14(3) that were in effect on the date of submission of this FSP, including, for ease of reference, the designations listed in Table 2, below.

Table 2: FPPR s. 14(3) Designations for the Campbell River FSP

FPPR s. 14 (3)(a) Ungulate Winter Ranges	FDU	Date Designated
UWR U1-004	Johnstone, Salmon North	December 17, 2003
UWR U1-014	Burman, Eliza	December 14, 2004
UWR U1-005	Kashutl, Tahsish, Artlish, Kaouk, Eliza, Gold, Sayward, Salmon South	July 20, 2006
FPPR s. 14 (3)(b) Wildlife Habitat Areas	FDU	Date Designated
WHA 1-005 (Data Sensitive)	Sayward, Salmon South	June 11, 2002
WHA 1-093 (Data Sensitive)	Johnstone	December 1, 2004
WHA 1-092 (Data Sensitive)	Johnstone	December 1, 2004
WHA 1-094 (Data Sensitive)	Gold	December 1, 2004
WHA 1-096 (Data Sensitive)	Sayward	December 1, 2004
WHA 1-135 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-136 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-137 (Marbled Murrelet)	Artlish, Tahsish	December 2, 2004
WHA 1-138 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-139 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-140 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-141 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-142 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-143 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-144 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-145 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-146 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-147 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-148 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-149 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-150 (Marbled Murrelet)	Artlish	December 2, 2004
WHA 1-151 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-152 (Marbled Murrelet)	Tahsish, Artlish	December 2, 2004
WHA 1-153 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-154 (Marbled Murrelet)	Tahsish, Artlish	December 2, 2004
WHA 1-155 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-156 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-157 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-158 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-159 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-160 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-161 (Marbled Murrelet)	Tahsish	December 2, 2004

WHA 1-162 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-163 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-164 (Marbled Murrelet)	Tahsish	December 2, 2004
WHA 1-116 (Marbled Murrelet)	Kashutl	December 13, 2004
WHA 1-119 (Marbled Murrelet)	Kashutl	December 13, 2004
WHA 1-211 (Marbled Murrelet)	Johnstone	November 9, 2011
WHA 1-212 (Marbled Murrelet)	Johnstone	January 21, 2008
WHA 1-481 (Red-legged Frog)	Sayward	April 1, 2014
WHA 1-482 (Red-legged Frog)	Sayward	April 1, 2014
WHA 1-483 (Red-legged Frog)	Sayward	April 1, 2014
FPPR s. 14 (3)(c) Fisheries Sensitive Watersheds	FDU	Date Designated
Artlish River Memekay River	Artlish Tahsish Salmon South Salmon North	December 28, 2005 and As per Schedule 2 FPPR Sec. 8.1
FPPR s. 14 (3)(d) Lakeshore Management Zones	FDU	Date Designated
Riparian Reserve Zones established for Lakes within the Sayward LU by the District Manager	Sayward	February 26, 2003
FPPR s. 14 (3)(e) Scenic Areas	FDU	Date Designated
Scenic areas as established by the District Manager	All	December 14, 2005
FPPR s. 14 (3) (g) Community Watersheds	FDU	Date Designated
John Hart Lake	Sayward	May 29, 2001
FPPR s. 14 (3)(h) and Land Act s. 93.4 Old Growth Management Areas	FDU	Date Designated
Established OGMAs as per the Sayward Landscape Unit Plan	Sayward	July 1, 2003 (established)
Established OGMAs as per the Ministerial Order for Land Use Objectives for Old Growth Management Areas	Johnstone, Salmon North Salmon South	July 26, 2010

7.3 Declared Areas (FPPR s. 14(4))

Cutblocks and roads declared under [FPPR s.14\(4\)](#) are listed as an amendment to the Strathcona FSP #85.

7.4 Areas Within FDUs Subject to a Road Permit, Cutting Permit, or Timber Sale Licence But Not Subject to this FSP (FPPR s. 14 (3)(j) and (k))

For the purposes of [FPPR s.14\(3\)\(j\) and \(k\)](#), the FSP maps identify the areas that are within the outer boundaries of the FDUs, but subject to a road permit, cutting permit, or Timber Sale Licence in effect on the date of commencement of this FSP.

8. Results and Strategies

8.1 Land Use Objectives (FRPA s. 5(1)(b) and 5(1.1); (FPPR s.1 definition)

8.1.1 Order Establishing Landscape Unit and Objectives

A Landscape Unit Plan (LUP) was established on July 1, 2003 under FPC s.4 for the Sayward Landscape Unit.

Higher Level Plan Objectives for the Sayward Landscape Unit

➤ OBJECTIVE 1 (HLP Objective 1)

1. Maintain or recruit old growth forest attributes in designated old growth management areas (OGMA, OGMA/UWR for Deer, and OGMA/UWR for Elk), as shown on the attached Sayward Landscape Unit map, titled Biodiversity and Wildlife³. Timber harvesting, including salvage, single-tree selection, topping for cone harvesting, and commercial gathering of botanical forest products, will not be permitted within OGMA's except as specified in sections 2 and 3 below.

2. The Delegated Decision Maker (DDM) may allow operations to occur within an OGMA that are not to be established as UWR for Deer or Elk for reasons such as but not limited to the following:

- (1) To prevent the spread of insect infestations or diseases that pose a significant threat to forested areas outside of OGMA's. This will be done in a manner that retains as many old growth forest attributes as possible.
- (2) Construction of roads if no other practicable option exists.
- (3) Partial-cut timber harvesting within immature (<100 years old) portions of OGMA's, where it can be demonstrated that harvesting will accelerate development of old growth forest attributes and improve the stand for biodiversity purposes, without compromising other resource values.

3 The following do not require the approval of the Delegated Decision Maker before proceeding:

- (1) Maintenance, deactivation, removal of danger trees, or brushing and clearing on existing roads under active tenure within the right-of-way for safety purposes.
- (2) Felling of guyline clearance, tailhold anchor trees, or danger trees (except high value live wildlife trees⁴) along cutblock boundaries or within the right of way on new road/bridge alignments to meet safety requirements. These trees are to be retained on site for coarse woody debris.
- (3) Intrusions⁵, less than 0.5 hectare in size for OGMA's that are not to [be] established as UWR for Deer or Elk.
- (4) OGMA's that are not to be established as UWR for Deer or Elk that are > 10ha in size may be modified for operational reasons provided that replacement OGMA of like or better quality and quantity is identified in order or priority, 1) immediately adjacent to the existing OGMA, or 2) in the same variant and landscape unit as the existing OGMA such that OGMA ecological attributes and spatial distribution are maintained or improved in one of the following categories:
 - i) OGMA's >10ha to < 50ha in size where the proposed development affects the OGMA by <5ha,
 - ii) OGMA's ≥ 50ha to < 100ha in size where the proposed development affects the OGMA by < 10ha,
 - iii) OGMA's ≥ 100ha in size where the proposed development affects the OGMA by <10%,
 - iv) Construction of ≤ 500m of road or a bridge within an OGMA where there is no other practicable option. As an alternative to finding replacement area, the licensee may deactivate or rehabilitate a temporary road or bridge site within four years after construction,

³ Available at: https://www.for.gov.bc.ca/tasb/slrp/srmp/coast/campbell_river/maps/say_wildlife_20030203.pdf

⁴ High value live wildlife trees are characterized as having the presence of black bear dens or visible, large stick nests.

⁵ Intrusions will occur where field engineering more precisely locates OGMA boundaries.

- v) *Construction of rock quarries and gravel pits under authority of forest tenure where the development will be located immediately adjacent to existing roads under tenure and will affect the OGMA by <0.5 ha.*

FDU	Result or Strategy
Sayward	<ol style="list-style-type: none"> 1. The holder(s) of the FSP will not carry out or authorize road construction or timber harvesting, including salvage, single-tree selection, topping for cone harvesting, or commercial gathering of botanical forest products within OGMA's delineated as part of the Sayward LUP established July 1, 2003 except : <ol style="list-style-type: none"> a) As agreed upon in writing by the DDM for activities within an OGMA not established as UWR for Deer or Elk including but not limited to the following: <ol style="list-style-type: none"> i) timber harvesting may occur to prevent the spread of insect infestations or disease that pose a significant threat to forested areas outside of OGMA's; ii) road construction may occur if no other practicable option exists; iii) partial-cut timber harvesting within immature portions of OGMA's, where it can be demonstrated that harvesting will accelerate development of old growth forest attributes and improve the stand for biodiversity purposes, without compromising other resource values. b) under the following permissible activities within OGMA's established as part of the Sayward LUP do not require approval of the DDM: <ol style="list-style-type: none"> i) maintenance, deactivation, removal of danger trees, or brushing and clearing on existing roads under active tenure within the right-of-way for safety purposes; ii) felling of guyline clearance, tailhold anchor trees, or danger trees (except high value wildlife trees) along cutblock boundaries or within the right-of-way on new road/bridge alignments to meet safety requirements; iii) intrusions less than 0.5 ha in size for OGMA's that are not established as UWR for Deer or Elk; iv) OGMA's that are not established as UWR for Deer or Elk that are > 10ha in size may be modified for operational reasons provided that replacement OGMA of like or better quality and quantity, as determined by a qualified professional, is identified in order of priority: <ol style="list-style-type: none"> 1) immediately adjacent to the existing OGMA; or, 2) in the same variant and landscape unit as the existing OGMA such that overall OGMA ecological attributes and spatial distribution are maintained or improved in one of the following categories: <ol style="list-style-type: none"> (1) OGMA's ≥ 10 ha to <50 ha in size where the proposed development affects the OGMA by < 5ha; (2) OGMA's ≥ 50 ha to <100 ha in size where the proposed development affects the OGMA by <10 ha; (3) OGMA's ≥ 100 ha in size where the proposed development affects the OGMA by <10 %; (4) construction of ≤ 500 m of road or a bridge within an OGMA where there is no other practicable option. As an alternative to finding replacement area, the licensee may deactivate or rehabilitate a temporary road or bridge site within four years after construction; (5) construction of rock quarries and gravel pits under authority of forest tenure where the development will be located immediately adjacent to existing roads under tenure and will affect the OGMA by <0.5 ha. 2. Section 1 of this strategy applies to subsequent amendments to OGMA's delineated within

	the Sayward LUP.
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➤ **OBJECTIVE 2 (HLP Objective 2)**

Maintain stand level structural diversity by retaining wildlife tree patches (WTP). Cutblocks for which harvesting has been completed by each licensee by tenure will maintain adequate amounts of wildlife tree patches to ensure that over any 5 year period, commencing on the date the objectives are established, the target percentage as noted in Table A is achieved. In addition:

- (1) *WTPs must be well distributed across the BEC subzone or variant.*
- (2) *No timber harvesting, including salvage or single tree selection, is to occur within Wildlife Tree Patches.*
- (3) *WTPs must include, if present, live and dead veteran trees (excluding danger trees), or remnant old growth patches.*
- (4) *WTPs must include larger trees for the stand and existing moderate to high value wildlife trees (excluding danger trees).*
- (5) *BEC subzones and/or variants will be determined by site plan information.*

Table A. Wildlife Tree Retention by BEC subzone in the Sayward Landscape Unit.

BEC Subzone	% Wildlife Tree Retention
<i>CWHmm1 (Coastal Western Hemlock, Submontane moist maritime)</i>	13
<i>CWHmm2 (Coastal Western Hemlock, Montane moist maritime)</i>	10
<i>CWHxm (Coastal Western Hemlock, Very Dry Maritime)</i>	14
<i>MHmm1 (Mountain Hemlock, Windward moist maritime)</i>	2

FDU	Result or Strategy										
Sayward	<p>1. The holder(s) of the FSP will identify WTRA(s), for cutblocks for which harvesting has been completed to ensure that over any 5 year period the target percentages noted in the table below are achieved.</p> <table data-bbox="615 1297 1211 1474"> <tr> <th>BEC Subzone</th><th>Total WTR (%)</th></tr> <tr> <td>CWHmm1</td><td>13</td></tr> <tr> <td>CWHmm2</td><td>10</td></tr> <tr> <td>CWHxm</td><td>14</td></tr> <tr> <td>MHmm1</td><td>2</td></tr> </table> <p>2. WTRAs will:</p> <ol style="list-style-type: none"> a) be distributed across the BEC subzone or variant as determined by Site Plan information; b) not be subject to timber harvesting, including salvage or single tree selection; c) include, if present, live and dead veteran trees, (excluding danger trees), or remnant old growth patches; and, d) include, when possible, larger trees for the stand and existing moderate to high value wildlife trees (excluding danger trees). <p>3. The holder(s) of the FSP will undertake to comply with FPPR s. 66 and 67 as those sections were on the date of this submission of this FSP, except with respect to FPPR s. 12.5(2) and (4), where:</p> <ol style="list-style-type: none"> a) a tree must be felled to safely establish one or more tailholds or guy-line tiebacks in a WTRA to facilitate adjacent cable logging operations; or 	BEC Subzone	Total WTR (%)	CWHmm1	13	CWHmm2	10	CWHxm	14	MHmm1	2
BEC Subzone	Total WTR (%)										
CWHmm1	13										
CWHmm2	10										
CWHxm	14										
MHmm1	2										

	<p>b) a tree, or trees, within a WTRA is modified via windfirming treatments to maintain the integrity of that WTRA;</p> <p>c) timber may be harvested in a WTRA, where the holder(s) of the FSP specifies one or more replacement WTRA, consistent with section 2 and 4 d) and e) of this strategy.</p> <p>4. Where timber harvesting is planned or authorized within a WTRA, replacement forest of equivalent age, structure and area must be identified that is:</p> <p>a) within the cutblock to which the WTRA is related; or,</p> <p>b) in an area contiguous to the cutblock to which the WTRA is related; or,</p> <p>c) in an area that is sufficiently close to the cutblock to which the WTRA is related that the wildlife trees could directly impact on, or be directly impacted by, a forest practice carried out in the cutblock.</p> <p>And that the process to replace the WTRA:</p> <p>d) includes a rationale prepared by a Qualified Professional outlining what was replaced and what was chosen as a replacement area prior to harvest of the applicable cutblock; In blocks prior to Free Growing Declaration a Site Plan or Site Plan Amendment will be prepared . Where Free Growing is declared a rationale will be prepared and filed on the opening file.</p> <p>e) includes data required to be submitted to the most current Province of BC database by the end of each calendar year, consistent with FPPR s. 86(3).</p> <p>5. The percentage of stand retention shall be determined as a percentage of the sum of the Net Area to Reforest (NAR) and area of Permanent Access Structures (PAS): $WTRA\ Retention\ \% = \frac{Retention\ Area}{(NAR + PAS)}$.</p>
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➤ **OBJECTIVE 3 (HLP Objective 4)**

Provide for spring forage adjacent to Ungulate Winter Ranges/Deer, as indicated on the Sayward Landscape Unit map, titled Biodiversity and Wildlife³ by managing seral stages as follows:

- Identifying Ungulate Winter Ranges/Deer within the Strathcona Timber Supply Area and determining all areas within 2 km that are on slopes 40 to 100% and with an aspect of exposure from 90 through 270 degrees and, ensuring that no more than 25% of this area be younger than 20 years old at any point in time; or Identifying Ungulate Winter Ranges/Deer within Tree Farm Licence 39 and managing as per the Weyerhaeuser Standard Operating Procedure for the Management of Critical Spring Forage Adjacent to Black-tailed Deer Winter Ranges, dated and approved November 29, 2001.*

FDU	Result or Strategy
Sayward	<p>1. In this R/S:</p> <p>“critical spring forage areas” (CSF) means an individual area larger than 2.0 ha within 2 kms to UWR for Deer as identified on the Sayward Landscape Unit map, titled Biodiversity and Wildlife³, with aspect between 90 degrees and 270 degrees and a slope range of 40 % to 100% modelled using 10m contour intervals from 1:5000 contour data, or best available data as it becomes available.</p> <p>“within 2 kms of a Deer UWR” means the area within a 2 km buffer applied from the perimeter of the UWR, excluding areas isolated from the UWR by large lakes which deer are highly unlikely to cross.</p> <p>“forest under 20 years” means portions of cutblocks larger than 2.0 ha 19 years or less</p>

	<p>from establishment based on reforestation declarations on the date of the assessment.</p> <p>“no more than 25% of this area” means the area of critical spring forage area to be harvested divided by the total of critical spring forage areas within the 2km buffer around the UWR.</p> <p>2.The holder(s) of the FSP will not carry out or authorize the harvest of timber or construction of new roads within areas identified as critical spring forage areas⁶ if such harvesting will result in >25% of total critical -spring forage area to be younger than 20 years old at any point in time.</p>
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OBJECTIVE 4 (HLP Objective 5)

Manage stand structure and provide hiding cover for elk in the Elk Visual Cover Areas as identified on the attached Sayward Landscape Unit map, titled Biodiversity and Wildlife, by:

- *Maintaining at least 50% of the forested area of each Elk Visual Cover Area at greater than 5 metres in height; and,*
- *Prohibiting further harvesting adjacent to the major riparian feature (swamp, lake or stream) within the Elk Visual Cover Areas identified on the Sayward Landscape Unit map, titled Biodiversity and Wildlife, until the forest on the opposite side of the riparian feature exceeds the 5 metre height requirement for a lateral distance of 100m from the riparian feature.*

FDU	Result or Strategy
Sayward	<p>1. In this R/S:</p> <p>“Elk Visual Cover Area” means spatially defined polygons located along main Elk travel corridors with the intent to protect Elk from human predation as indicated on the Sayward Landscape Unit map titled Biodiversity and Wildlife³.</p> <p>“50% of the forested area of the Elk Visual Cover Area” means the area with average stand height more than 5 m divided by the total area of the EVC using forest cover information from BC Geographic warehouse.</p> <p>“major riparian feature” means a W1 or W2 wetland, or S2, S3, stream, and lakes larger than 1.0 ha within an Elk Visual Cover Area.</p> <p>2. The holder(s) of the FSP will not carry out or authorize the harvest of timber or construction of new roads within areas identified as Elk Visual Cover areas if such harvesting will result in >50% of the forested area in each Elk Visual Cover area to be <5 meters in height,</p> <p>3. The holder(s) of the FSP will not carry out or authorize the harvest of timber or construction of new roads adjacent to the major riparian feature (swamp, lake stream) within an area identified as an Elk Visual Cover Area on the Sayward Landscape Unit map titled Biodiversity and Wildlife³, until the forest on the opposite side of the riparian feature exceeds the 5 meter height requirement for a lateral distance of 100 meters from the riparian feature, or</p> <p>4. The holder(s) of the FSP will not carry out or authorize the harvest of timber or construction of new roads within an area identified as an Elk Visual Cover Area until the</p>

⁶ Spring forage areas are aggregations of stands located within 2 km of each Ungulate Winter Range for deer. These stands are characterized by slopes ranging from 40 to 100% and having an aspect of exposure from 90 through 270 degrees.

	forest parallel to the main travel direction exceeds the 5 meter height requirement for a lateral distance of 100 meters from the harvest of timber or construction of new roads.
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➤ **OBJECTIVE 5 (HLP Objective 12)**

To manage stand structure and protect Critical Stream Reaches, as shown on the Sayward Landscape Unit map, titled Lakes Classification⁷, and Small Spawning and Rearing Streams (S4) by:

- *Retaining all windfirm trees with roots embedded in the streambank; and*
- *For S4 streams, retaining 50% of the stems, representative of species, age and size, within 10m of the channel;*

FDU	Result or Strategy
Sayward	<ol style="list-style-type: none"> 1. The holder(s) of the FSP will not carry out or authorize the harvest of windfirm trees with roots embedded in the streambank of small spawning and rearing streams (S4) and critical stream reaches as identified on the Sayward Landscape Unit map, titled Lakes Classification⁷. 2. Within each: <ol style="list-style-type: none"> a) Timber Sale Licence (TSL) gross area; or, b) cutting permit (CP) gross area <p>the holder(s) of the FSP will retain, for S4 streams, 50% of the stems, representative of tree species, age and size, within 10m of the channel, except where:</p> <ol style="list-style-type: none"> c) retaining 50% of stems within 10m of the channel is expected to be detrimental to the stream due to forest health or other concerns: <ol style="list-style-type: none"> i) an alternate strategy, including but not limited to retaining 0 – 50% of stems, is documented in a written rationale, prepared by a qualified professional, as part of the cutblock Site Plan, and considers the Factors set out in Schedule 1 of the FPPR; and, ii) the holder(s) of the FSP enter into a TSL or CP only if the Licence or Permit is consistent with the design referred to in subsection 2(c)(i) of this R/S.

➤ **OBJECTIVE 6 (HLP Objective 16)**

To establish a patch size objective and pursue enhanced timber harvesting opportunities, within areas not subject to integrated resource management (i.e., ungulate winter ranges, elk hiding cover areas, old growth management areas, recreation resource units, visually sensitive landscapes⁸, recreation constraint areas, lakeshore management zones, and designated community watersheds) and as shown as Non-constraint Areas on the Sayward Landscape Unit map titled, Non-constraint Areas⁹, by allowing cutblocks up to, but not exceeding 80 ha in size¹⁰.

FDU	Result or Strategy
Sayward	<ol style="list-style-type: none"> 1. Within the SLUP area, the holder(s) of the FSP may carry out or authorize the harvest of

⁷ Available at: https://www.for.gov.bc.ca/tasb/slrp/srmp/coast/campbell_river/maps/say_lakestream_20030130.pdf

⁸ Visually sensitive landscapes refers to areas with an established VQO of Preservation, Retention, or Partial Retention.

⁹ Available at: https://www.for.gov.bc.ca/tasb/slrp/srmp/coast/campbell_river/maps/say_nonconstraint_20030212.pdf

¹⁰ Size refers to the net area to be reforested.

	<p>cutblocks with a NAR up to 80 ha, subject to:</p> <ul style="list-style-type: none"> a) where the cutblock NAR overlaps the Integrated Resource Management¹¹ (IRM) area, as shown on the SLUP Non-constraint Areas map, the portion of the cutblock within the IRM area is limited to a maximum of 40ha NAR. b) Where the IRM areas are assumed to be areas that are within the landscape unit and outside of the non-constraint area.
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8.1.2 Ministerial Order Establishing Land Use Objectives for Old Growth Management Areas within the Tsitika, Naka, Adam-Eve, White and Salmon Landscape Units

Pursuant to *Land Act* s. 93.4, a Ministerial Order establishing land use objectives for the purposes of FRPA for OGMA within the Tsitika, Naka, Adam-Eve, White and Salmon LUs was designated on July 26, 2010.

Objectives for OGMAs

- (1) *Maintain or recruit old growth forests in established Old Growth Management Areas as shown on the map attached as Schedule 1¹² [or as subsequently amended], subject to subsections (2) to (6) below.*
- (2) *Despite subsection 1, timber harvesting and road or bridge construction are permitted within OGMAs, provided that:*
 - i) *the area of the OGMA that is subject to timber harvesting or road or bridge construction does not exceed the greater of one hectare or 10% of the area of the OGMA,*
 - ii) *replacement forest is identified which is*
 - i. *biologically suitable*
 - ii. *of equivalent age, structure and area, and*
 - iii. *situated in order of priority either immediately adjacent to the OGMA, or adjacent to another OGMA in the same variant and landscape unit as the existing OGMA, and*
 - iii) *road or bridge construction, if applicable, is required to access resource values beyond or adjacent to the OGMA and no other practicable option for road or bridge location exists.*
- (3) *For the purposes of subsection (2)(ii) and (eiii), as an alternative to identifying replacement area, a temporary road or bridge site may be permanently deactivated and rehabilitated within four years after construction.*
- (4) *Within OGMAs, the following activities are permitted:*
 - a) *First Nations traditional use of trees or understorey plants.*
 - b) *Topping or pruning of trees along boundaries to improve wind firmness.*
 - c) *Timber harvesting to prevent the spread of insect infestations or diseases that pose significant threat to forested areas outside of OGMAs. Salvage within OGMAs will be done in a manner that retains as many old growth forest attributes as possible.*
 - d) *Road maintenance, deactivation, removal of danger trees, or brushing and clearing on existing roads under active tenure within the right-of-way for safety purposes.*
 - e) *Felling for guyline clearance, tailhold anchor trees, or danger trees along cutblock boundaries or within the right-of-way on new road/bridge alignments to meet safety requirements.*

¹¹ Area defined as subject to integrated resource management are constrained areas as shown on the Sayward Landscape Unit Map titled non constraint Areas (available at https://www.for.gov.bc.ca/tasb/slrp/srmp/coast/campbell_river/maps/say_nonconstraint_20030212.pdf) and include UWRs, elk cover areas, OGMAs, recreation resource units, visually sensitive landscape, recreation constraint areas, lakeshore management areas, and designated community watersheds.

¹² Available at: https://www.for.gov.bc.ca/tasb/slrp/srmp/coast/northisland_centralcoast/reports/jonstone_aggregate_lu_legal5c.pdf

- f) *Silvicultural habitat enhancement in recruitment OGMA's.*
 - g) *Trail and site maintenance or development, and silvicultural treatments to address public safety associated with the management and operation of recreation sites and trails.*
- (5) *Replacement forest is required if the total area of an OGMA that is subject to the activities pursuant to subsection (4) exceeds the greater of one hectare or 10% of the area of the OGMA. Replacement forest must be biologically suitable, of equivalent age, structure and area, and situated, in order of priority, either immediately adjacent to the OGMA, or adjacent to another OGMA in the same variant and landscape unit as the OGMA.*
- (6) *OGMA adjustments and replacements made in accordance with subsections (2) to (5) must be documented and submitted as digital spatial data to the delegated decision maker at the end of each calendar year.*

FDU	Result or Strategy
Salmon South	<ol style="list-style-type: none"> 1. The holder(s) of the FSP will not carry out or authorize road or bridge construction or timber harvesting, including salvage, single-tree selection, topping for cone harvesting, or commercial gathering of botanical forest products within OGMA's delineated as part of the Ministerial Order designated July 26, 2010, except: <ol style="list-style-type: none"> a) where the road or bridge construction or timber harvesting does not exceed the greater of one hectare or 10% of the area of the OGMA polygon; b) where road or bridge construction, if applicable, is required to access resource values beyond the OGMA polygon and no other practicable option exists for road or bridge location; and, c) where timber harvesting or road or bridge construction takes place as per subsections 1(b) and 1(c), replacement forest is identified consistent with section 3 or 4 of this R/S. 2. Subject to OGMA-replacement forest considerations specified in section 3 of this R/S, the holder(s) of the FSP may undertake or authorize the following within OGMA's: <ol style="list-style-type: none"> a) First Nations traditional use or trees or understorey plants; b) topping or pruning or trees along boundaries to improve wind firmness; c) timber harvesting to prevent the spread of insect infestations or diseases that pose significant threat to forested areas outside of OGMA's with salvage to be done in a manner that retains as many old growth forest attributes as possible; d) road maintenance, deactivation, removal of danger trees, or brushing and clearing on existing roads within the right-of-way for safety purposes; e) felling for guyline clearance, tailhold anchor trees, or danger trees along cutblock boundaries or within the right-of-way on new road/bridge alignments to meet safety requirements; f) silvicultural habitat enhancement in recruitment OGMA's; g) trail and site maintenance or development, and silvicultural treatments to address public safety associated with the management and operation of recreation sites and trails; 3. Where the holder(s) of the FSP undertake or authorize activities within OGMA polygons, either: <ol style="list-style-type: none"> a) pursuant to section 1 of this R/S; or, b) pursuant to section 2 of this R/S exceeding the greater of one hectare or 10% of the area of the OGMA polygon affected <p>the following OGMA replacement process will apply:</p> <ol style="list-style-type: none"> c) replacement forest will be identified that is: <ol style="list-style-type: none"> i) biologically suitable; ii) of equivalent age, structure and area; iii) situated, in order of priority, either immediately adjacent to the OGMA, or adjacent to
Salmon North	
Johnstone	

FDU	Result or Strategy
	<p>another OGMA in the same BEC variant and LU as the existing OGMA; and,</p> <p>iv) documented and submitted as digital spatial data to the DDM at the end of each calendar year.</p> <p>4. Where the holder(s) of the FSP undertake road or bridge construction pursuant to section 1 of this R/S, as an alternative to identifying replacement area under subsection 3(c), a temporary road or bridge site that was constructed in an OGMA polygon may be permanently deactivated and rehabilitated within four years after construction.</p>

8.1.3 Order Establishing Provincial Non-Spatial Old Growth Objectives

The Order Establishing Non-spatial Old Growth Objectives (effective June 30, 2004) (the Order) clarifies the amount of area available for timber harvesting. This Order supplements, but does not replace [FPPR s. 9](#).

FDU	Result or Strategy
<p>Salmon South,</p> <p>Salmon North,</p> <p>Johnstone,</p>	<p>1. In this R/S:</p> <p>“non-contributing land base” means the non-contributing land base described in the Timber Supply Review for January 1 2000.</p> <p>“Order” means the Order Establishing Provincial Non-Spatial Old Growth Objectives (effective June 30, 2004);</p> <p>“retention targets” means those retention targets, by BEC variant, that are specified in the Order Establishing Non-Spatial Old Growth Objectives;</p> <p>“legal OGMA” are those OGMAs established through an LUP process or Ministerial order;</p> <p>“draft OGMA” are draft non legal OGMAs identified internally by BCTS sourced from landscape unit planning completed by QP for WFP TFL, and,</p> <p>“non legal OGMA” are those draft OGMA identified by the holder(s) of this FSP consistent with provision A8 of the Order and provision 2(c) and 6 of the Implementation Policy.</p> <p>2. Where legal OGMA are established through the LUP process or Ministerial Order, the holder(s) of the FSP, in accordance with the Order establishing Higher Level Plan Objectives for the LU or Ministerial Order will:</p> <p>a) Maintain or recruit old growth forest attributes within OGMAs;</p> <p>b) Authorize or carry out road construction or timber harvesting or other operations within OGMAs in accordance with direction in the objectives for the LUP or Ministerial Order; and,</p> <p>c) May authorize or carry out road construction or timber harvesting within OGMAs consistent with Administrative Adjustments, Amendments, and Operational Procedures for Old Growth Management Areas - ILMB Coast Region, dated August 13, 2010.</p>

FDU	Result or Strategy
Artlish Kashutl Tahsish Eliza Gold Burman Kaouk	<p>3. Where Non-legal and draft OGMA's, for the proportion of the LUs that fall within the FDU's of this FSP, the holder(s) of the FSP will:</p> <p>a) not carry out or authorize timber harvesting or road construction in old forest within the non-contributing land base in that FDU, to the extent necessary to meet the proportion of the specified retention targets that fall within the FDU; and,</p> <p>b) if the amount of old forest in the non-contributing land base is insufficient to meet the proportional specified retention target, determine if the proportional identified shortfall can be achieved in the old forest in the timber harvesting land base and in the mature forest in the non-contributing land base within the FDU's of this FSP, and:</p> <p>(i) not carry out or authorize timber harvesting or road construction in areas of mature forest assessed to have old forest structure in the non-contributing land base; and/or,</p> <p>(ii) not carry out or authorize timber harvesting or road construction in areas of old forest within the timber harvesting land base to the extent necessary to meet the proportional specified retention targets.</p>

8.1.4 Vancouver Island Land Use Plan Higher Level Plan Order

The applicable Higher Level Plan Order Objectives for the Special Management Zones (SMZs) and Enhanced Forestry Zones (EFZs) included in this FSP are listed in the following tables and described below and are shown on the FSP maps.

Table 3: VILUP Special Management Zones

Special Management Zone	Applicable HLP Objective	FDU
SMZ 7 Johnstone Strait	1 (a,b,c), 2	Johnstone
SMZ 8 Tsitika River	1 (a,b,c), 2, 4, 5	Johnstone
SMZ 10 Pinder-Atluck	1 (a,b,c), 2,	Tahsish, , Artlish

Table 4: VILUP Resource Management Zones (Enhanced and General)

Resource Management Zone	Applicable HLP Objective	FDU
RMZ 14 Kashutl	15, 16	Kashutl
EFZ 15 Tahsish	7, 9, 9.1 *	Tahsish, Artlish
RMZ 17 Artlish-Kaouk	15,16	Artlish , Kaouk
EFZ 24 Burman	7, 9, 9.1 *	Burman
EFZ 27 Naka	7, 9, 9.1*	Johnstone
EFZ 28 Adam/Eve	7, 9, 9.1*, 15, 16	Johnstone
EFZ 30 Salmon	7, 9, 9.1*	Salmon South, Salmon North
EFZ 18 Eliza	7, 9, 9.1*,	Eliza

* Objectives 7, 8, 9, 9.1 apply save and except for the parts of those zones which are designated as community watersheds as defined in [FPC s. 41\(8\)](#).



➤ **HLP Order Objective 1(a) – Mature and Old Seral**

1. *Sustain forest ecosystem structure and function in SMZs, by:*

- (a) *Creating or maintaining stand structures and forest attributes associated with mature¹³ and old¹⁴ forests subject to the following:*
- i. *the target for mature seral forest should range between one quarter to one third of the forested area of each SMZ¹⁵; and*
 - ii. *in the SMZs where the area of mature forest is currently less than the mature target range referred to in (i) above, the target amount of mature forest must be in place within 50 years.*

FDU	Result or Strategy
Portions of the Johnstone, Tahsish Artlish FDU within the SMZs	1. The holder(s) of the FSP will not carry out or authorize the harvesting of mature seral forest; <ul style="list-style-type: none"> a) within the designated Johnstone Strait SMZ 7, Tsitika River SMZ 8, Pinder Atluck SMZ 10 that would result in the amount of mature seral stage forest to fall below 25%.

➤ **HLP Order Objective 1(b) – Structural Forest Attributes**

1. *Sustain forest ecosystem structure and function in SMZs, by:*

- (b) *retaining, within cutblocks¹⁶, structural forest attributes and elements with important biodiversity functions¹⁷.*

FDU	Result or Strategy
Portions of the Johnstone Tahsish Artlish FDU within the SMZs	1. In designated, Johnstone Strait SMZ 7, Tsitika River SMZ 8, Pinder Atluck SMZ 10, the holder(s) of the FSP will: <ul style="list-style-type: none"> a) retain, within cutblocks, structural forest attributes and elements with important biodiversity functions¹⁷.



¹³ The mature seral forest is defined as generally 80 to 120 years old or older, depending on species and site conditions. The structure of mature seral forests generally includes canopies that vary vertically or horizontally, or both. The age and structure of the mature seral stage will vary significantly by forest type and from one biogeoclimatic zone to another.

¹⁴ The old seral forest is defined as generally greater than 250 years old, containing live and dead (downed and standing) trees of various sizes, including large diameter trees, and of various tree species, including broad-leaved trees. The structure of old seral forest varies significantly by forest type and from one biogeoclimatic zone to another.

¹⁵ Mature seral targets will be established through landscape unit planning. See transition provisions under III.

¹⁶ Within cutblocks: generally means non-contiguous with cutblock boundaries.

¹⁷ This includes, but is not limited to snags, wildlife trees, downed logs.

➤ **HLP Order Objective 1(c) and 2 – Silviculture Systems and Salvage**

1. *Sustain forest ecosystem structure and function in SMZs by:*

- (c) *Applying a variety of silvicultural systems, patch sizes and patch shapes across the zone, subject to a maximum cutblock size of 5 ha if clearcut, clearcut with reserves or seed tree silvicultural systems are applied, and 40 ha if shelterwood, selection or retention silvicultural systems are applied¹⁸.*

Despite subsection 1(c) above, cutblocks larger than 5 or 40 ha as the case may be, may be approved if harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events and wherever possible, the cutblock incorporates structural characteristics of natural disturbances.

FDU	Result or Strategy
Portions of the Johnstone, Tahsish Artlish FDU within the SMZs	<p>1. In this R/S:</p> <p>“shelterwood silviculture system” is defined as a system where the old stand is removed in a series of cuttings to promote the establishment of a new even-aged stand under the shelter of the old one. The intent is to protect and shelter the developing regeneration;</p> <p>“selection silviculture system” includes single tree and group selection and is defined as a system that removes mature timber either as single scattered individuals or in small groups at relatively short intervals, repeated indefinitely, where an uneven-aged stand is maintained. Regeneration should occur throughout the life of the stand with pulses following harvest entries. This system depends on recruitment of trees into successive age classes over time and the predictable yield from merchantable age classes;</p> <p>“retention silviculture system” is defined as sustaining the major ecological conditions and processes characteristic of a forest by maintaining a level of stand structure, complexity, and diversity. It is designed to retain individual trees or groups of trees to maintain structural diversity over the area of the cutblock for at least one rotation, and leave more than half the total area of the cutblock within one tree-height from the base of a tree or group of trees, whether or not the tree or group of trees is inside the cutblock;</p> <p>“clearcut silviculture system” is defined as a system managing successive even-aged stands by cutting the entire stand of trees at planned intervals (the rotation) then regenerating and tending a new stand in place of the old;</p> <p>“seed tree silviculture system” is defined as a system where the entire cutting unit is managed as it is with clearcut systems except that, for a designated time period, harvesting excludes those trees selected for the purpose of supplying seed.</p> <p>2 In designated Johnstone Strait SMZ 7, Tsitika SMZ 8, Pinder- Atluck SMZ 10, the holder(s) of the FSP will:</p> <ol style="list-style-type: none"> apply a variety of silviculture systems, patch sizes and patch shapes across the SMZ that are: <ol style="list-style-type: none"> subject to a maximum Net Area to be Reforested (NAR) of 5 ha if clearcut, clearcut with reserves, or seed tree silvicultural systems are applied, or subject to a maximum NAR of 40 ha if shelterwood, selection, or retention silvicultural systems are applied.

¹⁸ Maximum cutblock sizes refer to net area to be reforested.

	<p>b) carry out forest practices only if the forest practices are consistent with the design for the cutblock referred to in paragraph a) of this strategy.</p> <p>3. Despite subsection 2 of this result or strategy, the NAR for cutblocks within designated, Johnstone Strait SMZ 7, and Tsitika SMZ 8, Pinder- Atluck SMZ 10, may exceed the 5 ha or 40 ha limit as per s. 2a) and 2b) of this strategy, provided that:</p> <p>a) harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events, and,</p> <p>b) the cutblock design incorporates structural characteristics of natural disturbances, where safe, practicable, and site conditions permit.</p>
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➤ **HLP Order Objectives 4 and 5 – Rare Ecosystems**

4. *Maintain late-successional habitat elements and attributes of biodiversity¹⁹ in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation²⁰.*
5. *Retain late-successional habitat elements and attributes of biodiversity in patches of variable size.*

FDU	Result or Strategy
Portions of the Johnstone within the SMZs	<p>1. In this R/S:</p> <p>“old seral forest” is defined in VILUP as generally greater than 250 years old, containing live and dead (downed and standing) trees of various sizes, including large diameter trees, and of various tree species, including broad-leaved trees. The structure of old seral forest varies significantly by forest type and from BEC zone to another.</p> <p>2. Within the designated Tsitika SMZ 8, the holder(s) of the FSP will:</p> <p>a) design cutblocks that retain, within or adjacent to the cutblocks, late successional habitat elements and attributes of biodiversity²⁰ in old seral forest in:</p> <ol style="list-style-type: none"> i) WTRAs; ii) riparian management areas; or, iii) other areas reserved from harvesting <p>that are of various sizes and which will include site series representative of the site series associated with the areas to be harvested and are internal or immediately adjacent to the perimeter of the cutblock.</p> <p>b) carry out forest practices only if they are consistent with the design for the cutblock referred to in subsection 2(a) of this R/S;</p> <p>c) enter into a TSL or CP only if the licence or permit is consistent with the design for the cutblock referred to in subsection 2(a) of this R/S.</p>

➤ **HLP Order Objective 7 – Short-term Timber Availability**

¹⁹ This includes, but is not limited to: large diameter (>60 cm) live, decaying and dead standing trees (providing nest and cavity sites); downed wood, including large diameter pieces (50 to 150 cm); deciduous broad-leaved trees, both in riparian and upland areas.

²⁰ The level of representation of old seral forest will be applied through landscape unit planning.

7. *To increase the short-term availability of timber,*

- (a) a cutblock may be larger than 40 ha pursuant to section 11(2)(a) of the OPR; and*
- (b) pursuant to section 68(4) of the OPR, a cutblock is greened-up if it is adequately stocked and the average height of those trees that are*
 - (i) the tallest tree in each 0.01 ha plot included in a representative sample, and*
 - (ii) a commercially valuable species or other species acceptable to the district manager**is at least 1.3 meters;*

unless the district manager determines that a cutblock referred to under (a) or (b) would significantly impact specific hydrological, wildlife, biodiversity, scenic or recreation values.

FDU	Result or Strategy
Those portions of the Tahsish, Burman, Johnstone, Salmon South, Salmon North, Eliza within the EFZs	<ol style="list-style-type: none"> Within the Tahsish EFZ 15, Burman EFZ 24, Naka EFZ 27, Adam/Eve EFZ 28, Eliza EFZ 18, and Salmon EFZ 30, save and except the parts of those zones which are designated as community watersheds, the holder(s) of the FSP may: <ol style="list-style-type: none"> carry out or authorize the harvest of blocks that exceed 40 ha regardless of silviculture system applied; and, assess a cutblock as greened-up if it is adequately stocked and the average height of those trees that are: <ol style="list-style-type: none"> the tallest tree in each 0.01 ha plot included in a representative sample; and, a commercially valuable species or other species acceptable is at least 1.3 meters. For the purposes of this strategy, in determining the size of a proposed cutblock in the Tahsish EFZ 15, Burman EFZ 24, Naka EFZ 27, Adam/Eve EFZ 28, Salmon EFZ 30, and Eliza EFZ 18, the non-greened up portion of an existing cutblock adjacent to a cutblock proposed for harvest will be considered part of the proposed cutblock's NAR. In order to avoid or mitigate significant impacts to specific hydrological, wildlife, biodiversity, scenic or recreation values, cutblocks described in section 1 of this R/S will be consistent with: <ol style="list-style-type: none"> hydrological values by following the R/S for HLP objective 8, community watersheds and fisheries sensitive watersheds (FSWs); wildlife values by following the R/S in FSP Section 8.2.2, for wildlife, and Section 8.4.3 for ungulate winter ranges (UWRs); wildlife and biodiversity values by following the R/S in FSP Section 8.2.3 for water, fish, wildlife and biodiversity within riparian areas; wildlife and biodiversity values by following the R/S in FSP Section 8.2.5 for wildlife and biodiversity; scenic values by following the R/S in FSP Section 8.3.2 for visual quality; and, recreation values by following the Government Actions Regulation "Order to Identify Recreation Resource Features for the Campbell River Forest District " dated April 12, 2006, or as subsequently amended .

➤ **HLP Order Objective 8 – Hydrological Impacts**

8. *Avoid or mitigate adverse hydrological impacts, which may result from the practices referred to in objective 7, in watersheds with significant watershed sensitivity and significant fisheries values, as determined by the district manager and designated environment official.*

FDU	Result or Strategy
Tahsish Artlish	<ol style="list-style-type: none"> In this R/S, in order to avoid adverse hydrological impacts that may result from the practices specified in FSP section 8.1.4 for HLP Order Objective 7 (Short Term Timber Availability), within a watershed determined by the district manager and designated environment official to

FDU	Result or Strategy
Salmon North Salmon South	have significant watershed sensitivity and significant fisheries values within the Tahsish EFZ 15, Salmon EFZ 30, timber harvesting and road construction activities authorized or carried out by the holder(s) of the FSP will be consistent with the R/S in FSP section 8.3.1 for Fisheries Sensitive Watersheds.

➤ **HLP Order Objectives 9 and 9.1 – Species Composition**

9. *When proposing the species composition for the purposes of OPR section 39(3)(o), a person may, pursuant to OPR section 41, select a single species that is ecologically suited to the area, if a mix of species was present on the area before the timber was harvested.*

9.1. *The area that may be subject to selection of a single species pursuant to objective 9 is limited to no more than 20 percent of the forested area of any variant within a given EFZ.*

FDU	Result or Strategy
Portions of the Tahsish, Burman, Johnstone, Salmon South, Salmon North, Eliza within the EFZs	<ol style="list-style-type: none"> 1. In this R/S; “variant” is defined as a subset of Biogeoclimatic zone and subzone as determined using the <i>Field Guide for Site Identification and Interpretation for the Vancouver Forest Region</i>²¹. 2. For those areas that are harvested within Tahsish EFZ 15, Burman EFZ 24, Naka EFZ 27, Eliza EFZ 18, Adam/Eve EFZ 28, Salmon EFZ 30 within the term of this plan, the holder(s) of the FSP may reforest cutblocks with a single species that is ecologically suited to an area, using a species as set out in the applicable stocking standards, if a mix of species was present on the area before the timber was harvested, subject to section 2 of this R/S. 3. The amount of area subject to selection of single species is limited to no more than 20% of the forest area of any variant within a given EFZ.

➤ **HLP Order Objective 15 and 16 – Non-contributing Land Base**

15. *Retain old growth forests to meet old seral targets and marbled murrelet habitat requirements in the non-contributing landbase to the fullest extent possible.*

16. *Beyond retention in the non-contributing land base, retain old forests in the timber harvesting land base, up to the full target amount, if the district manager and the designated environmental official determine that such retention is required to maintain critical marbled murrelet habitat.*

FDU	Result or Strategy
Portions of EFZ 28 within the Johnstone; Portions of RMZ 14 within the Kashutl	<ol style="list-style-type: none"> 1. Old forest retention objectives for Adam/Eve EFZ 28 and Kashutl RMZ 14 will be managed as per the R/S for the Order Establishing Provincial Non-Spatial Old Growth Objectives in s. 8.1.3 of this FSP. 2. Marbled Murrelet habitat requirements as per Objective 15 will be managed through s. 8.2.2 of this FSP (Wildlife).

²¹ Available at: <https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh28/lmh28-01.pdf>

8.2 Objectives prescribed under FRPA s. 149

8.2.1 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.

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

8.2.2 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 forest stewardship plan 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 forest stewardship plan is submitted for approval.*

FDU	Species	Result or Strategy
All	Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	<ol style="list-style-type: none"> 1. Within areas to which the Notice for the Campbell River Forest District (dated July 27, 2004) established under s. 7(2) of the FPPR applies, the holder(s) of the FSP will not carry out or authorize the harvest of timber within Marbled Murrelet habitat as identified through the following process: <ol style="list-style-type: none"> a) Where a detailed survey (as described in <i>Standard Methods for Identifying Marbled Murrelet Habitat in British Columbia Using Air Photo Interpretation and Low-level Aerial Survey</i> whereby suitable nesting habitat is defined as Class 1, 2 or 3 Marbled Murrelet habitat), has been conducted by a qualified professional: <ol style="list-style-type: none"> i) An amount equal to the amount of suitable nesting habitat in the non-contributing land base in the FDUs in the FSP at the time the Notice was issued up to a maximum net mature timber harvesting land base (THLB) impact calculated as follows:

FDU	Species	Result or Strategy
		<p>1431 X <i>Suitable nesting habitat at the time the Notice was issued in the area covered by this FSP</i> <i>Suitable nesting habitat at the time the Notice was issued in the area covered by the Notice</i></p> <p>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):</p> <p>i) An amount equal to the amount of suitable nesting habitat in the non-contributing land base in the FDUs in the FSP at the time the Notice was issued up to a maximum net mature harvesting land base impact calculated as above.</p> <p>2. In this R/S, “non-contributing land base” is as described in the Timber Supply Review: Strathcona Timber Supply Area” dated January 1, 2000, Timber Supply Review for TFLs 19, 25 and 39 dated August 1, December 30 and July 1, 1996, respectively.</p> <p>3. The amount of habitat specified in the Notice will be:</p> <p>a) First, identified on the non-contributing land base;</p> <p>b) Second, identified on the contributing land base if there is insufficient habitat on the non-contributing land base;</p> <p>c) Reduced by the amount of suitable Marbled Murrelet habitat within any wildlife habitat area(s), old growth management area(s), ungulate winter range(s), or any other THLB removal established in the Campbell River Natural Resource District subsequent to the date of the Notice;</p> <p>d) Reduced by the amount of area within wildlife habitat area(s) established for Marbled Murrelet subsequent to the date of the Notice.</p> <p>4. If the amount of habitat for Marbled Murrelet specified in the Notice is addressed, the strategy will not apply to areas beyond that amount.</p> <p>If, after the date of submission of this FSP, an exemption is provided under FPPR s. 7(3) that relates to this strategy, the strategy no longer applies to the extent of the exemption, effective the date of the exemption.</p>

FDU	Species	Result or Strategy
All	Great Blue Heron (<i>Ardea herodias fannini</i>)	<p>1. The holder(s) of the FSP will not carry out or authorize road construction or cutblock harvesting as per section 2 of this R/S.</p> <p>2. When suitable habitat is identified, area will be delineated that meets the following criteria:</p> <p>a) The FSP holder proportion of the amount: to a maximum of 160 ha of which no more than 24 ha will be in the mature THLB;</p> <p>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,</p> <p>c) Attributes: exhibits attributes as described in the Notice.</p> <p>3. If the amount of habitat for Great Blue Heron specified in the Notice is addressed, the strategy will not apply to areas beyond that amount.</p>

FDU	Species	Result or Strategy
		If, after the date of submission of this FSP, an exemption is provided under FPPR s. 7(3) that relates to this strategy, the strategy no longer applies to the extent of the exemption, effective the date of the exemption.

8.2.3 Water, Fish, Wildlife and Biodiversity within Riparian Areas

Objectives set by government for 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.

FDU	Result / Strategy
All	<ol style="list-style-type: none"> In respect of FPPR S. 8, the holder(s) of the FSP will adopt as a result/strategy FPPR S. 47(1) to (3), (5) to (8), 48(1) and (2), 48(4) to (7), 49(1), (3) to (5), 50, 51, 52(2), and 53 as those sections were on the date of submission of this FSP except in those circumstances as described in section 3 of this result, below. For areas of primary forest activity authorized or carried out by the holder(s) of the FSP, the widths of the riparian management area, riparian reserve zone and riparian management zone will be: <ol style="list-style-type: none"> as specified in FPPR S. 47(4) to (6), 48(3) to (5) and 49(2) to (3), <u>or</u> as specified in a written rationale that: <ol style="list-style-type: none"> takes into consideration the Factors in Schedule 1, S. 2 of the FPPR which are: <ol style="list-style-type: none"> The need to buffer the aquatic ecosystem of a stream, wetland or lake from the introduction of materials that are deleterious to water quality or fish habitat, The role played by trees and understory vegetation in conserving water quality, fish habitat, wildlife habitat and biodiversity The need to maintain streambank and stream channel integrity, the relative importance and sensitivity of different riparian classes of streams, wetlands and lakes in conserving water quality, fish habitat, wildlife habitat, and biodiversity; the type, timing or intensity of forest practises that can be carried out within the context of a management regime referred to in paragraph (a); the role of forest shading in controlling an increase in temperature within a temperature sensitive stream, if the increase might have deleterious effect on fish or fish habitat; and; is prepared by a qualified professional and included in a site plan prior to the commencement of the primary forest activity. In respect of FPPR S. 50, for construction of roads through a stream, wetland or lakeshore Riparian Management Area, the Riparian Management Area will be as specified in FPPR S. 47(4), 48(3) and 49(2). In respect of FPPR S. 12(3), if the holder(s) of the FSP authorizes or carries out timber harvesting in a riparian management zone in a cutblock, retention of trees will: <ol style="list-style-type: none"> be based upon the factors in FPPR Schedule 1 S. 2; and, be specified and prescribed in a written rationale signed by a qualified professional, prior to commencement of the timber harvesting.

8.2.4 Community Watersheds

Objectives set by government for water in community watersheds: (FPPR s. 8.2)

In this section, “**community watershed**” means a community watershed

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

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

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

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

FDU	Result or Strategy
Sayward	<p>1. In this strategy, “qualified professional”²² means an applied scientist or technologist, acting alone or together with another professional, if:</p> <ul style="list-style-type: none"> a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, is acting under that association’s code of ethics and is subject to disciplinary action by that association; and b) the individual is acting within that individual’s area of expertise. <p>2. Prior to authorizing or undertaking timber harvesting or road construction within the area designated as the John Hart Community Watershed area, the holder(s) of the FSP will:</p> <ul style="list-style-type: none"> (a) have a qualified professional complete or update a watershed assessment for the community watershed²³ that follows methodology outlined in the <i>Coastal Watershed Assessment Procedure Guidebook Version 2.1</i>²⁴, as amended from time to time in Forest Research Technical Reports, such that all proposed developments are considered; or (b) have a qualified professional complete or update a watershed assessment for the community watershed²⁴ such that all proposed developments are considered, that produces similar results to those intended by the <i>Coastal Watershed Assessment Guidebook Version 2.1</i>, consistent with sections 3 and 4 of this strategy; (c) where timber harvesting or road construction is planned to occur, update the watershed

²² As defined in recently approved Provincial regulation:

https://www.for.gov.bc.ca/TASB/SLRP/LRMP/Nanaimo/CLUDI/GBR/Orders/GBR_LUO_Signed_29Jan2016.pdf

²³ For the community watershed and terrain adjacent to the watershed, as necessary, to inform the assessment.

²⁴ <https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/wap/wapgdbk-web.pdf>

FDU	Result or Strategy
	<p>assessment in 2(a) or 2(b) following any previously unaccounted for landslide or significant sedimentation events with the potential to result in material adverse effects²⁵ to water quality.</p> <p>3. Pursuant to subsection 2(a) and 2(b) of this strategy, the assessment of hydrologic impacts in the watershed assessments described in 2(a) and 2(b) will assess the potential for:</p> <ul style="list-style-type: none"> (d) adverse changes to peak stream flows, low stream flows, and timing of flows; (e) adverse changes in sedimentation; (f) adverse changes in terrain stability; (g) adverse changes to riparian zones; (h) adverse changes to channel morphology; (i) adverse changes to the watershed as a follow up to previous assessments for the watershed; (j) adverse changes as identified by the qualified professional through site-specific fieldwork; (k) adverse changes identified to the qualified professional through consultation with local watershed managers and local stakeholders; and, <p>where applicable, take into consideration results from consultation with other forest tenure holders whose tenures are situated within the watershed.</p> <p>4. Where the assessment in 2(a) or 2(b) of this strategy identifies potential adverse effects as described in subsections 3(a) to 3(h), the qualified professional preparing the assessment is to provide recommendations to manage, mitigate, or eliminate the impact(s) taking into consideration and corresponding to the severity of the consequence of the potential adverse impact.</p> <p>5. The holder(s) of the FSP will follow the results of section 4 of this strategy unless a variance to the recommendation(s) is supported by a rationale²⁶ written by a qualified professional.</p> <p>6. In respect of community watersheds, the holder(s) of the FSP will adopt as a result and strategy the practice requirements in FPPR S. 59, 60, and 61.</p>

8.2.5 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.

FDU	Result or Strategy
All	1. The holder(s) of the FSP will undertake to comply with FPPR s. 64 and 65 subject to section 2 or 3 of this R/S.

²⁵ Where a "material adverse effect" is understood to be an injurious result or unfavourable influence that might have some real, appreciable consequence.

²⁶ Rationale must meet the intent of practice requirements in FPPR s. 8.2 that provide for the protection of drinking water.

FDU	Result or Strategy
	<p>2. Cutblock size may exceed 40 ha within the Sayward FDU if timber harvesting operations are carried out in accordance with the R/S for Objective 6 of the Sayward LUP (FSP s. 8.1.1).</p> <p>3. Cutblock size may exceed 40 ha within the areas designated as Tahsish EFZ 15, Burman EFZ 24, Naka EFZ 27, Adam/Eve EFZ 28, Salmon EFZ 30, and Eliza EFZ 18, if timber harvesting operations are carried out in accordance with the R/S for Objective 7 of the VILUP (FSP s. 8.1.4).</p>

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.

FDU	Result or Strategy
<p>Salmon South Salmon North Johnstone Kashutl Tahsish Artlish Kaouk Eliza Gold Burman</p>	<p>1. The holder(s) of the FSP will undertake to comply with FPPR s. 66 and 67 as those sections were on the date of submission of this FSP, except with respect to FPPR s. 12.5(2) and (4), where:</p> <ul style="list-style-type: none"> a) a tree must be felled to safely establish one or more tailholds or guy-line tiebacks in a WTRA to facilitate adjacent cable logging operations; or, b) a tree, or trees, within a WTRA is modified via windfirming treatments to maintain the integrity of that WTRA; c) timber may be harvested in a WTRA, where a Qualified Professional specifies one or more replacement WTRA, consistent with section 3 d) and e) of this strategy. <p>2. Where wildlife tree retention targets are specified in approved-,landscape unit plans harvesting will undertake to comply with targets specified.</p> <p>3. Where timber harvesting is planned or authorized within a WTRA, replacement forest of equivalent age, structure and area must be identified that is:</p> <ul style="list-style-type: none"> a) within the cutblock to which the WTRA is related; or, b) in an area contiguous to the cutblock to which the WTRA is related; or, c) in an area that is sufficiently close to the cutblock to which the WTRA is related that the wildlife trees could directly impact on, or be directly impacted by, a forest practice carried out in the cutblock. <p>And that the process to replace the WTRA:</p> <ul style="list-style-type: none"> d) includes a rationale prepared by a Qualified Professional outlining what was replaced and what was chosen as a replacement area prior to harvest of the applicable cutblock; In blocks prior to Free Growing Declaration a Site Plan or Site Plan Amendment will be prepared . Where Free Growing is declared a rationale will be prepared and filed on the opening file. e) includes data required to be submitted to the most current Province of BC database by the end of each calendar year, consistent with FPPR s. 86(3). <p>4. The percentage of stand retention shall be determined as a percentage of the sum of the Net Area to Reforest (NAR) and area of Permanent Access Structures (PAS): WTRA Retention % = Retention Area / (NAR + PAS).</p>

8.2.6 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.*

FDU	Result or Strategy
All	<p>1. In this strategy:</p> <p>“cultural heritage resource” means a cultural heritage resource that is:</p> <ul style="list-style-type: none"> (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; <p>“monumental western red cedar or cypress” refers to a western red cedar or cypress log used for making paddles, masks, totems, canoes, and similar traditional use items, or a standing tree of similar size and dimension.</p> <p>“applicable First Nation” means a First Nation whose asserted traditional territory or treaty land falls within the FDU in this FSP plan area.</p> <p>2. 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 cultural heritage resources within the identified areas. All timber harvesting, road construction, or log dump construction activities will be referred to applicable First Nations prior to commencement of activities.</p> <p>3. The holder(s) of the FSP will evaluate the nature and extent of a possible site-specific cultural heritage resource identified by First Nations under section 2 of this strategy within areas of potential timber harvesting and road construction activities, including making reasonable efforts to share information or consult with the applicable First Nation in respect of the possible cultural heritage resource.</p> <p>4. The holder(s) of the FSP, when designing a cutblock or road, will identify</p> <ul style="list-style-type: none"> a) the portion of the area occupied by a cultural heritage resource, b) the nature of the cultural heritage resource, c) whether the cultural heritage resource is to be protected or conserved, and d) if the cultural heritage resource is to be conserved, what constraints, if any, are to apply to the forest practices carried out on the area. <p>5. For each cultural heritage resource that has been identified under subsection 3 for protection, 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 cultural heritage resource.</p> <p>6. If, within a cutblock or road where the holder(s) of the FSP is carrying out or has authorized timber harvesting or road construction, a previously unidentified additional occurrence of a cultural heritage resource type identified in 2. above, is encountered, the holder(s) of the FSP will:</p> <ul style="list-style-type: none"> a) consistent with the results of subsection 2, request the person with authority over the operations within the cutblock or road to modify operations consistent with .6.b) to the extent practicable to manage the cultural heritage resource; b) determine,

FDU	Result or Strategy
	<ul style="list-style-type: none"> i) the nature of the cultural heritage resource, ii) whether the cultural heritage resources can be protected or conserved, and iii) if the cultural heritage resource is to be protected or conserved, what constraints, if any, should be applied to the forest practices carried out in the area. <p>7. The holder(s) of the FSP recognizes that mature western redcedar and cypress located within the identified FDUs may be cultural heritage resources to the applicable First Nations and will ensure that:</p> <ul style="list-style-type: none"> a) western redcedar and cypress for traditional and cultural use will be conserved in an amount consistent with the amount of historic use. Amount of historic use is based upon FN requests or use over a representative time period as determined by FLNRORD and each First Nation. Western redcedar and cypress for traditional and cultural use will, wherever possible, be identified or located in otherwise constrained areas including: riparian management zones, wildlife tree retention areas, ungulate winter ranges, wildlife habitat areas, riparian reserve zones and any other areas constrained for non timber values; b) where current FN requests for western red cedar and cypress for traditional and cultural use are confirmed by FLNRORD, the holder(s) of the FSP will assist each FN to identify suitable trees. c) if requested by FN, the holder(s) of the FSP will help identify suitable areas for bark gathering in cutblocks prior to harvesting; d) western redcedar and cypress will be planted on areas referred to in section 29(1) of the Forest and Range Practices Act in accordance with the approved stocking standards where determined to be appropriate by the prescribing forester; <p>The holder(s) of the FSP will assist FLNRORD where they are actively developing a strategy for and in the identification of western redcedar or cypress for traditional and cultural use.</p>

8.3 Orders Established under Government Actions Regulation (GAR)

8.3.1 Fisheries Sensitive Watersheds (FPPR s. 8.1)

The Artlish River and the Memekay River were established as Fisheries Sensitive Watersheds (FSW) on December 28, 2005 under GAR s. 14(1). Objectives for the Artlish FSW and the Memekay FSW were established on December 28, 2005 under GAR s. 14(2).

Objectives established for the Artlish FSW and the Memekay FSW are:

The objective is to provide, within the normal forest rotation, special management of the amount, timing and distribution of primary forest activities, in order to:

- i) *conserve the natural hydrological conditions, natural stream bed dynamics and integrity of stream channels in the Fisheries Sensitive Watershed,*
- ii) *conserve the quality, quantity and timing of water flows required by fish in the Fisheries Sensitive Watershed, and*
- iii) *prevent the cumulative hydrological effects of primary forest activities in the Fisheries Sensitive Watershed from resulting in a material adverse impact on the fish habitat of the watershed.*

FDU	Result or Strategy
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Artlish	1. In this strategy,
Tahsish	“ qualified professional ” ²⁷ means an applied scientist or technologist, acting alone or together with another professional, if:
Salmon North	a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, is acting under that association’s code of ethics and is subject to disciplinary action by that association; and
Salmon South	b) the individual is acting within that individual’s area of expertise.
	2. Prior to authorizing or undertaking timber harvesting or road construction within a designated Fisheries Sensitive Watershed (FSW) area, the holder(s) of the FSP will: <ul style="list-style-type: none"> a) have a qualified professional complete or update a watershed assessment, within the FSW²⁸ that follows methodology outlined in the <i>Coastal Watershed Assessment Procedure Guidebook Version 2.1</i>²⁹, as amended from time to time in Forest Research Technical Reports, such that all known, proposed developments are considered; or, b) have a qualified professional complete or update a watershed assessment, within the FSW such that all known, proposed developments are considered, that produces similar results to those intended by the <i>Coastal Watershed Assessment Guidebook Version 2.1</i>, consistent with sections 3 and 4 of this strategy; c) where timber harvesting or road construction is planned to occur, update the watershed assessment in 2(a) or 2(b) following any previously unaccounted for landslide or significant sedimentation events with the potential to result in material adverse effects³⁰ to fish habitat.
	3. Pursuant to subsection 2(a) and 2(b) of this strategy, the assessment of hydrologic impacts in the watershed assessment described in 2(a) and 2(b) will assess the potential for: <ul style="list-style-type: none"> a) adverse changes to peak stream flows, low stream flows, and timing of flows; b) adverse changes in sedimentation; c) adverse changes in terrain stability; d) adverse changes to riparian zones; e) adverse changes to channel morphology; f) adverse changes to the watershed as a follow up to previous assessments for the watershed; g) adverse changes as identified by the qualified professional through site-specific fieldwork; h) adverse changes identified to the qualified professional through consultation with local watershed managers and local stakeholders; and, <p>where applicable, take into consideration results from consultation with other forest tenure holders whose tenures are situated within the watershed.</p>
	4. Where the assessment in subsection 2(a) or 2(b) of this strategy identifies potential adverse effects as described in subsections 3(a) to 3(g), the qualified professional preparing the assessment is to provide recommendations to manage, mitigate or eliminate the impact(s), taking into consideration and corresponding to the severity of the consequence of the potential adverse impact.
	5. The holder(s) of the FSP will follow the results of section 4 of this strategy unless a variance to the recommendation(s) is supported by a rationale ³¹ written by a qualified professional. 6. In respect of

²⁷ As defined in recently approved Provincial regulation:

https://www.for.gov.bc.ca/TASB/SLRP/LRMP/Nanaimo/CLUDI/GBR/Orders/GBR_LUO_Signed_29Jan2016.pdf

²⁸ For the FSW and terrain adjacent to the watershed, as necessary, to inform the assessment.

²⁹ <https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/wap/wapgdbk-web.pdf>

³⁰ Where a “material adverse effect” is understood to be an injurious result or unfavourable influence that might have some real, appreciable consequence.

	FSWs, the holder(s) of the FSP will adopt as a result/strategy the practice requirements in FPPR S. 55, 56, 57 .
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8.3.2 Visual Quality

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

Categories of visually altered forest landscape are as defined in [FPPR s. 1.1](#).

FDU	Result or Strategy
All	<ol style="list-style-type: none"> For the purposes of this R/S, a “significant public viewpoint”, as that term is used in the definition of “visually altered forest landscape” as defined in FPPR s. 1.1 means a view point on water or land: <ol style="list-style-type: none"> 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, included in the most current Visual Landscape Inventory; or, determined to be important by a qualified professional. Road construction and/or timber harvesting carried out or authorized by the holder(s) of the FSP within scenic areas established within the Campbell River Forest District, will be consistent with: <ol style="list-style-type: none"> the visual quality objectives as established by the District Manager; and, the categories of visually altered forest landscape as of the date the timber sale is advertised. The holder of the FSP will make application to the delegated decision maker for exemption consistent with FPPR s. 12(7) to carry out or authorize timber harvesting or road construction under the following strategy that would result in an alteration greater than specified in subsection (2) of this result where: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> mimic naturally occurring landscape characteristics; and retain timber that is not damaged, destroyed or threatened where safe and operationally practicable to do so.

8.3.3 Resource Feature Set by Order - Karst

Identified resource features are subject to practice requirements; no result or strategy is required as objectives have not been established for the management of the resource feature. Where applicable within the Plan area, the holder(s) of the FSP will adhere to the requirements of [FPPR s. 70\(1\)](#) with respect to resource features:

An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a resource feature.

FDU	Practice Requirement
All	<ol style="list-style-type: none"> In this practice requirement, the holder(s) of the FSP will ensure that any primary forest activities authorized or carried out by the holder(s) of the FSP will be carried out in accordance

³¹ Rationale must meet the intent of practice requirements in FPPR S. 8.1 that provide for the protection of fish habitat.

	<p>with the established Resource Feature Order under sections 5(1) (a) of the Government Actions Regulation (B.C. Reg. 17/04), “Order to Identify Karst Resource Features” dated May 30, 2007, or as subsequently amended.</p> <p>2. Pursuant to Section 5(1) (a) of the Government Actions Regulation under the <i>Forest and Range Practices Act</i>, the following are defined as surface or subsurface elements of a karst system as resource features wherever they are found within the Campbell River Forest District:</p> <ul style="list-style-type: none"> a) Karst caves; b) significant surface karst features; and c) important features and elements within high and very high vulnerability karst terrain. <p>3. The location of a subsurface or subsurface element of a karst system as described in subsection 2 must not be publically disclosed by the agreement holder(s).</p>
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8.3.4 Resource Feature Set by Order – Recreation Resource Feature

Identified resource features are subject to practice requirements; no result or strategy is required as objectives have not been established for the management of the resource feature. Where applicable within the Plan area, the holder(s) of the FSP will adhere to the requirements of *FPPR s. 70(1)* with respect to resource features:

An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a resource feature.

FDU	Practice Requirement
All	<p>1. In this practise requirement:</p> <p>“RRU” means an administrative boundary delineating broad recreation resource units of similar existing or desired recreation setting and experience objectives.</p> <p>“not damage or render ineffective a recreation resource feature” means the resource feature (s) are managed to maintain the user setting and experience of the recreation resource as described in the Recreation Features Inventory Inventory Manual, (October 1998.³²) Prescribing professionals should apply judgement and seek the assistance of specialists where necessary to assess the impact of forest management to resource features and the recreational users and setting.</p> <p>“layer manager as of effective date of this FSP:” means the FSP holder mapping information including :</p> <p>TSG_recreation opportunity_spectrum indicates polygons ranked into 4 ROS classes, natural, natural roaded, modified, or developed. described in the Recreation Opportunity Spectrum Inventory Manual, (October 1998³³). The majority of the FSP holder activities are proposed in RRU ranked modified. RRU rankings are an approximate surrogate to understand level of harvest compatible with recreation setting and experience.</p>

³² Available at: https://gww.nrs.gov.bc.ca/flnrord/files/flnrord/media/recreation_features_inventory_standards.pdf

³³ Available at: https://gww.nrs.gov.bc.ca/flnrord/files/flnrord/media/ros_procedures_and_standards.pdf

	<p>TSG_GAR_DCR_recreation_resource_feature_polygon shows polygons ranked yes or no for occurrence in the DCR GAR order .</p> <p>TSG_GAR_DCR_recreation_resource_features_lines indicates trails ranked yes or no for occurrence in the DCR GAR order .</p> <p>TSG_recreation_resource_feature_inventory_DCR indicates recreation features inventory as described in the Recreation Features Inventory Manual, (October 1998.)</p> <p>TSG_FTEN_recreation_polygon identifies recreation sites.</p> <p>TSG_FTEN_recreation_line Identifies provincial trails and routes.</p> <p>2. In this practice requirement, the holder(s) of the FSP will ensure that any primary forest activities authorized or carried out within identified recreation resource features polygons by the holder(s) of the FSP will be carried out in accordance with the established Resource Feature Order under sections 5(1) of the Government Actions Regulation “Order to Identify Recreation Resource Features for the Campbell River Forest District ” dated April 12, 2006, or as subsequently amended.</p>
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8.4 Objectives continued under FRPA S. 180 and 181 (Grandparenting Designations, Objectives, and Measures)

The objectives in respect of specified designations established or continued under the FPC under FSP s. 8.4 are grandparented.

Licensees operating within the Campbell River Natural Resource District 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 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 #U1-014 and associated general wildlife measures were established on December 14, 2004 under [GAR s. 9\(2\) and 12\(1\)](#). The Order was amended on January 30, 2006. The Order establishing UWR #U1-014 provides an exemption from the obligation to prepare result or strategies in relation to the objective for the winter survival of ungulates in TFL 19 as per [FPPR s. 7\(3\)](#).

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

Wildlife Habitat Areas # WHA 1-481, 1-483, 1-485, 1-486 and associated general wildlife measures for Red Legged Frogs (*Rana aurora*) were established April 1, 2014 under GAR s. 9(2) and 12(1). The Order establishing WHA # 1-481, 1-483, 1-485, 1-486 provides an exemption from the obligation to prepare result or strategies in relation to the objective to meet the habitat requirements of red legged frogs in portions of the North Island TSA that were previously part of the Strathcona TSA at the time of the order as per [FPPR s. 7\(3\)](#).

FSP s. 8.4 is consistent with Orders establishing objectives for Lakeshore Management within the Sayward LU, Recreation Trails within the Sayward LU, and

Ungulate Winter Range #U1-004; this FSP section 8.4.3 is not subject to approval by the DDM of this FSP.

8.4.1 Objectives Set for Lakeshore Management within the Sayward Landscape Unit (LO Objective 10)

Riparian reserve zones and riparian management zones, within the Sayward LU and associated objectives were established on February 26, 2003 as per [FPC s. 64](#). These objectives are continued under [FRPA s. 181](#).

Riparian Reserve Zones

To manage for fisheries values within those areas noted as riparian reserve zones as shown on the Sayward Landscape Unit map, titled Lakeshore Management³⁰, by:

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

Riparian Management Zones:

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

FDU	Result or Strategy
Sayward	<ol style="list-style-type: none"> 1. The holder(s) of the FSP will not carry out or authorize the harvesting of timber within the riparian reserve zones as shown on the Sayward Landscape Unit map titled, Lakeshore Management³⁴, unless such activity occurs within established recreation sites and/or trails and are complementary to the recreation setting and experience as determined by the Statutory Decision Maker. 2. The holder(s) of the FSP will not carry out or authorize the construction of roads within the riparian reserve zones as shown on the Sayward Landscape Unit map titled, Lakeshore Management³⁰, unless no other practicable option exist as determined by the Statutory Decision Maker. 3. The holder(s) of the FSP will not carry out or authorize the harvesting of timber within 50 metres from the timbered edge surrounding the McIvor, Beaver, Comeback, Hemp, Lawnchair, Lily, Little Mud, Pocket, Reed, Sedge, Shadow, Smolt, Star, and Whistlepunk Lakes unless at least 75% of the forested area is greater than 5 metres in height.

8.4.2 Recreation Trail Objective – Sayward Landscape Unit (HLP Objective 8)

A recreation trail objective for the Sayward Landscape Unit was established on July 1, 2003 as per [FPC s. 6](#). These objectives are continued under [FRPA s. 181](#).

³⁴ Available at: https://www.for.gov.bc.ca/tasb/slrp/srmp/coast/campbell_river/maps/say_lshore_20030205.pdf

Objective 1:

Harvesting and/or road building within 10 metres of the running surface of existing trails within the Snowden Forest, as shown on the Sayward Landscape Unit Map titled, Recreation Constraints³¹, requires the prior approval of the Designated Statutory Decision Maker.

FDU	Result or Strategy
Sayward	1. The holder(s) of the FSP will not carry out or authorize road construction or timber harvesting within 10 metres of the running surface of trails established under <i>FRPA</i> s. 56 within the Snowden Forest as shown on the Sayward Landscape Unit Map titled, Recreation Constraints ³⁵ , without prior approval from the Designated Statutory Decision Maker.

9. Stocking Standards

9.1 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.

9.2 Regeneration Date and Stocking Standards, Free Growing Height

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

9.3 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 area under this plan, cutblock specific stocking standards will be proposed as an amendment of this FSP. Stocking standards which may be amended into this FSP will be maintained on the area for twelve months following the completion of the harvesting.

9.4 Stocking Standards and *FRPA* S. 197(5)

In accordance with *FRPA* s. 197(5), the holder of this FSP may specify in a written notice to Government that stocking standards approved as part of the FSP apply to cutblocks harvested prior to the commencement of this FSP by the holder(s) of the FSP.

The potential effects of climate change have been considered in the development of this FSP and in particular, the development of the stocking standards. Increasing the diversity of regenerating tree species will lead to more resilient plantations. An increased (but still limited) deployment of Western white pine will contribute to an increased diversity of species.

10. 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

³⁵ Available at: https://www.for.gov.bc.ca/tasb/slrp/srmp/coast/campbell_river/maps/say_cons_rec_20030203.pdf

- (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 forest stewardship plan must specify measures in the plan to prevent the introduction or spread of species of plants that are invasive plants under the Invasive Plants Regulation, if the introduction or spread is likely to be the result of the person's forest practices.

FDU	Measures
All	<p>1. In these measures:</p> <p>“applicable area” means an area where:</p> <ul style="list-style-type: none"> a) it is likely that forest practices carried out or authorized by the holder(s) of the 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 the FSP has not deemed the area to be an active surface area where primary forest activities are occurring , or are planned to occur. <p>“preferred seed” means seed with the following attributes:</p> <ul style="list-style-type: none"> a) high sod-forming content, except in areas that are planted with tree seedlings; b) has been certified by the Canadian Seed Growers Association that the seed: <ul style="list-style-type: none"> i) meets or exceeds the standards for varietal purity established by the Canadian Seed Growers Association for seed of that kind of species (Seeds Act, Seeds Regulation S. 2(1)); and, ii) is of native origin. <p>“Priority invasive plants” refers to gorse, Japanese knotweed, giant knotweed, Scotch broom, purple loosestrife, and yellow iris, consistent with s. 2 of the <i>Invasive Plants Regulation</i>, which may be found within the plan area.</p> <p>2. If the holder(s) of the FSP carries out a primary forest activity in an applicable area, the holder(s) of the FSP will:</p> <ul style="list-style-type: none"> a)confirm known locations of priority invasive plants within the plan area using the most current recognized provincial database; b)distribute information to staff and contractors on priority invasive plants that exist or threaten to establish within the plan area; c)direct staff to monitor and report previously unreported incidences of priority invasive plants and enter them into the most current recognized Provincial database. <p>3. If the holder(s) of the FSP carries out or authorizes a primary forest practice in an applicable area, the holder(s) of the FSP, within two growing seasons of completing the activity authorized in the TSL or CP, will:</p>

	<ul style="list-style-type: none"> a) seed areas of exposed soil that exceed 0.1 contiguous hectares, that have been disturbed by primary forest activities authorized by the FSP holder(s), recognizing that spring and fall are optimum times to revegetate, and giving preference to preferred seed that is: <ul style="list-style-type: none"> i) readily available; ii) comparable in cost to agronomic mixtures; and, iii) comparable in effectiveness to agronomic mixtures. <p>4. If newly introduced priority invasive plants are detected during post-harvest monitoring that are likely the result of the holder(s) of the FSP's forest practices; the holder(s) of the FSP will work with government agencies to:</p> <ul style="list-style-type: none"> a) develop a plan to mitigate the spread; and b) implement the plan.
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11. Measures To Mitigate the Effect of Removing or Rendering Ineffective Natural Range Barriers

FDU	Measures
Salmon North	<ul style="list-style-type: none"> (1) The holder(s) of the FSP will: <ul style="list-style-type: none"> (a) each year under the term of this FSP, identify any areas within the FDUs that are subject to or adjacent to agreements under the <i>Range Act</i> in respect of grazing of livestock, using information gathered from regional experts; (b) inform each of the affected holders of agreements under the <i>Range Act</i> of planned harvest and road construction within or adjacent to their agreement; (c) where the affected holder of an agreement under the <i>Range Act</i> indicates that the planned harvest and road construction will remove or render ineffective a natural range barrier, <ul style="list-style-type: none"> (i) design cutblocks and roads to mitigate the effect of the removal or ineffectiveness, (ii) carry out forest practices only if the forest practices are consistent with the design for the cutblock or road referred to in subparagraph (i), and (iii) enter into a timber sale licence, cutting permit or grant a road permit only if the licence or permit is consistent with the design for the cutblock or road referred to in subparagraph (i). (2) The holder of a timber sale licence will not remove or render ineffective a natural range barrier other than in a manner set out in the timber sale licence. (3) The holder of a cutting permit document will not remove or render ineffective a natural range barrier other than in a manner set out in the cutting permit document. (4) If the holder of a timber sale licence or cutting permit removes or renders ineffective a natural range barrier other than in a manner set out in the licence or permit, the holder will carry out reasonable measures to mitigate the effect of the removal or ineffectiveness.

12. Signatures of Persons Required to Prepare Plan (FRPA S. 5(3))

BC Timber Sales, Strait of Georgia Business Area

and on behalf of:

0898322 B.C. Ltd./K'omoks First Nation Holder of FL A91958

0898322 B.C. Ltd./K'omoks First Nation Holder of NRFL A94482

RPF Signature: _____



Name: Kathryn Willis RPF

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

Timber Sales Manager Signature: _____



Name: Don Hudson

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

Date: February 8, 2018

APPENDIX 1 FSP Stocking Standards
A1.1 Stocking Standards BC Timber Sales’ Campbell River FSP (Strait of Georgia Business Area)

		BEC			Preferred Species								Acceptable Species													
Standard ID	REF #	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)	MI TD (m)	Max RD (yrs)	FG yrs
1056446	1	CWH	mm1	01	FDC	3.0	CW	1.5					HW ¹⁰	2.0							900	500	400	2.0	6	20
1056447	2	CWH	mm1	02	PLC	1.3	FDC	2.0					CW	1.0							800	400	400	2.0	6	20
1056448	3	CWH	mm1	03	FDC	2.0							CW	1.0							800	400	400	2.0	3	20
1056449	4	CWH	mm1	04	FDC	2.0							CW	1.0	PW ³¹	2.5					900	500	400	2.0	3	20
1056450	5	CWH	mm1	05	FDC	3.0	CW	1.5					PW ³¹	2.5							900	500	400	2.0	3	20
1056451	6	CWH	mm1	06	CW	1.5	HW	2.0					FDC ⁷	3.0							900	500	400	2.0	6	20
1056452	7	CWH	mm1	07	CW	2.0	FDC	4.0													900	500	500	2.0	3	20
1056453	8	CWH	mm1	08	BA	1.0	CW	2.0	SS ³⁵	4.0											900	500	500	2.0	3	20
1056454	9	CWH	mm1	09	CW ¹	2.0							BA ¹	1.0							900	500	400	2.0	3	20
1056455	10	CWH	mm1	12	CW ¹	1.0							HW ¹	1.8	SS ^{1,35}	2.0					800	400	400	1.5	3	20
1056456	11	CWH	mm2	01	HM ¹³	1.0	HW	1.3	CW	1.0	FDC ⁹ YC	2.3 1.0	BA	0.8							900	500	400	2.0	6	20
1056457	12	CWH	mm2	02	PLC	1.3	FDC	1.3					CW	0.8							800	400	400	2.0	6	20

*BC Timber Sales
Campbell River Forest Stewardship Plan*

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[illegible]

Standard ID	REF #	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)	MI TD (m)	Max RD (yrs)	FG yrs
1056478	30	CWH	vm1	01	CW	1.5	HW	3.0	FDC ⁹ ₁₆	3.0	BA ²⁶	1.8									900	500	500	2.0	6	20
1056479	31	CWH	vm1	03	CW	1.0	HW	2.0	FDC ⁹ ₁₆	2.0			PLC ⁵³	1.3							800	400	400	2.0	6	20
1056480	32	CWH	vm1	04	CW	1.5	HW	3.0	FDC ⁹ ₁₆	3.0											900	500	400	2.0	3	20
1056481	33	CWH	vm1	05	BA	1.8	CW	1.5	HW	3.0	FDC ¹ _{9 16}	3.0	SS ³⁵	3.0							900	500	400	2.0	3	20
1056482	34	CWH	vm1	06	BA ²⁶	1.8	CW	1.5	HW	3.0											900	500	500	2.0	6	20
1056483	35	CWH	vm1	07	BA	2.3	CW	2.0	FDC _{1, 9}	4.0	HW	4.0	SS ³⁵	4.0							900	500	400	2.0	3	20
1056484	36	CWH	vm1	08	BA	2.3	CW	2.0	HW	4.0			SS ³⁵	4.0							900	500	400	2.0	3	20
1056485	37	CWH	vm1	09	BA	2.3	CW	2.0	HW	4.0											900	500	500	2.0	3	20
1056486	38	CWH	vm1	10	CW ¹	2.0							BA ¹	2.3	SS ^{1, 35}	4.0					900	500	400	1.5	3	20
1056487	39	CWH	vm2	01	FDC ¹ ₉	2.3	HW	2.5	CW	1.5	YC ⁶⁹ BA	1.5 1.8	SS ⁷ ₃₅ ¹⁵	3.0							900	500	400	2.0	6	20
1056488	40	CWH	vm2	03	CW	1.0	HW	1.8	FDC ⁹ ₁₆	1.5	YC ⁶⁹	1.0	PW ^{16 31}	2.5							800	400	400	2.0	6	20
1056489	41	CWH	vm2	04	CW	1.0	HW	1.8	FDC ⁹ ₁₆	1.5	YC ⁶⁹	1.0	BA	1.5	PW ^{16 31}	2.5					900	500	400	2.0	6	20
1056490	42	CWH	vm2	05	CW	1.5	HW	2.5	YC ⁶⁹	1.5	BA	1.8	FDC ^{1 8} ₉	2.3	SS ^{15 35}	3.0					900	500	400	2.0	3	20
1056491	43	CWH	vm2	06	CW	1.5	HW	2.5	YC ⁶⁹	1.5	BA	1.8									900	500	500	2.0	6	20
1056492	44	CWH	vm2	07	CW	2.0	HW	3.5	YC ⁶⁹	2.0	BA	2.3	SS ^{15 35}	4.0							900	500	400	2.0	3	20
1056493	45	CWH	vm2	08	CW ¹⁴	2.0	HW	3.5	YC ⁶⁹	2.0	BA	2.3	SS ³⁵	4.0							900	500	400	2.0	3	20

Standard ID	REF #	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)	MI TD (m)	Max RD (yrs)	FG yrs
1056494	46	CWH	vm2	09	CW ¹	1.0	HW ¹	1.8	YC ¹ ₆₉	1.0			BA	1.5	HM ¹³	1.8					800	400	400	2.0	3	20
1056496	47	CWH	vm2	11	CW ¹	1.0	YC ¹ ₆₉	1.0					HW ¹	1.8							800	400	400	1.5	3	20
1056497	48	CWH	xm	01	FDC	3.0							HW ²⁴	2.0	CW	1.5	PW ³¹	2.5			900	500	400	2.0	3	20
1056499	49	CWH	xm	03	FDC	2.0	PLC ⁶	1.3					CW	1.0							800	400	400	2.0	3	20
1056500	50	CWH	xm	04	FDC	3.0							CW	1.5	PW ³¹	2.5					900	500	400	2.0	3	20
1056501	51	CWH	xm	05	CW	2.0	FDC	4.0					PW ³¹	2.5							900	500	400	2.0	3	20
1056502	52	CWH	xm	06	CW	1.5	HW	2.0	FDC ¹⁸	3.0											900	500	500	2.0	6	20
1056503	53	CWH	xm	07	CW	2.0	FDC	4.0					BG	3.5							900	500	400	2.0	3	20
1056504	54	CWH	xm	08	CW	2.0	SS ³⁵	4.0					BG	3.5							900	500	400	2.0	3	20
1056505	55	CWH	xm	09	CW ¹	2.0							BG ¹	3.5							900	500	400	2.0	3	20
1056506	56	CWH	xm	12	CW ¹	1.0							HW ¹	1.3	PW ³¹	2.5					800	400	400	1.5	3	20
1056507	57	MH	mm1	01	BA	0.6	HM	1.0	YC	1.0			SE	1.0							900	500	400	2.0	7	20
1056508	58	MH	mm1	02	HM	0.8	YC	0.8					BA	0.6	SE	0.8					800	400	400	2.0	4	20
1056509	59	MH	mm1	03	BA	0.6	HM	1.0	YC	1.0											900	500	500	2.0	4	20
1056510	60	MH	mm1	04	BA	0.6	HM	1.0	YC	1.0											900	500	500	2.0	7	20
1056511	61	MH	mm1	05	BA	0.6	YC	1.0					HM	1.0							900	500	400	2.0	4	20
1056512	62	MH	mm1	06	HM ¹	0.8	YC ¹	0.8					BA ¹	0.6							800	400	400	2.0	7	20

Standard ID	REF #	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)	MI TD (m)	Max RD (yrs)	FG yrs
1056513	63	MH	mm1	07	BA ¹	0.6	YC ¹	0.8					HM ¹	0.8							900	500	400	2.0	4	20
1056514	64	MH	mm1	09	YC ¹	0.8							HM ¹	0.8							800	400	400	2.0	4	20
1056523	65 root rot	CWH	xm	01	FDC ₉₆	3.0							HW ²⁴	2.0	CW	1.5	PW ²⁴	2.5			900	500	400	2.0	3	20
1056524	66 root rot	CWH	xm	03	PLC ⁶	1.3							CW	1.0							800	400	400	2.0	3	20
1056525	67 root rot	CWH	xm	04	FDC ₉₆	3.0							CW	1.5	PW ³¹	2.5					900	500	400	2.0	3	20
1056526	68 root rot	CWH	xm	05	CW	2.0	FDC ₉₆	4.0					PW ³¹	2.5							900	500	400	2.0	3	20
1056527	69 root rot	CWH	xm	06																	900	500	400	2.0	6	20
1056528	70 root rot	CWH	xm	07	CW	2.0	FDC ₉₆	4.0					BG	3.5							900	500	400	2.0	3	20
1056530	71 elk	CWH	xm	03	FDC ₉₉	2.0	PLC ⁶ ₉₉	1.3					CW ⁹⁹	1.0	DR ^b	4.0					800	200	200	1.5	3	20
1056531	72 elk	CWH	xm	01	FDC ₉₉	3.0							PW ^{99 31}	2.5	CW ⁹⁹	1.5	DR ⁹⁹ _{7 42 a}	4.0	HW _{24 99}	2.0	900	250	200	1.5	3	20
1056532	73 elk	CWH	xm	05	FDC ₉₉	4.0	CW ₉₉	2.0					PW ^{31 99}	2.5	DR ^{a 42} ₉₉	4.0					900	250	200	1.5	3	20
1056533	74 elk	CWH	xm	06	FDC _{18 99}	3.0	HW ₉₉	2.0	CW ₉₉	1.5			DR ^{a 41} ₉₉	4.0							900	250	200	1.5	6	20

*BC Timber Sales
Campbell River Forest Stewardship Plan*

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[illegible]

*BC Timber Sales
Campbell River Forest Stewardship Plan*

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[illegible]

A1.2 Reference Notes for Stocking Standards

Tree Species

'BA' is amabilis fir

'BG' is grand fir

'BP' is noble fir

'CW' is western red cedar

'FDC' is coastal douglas fir

'HM' is mountain hemlock

'HW' is western hemlock

'PLC' is shore pine

'PW' is white pine

'SS' is sitka spruce

'SE' is engelmann spruce

'YC' is yellow cedar

'EP' is paper birch

'ACT' is black cottonwood

'MB' is bigleaf maple

'DR' is red alder

MIN or 'Min' means minimum

MITD means minimum inter tree distance in metres.

MSS means minimum stocking standard stems per hectare of planted and natural preferred and, if present, acceptable species.

SU means standards unit.

FG means free growing at 20 years.

Height of trees above brush : in addition to being at least minimum required height, trees must be greater than the approved minimum percentage height above brush in order to be free growing.

All BEC = 150%, except MH is 125%

'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 within the mosaic..

Where standards units (SUs) are comprised of an unmappable mosaic of site series, the practice will be to managed for the stocking standards of the dominant site series provided that the tree species are suitable in all site series contained within the SU.

True Firs (BA,BG,BP) . The plan area is within the quarantine zone. There is a risk of balsam wooly adelgid within quarantine area, see :

<http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/animals-and-crops/plant-health/insects-and-plant-diseases/nursery-and-ornamentals/balsam-woolly-adelgid>

Footnotes:

Applies to footnotes associated with default Reference Guide for FDP Stocking Standards, updated October 12, 2017.³⁶

1. suitable on elevated microsites.
6. suitable on nutrient very poor sites.
7. suitable on nutrient medium sites.
8. suitable on steep slopes.
9. suitable on warm aspects.
10. suitable on cool aspects.
13. suitable at upper elevations.
14. suitable at lower elevations.
15. suitable in the northern portion of biogeoclimatic unit.
16. suitable in the southern portion of biogeoclimatic unit.
18. suitable in the eastern portion of biogeoclimatic unit.
24. suitable in wetter portion of biogeoclimatic unit.
26. suitable minor species on nutrient poor sites.
31. must use blister rust resistant stock- see BC Journal of Ecosystems and Management 10(1):97-100 for supplementary information.
35. use resistant stock to mitigate risk of spruce weevil damage- see SS weevil decision tool at <http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042>.
- 41..limited by poorly drained soils.
42. suitable on sites with a fresh soil moisture regimes.
53. minor component.
69. suitable at upper elevations of the biogeoclimatic unit only when used in the southern portion of the biogeoclimatic unit
 - a. productive, reliable, and feasible regeneration option.
 - b. limited in productivity, reliability and/or feasibility.

Applies to footnotes associated with stocking standards unique to this FSP

99. restricted to areas of heavy elk use: An area will be considered as having heavy elk use if reasonable efforts to manage the risk have failed, and there is evidence the damage is chronic and-ongoing. DR will comprise not more than 5% of the crop trees for a SU.
98. restricted to 6.0 ha of block K003C3XE, opening # 1667933.
97. restricted to trial use.
96. stumping required where prescribed.

Management Strategies Describing the situations or circumstances that determine when *FPPR* s. 44(1) (free growing stands generally) or s. 45 (free growing stands collectively across cutblocks) will apply to an area.

³⁶ Available at: https://www.for.gov.bc.ca/hfp/silviculture/stocking_stds.htm

Situations or Circumstances Where Less Than 2.0 metre Minimum Horizontal Intertree Distance Applies:

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:

- i. 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).
- ii. 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
- iii. Wet sites (site series 12) where irregularly spaced mounds are the only productive microsites.
- iv. Roadside debris piles that do not represent a significant loss of productive site (i.e. are less than 50m² ground surface area), or pose a stability concern or fire hazard will, as a general rule, will remain untreated. For ground based harvest systems in second growth stands, an attempt will be made to leave these small piles dispersed throughout the cutblock. Minimum stocking standards will be maintained in these areas with and intertree spacing of 1.0m around slash piles or heavy slash accumulations. For heavy road side slash accumulations, site preparation is the priority and will focus on rearranging the slash to achieve target stocking.
- v. Include sites where elk or deer are trampling, bedding, browsing, and/or rubbing. Microsite selection reduced to 1.5 metre spacing is used to reduce browse opportunity, and maximize utilization of optimum microsites.
- vi. A site that is a preferable microsite to that which would have been available at 2.0 metre spacing.
- vii. A site directly adjacent to retained trees, riparian zones.

Management of Standards Units Impacted by Heavy Elk Use: Stocking Standards

An area of heavy elk use is defined as an area that will not achieve free growing standards described in the site plan (SP) due to impacts by elk activity, including continuous and ongoing trampling, bedding, browse, and/or rubbing. The damage must be significant enough that it is either reducing tree vigour or causing mortality such that crop trees cannot achieve minimum heights and/or the standards unit (SU) cannot achieve minimum densities as stated in the initial SP. Elk browse has three major influences on crop trees in the area affected.

The first influence occurs early in the establishment of the new stand where browse is severe and continued, resulting in mortality of the seedling. Severe browsing at this stage of seedling development sometimes results in the elk pulling the seedling from the ground. The lower stocking that results within the area affected, despite fill planting, could potentially make stocking standards described in the SP unachievable.

The second influence occurs where seedlings and young trees are continuously browsed but not killed. The seedling is generally short, stunted and very bushy in appearance. It is difficult for an affected crop tree to achieve minimum free growing height or meet requirements for damage / tree form.

The third type of damage is primarily due to rubbing of the stems on crop trees in localized areas and/or along elk trails. This damage also reduces vigour, causes poor form and can also result in mortality of the crop trees.

The intent of these stocking standards is that they will be applied through a site plan amendment, after attempts to meet the initial standards for that area have failed. These CWHxm standards will not be chosen at the site planning stage, even though it may be evident that high elk presence in the area will hinder reforestation. The elk standards in this FSP are for application in the xm sub zone. The species chosen for a particular block will be based on the 'regular' stocking standards which will have been in place at the time of initial stocking. For the purposes of measuring and verifying for stratification, the following description will be used as a guide to assess for heavy damage or the likelihood that damage will continue to reduce the value of the stand post-free growing.

An area will be considered as having heavy elk use if reasonable efforts to manage the risk have failed. How 'reasonable efforts' will be defined will vary, however the intention is that planting efforts will be made to reach the target in the initial stocking standard. Initial stocking efforts will reflect the elk browse potential in the area and strategies to mitigate elk damage including; species and stock type selection, application of deer/elk repellent products, installation of tree protection cones, microsite selection, and increased planting density will be implemented. Fill planting will be conducted where needed.

When the efforts as described above fail to generate stocking which meets originally applied standards, and there is evidence the damage is chronic and-ongoing, the elk stocking standards will be applied. The preferred option is to stratify the worst damaged areas and apply the new standard to as small an area as possible, but in extreme cases the standard may be applied to the entire SU. Efforts will still be made to exceed the reduced standards where possible. Stocking standards must be flexible for these areas and it may only be economically feasible to achieve an average of 200 to 300 trees per hectare.

Elk Stocking Standard:³⁷

1) In areas where elk have substantially affected regeneration efforts as described above, the target stocking will aim for 900, or 800 in (03) well-spaced stems/ha preferred and acceptable. However, the minimum preferred and acceptable will be reduced to 50% well-spaced stems/ha and the minimum preferred will be reduced to 50% well-spaced per/ha. Minimum inter tree distance will be reduced to 1.5 m. If the minimum inter tree distance in the SP is less than 1.5 m it will remain unchanged. Species selection will be subject to a particular species' productivity, reliability, and feasibility for any given site

³⁷ Developed with reference to:
Henigman, J., J. Turner, and K. Swift. 2005. Coast Forest Region: Roosevelt Elk Wildlife Habitat Decision Aid. BC Journal of Ecosystems and Management 6(1):51-53.

series generally consistent with LMH 28. The species chosen will be consistent with the original stocking standards chosen for the block.

2) The use of deciduous species mixed with the conifer will be an acceptable strategy to reduce damage caused by elk (Henigman et al. 2005³²). DR will comprise not more than 5% of the crop trees for a SU. Where there are 10 or less maple coppices/ha in a heavy elk use area they will be accepted as a component of biodiversity.

3) Conifer crop trees will be considered free growing with 1.0 m inter-tree distance between the stems of crop trees and deciduous trees at breast height. Conifer crop trees must not exhibit any signs of reduced leader growth over the previous two growing seasons

Broadleaf Management Strategy

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.

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.
- A minor component of stands managed using the Elk stocking standards.

Red alder will be the primary species under management. Sites selected for red alder management will generally be moist to wet, nutrient medium to very rich. Its application in CWH xm sites, as listed in the Stocking Standards tables will be targeted at the fresh, nutrient poor to medium component of the series .

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

APPENDIX 2: FSP Maps and Identification of FDUs

Go to: https://www.for.gov.bc.ca/bcts/areas/TSG/TSG_FSP.htm