

SOUTH ISLAND NATURAL RESOURCE DISTRICT

Pacific Maritime Forest Stewardship Plan

B.C. Timber Sales Strait of Georgia Business Area

Otter Point Timber Ltd. (Holder of FL A74632)

Timco Trading Ltd. (Holder of NRFL A91342)

Rosewall Forest Tenure Holdings Ltd. (Holder of FNWL N2L)

Qala:yit Forestry Limited Partnership (Holder of CFA K5U)



BCTS

BC Timber Sales
Strait of Georgia

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1 INTRODUCTION TO THE PACIFIC MARITIME FOREST STEWARDSHIP PLAN

This Forest Stewardship Plan (FSP) has been prepared by BC Timber Sales Strait of Georgia Business Area on behalf of the licensees listed under section 1.1, Application of the Forest Stewardship Plan.

1.1 Application of the Forest Stewardship Plan (FRPA S. 3(4))

This FSP applies to the following:

Table 1: Application of the Pacific Maritime FSP

Licences	Forest Tenure Holder	Applicable FDU(s)
N/A – Operations within: <ul style="list-style-type: none">Pacific TSAArrowsmith TSA	BC Timber Sales – Strait of Georgia Business Area	All
Forest Licence A74632	Otter Point Timber Ltd.	Chemainus
Non-Replaceable Forest Licence A91342	Timco Trading Ltd.	Chemainus, Cowichan, Nitinat, Loss/San Juan
First Nations Woodland Licence N2L	Rosewall Forest Tenure Holdings Ltd.	Rosewall
Community Forest Agreement K5U	Qala:yit Forestry Limited Partnership	Gordon, Loss/ San Juan

1.2 Definitions

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

BCTS means BC Timber Sales

BEC means Biogeoclimatic Ecosystem Classification

BEO means Biodiversity Emphasis Option

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

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

FRPA means the *Forest and Range Practices Act*

GAR means Government Actions 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

GWM(s) means General Wildlife Measure(s)

HLP means Higher Level Plan

FSP means Forest Stewardship Plan

LU means Landscape Unit

Layer One Stocking Standard means the mature overstorey trees >12.5 cm dbh as referred to in the Silviculture Survey Procedures Manual April 1, 2016.

NAR means Net Area to Reforest

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

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 Results/Strategies

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

UWR means an Ungulate Winter Range

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

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

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

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

1.3 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 Legislated Planning Date.

1.4 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.

1.5 Objectives Cancelled

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

2 TERM AND COMMENCEMENT OF THE FSP (FOREST AND RANGE PRACTICES ACT (FRPA) S. 6(1)(A), S. 6(1)(B) AND S. 6(2))

The dates of submission, approval, and effective date of this FSP are **listed on the front cover, page 1**. The term of this FSP is five years, beginning on the commencement date. This FSP may be extended after the commencement date according to applicable legislation.

3 MAPS (FRPA S. 5(1)(A) AND FOREST AND PLANNING PRACTICES REGULATION (FPPR) S. 14)

The maps posted at: https://www.for.gov.bc.ca/bcts/areas/TSG/TSG_FSP.htm show the boundaries of the Forest Development Units (FDUs) under this FSP. The maps also show the areas that are excluded from the FDUs and from this FSP. This FSP includes portions of the Rosewall, Little Qualicum, Millstone, Nanaimo, Chemainus, Cowichan, Koksilah, San Juan, Loss, Gordon, and Nitinat Landscape Units (LUs).

3.1 Designations in Effect at Date of Submission of this FSP (FPPR S. 14(3))

The maps that are part of this FSP show the designations and requirements described in FPPR S. 14(3) that were in effect as of the date of submission, including, for ease of reference, the designations listed below.

Table 2: FPPR 14(3) Designations for the Pacific Maritime FSP

Designation	FDU	Date Designated
FPPR 14 (3)(a) Ungulate Winter Ranges		
#U1-002 (for TFL 46 and for Pacific TSA	Cowichan	September 26, 2003

Designation	FDU	Date Designated
(formerly TFL 46))	Gordon Loss/San Juan Nitnat	
#U1-017 (for the Arrowsmith TSA)	Chemainus Cowichan Gordon Little Qualicum Nanaimo Rosewall	November 21, 2003
FPPR 14(3)(b) Wildlife Habitat Areas		
1-007 (Marbled Murrelet)	Gordon	December 22, 2005
1-008 (Marbled Murrelet)	Gordon	December 22, 2005
1-032 (Marbled Murrelet)	Loss/San Juan	December 22, 2005
1-033 (Marbled Murrelet)	Chemainus	December 18, 2006
1-034 (Marbled Murrelet)	Cowichan	December 18, 2006
1-098 (Marbled Murrelet)	Loss/San Juan	December 22, 2005
1-099 (Marbled Murrelet)	Loss/San Juan	December 22, 2005
1-104 (Marbled Murrelet)	Nitinat	December 22, 2005
1-187 (Marbled Murrelet)	Gordon	December 22, 2005
1-223 (Red-legged Frog)	Loss/San Juan	April 9, 2009
FPPR 14 (3)(c) Fisheries Sensitive Watersheds		
F-1-004 (Gordon River)	Gordon	December 28, 2005
F-1-006 (Hemmingsen Creek)	Loss/San Juan	December 28, 2005
FPPR 14 (3)(e) Scenic Areas		
1 (Highway 1 and 19 from Victoria to the Tsable River including Denman and Hornby Islands) 2 (Highway 4 from Parksville to Ucluelet and Tofino) 17 (Rosander Main from Caycuse River to Carmanah Provincial Park) 18 (Nitinat Lake) 20 (Pacific Ocean from Cape Beale to Carmanah Point) 21 (Highway 14 – Victoria to Port Renfrew) 22 (San Juan Ridge Trail/San Juan Special Management Zone) 24 (Highway 18 – Duncan to Honeymoon Bay) 25 (Gordon River travel corridors from Port Renfrew to Gordon River Bridge) 26 (Port Renfrew to the Harris Creek Valley to	All	Established in Government Actions Regulation (GAR) order Designated November 13, 1998 Amended December 30, 2011

Designation	FDU	Date Designated
a point just north of the old Harris Creek Camp (vicinity of Hillcrest main Junction) 30 (San Juan River Valley from Port Renfrew to the San Juan River at the San Juan River recreation site.) 31 (Cowichan Lake)		
FPPR 14 (3) (g) Community Watersheds		
Little Qualicum River (#920.039)	Little Qualicum	June 15, 1995
Nile Creek (#920.045)	Rosewall	June 15, 1995
Holland Creek (#920.032)	Chemainus	June 15, 1995
Stocking Creek (#920.065)	Chemainus	July 16, 1999
Banon Creek (#920.004)	Chemainus	June 15, 1995
FPPR 14 (3)(h) Old Growth Management Areas (OGMAs)		Effective Date of the Order
Renfrew area OGMAs	Nitinat Loss/San Juan Gordon	April 1, 2009; amended February 2, 2012
Coastal Douglas-fir OGMAs	Rosewall	July 26, 2010; amended September 16, 2011

3.2 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))

The FSP maps identify the areas that are within the outer boundaries of the FDU, but subject to a road permit, cutting permit or a Timber Sale Licence.

Any areas declared under S. 14(4) of the FPPR are listed as an amendment to the East South West Coast FSP #136.

3.3 Stocking Standards and S. 197(4) (5) (7) of the FRPA

In accordance with FRPA S. 197(4) (5) (7), the holder(s) 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.

4 RESULTS AND STRATEGIES (FRPA S. 5(1)(B))

4.1 Land Use Objectives (FPPR S.1 definition)

4.1.1 Order Establishing Provincial Non-Spatial Old Growth Objectives

The Order Establishing Provincial 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 / Strategy
Rosewall, Little Qualicum,	(1) In this result or strategy: “non-contributing land base” means the non-contributing land base described in the Timber Supply Review for the Arrowsmith Timber Supply Area (effective date

FDU	Result / Strategy
Nanaimo, Chemainus, Cowichan, Koksilah, Loss LU portion of Loss/San Juan FDU	<p>September 1, 2002) and the Timber Supply Review for TFL 46 effective June 30, 2004³;</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 Provincial Non-Spatial Old Growth Objectives; and,</p> <p>“draft OGMA” are those OGMAs identified consistent with provision A8 of the Order and provisions 2(c) and 6 of the Implementation Policy⁴.</p> <p>(2) Where draft OGMAs are identified, the holder(s) of the FSP, in accordance with the written notice specifying the draft OGMAs meet the intent of the Order:</p> <ul style="list-style-type: none"> (a) will recruit or maintain old growth forest attributes within draft OGMAs; (b) will authorize or carry out road construction or timber harvesting or other such operations within draft OGMAs in accordance with direction in the written notice specifying that draft OGMAs meet the intent of the non-spatial Order for the LU; and, (c) may authorize or carry out road construction within draft OGMAs, provided that replacement areas are selected by the holder(s) of the FSP that: <ul style="list-style-type: none"> (i) are within the same BEC variant; (ii) where practicable, are proximal to the location of the OGMA as originally drafted; (iii) have similar or more suitable ecological attributes for conserving biological diversity than the area being removed from draft OGMA; (iv) such replacement will not result in insufficient suitable forest being available to meet the retention targets. <p>(3) Where amendments are made to draft OGMAs as provided for in subsection 2(c) of this R/S, the holder(s) of this FSP will map and submit draft OGMA boundary amendments to the applicable Provincial ministry responsible for establishing and amending OGMAs.</p> <p>(4) In addition to section (2) of this R/S, where there are no draft OGMAs, for the proportion of the LUs that fall within the FDUs of this FSP, the holder(s) of the FSP will:</p> <ul style="list-style-type: none"> (a) not carry out or authorize timber harvesting or road construction in old forest within the non-contributing landbase in that FDU, to the extent necessary to meet the proportion of the specified retention targets that fall within the FDU; and, (b) if the amount of old forest in the non-contributing landbase 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 landbase (THLB) and in the mature forest in the non-contributing landbase within the FDUs of this FSP, and: <ul style="list-style-type: none"> (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 landbase; and/or (ii) not carry out or authorize timber harvesting or road construction in areas of old forest within the THLB to the extent necessary to meet proportional specified retention targets.

³ The application of this FSP is for licenses wholly external to TFL 46; however, for the purposes of this FSP, the definition of non-contributing land base includes non-contributing land base as described in the Timber Supply Review for TFL46, effective June 30, 2004, as was in effect when the Non-Spatial Old Growth Order came into force (June 30, 2004). This definition of non-contributing land base applies to FSP licences within the Pacific TSA which were originally derived from TFL46.

⁴ The Implementation Policy provides guidance for the implementation of the provincial order for non-spatial old growth objectives and is available at: https://www.for.gov.bc.ca/tasb/slrp/policies-guides/old-growth/Old_Growth_Order_Implementation_Policy_March_19_2004.pdf

4.1.2 Vancouver Island Land Use Plan Higher Level Plan Order

The applicable Higher Level Plan (HLP) Order Objectives for the Special Management Zones (SMZs) and Enhanced Forestry Zones (EFZs) are listed in the following tables and described below.

Table 3: VILUP Special Management Zones

Special Management Zone	Applicable HLP Objective	FDU
SMZ 20 – Upper Qualicum	1, 2	Rosewall
SMZ 22 – San Juan Ridge	1, 2	Loss/San Juan

Table 4: VILUP Enhanced Resource Management Zones

Enhanced Resource Management Zone*	Applicable HLP Objective	FDU
EFZ 47 – Loss-Jordan	7, 9, 9.1	Loss/San Juan

* Objectives 7, 9, 9.1 apply save and except for the parts of those zones that are designated as Community Watersheds as defined in [S. 41\(8\) of the Forest Practices Code of British Columbia Act](#).

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 mature⁵ and old⁶ forests subject to the following:*

- i. *The target for mature seral forest should range from one quarter to one third of the forested area of each SMZ; 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 / Strategy
Portions of the Rosewall and Loss/San Juan within the SMZs	<p>(1) In this result:</p> <p>“areas” means the net area to be reforested (NAR) plus the area occupied by Permanent Access Structures (PAS);</p> <p>“spatially defined areas” are areas of mature⁵ or older⁶ forest or recruitment areas that will be identified to attain mature seral stage and can be mapped at a 1:20,000 scale.</p> <p>(2) The holder(s) of the FSP will only authorize or carry out harvesting such that no less than 25% of the forested area of the portion of the FDUs covered by SMZ 20 and SMZ 22 is retained as mature or old seral age class.</p>

⁵ 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.

⁶ 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.

FDU	Result / Strategy
	<p>(3) In addition to subsection (2) of this R/S, where the area of mature or old seral forest within the portions of the FDUs covered by SMZs 20 and 22 is currently less than 25%, the FSP holder(s) will ensure that mature and old forest within the portions of the FDUs covered by SMZs 20 and 22 is 25%, or more, within 50 years.</p> <p>(4) Where applicable, the holder(s) of the FSP will consult with other forest tenure holders to ensure that this objective is being met for SMZs 20 and 22.</p>

HLP Order Objective 1(b) – Structural Forest Attributes

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

- (5) Retaining, within cutblocks⁷, structural forest attributes and elements with important biodiversity functions⁸.

FDU	Result / Strategy
Portions of the Rosewall and Loss/San Juan within the SMZs	<p>(1) In this strategy, “structural forest attributes with important biodiversity functions” includes, but is not limited to, snags, wildlife trees, and downed logs.</p> <p>(2) In respect of areas to which Objective 1(b) applies, the holder(s) of the FSP will:</p> <p>(a) design cutblocks in a manner that is consistent with retaining structural forest attributes and elements with important biodiversity functions that exist in each of the following:</p> <ul style="list-style-type: none"> (i) wildlife tree patches/wildlife tree retention areas; (ii) no-work zones; (iii) riparian management areas; (iv) other potential leave areas, that are generally within cutblock boundaries; <p>(b) carry out forest practices only if the forest practices are consistent with the design for the cutblock referred to in paragraph (a); and,</p> <p>(c) enter into a timber sale licence or cutting permits only if the licence/permit is consistent with the design for the cutblock referred to in paragraph (a).</p>

HLP Order Objective 1(c) – Silviculture Systems

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

- (6) 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 applied⁹.

⁷ Within cutblocks: generally means non-contiguous with cutblock boundaries.

⁸ This includes, but is not limited to snags, wildlife trees, downed logs.

⁹ Maximum cutblock sizes refer to net area to be reforested (NAR).

FDU	Result / Strategy
Portions of the Rosewall and Loss/San Juan within the SMZs	<p>(1) In this result,</p> <p>“shelterwood silviculture system” is defined¹⁰ 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 harvest area 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 respect of SMZs to which Objective 1(c) applies, the holder(s) of the FSP will:</p> <ul style="list-style-type: none"> (a) design cutblocks in a manner that is consistent with: <ul style="list-style-type: none"> (i) establishing a variety of silvicultural systems and patch sizes and shapes across the SMZ; and, (ii) for shelterwood, selection, or retention silvicultural systems: <ul style="list-style-type: none"> (A) maintaining varying levels of retention within the cutblocks based on a consideration of the site-specific site conditions and the forest values; and, (B) limiting the NAR to 40 hectares except as provided in the R/S for HLP Objective 2 - Salvage; and, (iii) for clear-cut, clear-cut with reserves or seed tree silvicultural systems, limiting the NAR to 5 hectares except as provided in the R/S for HLP Objective 2 - Salvage; and, (b) carry out forest practices only if the forest practices are consistent with the design for the cutblock referred to in paragraph (a); and, (c) enter into a timber sale licence or cutting permit only if the licence/permit is consistent with the design for the cutblock referred to in subsection (2)(a) of this R/S.

HLP Order Objective 2 - Salvage

¹⁰ Definitions of all silvicultural systems listed under this FSP result are sourced from: Silvicultural Systems Handbook for British Columbia, Ministry of Forest, Forest Practices Branch, March 2003.

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

FDU	Result / Strategy
Portions of the Rosewall and Loss/San Juan within the SMZs	<p>(1) If, within an SMZ to which Objective 2 applies, timber harvesting is to be carried out in a cutblock to recover timber damaged by fire, insects, wind or other similar events, the holder(s) of the FSP may design the cutblock to have a NAR that exceeds:</p> <p style="padding-left: 40px;">(a) 40 hectares for shelterwood, selection, or retention silvicultural systems; and,</p> <p style="padding-left: 40px;">(b) 5 hectares for clearcut, clearcut with reserves or seed tree silvicultural systems</p> <p>provided that the design incorporates structural characteristics of natural disturbances into the cutblock where safe and practicable.</p>

HLP Order Objective 7 – Short Term Timber Availability

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 / Strategy
Portion of the Loss/San Juan within the EFZ	<p>(1) For the purposes of HLP Order Objective 7, in the Loss-Jordan EFZ, the holder(s) of the FSP may carry out or authorize timber harvesting and road construction within cutblocks that</p> <p style="padding-left: 40px;">(a) apply any silvicultural system;</p> <p style="padding-left: 40px;">(b) exceed 40 ha; and,</p> <p style="padding-left: 40px;">(c) are adjacent¹¹ to areas that are greened-up as provided in HLP Objective 7(b).</p> <p>(2) For the purposes of HLP Order Objective 7, in determining the size of a proposed cutblock in the Loss-Jordan EFZ, the non-greened up portion of a cutblock adjacent to a cutblock proposed for harvest will be considered part of the NAR.</p> <p>(3) In order to avoid or mitigate significant impacts to specific hydrological, wildlife, biodiversity, scenic or recreation values, cutblocks described in subsection (1) will be consistent with:</p> <p style="padding-left: 40px;">(a) wildlife values if consistent with R/S in FSP Section 4.2.2, for Wildlife;</p> <p style="padding-left: 40px;">(b) wildlife and biodiversity values if consistent with R/S in FSP Section 4.2.3 for Water, Fish, Wildlife and Biodiversity within Riparian Areas;</p> <p style="padding-left: 40px;">(c) wildlife and biodiversity values if consistent with R/S in FSP Section 4.2.5 for Wildlife</p>

¹¹ “Adjacent” means an area that is sufficiently close to a cutblock that, due to its location, could directly impact on, or be impacted by, a forest practice carried out within the cutblock (from FPPR S. 65(1)).

	and Biodiversity; (d) scenic values if consistent with R/S in FSP Section 3.4.1 for visual quality; and, (e) recreation values if harvested in accordance with the GAR order for the South Island Forest District signed December 1, 2005.
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HLP Order Objective 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 / Strategy
Portion of the Loss/San Juan within the EFZ	(1) For those areas that are harvested within an EFZ during the term of this plan, the holder(s) of the FSP will ensure that not more than 20% of the total NAR for all of the cutblocks will be reforested using a single species that is ecologically suited to the area as set out in the applicable stocking standards.

4.1.3 Order Establishing Land Use Objectives for the Renfrew Aggregate Landscape Unit

Landscape Unit Plans have been established under [S. 93.4 of the Land Act](#) for the Renfrew Aggregate which is comprised of the Caycuse, Gordon, Nitinat, San Juan and Walbran LUs. This FSP incorporates portions of the Nitinat, Gordon, and San Juan LUs into FDUs.

Objectives Set by Government for OGMA's within the Renfrew Aggregate Landscape Unit

3.1. *Maintain or recruit old growth forests in established old Growth Management Areas (OGMA's), as shown on the attached Old Growth Management Area maps dated February 1, 2012, subject to section 3.2 and 3.3 below. The boundaries of the established OGMA's are defined by the spatial data set contained in the provincial GEO BC Geographic Warehouse (GGW) accessible through GEOBC at: <http://www.geobc.gov.bc.ca>*

3.2. *Permissible activities:*

a) *Minor OGMA intrusions and/or boundary adjustments for operational reasons:*

Minor timber harvesting operations, and road or bridge construction required to access resource values beyond or adjacent to the OGMA, are permitted in OGMA's that are 10 ha or greater in size, provided that:

- i) *the operation or boundary adjustment does not affect more than 10 percent of the area of the OGMA,*
- ii) *no other practicable option for road or bridge location exists,*
- iii) *suitable OGMA replacement forest of equivalent age, structure and area is identified either (in order of priority) directly adjacent to, or in the same variant and landscape unit as the adjusted OGMA, and*
- iv) *intrusions, boundary adjustments and OGMA replacement areas are documented, mapped and submitted to the delegated decision maker at the end of each calendar year.*

In the case of temporary roads or bridge sites placed within OGMA's, as an alternative to finding replacement area the licensee may permanently deactivate and rehabilitate a temporary road or bridge site within four years after construction.

b) *Other permissible activities within OGMA's:*

- i) *Salvage harvesting to prevent the spread of insect infestations or diseases that pose a significant threat to forested areas outside of OGMA's. Salvage within OGMA's will be done in a manner that retains as many old growth forest attributes as possible.*
- ii) *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.*
- iii) *Felling of 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.*
- iv) *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 less than 0.5 ha in total.*
- v) *Small boundary adjustments for operational reasons, or intrusions, other than those specified above, that result in a net loss to the OGMA of less than or equal to 0.5 hectare in total.*
- vi) *First Nations traditional use of trees or understory plants.*

OGMA replacement forest is required as a result of the activities in 3.2(b) (i) to (v) above if the total net change to the OGMA exceeds two ha in size. Replacement forest must be of equivalent age, structure and area and situated (in order of priority), either immediately adjacent to the existing OGMA, or in the same variant and landscape unit as the existing OGMA. Boundary adjustments and OGMA replacement areas must be documented, mapped and submitted to the delegated decision maker at the end of each calendar year.

3.3. Exemptions:

The permissible activities under 3.2(a) and 3.2(b) (i) to (v) do not apply to OGMA's 317 and 367.

FDU	Result / Strategy
Nitinat, Gordon, San Juan portion of Loss/San Juan FDU	<p>(1) The holder(s) of the FSP will not carry out or authorize road construction or timber harvesting within OGMA's delineated as part of the Renfrew Sustainable Resource Management Plan (SRMP) established April 1, 2009 and amended February 2, 2012 as shown on the OGMA map dated December 20, 2006 and amended February 1, 2012 or as subsequently amended except:</p> <ul style="list-style-type: none"> a) minor timber harvesting operations, and road or bridge construction required to access resource values beyond or adjacent to the OGMA, are permitted in OGMA's that are 10 ha or greater in size, provided that: <ul style="list-style-type: none"> i) the operation or boundary adjustment does not affect more than 10% of the area of the OGMA; ii) no other practicable option for road or bridge location exists; iii) intrusions, boundary adjustment and OGMA replacement areas are documented, mapped and submitted to the DDM at the end of each calendar year. b) for the following permissible activities: <ul style="list-style-type: none"> i) salvage harvesting to prevent the spread of insect infestations or diseases that pose a significant threat to forested areas outside of OGMA's. Salvage within OGMA's will be done in a manner that retains as many old growth forest attributes as is possible and safe; ii) 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; iii) felling of 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; iv) construction of road, 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 less than 0.5 ha in total;

FDU	Result / Strategy
	<ul style="list-style-type: none"> v) small boundary adjustments for operational reasons, or intrusions, other than those specified above, that result in a new loss to the OGMA of less than or equal to 0.5 ha in total; and, vi) First Nations' traditional use of trees or understory plants. <p>(2) Where intrusions into OGMAs are being undertaken consistent with S. 1(a) of this R/S, the holder(s) of the FSP will either:</p> <ul style="list-style-type: none"> a) ensure that suitable OGMA replacement forest of equivalent age, structure and area is identified either (in order of priority) directly adjacent to, or in the same variant and LU as the adjusted OGMA; or, b) permanently deactivate and rehabilitate a temporary road or bridge site located within the OGMA within 4 years after construction. <p>(3) Where intrusions into OGMAs are being undertaken consistent with S. 1(b) of this R/S that result in a net change to the OGMA of at least 2 ha, the holder(s) of the FSP will:</p> <ul style="list-style-type: none"> a) identify OGMA replacement forest that is of equivalent age, structure and area and situated (in order of priority), either immediately adjacent to the existing OGMA, or in the same variant and LU as the existing OGMA; and, b) document, map and submit all boundary adjustments and OGMA replacement areas to the DDM at the end of each calendar year. <p>The permissible activities listed in section 1(a) and (b) of this strategy do not apply to OGMA polygon 317.¹²</p>

Objectives Set by Government for Wildlife Tree Retention within the Renfrew Aggregate Landscape Unit

4.1. Retention of wildlife tree patches (WTPs):

Maintain stand-level structural diversity by retaining wildlife trees subject to the following:

- a) *The holder of an agreement under the Forest Act who completes harvesting in one or more cutblocks, except minor salvage cutblocks¹³, located within the Renfrew SRMP area during the sixty month period beginning on April 1, 2007 or during the term of the agreement, whichever is shorter, must ensure that at the end of this and any subsequent sixty month period the total area covered by wildlife tree retention areas that relate to the cutblocks meets or exceeds the percent requirement by landscape unit and biogeoclimatic subzone presented in Table A.*

Table A: Wildlife Tree Retention by LU and BEC Subzone in the Renfrew SRMP

Landscape Unit	Biogeoclimatic Subzone	% WTP requirement
Caycuse	CWH vm (Coastal Western Hemlock, very wet maritime)	11
	CWH mm (Coastal Western Hemlock, moist maritime)	14
	CWH xm (Coastal Western Hemlock, very dry maritime)	14
	MH mm (Mountain Hemlock, moist maritime)	4
Gordon	CWH mm	14
	CWH vm	10
	CWH xm	13
	MH mm	5
Nitinat	CWH mm	14

¹² Note: OGMA polygon #367 is not within an FDU that is part of this FSP.

¹³ A minor salvage cutblock is defined as less than 2.0 ha of harvesting and/or less than a total volume of 2000m³ excluding volume harvested from any road clearing width, if the road is required to facilitate the removal of the timber within the minor salvage cutblocks.

Landscape Unit	Biogeoclimatic Subzone	% WTP requirement
	<i>CWH vh (Coastal Western Hemlock, very wet hypermaritime)</i>	2
	<i>CWH vm</i>	12
	<i>CWH xm</i>	15
	<i>MH mm</i>	4
San Juan	<i>CWH mm</i>	11
	<i>CWH vm</i>	12
	<i>CWH xm</i>	7
	<i>MH mm</i>	5
Walbran	<i>CWH vm</i>	6
	<i>MH mm</i>	0

- b) *WTPs must be well distributed across the BEC subzone.*
- c) *When designated at the operational site plan level, WTPs must be located within or immediately adjacent to a cutblock.*
- d) *No timber harvesting, including single tree selection is to occur within WTP's, except as noted in (e) below.*
- e) *Salvage of windthrown timber is permitted within WTPs where windthrow impacts 25% to 50% of the dominant or co-dominant stems. Salvage of windthrown timber and harvesting of remaining standing stems is permitted within WTPs where windthrow exceeds 50% of the dominant or co-dominant stems; or where forest health issues pose a significant threat to areas outside the WTP. Where salvage/harvesting is planned and authorize, suitable replacement WTP area of at least equivalent quantity must be identified concurrently to achieve retention target.*
- f) *WTPs should include, if present, remnant old-growth patches and live or dead veteran trees (excluding danger trees).*
- g) *WTPs must include representative larger trees for the stand (dbh > average operational cruise) and any moderate to high value wildlife trees if available (excluding danger trees).*
- h) *BEC subzones and variants will be determined by operational site plan information.*
- i) *In WTPs with a likelihood of windthrow, pruning and/or topping may be carried out to maintain the integrity of the WTP.*

FDU	Result / Strategy																																
Nitinat, Gordon, San Juan portion of Loss/San Juan FDU	<p>(1) The holder(s) of the FSP will identify WTPs for cutblocks for which harvesting has been completed to ensure that over any 5 year period, beginning on April 1, 2007, the total area covered by WTP that relate to the cutblocks meets or exceeds the percent specified in the table below.</p> <table><tr><th>Landscape Unit</th><th>BEC Subzone</th><th>WTP (%)</th></tr><tr><td rowspan="4">Gordon</td><td>CWH mm</td><td>14</td></tr><tr><td>CWH vm</td><td>10</td></tr><tr><td>CWH xm</td><td>13</td></tr><tr><td>MH mm</td><td>5</td></tr><tr><td rowspan="5">Nitinat</td><td>CWH mm</td><td>14</td></tr><tr><td>CWH vh</td><td>2</td></tr><tr><td>CWH vm</td><td>12</td></tr><tr><td>CWH xm</td><td>15</td></tr><tr><td>MH mm</td><td>4</td></tr><tr><td rowspan="4">San Juan</td><td>CWH mm</td><td>11</td></tr><tr><td>CWH vm</td><td>12</td></tr><tr><td>CWH xm</td><td>7</td></tr><tr><td>MH mm</td><td>5</td></tr></table> <p>(2) Wildlife Tree Patches:</p> <ul style="list-style-type: none">(a) will be distributed across the BEC subzone, as determined by operational site plan information;(b) will be located within or immediately adjacent to a cutblock, when designated at the operational site plan level;(c) will not be subject to timber harvesting, including single tree selection except as noted in subsection 2(d) below;(d) may be subject to salvage of windthrown timber where:<ul style="list-style-type: none">(i) windthrow impacts 25% to 50% of the dominant or co-dominant stems;(ii) windthrow exceeds 50% of the dominant or co-dominant stems; or(iii) forest health issues pose a significant threat to areas outside the WTP.(e) will include, if present, remnant old growth patches and live or dead veteran trees, (excluding danger trees);(f) will include representative larger trees for the stand (dbh > average operational cruise) and any moderate to high value wildlife trees if available (excluding danger trees); and(g) with a likelihood of windthrow will be subject to pruning and/or topping to maintain the integrity of the WTP if prescribed by a qualified professional in a written rationale. <p>(3) Where salvage or harvesting is planned and authorized as per subsection 2(d) of this R/S, replacement forest of equivalent age, forest structure, and area must be identified that is:</p> <ul style="list-style-type: none">(a) within the cutblock to which the original WTP was related; or(b) in an area contiguous to the cutblock to which the original WTP was related; or(c) in an area sufficiently close to the cutblock to which the original WTP was 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 WTP will:</p> <ul style="list-style-type: none">(d) include a rationale as part of a Site Plan prepared by a Qualified Professional outlining what was replaced and what was chosen as a replacement area prior to harvest commencement on the applicable cutblock;	Landscape Unit	BEC Subzone	WTP (%)	Gordon	CWH mm	14	CWH vm	10	CWH xm	13	MH mm	5	Nitinat	CWH mm	14	CWH vh	2	CWH vm	12	CWH xm	15	MH mm	4	San Juan	CWH mm	11	CWH vm	12	CWH xm	7	MH mm	5
Landscape Unit	BEC Subzone	WTP (%)																															
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San Juan	CWH mm	11																															
	CWH vm	12																															
	CWH xm	7																															
	MH mm	5																															

FDU	Result / Strategy
	<p>(e) include 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>(4) The holder(s) of the FSP will authorize or carry out forest practices only if consistent with the design for the cutblock in sections 1, 2, and 3 of this strategy.</p> <p>(5) The holder(s) of the FSP will enter into a timber sale licence or cutting permit only if the licence or permit is consistent with the design for the cutblock referred to in sections 1, 2, and 3 of this strategy.</p> <p>(6) The percentage of WTP area retained shall be determined as a percentage of the sum of the Net Area to Reforest (NAR) and area of Permanent Access Structures (PAS): $\text{WTP Retention \%} = \text{WTP Retention Area} / (\text{NAR} + \text{PAS})$.</p>

4.1.4 Order for Old Growth Management Areas within the Coastal Douglas-fir moist maritime (CDFmm) Biogeoclimatic Subzone

Land Use Order Objective 3 for CDFmm biogeoclimatic subzone plant communities:

- (1) *Protect all CDFmm biogeoclimatic subzone plant communities within the Old Growth Management Areas identified in Schedules 1 to 3 attached to this order.*
- (2) *Despite subsection (1), up to 5% of a polygon may be disturbed if there is no practicable alternative for road access or other infrastructure or to address a safety concern.*
- (3) *Where the objective refers to an area shown on a schedule and the area is also defined by a spatial dataset, the boundaries of the area as defined by the spatial dataset apply in the event of any inconsistency. All spatial datasets are available at <http://www.geobc.gov.bc.ca>*

FDU	Result / Strategy
Rosewall	<p>(1) In this strategy, 'Order' is the Ministerial Order for Old Growth Management Areas within the Coastal Douglas-fir moist maritime (CDFmm) Biogeoclimatic Subzone.</p> <p>(2) The holder of the FSP will not authorize or carry out any timber harvesting or road construction within the OGMA established in the Order unless there is no practicable alternative for road access or other infrastructure or to address a safety concern; and,</p> <p>(3) Where there is no practicable alternative for road access or other infrastructure or to address a safety concern, a qualified professional will prepare a written rationale that:</p> <ol style="list-style-type: none"> (a) outlines the need for road construction and associated timber harvesting for reasons set out in S. 3 of the R/S above; and, (b) disturbs less than 5% of a polygon established in the Order; and, (c) is prepared prior to commencement of timber harvesting or road construction. <p>(4) The boundaries of an area to which the objective refers are those defined by the spatial dataset, in the case of any inconsistency with the schedule in the order.</p>

4.2 Objectives prescribed under FRPA S.149

4.2.1 Soils

Objective set by government for soils (FPPR S. 5)

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

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 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. The timber sales manager will notify each holder of a timber sale licence entered into or a road permit granted during the term of the plan that FPPR S. 35 and 36 apply to the holder, as per FPPR S. 12.1(5)(a).

4.2.2 Wildlife

Objectives set by government for wildlife (FPPR S. 7)

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

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

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).*

If satisfied that the objective set out in subsection (1) is addressed, in whole or in part, by an objective in relation to a wildlife habitat area or an ungulate winter range, a general wildlife measure, or a wildlife habitat feature, the minister responsible for the Wildlife Act must exempt a person from the obligation to specify a result or strategy in relation to the objective set out in subsection (1) to the extent that the objective is already addressed.

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 / Strategy
All	Marbled Murrelet <i>Brachyramphus marmoratus</i>	(1) In this strategy: “ Marbled Murrelet notice ” means the notice entitled “ <i>Indicators of the amount, distribution and attributes of wildlife habitat required for the survival of species at risk in the South Island Forest District for Marbled Murrelet</i> ” dated December 21, 2004; “ non-contributing land base ” means the non-contributing land base described in the Timber Supply Review for the Arrowsmith Timber Supply Area

FDU	Species	Result / Strategy
		<p>(effective date September 1, 2002) and the Timber Supply Review for TFL 46 effective June 30, 2004¹⁴;</p> <p>“detailed survey” references Standard Methods for Identifying and Ranking Nesting Habitat of Marbled Murrelets (<i>Brachyramphus marmoratus</i>) in British Columbia using air photo Interpretation and Low-level Aerial Surveys, Burger, A. ed., 2004;</p> <p>“Conservation Region” means the geographic area identified by the MAMU Recovery Team which approximately matches both the variation in MAMU habitat use and forest district, (Canadian Marbled Murrelet Recovery Team Working Document No. 1, 2003).</p> <p>(2) The holder(s) of the FSP will carry out or authorize timber harvesting or road construction in a manner that retains the habitat specified in the Marbled Murrelet notice, where the habitat is described as the following forest types:</p> <p>(a) in areas under the FSP where a detailed survey has not been conducted:</p> <p>(i) Amount: the suitable habitat within the non-contributing land base in each FDU at the time the Marbled Murrelet notice was issued; and,</p> <p>(ii) Distribution: where the habitat occurs on the land base in each FDU; and</p> <p>(iii) Attributes: as provided in the Marbled Murrelet notice; and,</p> <p>(b) in areas under the FSP where a detailed survey has been conducted:</p> <p>(i) Amount: Class 1, 2 or 3 Marbled Murrelet habitat within the non-contributing land base in each FDU at the time the Marbled Murrelet notice was issued; and,</p> <p>(ii) Distribution: where the habitat occurs on the land base in each FDU; and,</p> <p>(iii) Attributes: Class 1, 2 or 3 Marbled Murrelet habitat, as described in <i>Standard Methods for Identifying Marbled Murrelet Habitat in British Columbia Using Air Photo Interpretation and Low-level Aerial Surveys</i>.</p> <p>(3) For the purposes of subsection (2), the amount of habitat specified in the Marbled Murrelet notice will be:</p> <p>(a) first, identified on the non-contributing land base, or areas that are otherwise constrained with respect to timber harvesting opportunities, and if there is insufficient habitat on that land base, then identified on the contributing landbase; and,</p> <p>(b) reduced by the amount of area of suitable habitat within any wildlife habitat area (WHA), OGMA, or ungulate winter range established in the FDU subsequent to the date of the Marbled Murrelet Notice, except where:</p> <p>(i) a WHA is established specifically for marbled murrelet, then the amount will be reduced by the entire amount of area in the WHA.</p>

4.2.3 Water, Fish, Wildlife and Biodiversity within Riparian Areas

Objectives set by government for water, fish, wildlife and biodiversity within riparian areas (FPPR S. 8)

¹⁴ The application of this FSP is for licenses wholly external to TFL 46; however, for the purposes of this FSP, the definition of non-contributing land base includes non-contributing land base as described in the Timber Supply Review for TFL46, effective June 30, 2004, as was in effect when the Marbled Murrelet Notice came into force (December 21, 2004). This definition of non-contributing land base applies to FSP licences within the Pacific TSA which were originally derived from TFL46.

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	<p>(1) 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, except in those circumstances as described in section 3 of this result, below.</p> <p>(2) 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: (a) as specified in FPPR S. 47(4) to (6), 48(3) to (5) and 49(2) to (3); or, (b) as specified in a written rationale that: (i) takes into consideration the Factors in Schedule 1, S. 2 of the FPPR; and (ii) is prepared by a qualified professional prior to the commencement of the primary forest activity.</p> <p>(3) 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).</p> <p>(4) 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: (a) be based upon the factors in FPPR Schedule 1 S. 2; and, (b) be specified and prescribed in a written rationale signed by a qualified professional, prior to commencement of the timber harvesting.</p>

4.2.4 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 / Strategy
Little Qualicum, Rosewall, Chemainus	<p>(1) In this strategy, “qualified professional”¹⁵ 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 a designated 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 watershed¹⁶ that follows methodology outlined in the <i>Coastal Watershed Assessment Procedure Guidebook Version 2.1</i>¹⁷, 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 watershed¹⁵ 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 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 effects¹⁸ to water quality. <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"> (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> <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</p>

¹⁵ 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

¹⁶ For the community watershed and terrain adjacent to the watershed, as necessary, to inform the assessment.

¹⁷ <https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/wap/wapgdbk-web.pdf>

¹⁸ Where a “material adverse effect” is understood to be an injurious result or unfavourable influence that might have some real, appreciable consequence.

FDU	Result / Strategy
	<p>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 rationale¹⁹ 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>

4.2.5 Wildlife and Biodiversity

Objectives set by government for wildlife and biodiversity – 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 / Strategy
All	<p>(1) The holder(s) of the FSP will adopt FPPR S. 64 and 65 as results or strategies under this FSP.</p> <p>(2) Further to subsection (1):</p> <ul style="list-style-type: none"> a) cutblocks located in SMZs 20 or 22 will have a NAR in accordance with the R/S for FSP section 4.1.2 addressing HLP Order Objective 1(c) – Silviculture Systems or HLP Order Objective 2 - Salvage; and, b) for cutblocks located within EFZ 47, cutblock harvesting will be in accordance with the result or strategy for FSP section 4.2.1 addressing HLP Order Objective 7 – Short Term Timber Availability.

FDU	Result / Strategy
All	<p>(1) In this strategy:</p> <p>“Coastal Douglas-fir moist maritime Biogeoclimatic subzone (CDFmm)” is a Biogeoclimatic subzone, as identified through fieldwork by a qualified professional, using A Field Guide for the Identification and Interpretation for the Vancouver Forest Region, Land Management Handbook #28 (1994 and as updated);</p> <p>“Fieldwork” is work carried out during the course of normal business operations by or for the holder of the FSP.</p> <p>(2) The holder of the FSP will not authorize or carry out any timber harvesting or road construction within areas identified as being within the CDFmm, subject to S. 3 of this R/S.</p> <p>(3) Where there is no practicable alternative for road access or other infrastructure or to address a safety concern, a qualified professional will prepare a written rationale that:</p> <ul style="list-style-type: none"> (a) describes the extent and reason for the road construction and associated timber harvesting in the CDFmm; and, (b) is prepared by a qualified professional prior to commencement of timber harvesting or road construction.

Objectives set by government for wildlife and biodiversity – stand level ([FPPR S 9.1](#))

The objective set by government for wildlife and biodiversity at the stand level is, without unduly reducing the

¹⁹ Rationale must meet the intent of practice requirements in FPPR s. 8.2 that provide for the protection of drinking water.

FDU	Result / Strategy
All	<p>(1) Subject to sections 1 and 2 of this strategy, the holder(s) of this FSP adopts, as a result or strategy, FPPR S. 66 and 67, 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 (pruned or topped) to maintain the integrity of that WTRA; (c) timber may be harvested in a WTRA, or WTP, where a Qualified Professional specifies one or more replacement WTRA that provide an area, number of trees, or habitat, that is equivalent to the portion of the WTRA from which the timber is being harvested and is documented consistent with subsections 3(d) and (e) of this strategy; (d) operations are subject to section (3) of this strategy. <p>(2) Where wildlife tree retention targets are specified in approved Landscape Unit Plans, wildlife tree retention will meet or exceed targets specified in approved Landscape Unit Plans.</p> <p>(3) Where timber harvesting is planned or authorized within a WTRA, replacement forest of equivalent age, forest 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 as part of a Site Plan or Site Plan Amendment prepared by Qualified Professional outlining what was replaced and what was chosen as a replacement area prior to harvest commencement of the applicable cutblock; (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 WTRA area retained shall be determined as a percentage of the sum of the Net Area to Reforest (NAR) and area of Permanent Access Structures (PAS): $WTRA\ Retention\ \% = \frac{WTRA\ Retention\ Area}{(NAR + PAS)}$.</p>

4.2.6 Cultural Heritage Resources

Objectives set by government for 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 / Strategy
All	(1) In this strategy:

FDU	Result / Strategy
	<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 FDUs in this FSP plan area.</p> <p>(2) When road building or timber harvesting activities are proposed, the holder(s) of the FSP will provide the opportunity for applicable First Nations to inform the holder(s) of the FSP of any information related to cultural heritage resources that may be impacted by the proposed road building or timber harvesting activities. The following process will be used:</p> <ul style="list-style-type: none"> (a) the holder(s) of the FSP will refer to applicable First Nations, areas identified for potential timber harvesting and road construction such that all proposed developments are considered, if any, and request information regarding cultural heritage resources and recommendations for their management within the identified areas; (b) the holder(s) of the FSP will evaluate the nature and extent of a possible cultural heritage resources identified by applicable First Nations during 2(a) within areas of potential timber harvesting and road construction activities, including information sharing or consulting with the applicable First Nation in respect of the possible cultural heritage resource; (c) subject to and consistent with the results of subsection 2(a), the holder(s) of the FSP, when designing a cutblock or road will, prior to timber harvesting or road construction, identify the following: <ul style="list-style-type: none"> (i) the portion of the area occupied by a cultural heritage resource; (ii) the nature of the cultural heritage resource; (iii) whether the cultural heritage resource is to be protected or conserved; and, (iv) 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; (d) for cultural heritage resource that has been identified under subsection 2(c) for protection or conservation, the holder(s) of the FSP will carry out or authorize a person to carry out a primary forest activity only to the extent that the primary forest activity is consistent with the constraints, if any, specified in the design for the cutblock or road. <p>(3) 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 cultural heritage resource type identified in (2)(a) above, is encountered, the holder(s) of the FSP will:</p> <ul style="list-style-type: none"> (a) be consistent with the results of subsection 2(a), request the person with authority over the operations within the cutblock or road to modify operations consistent with (3)(b) to the extent practicable to manage the cultural heritage resource; (b) determine: <ul style="list-style-type: none"> (i) the nature of the cultural heritage resource;

FDU	Result / Strategy
	<p>(ii) whether the cultural heritage resource is to be protected or conserved based on the results from 2(a) above or based on the outcome of 3(b)(i); and,</p> <p>(iii) if the cultural heritage resource is to be protected or conserved, what protection measures or constraints, if any, are to apply to the forest practices carried out on the area.</p> <p>(4) In addition to sections (2) and (3) of this strategy, the holder(s) of the FSP recognizes that mature western red cedar, cypress, and other tree species identified during 2(a) located within the FDUs of the FSP plan area may be cultural heritage resources to the applicable First Nations and will ensure that, in addition to subsections 2 and 3:</p> <p>(a) western red cedar and cypress, where ecologically suited, will be planted on areas referred to in FRPA S. 29(1) and (2) in accordance with the stocking standards specified in this FSP;</p> <p>(b) where other tree species are identified via 2(a), where requested, a component of the species will be maintained within the total area under the prescription of the cutblock; and,</p> <p>(c) where requested by an applicable First Nation, BCTS will assist the First Nation with the implementation of the “Guidelines for Managing Cedar for Cultural Purposes”²⁰ for the purposes of developing a strategy for management of western red cedar or cypress, including monumental western red cedar or cypress, within the portion(s) of their traditional territory that fall within the FDUs of this FSP.</p>

4.3 Objectives continued under FRPA S. 180 and S. 181

The objectives in respect of specified designations established or continued under the *Forest Practises Code* under FSP s. 4.3 are grandparented. FSP s. 4.3 is consistent with Orders establishing Ungulate Winter Range #U1-017 and Ungulate Winter Range #U1-002; this FSP section is not subject to approval by the Delegated Decision Maker of this FSP.

4.3.1 Objective Set by Order – Ungulate Winter Range #U1-017

For UWR units 1 through 46:

1. Objective 1

Road construction is not to occur within the designated ungulate winter ranges, with the exception of UWR unit 12 (Effingham), unless there is no other practicable option, the quality of the winter ranges will not be significantly affected and a variance is approved by the MWLAP Statutory Decision Maker or designate. For UWR unit 12 (Effingham), the MWLAP Statutory Decision Maker recognises that road access is required within this UWR and main road access will traverse through the UWR to reach timber in the Effingham valley beyond.

2. Objective 2

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

3. Objective 3

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

4. Objective 4

²⁰ http://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/forestry-agreements/policies-reports/guidelines_for_managing_cedar_for_cultural_purposes.pdf

Road maintenance, road deactivation, felling of danger trees or brushing and clearing on existing roads to address worker safety is allowed. Felling of danger trees, felling for guyline clearance, felling of tail hold anchor trees along cutblock boundaries to address worker safety is allowed. Any trees that must be felled within a UWR will be left onsite to provide coarse woody debris, unless the felled tree lies outside the UWR. Licensees will ensure that UWR values are maintained and incorporated when addressing worker safety concerns.

Note: The Deputy Minister of Water, Land and Air Protection wishes to acknowledge that UWR units 12 13, 14, 15, 16, 40 and 44 are contained within areas undergoing an industry-led landscape unit planning process in the western portion of the Arrowsmith TSA and may be reviewed by professional biologists. Revisions to UWR units 12, 13, 14, 15, 16, 40 and 44 within the Effingham, Henderson, Toquart, Maggie and Escalante landscape units may be proposed to regional WLAP staff as a result of this process and will be evaluated and forwarded for consideration by the Deputy Minister of Water, Land and Air Protection within 60 days of their receipt by regional staff.

For UWR units 47 through 51:

5. Objective 1

Plan the harvest sequence to ensure the following approximate seral stage distribution is maintained within the timber harvesting land base (THLB) portion of the ungulate winter range: 25% in 0-20 year old stands, 25% in 21-40 year old stands, 25% in 41-60 year old stands and 25% in 61-80 year old stands. This balanced age-class will be achieved over the next 60-80 years.

4.3.2 Objective Set by Order - Ungulate Winter Range #U1-002

1. Objective 1

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

2. Objective 2

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

3. Objective 3

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

4. Objective 4

Snag removal is not to occur within the designated winter ranges unless required to address worker safety.

FDU	Result / Strategy
Rosewall, Little Qualicum, Nanaimo, Chemainus, Cowichan, Gordon	(1) The holder(s) of this FSP will ensure that any primary forest activities authorized or carried out by the holder(s) of this FSP will be carried out in accordance with: (a) Objectives 1-4, and the subsequent note, for UWR units 1 through 46; and, (b) Objective 1 for UWR units 47 through 51 established by <i>Order - Ungulate Winter Range #U1-017</i> dated November 21, 2003, or as subsequently amended.
Cowichan, Gordon, Nitinat, Loss/San Juan	(1) The holder(s) of this FSP will ensure that any primary forest activities authorized or carried out by the holder(s) of this FSP will be carried out in accordance with objectives 1–4 established by <i>Order - Ungulate Winter Range #U1-002</i> dated September 26, 2003, or as subsequently amended.

4.4 Orders established under the Government Actions Regulation

4.4.1 Resource Feature Set by Order – Resource Feature 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	<p>(1) In this practice requirement, the holder(s) of this 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 with the established Resource Feature Order under S. 5(1)(a) of the Government Actions Regulation (B.C. Reg. 17/04), surface or subsurface element or karst system Order dated January 15, 2010 or as subsequently amended.</p> <p>(2) Pursuant to S. 5(1)(a) of the Government Actions Regulation under FRPA, the following are defined as surface or subsurface elements of a karst system as resource features wherever they are found within the South Island 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 surface or subsurface element of a karst system as described in section (2) of this Practice Requirement must not be publically disclosed by agreement holder(s).</p> <p>(4) Where a surface or subsurface element of a karst system as described in section (2) of this Practice Requirement has been located, and has not been previously reported, the agreement holder(s) must satisfy the annual reporting requirements for karst resource features as per FPPR S. 86(3)(b).</p>

4.4.2 Visual Quality Objectives for the South Island Natural Resource District

Pursuant to Section 7(2) of the Government Actions Regulation (GAR), I, Jack Dryburgh, District Manager for the South Island Forest District, establish Visual Quality Objectives (VQOs) for the South Island Forest District as shown on the attached map titled South Island Forest District, Visual Quality Objectives Established Under Section 7(2) GAR order, dated December 1, 2005. This order is effective on December 15, 2005.

These VQOs apply to the scenic areas identified as known in the district manager's letter dated November 13, 1998 and grandparented under Section 180 of the Forest and Range Practices Act. These objectives apply to the crown land portions of the South Island Forest District, and to the private land within Woodlot Licences and Tree Farm Licences. This order does not apply to the Clayoquot Sound Scientific Panel planning area.

And, as amended:

Pursuant to Section 7(2) of the Government Actions Regulation (GAR), I Calvin Ross, A/District Manager for the South Island Natural Resource District, establish and amend established Visual Quality Objectives (VQOs), Travel Corridors, and associated Scenic Areas for the South Island Natural Resource District as shown on the attached map titled South Island Forest District, Visual Quality Objectives Established Under Section 7(2) GAR Order Amendment map, dated December 14, 2011.

FDU	Result / Strategy
All	<p>(1) In this result,</p> <p>“applicable scenic area” means a scenic area that was made known in the South Island Natural Resource District by letter dated November 13, 1998, and as amended pursuant to S. 7(2) of the Government Actions Regulation (GAR);</p> <p>“applicable visual quality objective” means the visual quality objective established for a scenic area in the South Island Natural Resource District pursuant to S. 7(2) of the GAR;</p> <p>“significant public viewpoint”, as that term is used in the definition of “altered forest landscape” means a viewpoint on water or land:</p> <ul style="list-style-type: none"> (a) where a large number of people traditionally congregate which may be a viewpoint in a park, highway pullout or rest stop, or city center; or, (b) included in the most current Visual Landscape Inventory; or, (c) Determined to be important by a qualified professional. <p>(2) Road construction and/or timber harvesting carried out or authorized by the holder(s) of the FSP within applicable scenic areas established on November 13, 1998, and as amended pursuant to GAR S. 7(2), will be consistent with:</p> <ul style="list-style-type: none"> (a) the visual quality objectives as established by the District Manager effective December 15, 2005 and amended December 20, 2011; and, (b) the categories of visually altered forest landscape as defined in FPPR s.1.1 as of the date the timber sale is advertised or cutting permit is applied for. <p>(3) Where site conditions meet the criteria in 3(a), the holder(s) of this FSP may carry out or authorize timber harvesting or road construction under the following strategy that would result in an alteration greater than specified in section (2) of this R/S where:</p> <ul style="list-style-type: none"> (a) timber harvesting or road construction are related to the harvesting of greater than 10.0 hectares of timber that is damaged, destroyed or threatened by fire, insects, disease, wind, flooding, or stand replacing natural disturbance events where the cutblock will be harvested and/or roads constructed, to the extent practicable, to: (i) mimic naturally occurring landscape characteristics; (ii) retain timber that is not damaged or destroyed where safe and operationally practicable to do so; (iii) be consistent with a Visual Impact Assessment conducted for the salvage area; and (iv) be consistent with the next lowest (less restrictive) category of visually altered forest landscape for the Visual Quality Objective Polygon where the timber harvesting or road construction is located. <p>(4) In the circumstance where alterations on Crown lands subject to Land Act tenures (herein called the Crown lands for the purposes of this result) would influence the ability of the FSP holder(s) to meet Section 2 or 3 of this result, the holder(s) of the FSP will manage to the applicable VQO(s) as follows:</p> <ul style="list-style-type: none"> (a) alterations on Crown lands will be excluded from the FSP holder(s) Visual Impact Assessment provided it is understood²¹ that these Crown lands will not achieve visually effective green up²² within 5-years of development of the FSP holder(s) proposed timber harvesting and/or road construction; (b) the achievement of the applicable VQO for the proposed timber harvesting and/or road construction will not be considered to be impacted by the alteration on the Crown lands,

²¹ Via the results of communication with the Land Act tenure holder of the Provincial agency responsible for the issuance of the Land Act tenure.

²² As described in the Province of British Columbia’s *Green-up Guidebook*, Second Edition, January 1999, available at: <https://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/greenup/ziped/greenup.pdf>

	<p>provided it is understood²¹ that these Crown lands will not achieve visually effective green up within 5-years of development of the FSP holder(s) proposed timber harvesting and/or road construction;</p> <p>(c) in the circumstance where visually effective green up is understood²⁰ as planned to be achieved on the Crown lands within 5-years of the development of the FSP holder(s) proposed timber harvesting and/or road construction, then the FSP holder(s) will either:</p> <ul style="list-style-type: none">(i) meet section 2 of this result; or,(ii) where site conditions meet the criteria specified in subsection 3(a) of this result, meet section 3 of this result; or,(iii) make application to the DDM for an exemption under FPPR s. 12(7) in which the FSP holder(s) specifies why it is not practicable to be consistent with the existing results for visual quality management in this FSP. Under this provision, road construction and/or timber harvesting carried out or authorized by the holder(s) of this FSP will be consistent with any conditions specified by the DDM in the exemption approval.
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4.4.3 Fisheries Sensitive Watersheds

Objectives set by government for fish habitat in fisheries sensitive watersheds (FPPR S. 8.1)

*In this section, “**fisheries sensitive watershed**” means an area identified in Schedule 2 of this regulation*

- (a) with significant downstream fisheries values continued under section 180(f) of the Act and significant watershed sensitivity continued under section 180(g) of the Act, and*
- (b) for which there is no fisheries sensitive watershed objective.*

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

Order – Fisheries Sensitive Watersheds – Vancouver Island (December 28, 2005)

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

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

FDU	Result/Strategy
The portions of Gordon and Loss/San Juan within the FSWs	<p>(1) In this strategy, “qualified professional”²³ 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 a designated Fisheries Sensitive Watershed (FSW) 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, within the FSW²⁴ that follows methodology outlined in the <i>Coastal Watershed Assessment Procedure Guidebook Version 2.1</i>²⁵, 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 FSW²² 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 effects²⁶ to fish habitat. <p>(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:</p> <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> <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</p>

²³ 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

²⁴ For the FSW and terrain adjacent to the watershed, as necessary, to inform the assessment.

²⁵ <https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/wap/wapgdbk-web.pdf>

²⁶ Where a “material adverse effect” is understood to be an injurious result or unfavourable influence that might have some real, appreciable consequence.

	<p>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 rationale²⁷ written by a qualified professional.</p> <p>(6) In respect of FSWs, the holder(s) of the FSP will adopt as a result/strategy the practice requirements in FPPR S. 55, 56, 57.</p>
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4.4.4 Orders Establishing Wildlife Habitat Areas

The Orders establishing Wildlife Habitat Areas within the FDUs of the Pacific Maritime FSP as listed in FSP Table 2: ([FPPR S. 14\(3\)](#) Designations for the Pacific Maritime FSP) specify general wildlife measures (GWMs) applicable to the WHAs. No results or strategies are required as objectives have not been established for the management of the WHAs. Where applicable within the Plan area, the holder(s) of the FSP will adhere to the requirements of [FPPR S. 69](#) with respect to GWMs:

An authorized person who carries out primary forest activities on an area must comply with each general wildlife measure that applies to the area.

Order – Wildlife Habitat Areas #1-007, 1-008, 1-032, 1-098, 1-099, 1-104, 1-187²⁸ for Marbled Murrelets

FDU	Measures
Portions of the Gordon, Loss/San Juan, and Nitinat FDUs within the WHAs	<p>(1) The holder(s) of the FSP will ensure that any primary forest activities authorized or carried out by the holder(s) of the FSP within the established WHAs will be in accordance with the GWMs established by <i>Order – Wildlife Habitat Areas #1-007, 1-008, 1-032, 1-097 to 1-104, 1-187</i> under authority of GAR S. 9(2) and 10(1), designated December 22, 2005, or as subsequently amended, as follows:</p> <ul style="list-style-type: none"> (a) Roads are not to be constructed or widened unless the Minister of Environment or his/her delegate is satisfied there is no other practicable option and approves an exemption; (b) Timber is not to be harvested except for salvage or traditional aboriginal purposes, subject to the Minister of Environment or his/her delegate approving an exemption; (c) Pesticides are not to be used unless an exemption is approved by the Minister of Environment or his/her delegate; (d) Recreational structures, trails or facilities are not to be developed.

Order – Wildlife Habitat Areas #1-033, 1-034²⁶ for Marbled Murrelets

FDU	Measures
Portions of the Chemainus and Cowichan FDUs within the WHAs	<p>(1) The holder(s) of the FSP will ensure that any primary forest activities authorized or carried out by the holder(s) of the FSP within the established WHAs will be in accordance with the GWMs established by <i>Order – Wildlife Habitat Areas #1-033, 1-034 and 1-040 Marbled Murrelet WHAs in the South Island Forest District</i> under authority of GAR S. 9(2) and 10(1), designated December 18, 2006, or as subsequently amended, as follows:</p> <ul style="list-style-type: none"> (a) Roads are not to be constructed or widened unless the Minister of Environment or his/her delegate is satisfied there is no other practicable option and approves an exemption; (b) Timber is not to be harvested except for salvage or traditional aboriginal purposes, subject to the Minister of Environment or his/her delegate approving an exemption;

²⁷ Rationale must meet the intent of practice requirements in FPPR S. 8.1 that provide for the protection of fish habitat.

²⁸ Note: Order includes additional WHA polygons that are external to the FDUs of the Pacific Maritime FSP and therefore not listed here.

	<p>(c) Pesticides are not to be used unless an exemption is approved by the Minister of Environment or his/her delegate;</p> <p>(d) Recreational structures, trails or facilities are not to be developed.</p>
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Order – Wildlife Habitat Areas #1-223²⁶ for Red-legged Frogs

FDU	Measures
Portions of the Loss/San Juan FDU within the WHA	<p>(1) The holder(s) of the FSP will ensure that any primary forest activities authorized or carried out by the holder(s) of the FSP within the established WHA will be in accordance with the GWMs established by <i>Order – Wildlife Habitat Areas #1-213, 1-216, 1-217, 1-218, 1-219, 1-220, 1-222, and 1-223 Red-legged Frog - South Island Forest District</i> under authority of GAR S. 9(2) and 10(1), designated April 9, 2009, or as subsequently amended, as follows:</p> <p>(a) Roads are not to be constructed;</p> <p>(b) Timber is not to be harvested except where:</p> <ul style="list-style-type: none"> (i) guyline tiebacks are required to facilitate timber harvesting; or (ii) trees are felled in accordance with S. 2(3)²⁹ of the FPPR; and, (iii) trees felled for the purposes in (i) and (ii) that fall within the WHA are retained on-site; <p>(c) Pesticides are not to be used except for the application of herbicide to control for invasive plants or noxious weeds, if the herbicide is applied:</p> <ul style="list-style-type: none"> (i) by stem injection, cut and paint, foliar wipe or other direct plant application; or, (ii) by spot spraying for individual plants or cluster of plants if direct plant application is not practicable; and, (iii) with no direct application to either red-legged frogs or water.

5 STOCKING STANDARDS

5.1 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](#).

5.2 Regeneration Date and Stocking Standards, Free Growing Height

The Appendix 1 FSP stocking standards specify the regeneration date, free growing height and stocking standards for the situations or circumstances where [FPPR S. 44\(1\)](#) applies.

5.3 [FPPR S. 16\(4\) / 44\(4\)](#) Stocking Standards for Intermediate Cutting

For the purpose of this FSP, Intermediate Cutting is described as a stand entry to remove trees prior to final harvest, which results in no assigned regeneration standards.

- Intermediate Cutting: Commercial Thinning, pre-poling and single stem removal. It is usually prescribed to enhance growth of residual trees prior to the final harvest while facilitating the removal of merchantable timber that would otherwise be lost or devalued due to stand competition.

Intermediate Cutting:

- Harvest activities will not negatively impact site productivity;

²⁹ Section specifies safety-related exemptions relating to conformance with the [Workers Compensation Act](#).

- Harvest activities will not create openings more than 0.2ha in size
- An economically viable residual stand suitable for future harvest opportunities will remain;
- Health, form and vigour of residual stems are consistent with acceptable harvest-related damage criteria specified for Layer 1 in Table A, page 9, SEDRESS Framework Implementation Guide (Silviculture Working Group, February 14, 2014)

Subject to FPPR sections 16(4), 44(3)(h), and 44(4), the area on which Intermediate Cutting is carried out must conform to the following stocking standards for a period of 12 months after completion of harvest:

- The residual stand will be representative of the original stand in terms of species composition of preferred and accepted species for the applicable BEC zones and site series as shown in appendix 1 and at least 40m² /ha of BA will be retained. .

Intermediate Cutting may be carried out for the following situations and circumstances:

- To maintain a visual quality objective (VQO) of Preservation (P), Retention (R), and Partial Retention(PR);
- To maintain slope stability on sites with terrain class IV and V;
- To maintain the integrity of known resource features, including karst areas, sensitive soils, etc;
- To maintain the integrity of cultural heritage features including culturally modified trees or archaeological sites; or
- To facilitate a limited harvest on sites where continuous tree retention is desirable to maintain protection of non-timber values including wildlife features ,and areas with important recreation features.

6 MEASURES TO PREVENT THE INTRODUCTION AND SPREAD OF INVASIVE PLANTS (FRPA S. 47, FPPR S. 17)

FRPA S. 47 requires that:

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

- (a) specified in the applicable operational plan, or*
- (b) authorized by the minister*

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

FPPR S. 17: *For the purpose of section 47 [invasive plants] of the Act, a person who prepares a 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 will result in introduction or spread of priority invasive plants; (b) there is a moderate to high risk that priority invasive plants are likely to germinate on exposed soil 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 as an active surface area where primary

	<p>forest activities are occurring.</p> <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 species (<i>Seeds Act</i>, <i>Seeds Regulation</i> 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 Invasive Plants Regulation, that may be found within the plan area.</p> <p>(2) If the holder(s) of the FSP carries out a forest practice 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 new instances of priority invasive plants and enter them into the most current provincial recognized database. <p>(3) If the holder(s) of the FSP carries out a forest practice in an applicable area, the holder(s) of the FSP, will, within two growing seasons of completing the activity authorized in the timber sale licence or cutting permit, will:</p> <ul style="list-style-type: none"> (a) seed areas of exposed soil that exceed 0.25 contiguous hectares, excluding the road prism, that have been disturbed by primary forest activities authorized by the holder(s) of this FSP, recognizing that spring and fall are the optimum times to revegetate, and giving preference to 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; (b) revegetate previously rehabilitated temporary access structures within cutblocks with legumes.
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7 MEASURES TO MITIGATE THE EFFECT OF REMOVING OR RENDERING INEFFECTIVE NATURAL RANGE BARRIERS

FDU	Measures
Rosewall	<p>(1) The holder(s) of the FSP will:</p> <ul style="list-style-type: none"> (a) each year under the term of this FSP, identify any areas within the FDU that are subject to or adjacent to agreements under the <i>Range Act</i> in respect of grazing of livestock, using information gathered from Ministry of Forests, Lands and Natural Resource Operations district range staff, or 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 subsection (1)(c)(i) of this measure; 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

	<p>subsection (1)(c)(i) of this measure.</p> <p>(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.</p> <p>(3) The holder of a cutting permit will not remove or render ineffective a natural range barrier other than in a manner set out in the cutting permit document.</p> <p>(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, as practicable, to mitigate the effect of the removal or ineffectiveness.</p>
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8 SIGNATURES OF PERSONS REQUIRED TO PREPARE PLAN (FRPA S. 5(3))

BC Timber Sales, Strait of Georgia Business Area

and on behalf of:

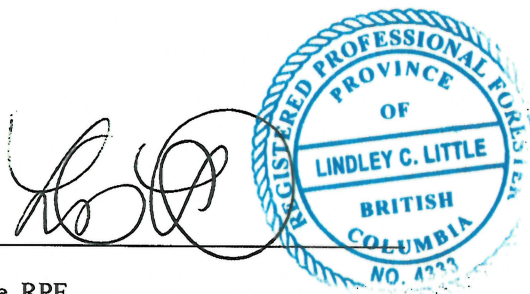
Otter Point Timber Ltd., Holder of FL A74632;

Timco Trading Ltd., Holder of NRFL A91342;

Rosewall Forest Tenure Holdings Ltd., Holder of FNWL N2L

Qala:yit Forestry Limited Partnership, Holder of Community Forest Agreement K5U

RPF Signature: _____



Name: Lindley Little, RPF

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

Timber Sales Manager Signature: _____

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke.

Name: Don Hudson

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

Date: February 8, 2018

APPENDIX 1 (APPLICABLE TO ALL AREAS UNDER THIS FSP)
FSP EVEN AGED STOCKING STANDARDS

ID	Silv Strat REF	BEC			Preferred Species								Acceptable Species								Stocking (w/s)			MIN Inter Tree Dist (m) ¹	RG Delay	FG Date
		Zone	SZ/ Varia nt	Site Serie s	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	Targe t P&A (sph)	Min P&A (sph)	Min P (sph)		Max (yrs)	Late (yrs)
1055256	1	CWH	mm1	01	Fd	3.0	Cw	1.5					Hw ¹⁰	2.0							900	500	400	2.0	6	20
1055258	2	CWH	mm1	02	Pl	1.3	Fd	2.0					Cw	1.0							800	400	400	2.0	6	20
1055259	3	CWH	mm1	03	Fd	2.0	Cw	1.0					Hw	1.8							800	400	400	2.0	3	20
1055260	4	CWH	mm1	04	Fd	2.0	Cw ²⁵	1.0					Pw ¹⁹	2.5	Hw	1.8					900	500	400	2.0	3	20
1055261	5	CWH	mm1	05	Fd	3.0	Cw	1.5					Pw ¹⁹	2.5	Hw	2.0	Ba	0.8			900	500	400	2.0	3	20
1055262	6	CWH	mm1	06	Cw	1.5	Hw	2.0					Fd ⁷	3.0	Ba	0.8					900	500	400	2.0	6	20
1055263	7	CWH	mm1	07	Cw	2.0	Fd	4.0					Ba ²²	1.0	Hw	2.5					900	500	400	2.0	3	20
1055264	8	CWH	mm1	12	Cw ³	1.0							Hw ³	1.5	Ss ³	2.0					800	400	400	2.0	3	20
1055265	9	CWH	mm2	01	Hm ¹¹ / Hw	1.0/ 1.3	Cw	1.0	Fd ⁹	2.3	Yc	1.0	Ba	0.8							900	500	400	2.0	6	20
1055266	10	CWH	mm2	02	Pl	1.3	Fd	1.5					Cw	0.8							800	400	400	2.0	6	20

1055267	11	CWH	mm2	03	Fd	1.5	Hw	1.0	Cw ² ₅	0.8			Hm ¹¹	0.8	Yc	0.8					800	400	400	2.0	3	20
1055268	12	CWH	mm2	04	Fd	1.5	Cw ²⁵	0.8					Pw ¹⁹	2.5	Yc	0.8	Hw	1.0			900	500	400	2.0	3	20
1055269	13	CWH	mm2	05	Ba	0.8	Cw	1.0	Yc	1.0	Fd ⁹	2.3	Pw ¹⁹	2.5	Hw	1.3					900	500	400	2.0	3	20
1055270	14	CWH	mm2	06	Hw	1.3	Cw	1.0	Yc	1.0			Ba	0.8	Hm ¹¹	1.3	Fd ¹²	2.3			900	500	400	2.0	6	20
1055271	15	CWH	mm2	07	Cw ³	0.8	Hw	1.0	Ba	0.8			Hm ¹¹	0.8	Yc ³	0.8					800	400	400	2.0	3	20
1055272	16	CWH	mm2	08	Cw	1.3	Yc	1.3	Ba	1.0			Hw ⁴	1.8	Fd ⁹	3.0					900	500	400	2.0	3	20
1055273	17	CWH	mm2	10	Cw ³	0.8							Pw ¹⁹	2.5	Yc ³	0.8	Hw ³	1.0								
1055274	18	CWH	vh1	01	Cw	1.5	Hw	2.0	Yc	1.5			Pl ⁶	1.5	Ba ⁷	1.8	Ss ^{7, 20}	3.0			900	500	400	2.0	6	20
1055275	19	CWH	vh1	03	Cw	1.0	Hw	1.3	Pl	1.3	Yc	1.0									800	400	400	2.0	6	20
1055276	20	CWH	vh1	04	Ba	2.3	Hw	1.8	Cw	2.0			Ss ²⁰	4							900	500	400	2.0	6	20
1055277	21	CWH	vh1	05/ 06	Ba	2.3	Cw	2	Yc	2			Hw ⁴	1.8	Ss ²⁰	4					900	500	400	2.0	3	20
1055278	22	CWH	vh1	07	Ba	2.3	Cw	2					Hw ⁴	1.8	Ss ²⁰	4					900	500	400	2.0	3	20
1055279	23	CWH	vh1	11	Cw ³	1.0	Plc ⁶	1.3	Yc ³	1.0	Hw ³	1.3									800	400	400	2.0	3	20
1055280	24	CWH	vh1	13	Cw ³	1.0	Yc	1.0					Hw ³	1.3	Pl	1.3	Ss	2.0			800	400	400	2.0	3	20
1055281	25	CWH	vm1	01	Cw	1.5	Hw	3.0	Fd ^{8, 9, 13}	3.0	Ba ¹⁸	1.8	Ss ^{7, 20}	3.0							900	500	400	2.0	6	20
1055282	26	CWH	vm1	03	Cw	1.0	Hw	2.0	Fd ^{9, 13}	2.0			Pl ²³	1.3							800	400	400	2.0	6	20
1055283	27	CWH	vm1	04	Cw	1.5	Hw	3.0	Fd ^{9, 13}	3.0			Ba	1.8							900	500	400	2.0	3	20
1055284	28	CWH	vm1	05	Ba	1.8	Cw	1.5	Hw	3.0	Fd ^{3, 8, 9, 13}	3.0	Ss ²⁰	3.0							900	500	400	2.0	3	20

1055285	29	CWH	vm1	06	Ba ¹⁸	1.8	Cw	1.5	Hw	3.0			Ss ^{7,20}	3.0							900	500	400	2.0	6	20
1055286	30	CWH	vm1	07	Ba	2.3	Cw	2.0	Hw ₄	4.0	Fd ^{3,9,16} ₆	4.0	Ss ²⁰	4.0							900	500	400	2.0	3	20
1055287	31	CWH	vm1	08	Ba	2.3	Cw	2.0	Hw ₄	4.0			Ss ²⁰	4.0							900	500	400	2.0	3	20
1055288	32	CWH	vm1	14	Cw ³	1.5							Hw ³	3.0	Ss ^{3,20}	3.0	Pl ²³	2.0			800	400	400	2.0	3	20
1055289	33	CWH	vm2	01	Fd ^{3,7,8,9,16}	2.3	Hw	2.5	Cw / Yc ² ₄	1.5	Ba	1.8			Hm ¹¹	1.0					900	500	400	2.0	6	20
1055290	34	CWH	vm2	03	Cw	1.0	Hw	1.8	Fd ^{9,13}	1.5	Yc ²⁴	1.0	Pw ^{13,19} ₉	2.5	Hm ¹¹	0.8	Pl ²³	1.3			800	400	400	2.0	6	20
1055291	35	CWH	vm2	04	Cw	1.0	Hw	1.8	Fd ^{9,13}	1.5	Yc ²⁴	1.0	Ba	1.5	Pw ¹³	2.5	Hm ¹¹	0.8	Ss ²⁰	2.0	900	500	400	2.0	6	20
1055292	36	CWH	vm2	05	Cw	1.5	Hw	2.5	Yc ² ₄	1.5	Ba	1.8	Fd ^{3,8,9,16}	2.3			Hm ¹¹	1.0			900	500	400	2.0	3	20
1055293	37	CWH	vm2	06	Cw	1.5	Hw	2.5	Yc ² ₄	1.5	Ba	1.8	Hm ¹¹	1.0	Ss ⁷	3.0					900	500	400	2.0	6	20
1055294	38	CWH	vm2	07	Cw	2.0	Hw ⁴	3.5	Yc ² ₄	2.0	Ba	2.3			Hm ¹¹	1.0					900	500	400	2.0	3	20
1055295	39	CWH	vm2	08	Cw ¹²	2.0	Hw ⁴	3.5	Yc ² ₄	2.0	Ba	2.3	Ss ²⁰	4.0	Hm ¹¹	1.0					900	500	400	2.0	3	20
1055296	40	CWH	vm2	09	Cw ³	1.0	Hw ³	1.8	Yc _{3,24}	1.0	Hm ¹¹	1.8	Ba	1.5	Pl ³	1.3					800	400	400	2.0	3	20
1055297	41	CWH	vm2	11	Cw ³	1.0	Yc ^{3,24}	1.0					Hw ³	1.8	Hm ^{11,23}	0.8	Ss ^{3,20}	2.0			800	400	400	2.0	3	20
1055298	42	CWH	xm	01	Fd	3.0							Cw ²	1.5	Pw ¹⁹	2.5	Hw ¹⁷	2.0			900	500	400	2.0	3	20
1055299	43	CWH	xm	03	Fd	2.0	Pl ⁶	1.3					Cw	1.0	Hw	1.3	Pw ¹⁹	2.5			800	400	400	2.0	3	20
1055300	44	CWH	xm	04	Fd	3.0							Cw ²	1.5	Pw ¹⁹	2.5					900	500	400	2.0	3	20

1055301	45	CWH	xm	05	Cw	2.0	Fd	4.0					Pw ¹⁹	2.5	Bg ²³	3.5	Hw	1.8			900	500	400	2.0	3	20
1055302	46	CWH	xm	06	Cw	1.5	Hw	2.0	Fd ¹⁵	3.0			Bg ⁷	3.0	Pw ¹⁹	2.5					900	500	400	2.0	6	20
1055303	47	CWH	xm	07	Cw	2.0	Fd	4.0	Bg	3.5			Hw	1.8							900	500	400	2.0	3	20
1055304	48	CWH	xm	12	Cw ³	1.0							Hw ³ **	1.5	Pw ¹⁹	2.5	Ss ²⁰	1.5			800	400	400	2.0	3	20
1055305	49	MH	mm1	01	Ba	0.6	Hm	1.0	Yc	1.0			Hw ^{12,23}	1.0							900	500	400	2.0	7	20
1055306	50	MH	mm1	02	Hm	0.8	Yc	0.8					Ba	0.6							800	400	400	2.0	4	20
1055307	51	MH	mm1	03	Ba	0.6	Hm	1.0	Yc	1.0			Hw ^{12,23}	1.0							900	500	400	2.0	4	20
1055308	52	MH	mm1	04	Ba	0.6	Hm	1.0	Yc	1.0			Hw ^{12,23}	1.0							900	500	400	2.0	7	20
1055309	53	MH	mm1	05	Ba	0.6	Yc	1.0					Hm	1.0	Hw ^{12,23}	1.0					900	500	400	2.0	4	20
1055310	54	MH	mm1	06	Hm ³	0.8	Yc ³	0.8					Ba ³	0.6							800	400	400	2.0	7	20
1055311	55	MH	mm1	07	Ba ³	0.6	Yc ³	0.8					Hm ³	0.8							900	500	400	2.0	4	20
1055312	56	MH	mm1	09	Yc ³	0.8	Hm ³	0.8													800	400	400	2.0	4	20
1055313	Spr uce 1	CWH	xm1 xm2	08	Bg	3.5	Cw	2.0	Ss	3.0											900	500	400	2.0	3	20
1055314	Spr uce 2	CWH	xm1 xm2	13	Bg	3.5	Cw	2.0					Fdc	4.0	Ss ³	4.0					900	500	400	1.5	3	20
1055315	Spr uce 3	CWH	xm1 xm2	14	Bg	3.5	Cw	2.0					Ss ³	3.0							900	500	400	1.0	3	20

1055316	Spr uce 4	CWH	vm1	07/08 /09	Ba	2.3	Cw	2.0	Ss	4.0			Hw	4.0							900	500	400	2.0	3	20
1055317	Spr uce 5	CWH	vm1	14	Cw	1.5			Ss	3.0			Hw	3.0							800	400	400	1.5	3	20
1055318	Spr uce 6	CWH	mm1	08	Ba	1.0	Cw	2.0	Ss	4.0											900	500	400	1.5	3	20
1055319	Ald er	CWH	mm1 mm2 xm	07	Dr ²⁷	4.0							Mb	4.0	Ep	4.0					1200	700	500	2.0	3	20
1055320	Mi woo d*	CWH	mm1 mm2 xm	05/ 07	Dr ²⁷	4.0							Mb	4.0	Ep	4.0					2000	1200	700	2.0	3	20
1055366	root rot 1	CWH	xm	01/04 /05/0 6	CW	2.0	PW	3.5													900	400	400	2.0	3	20
1055367	root rot 2	CWH	xm	01/04	CW	2.0	PW	3.5	FD C ²⁶	3											900	400	400	2.0	3	20
1055368	root rot 3	CWH	xm	05/07	CW	2.0	PW	3.5	FD C ²⁶	4			BG	3.5							900	400	400	2.0	3	20
1055369	root rot 4	CWH	xm	03	PW	3.5							CW	2.0							800	500	400	1.5	3	20
1055370	root rot 5	CWH	xm	06	CW	1.5							PW	2.5							900	500	400	1.5	6	20

* see section A 1.1.3.1

A1.1 Reference Notes for Stocking Standards

A1.1.1 Tree Species

'Ba' is amabilis fir
'Bg' is grand fir
'Cw' is western red cedar
'Dr' is red alder
'Ep' is paper birch
'Fd' is coastal Douglas-fir
'Hm' is mountain hemlock
'Hw' is western hemlock
'Pl' is lodgepole pine
'Pw' is white pine
'Ss' is sitka spruce
'Yc' is yellow cedar

A1.1.2 Definitions

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

'MIN' or 'Min' means minimum.

A1.1.3 Clarifications

The Appendix 1 stocking standards table is based on the Vancouver Forest Region *Reference Guide for FDP Stocking Standards* dated December 11, 2002. Where site series have the same requirements for each of the above boxes, they have been combined.

Site series where the stocking standards say 'avoid logging', or the site series that are floodplain site series, sites with strongly fluctuating water tables or shoreline/ocean spray sites have been excluded.

The minimum density post-spacing is as recommended in the *Establishment to Free-Growing Guidebook: Vancouver Forest Region*³⁰ (i.e. the minimum density post-spacing is the same as the minimum stocking standard).

** Hw is listed as an acceptable species in the Vancouver Forest Region stocking standards but no height was given; therefore, 1.5 m is used as the minimum height.

³⁰ <https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/FREE/EFG-Van-print.pdf>

In addition to the notes regarding species in the Vancouver Forest Region stocking standards, the following applies:

- Ss is moved from preferred to acceptable due to risk of weevil damage in 04 and 05 site series of CWHvh2.

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

A1.1.3.1 Mixedwood Stocking Standards Apply to FDU Chemainus, Cowichan, Nitinat, and Loss/San Juan

*Micro Patch Mixedwood Management Stocking Standard is to be applied as follows. The currently approved coniferous stocking standards for the BEC site series in question apply to the coniferous portion of the stand.

For the purposes of regeneration and free-growing stocking surveys, plots will be classified as Conifer (CD) or Deciduous (DC). Plots that fall within the conifer dominated sub-stratum will have the coniferous stocking standards applied. Plots that fall within the deciduous dominated sub-stratum will have the deciduous standard applied. A minimum sub-stratum size of 0.5ha will apply.

The Micro Patch Mixedwood Stocking Standard is consistent with the *Hardwood Management in the Coast Forest Region* document, prepared by the Silviculture Working Group (File: 00202-30/53908F)³¹.

A1.1.3.2 Alder and Mixedwood Free Growing Damage Criteria Apply to FDU Chemainus, Cowichan, Nitinat, and Loss/San Juan

Consistent with the *Hardwood Management in the Coast Forest Region* document²⁹, an acceptable broadleaf crop tree must:

- Not have a pith that is displaced >30cm from the location of the root crown pith;
- Not originate from a cut stump;
- Have one dominant, live leader;
- Not have a wound >10% of the stem circumference nor is >10% of the length of the stem;
- Not have any fungal infections or insect infestations affecting tissues below the bark surface visible without destructive sampling;
- Not be browsed so as to limit its ability to become a crop tree.

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[https://www.for.gov.bc.ca/rco/stewardship/crit/docs/Hardwood%20Management%20in%20the%20Coast%20Forest%20Region%20\(final%20July11V2\).pdf](https://www.for.gov.bc.ca/rco/stewardship/crit/docs/Hardwood%20Management%20in%20the%20Coast%20Forest%20Region%20(final%20July11V2).pdf)

A1.1.4 Footnotes

1. Reduction of inter-tree spacing to 1.5m is acceptable for site specific conditions involving bedrock, large blocky colluvium or hygric sites or on disturbed roadside areas³². Roadside areas generally contain high percentages of mineral and morainal type soils.
2. Cw will be considered an acceptable species where root diseases are prevalent and on standards units where an unmappable mosaic of site series includes moister site series. It will be acceptable to form up to 10% of the free-growing stand.
3. Elevated microsites are preferred.
4. Suitable on thick forest floors³³.
5. Restricted to coarse-textured soils³⁴.
6. Restricted to nutrient-very-poor sites.
7. Restricted to nutrient-medium sites.
8. Restricted to steep slopes³⁵.
9. Restricted to southerly aspects³⁶.
10. Restricted to northerly aspects³⁷.
11. Restricted to upper elevations of BEC unit.
12. Restricted to lower elevations of BEC unit.
13. Restricted to southern portion of BEC unit in region.
14. Restricted to western portion of BEC unit in region.
15. Restricted to eastern portion of BEC unit in region.
16. Restricted to trial use.
17. Suitable (as a major species) in wetter portion of BEC unit.
18. Suitable minor species on salal-dominated sites.
19. Risk of white pine blister rust.
20. Risk of weevil damage.
21. Suitable in areas with stronger maritime influence.
22. Risk of balsam woolly adelgid.
23. Minor component.
24. Species is restricted to upper elevations when used in the southern portion of the BEC unit.
25. Will be preferred in wetter portions of the site series.

³² ‘**Disturbed roadside area**’ refers to the area within the road right-of-way that has been disturbed due to road construction, where logs have been landed and log processing occurs. It is a maximum of 10m from the edge of the road running surface (akin to the length of a log).

³³ ‘**Thick forest floor**’ means a forest floor >20 cm.

³⁴ ‘**Coarse-textured soils**’ refers to sand and loamy sand; or sandy loam, loam, sandy clay loam with >70% coarse fragment content.

³⁵ ‘**Steep slopes**’ means slopes >50%.

³⁶ ‘**Southerly aspect**’ refers to SSE to WSW facing slopes with slopes >35%.

³⁷ ‘**Northerly aspect**’ refers to NW to ENE facing slopes with slopes >5%.

26. Stumping required where prescribed.

27. Standard approved for FDU's Chemainus, Cowichan, Nitinat, Loss/San Juan

Western white pine (Pw)

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

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

Sitka Spruce (Ss)

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

Ss must display a healthy leader and meet minimum height requirements to be accepted as a crop tree at free growing.