# Matchlee General Partner Ltd.



# FOREST STEWARDSHIP PLAN 2021-2026

**FSP ID:** 

**Approved date:** 

**Expiry date:** 

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# Signatures of Person Preparing the Plan and Licence Holder Authorization (FRPA S. 5(3))

Authorized Licensee Signature	Larry Fedorkie, RFT President, Capacity Forest Management Ltd., on behalf of Matchlee General Partner Ltd.
Preparing Forester "I certify that the work described herein fulfills the standards expected of a member of the Association of British Columbia Forest Professionals and that I did personally supervise the work."	Gary Gallinger, RPF Operations Planner, Capacity Forest Management Ltd.

# 1. Application of this FSP

## 1.1 Date of Submission

The date of submission of this Forest Stewardship Plan (FSP) is May 8, 2021.

# 1.2 Term of the FSP (FRPA S. 6)

The term of this FSP is 5 years.

# 1.3 Commencement of Term (FRPA S. 6(1)(b))

The term of this FSP commences on the date specified in writing by the minister in approving the plan.

# 1.4 Licences and Licence Holders (FRPA S. 3(4))

This FSP applies to each cutting permit and road permit issued or granted to the holder, and for the agreements, listed in Table 1 that are issued or granted:

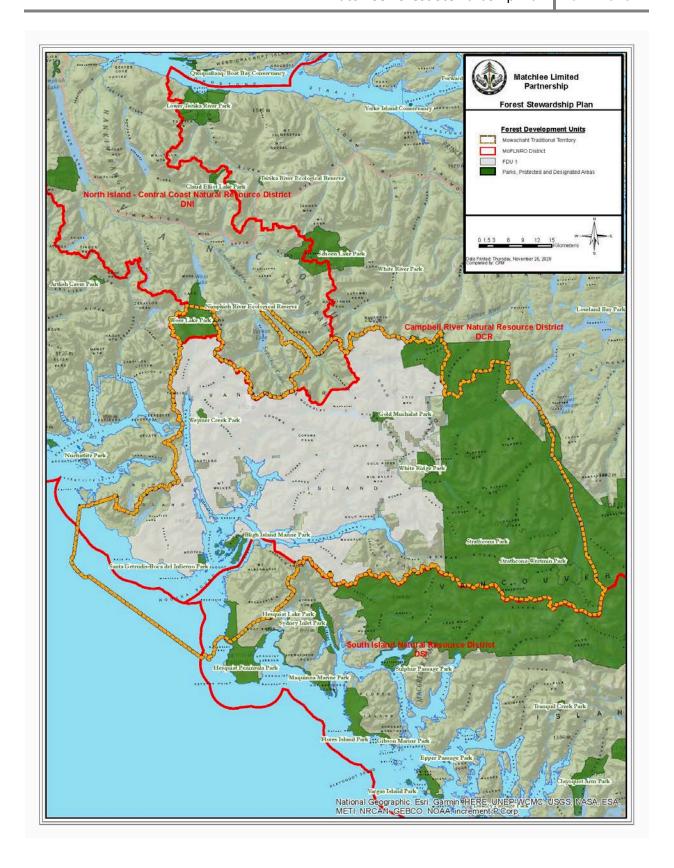
- (i) After the Commencement Date or the Extension Date of this FSP; and
- (ii) Within the Forest Development Unit (FDU) under this FSP.

**Table 1 Application of this Forest Stewardship Plan** 

Holders of this Forest Stewardship Plan	Agreement
Matchlee Limited Partnership	NRFL A86297
Matchlee Limited Partnership	NRFL A86298
Matchlee Limited Partnership	NRFL A86299
Matchlee Limited Partnership	NRFL A53745
Matchlee General Partner Ltd.	NRFL A95359
Matchlee General Partner Ltd.	NRFL A95360
Matchlee General Partner Ltd.	NRFL A95361

# 1.5 Map (FRPA S. 5(1)(a)) and (FPPR S. 14)

The following FSP map shows the boundary of the forest development unit 1 (FDU) under this FSP. The map also shows the areas that are excluded from the FDU and from this FSP. This FSP includes portions of the Burman, Nootka, Tahsis, Tlupana, Gold and Kleeptee Landscape Units.



# 1.5.1 Designation in Effect at Date of Submission of this FSP (FPPR S. 14(3))

The FSP map shows the designations and requirements described in FPPR S. 14(3) that were in effect on the Date of Submission, including, for ease of reference, the designations listed in Table 2, below.

The most recent spatial data and information supplied by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development was used for the location of Ungulate Winter Ranges and Wildlife Habitat Areas in the development of the FSP Map.

Table 2 FPPR 14(3) Designations for Matchlee FSP

FPPR 14 (3)(a) Ungulate Winter Ranges	LU	Date Designated
UWR U-1-014	Tahsis, Tlupana, Kleeptee, Burman, Gold	December 23, 2004. Amendments in 2006, 2007, 2008, 2012, 2014, and 2018
UWR U-1-005	Tlupana, Gold	June 29, 2006. Amendments in 2007, and 2010
FPPR 14 (3)(b) Wildlife Habitat Areas	LU	Date Designated
WHA 1-001	Tahsis	April 25, 2000
WHA 1-086	Tlupana	December 9, 2004
WHA 1-088	Gold	December 9, 2004
WHA 1-090	Gold	December 9, 2004
WHA 1-094	Gold	December 9, 2004
WHA 1-095	Gold	December 9, 2004
WHA 1-225	Burman	December 17, 2009
WHA 1-230	Gold	December 17, 2009
WHA 1-231	Kleeptee	December 17, 2009
WHA 1-232	Kleeptee	December 17, 2009
WHA 1-232a	Kleeptee	April 26, 2018
WHA 1-232b	Kleeptee	April 26, 2018
WHA 1-237	Nootka	December 17, 2009
WHA 1-238	Tahsis	December 17, 2009
WHA 1-239	Tahsis	December 17, 2009
WHA 1-242	Tlupana	December 17, 2009
WHA 1-243	Tlupana	December 17, 2009
WHA 1-244	Tlupana	December 17, 2009
WHA 1-247	Tlupana	December 17, 2009
WHA 1-272	Tahsis	December 17, 2009
WHA 1-395	Tahsis	April 24, 2014
WHA 1-485	Nootka	April 24, 2014
WHA 1-486	Nootka	April 24, 2014
WHA 1-489	Tlupana	January 16, 2020
WHA 1-582	Kleeptee	April 26, 2018

Table 2 FPPR 14(3) Designations for Matchlee FSP (cont.)

FPPR 14 (3)(b) (cont.) Wildlife Habitat Areas	LU	Date Designated
WHA 1-639	Nootka	April 26, 2018
WHA 1-640	Nootka	April 26, 2018
WHA 1-641	Nootka	April 26, 2018
WHA 1-642	Nootka	April 26, 2018
WHA 1-643	Nootka	April 26, 2018
WHA 1-644	Nootka	April 26, 2018
WHA 1-645	Nootka	April 26, 2018
WHA 1-694	Nootka	April 26, 2018
FPPR 14(3)(c) Fisheries Sensitive Watersheds	LU	Date Designated
		None designated
FPPR 14(3)(d) Lakeshore Management Zones	LU	Date Designated
		None designated
FPPR 14(3)(e) Scenic Areas	LU	Date Designated
Scenic areas as established by the District Manager.	Nootka, Tahsis, Tlupana, Kleeptee, Burman, Gold	December 14, 2005
FPPR 14(3)(f) L1 Lake	LU	Date Designated
		None designated
FPPR 14(3)(g) Community Watersheds	LU	Date Designated
McKelvie	Tahsis	June 15, 1995
FPPR 14(3)(h) Old Growth Management Areas	LU	Date Designated
		None designated
FPPR 14(3)(i) Areas	LU	Date Designated
		None designated

# 1.5.2 Declared Areas (FPPR. 14(4))

Cutblocks and roads declared under FPPR S. 14(4) are shown on the FSP map.

# 2 Results and Strategies

# 2.1. Land Use Objectives

# 2.1.1 Non-Spatial Old Growth Objectives

To contribute to the conservation of biodiversity, licensees must maintain old forest by biogeoclimatic variant within each landscape unit according to the age of old forest and the percentage of old forest retention that is specified in the Order Establishing Non-Spatial Old Growth Objectives (effective June 30, 2004). This Order supplements, but does not replace, FPPR S 9.

FDU / LU	Strategy	
1 / All	During the term of this FSP and to the degree possible due to circumstances within the control of the Holder, the minimum percentages of old forest (plus mature or other recruitment where applicable) indicated in the Order will be maintained. Where a Landscape Unit is not entirely within the FSP area, the results stated apply only to that portion of the Landscape Unit within the FSP area until the amount of contributing old growth to be retained is apportioned by government or by Licensee agreement among FSPs and/or Licensees.	
	2) The results for each Landscape Unit as indicated in the Order will be maintained until the earlier of:	
	(a) the replacement of this plan, or (b) with respect to each Landscape Unit,	
	<ul> <li>i) the effective date of a Notice or an exemption provided by the appropriate Minister or delegate with respect to old growth management areas, or</li> <li>ii) an Order establishing a Landscape Unit Plan.</li> </ul>	

# 2.1.2 Vancouver Island Land Use Plan Higher Level Plan Order

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

Table 3 VILUP Special Management Zones within FDU

Special Management Zone	Applicable HLP Objective	FDU / LU
SMZ 11 – Schoen - Strathcona	1(a)(b)(c), 2, 4 and 5	FDU 1 / Gold
SMZ 12 - Western Nootka Island	1(a)(b)(c), 2, 4 and 5	FDU 1 / Nootka

## Table 4 VILUP General Resource Management Zones within FDU

General Resource Management Zone	Applicable HLP Objective	FDU / LU
RMZ 20 - Nootka	n/a	FDU 1 / Nootka
RMZ 22 - Gold	n/a	FDU 1 / Gold

#### Table 5 VILUP Enhanced Resource Management Zone within FDU

Enhanced Resource Management Zone	Applicable HLP Objective	FDU / LU
RMZ 19 – Tahsis	7, 9, and 9.1*	FDU 1 / Tahsis
RMZ 21 - Tlupana	7, 9, and 9.1	FDU 1 / Tlupana
RMZ 23 - Kleeptee	7, 9, and 9.1	FDU 1 / Kleeptee
RMZ 24 – Burman	7, 9, and 9.1	FDU 1 / Burman

<sup>\*</sup> Objectives 7, 9, 9.1 apply, except for the parts of those zones which are designated as community watersheds as defined in FPC S. 41(8).

# 2.1.2.1 Objective 1(a)

- 1) Sustain forest ecosystem structure and function in SMZs, by:
  - (a) Creating or maintaining stand structures and forest attributes associated with mature<sup>1</sup> and old<sup>2</sup> forests subject to the following:
    - i) the target for mature seral forest should range between one quarter to one third of the forested area of each SMZ³; 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 / LU	Result
1 / Gold 1 / Nootka	The holder(s) of the FSP will not carry out or authorize the harvesting of mature seral forest
,	(a) within the designated Schoen - Strathcona SMZ that would result in the amount of mature seral stage forest to fall below 25%.
	(b) within the designated Western Nootka Island SMZ that would result in the amount of mature seral stage forest to fall below 25%.

### 2.1.2.2 Objective 1(b)

- 1) Sustain forest ecosystem structure and function in SMZs, by:
  - (b) retaining, within cutblocks<sup>4</sup>, structural forest attributes and elements with important biodiversity functions<sup>5</sup>.

FDU	Strategy
1 / Gold 1 / Nootka	1) In designated SMZs 11 and 12, the holder(s) of the FSP will retain, within cutblocks, structural forest attributes and elements with important biodiversity functions.

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> The old seral forest is defined as generally greater than 250 years old, containing live and dead (downed and standing) trees of various sixes, 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.

<sup>&</sup>lt;sup>3</sup> Mature seral targets will be established through landscape unit planning. See transition provisions under III.

<sup>&</sup>lt;sup>4</sup> Within cutblocks: generally means non-contiguous with cutblock boundaries.

<sup>&</sup>lt;sup>5</sup> This includes, but is not limited to snags, wildlife trees, downed logs.

# 2.1.2.3 Objective 1(c) and 2

- 1) Sustain forest ecosystem structure and function in SMZs by:
  - (c) Applying a variety of silvicultural systems, patch sizes and patch shapes across the zone, subject to a maximum cutblock size of 5 ha if clearcut, clearcut with reserves or seed tree silvicultural systems are applied, and 40 ha if shelterwood, selection or retention silvicultural systems are applied<sup>6</sup>.
- 2) Despite subsection 1(c) above, cutblocks larger than 5 or 40 ha, 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 / LU	Strategy
1 / Gold 1 / Nootka	1) In designated SMZs 11 and 12, the Holder(s) of the FSP will apply a variety of silviculture systems, patch sizes and patch shapes across the SMZ that are:
	(a) subject to a maximum Net Area to be Reforested (NAR) of 5 ha if clearcut, clearcut with reserves, or seed tree silvicultural systems are applied, or
	(b) subject to a maximum NAR of 40 ha if shelterwood, selection, or retention silvicultural systems are applied.
	2) Despite subsection 1 of this result or strategy, the NAR for cutblocks within designated SMZs 11 and 12 may exceed the 5 ha or 40 ha limit as per S. 1a) and 1b) of this strategy, provided that:
	(a) harvesting is being carried out to recover timber that was damaged by fire, insects, wind, or other similar events, and,
	(b) the cutblock design incorporates structural characteristics of natural disturbances, where safe, practicable, and site conditions permit.

<sup>&</sup>lt;sup>6</sup> Maximum cutblock sizes refer to net are to be reforested.

### 2.1.2.4 Objectives 4 and 5

- 4) Maintain late-successional habitat elements and attributes of biodiversity<sup>7</sup> in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation<sup>8</sup>.
- 5) Retain late-successional habitat elements and attributes of biodiversity in patches of variable size.

FDU / LU	Strategy
1 / Gold 1 / Nootka	1) Within the designated SMZ 11, the Holder(s) of the FSP will design cutblocks that retain, within or adjacent to the cutblocks, late successional habitat elements and attributes of biodiversity in:
	<ul><li>(a) wildlife tree patches,</li><li>(b) riparian management areas, and</li><li>(c) other areas reserved from harvesting,</li></ul>
	that are of various sizes and which have site series representative of the site series associated with the areas to be harvested and are within 250 m of the cutblock.

### 2.1.2.5 Objective 7

- 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 / LU	Strategy
1 / Burman 1 / Tahsis 1 / Tlupana 1 / Kleptee	<ol> <li>Within the Burman, Tahsis, Tlupana, and Kleeptee EFZs, with exceptions to the parts of those zones which are designated as community watersheds, the holder(s) of the FSP may:</li> <li>(a) carry out or authorize the harvest of blocks that exceed 40 ha regardless of silviculture system applied, and</li> </ol>
	<ul><li>(b) assess a cutblock as greened-up if it is adequately stocked and the average height of those trees that are:</li><li>i) the tallest tree in each 0.01 ha plot included in a representative sample, and</li></ul>

<sup>&</sup>lt;sup>7</sup> This includes, but is not limited to: large diameter (>60 cm) live, decaying and dead standing trees (providing nest and cavity sites); downed wood, including large diameter pieces (50 to 150 cm); deciduous broad-leaved trees, both in riparian and upland areas.

<sup>&</sup>lt;sup>8</sup> The level of representation of old seral forest will be applied through landscape unit planning.

- ii) a commercially valuable species or other species acceptable is at least 1.3 meters.
- 2) For the purposes of this strategy, in determining the size of a proposed cutblock in the Burman, Tahsis, Tlupana and Kleeptee EFZs, the non-greened up portion of an existing cutblock adjacent to a cutblock proposed for harvest will be considered part of the NAR.
- 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:
  - (a) hydrological values by following the strategies in S. 2.2.5, for community watersheds, and
  - (b) wildlife values by following the results in S. 2.2.3, for wildlife,
  - (c) wildlife and biodiversity values by following the results in S. 2.2.4, for water, fish, wildlife, and biodiversity within riparian areas, and
  - (d) wildlife and biodiversity values by following the practice requirement or strategies in S. 2.2.6, for wildlife and biodiversity, and
  - (e) scenic values by following the results in S. 3.1, for visual quality, and
  - (f) recreation values by following FPPR S. 70.

#### Objectives 9 and 9.1 2.1.2.6

- When proposing the species composition in a silviculture prescription a person may 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 / LU	Result
1 / Burman 1 / Tahsis 1 / Tlupana	1) Within the EFZ 19, 21, 23, and 24 the Holder(s) of the FSP may reforest cutblocks with a single species that is ecologically suited to an area, if a mix of species was present on the area before the timber was harvested, subject to subsection 2.
1 / Kleptee	<ol> <li>The amount of area subject to selection of single species is limited to no more than 20% of the forest area of any variant within a given EFZ.</li> </ol>

# 2.2. Objectives prescribed under FRPA S. 1492.2.1 Soils

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

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

## 2.2.2 Timber

The objective set by government for timber are to:

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

FDU / LU	Practice requirement
1 / ALL	Results or strategies are not specified in this FSP under the FPPR 6 Objective, per the FPPR S.12(8) exemption for results or strategies for Timber, except as provided for the VILUP Land-Use Objectives 7 and 8.

# 2.2.3 Wildlife

- (1) The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for
  - a) the survival of species at risk,
  - b) the survival of regionally important wildlife, and
  - c) the winter survival of specified ungulate species.
- (2) A person required to prepare a forest stewardship plan must specify a result or a strategy in respect of the objective stated under subsection (1) only if the minister responsible for the Wildlife Act gives notice to the person of the applicable
  - a) species referred to in subsection (1), and
  - b) indicators of the amount, distribution and attributes of wildlife habitat described in subsection (1).
- (3) If satisfied that the objective set out in subsection (1) is addressed, in whole or in part, by an objective in relation to a wildlife habitat area, or an ungulate winter range, a general wildlife measure, or a wildlife habitat feature, the minister responsible for the Wildlife Act must exempt a person from the obligation to specify a result or strategy in relation to the objective set out in subsection (1) to the extent that the objective is already addressed.
- (4) On or after December 31, 2004, a notice described in subsection (2) must be given at least 4 months before the forest stewardship plan is submitted for approval.

# **Exemptions**

Licensees operating within the CRFD are exempt from the obligation of preparing a result or strategy in relation to the objective set out in FPPR S. 7(1) for:

- (a) the Queen Charlotte Goshawk as noted in the Order establishing WHA 1-085 to 1-088 and 1-090 to 1-095 dated Dec 1, 2004.
- (b) the Red-legged Frog as noted in the Order establishing WHA 1-481 to 1-486 dated April 1, 2014.
- (c) the Keens' Long-eared Myotis as noted in the Order establishing WHA 1-391, 1-392 and 1-395 dated April 1, 2014.

Ungulate Winter Range #U1-014 and associated general wildlife measures were established on December 14, 2004 under GAR S. 9(2) and 12(1). The Order establishing UWR #U1-014 provides an exemption from the obligation to prepare result or strategies in relation to the objective for the winter survival of ungulates in TFL 19 as per FPPR S. 7(3).

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

# **Marbled Murrelet (Brachyramphus marmoratus)**

FDU / LU	Result
1/ALL	1. The Holder will not carry out or authorize primary forest activities within an area that would result in the amount or distribution of habitat for Marbled Murrelet to be reduced below that specified in the relevant Section 7 notice (July 27, 2004).
	2. The Holder will identify interim management areas that can contribute to future WHAs consistent with the applicable Section 7 notice (July 27, 2004).
	<ol> <li>Where new WHA are established, any primary forest activities carried out or authorized by the Holder will be consistent with the Order and general wildlife measures in place for those WHA.</li> </ol>
	4. Section 1 and 2 of this result/strategy no longer apply to any area where WHA are legally established that meet the intent of the notice and an exemption is given under FPPR S. 7(3).

# **Great Blue Heron (Ardea herodias fannini)**

FDU / LU	Result
1/ALL	<ol> <li>The Holder will not carry out or authorize primary forest activities within an area that would result in the amount or distribution of habitat for Great Blue Heron to be reduced below that specified in the relevant Section 7 notice (July 27, 2004).</li> </ol>
	2. The Holder will identify interim management areas that can contribute to future WHAs consistent with the applicable Section 7 notice (July 27, 2004).
	3. Where new WHA are established, any primary forest activities carried out or authorized by the Holder will be consistent with the Order and general wildlife measures in place for those WHA.
	4. Section 1 and 2 of this result/strategy no longer apply to any area where WHA are legally established that meet the intent of the notice and an exemption is given under FPPR S. 7(3).

# 2.2.4 Water, Fish, Wildlife and Biodiversity within Riparian Areas

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

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

FDU / LU	Result
1 / All	1) The holder(s) of the FSP will adopt as a result 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 below.
	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:
	<ul> <li>i) takes into consideration the Factors in Schedule 1, S. 2 of the FPPR; and</li> <li>ii) is prepared by a qualified professional prior to commencement of the primary forest activity.</li> </ul>
	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).
	4) In respect of FPPR S. 12(3), if the holder(s) of the FSP authorizes or carries out a primary forest activity in a riparian management zone in a cutblock, retention of trees will:
	<ul> <li>(a) be based upon the factors in FPPR S. 1 Section 2, and</li> <li>(b) be specified and prescribed in a written rationale signed by a qualified professional, prior to commencement of the primary forest activity.</li> </ul>

# 2.2.5 Community Watersheds

- 1) Objectives set by government for water in community watersheds (FPPR S. 8.2) (1.) In this section, "community watershed" means a community watershed,
  - (a) that is continued under section 180(e) of the Act, and
  - (b) for which a water quality objective has not been,
    - (i) continued under section 181 of the Act, or
    - (ii) established under the Government Actions Regulation.
- 2) The objective set by government for water being diverted for human consumption though a licensed waterworks in a community watershed is to prevent to the extent described in subsection (3) the cumulative hydrological effects of primary forest activities within the community watershed from resulting in
  - (a) a material adverse impact on the quantity of water or the timing of the flow of the water from the waterworks, or
  - (b) the water from the waterworks having a material adverse impact on human health that cannot be addressed by water treatment required under
    - (i) an enactment, or
    - (ii) the licence pertaining to the waterworks.
- 3) The objective set by government under subsection (2) applies only to the extent that it does not unduly reduce the supply of timber from British Columbia's forests.
- 4) If satisfied that the objective set out in subsection (2) is not required to provide special management the minister responsible for the Wildlife Act must exempt a person from the requirement to specify a result of strategy in relation to the objective.
- 5) If satisfied that the objective set out in subsection (2) is addressed, in whole or in part, by an enactment, the minister responsible for the Wildlife Act must exempt a person from the requirement to specify a result or strategy in relation to the objective set out in subsection (2) to the extent that the objective is already addressed.

FDU / LU	Strategy
1 / Tahsis	This strategy applies to the McKelvie Creek Community Watershed and any new Community Watersheds established during the term of the plan after the time period specified in FRPA S.8.
	The Holder will ensure that all primary Forest Activities are compliant with FPPR S. 59, 60, 61, 62 and 63. In addition, all primary forest activities within community watersheds authorized or conducted by the Holder will be consistent with the recommendations of a hydrologic assessment. The hydrologic assessment will:
	a. be written by a Qualified Professional;
	b. consider the potential for hydrologic changes, within the watershed, associated with climate change and industrial activities;
	c. indicate that planned and existing harvesting and road building are unlikely to result in an elevated risk to a licenced waterworks associated with increased peak flows;

- d. contain a survey of existing sediment sources that could impact a licenced waterworks;
- e. assess riparian and channel conditions upstream of any licenced waterworks;
- f. include a watershed report card; and
- g. provide recommendations that mitigate the risk of the primary forestry activities impacting the objectives stated in FPPR S. 8.2.

In respect to Community Watersheds, the Holder will work with other tenure holders within the relevant FDU to incorporate their planned and existing activities into the hydrologic assessment. The Holder will refer the completed hydrologic assessment to those tenure holders prior to the commencement of primary forest activities.

# 2.2.6 Wildlife and Biodiversity

#### **Landscape Level**

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 / LU	Practice requirements
1 / All	The Holder of this FSP adopts the practice requirements as specified in <i>FPPR S. 64</i> and <i>S. 65</i> , as those sections were on the date this FSP was submitted for approval.
	Exceptions are given to the areas designated as EFZ 19, 21, 23, and 24 if timber harvesting operations are carried out in accordance with the result/strategy for Objective 7 of the VILUP.

#### **Stand Level**

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, to retain wildlife trees.

FDU / LU	Strategy
1 / ALL	1) The holder(s) of the FSP will undertake to comply with FPPR S. 66 and 67 as those sections were on the date of submission of this FSP, except with respect to FPPR S. 12.5(1) and (2), where:
	<ul> <li>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,</li> <li>b) a tree, or trees, within a WTRA is modified via windfirming treatments to maintain the integrity of that WTRA; or</li> <li>c) danger trees may be felled; or</li> <li>d) timber may be harvested in a WTRA, where a Qualified Professional specifies one or more replacement WTRA, consistent with section 3 d) and e) of this strategy.</li> </ul>
	2) Where wildlife tree retention targets are specified in approved ,landscape unit plans harvesting will undertake to comply with targets specified.
	3) Where timber harvesting is planned or authorized within a WTRA, replacement forest of equivalent age, structure and area must be identified that is:
	<ul> <li>a) within the cutblock to which the WTRA is related; or,</li> <li>b) in an area contiguous to the cutblock to which the WTRA is related; or,</li> <li>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.</li> </ul>
	And that the process to replace the WTRA:
	d) includes a rationale prepared by a Qualified Professional outlining what was replaced and what was chosen as a replacement area prior to harvest of the applicable

- cutblock; In blocks prior to Free Growing Declaration a Site Plan or Site Plan Amendment will be prepared. Where Free Growing is declared a rationale will be prepared and filed on the opening file.
- e) includes data required to be submitted to the most current Province of BC database by the end of each calendar year, consistent with FPPR S. 86(3).
- 4) The percentage of stand retention shall be determined as a percentage of the sum of the Net Area to Reforest (NAR) and area of Permanent Access Structures (PAS): WTRA Retention % = Retention Area / (NAR + PAS).

# 2.2.7 Cultural Heritage Resources

The objective set by government for cultural heritage resources (FPPR S. 10) 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 / LU	Stra	itegy
1 / ALL	1.	On an annual basis, the Holder will:
		<ul> <li>a. refer to applicable First Nations a map of sufficient scale (e.g., 1:20,000) detailing areas proposed for primary forest activities, and</li> <li>b. request information or knowledge pertaining to potentially impacted cultural heritage resources, that the First Nation may be aware of, within:</li> </ul>
		<ul><li>i. sixty days; or</li><li>ii. as previously agreed to by the First Nation in a formalized agreement.</li></ul>
		The holder(s) will evaluate the nature and extent of a potential site-specific and relevant cultural heritage resource, identified within areas of potential primary forest activities, including making reasonable efforts to share information or consult with the applicable First Nation in respect of the relevant cultural heritage resource. Where spatially explicit information related to a cultural heritage resource is provided by a First Nation the holder(s) will maintain a dataset, to be shared with the applicable First Nation, showing the location, extent, and nature of the cultural heritage resource.
		The holder(s), when designing a primary forest activity, will identify the portion of the area occupied by a relevant cultural heritage resource, the nature of the relevant cultural heritage resource, and whether the relevant cultural heritage resource is to be protected or conserved. If the relevant cultural heritage resource is to be conserved, the holder(s) will identify what constraints, if any, are to apply to the primary forest activity carried out on the area.
		The applicable First Nation will be sent written documentation of discussions during referrals occurring as per S.1 of this strategy which will include specific actions to be taken, if any, to mitigate impacts and conserve and/or protect identified cultural heritage resource values.
		For each relevant cultural heritage resource that has been identified under S. 3, for protection, the holder(s) will carry out or authorize a person to carry out a primary forest activity only to the extent that the forest practice does not damage or render ineffective the relevant cultural heritage resource.
		If, within a cutblock or road where the holder(s) of the FSP is carrying out or has authorized primary forest activities, a previously unidentified cultural heritage resource is encountered, the holder(s) of the FSP will consult with the applicable First Nation, and:
		<ul> <li>require operations within the cutblock or road to cease or be modified to the extent necessary to protect the cultural heritage resource,</li> </ul>

- b. determine,
  - i. the nature of the cultural heritage resource, and
  - ii. whether the cultural heritage resource is to be protected or conserved, and
  - iii. if the cultural heritage resource is to be conserved, what constraints, if any, are to apply to the forest practices carried out in the area.
- c. modify the design of the primary forest activities to conform with S. 2; and
- d. authorize operations to resume within the cutblock or road to the extent that the operations are consistent with the modified design.
- 7. The holder(s) of the FSP recognize that mature western red cedar and cypress are cultural heritage resources to the applicable First Nations. To ensure continued availability of this resource:
  - a. upon request by an applicable First Nation, provide assistance in locating western red cedar and cypress that would be suitable for cultural use; and.
  - b. if requested by the applicable First Nations, the holder(s) of the FSP will help identify suitable areas for bark gathering in cutblocks prior to harvesting.
  - c. where artificial regeneration is prescribed, western red cedar and cypress, where they are an ecologically suitable species, will be planted on areas referred to in FRPA S. 29(1) in accordance with the stocking standards specified in this FSP.

# 3. Objectives Established under Government Actions Regulations (GAR)

# 3.1 Visual Quality

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

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

FDU / LU	Result
1/ALL	1. For the purposes of this result, a "significant public viewpoint", as that term is used in the definition of "altered forest landscape" means a viewpoint on water or land:
	(a) where many people traditionally congregate which may be a viewpoint in a park, highway pullout or rest stop, or city center; or
	(b) included in the most current Visual Landscape Inventory; or,
	(c) determined to be important by a qualified professional.
	2. Primary forest activities carried out or authorized by the holder(s) of the FSP within scenic areas established within the Campbell River Natural Resource District, will be consistent with:
	(a) the visual quality objectives as established by the District Manager; and
	(b) the categories of visually altered forest landscape as defined in FPPR S. 1.1, and
	(c) any subsequent amendments made to the VQOs in a and b, and
	(d) any future Orders enacted that relate to visual quality.
	3. Prior to authorizing primary forest activities, where VQOs apply, the Holder will ensure a detailed Visual Impact Assessment is completed by a qualified professional to ensure the activities are consistent with the VQO, taking into account the current state of the VQO and the effects of surrounding development. Where portions of an assessed landform contain existing non-forested alterations, such as private land, gravel pits, or natural rock bluffs, the Visual Impact Assessment will not assess these areas as contributing to the current state of the VQO.

# 3.2 Karst

FDU / LU	Practice Requirement
1/ALL	Resource features are practice requirements outside of the FSP, and are mentioned here only as background information supporting the plan. Because no objectives are specified in resource feature orders, results or strategies are not required.
	The holder(s) of the FSP will ensure that any primary forest activities authorized or carried out by the holder(s) of the FSP will be carried out so as not to damage or render ineffective a resource feature, as required under FPPR S. 70 (1), in accordance with the established Resource Feature Order, "Order to Identify Karst Resource Features for the Campbell River Forest District" dated May 30, 2007, or as subsequently amended.
	Pursuant to Section 5(1) (a) of the Government Actions Regulation under the <i>Forest and Range Practices Act</i> , the following are defined as surface or subsurface elements of a karst system as resource features wherever they are found within the Campbell River Forest District:
	<ul><li>(a) Karst caves;</li><li>(b) significant surface karst features; and</li><li>(c) important features and elements within high and very high vulnerability karst terrain.</li></ul>
	The location of a subsurface or subsurface element of a karst system identified above will not be publicly disclosed by the agreement holder(s).

# 3.3 Recreation

FDU / LU	Practice Requirement
1/ALL	Resource features are practice requirements outside of the FSP, and are mentioned here only as background information supporting the plan. Because no objectives are specified in resource feature orders, results or strategies are not required.
	The holder(s) of the FSP will ensure that any primary forest activities authorized or carried out within identified recreation resource feature polygons established under section 5(1) of the Government Actions Regulation (B.C. Reg. 17/04), "Order to Identify Recreation Resource Features for the Campbell River Forest District", dated April 12, 2006, or as subsequently amended, will not damage or render ineffective a resource feature as required under FPPR S. 70 (1).

# 4. Measures to Prevent the Introduction and Spread of Invasive Plants

#### 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 / LU	Measure
1/ALL	Prior to starting development in a new area, the Holder will check the Invasive Alien Plant     Program Application (IAPP) to ascertain known locations of invasive plants.
	2. If the risk of establishment and spread of invasive plants is determined to be moderate to high and they are likely to germinate on soil exposed because of the FSP Holder's road construction or cutblock harvesting under this FSP, and it is reasonably foreseeable that revegetation with grass seed would materially reduce the likelihood of germination, a Holder of this FSP will:
	<ul><li>a. within one year of the Holder completing such activity, seed such soil that exceeds 0.1 ha in contiguous area; and</li><li>b. use seed:</li></ul>
	<ul> <li>i) that meets Common No. 1 Forage Mixture (or better);</li> <li>ii) with high sod forming content (except in areas that are planted with tree seedlings); and</li> <li>iii) that has been certified by the Canadian Seed Growers Association that the seed meets the standards for varietal purity established by the Association for seed of that kind of species (Seeds Act, Seeds Regulation S. 2(1)), as advised in Appendix Of the "Invasive Plant Information for FSP Preparers &amp; Reviewers with the Coast Region"; and</li> <li>iv) that is of native origin, provided:</li> </ul>
	<ul><li>(1) the seed is readily available; and</li><li>(2) the seed is comparable in cost to agronomic mixtures; and</li><li>(3) the seed is comparable in effectiveness to agronomic mixtures.</li></ul>
	3. If moderate to high risk invasive plants are likely to establish in cutblocks harvested during the forest regeneration phase, the Holder of this FSP will through normal reforestation practices:
	a) Establish a stand of coniferous and/or deciduous crop trees consistent with the applicable stocking for the area on or before the regeneration date; and

b) Meet Free Growing requirements consistent with the applicable stocking standards on or before the late Free Growing Date so that the stand will form a closed canopy to suppress seed and vegetative production of shade intolerant invasive plants.

#### 4. The Holder will:

- a) Investigate all significant occurrences of prolific or atypical plant species identified during silviculture surveys at the pre-harvest site plan stage or post-harvest and report confirmed occurrences that were previously unknown to the IAPP within a month of identification;
- where a prolific or atypical plant species is identified as an invasive plant species as described in the Invasive Plant Regulation, establish site specific measures to control the spread of the invasive plant species with the assistance of the MoFLNRORD Invasive Plant Specialist, if necessary;
- instruct employees and contractors to sufficiently clean equipment and vehicles prior to moving them from an area with known occurrences of invasive species, or from a location external to and FDU in this FSP, to within the areas of primary forest activities;
- d) ensure contractors begin work in un-infested areas before moving into known infested areas;
- e) ensure contractors do not park equipment in known infested areas;
- f) instruct contractors not to move soil, subgrade or surfacing material from an area known to have invasive plants to an area known to be free on invasive plants;
- g) annually provide appropriate personnel training and information regarding the recognition of 10 most likely invasive plants that are known to exist, or likely to exist within an FDU of this FSP, to all field staff and contractors.
- 5. If invasive plants establish as a direct result of the Holders forest practices, the Holder will:
  - (a) develop and implement an invasive plant treatment plan with assistance from the MoFLNRORD Invasive Plant Specialist, if necessary, and
  - b) monitor the revegetated areas, repeating revegetation as necessary until exposed soil is eliminated.

# 5. Measures to Mitigate the Effect of Removing or Rendering Ineffective Natural Range Barriers

For the purpose of section 48 [natural range barriers] of the Act, a person who prepares a forest stewardship plan must specify measures to mitigate the effect of removing or rendering ineffective natural range barriers.

FDU / LU	Measure
1 / ALL	No measures are proposed as there are no range tenures within this FDU.

# 6. Stocking Standards

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

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

# 6.2 Regeneration Date and Stocking Standards, Free Growing Height

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

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

If areas of FDU 1 are harvested for special forest products, intermediate cuts or a commercial thinning, the stocking standards in Appendix 1 of this FSP will be maintained on the area for twelve months following the completion of the harvesting.

# 6.4 Ecologically Suitable Species

Ecologically suitable tree species are species that have been found to occur based on available soil water and nutrients. The soil moisture regime and soil nutrient regime are combined into an edatope. The edatopic grid for each species determines infrequent, and frequent to very frequent occurrences. Ecologically suitable species, in the context of this stocking standard, are found in the frequent to very frequent ranges due to moderate to good vigour performance unless limited by a footnote. The prescribing Forester must determine suitability based on site specific criteria such as soil moisture and nutrient regimes, aspect and elevational transition zones determined in the field. As per FPPR S. 26 (3)(a) the species listed in Table 2 are derived from Land Management Handbook No. 28, A Field Guide for Site Identification and Interpretation for the Vancouver Forest Region<sup>9</sup>, Reference Guide for FDP Stocking Standards (March 2019)<sup>10</sup>, and The Distribution and Synopsis of Ecological and Silvical characteristics of tree species in British Columbia's forests<sup>11</sup>.

# 6.5 Even Aged Management

Table 1 applies to sites and Standards Units with even-aged management. Even-aged stands generally have one dominant age class; although, one or more age classes can be represented through different silviculture systems. The following silviculture systems are applicable to even aged management: Clear Cut, Clear Cut with Reserves, Seed Tree, Retention (groups or dispersed), and Group Selection.

<sup>&</sup>lt;sup>9</sup> Green, R.N. and Klinka, K 1994. Land Management Handbook No. 28, A Field Guide for Site Identification and Interpretation for the Vancouver Forest Region

<sup>&</sup>lt;sup>10</sup> British Columbia Ministry of Forests and Range, 2019. Reference Guide Standards in Excel 03 format. Forest Practices Branch, Victoria, BC.

Klinka, K., Worrall, J., Skoda L., and Varga, P. 2000. The Distribution and Synopsis of Ecological and Silvical Characteristics of Tree Species in British Columbia's Forests. Canadian Cartographics. Coquitlam, BC

# 6.6 Site Series Mosaics/Complexes

Where more than one site series is located within a logical standards unit area the standard that applies will be that of the dominant site series. This standard can be modified with the inclusion of additional species selected from the standard of the subdominant site series for those specific areas of the mosaic or complex. These additional components to the standard will be supported by a documented rationale.

#### 6.7 Transitional Sites

On transitional sites occurring between two BEC units, the standard that applies will be that of the dominant BEC unit. This standard can be modified with the inclusion of components associated with the sub-dominant BEC unit. These additional components to the standard will be supported by a documented rationale.

#### 6.8 Minimum Intertree Distance

The general minimum intertree distance (MITD) of 2.0 metres can be reduced to 1.0 metre for any given site where productive and plantable spots are limited by site characteristics. These can include, but are not limited to, colluvial sites, wet sites, disturbed roadsides, heli–logging blocks, or other sites where site conditions preclude the attainment of the target stocking standards. The target inter-tree spacing will remain the same but a reduced MITD will allow for the selection of the most productive growing sites. Justification for the reduced MITD will be supported by a documented rationale.

Colluvial sites are those with large surface rocks or boulders or sub-surface rocks. On these sites soil is either shallow or limited to gaps between rocks. These sites can be very localized or extensive in nature such as large deposition zones from historic slides, talus slopes, avalanche tracks or boulder veneers.

Wet sites are those with high or fluctuating water tables and growing season water surpluses. Productive growing sites are generally less frequent and found mainly on elevated mounds. Under the BEC system the soil moisture rating (SMR) for these sites ranges from very moist (6) to wet (7).

Disturbed roadside areas are those within the road prism where productive growing sites are less frequent because of broken rock, talus, heavy slash or other unfavorable soil materials caused by road building and harvesting operations.

# 6.9 Slide Area Management

For slide areas caused as a result of a primary forest activity, the holder(s) of this FSP will ensure that the slide is assessed by a qualified professional to determine if FRPA S. 108 and FPPR S. 96 apply. The immediate strategy will be to control silt and sediment production and stabilize the site, where safety permits. The qualified professional will assess the slide initiation, transport, and deposition zones and will determine an appropriate management/regeneration strategy.

# 6.10 Minimum Height Over Brush

For the CWH biogeoclimatic zone, the minimum free-growing height over competitive brush species will be 150%.

For the MH biogeoclimatic zone, the minimum free-growing height over competitive brush species will be 125%.

#### **APPENDIX 1.0 - MATCHLEE FSP STOCKING STANDARDS**

#### **1.1 ADMINISTRATION**

As per FPPR S. 16, the following tables are the stocking standards that are to be applied to the blocks harvested under this FSP within the noted licenses. These tables are to be used along with the block specific site plans as required by FRPA S. 10.

Table 1. Stocking Stand	dards: Administration			
Region Coast Forest Region	District Campbell River Forest District	Management Unit(s)  FDU 1	Licensees and Licences  Matchlee Limited Partnership  NRFL A86297  NRFL A86298  NRFL A86299  NRFL A53745  Matchlee General Partner Ltd.  FL A95359, FL A95360 & FL A95361	Date <b>May 8, 2021</b>

## **1.2 STOCKING STANDARDS**

Table 2	. Stock	king Stand	lards fo	or Ecolo	gicall	y Suita	ble Sp	ecies										
	BEC			Conifer	Coniferous Species											Stocking		Regen
MoF ID#	Zone	Subzone/ Variant	Site Series	1	Min Ht	2	Min Ht	3	Min Ht	4	Min Ht	5	Min Ht	6	Min Ht	Target (sph)	Min (sph)	Date (yrs)
1048392	CWH	xm	01	Fd	3.0	Hw <sup>24</sup>	2.0	Cw	1.5	Pw <sup>31</sup>	2.5					900	500	3
1048393	CWH	xm	02*	Fd	2.0	Pl	1.25									400	200	3
1048394	CWH	xm	03	Fd	2.0	PI <sup>6</sup>	1.25	Cw	1.0							800	400	3
1048395	CWH	xm	04	Fd	3.0	Cw	1.5	Pw <sup>31</sup>	2.5							900	500	3
1048396	CWH	xm	05	Cw	2.0	Fd	4.0	Pw <sup>31</sup>	2.5	Bg <sup>53</sup>	3.5					900	500	3
1048397	CWH	xm	06	Cw	1.5	Hw	2.0	Fd <sup>18</sup>	3.0	Bg <sup>7</sup>	3.0					900	500	6
1048398	CWH	xm	07	Cw	2.0	Fd	4.0	Bg <sup>47</sup>	3.5							900	500	3
1048399	CWH	xm	08	Cw	2.0	Ss <sup>35</sup>	4.0	Bg <sup>47</sup>	3.5							900	500	3
1048400	CWH	xm	09	Cw <sup>1</sup>	2.0	Bg <sup>1</sup>	3.5									900	500	3
1048401	CWH	xm	11*	$Pl^1$	1.25	Cw <sup>1</sup>	1.0									400	200	3
1048402	CWH	xm	12	Cw <sup>1</sup>	1.0	Hw <sup>1</sup>	1.25	Pw <sup>31</sup>	2.5							800	400	3
1048403	CWH	xm	13	Cw	2.0	Bg <sup>47</sup>	3.5	Fd	4.0							900	500	3
1048404	CWH	xm	14	Bg <sup>1, 47</sup>	3.5	Cw <sup>1</sup>	2.0									900	500	3
1048405	CWH	xm	15	Cw <sup>1</sup>	2.0											800	400	3

Table 2.	. Stock	king Stand	dards fo	or Ecolo	gically	y Suital	ble Sp	ecies (	cont.)									
	BEC			Conifero	us Spec	cies										Stoc	king	Regen
MoF ID#	Zone	Subzone/ Variant	Site Series	1	Min Ht	2	Min Ht	3	Min Ht	4	Min Ht	5	Min Ht	6	Min Ht	Target (sph)	Min (sph)	Date (yrs)
1048406	CWH	vh1	01	Cw	1.5	Hw	2.0	Yc	1.5	PI <sup>6</sup>	1.5					900	500	6
1048407	CWH	vh1	02*	Pl	1.3	Cw	1.0	Yc	1.0							400	200	3
1048408	CWH	vh1	03	Cw	1.0	Hw	1.3	Pl	1.3	Yc	1.0					800	400	6
1048409	CWH	vh1	04	Cw	2.0	Hw	1.8	Ba <sup>47</sup>	2.3	Ss <sup>35</sup>	4.0					900	500	6
1048410	CWH	vh1	05	Ba <sup>47</sup>	2.3	Cw	2.0	Yc	2.0	Ss <sup>35</sup>	4.0	Hw <sup>2</sup>	1.8			900	500	3
1048411	CWH	vh1	06	Ba <sup>47</sup>	2.3	Cw	2.0	Yc	2.0	Ss <sup>35</sup>	4.0	Hw <sup>2</sup>	1.8			900	500	3
1048412	CWH	vh1	07	Ba <sup>47</sup>	2.3	Cw	2.0	Ss <sup>35</sup>	4.0	Hw <sup>2</sup>	1.8					900	500	3
1048413	CWH	vh1	08	Cw	2.0	Ss	4.0	Ba <sup>47</sup>	2.3							900	500	3
1048414	CWH	vh1	09	Cw <sup>1</sup>	2.0	Ss <sup>1</sup>	4.0	Ba <sup>1,47</sup>	2.3							900	500	3
1048415	CWH	vh1	11	Cw <sup>1</sup>	1.0	Yc1	1.0	Hw <sup>1</sup>	1.3	PI <sup>6</sup>	1.3					800	400	3
1048416	CWH	vh1	12*	Cw	1.0	$Pl^1$	1.3	Yc	1.0							400	200	3
1048417	CWH	vh1	13	Cw <sup>1</sup>	1.0	Yc	1.0	Hw <sup>1</sup>	1.3							800	400	3
1048418	CWH	vh1	14*	Ss	2.0	Cw	1.0	Pl	1.3							400	200	3
1048419	CWH	vh1	15	Ss	3.0	Cw	1.5	Hw	2.0							900	500	3
1048420	CWH	vh1	16*	Ss	3.0	Cw	1.5	Pl	1.5							400	200	3
1048421	CWH	vh1	17	Ss	2.0	Cw	1.0	Hw	1.3							900	500	3
1048422	CWH	vh1	18*	Cw <sup>1</sup>	1.0	Ss <sup>1</sup>	2.0									400	200	3
1048423	CWH	vm1	01	Cw	1.5	Hw	3.0	Ba <sup>26,47</sup>	1.8	Fd <sup>9,16</sup>	3.0					900	500	6
1048424	CWH	vm1	02*	Pl	1.3	Cw	1.0	Fd <sup>9,16</sup>	2.0	Hw	2.0					400	200	3
1048425	CWH	vm1	03	Cw	1.0	Hw	2.0	Fd <sup>9,16</sup>	2.0	PI <sup>53</sup>	1.3					800	400	6
1048426	CWH	vm1	04	Cw	1.5	Hw	3.0	Fd <sup>9,16</sup>	3.0							900	500	3
1048427	CWH	vm1	05	Ba <sup>47</sup>	1.8	Cw	1.5	Hw <sup>2</sup>	3.0	Fd <sup>1,9,16</sup>	3.0	Ss <sup>35</sup>	3.0			900	500	3
1048428	CWH	vm1	06	Ba <sup>26, 47</sup>	1.8	Cw	1.5	Hw	3.0							900	500	6
1048429	CWH	vm1	07	Ba <sup>47</sup>	2.3	Cw	2.0	Hw <sup>2</sup>	4.0	Fd <sup>1,9,23</sup>	4.0	Ss <sup>35</sup>	4.0			900	500	3
1048430	CWH	vm1	08	Ba <sup>47</sup>	2.3	Cw	2.0	Hw <sup>2</sup>	4.0	Ss <sup>35</sup>	4.0					900	500	3
1048431	CWH	vm1	09	Ba <sup>47</sup>	2.3	Cw	2.0	Hw	4.0							900	500	3
1048432	CWH	vm1	10	Cw <sup>1</sup>	2.0	Ss <sup>1,35</sup>	4.0	Ba <sup>1,47</sup>	2.3	_						900	500	3
1048433	CWH	vm1	12	Cw <sup>1</sup>	1.0	Hw <sup>1</sup>	2.0	Yc <sup>1</sup>	1.0	$Pl^1$	1.3					800	400	3
1048434	CWH	vm1	13*	Pl <sup>1</sup>	1.3	Cw <sup>1</sup>	1.0									400	200	3
1048435	CWH	vm1	14	Cw <sup>1</sup>	1.5	Hw <sup>1</sup>	3.0	Ss <sup>1,35</sup>	3.0							800	400	3

	BEC		Conifer	Coniferous Species													Stocking		Regen			
MoF ID#	Zone	Subzone/ Variant	Site Series	1	Min Ht	2	Min Ht	3	Min Ht	4	Min Ht	5	Min Ht	6	Min Ht	5	Min Ht	6	Min Ht	Target (sph)	Min (sph)	Date (yrs)
1048436	CWH	vm2	01	Hw	2.5	Cw	1.5	Yc	1.5	Ва	1.8	Fd <sup>1,9,23</sup>	2.3	Ss <sup>7,15,35</sup>	3.0					900	500	6
1048437	CWH	vm2	02*	Pl	1.3	Cw	1.0	Yc	1.0	Fd <sup>9,16</sup>	1.5	Hw	1.8							400	200	3
1048438	CWH	vm2	03	Cw	1.0	Hw	1.8	Yc	1.0	Fd <sup>9,16</sup>	1.5	Pw <sup>16,31</sup>	2.5							800	400	6
1048439	CWH	vm2	04	Cw	1.0	Hw	1.8	Yc	1.0	Fd <sup>9,16</sup>	1.5	Ва	1.5	Pw <sup>16</sup>	2.5					900	500	6
1048440	CWH	vm2	05	Cw	1.5	Hw	2.5	Yc	1.5	Ва	1.8	Fd <sup>1,8,9,23</sup>	2.3	Ss <sup>15,35</sup>	3.0					900	500	3
1048441	CWH	vm2	06	Cw	1.5	Hw	2.5	Yc	1.5	Ва	1.8									900	500	6
1048442	CWH	vm2	07	Cw	2.0	Hw <sup>2</sup>	3.5	Yc	2.0	Ва	2.3	Ss <sup>15,35</sup>	4.0							900	500	3
1048443	CWH	vm2	08	Cw <sup>14</sup>	2.0	Hw <sup>2</sup>	3.5	Yc	2.0	Ва	2.3	Ss <sup>35</sup>	4.0							900	500	3
1048444	CWH	vm2	09	Cw <sup>1</sup>	1.0	Hw <sup>1</sup>	1.8	Yc <sup>1</sup>	1.0	Hm <sup>1,13</sup>	0.8	Ва	1.5							800	400	3
1048445	CWH	vm2	10*	$Pl^1$	1.3	Yc <sup>1</sup>	1.0	Hm	0.8											400	200	3
1048446	CWH	vm2	11	Cw <sup>1</sup>	1.0	Yc <sup>1</sup>	1.0	Hw <sup>1</sup>	1.8											800	400	3
1048447	MH	mm1	01	Ba <sup>47</sup>	0.6	Hm <sup>13</sup>	1.0	Yc <sup>13</sup>	1.0	Se <sup>23</sup>	1.0	Cw <sup>14</sup>	1.0	Hw <sup>13</sup>	1.0	Bp <sup>13,23,47</sup>	0.6	Fd <sup>9,14,23</sup>	1.0	900	500	7
1048448	MH	mm1	02	Hm	0.8	Yc	0.8	Ba <sup>47</sup>	0.6	Se <sup>23</sup>	0.8									800	400	4
1048449	MH	mm1	03	Ba <sup>47</sup>	0.6	Hm	1.0	Yc	1.0	Bp <sup>23,47</sup>	1.3	Hw <sup>14,53</sup>	1.0	Se <sup>23</sup>	1.0					900	500	4
1048450	MH	mm1	04	Ba <sup>47</sup>	0.6	Hm	1.0	Yc	1.0											900	500	7
1048451	MH	mm1	05	Ba <sup>47</sup>	0.6	Yc	1.0	Hm	1.0											900	500	4
1048452	MH	mm1	06	Hm <sup>1</sup>	0.8	Yc <sup>1</sup>	0.8	Ba <sup>1, 47</sup>	0.6											800	400	7
1048453	MH	mm1	07	Ba <sup>1, 47</sup>	0.6	Yc <sup>1</sup>	0.8	Hm <sup>1</sup>	0.8											900	500	4
1048454	MH	mm1	08	Hm <sup>1</sup>	0.8	Yc <sup>1</sup>	0.8													400	200	4
1048455	MH	mm1	09	Yc1	0.8	Hm <sup>1</sup>	0.8													800	400	4

Footnote

restricted to area north of the Dean Channel

applies only to rust resistant, planted stock. restricted to sites where the species occurs as a major species in a pre-harvest, natural stand restricted to areas with proven PI performance restricted to sheltered microsites with deep soil

risk of unsuccessful release of advance regeneration acceptable in sx-sm portion of site series

risk of balsam wooly adelgid risk of heavy browsing by deer

minor component

# **Reference Guide for FSP Stocking Standards**

	Footnote #	<u>Footnote</u>	Footnote #
Conifer Tree Species	1	elevated microsites are preferred	46
"Ba" means amabilis fir;	2	suitable on thick forest floors	47
"Bg" means grand fir;	3	restricted to coarse-textured soils	48
"BI" means subalpine fir;	4	restricted to medium-textured soils	49
"Bp" means noble fir;	5	footnote retired	50
"Cw" means western red cedar;	6	restricted to nutrient-very-poor sites	
"Fd" means Douglas-fir;	7	restricted to nutrient-medium sites	51
"Hm" means mountain hemlock;	8	restricted to steep slopes	52
"Hw" means western hemlock;	9	restricted to southerly aspects	53
"Lt" means tamarack;	10	restricted to northerly aspects	54
"Lw" means western larch;	11	restricted to crest slope positions	55
"Pa" means whitebark pine;	12	suitable on cold air drainage sites	
"PI" means lodgepole pine;	13	restricted to upper elevations of biogeoclimatic unit	
"Pw" means white pine;	14	restricted to lower elevations of biogeoclimatic unit	
"Py" means ponderosa pine;	15	restricted to northern portion of biogeoclimatic unit in region	on
"Sb" means black spruce;	16	restricted to southern portion of biogeoclimatic unit in region	on
"Se" means Engelmann spruce;	17	restricted to western portion of biogeoclimatic unit in regio	n
"Ss" means Sitka spruce;	18	restricted to eastern portion of biogeoclimatic unit in region	1
"Sw" means white spruce;	19	restricted, not in Queen Charlotte Islands	
"Sx" means hybrid spruce or interior spruce;	20	restricted, not near outer coast	
"Sxs" means hybrid Sitka spruce;	21	restricted to mainland	
"Sxw" means hybrid white spruce;	22	restricted to southern Gardner Canal-Kitlope area	
"Yc" means yellow cedar.	23	restricted to trial use	
	24	suitable (as a major species) in wetter portion of	
Broadleaf Tree Species		biogeoclimatic unit	
"Acb" means balsam poplar;	25	suitable on sites lacking salal	
"Act" means black cottonwood;	26	suitable minor species on salal-dominated sites	
"At" means trembling aspen;	27	partial canopy cover required for successful establishment	
"Dr" means red alder;	28	limited by moisture deficit	
"Ep" means common paper birch;	29	risk of heavy browsing by moose	
"Mb" means bigleaf maple;	30	risk of porcupine damage	
"Qg" means garry oak;	31	risk of white pine blister rust	
"Ra" means arbutus;	32	limited by growing-season frosts	
//	33	footnote retired and replaced with footnote 'a'	
"Biogeoclimatic unit" or "BGC classification" means			
the zone, subzone, variant and site series	34	risk of snow damage	
described in the most recent field guide published	35	risk of weevil damage	
by the Ministry of Forests for the identification and	36	suitable major species on salal-dominated sites	
interpretation of ecosystems, as applicable to a	37	risk of heart rots	
harvested area.	38	footnote retired	
((A 41A)	39	avoid exposed and windy sites	
"MIN or "Min" means minimum.	40	risk of redheart	
*December of not Hawastin -	41	limited by poorly drained soils	
*Recommend not Harvesting.	42	restricted to fresh soil moisture regimes	
	43	suitable on mainland coast only (QCI only)	
	44	suitable in areas with stronger maritime influence	
	45	suitable in areas with stronger continental influence	