Draft Forest Stewardship Plan

2021-2026

A&A Trading Ltd. and the Terrace Community Forest Limited Partnership

Forest License A16836 and Community Forest Agreement K1X

Coast Mountain Natural Resource District

FSP #630

Preparing Forester:

"I certify that I have determined that this work was performed to an acceptable standard"

RPF Signature: _____

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Version 1.0 – Submitted for approval XX XX, XXXX

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1.0 FOREST STEWARDSHIP PLAN

This Forest Stewardship Plan (FSP) covers Forest Development Unit (FDU) 1 and FDU 2 located within the Kitselas First Nation, Kitsumkalum First Nation, Lax Kw'alaams Band, Metlakatla First Nation, Haisla Nation, Wet'suwet'en First Nation and the Gitwangak Huwilp territories in the province of British Columbia.

The FSP is a landscape level plan, which focuses on establishing strategies and results for conserving and protecting timber and non-timber resource values during forest management activities. The FSP states measurable or verifiable, enforceable results and strategies that are consistent with objectives set by government for a variety of forest values (e.g. fish, water, biodiversity, etc.). The FSP takes direction from the Kalum Sustainable Resource Management Plan (SRMP) Order, Forest and Range Practices Act (FRPA) and pertinent associated regulations such as the Forest Planning and Practices Regulation (FPPR). The FSP is the primary referral process for notifying the public, stakeholders, First Nations, and government agencies as to the location of FDUs and the strategies and results that will apply to forest management activities in the respective FDUs.

To ensure that the objectives under this FSP are achieved, A&A Trading Ltd. (A&A) and the Terrace Community Forest Ltd (TCF) are committed to working collaboratively and in cooperation with other licensees, First Nations and government in shared landscape units and watersheds covered by FDU 1 and FDU 2.

2.0 APPLICATION, TERM AND COMMENCEMENT OF TERM OF THIS FSP

This FSP may be amended from time to time as required. Possible reasons for amendments include changes in land-use designations or regulations, changes to operating areas, adaptive management lessons learned, changing economic or market conditions and/or changes in forest management due to climate change.

2.1 Application of this FSP (FRPA Section 3(4))

This FSP applies to Forest License A16836 held by A&A and Community Forest Agreement K1X held by the TCF, collectively known as the Holder(s).

2.2 Date of Submission

The date of submission of this FSP is XX XX, XXXX.

2.3 Term of this FSP (FRPA Section 6(1)(a))

The term of this FSP is 5 years.

2.4 Commencement of Term (FRPA Section 6(1)(b))

The term of this FSP commences on the date of approval of this FSP as specified by the delegated decision maker (DDM).

3.0 FOREST DEVELOPMENT UNITS

3.1 Forest Development Unit (FDU) Designations

FDUs identify areas of different planned development activities in the next 5 years. There are two FDUs, titled FDU 1 and FDU 2 included under the FSP.

Management Unit	Landscape Units or portion of within FDU 1 or FDU 2	Description of FDU
FDU 1	Kitimat, Hot Springs, Lakelse, Skeena River Kalum, Nelson-Fiddler, Kalum, and Exstew.	FDU 1 includes all of the area covered by the K1X CFA and is within the Kitselas First Nation, Kitsumkalum First Nation, Lax Kw'alaams Band, Metlakatla First Nation, and the Haisla Nation territories.
FDU 2	Jesse-Bish, Hirsch, Wedeene, Kitimat, Hot Spring, Lakelse, Kleanza-Treasure, Skeena River Kalum, Nelson-Fiddler, Kalum, Exstew, Exchamsiks, and Kasiks.	FDU 2 includes area covered by A16836 Forest License and is within the Kitselas First Nation, Kitsumkalum First Nation, Lax Kw'alaams Band, Metlakatla First Nation, Haisla Nation, Wet'suwet'en First Nation and the Gitwangak Huwilp territories.

3.2 Designations in Effect Four Months Prior to the Date of Submission of this FSP (FPPR Section 14(2)(ii))

The FSP Maps show the designations and other things described in Section 14(3)(a-d, f-k) of the FPPR that were in effect four months prior to the Date of Submission. Scenic areas described in FPPR Section 14(3)(e), are not shown on the FSP Maps. Scenic Areas have been designated and Visual Quality Objectives were established in Coast Mountains Natural Resource District under the Forest Practices Code Act of BC through District Manager letters dated Jan. 7, 1997; Sept. 8, 1998; and Mar 23, 2000. These Scenic Areas and their associated Established Visual Quality Objectives have been continued under sections 180 and 181, respectively, of the Forest and Range Practices Act. Parks, conservancies and other protected areas are excluded from the FSP. Other areas excluded from FDU 1 and FDU 2 area are clearly indicated on the map as not being included.

3.3 Maps

The FSP Maps, located in Appendix 2, show the boundaries of FDU 1 and FDU 2 and other features of the FSP.

3.4 Roads and Cutblocks with Assessments Complete

There are no cutblocks or roads within this FSP that are considered approved under Section 196(1) or (2) of the FRPA, or that are referred to in Section 110 of the FPPR.

4.0 UNDERTAKINGS, RESULTS AND STRATEGIES

4.1 Land Use Objectives (FPPR Section 1 definition)

4.1.1 Non-Spatial Old Growth Order

A Non-Spatial Old Growth Order effective June 30, 2004 establishes landscape units, biodiversity emphasis and objectives in the province. FDU 1 and FDU 2 are within the area to which the Order establishing Land Use Objectives in the Kalum SRMP Area, dated April 28, 2006 apply therefore a result/strategy in respect of the Order Establishing Provincial Non-Spatial Old growth Objectives is no longer required in this FSP.

4.1.2 Kalum Sustainable Resource Management Plan Order

The Kalum SRMP Order objectives that apply to FDU 1 and FDU 2 are summarized in Table 1.

Table 1: Kalum SRMP Objectives that apply to FDU 1 and FDU 2

Forest Development Unit	Objectives that Apply to that Forest Development Unit
FDU 1	1, 3, 4, 5, 6, 7, 11, and 17
FDU 2	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, and 17
Not applicable to this FSP	8, 12, 13, 14, 15, and 16

Kalum SRMP Order Objective 1

Objective 1:	Maintain a range of forest seral stages by biogeoclimatic variant, within each landscape unit, consistent with Tables 1, 2, and 3 of the Kalum SRMP (April 2006).
Strategy	The Holder(s) will maintain a range of forest seral stages by BEC variant for each landscape unit or portion of a landscape unit located within FDU 1 and FDU 2 consistent with the ranges specified in Table 1, Table 2 and Table 3 of the Kalum SRMP (April 2006).
Applicable for FDU 1 and FDU 2	

Kalum SRMP Order Objective 2

Objective 2:	Maintain old seral stage forest within each undeveloped watershed listed in Table 4 and shown on Map 3, consistent with Table 5 of the Kalum SRMP (April 2006).
Strategy	During the term of this FSP, prior to the Holder(s) harvesting within an *Undeveloped Watershed* that is within FDU 1 or FDU 2: 1. Determine the amount of old seral stage forest that exists within the *Undeveloped Watershed*. 2. Subject to section 3 of this strategy: a) If the amount of old seral stage forest is at least 95% of the minimum targets for the Biogeoclimatic Ecological Classification (BEC) *site series* described in Table 5 of the Kalum SRMP (April 2016), no further action is required. b) If there is insufficient old seral stage forest to meet the minimum targets for the BEC *site series* described in Table 5 of the Kalum SRMP (April 2016), designate no-harvest Old Seral Recruitment Areas as required. c) For BEC *site series* that amount to less than 10 hectares in a *Undeveloped Watershed*, the targets do not apply. 3. Section 2 of this strategy does not apply to a road if: a) The road is necessary to access timber beyond the occurrence of a BEC *site series* that is below the 95% threshold if that timber would otherwise be isolated from harvest; or b) Terrain conditions such as slope, gradient or terrain stability constrain road locations and dictate that sections of road enter and leave a BEC *site series* that is below the 95% threshold to access timber; or c) No practicable alternative exists 4. For the purposes of this strategy: a) *Site series* may be represented through Predictive Ecosystem Mapping, or some other surrogate as agreed to by the Agency responsible for the Kalum SRMP; b) *Undeveloped Watersheds* are the Jess Undeveloped Watershed and Emsley Undeveloped Watershed as shown on the FSP map, which correspond to the undeveloped watersheds shown on Map 3 of the Kalum SRMP (April 2006).
Applicable for FDU 2	

Kalum SRMP Order Objective 3

Objective 3:	Maintain or recruit old seral stage forest, reflective of the full range of ecosystems, including some with interior forest conditions, throughout each rotation within the Old Growth Management Areas shown on Map 4 of the Kalum SRMP (April 2006). Forest harvesting activities in the OGMAs are limited to insect or disease control measures that are necessary to mitigate severe damage to the habitat attributes in the OGMAs, or other forest values in the landscape.
Result	1. Subject to section 2 of this strategy, the Holder(s) of this FSP will not harvest timber or build road in an Old Growth Management Area (OGMA) as shown on the FSP maps, which correspond to the OGMAs shown on Map 4 OGMA Kalum SRM, updated June 13, 2019. 2. Harvesting timber or building road in an OGMA is permitted if it is for insect or disease control measures that are necessary to mitigate severe damage to the habitat attributes in the OGMA, or other forest values in the landscape, or in accordance with the strategy Kalum SRMP Order Objective 4 of this FSP.
Applicable for FDU 1 and FDU 2	

Kalum SRMP Order Objective 4

Objective 4:	Provide operational flexibility in managing OGMAs by allowing up to 10 hectares or 10% of the individual OGMA area, whichever is less, to be disturbed for one or more of the following purposes: • allowing road development where no practicable alternative exist; • to better reflect physical features that were intended to form the actual boundaries of the OGMA; • to improve harvest boundary alignment in a way that will contribute to the maintenance of the OGMA; • to address a compelling forest health issue; or, • to shift the location of the contiguous area of the OGMA to improve the retention of old forest attributes as identified through field assessment. The allowable disturbance described above is conditional upon a forest agreement holder identifying and reserving from harvesting an alternative area(s) within the same BEC variant within a landscape unit, provided the alternative area: • is of equal or greater extent in total than the area to be

	disturbed; and, • will result in equal or greater retention of key old forest attributes that are understood to be important for biodiversity conservation.
Strategy	During the term of the this FSP, within a FDU: 1. The Holder(s) may disturb an OGMA for one or more of the following purposes, subject to 2 and 3 of this strategy: a) Allowing road development where no practicable alternative exist; b) To better reflect physical features that were intended to form the actual boundaries of the OGMA; c) To improve harvest boundary alignment in a way that will contribute to the maintenance of the OGMA; d) To address a compelling forest health issue; e) To shift the location of the contiguous area of the OGMA to improve the retention of old forest attributes as identified through field assessment; 2. An alternative OGMA is selected within the same BEC variant within a landscape unit, provided the alternative OGMA: a) Is of equal or greater extent in total than the area to be disturbed; and, b) Will result in equal or greater retention of key old forest attributes that are understood to be important for biodiversity conservation. 3. The amendment request is referred to the District Manager (or a delegate), and the District Manager approves the request. a) A request for a *minor OGMA amendment* is submitted in advance of, or in conjunction with, the submission of a cutting permit and/or road permit application. b) A request for a *significant OGMA amendment* is submitted in advance of the submission of a cutting permit and/or road permit application. 4. An OGMA is as shown on the FSP map, which correspond to the OGMAs shown on Map 4 OGMA Kalum SRM, Updated June 13, 2019. 5. For the purposes of this strategy. a) A *minor OGMA amendment* has the following unique criteria that may be applied and specific approval mechanisms: • No other significant resource values have been identified within the OGMA to be amended (e.g. First Nations values, wildlife habitat for red or blue listed species, rare ecosystems, etc.);

- Minor amendments do not materially change the original Order or its effect on forest and range tenure holders;
- As per Section 93(6) of the *Land Act* public review is not required because the proposed amendment is "not significant";
- Information sharing with First Nations is not required although it may be undertaken at the discretion of the proponent of the amendment;
- Approval authority is delegated to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) District Manager;
- The area of the amendment is consistent with the area/percentage limits defined in the following table:

Size of OGMA	**1 – 200 ha**	**201 – 1000 ha**	**> 1000 ha**
OGMA minor Amendment limits	Up to 10% or 10 ha of OGMA (whichever is less)	Up to 5% or 25 ha of OGMA (whichever is less)	Up to 2.5% of OGMA

**Note: the above criteria only apply where applicable legal Orders do not specify size criteria*

b) A *significant OGMA amendment* has the following unique criteria that may be applied and specific approval mechanisms:

- The size of amendment exceeds the limits defined for a minor amendment (as defined in a legal Order or, where no legal Order is in effect or is silent on this subject, as per the area/percentage listed the table in Subsection 4(b) of this strategy); or
- A First Nations' concern or value associated with a specific OGMA is known;
- The OGMA to be amended overlaps with other important values such as wildlife habitat, rare ecosystems, cultural and heritage, and recreation;
- As per Section 93(6) of the Land Act public review is required;
- Information sharing with First Nations is required;
- Approval authority is delegated to the Ministry of FLNRORD District Manager;

Applicable for FDU 1 and FDU 2

Kalum SRMP Order Objective 5

Objective 5:	Maintain structural diversity in managed stands by retaining wildlife tree patches in each cut block, over the rotation, consistent with the targets in Table 6 of the Kalum SRMP (April 2006). Shift or vary targets shown in Table 6 among cut blocks within a cut block aggregate based on risks to biodiversity.
Strategy	When harvesting timber within FDU 1 and FDU 2 designate wildlife tree retention areas (WTRA) for a cutblock or cutblock aggregate harvested by the Holder(s) consistent with target percent for each Landscape Unit and BEC subzone listed in Table 6 of the Kalum SRMP (April 2006).
Applicable for FDU 1 and FDU 2	

Kalum SRMP Order Objective 6

Objective 6:	Maintain the natural composition of dominant tree species across each landscape unit and throughout the rotation.
Result	The Holder(s) will reforest cutblocks consistent with the approved stocking standards located in Appendix 1 of this FSP.
Applicable for FDU 1 and FDU 2	

Kalum SRMP Order Objective 7

Objective 7:	Attain a landscape pattern of patchiness that, over a long term, reflects the natural disturbance patterns as per Table 7 of the Kalum SRMP (April 2006).
Strategy	During the term of the FSP, the Holder(s) will manage cutblocks consistent with maintaining a landscape pattern of patchiness that reflects the natural disturbance patterns as per Table 7 of the Kalum SRMP (April 2006).
Applicable for FDU 1 and FDU 2	

Kalum SRMP Order Objective 9

Objective 9:	Maintain forest stand structure and function to facilitate wildlife movement, in the level pass between the Williams and Thomas/Clore watersheds identified on Map 5 of the Kalum SRMP (April 2006).
Strategy	The Holder(s) will construct roads and harvest cutblocks in the level pass between the Williams and Thomas/Clore watersheds, as identified on the FDU 2 FSP Map and consistent with Map 5 of the Kalum SRMP (April 2006), consistent with maintaining forest stand structure and function to facilitate wildlife movement.
Applicable for FDU 2	

Kalum SRMP Order Objective 10

Objective 10:	Conserve rare plant community complexes on the Skeena Islands identified on Map 6 of the Amendment to Land Use Objective 10 – Skeena Island in the 2006 Kalum SRMP, dated December 4, 2017, according to (a), (b), (c) and (d): a) Within the High Conservation Areas, retain 100% of the Crown forested land. b) Outside the High Conservation Areas, retain a forested, harvest-free 50-metre buffer around all back channels. c) Outside the High Conservation Areas, retain a forested, harvest-free 50-metre buffer around coniferous stumps, logs, and snags greater than 50 cm in diameter and around live coniferous trees greater than 50 cm in diameter at breast height. d) Only where it is otherwise not practicable and the objective to conserve rare plant community complexes can be achieved, may new roads be constructed within high conservation Areas to access timber outside of those areas.
Strategy	The Holder will conserve rare plant community complexes on the Skeena Islands as identified on the FDU 2 FSP Map and consistent with Map 6 of the Amendment to Land Use Objective 10 – Skeena Island in the 2006 Kalum SRMP, dated December 4, 2017, according to the Kalum SRMP Objective 10 (a), (b), (c) and (d).
Applicable for FDU 2	

Kalum SRMP Order Objective 11

Objective 11:	Maintain natural level of forage supply for grizzly bears in the watersheds identified on Map 7 of the Kalum SRMP (April 2006) by: a) providing an adequate supply of berry feeding; b) maintaining natural levels of forage supply as present in old growth forests; c) on the rich and wetter sites implement regeneration and free to grow standards consistent with Table 8 of the Kalum SRMP (April 2006). Vary from these standards based on site specific factor, provided parts a) and b) in this objective will be achieved; and, d) within McKay-Davies and Copper watersheds, no more than 30% of the forested land base, excluding broadleaf trees, will be between 25 and 100 years old.
Strategy for Objective 11 (a) (b) and (c)	1. Subject to section 2 of this strategy, the Holder(s) will apply Grizzly Bear Stocking Standards for Wildlife Forage found in Table 4 of Appendix 1 – Stocking Standards of the FSP within Grizzly Bear Watersheds as shown on the FSP Maps, which correspond to Map 7 of the Kalum SRMP (April 2006), on *rich and wetter sites* to promote berry feeding and to maintain natural levels of forage for Grizzly Bears. 2. The Holder(s) may vary from the Stocking Standards for Wildlife Forage based on site specific factors. 3. For the purposes of this strategy: a) *Rich and wetter sites* include CWHws1/06, CWHws1/08, CWHws1/11, CWHws2/06, CWHws2/07, CWHws2/08, CWHws2/11, CWHvm1/07, CWHvm1/08, CWHvm1/09, CWHvm1/10, CWHvm1/14, CWHvm2/08, and CWHvm2/11.
Strategy for Objective 11 (d)	1. During the term of this FSP, harvesting operations by the Holder(s) within the McKay-Davies Grizzly Bear watershed will result in: a) Less than 30% of the forested land base, excluding broadleaf forests, is between 25 and 100 years old within the Holders' portion of the McKay-Davies Grizzly Bear watersheds, or b) An analysis of the Grizzly Bear watershed indicates that having more than 30% of the area within the Holders' portion will not result in the 30% threshold being exceeded for the entire McKay-Davies Grizzly Bear watershed. 2. For the purposes of this strategy, McKay-Davies Grizzly Bear watershed is as shown on the FSP Maps, which corresponds to Map 7 of the Kalum SRMP (April 2006).
Applicable for FDU 1 and FDU 2	

Kalum SRMP Order Objective 17

Objective 17:	Maintain the quality, quantity, and natural flow regimes of water in watersheds identified on Map 9 of the Kalum SRMP (April 2006) as newly established Community Watersheds. Ensure a clear-cut equivalency of less than 20% of the watershed area in sub-basins larger than 250 hectares, unless a different threshold is determined as being more appropriate as a measure of maintenance of natural flow regimes.
Strategy	The strategy for maintaining the quality, quantity and natural flow regimes of water in watersheds identified on Map 9 of the SRMP (April 2006) is as per FSP strategy 4.2.5 for water in community watersheds.
Applicable for FDU 1 and FDU 2	

4.2 Objectives Prescribed under FRPA Section 149

4.2.1 Objectives set by government for soils (FPPR Section 5)

Objective set by government for	Soils
Regulation	FPPR Section 5
Objective	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.
Practice Requirement Default	The Holder of this FSP will undertake to comply with the legislated requirements setting limits for soil disturbance (Section 35 of FPPR) and for permanent access structures (Section 36 of FPPR).
Applicable for FDU 1 and FDU 2	

4.2.2 Objectives set by government for wildlife (FPPR Section 7)

Objective set by government for	Wildlife
Regulation	FPPR Section 7
Objective	1. The objective set by government for wildlife is, without unduly reducing the supply of timber from British Columbia's forests, to conserve sufficient wildlife habitat in terms of amount of area, distribution of areas and attributes of those areas, for

	(a) the survival of species at risk, (b) the survival of regionally important wildlife, and (c) the winter survival of specified ungulate species. 2. A person required to prepare a forest stewardship plan must specify a result or strategy in respect of the objective stated under subsection 1 only if the minister 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
The following are results or strategies applicable to FDU 1 and FDU 2 for individual species at risk:	
Wildlife Habitat Area (Marbled Murrelet) The strategy is as per the strategy Kalum SRMP Order Objective 1, the result Kalum SRMP Order Objective 3, and the strategy Kalum SRMP Order Objective 7 of this FSP.	
Wildlife Habitat Area (Coastal Tailed Frog) Coastal Tailed Frog Wildlife Habitat Areas are shown on the FSP Map and approved through Order – Wildlife Habitat Areas # 6-058 and #6-059 and Order – Wildlife Habitat Areas # 6-060 to #6-067. Pursuant to Section 7(3) of the *Forest Planning and Practices Regulation*, a person required to prepare a forest stewardship plan is exempt from the obligation to prepare results or strategies in relation to the objective set out in Section 7(1) of the *Forest Planning and Practices Regulation* to the extent that Wildlife Habitat Areas address the amount included in for Coastal Tailed Frog in the Kalum Forest District.	
Grizzly Bear In addition to Grizzly Bear habitat that is already protected in Wildlife Habitat areas established under the Order – Wildlife Habitat Area #6-287 for Grizzly Bear, the Holder(s) will ensure that:	

a) primary forest activities will maintain a range of forest seral stages consistent with the strategy titled Kalum SRMP Order Objective 1 and Kalum SRMP Order Objective 7 of this FSP; and b) primary forest activities will maintain natural levels of forage supply for grizzly bears consistent with the strategy for Kalum SRMP Order Objective 11 (a), (b) and (c) and Kalum SRMP Order Objective 11 (d).
Ungulate Winter Range (Moose) Moose Ungulate Winter Ranges are show on the FSP Map and approved through Order – Ungulate Winter Range #6-009. Pursuant to Section 7(3) of the *Forest Planning and Practices Regulation*, a person required to prepare a forest stewardship plan is exempt from the obligation to prepare results or strategies in relation to the objective set out in Section 7(1) of the *Forest Planning and Practices Regulation* for moose in the portion of the Kalum TSA, Cascadia TSA, Pacific TSA, TFL 41 and TFL 1.
Ungulate Winter Range (Mountain Goat) Mountain Goat Ungulate Winter Ranges are show on the FSP Map and approved through Order – Ungulate Winter Range #U-6-001, dated November 24, 2005. Pursuant to Section 7(3) of the *Forest Planning and Practices Regulation*, a person required to prepare a forest stewardship plan is exempt from the obligation to prepare results or strategies in relation to the objective set out in Section 7(1) of the *Forest Planning and Practices Regulation* for the winter survival of Mountain Goats in the Kalum TSA, TFL 41 and TFL 1.
As per Section 7(4) of the *Forest Planning and Practices Regulation,* a notice described in Section 7(2) has not been provided for “regionally important wildlife” for the area under the FSP. No result or strategy has been specified for this objective.

4.2.3 Objectives set by government for water fish, wildlife and biodiversity in riparian areas (FPPR Section 8)

Objective set by government for	Water, Fish Wildlife and Biodiversity in Riparian Areas
Regulation	FPPR Section 8
Objective	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.
Practice Requirement Default	Undertaking Under FPPR Section 12.1(2) When constructing a road or harvesting timber under this FSP, the Holder undertakes to comply with Section 47, 48, 49, 50, 51, 52(2), and 53 of the FPPR.
Applicable to FDU 1 and FDU 2.	

Regulation	Retention of Trees in a Riparian Management Zone FPPR s.12(3)
Strategy	1. In respect to sections 8 and 12(3) of the FPPR, to address the retention of trees in a riparian management zone (RMZ), the Holder(s) of this FSP will: a) Ensure that prior to harvesting; retention levels within the RMZ's are determined by a Qualified Professional through a riparian assessment that considers: i) All of the factors listed in Schedule 1, section 2 of the FPPR as that section was on the date of submission of this FSP and ii) Potential site specific safety and operational issues. b) Design cutblocks and roads in a manner that is consistent with the retention levels as determined by a Qualified Professional as described in subsection (a).
Applicable to FDU 1 and FDU 2.	

4.2.4 Objectives set by government for fish habitat in fisheries sensitive watersheds (FPPR Section 8.1)

Objective set by government for	Fisheries Sensitive Watershed
Regulation	FPPR Section 8.1
N/A	No "fisheries sensitive watersheds" continued under Section 180(f) or Section 180(g) exist within the area under the FSP. No result or strategy has been specified for this objective.
Applicable to FDU 1 and FDU 2	

4.2.5 Objectives set by government for water in community watershed (FPPR Section 8.2)

Objective set by government for	Community Watershed
Regulation	FPPR Section 8.2
Strategy	Within Community Watersheds in FDU 1 and FDU 2: 1. Primary forest activities will be consistent with Sections 59, 60, 61, 62 and 63 of the FPPR; and 2. A minimum of 80% of the Community Watershed area will be maintained as hydrologically recovered; or 3. Cutblocks and roads will be designed in consultation with a qualified person and consistent with the Watershed Assessment and Management of Hydrologic and Geomorphic Risk in the Forest Sector Version 1.0, dated January 14, 2020. 4. For the purposes of section 2 of this strategy, hydrologic recovery is determined by completing an Equivalent Clear Cut Area (ECA) Analysis using the following methodology: a) The most current VRI will be used, downloaded from BC Geographic Warehouse, updated with new harvest disturbances from RESULTS, blocks submitted for approval in FTA and proposed licensee blocks obtained from licensees operating in the same Community Watershed; b) The VRI disturbance layer will be compared with the most recent Landsat imagery to ensure correct block shapes used reflect actual disturbance area and that no areas have been missed; c) Non-timbered natural polygons such as lakes, swamps, other water-bodies > 1.0 hectares and permanently deforested sites (e.g. gravel pits, SUPs, private land) will be removed from the ECA calculation. Natural polygons with low crown closure will be assigned a “1” height in the analysis. d) Natural forests > 250 yrs. old with no harvest history will be assigned an ECA value of 100%, with previously harvested stands receiving a score based on the Bill Floyd curve for determining hydrologic recovery. Previously harvested stands will have a maximum ECA value of 97.5%. 5. For the purposes of this strategy, a Community Watershed includes: • Spring Creek Community Watershed, • Deep Creek Community Watershed,

	• Wathl Creek Community Watershed, • Eneeksagilaguaw Creek Community Watershed, • Gossen Creek Watershed, • Kleanza (Singlehurst Creek) Watershed, and • Hatchery Watershed As shown on the FSP Maps and consistent with Map 9 of the of the Kalum SRMP (April 2006).
Strategy	During the term of this FSP, within the Drake Community Watershed: 1. Timber harvesting by the FSP Holder is limited to actions required to prevent or address potential losses due to fire, wind, or forest health factors, as mutually agreed between the FSP Holder and the Ministry of FLNRORD. 2. Road construction to access timber beyond the Drake Community Watersheds is acceptable. 3. The Drake Community Watershed shown on the FSP Maps and consistent with Map 9 of the of the Kalum SRMP (April 2006).

4.2.6 Objectives set by government for Wildlife and Biodiversity (FPPR Sections 9 & 9.1)

Objective set by government for	Wildlife and Biodiversity
Regulation	FPPR Section 9 and 9.1
Objective	Objectives set by government for wildlife and biodiversity - landscape level – Objective 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. Objectives set by government for wildlife and biodiversity - stand level – Objective 9.1 The objective set by government for wildlife and biodiversity at the stand level is, without unduly reducing the supply of timber from British Columbia's forests, to retain wildlife trees.
Practice Requirement Default	The Holder(s) of the FSP will undertake to comply with the default practice requirements outlined in Section 64, 65, 66 and 67 of the FPPR.
Applicable to FDU 1 and FDU 2	

4.2.7 Objectives set by government for Visual Quality (FPPR Section 9.2)

Objective set by government for	Visual Quality
Objective	The objective set by government in relation to visual quality for a scenic area, that was established on or before October 24, 2002, and for which there is no visual quality objective is to ensure that the altered forest landscape for the scenic area: a) in visual sensitivity class 1 is in either the preservation or retention category, b) in visual sensitivity class 2 is in either the retention or partial retention category, c) in visual sensitivity class 3 is in either the partial retention or modification category, d) in visual sensitivity class 4 is in either the partial retention or modification category, e) in visual sensitivity class 5 is in either the modification or maximum modification category.
N/A	Scenic Areas covered by this FSP have Established Visual Quality Objectives.
Applicable to FDU 1 and FDU 2	

4.2.8 Objectives set by government for Visual Resources (GAR 7 and 17)

Objective set by government for	Visual Quality Objectives
Regulation	Scenic Areas have been designated and Visual Quality Objectives were established in Coast Mountains Natural Resource District under the Forest Practices Code Act of BC through District Manager letters dated Jan. 7, 1997; Sept. 8, 1998; and Mar 23, 2000. These Scenic Areas and their associated Established Visual Quality Objectives have been continued under sections 180 and 181, respectively, of the Forest and Range Practices Act. Categories of visually altered forest landscape are as defined in FPPR Section 1.1.
Strategy	1) When harvesting timber or building road within a scenic area, the Holder(s) activities will be: a) consistent with Established Visual Quality Objectives from

	significant public viewpoints; and b) assessed at the landform scale 2) For the purposes of this strategy: a) a *significant public viewpoint,* as that term is used in the definition of altered forest landscape means a view point on water or land: i) 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 ii) included in the most current Visual Landscape Inventory; or, iii) determined to be important by a Qualified Professional.
Applicable to FDU 1 and FDU 2	

4.2.9 Objectives set by government for Cultural Resources (FPPR Section 10)

Objective set by government for	Cultural Resources
Objective	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.
Strategy	The FSP Holder(s), will use two complimentary strategies to conserve, or, if necessary protect *cultural heritage resources*: • Information Sharing • Identifying Previously Unknown Site Specific Cultural Heritage Information <u>Information Sharing</u> 1. During the term of this FSP, FSP Holder(s) will communicate regularly with local First Nation groups that have territory within the FDU 1 and/or FDU 2. As a minimum, meetings with First Nation groups will be requested by the Holder(s) annually when forest development operations (i.e. layout, road construction, or harvesting) are planned within the First Nation's territory. a) The FSP Holder(s) will: i) Share, review and discuss any previously unknown

	cultural heritage resource information with the First Nation, and ii) Request from the First Nation, any information on *cultural heritage resources* of continuing importance to the First Nation that has not been previously shared with the FSP Holder(s). b) The FSP Holder(s) will not share *cultural heritage resource information* received with any other party (including other First Nation groups, the Government of BC or its Ministries, or BC Timber Sales) unless they are given express written consent or direction from the First Nation to do so. c) The FSP Holder(s) will review with respective First Nations the areas where forest development operations are planned, with the intent of describing and addressing the concerns of both parties. Specifically: i) Determine areas or items of concern related to *cultural heritage resources*. This includes defining the nature and extent of *cultural heritage resources* that may be impacted by the planned operations. ii) Describe forest management activities that will conserve or protect the *cultural heritage resources* defined in subsection 1(c)(i) of this strategy. iii) Modify planned operations where and as necessary to conserve or protect the *cultural heritage resources* defined in subsection 1(c)(i) of this strategy. iv) Attempt to resolve any conflicts through consensus. 2. The FSP Holder(s) will prepare a summary of the process in section 1 of this FSP strategy, indicating whether there were any issues and how they were resolved. If issues were not resolved, the summary will describe how the parties have attempted to address the issues. In the unlikely event that meetings have not occurred, the summary will document the efforts made to meet and/or review information with First Nation. The summary will be provided to: a) The First Nation representative, and b) Subject to subsection 2(c), the District Manager (or his/her delegate), c) The prepared summary referenced in subsection 2(b) of this strategy will respect confidentiality. <u>Identifying Previously Unknown Site Specific Cultural Heritage Information</u> 3. Prior to harvesting in an area where site specific *cultural heritage resource information* is not available, the FSP Holder(s) will

	conduct a cultural heritage resource review (CHRR), which will consist of: a) A review of known information for the area covered by the block, including but not limited to archaeological overview assessments, archaeological impact assessments, traditional use studies, information gathered for nearby blocks, and information received through section 1 and 2 of this FSP strategy. b) A review of the block by a person with knowledge and experience in recognition of *cultural heritage resources* to identify the location, nature, and extent of *cultural heritage resources.* c) If, in the opinion of the person conducting the review there is potential for impact to a *cultural heritage resource*, the CHRR will include recommendations for the conservation, mitigation or protection of the cultural heritage resource, and will be shared with the Holder(s) and the appropriate First Nation(s). d) If, in the opinion of the person conducting the field review there is potential for impact to resources covered by the Heritage Conservation Act (HCA), an archaeological impact assessment will be completed prior to operations. 4. For any potential *cultural heritage resources* identified by operational personnel (i.e. layout, road construction, or harvesting crews) which were not previously identified through information sharing as described in, section 1 and 2 of this FSP strategy, or a CHRR as described in section 3 of this FSP strategy, or for which a process, policy, strategy, or result that describes how to deal with that cultural heritage resource is not in place or has not been shared with the appropriate First Nation(s): a) Operational activities will be stopped. b) The FSP Holder(s) will be notified. c) A site visit will be conducted to determine the need for mitigative measures. d) A description of the previously unidentified cultural heritage resource and any mitigative measures will be shared/provided: i) with the appropriate First Nation(s), and ii) subject to subsection 4(d)(iii) with the District Manager of the Coast Mountains Natural Resource District, iii) The description of the previously unidentified cultural heritage resource and any mitigative measures referenced in subsection 4(d)(ii) of this FSP strategy will respect confidentiality. e) Information noted in subsection 4(d) of this FSP strategy will be shared/provided within the following timelines:

	i) Where a cultural heritage resource feature is discovered before a cutting authority is issued, at or before application for the cutting authority. ii) Where a cultural heritage resource feature is discovered after a cutting authority is issued, the information will be shared/provided with the applicable First Nation within two weeks of the FSP Holder(s) being notified of the cultural heritage resource features' discovery. 5. For the purposes of this strategy: a) *cultural heritage resource information* includes but is not limited to • traditional use information, • archaeological information, • cultural site information, • traditional use studies, b) *cultural heritage resources* are the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and not regulated under the Heritage Conservation Act.
Applicable to FDU 1 and FDU 2.	

4.2.10 Objectives set by government for Recreation Sites and Trails

Objective set by government for	Recreation Sites and Trails
Objectives	**Maroon Mountain Recreation Trail and Gunsight Lake Trail** Refer to the Order to Establish Objectives for a Recreation Site, Recreation Trail or Interpretative Forest Site, Project File 16660-04, effective November 8, 1996. **West Lake Recreation Site** Refer to the Order to Establish Objectives for a Recreation Site, Recreation Trail or Interpretative Forest Site, Project File 16660-04, effective July 30, 1997. **Thornhill Mountain Recreation Trail, Big Cedar Recreation Trail and Bornite Mountain Recreation Trail** Refer to the Order to Establish Objectives for a Recreation Site, Recreation Trail or Interpretative Forest Site, Project File 16660-04, effective July 6, 1998. **Robinson Lake Trail and Clague Mountain Hiking Trail (and Clague Mountain Snowmobile Trail)** Refer to the Order to Establish Objectives for a Recreation Site,

	Recreation Trail or Interpretative Forest Site, Project File 16660-04, effective March 29, 1999. **Clearwater Lakes Recreation Site, Onion Lake Ski Trail and Red Sand Lake Interpretive Forest Site (includes Hart Farm Recreation Site, RedSand Intro Recreation Trail and Red Sand Lake Operational Trail)** Refer to the Order to Establish Objectives for a Recreation Site, Recreation Trail or Interpretative Forest Site, Project File 16660-04, effective August 16, 1999. **Sterling Mountain Recreation Trail** Refer to the Order to Establish Objectives for a Recreation Site, Recreation Trail or Interpretative Forest Site, for the Sterling Mountain Recreation Trail, Project File 16660/20-6321, dated August 19, 2011.
Strategy	During the term of this FSP, on Recreation Trails or Sites with established objectives within FDU 1 or FDU 2: 1. Harvesting and road building activities by the FSP Holder(s) will maintain natural vegetation within 10 meters of trail centerline other than for a required crossing as per section 3 of this FSP strategy. 2. Harvesting and road building activities by the FSP Holder(s) that occur within 50 meters either side of trail centerline a) Will only occur after the planned activity has been referred to the Ministry responsible for the trail. b) Cutting Permit or Road Permit submission(s) indicates that development is within 50 meters of the trail and describes the results of the referral to the Ministry responsible for the trail. 3. A crossing of the trail by the FSP Holder(s) is permitted if the crossing is required to access productive forest land that would otherwise be isolated, provided: a) The trail location is re-established if the crossing disturbs it. Alternatively, the trail can be relocated away from the crossing. The timing of the trail crossing, re-establishment, or trail relocation will require authorization from the Ministry responsible for the trail. b) A trail crossing is deactivated once it is no longer required. 4. No harvesting and road building activities will occur within the site boundaries of the Clearwater Lakes Recreation Site, Red Sand Lake Interpretive Forest Site and West Lake Recreation Site. 5. The Holder(s) road building activities will not result in motorized access to the Clearwater Lakes Recreation Site.

No legal objective is established through Order for the other recreation sites and trails within FDU 1 and FDU 2. As such, no result or strategy is written for these recreation sites and trails, and they are shown of the FSP Maps for information purposes only. The Holder(s) will work collaboratively with stakeholder groups where operations have the potential to impact recreation sites/trails.

4.3 Measures

4.3.1 Measure set by government to prevent the introduction and spread of invasive plants (FPPR Section 17)

Measure set by government for preventing the introduction and spread of invasive plants	
Regulation	FPPR Section 17
Requirement	For the purpose of FRPA Section 47 *[invasive plants]*, 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.
Measures	The FSP Holder(s) will use the following measures to control of invasive plant species identified in the Invasive Plants Regulation: 1. Use certified seed only in erosion control and grass-seeding activities. 2. Road construction, logging, and silviculture machinery that is to be transported from more than 200 kilometers away from the Coast Mountains Natural Resource District, and that is to do work under the authority of this FSP, must be washed before entering FDU 1 or FDU 2. 3. Road construction, logging, and silviculture machinery includes skidders, brushers, excavators, drills, loaders, and other heavy machinery. Road construction, logging, and silviculture machinery also includes pickup trucks and ATVs if the vehicle has been off pavement.
Applicable to FDU 1 and FDU 2	

4.3.2 Measure set by government related to Range Barriers (FPPR Section 18)

Measure set by government for natural range barriers	
Regulation	FPPR Section 18
Requirement	For the purpose of FRPA Section 48 *[range barriers]*, a person who prepares a forest stewardship plan must specify measures to mitigate the effect of removing or rendering ineffective natural range barriers .
Measures	No measures have been developed as there is no range tenure overlap with FDU 1 or FDU 2.

4.4 Stocking Standards

4.4.1 Situations or Circumstances That Determine Whether Free Growing is Assessed on a Block or Across Blocks

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

4.4.2 Regeneration Date, Free Growing Height and Stocking Standards

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

4.4.3 Situations or Circumstances That Determine When FPPR Section 44(4) and the Standards Applicable FPPR Section 16(4) Applies

Where harvesting of special forest products, intermediate cuts or commercial thinning occurs as per FRPA s-s 44(3)(h) and (i), the Stocking Standards included in Appendix 1 will be maintained for a period of at least 12 months following the completion of intermediate timber harvesting on the area that the harvesting took place.

APPENDIX

APPENDIX 1 STOCKING STANDARDS

1.0 FOREWORD

As per the FPPR Section 16, the herein contained stocking standards have been prepared and are to be applied to the proposed harvest areas under this FSP. In addition, the standards presented herein are to be used in conjunction with the signed Site Plans as pre-harvesting planning documentation, as required by the FRPA.

The standards included within Appendix 1 Stocking Standings have been prepared based on the experience of the signing Forester and in consultation with staff and government Foresters, Establishment to Free Growing Guidebook (V2.3 dated, May 2000 and revised in October 2007), Reference Guide for Forest Development Stocking Standards for the Prince Rupert Forest Region (updated March 2019) and the Resource Practices Branch Silviculture Survey Procedures Manual (May 1, 2020).

Appendix 1 Stocking Standards specifies the regeneration date, free growing height and ecologically suitable stocking standards for the situations where Section 44 (1) applies and is applicable to FDU 1 and FDU 2. Even-aged management (Section 2.0) and uneven-aged management (Section 3.0) stocking standards are included in the appendix.

2.0 EVEN-AGED MANAGEMENT

Even-aged management stocking standards set out in Table 1 Even-Aged Stocking Standards, Table 2 Root Rot Stocking Standards, Table 3 Fire Management Stocking Standards and Table 4 Wildlife Forage Stocking Standards (applies to Grizzly Bears and Moose) apply where:

1. The silviculture management objective is to develop a harvest crop consisting of a single age class or layer, generally the youngest age class following harvest or silviculture layers 3 and 4. Trees from other age classes or layers may be retained on the site for seed trees and/or management of other values, and

2. Retention of trees within age classes or layers other than the intended harvest crop is limited to a basal area less than or equal to 10 square meters per hectare. Basal area is to be measured on any live retention tree equal to or greater than 12.5 centimeters DBH, and

3. The management system creates openings larger than 0.6 hectares unless that opening is less than 70 meters wide (i.e. two tree-lengths) along its narrowest axis. For the purposes of part 1 above, if a single subsequent harvest entry on the stand is planned within 20 years, even-aged management will apply. This option would be utilized when implementing seed tree systems or similar management regimes.

Even-aged management silviculture systems include clearcut, clearcut with reserves, seed tree, shelterwood, and patch cut (where the openings created meet the above definitions).

2.1 Selection of Well-Spaced Stems

Criteria for Evaluating Health, Form and Vigor

Trees that are selected as well-spaced are being chosen to form part of a future crop, so they must be of sufficient good health, form and vigor that they can be utilized as crop trees at the time of harvest.

The criteria for good health, good form and good vigor are as follows.

- Table A5-1 and Figures A5-1 to A5-4 in the Establishment to Free Growing Guidebook – Prince Rupert Forest Region, version 2.3, May 2000 and revised in October 2007, with the following exception:
    - For pine that is infected by Dothistroma: use the “Defoliation Free Growing Damage Standard for Determinate Growth Conifers” March 2, 2005.

- The acceptability standards for advanced regeneration and residual mature and pole layer crop trees in Appendix 10 of the Establishment to Free Growing Guidebook - Prince Rupert Forest Region, version 2.3, May 2000 and revised in October 2007.

The following qualifiers apply to the criteria for good health, good form and good vigor:
- the assessment of health, form and vigor applies only at the time of Free Growing;
- the criteria are specific to even-aged managed stands; and
- the criteria do not apply to broadleaf species.

2.2 Brush and Broadleaf Competition Criteria

In addition to criteria for selection of Well-Spaced Stems, to be considered Free Growing a crop tree must:

1. Be free from unacceptable levels of herb, shrub, or broadleaf tree competition, in accordance with the criteria set out in Appendix 9 of the Establishment to Free Growing Guidebook - Prince Rupert Forest Region, version 2.3, May 2000 and revised in October 2007, with the following exceptions:

- where stocking standards include broadleaf tree species as ecologically suitable species, these broadleaf species shall be deemed to not be in competition
- layer 1 (> 12.5 centimeters DBH) broadleaf species retained within the Site Plan for non-timber purposes will be considered non-competitive when assessing for Free Growing, if the total layer 1 broadleaf species in the plot are either:
    - less than 6% Crown Closure
    - less than 8 square meters Basal Area
- in order to increase riparian and biodiversity values, alder, aspen, birch, and cottonwood are not considered competing vegetation within the first 10 meters of the riparian management zones of S1 to S5 streams, L1 and L3 lakes or W1 and W3 wetlands
- herbaceous vegetation less than 100% of the height of crop trees within 5 meters of a S4, S5 or S6 stream is not considered competing vegetation.

2. Have experienced a minimum of 2 full growing seasons between any brushing treatment and the Free Growing assessment.

3. Meet the following minimum percentage height above competing brush in order to be free growing:

Percent Height above brush	**Applies to**
100%	ICH
125%	MH
150%	CWH

2.3 Complexes

Where a complex has been noted in a Site Plan, the Standards Unit(s) will be managed according to the dominant site series as identified in the Site Plan.

2.4 Broadleaf

Broadleaf (hardwood or deciduous) species are noted in the Appendix 1 Stocking Standard tables and should be used to fulfill silviculture obligations consistent with their applicable footnotes. Managing broadleaf species may be desirable for a number of reasons, including biodiversity, wildlife habitat, nurse crops for conifers, reducing the risk of forest health problems, reduce the risk of fire, and potentially increasing yield. With the exception of Table 3, Fire Management Stocking Standards, where broadleaf trees are always considered desirable, the footnotes for broadleaf species differentiate when a species is a productive, reliable, and feasible regeneration option versus when it is limited in one or more of these considerations.

a. productive, reliable, and feasible regeneration option
The species is not significantly limited in productivity, reliability, and feasibility and can be considered as a regeneration option.

b. limited in productivity, reliability, and/or feasibility

The species is capable of growing on the site but is not recommended as a major species because of its limitations in productivity, reliability, and/or feasibility. These sites are best managed for conifer species although broadleaf trees may be managed as minor components of the stand, especially where these species are managed to provide for non-timber values.

2.5 Management for Wildlife Forage

Wildlife forage stocking standards set out in Appendix 1 and titled, Table 4 Wildlife Forage Stocking Standards (Grizzly Bear and Moose) address forage for Grizzly Bears and Moose as follows.

Grizzly Bear

Wildlife Forage Stocking Standards are to be applied consistent with the Kalum SRMP Order Objective 11 strategy for Objective 11(a), (b) and (c) of this FSP, when ecosystem classification identifies a complex that contains a treatable unit.

A treatable unit is at least one hectare for pure subhygric to sub-hydric sites or two hectares of non-contiguous sub-hygric to sub-hydric sites with ecosystem complexes where the individual sites are greater than 0.25 hectares and such sites comprise more than 20% of the ecosystem complex area. The minimum size for a red-osier dogwood (CWH vm1 10, CWH ws1 08, and CWH ws2 08) complex is 1.0 hectare for pure willow and/or red-osier dogwood sites and 2.0 hectares of non-contiguous red-osier dogwood sites within ecosystem complexes where the individual sites are greater than 0.25 hectare and such sites comprise 20% or more of the ecosystem complex sites.

Moose

Wildlife Forage Stocking Standards can also be applied on subhygric to subhydric sites within Moose Ungulate Winter Ranges, consistent with Schedule 1 - General Wildlife Measure, Section 3 of the Order – Ungulate Winter Range #6-009, to restore post-harvest moose forage production.

2.6 Management for Wildland Urban Interface Areas

Wildland urban interface area stocking standards set out in Appendix 1 and titled, Table 3 Fire Management Stocking Standards (FMSS) address fire hazard around structures and/or infrastructure in the wildland-urban interface.

FMSS are applied to standard units (SU) to be harvested by the FSP Holders if a Wildland Urban Interface Wildfire Threat Assessment Worksheet (January 24, 2013) determines that the Wildland Urban Interface Threat Class is high or extreme. A Wildfire Threat Assessment will be completed where:

a) 50% of the SU is located within 500 meters of three or more known instances of *structures or infrastructure*, or

b) 50% of the SU is located within 500 meters of one or two known instances of *structures or infrastructure,* and

c) the prescribing forester determines that a Wildfire Threat Assessment should be completed.

Structures or infrastructure are those that are known, legally established, in usable condition, vulnerable to fire, and known to have been used within the year previous to Site Plan field data gathering.

2.7 Standard Units and Silviculture Surveys Stratification

Within each Site Plan a block may be subdivided into a series of standards units (SU). BEC zones and site series often form the basic unit of stratification. Within each SU, standards such as maximum site disturbance, silviculture system and stocking standards are the same. During Silviculture Surveys Stratums may further subdivide these SUs. The minimum Stratum size for Milestone surveys is 1.0 ha, or a maximum of 2.0 hectares if the Stratum is less than 5% of SU Net Area to be Reforested. For the purposes of FPPR Section 46.11(2), for an area to be considered mappable, its minimum dimension must be at least 35 meters and its mappable area must be at least 0.25 hectares.

Table 1 - Even-Aged Stocking Standards

ID	BEC			Ecologically Suitable Species														Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	CWH	vm1	01	Ba[26]	1.40	Cw	1.5	Hw	2.0	Ss[7, 26, 35]	2.0	Dr [50, b]	1.4					900	500	2	6	Ss 7 - suitable on nutrient-medium sites Ba / Ss 26 – suitable minor species on nutrient poor sites Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm1	03	Cw	1.0	Hw	1.4	Pl	1.4	Dr[50,b]	1.0							800	400	2	6	Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm1	04	Ba	1.4	Cw	1.5	Hw	2.0	Ss [35]	2.0	Dr[50,b]	1.4					900	500	2	3	Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm1	05	Ba	1.4	Cw	1.5	Hw	2.00	Ss [35]	2.00	Dr[50, b]	1.4	Act[b]	1.4			900	500	2	3	Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act /Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm1	06	Ba[26]	1.4	Cw	1.5	Hw	2.0	Ss[7, 26, 35]	2.0	Yc	1.5	Dr[50,b]	1.4			900	500	2	6	Ss 7 - suitable on nutrient-medium sites Ba / Ss 26– suitable minor species on nutrient poor sites Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm1	08	Ba	1.4	Cw	1.5	Hw	2.0	Ss [35]	2.0	Act[a]	2.0	Dr[50,a]	1.4			900	500	2	3	Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option
	CWH	vm1	09	Ba	1.4	Cw	1.5	Ss [1, 35]	2.0	Act[a]	2.0	Dr[50,a]	1.4					900	500	2	3	***Red listed ecosystem, avoid logging. Ss 1 - suitable on elevated microsites Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option
	CWH	vm1	10	Cw[1]	1.5	Ss [1, 35]	2.0	Ba[1]	1.4	Act[a]	2.0	Dr[50,a]	1.4					900	500	2	3	***Blue listed ecosystem, avoid logging. Ba / Cw / Ss 1 - suitable on elevated microsites Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option
	CWH	vm1	14	Cw[1]	1.0	Hw[1]	1.4	Ss [1, 35]	1.4	Yc[1]	1.0	Act[b]	2.0	Dr[50,b]	1.0			800	400	2	3	Cw / Ss/ Hw / Yc 1 - suitable on elevated microsites Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr b – limited in productivity, reliability and/or feasibility

ID	BEC			Ecologically Suitable Species													Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	CWH	vm2	01	Ba	1.40	Cw[14]	1.5	Hw	2.0	Ss [7, 35]	2.0	Yc	1.5	Hm[13]	1.0	Dr[50,b]	1.0	900	500	2	6	Ss 7 – suitable on nutrient-medium sites Cw 14 – suitable at lower elevations Hm 13 – suitable at upper elevations Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm2	03	Cw[14]	1.0	Hw	1.8	Pl	1.40	Yc[13]	1.0	Hm[13]	1.0					800	400	2	6	Hm / Yc 13 – suitable at upper elevations Cw 14 – suitable at lower elevations
	CWH	vm2	05	Ba	1.40	Cw[14]	1.5	Hw	2.0	Ss [35]	2.0	Yc[13]	1.5	Hm[13]	1.0	Dr[50,b]	1.0	900	500	2	3	Hm / Yc 13 – suitable at upper elevations Cw 14 – suitable at lower elevations Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm2	06	Ba	1.40	Cw[14]	1.5	Hw	2.0	Ss[7, 35]	2.0	Yc	1.5	Hm[13]	1.0	Dr[50,b]	1.0	900	500	2	6	Ss 7 - suitable on nutrient-medium sites H 13 – suitable at upper elevations Cw 14 – suitable at lower elevations Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm2	08	Ba	1.4	Cw[14]	2.0	Hw	2.0	Ss [35]	2.0	Yc	1.5	Hm [13,]	1.0	Dr[50,b]	1.0	900	500	2	3	Hw 2 - Suitable on thick forest floors Hm 13 – suitable at upper elevations Cw 14 – suitable at lower elevations Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	vm2	09	Cw[1]	1.0	Hw[1]	1.80	Yc[1]	1.0	Hm[1]	0.8	Pl[1, 301]	1.40					800	400	2	3	Cw / Hw / Yc / Pl /Hm 1 - suitable on elevated microsites Pl 301 –risk of red band needle blight, can contribute up to 20% of well spaced trees.
	CWH	vm2	11	Cw[1]	1.0	Yc[1]	1.0	Hw[1]	1.80	Hm[1]	0.8	Ss [1, 35]	2.0	Dr[b,50]				800	400	2	3	Cw / Hw / Yc /Hm / Ss 1 - suitable on elevated microsites Ss 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws1	01	Ba Bg[34, 300]	1.4 1.4	Cw Fd[34, 300]	1.4 1.4	Hw Dr[,a]	2.0 1.4	Pl[301] Ep[,b]	2.0 1.4	Sxs [35] At[b]	2.0 1.4	Py[34, 300] Act[b]	2.0 1.4	Lw[32, 34, 300]	1.4	900	500	2	6	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg/ Fd 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg/ Fd 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. Dr a - productive, reliable, and feasible regeneration option Ep/ At/ Act b – limited in productivity, reliability and/or feasibility
	CWH	ws1	03	Hw Fd[34, 300]	2.0 1.4	Pl[301]	2.0	Cw	1.4	Ba	1.4	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Bg[34, 300]	1.4	900	500	2	6	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg/ Fd 34 – risk of snow damage. Lw/ Py/ Bg/ Fd 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees.

ID	BEC			Ecologically Suitable Species														Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	CWH	ws1	04	Ba Bg[34, 300]	1.4 1.4	Cw Fd[34, 300]	1.4 1.4	Hw Dr[50,b]	1.4 1.4	Sxs [35] Act[b]	2.0 1.4	Pl[301]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	900	500	2	3	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg/ Fd 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg/ Fd 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr / Act b – limited in productivity, reliability and/or feasibility
	CWH	ws1	05	Ba Bg[34, 300]	1.4 1.4	Cw Dr[50,b]	1.4 1.4	Hw	2.0	Sxs [7, 35]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Fd[34, 300]	1.4	900	500	2	6	Sxs7 – suitable on nutrient-medium sites Lw 32 – limited by growing season frosts. Lw/ Py/ Bg/ Fd 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg/ Fd 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws1	06	Ba Bg[34, 300]	1.4 1.4	Cw Dr[50,a]	1.4 1.4	Hw Act[b]	2.0 2.0	Sxs[35]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Fd[34, 300]	1.4	900	500	2	3	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg/ Fd 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg/ Fd 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr a - productive, reliable, and feasible regeneration option Act b – limited in productivity, reliability and/or feasibility
	CWH	ws1	07*	Ba Bg[34, 300]	1.4 1.4	Cw Dr[50,a]	1.4 1.4	Sxs [35] Act[a]	2.0 1.4	Hw	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Fd[34, 300]	1.4	900	500	2	3	***Red listed ecosystem, avoid logging. Lw 32 – limited by growing season frosts. Lw/ Py/ Bg/ Fd 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg/ Fd 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act/Dr a - productive, reliable, and feasible regeneration option
	CWH	ws1	08	Ba[1] Bg[34, 300]	1.4 1.4	Cw[1] Dr[50,a]	1.4 1.4	Sxs [1, 35] Act[a]	2.0 2.0	Hw[1]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Fd[34, 300]	1.4	900	500	2	3	***Blue listed ecosystem, avoid logging Ba / Cw / Sxs/ Hw 1 - suitable on elevated microsites Lw 32 – limited by growing season frosts. Lw/ Py/ Bg/ Fd 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg/ Fd 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees . Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option
	CWH	ws1	11	Cw[1]	1.0	Sxs [1, 35]	1.4	Hw[1]	1.4	Ba[1]	1.0	Act [a]	2.0	Dr[a, 50]	1.0			800	400	2	3	Ba / Cw / Sxs/ Hw 1 - suitable on elevated microsites Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option

ID	BEC			Ecologically Suitable Species													Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	CWH	ws2	01	Ba Dr[50,b]	1.0 1.0	Bl[12]	1.0	Cw[14]	1.0	Hw	1.3	Pl[301]	2.0	Sxs [35]	2.0	Hm[13]	1.0	900	500	2	6	Bl 12 – Suitable on cold air drainage sites Hm 13 – suitable at upper elevations Cw 14 – suitable at lower elevations Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws2	03	Hw	1.3	Pl [301]	2.0	Cw	1.0	Ba	1.0	Hm[13]	1.0	Dr[50,b]	1.0			900	500	2	6	Hm 13 – suitable at upper elevations Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws2	04	Ba Dr[50,b]	1.0 1.0	Bl[12]	1.0	Cw[14]	1.0	Sxs[35]	1.0	Hw	1.3	Hm[13]	1.0	Act[b]	2.0	900	500	2	3	Bl 12 – Suitable on cold air drainage sites Hm 13 – suitable at upper elevations Cw 14 – suitable at lower elevations Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act /Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws2	05	Ba	1.0	Bl[12]	1.0	Cw[14]	1.0	Sxs[7, 35]	1.0	Hw	1.3	Dr[50,b]	1.0			900	500	2	6	Sxs 7 – suitable on nutrient-medium sites Bl 12 – Suitable on cold air drainage sites Cw 14 – suitable at lower elevations Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws2	06	Ba	1.0	Bl[12]	1.0	Cw[14]	1.0	Sxs [35]	1.0	Hw	1.3	Dr[50,b]	1.0	Act [b]	1.0	900	500	2	3	Bl 12 – Suitable on cold air drainage sites Cw 14 – suitable at lower elevations Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws2	07	Ba	1.0	Bl[12]	1.0	Cw	1.0	Sxs [35]	1.0	Hw	1.3	Dr[50,a]	1.0	Act[a]	1.0	900	500	2	3	Bl 12 – Suitable on cold air drainage sites Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option
	CWH	ws2	08	Ba[1]	1.0	Bl[12]	1.0	Cw[1]	1.0	Sxs[1, 35]	1.0	Hw[1]	1.0	Dr[50,a]	1.0	Act [a]	1.0	900	500	2	3	Cw / Ba / Sxs / Hw 1 - suitable on elevated microsites Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Bl 12 – Suitable on cold air drainage sites Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option
	CWH	ws2	11	Cw[1]	0.8	Sxs [1, 35]	0.8	Hw[1]	0.8	Ba[1]	0.8	Act [a]	2.0	Dr[a, 50]	0.8			800	400	2	3	Ba / Cw / Sxs/ Hw 1 - suitable on elevated microsites Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Dr 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act / Dr a - productive, reliable, and feasible regeneration option

ID	BEC			Ecologically Suitable Species														Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	ICH	mc2	01	Hw[32] Ba[50]	1.0 1.0	Sx[35] At[50,a]	1.0 1.0	Pl[301] Ep[50,a]	2.0 1.0	Bl[29]	1.0	Cw[32]	1.0	Lw[9, 32]	1.0	Fd[9,32]	1.0	1200	700	1	4	Fd / Lw 9 - suitable on warm aspects Bl 29 - Risk of heavy browsing by moose Hw/ Cw/ Lw/ Fd 32 – Limited by growing-season frosts Sx 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Ba/ At / Ep 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. At / Ep a - productive, reliable, and feasible regeneration option
	ICH	mc2	03/04	Cw[32] Ba[50]	1.0 1.0	Hw[32] Act[b]	1.0 2.0	Sx[35] At[50,a]	1.0 1.0	Bl[29] Ep[50,a]	1.0 1.0	Pl[301]	2.0	Lw[9, 32]	1.0	Fd[9, 32]	1.0	1200	700	1	4	Lw / Fd 9 - suitable on warm aspects Bl 29 - Risk of heavy browsing by moose Hw/ Cw/ Lw / Fd 32 – Limited by growing-season frosts Sx35 – use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Ba/ At /Ep 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. At/ Ep a - productive, reliable, and feasible regeneration option Act b – limited in productivity, reliability and/or feasibility
	ICH	mc2	05	Cw[1, 32] At[50,a]	1.0 1.0	Sx[1, 35] Ep[50,a]	1.0 1.0	Bl[1, 29]	1.0	Hw[1,32]	1.0	Pl[1,301]	2.0	Ba[50]	1.0	Act[b]	2.00	1200	700	1	4	Cw/ Sx/ Bl/ Hw/ Pl 1 – suitable on elevated microsites Bl 29 - Risk of heavy browsing by moose Cw/Hw 32 – Limited by growing-season frosts Sx 35 – use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Ba/ At/ Ep 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. Act b – limited in productivity, reliability and/or feasibility At/ Ep a- productive, reliable, and feasible regeneration option
	ICH	mc2	06	Cw[1, 32] Ep[a]	1.0 1.0	Sx[1,35] Act[a]	1.0 2.00	Bl[1,29]	1.0	Pl[1]	2.0	Hw[1,32]	1.0	Ba[50]	1.0	At[50,a]	1.0	1200	700	1	4	Cw/ Sx/ Bl/ Hw/ Pl 1 – suitable on elevated microsites Bl 29 - Risk of heavy browsing by moose Cw/Hw 32 – Limited by growing-season frosts Sx 35 – use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Ba 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Act /At / Ep a- productive, reliable, and feasible regeneration option
	ICH	mc2	07	Sx[1, 35] Ep[50, b]	1.0 1.0	Bl[1, 29] Act[b]	1.0 2.00	Cw[1, 32]	1.0	Hw[1, 32]	1.0	Pl[1, 301]	1.4	Ba[50]	1.0	At[b]	1.0	1200	700	1	4	Cw / Sx / Bl / Hw / Pl 1 – suitable on elevated microsites Bl 29 - Risk of heavy browsing by moose Cw / Hw 32 – Limited by growing-season frosts Sx 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Ba/ At/ Ep 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. Act / At/ Ep b - limited in productivity, reliability and/or feasibility
	ICH	mc2	51	Pl[301]	2.0	Bl[28, 29]	1.0	Sx[28, 35]	1.0	Hw	1.0	Ba[50]	1.0	At[50, b]	1.0	Ep[50, b]	1.0	1200	700	1	4	Bl / Sx 28 – limited by moisture deficit Bl 29 – Risk of heavy browsing by moose Sx 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Ba/ At/ Ep 50 - Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. At / Ep b – limited in productivity, reliability and/or feasibility

ID	BEC			Ecologically Suitable Species														Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	ICH	mc2	52/ 53 / 54	Pl[301] At[50,a]	2.0 1.0	Sx [35] Ep[50,a]	1.0 1.0	Bl[29]	1.0	Cw [32]	1.0	Hw[32]	1.0	Ba[50]	1.0	Act [b]	2.0	1200	700	1	4	Bl 29 – Risk of heavy browsing by moose Hw / Cw 32 – Limited by growing-season frosts Sx 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Ba/ At/ Ep 50 - Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand Pl 301–risk of red band needle blight, can contribute up to 20% of well spaced trees. Act b – limited in productivity, reliability and/or feasibility At / Ep a- productive, reliable, and feasible regeneration
	MH	mm1	01/04	Ba	1.0	Hm	1.0	Yc	1.0	Hw[14]	1.0	Cw[14]	1.0					900	500	2	7	Hw14 - suitable at lower elevations
	MH	mm1	03/05	Ba	1.0	Hm	1.0	Yc	1.0	Hw[14]	1.0							900	500	2	4	Hw 14 – suitable at lower elevations
	MH	mm2	01	Ba	1.0	Hm	1.0	Yc[13,17, 50]	1.0	Bl[50]	1.0	Hw[14, 50]	1.0	Cw[14]	1.0			900	500	2	7	Yc 13 – suitable at upper elevations Hw/ Cw 14 – suitable at lower elevations Yc 17 – Restricted to western portion of biogeoclimatic unit in region Yc / Bl / Hw 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand
	MH	mm2	03/04	Ba	1.0	Hm	1.0	Yc[17, 50]	1.0	Bl [50]	1.0	Hw[14, 50]	1.0					900	500	2	7	Hw 14 – suitable at lower elevations Yc 17 – Restricted to western portion of biogeoclimatic unit in region Yc / Bl / Hw 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand
	MH	mm2	05	Ba	1.0	Hm	1.0	Yc[17, 50]	1.0	Bl [50]	1.0	Hw[14, 50]	1.0					900	500	2	4	Hw 14 – suitable at lower elevations Yc 17 – Restricted to western portion of biogeoclimatic unit in region Yc / Bl / Hw 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand

Table 2 - Root Rot Stocking Standards

ID	BEC			Ecologically Suitable Species														Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	CWH	ws1	01 Root Rot Sites	Ba Bg[34, 300]	1.4 1.4	Cw Dr[a]	1.4 1.4	Hw Ep[b]	2.0 1.4	Pl[301] At[b]	2.0 1.4	Sxs [35] Act[b]	2.0 1.4	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	900	500	2	6	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Pl 301 – risk of red band needle blight, can contribute up to 20% of well spaced trees. Dr a - productive, reliable, and feasible regeneration option Ep/ At/ Act b – limited in productivity, reliability and/or feasibility
	CWH	ws1	03 Root Rot Sites	Hw Ep[b]	2.0 1.4	Pl[301]	2.0	Cw	1.4	Ba	1.4	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Bg[34, 300]	1.4	900	500	2	6	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg 34 – risk of snow damage. Lw/ Py/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Pl 301 – risk of red band needle blight, can contribute up to 20% of well spaced trees. Ep b – limited in productivity, reliability and/or feasibility
	CWH	ws1	04 Root Rot Sites	Ba Bg[34, 300]	1.4 1.4	Cw Dr[b]	1.4 1.4	Hw Ep[b]	1.4 1.4	Sxs [35] Act[b]	2.0 1.4	Pl[301]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	900	500	2	3	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Pl 301 – risk of red band needle blight, can contribute up to 20% of well spaced trees. Dr / Ep / Act b – limited in productivity, reliability and/or feasibility
	CWH	ws1	05 Root Rot Sites	Ba Dr[b]	1.4 1.4	Cw	1.4	Hw	2.0	Sxs [7, 35]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Bg[34, 300]	1.4	900	500	2	6	Sxs7 – suitable on nutrient-medium sites Lw 32 – limited by growing season frosts. Lw/ Py/ Bg 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Dr b – limited in productivity, reliability and/or feasibility
	CWH	ws1	06 Root Rot Sites	Ba Dr[a]	1.4 1.4	Cw Act[b]	1.4 2.0	Hw	2.0	Sxs[35]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Bg[34, 300]	1.4	900	500	2	3	Lw 32 – limited by growing season frosts. Lw/ Py/ Bg 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Dr a - productive, reliable, and feasible regeneration option Act b – limited in productivity, reliability and/or feasibility
	CWH	ws1	07* Root Rot Sites	Ba	1.4	Cw	1.4	Sxs [35]	2.0	Hw	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Act[b]	1.4	900	500	2	3	***Red listed ecosystem, avoid logging. Lw 32 – limited by growing season frosts. Lw/ Py/ Bg 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees Act/Dr a - productive, reliable, and feasible regeneration option
	CWH	ws1	08 Root Rot Sites	Ba[1] Dr[a]	1.4 1.4	Cw[1]	1.4	Sxs [1, 35]	2.0	Hw[1]	2.0	Py[34, 300]	2.0	Lw[32, 34, 300]	1.4	Act[b]	2.0	900	500	2	3	***Blue listed ecosystem, avoid logging Ba / Cw / Sxs/ Hw 1 - suitable on elevated microsites Lw 32 – limited by growing season frosts. Lw/ Py/ Bg 34 – risk of snow damage. Sxs 35 - use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: http://pubs.cif-ifc.org/doi/abs/10.5558/tfc2013-042 Lw/ Py/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees. Act / Dr a - productive, reliable, and feasible regeneration option

**Root Rot Sites stocking standards are subject to requirements under Appendix 1, Section 3.0 Forest Health for root rot.

Table 3 - Fire Management Stocking Standards

ID	BEC			Ecologically Suitable Species														Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	CWH	vm1	01/06	Ba[26]	1.40	Dr	1.4											900	500	2	6	Ba 26 – suitable minor species on nutrient poor sites
	CWH	vm1	03	Dr	1.0													800	400	2	6	
	CWH	vm1	04	Ba	1.4	Dr	1.4											900	500	2	3	
	CWH	vm1	05/08/09	Ba	1.4	Dr	1.4	Act	1.4									900	500	2	3	***09 Red listed ecosystem, avoid logging
	CWH	vm1	10	Ba[1]	1.4	Dr	1.4	Act	2.0									900	500	2	3	***Blue listed ecosystem, avoid logging. Ba 1 - suitable on elevated microsites
	CWH	vm1	14	Dr	1.0	Act	2.0											800	400	2	3	
	CWH	vm2	01/05/06/08	Ba	1.40	Dr	1.0											900	500	2	6	
	CWH	vm2	03	Dr	1.0													900	500	2	6	
	CWH	vm2	09/11	Ba	1.4	Dr	1.0											800	400	2	3	
	CWH	ws1	01	Ba	1.4	Lw[32, 34, 300]	1.4	Bg[34, 300]	1.4	Dr	1.4	Ep	1.4	At	1.4	Act	1.4	900	500	2	6	Lw 32 – limited by growing season frosts. Lw/ Bg 34 – risk of snow damage. Lw/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees
	CWH	ws1	03	Ba	1.4	Lw[32, 34, 300]	1.4	Bg[34, 300]	1.4	Ep	1.4	At	1.4					900	500	2	6	Lw 32 – limited by growing season frosts. Lw/ Bg 34 – risk of snow damage. Lw/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees
	CWH	ws1	04	Lw[32, 34, 300]	1.4	Ba	1.4	Bg[34, 300]	1.4	Dr	1.4	Ep	1.4	At	1.4	Act	1.4	900	500	2	3	Lw 32 – limited by growing season frosts. Lw/ Bg/ 34 – risk of snow damage. Lw/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees
	CWH	ws1	05	Lw[32, 34, 300]	1.4	Ba	1.4	Bg[34, 300]	1.4	Dr	1.4	Ep	1.4	At	1.4			900	500	2	6	Lw 32 – limited by growing season frosts. Lw/ Bg 34 – risk of snow damage. Lw/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees
	CWH	ws1	06	Lw[32, 34, 300]	1.4	Ba	1.4	Bg[34, 300]	1.4	Dr	1.4	Ep	1.4	At	1.4	Act	2.0	900	500	2	3	Lw 32 – limited by growing season frosts. Lw/ Bg 34 – risk of snow damage. Lw/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees
	CWH	ws1	07*	Lw[32, 34, 300]	1.4	Ba	1.4	Bg[34, 300]	1.4	Act	1.4							900	500	2	3	***Red listed ecosystem, avoid logging. Lw 32 – limited by growing season frosts. Lw/ Bg/ 34 – risk of snow damage. Lw/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees
	CWH	ws1	08	Ba[1]	1.4	Lw[32, 34, 300]	1.4	Bg[34, 300]	1.4	Act	2.0	Dr	1.4					900	500	2	3	***Blue listed ecosystem, avoid logging Ba 1 - suitable on elevated microsites Lw 32 – limited by growing season frosts. Lw/ Bg 34 – risk of snow damage. Lw/ Bg 300 – climate change adaptation species can contribute (collectively) up to 20% of well-spaced trees
	CWH	ws1	11	Ba[1]	1.0	Act	2.0	Dr	1.0									800	400	2	3	Ba 1 - suitable on elevated microsites
	CWH	ws2	01	Ba	1.0	Dr	1.0	Ep	1.0	Act	1.0	At	1.0					900	500	2	6	Bl 12 – Suitable on cold air drainage sites

ID	BEC			Ecologically Suitable Species													Stocking (w/s)				Additional Standards/Comments
	Zone	SZ/ Variant	Site Series	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Sp	Ht (min)	Target (sph)	Min (sph)	Inter Tree Dist. (m)	Delay (years)	
	CWH	ws2	03	Dr	1.0	At	1.0	Ep	1.0									900	500	2	6	
	CWH	ws2	04/06	Ba	1.0	Dr	1.0	Ep	1.0	At	1.0	Act	2.0					900	500	2	3	
	CWH	ws2	05	Ba	1.0	Dr	1.00	At	1.0	Ep	1.0							900	500	2	6	
	CWH	ws2	07/08	Ba	1.0	Dr	1.00	Act	2.0									900	500	2	3	
	CWH	ws2	11	Ba[1]	0.8	Dr	0.8	Act	2.0									800	400	2	3	Ba 1 - suitable on elevated microsites
	ICH	mc2	01	Ba[50]	1.0	Lw[9, 32]	1.0	Bl[29]	1.0	At	1.0	Ep	1.0					1200	700	1	4	Lw 9 - suitable on warm aspects Lw 32 – Limited by growing-season frosts Ba 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand.
	ICH	mc2	03/04	Lw[9, 32]	1.0	Ba[50]	1.0	At	1.0	Ep	1.0	Act	2.0					1200	700	1	4	Lw 9 - suitable on warm aspects Lw 32 – Limited by growing-season frosts Ba 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand
	ICH	mc2	05/06/07/ 52/ 53/ 54	Ba[50]	1.0	At	1.0	Ep	1.0	Act	2.00							1200	700	1	4	Ba 50 – Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand
	ICH	mc2	51	Ba[50]	1.0	At	1.0	Ep	1.0									1200	700	1	4	Ba 50 - Restricted to sites where the species occurs as a major species (>30%) in a pre-harvest, natural stand

Table 4 - Wildlife Forage Stocking Standards (applies to Grizzly Bears and Moose)

ID	BEC			Ecologically Suitable Species	Stocking (w/s)				Maximum Density			Additional Standards/Comments
	Zone	SZ/ Variant	Site Series		Delay (years)	Minimum Inter-tree Distance (m)	Target (sph)	Min (sph)	Pre Space (Max sph)	Post Spacing (Min sph)	Post Spacing (Max sph)	
	CWH	vm1	08	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	600	400	660	400	660	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	vm1	09/10	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	500	200	550	200	550	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	vm1	14	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	400	200	440	200	440	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	vm2	08	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	600	400	660	400	660	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	vm2	11	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	400	200	440	200	440	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws1	06	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	600	400	660	400	660	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws1	07	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	500	200	550	200	550	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws1	08	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	500	200	550	200	550	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws1	11	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	400	200	440	200	440	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws2	06	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	600	400	660	400	660	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws2	07	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	500	200	550	200	550	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws2	08	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	500	200	550	200	550	As per equivalent BEC classification in Stocking Standards Table 1.
	CWH	ws2	11	As per equivalent BEC classification in Stocking Standards Table 1.	3	1	400	200	440	200	440	As per equivalent BEC classification in Stocking Standards Table 1.

****** If a stand exceeds the maximum density set in the prescription at free growing but does not exceed 4000 stems per hectare (sph), the stand will be assessed to ensure there are sufficient gaps to provide forage for Grizzly Bears or Moose. Sufficient forage gaps are considered to be greater than 20% gaps across the Standards Unit. To test if adequate gap creation exists, 20% (per Standards Unit) of the established plots (50 square meters) may only contain trees greater than 50 centimeters in one of four quadrants. For example, if five plots were assessed, four out of five plots could have trees in more than one quadrant that are equal to or taller than 50 centimeters. If the results of the Free Growing survey show maximum density is exceeded without sufficient forage gaps or that total sph exceeds 4000 sph a spacing treatment to meet the forage objective will be implemented.

Notes:

- **Free-growing assessment, Tree Height:** Same as the stocking standards for the ecosystem as described in Stocking Standards Table 1.
- **Minimum Inter-tree Spacing:** As per Section 3.2.5
- **Well-Spaced stems:** "Well spaced" does not apply to forage gaps when cluster management is identified as a stand level strategy in the Site Plan.
- **Target post-spacing density:** The target post spacing density is 100 stems/ ha less than the post spacing maximum density.

Reference Notes for Stocking Standards

Ecologically Suitable Species

These are species (with the exception of species included for climate change adaptation, as indicated by footnote 300) that have been found to occur based on available soil water and nutrients as published in Land Management Handbook 26 “A Field Guide to Site Identification and Interpretation for the Prince Rupert Forest Region”. The soil moisture regime and soil nutrient regime are combined into an edatope. The edatopic grid for each species determines infrequent, 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. The prescribing Forester must also consider immediate and long term forest health issues, including the long-term forest health risks associated with a changing climate. The prescribing Foresters determination will be included in the Site Plan as a silviculture prescription.

Tree Species‘

‘Act’ is black cottonwood

‘At’ is trembling aspen

‘Ba’ is amabilis fir

‘Bg’ is grand fir

‘Bl’ is sub-alpine fir

‘Cw’ is western red cedar

‘Dr’ is red alder

‘Ep’ is paper birch

‘Fd’ is Douglas fir (coastal or interior)

‘Hm’ is mountain hemlock

‘Hw’ is western hemlock

‘Lw’ means western larch

‘Pl’ is lodgepole pine

‘Py’ is ponderosa pine

‘Ss’* is sitka spruce

‘Sx’* is hybrid / interior spruce

‘Sxs’* is hybrid sitka spruce

‘Yc’ is yellow cedar

* The terms Ss, Sx and Sxs are used interchangeably as the terms are a reflection of the seed registration and not indicative of the genetic material.

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

‘MIN’ or ‘Min’ means minimum.

3.0 UNEVEN-AGED MANAGEMENT

The following stocking standards for multi-layer stands apply to any silviculture system where:

FPPR Section 64 (3) & (4)

1. The silviculture management objective is to develop a stand that supports economically viable harvest entries at 20 to 50 year intervals, and
2. Retention of trees exceeds a basal area of 10 square meters per hectare, or
3. Openings are less than 0.6 hectares in size with a target average in any harvest unit of 0.3 to 0.4 hectares, and less than 70 meter wide (i.e. two tree-lengths) along its narrowest axis. Variance outside of these targets is allowed if supported by the proper rationale from a Qualified Professional.

Applicable silviculture systems are retention, single tree selection, and group selection.

3.1 Applying Uneven-Aged (Multi-layered) Stocking Standards

The multi-layer stocking standards may be applied, where ecologically suitable, to partial harvesting silviculture systems that include single or multiple entry harvesting designated to create multi-storied stands. Multi-storied stands generally have two or more dominant age classes or layers that are created by partial cutting silviculture systems in both even and uneven aged stands. The purpose of these standards is to allow retention trees from different layers to contribute towards the stocking and to avoid additional stocking in the under-story that will never attain acceptable growth and vigor.

To apply the multi-layered stocking standards, first select the appropriate site from the biogeoclimatic ecosystem classification (BEC) site series fro Appendix 1, Table 1 Even-aged Management to determine the ecologically suitable tree species and the applicable free growing heights. Then select the set of target and minimum stocking densities from the Stocking Standards for Multi-layer Stands (Table 5) that correspond to the target density in Appendix 1, Table 1. Where SUs are comprised of more than one site series, the practice will be to manage the stocking standards of the dominant site series provided that the tree species are suitable for all the site series contained in the SU.

Uneven-aged stocking standards may be applied in partial harvesting plans that are designed to meet specific management objectives. Some examples where these standards are appropriate include:

- to maintain structural diversity in an areas with patch size and seral stage distribution limitations.
- when operating in visually constrained areas;
- wildlife enhancement areas where the removal of some stand volume is appropriate;
- partial cutting in stands with a naturally occurring multi-storied stand structure; and
- feathering of cut-block edges to meet wind-throw or riparian management objectives.

The establishment and growth of the regeneration layer occurs under the influence of existing leave trees of one or more additional age classes.

Stand Layer Definition:

Layer 1	Mature	trees ≥ 12.5 centimeters DBH
Layer 2	Pole	trees 7.5 centimeters to 12.4 centimeters DBH
Layer 3	Sapling	trees ≥ 1.3 meters height to 7.4 centimeters DBH
Layer 4	Regeneration	trees < 1.3 meters height

3.2 Regeneration Date / Free Growing Height

Maximum regen delay for uneven-aged management is 7 years. The free growing heights where applicable are as listed in Appendix 1, Table 1 Even-aged Stocking Standards. Regen delay can be met immediately following logging if the residual stand has no significant damage or pest problems and meets minimum stocking standards. If regeneration is achieved immediately following harvest, earliest Free-Growing date is 12 months after completion of logging.

3.3 Ecologically Suitable Species

The ecologically suitable species listed in Appendix 1, Table 1 Even-aged Stocking Standards by biogeoclimatic zone, variant and site series are to be considered ecologically suitable, subject to applicable footnotes, with the exception of locally shade-intolerant species Douglas-fir (Fd) which in layer 4 is considered not suitable.

3.4 Selection of Well-Spaced Stems

Criteria for Evaluating Health, Form and Vigor

Trees that are selected as well-spaced are being chosen to form part of a future crop, so they must be of sufficient good health, form and vigor that they can be utilized as crop trees at the time of harvest.

The criteria for good health, good form and good vigor are as follows.

- Table A5-1 and Figures A5-1 to A5-4 in the Establishment to Free Growing Guidebook – Prince Rupert Forest Region, version 2.3, May 2000 and revised in October 2007, with the following exception:
    - For pine that is infected by Dothistroma: use the “Defoliation Free Growing Damage Standard for Determinate Growth Conifers” March 2, 2005.

- The acceptability standards for advanced regeneration and residual mature and pole layer crop trees in Appendix 10 of the Establishment to Free Growing Guidebook - Prince Rupert Forest Region, version 2.3, May 2000 and revised in October 2007.

The following qualifiers apply to the criteria for good health, good form and good vigor:

- the assessment of health, form and vigor applies only at the time of Free Growing;
- the criteria are specific to layers 3 and 4 in uneven-aged managed stands; and
- the criteria do not apply to broadleaf species.

For layers 1 and 2 in uneven-aged management stands the criteria for good health, form, and vigor are:

- trees must not exceed the damage criteria of Table A of the Free Growing Damage Criteria for Multi-layered Stands in British Columbia (February 2007);
- western hemlock trees must not be subject to a dwarf mistletoe infection rating of 4 or more as described in Figure 5 of the Dwarf Mistletoe Management Guidebook (July 1995); and
- trees must have at least 20% continuous live crown.

3.5 Brush and Broadleaf Competition Criteria

In addition to criteria for selection of Well-Spaced Stems, to be considered Free Growing a crop tree must:

1. Be free from unacceptable levels of herb, shrub, or broadleaf tree competition, in accordance with the criteria set out in Appendix 9 of the Establishment to Free Growing Guidebook - Prince Rupert Forest Region, version 2.3, May 2000 and revised in October 2007, with the following exceptions:

- where stocking standards include broadleaf tree species as ecologically suitable species, these broadleaf species shall be deemed to not be in competition
- layer 1 (> 12.5 cm DBH) broadleaf species retained within the Site Plan for non-timber purposes will be considered non-competitive when assessing for Free Growing, if the total layer 1 broadleaf species in the plot are either:
    - less than 6% Crown Closure
    - less than 8 square metres Basal Area
- in order to increase riparian and biodiversity values, alder, aspen, birch, and cottonwood are not considered competing vegetation within the first 10 metres of the riparian management zones of S1 to S5 streams, L1 and L3 lakes or W1 and W3 wetlands
- herbaceous vegetation less than 100% of the height of crop trees within 5 m of a S4, S5 or S6 stream is not considered competing vegetation.

2. Have experienced a minimum of 2 full growing seasons between any brushing treatment and the Free Growing assessment.

3. Meet the following minimum percentage height above competing brush in order to be free growing:

Percent Height above brush	**Applies to**
100%	ICH
125%	MH
150%	CWH

Table 5 - Stocking Standards for Multi-layer Stands

Stocking Standard I.D. #	Target from Stocking Standards Appendix 1, Table 1 (sph)	Layer	Stocking (well-spaced stems / ha)		Regeneration delay * (max years)
			Target	Minimum	
1051322	1200	1	600	300	7
		2	800	400	7
		3	1000	500	7
		4	1200	700	7
1051323	1000	1	400	200	7
		2	600	300	7
		3	800	400	7
		4	1000	500	7
1051324	900	1	400	200	7
		2	500	300	7
		3	700	400	7
		4	900	500	7
1051325	800	1	300	150	7
		2	400	200	7
		3	600	300	7
		4	800	400	7
1051326	600	1	300	150	7
		2	400	200	7
		3	500	300	7
		4	600	400	7
1051327	400	1	200	100	7
		2	300	125	7
		3	300	150	7
		4	400	200	7

The following minimum inter-tree distances will apply for trees to be counted as well-spaced.

- 0.0 metres in Layer 1 of multi-layered stands.
- 1.0 metres between Layers 2, 3 and 4 for multi-layered stands.

4.0 RULES FOR MODIFYING STOCKING STANDARDS

Minimum Inter-tree Horizontal Distance (MITD):

In all Coastal Western Hemlock zone and Mountain Hemlock zone standards units (not in the ICH) for the purpose of the stocking standards listed in Appendix 1, Table 1 Even-aged Management Stocking Standards, Appendix 1, Table 2 Root Rot Stocking Standards, and Appendix 1, Table 3 Fire Management Stocking Standards the minimum allowable horizontal distance between well-spaced or Free Growing trees is 2-meters. For these stocking standards (not in the ICH), the minimum allowable horizontal distance can be reduced to accommodate site specific conditions where there are less than 400 plantable spots available per hectare involving colluvium, hygric and sub-hygric sites, on disturbed roadside areas or mechanically site-prepped areas. Reduction of inter-tree spacing to 1.5 meters is acceptable in these cases. Target spacing distribution is based on target densities of well-spaced stems per hectare of ecologically suitable species.

The target inter-tree spacing will remain the same but a reduced site specific Minimum Inter Tree Distance (MITD) will allow for the selection of the most productive growing sites. Justification for the reduced MITD will be supported by a documented rationale and included in the Site Plan.

Colluvial sites are those with large surface rocks, 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 or boulder veneers.

Wet sites (hygric and sub-hygric) 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 to wet.

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

Mechanically site-prepped areas are those that have been artificially prepared for reforestation by digging, plowing, scraping or mixing the soil to create micro-sites. This is completed after harvesting but before planting.

This modifying rule does not apply to the Interior Cedar-Hemlock zone stocking standards or Appendix 1, Table 4 Wildlife Forage Stocking Standards that have a minimum allowable horizontal distance between well-spaced or Free Growing trees of 1-meter.

5.0 FOREST HEALTH FACTORS APPLICABLE TO STOCKING STANDARDS

Root Rot - Alternate stocking standards have been listed for sites infected by Annosus (DRN) and Armaillaria (DRA) root rot in the CWHws1 subzones. These standards will be applied to infected sites when an alternate species management strategy is prescribed. Determine the type of root rot and plant alternate species to those considered "highlight susceptible" or "intermediately susceptible" for the applicable rot. A minor component (less than 20%) of natural "intermediately susceptible" species with good form and vigor will be acceptable at free growing in these areas.

Common Name	Relative Susceptability				Reference
	Highly Susceptable	Intermediately Susceptable	Tolerant	Resistant	
Annosus root rot	western hemllock, amabilis fir	Douglas fir, western red cedar, sitka spruce	lodgepole pine	Broadleaf trees	*Morrison 1979, Schmitt et al., 2000, and* https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/forest-health/forest-health-docs/root-disease-docs/rootdiseaseguidebookjune2018_4.pdf https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/forest-health/managed-stand-pests/table_1_root_diseases_and_relative_host_susceptibility.gif
Armillaria root rot	Douglas fir, sitka spruce	lodgepole pine, western hemlock, ponderosa pine	western larch, western red cedar	Broadleaf trees	Celeary et al., 2008, Morrison et al., 1992, and https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/forest-health/forest-health-docs/root-disease-docs/rootdiseaseguidebookjune2018_4.pdf

Spruce Weevil –All planted spruce is to be from seed which has been selected for resistance to spruce weevil. Areas around Lakelse Lake and in the Kitimat River drainage (south of Terrace) have been identified as high risk areas for spruce weevil.

Dwarf Hemlock Mistletoe – Dwarf mistletoe infection on a tree will be evaluated using the Hawksworth six class rating system. On a tree basis, light infection is a rating of 1 to 2; moderate infection is 3 to 4; and sever is 5 to 6. The following criterion outlines what would not be acceptable for stocking purposes. For layers 3 and 4 trees, Hw will be unacceptable if any infection occurs on the stem or a live branch, or is within 8 meters horizontal distance from the bole of a higher layer tree that is infected with a Hawksworth rating > 3. Non-host species (Cw and Yc) or less susceptible species (Hm, Ba, Ss) will be planted and/or targeted to mitigate the effects of dwarf hemlock mistletoe on the regenerating stand.

Red band needle blight (Dothistroma) – red band needle blight is managed through the use of footnote 301. Prevalence of red band needle blight is expected to increase with climate projections of warmer and wetter seasonal conditions.

APPENDIX 2 FSP MAPS

FDU 1 Map

FDU 2 Map

APPENDIX 3 ADVERTISEMENT

APPENDIX 4, 5 AND 6 CONFIDENTIAL INFORMATION

The information contained in Appendix 4, 5 and 6 is considered confidential and is removed from the main Forest Stewardship Plan document. Appendix 4, 5 and 6 demonstrate the Holder's consistency with FPPR Section 22(2).