



Fraser Lake Sawmills
Stuart Nechako Natural Resource
District
portion of the
Prince George Timber Supply Area

Forest Stewardship Plan #999

2023

Amendment 1

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1. Interpretation

1.1. Definitions

In this document, unless this specified, or the context requires otherwise:

“ACT” means the Forest and Range Practices Act;

“Agreement Holder(s)” means a holder of a license identified in section 1.2.

“FPPR” means the Forest Planning and Practices Regulation B.C.;

“FSP” means forest stewardship plan;

“FDU” means a forest development unit

“GAR” means Government Action Regulation

“Machine Free Zone/MFZ” means an area where machine traffic will not enter other than at identified crossings.

“Primary Forest Activity” means one or more of the following: (a) timber harvesting, (b) silviculture treatments, or (c) road construction, maintenance, and deactivation.

1.2. Application of the Forest Stewardship Plan

The term of this FSP is 5 years and begins on the effective date specified in writing by the minister in approving the plan.

1. Parties to this FSP include the following Agreement Holders:

- a) West Fraser Mills as holder of licenses A18162 and A89982; and
- b) Cheslatta Carrier Nation as the holder of license A93086.
- c) Kani Forest Tenure Limited Partnership as the holder of license A99206.

2. Forest Development Units

2.1. Forest Development Units under this FSP

The following FDUs are specified for this FSP;

1. Within the Stuart Nechako District, the Fort St. James FDU (Map 2A, 2B, 2C) and the Vanderhoof FDU (Map 3A, 3B).

Things that are in effect (FPPR 14(2)(b)) within these FDUs are found in Appendix D.

The FDUs exclude private land, federal reserves, long-term leases, and area based tenures known on the date of submission of this FSP. These areas may change from time to time. The FDUs encompass a number of parks and protected areas, however development will not happen within these areas as the Agreement Holders do not have harvesting rights within these areas. These areas however contribute attributes to a number of government objectives so their area is considered in landscape level objective monitoring.

3. Results and Strategies

3.1. Objectives set by government for soils

Within all FDUs, the Agreement Holders undertake to comply with FPPR sections 35 (*Soil disturbance limits*) and 36 (*Permanent access structure limits*).

3.2. Objectives set by government for timber

As per FPPR 12(8), the Agreement Holders are exempt from specifying a result or strategy for this objective.

3.3. Objectives set by government for wildlife

3.3.1. FPPR 7(2) Notice-Indicators of the amount, distribution and attributes of wildlife habitat required for the survival of species at risk in the Vanderhoof Forest District – Northern Caribou (*Rangifer tarandus caribou*)

Area of Application: The area identified as Northern Caribou SAR Section 7 (Tweedsmuir Caribou Herd) areas on Map 3B within the Vanderhoof FDU.

Result and Strategy:

1. Within the Vanderhoof FDU, before carrying out primary forest activities within the Northern Caribou SAR Section 7 areas, the Agreement Holders will:
 - a) collaborate with other licensees with interests within the SAR Section 7 areas and Ministry Biologists to identify the locations containing the Species at Risk elements in Table 1 to a maximum amount of 6,100ha of stands >80yrs within the timber harvesting land base.
2. Within the Vanderhoof FDU, primary forest activities will not be carried out by the Agreement Holders in the locations identified in 1a) above.
3. For the areas identified in 1a) above that overlap winter range referenced in FSP sections 3.3.4(1)(i), the Agreement Holders will:
 - a) not construct a road within 100m of the winter range;
 - b) will prescribe primary forest activity practices in consultation with a Registered Professional Biologist(s) or Ministry Biologist that are meant to not create an abundance of moose or wolves within 5km of the winter range; and
 - i) carry out those practices when carrying out primary forest activities within 5km of the winter range.

Table 1.

Species at Risk Element	Biogeoclimatic Zone	Size of each Area (ha)
Calving Range	AT, ESSF	50-300ha
Rutting Range	AT, ESSF	50-300ha
Connectivity Matrix(s)	SBS	>=1000ha
Mineral Licks	AT, ESSF, SBS	>=50ha

3.3.2. FPPR 7(2) Notice-Indicators of the amount, distribution and attributes of wildlife habitat required for the survival of species at risk in the Fort St. James Forest District – Northern Caribou (*Rangifer tarandus caribou*)

Area of Application: The area identified as Northern Caribou SAR Section 7 (Takla, Wolverine, and Chase Caribou Herds) areas on Maps 2B and 2C within the Fort St. James FDU.

Result and Strategy:

1. Within the Fort St. James FDU, before carrying out primary forest activities within the Northern Caribou SAR Section 7 areas, the Agreement Holders will:
 - a) collaborate with other licensees with interests within the SAR Section 7 areas and Ministry Biologists to identify the locations of the Species at Risk elements in Table 2 to a maximum amount of 9,800ha of stands >80yrs within the timber harvesting land base.
2. Within the Fort St. James FDU, primary forest activities will not be carried out by the Agreement Holders in the locations identified in 1a) above.
3. For the areas identified in 1a) above that overlap winter range referenced in FSP sections 3.3.3 and 3.3.4(2)(i), (ii), or (iv), the Agreement Holders will:
 - a) not construct a road within 100m of the winter range;
 - b) will prescribe primary forest activity practices in consultation with a Registered Professional Biologist(s) or Ministry Biologists that are meant to not create an abundance of moose or wolves within 5km of the winter range; and
 - i) carry out those practices when carrying out primary forest activities within 5km of the winter range.

Table 2.

Species at Risk Element	Biogeoclimatic Zone	Size of each Area (ha)
Calving Range	AT, ESSF	50-300ha
Rutting Range	AT, ESSF	50-300ha
Connectivity Matrix(s)	SBS, BWBS	>=1000ha
Mineral Licks	AT, ESSF, SBS, BWBS	>=50ha

3.3.3. FPPR 7(2) Notice -Indicators of the amount, distribution and attributes of wildlife habitat required for the winter survival of ungulate species in Fort St. James Forest District within the Prince George Timber Supply Area– Northern Caribou (*Rangifer tarandus caribou*)

Area of Application: The winter range areas (WRA) identified as Northern Caribou UWR Section 7 areas on Maps 2B and 2C within the Fort St. James FDU that are not already addressed by the Ungulate Winter Range Orders U-7-003, U-7-015, and U7-026.

Result and Strategy:

1. Within the Fort St. James FDU, before carrying out primary forest activities within the Northern Caribou UWR Section 7 areas, the Agreement Holders will:
 - a) collaborate with other licensees with interests within the SAR Section 7 areas and Ministry Biologists to identify the locations of the habitat types in Table 3 to a maximum amount of 18,237ha of timber harvesting land base.
2. Within the Fort St. James FDU, primary forest activities will not be carried out by the Agreement Holders in the locations identified in 1a) above.
3. For the winter range areas identified in 1a) above, the Agreement Holders will:
 - a) not construct a road within 100m of the area;
 - b) will prescribe primary forest activity practices in consultation with a Registered Professional Biologist(s) or Ministry Biologists that are meant to not create an abundance of moose or wolves within 5km of the areas; and
 - i) carry out those practices when carrying out primary forest activities within 5km of the areas.

Table 3.

UWR Type	Biogeoclimatic Zone	Size of each Area (ha)
High Elevation	AT, ESSF	50-300ha
Low Elevation	SBSdk, SBSdw3	50-300ha

3.3.4. GAR 9(2), 10(1) and 12(1) Wildlife Habitat Areas and Ungulate Winter Range Orders

Result and Strategy:

1. The Agreement Holders undertake to comply with the General Wildlife Measures specified within the following Order within the Vanderhoof FDU:
 - i) Northern Caribou (UWR 7-012)
2. The Agreement Holders undertake to comply with the General Wildlife Measures specified within the following Orders within the Fort St. James FDU:
 - i) Grizzly Bear (WHA 7-001)
 - i) The Schedule 2 objective result and strategy is the holders of this FSP will not harvest within the area of WHA 7-001 during the term of this FSP.
 - ii) Mountain Caribou (UWR U-7-003)
 - iii) Northern Caribou (UWR U- 7-015)
 - iv) Caribou (WHA 7-016, 7-019 to 7-022, 7-024 to 7-044, 7-061)
 - v) Caribou (WHA 7-023, 7-045 to 7-056, 7-059, 7-060)
 - vi) Mountain Goat (UWR U-7-019)
 - vii) Northern Caribou (UWR U-7-026)

3.3.5. Ungulate Winter Range #U-7-018 and U-7-020 Moose

Result and Strategy:

1. The Agreement Holders undertake to comply with the General Wildlife Measures specified within the Ungulate Winger Range Order #U-7-018 and U-7-020 within the Vanderhoof and Fort St. James FDUs.

3.3.5.1 Objective – Promote stand heterogeneity by using a diversity of tree species identified in an approved stocking standard.

The objective under the Order applies to the conditional harvest area UWR units identified in the table below:

Table 4.

UWR TAG	UNIT No.
U-7-018	2,4,6,9,11,13,15,17,18
U-7-020	4,10,12,14,16,18,19,20,21

In the following result and strategy, Qualified Registered Professional has the same meaning as in section 3.5 of this FSP.

Result and Strategy:

1. Where an Agreement Holder carries out a primary forest activity within a conditional harvest area of U-7-018 and U-7-020 in the Vanderhoof and Fort St. James FDUs, the results and strategies for the objective to promote stand heterogeneity by using a diversity of tree species identified in an approved stocking standard are:
 - i) A mixture of two or more species from the preferred or acceptable species identified in the approved stocking standards in Appendix A will be planted within the Net Area to Reforest (NAR) of each applicable cutblock, except as noted in subsection iv).
 - ii) Further to subsection i), the total number of well-spaced stems will be consistent with Appendix A, but the stocking standard targets for preferred well-spaced stems for a particular Zone/Subzone and Site Series will include both the preferred and acceptable tree species identified for the Zone/Subzone and Site Series. Thus, to enhance species diversity in the NAR within these cutblocks, the stocking standard preferred species shall include both the listed preferred and acceptable species listed in Appendix A.
 - iii) No more than 60% of any single tree species will be planted within the NAR of each applicable cutblock, except as noted in subsection iv).
 - iv) In block specific instances where the site ecological and stand conditions present on the block limit the feasibility of certain species to perform well enough to meet free growing obligations, the requirements to plant no more than 60% of any single species may be varied with a written rationale by a qualified registered professional. The rationale will document the conditions of the specific block that restrict the use of shade or partially shade intolerant preferred or acceptable species and steps taken to promote species diversity. These variances will be limited to the following conditions:
 - (1) Rich and Very Rich sites within the subhygric, hygric and subhydric edatopic grid, or
 - (2) Where the deciduous component contributes greater than 15% of the gross volume from the cruise.The intent of this variation is to enable planting shade tolerant species on sites where herbaceous, woody or deciduous species are likely to outcompete other shade intolerant conifers. Where two or more shade tolerant species are acceptable both will be utilized.
- v) Where healthy contiguous and mappable deciduous types more than 2 hectares in size are identified through silviculture surveys in the NAR and found to be out-competing target coniferous stems, their area and location will be delineated. An exemption from the requirement to achieve a Free-Growing stand will be sought for the area comprising these deciduous types. If approved the area will be removed from the NAR for the purpose of enhancing moose habitat.

3.3.6. FRPA 181 Ungulate Winter Range Orders (Grand parented Objectives) Mule Deer – Vanderhoof Forest District

Area of Application: The Vanderhoof FDU.

Result and Strategy:

1. The Agreement Holders undertake as results and strategies, the practices identified in the *Ungulate Winter Range Order U-7-011* for the following objectives when carrying out primary forest activities:
 - a) Habitat Condition,
 - b) Timber Harvest,
 - c) Forest Health Management, and
 - d) Access Management

3.3.7. FRPA 181 Ungulate Winter Range Orders (Grand parented Objectives) Mule Deer – Fort St. James Forest District

Area of Application: The Fort St. James FDU.

Result and Strategy:

1. The Agreement Holders undertake as results and strategies, the practices identified in the *Ungulate Winter Range Order U-7-002* for the following objectives when carrying out primary forest activities:
 - a) Desired Habitat Condition,
 - b) Timber Harvest,
 - c) Forest Health
 - d) Access Management

3.4. Objective set by government for water, fish, wildlife and biodiversity within riparian areas

3.4.1. General

The Agreement Holders:

1. Within all FDUs, undertake to comply with FPPR sections 50 and 51 (*the legislated restrictions in the riparian management areas and riparian reserve zones*).
2. Within all FDUs, undertake to comply with FPPR section 52(2) (*the legislated restrictions in a riparian management zone*).

3.4.2. Riparian Classification 12.3(1),(2),(3)

Result and Strategy:

1. For the purposes of FPPR 12.3(1), (2), and (3), the Agreement Holders within all FDUs, use the riparian management areas (RMA), riparian reserve zones (RRZ), and the riparian management zones (RMZ) within Table 5 in section 3.4.3.

3.4.3. Retention of trees within Riparian Management Zones (FPPR 12(3))

For the purposes of the result and strategy, the following applies:

1. Application is to streams that are within a cut block or within an RMA distance from a cut block.
2. Tree retention targets in RMZ are for live conifer trees and assume that live trees are present in numbers and diameter sufficient to meet the target before the primary forest activity occurs. If this is not the case, all the live trees of sufficient diameter will be retained within the target areas and the difference made up with smaller live trees or dead stems of sufficient diameter.
3. **5m or 7m MFZ** means a **machine free zone** 5m or 7m in width from the edge of a riparian feature where non-merchantable conifer trees, understory and overstory deciduous trees, shrubs, and herbaceous vegetation have been retained to the extent practicable.
4. **7m MFZ + 15 trees** means a **machine free zone** 7m in width from the edge of a riparian feature where non-merchantable conifer trees, understory and overstory deciduous trees, shrubs, and herbaceous vegetation have been retained to the extent practicable plus a minimum 15 conifer tree >12.5cm dbh per side per 100m within 10m of the stream bank.
5. **Dominant, Co-dominant, and Intermediate** stems has the same meaning as in page 33 of the Silviculture Prescription Data Collection Field Handbook LMH 47.
<https://www.for.gov.bc.ca/hfd/pubs/docs/Lmh/Lmh47.pdf>

Result and Strategy:

1. To retain large woody debris, provide visual screening, retain vertical structure, maintain wind firm boundaries, reduce sedimentation risk, conserve overall riparian function, and maintain connectivity corridors adjacent to and between riparian features, for the term of this FSP, within all FDUs, the Agreement Holders will ensure that at the completion of harvesting or road building within or adjacent to a cutblock the following retention occurs within the RMZ:

Table 5.

	Riparian Class	Riparian Subclass	Equivalent FPPR Description	Total RMA (m)	RRZ (m)	RMZ (m)	Minimum Retention for RMZ within specified distance (>12.5cm dbh stems or meters reserved)	Strategy for retention
FISH STREAMS	S1-A		≥100m	100	55	45	50% in first 15m	Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs to extent practicable throughout the RMZ. Within the specified distance , if a reserve is not used to achieve retention objective, preferentially remove Dominant and Co-dominant conifer stems and focus retention on merchantable Intermediate stems.
	S1-B		>20m	70	55	15	50% in first 15m	
	S2		≥5m ≤ 20m	50	35	15	50% in first 15m	
	S3		≥1.5m < 5m	40	25	15	50% in first 15m	
	S4	Large S4	≥1.0m < 1.5m	30	10	20	20% in first 10m	
	S4	Small S4	<1.0m	30	0	30	7m MFZ + 15 trees/100m	Retention trees will be conifers at least 12.5cm dbh. Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs throughout the RMZ to extent practicable.
NON-FISH STREAMS	S5		>3m	30	25	5	50% in first 5m	Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs to extent practicable throughout the RMZ. Within the specified distance , if a reserve is not used to achieve retention objective, preferentially remove Dominant and Co-dominant conifer stems and focus retention on merchantable Intermediate stems.
	S6	Large S6	≥1.0m < 3m	20	0	20	7m MFZ + 15 trees/100m	Retention trees will be conifers at least 12.5cm dbh. Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs to extent practicable throughout RMZ.
	S6	Small S6	≤1.0m	20	0	20	5m MFZ	Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs to extent practicable throughout RMZ.
	NCD (Non-Classified Drainage)		Not an FPPR class.	20	0	20	5m MFZ	Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs to extent practicable throughout RMZ.
WETLANDS	W1		≥5ha	50	30	20	25%	Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs to extent practicable throughout the RMZ. Within the specified distance , if a reserve is not used to achieve retention objective, preferentially remove Dominant and Co-dominant conifer stems and focus retention on merchantable Intermediate stems.
	W3		1ha < 5ha	30	15	15	25%	
	W5		Wetland complex FPPR 48(2)	50	30	20	25%	
	NCW (Non-Classified Wetland)		<1ha in size.	10	0	10	25%	
LAKES	L1	A	>5ha ≤500ha	250	200	50	25%	Retain undermerch conifer (<12.5cm dbh), deciduous, wildlife trees, stubs, and shrubs to extent practicable throughout the RMZ. Within the specified distance , if a reserve is not used to achieve retention objective, preferentially remove Dominant and Co-dominant conifer stems and focus retention on merchantable Intermediate stems.
	L1	AM	>500ha ≤1000ha	250	100	150	25%	
	L1	B	>500ha	100	50	50	25%	
	L1	C	>5ha ≤500ha	100	50	50	25%	
	L3		1ha ≤ 5ha	30	15	15	25%	
	NCL (Non-Classified Lake)		<1ha in size.	10	0	10	25%	

3.5. Objectives set by government for fish habitat in fisheries sensitive watersheds

In addition to the definitions in subsection 1.1 of this FSP, the following definitions apply to the results and strategies in subsection 3.5.

“Active Floodplain” means any level area with alluvial soils, adjacent to streams, which is flooded by stream water on a periodic basis and is at the same elevation as areas showing evidence of : flood channels free of terrestrial vegetation, rafted debris, or fluvial sediments newly deposited on the surface of the forest floor or suspended on trees or vegetation and recent scarring of trees by material moved by flood waters. Source:

<https://www.for.gov.bc.ca/ftp/hfp/external/!publish/FPC%20archive/old%20web%20site%20contents/fpc/fpcguide/riparian/ripar2.htm>

“Alluvial Fans” means a cone-shaped deposit of sediment formed where a stream decreases in gradient and becomes laterally unconfined as it emerges from the confines of steeper areas. Fans can occur wherever channels lose confinement in lower, mid, and upper slope areas. Source:

<https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh57.htm>

“Below a Moderate Rating” has the same meaning as in Table 11 of the *Protocol for Evaluating the Potential Impact of Forestry and Range Use on Water Quality 2018 (Water Quality Effectiveness Evaluation 2018)* and is the numeric quantity of less than or equal to 1.0 m³ of Total Volume Fine Sediment Generated (WQ Index) as shown in the Protocol.

“Fine Sediment” is defined as the “finer textured materials under 1mm diameter – fine sand, silt and clay portion of the material matrix” Source: *footnote 2, page 1 of the FREP Protocol for Evaluating the Potential Impact of Forestry and Range Use on Water Quality 2018 (Water Quality Effectiveness Evaluation 2018)*.

“Lacustrine surficial geology” is a surface sediment produced by, or belonging to, lakes Source: *Land Management Handbook 47 Silviculture Prescription Data Collection Field Handbook (2000)* (<https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh47.pdf> p. 113)

“Glaciofluvial surficial geology” is a surface sediment deposit made by streams flowing from glaciers. Source: *Land Management Handbook 47 Silviculture Prescription Data Collection Field Handbook (2000)* (<https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh47.pdf> p. 112)

“Gentle-Over-Steep terrain” is as defined in the order with the following limits added for clarity:

“**Gentle**” refers to terrain 0% to 26% downslope gradient, and

“**Steep**” refers to terrain that is considered moderately steep to steep and is greater than or equal to 50% downslope gradient. Source: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/resource-roads/engineering-manual/terrain_stability_bill_grainger.pdf

“Qualified Registered Professional” means a member of a self-regulating profession that ensures its members are competent in their field of practice.

“Sediment Control Plan” means a plan developed prior to works starting by a Qualified Registered Professional that outlines the sediment control best management practices that will be used to control sediment production at road crossings or along road sections. The sediment control plan will be consistent with and use the standard best management practices outlined in <https://library.fpinnovations.ca/en/permalink/fpipub40893>. Sediment control plans are also part of an engineered design for construction and replacement of fish stream crossings.

“Table 1 and Table 2 FSWs” are those Fisheries Sensitive Watersheds listed in Tables 1 and 2 in Order.

Table 1

FSW	Unit	ECA %
f-7-006 (Gluski Creek)	1,2	25
f-7-007 (Forfar Creek)	1,2	25
f-7-008 (Kynoch Creek)	1,2	25
f-7-009 (Bivouac Creek)	1,2	30
f-7-011 (Van Decar Creek)	1,2	19
f-7-012 (Sidney Creek)	1,2,3	17
f-7-013 (Paula Creek)	1,2,3	17
f-7-014 (Sandpoint Creek)	1,2	21
f-7-015 (Narrows Creek)	1,2	20

Table 2

FSW	ECA %
f-7-016 (Frypan Creek)	19
f-7-017 (Lovell Creek)	19
f-7-018 (Ankwill Creek)	20

“WQEE” means the FREP *Protocol for Evaluating the Potential Impact of Forestry and Range Use on Water Quality 2018 (Water Quality Effectiveness Evaluation 2018)* and for the purposes of the results and strategies for FSWs is carried out by a qualified registered professional.

Area of Application:

The Fisheries Sensitive Watersheds within the Fort St. James FDU are identified in Schedule 1 of the Order – *Fisheries Sensitive Watershed Fort St. James Forest District*, effective March 22, 2018 and are represented in the Table 1 and Table 2 FSWs in the results and strategies.

Result and Strategy:

1. The results and strategies that apply to equivalent clear cut area in Objective 1 of the Order for both Table 1 and 2 FSWs are the required ECA (%) thresholds in Table 1 and 2 of the Order and,
 - a) the ECA (%) will be calculated using the most recent Omineca approach which is consistent with the Provincial Cumulative Effects Framework reporting (<https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/cumulative-effects-framework/value-assessments-protocols/aquatic-ecosystems>) and will account for the primary forest activities that will be implemented by

the holders of this FSP and other licensees within the FSW prior to carrying out the primary forest activity.

2. The result and strategies during primary forest activities that apply to old growth attributes and long term large woody debris (LWD) recruitment to the stream channel in Objective 2 of the Order for both Table 1 and 2 FSWs are:
 - a) Implement primary forest activities such that the holders of this FSP retain unharvested the riparian area as defined in the Order on an S4 or S6 stream reach except;
 - i) for an access structure crossing the stream where the total area disturbed by access structures and past primary forest activities on the entire length of a subject S4 or S6 reach will result in no more than 10% of the riparian area of the assessed S4 or S6 reach being in a non old-growth condition as defined in the Order, where
 - (1) The upper and lower bounds of the subject S4 and S6 reach will be determined using field confirmed stream widths, and
 - (2) The stream reach will be considered fish bearing unless a Qualified Registered Professional determines fish bearing status or there is an existing fish inventory that provides information on fish presence for that stream reach.
3. The result and strategies that apply to fine sediment production in Objective 3 for both Table 1 and 2 FSWs for all active road crossings on fish streams, direct tributaries to fish streams, and active road sections connected to fish streams, are:
 - a) A holder of this FSP will, during the construction of these active road crossings and road sections have best management practices in place and a sediment control plan to minimize fine-sediment production during work activities and prior to first use;
 - i) complete a WQEE, and
 - ii) implement the works and mitigation measures necessary for the predicted fine sediment production to be kept below a moderate rating as determined using the WQEE protocol, and
 - iii) not use the road crossings or road sections until the works and mitigation measures are complete and at a stage where they will maintain the WQEE predicted fine sediment production below a moderate rating.
 - b) Within the 6 months prior to first use for primary forest activities on existing active crossings and the road sections by a holder of this FSP where they are prime maintainers, the holder of this FSP will complete a WQEE at each crossing and road section, and
 - i) carry out the works and implement the mitigation measures necessary for the predicted fine sediment production to be kept below a moderate rating as determined using the WQEE protocol, and

- ii) not use the crossings or road sections until the works and mitigation measures are complete and at a stage where they will maintain the WQEE predicted fine sediment production below a moderate rating.
 - c) If a holder of this FSP is not the prime maintainer of the existing active crossing or road section, they will obtain and review the WQEE completed by the prime maintainer to ensure works and mitigation measures are in place and their use will not cause those works and mitigation measures to be ineffective, and
 - i) if the road section prime maintainer does not have a WQEE available, the holder of this FSP will complete one and provide the fine sediment rating information, required works and mitigation measures to maintain the predicted fine sediment production to below a moderate rating to the road section prime maintainer, and
 - ii) if the prime maintainer will not complete the required works or mitigation measures in time for use by a holder of this FSP, then that holder of this FSP will complete the required works or mitigation measures referenced in the WQEE before their first use of the existing active crossings or road sections, and
 - d) A holder of this FSP will monitor the active crossings and road sections during active use to ensure previously completed works and mitigation measures implemented remain in a condition to maintain the WQEE predicted fine sediment production below a moderate rating and,
 - i) suspend active use and carry out necessary works and mitigation measures when the FSP Holder identifies that weather conditions or the continued use of the crossing or road section may result in fine-sediment production achieving a moderate rating or higher, and
 - ii) carry out necessary works and mitigation measures to maintain the WQEE predicted fine sediment production below a moderate rating for the period the road is not actively used for primary forest activities if the FSP Holder is responsible for road maintenance.
4. The result and strategies in respect of active roads crossing fish streams for Objective 4 of the Order for both Table 1 and 2 FSWs is for a holder of this FSP to ensure crossings on fish streams are:
- a) For new crossings, install engineer designed and certified open bottomed structures that preserve the maximum pre-crossing stream channel width and maintain the natural roughness of the stream channel bed at the crossing site, or
 - b) For replacement structures, install engineer designed and certified open bottomed structures that maintain the natural roughness of the stream channel bed and accommodate the maximum natural stream channel width, or the maximum re-established stream channel width and re-establish the natural roughness in the case of the removal of a closed bottom structure, using the undisturbed stream channel within the first 20m upstream of the crossing as a benchmark condition, and

- c) For new crossings, deactivations and replacement of structures involving instream works, the works will follow the Omineca Regional Timing Windows (https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/working-around-water/terms_conditions_timing_omineca.pdf) in effect at the time, and
 - i) Follow a sediment control plan for the works that will minimize fine sediment production during work activities and maintain the WQEE predicted fine sediment production below a moderate rating at completion of the works.
- 5. The result and strategy that applies to Objective 5 of the Order for a Table 1 Unit 1 FSW is a holder of this FSP will not conduct timber harvesting in Unit 1 of each FSW except for the purpose referenced in this FSP section 6.
- 6. The result and strategy that applies to new access structures in Objective 6 of the Order for a Table 1 Unit 1 FSW is a holder of this FSP will not construct a new access structure within a Table 1 Unit 1 FSW except where it can be documented that no other practicable option to gain access to timber beyond Unit 1 using the following criteria:
 - a) A qualified registered professional determines and provides a rationale that a new access structure outside the Unit 1 area will require construction that will increase the likelihood of fine sediment production into the stream over that expected within the Unit 1 area,
 - b) A qualified registered professional determines and provides a rationale that a new access structure outside the Unit 1 area will increase the likelihood of landslides into the stream over that expected within the Unit 1 area, or
 - c) The new access structure is a replacement stream crossing for one that a qualified registered professional determines and provides a rationale that due to its condition and location is either unsafe, or unable to maintain a WQEE predicted fine sediment production below a moderate rating if use is continued,
 - i) In which case the qualified registered professional will develop a sediment control plan to guide how the existing access structure will be deactivated, works completed and mitigation measures implemented to maintain a WQEE predicted fine sediment production below a moderate rating.
- 7. The result and strategy that applies to road density on unstable terrain for Objective 7 for a Table 1 FSW and Objective 6 for a Table 2 FSW in the Order is a holder of this FSP, will:
 - a) Prior to carrying out road construction within the FSW, review existing terrain mapping and slope stability classification to identify areas of class IV and V terrain coupled to fish bearing streams as well as their directly connected non-fish bearing tributaries, and
 - b) in the case where this mapping does not exist, identify slopes >50% in the field coupled to fish bearing streams as well as their directly connected non-fish bearing tributaries, and

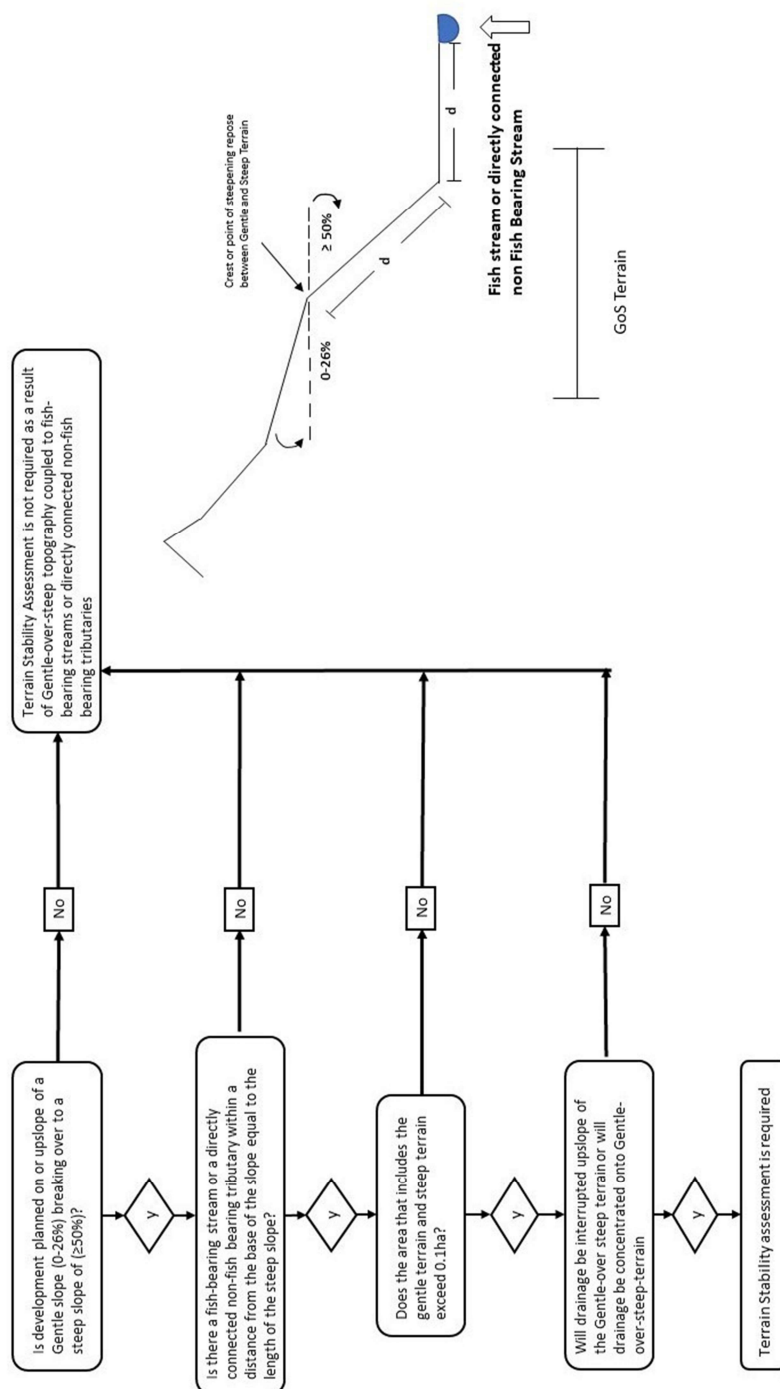
- c) engage a qualified registered professional to conduct a terrain stability assessment where a road is proposed through an area containing the conditions of a) and b) to identify potentially unstable slopes along the proposed road route, and
 - d) follow the practice recommendations from the qualified registered professional regarding identified potentially unstable slopes and not exceed a road density of 0.15km/km² on these identified potentially unstable slopes to maintain a low hazard category.
8. The result and strategy for Objective 8 in the Order for a Table 1 or Table 2 FSW for primary forest activities on gentle-over-steep terrain is:
- a) A holder of this FSP will, for gentle-over-steep terrain that is coupled to fish-bearing streams as well as their directly connected non-fish bearing tributaries, use “Gentle-over-steep destabilization avoidance flowchart” applied to polygons of “Gentle-Over-Steep” terrain greater than 0.1ha in size to determine if a Terrain Stability Assessment is required. Where a Terrain Stability Assessment is required on an area as per Flowchart 1 the Holder will:
 - i) Engage a qualified registered professional to conduct a terrain stability assessment and provide recommended management strategies to avoid destabilization of gentle-over-steep terrain as a result of primary forest activities, and
 - ii) Complete and implement the recommended management strategies from the terrain stability assessment completed in (i), if carrying out primary forest activities in the area referred to in paragraph 8(a).
9. The result and strategy for primary forest activities on alluvial fans and/or floodplains that applies to Objective 5 for a Table 2 FSW in the Order is prior to submission of cutting or road permits:
- a) A holder of this FSP will engage a qualified registered professional to spatially identify alluvial fans and active floodplains in the development area, and
 - b) Prior to carrying out primary forest activities within the alluvial fans or floodplains identified in 9(a), a qualified registered professional will be engaged to :
 - (1) Provide recommendations to the FSP holders to avoid or mitigate the extent of disturbance and plan primary forest activities such that they do not have a material adverse effect on erosion, sedimentation, terrain instability and stream channel disturbance that would interfere with natural hydrogeomorphic processes and natural channel morphology.
 - c) The holder of this FSP will implement the recommendations provided by the qualified registered professional engaged in 9(b) when carrying out primary forest activities.
10. The result and strategy for primary forest activities on lacustrine or glacio-fluvial surficial geology that applies to Objective 7 for a Table 2 FSW, is the holder of this FSP will:
- a) Prior to carrying out primary forest activities, engage a qualified registered professional to:

- i) Identify lacustrine or glacio-fluvial surficial geology that are coupled to fish-bearing streams as well as their directly connected non-fish bearing tributaries, and
 - ii) Provide recommendations to avoid or mitigate disturbance on these areas that may have a material adverse effect through the transport of sediment and debris to coupled fish-bearing streams as well as their directly connected non-fish bearing tributaries when carrying out primary forest activities, and
- b) The holder of this FSP will implement the recommendations to minimize disturbance on these areas during primary forest activities.

Flowchart 1



Gentle Over Steep Slope Destabilization Avoidance Flowchart



3.6. Objectives set by government for water in community watersheds

There are no community watersheds within the Vanderhoof or Fort St. James FDUs.

3.7. Objectives set by government for wildlife and biodiversity – landscape level

The Agreement Holders participate with other Prince George TSA licensees through the Licensee Landscape Objectives Working Group (LLOWG) in the collaborative management of old forest, interior forest, and young forest patch size requirements to meet the objectives of the *Order Establishing Landscape Biodiversity Objectives for the Prince George Timber Supply Area* October 20, 2004. Reports are generated annually by the LLOWG for harvest activities for the past April 1 to March 31 period and provided to the Ministry of Forests, Omineca Region Old Growth and Biodiversity Specialist or designate.

“**ADA**” has the same meaning as that in section 3.12 of this FSP.

“**BEC**” means the Biogeoclimatic Ecosystem Classification system which is the BC Ministry of Forests method of classifying and managing sites on an ecosystem basis.

“**Interior Old Forest**” has the same meaning as in the Order.

“**mBEC**” means merged BEC and is the unit of assessment for Old Forest and Interior Old Forest.

“**NDU**” means natural disturbance unit and is the unit of assessment for Young forest patch size as described in the Order.

“**Old Forest**” has the same meaning as in the Order.

“**Order**” means the *Order Establishing Landscape Biodiversity Objectives for the Prince George Timber Supply Area* October 20, 2004.

“**Trend**” means a general direction in which something is developing or changing.

“**Young Forest**” has the same meaning as in the Order.

Result and Strategy:

1. The Agreement Holders’ Primary Forestry Activities within an ADA will not consider the objectives of the Order Establishing Landscape Biodiversity Objectives for the Prince George Timber Supply Area, October 20, 2004.
2. The Agreement Holders, within the Vanderhoof FDU and Fort St. James FDU, outside of an ADA, will comply with the Old forest and Interior Old Forest targets in the Order.
3. If an mBEC is deficient in old forest or interior old forest, the Agreement Holders will not harvest old forest or interior old forest within the mBEC,
 - a) until the mBEC has achieved the minimum percent of old forest or old interior forest, or

- b) until the Agreement Holder receive approval for a recruitment strategy for the mBEC, or
 - c) until a recruitment strategy prepared by another licensee is approved for the mBEC, in which case the Agreement Holders will follow that recruitment strategy.
4. The Agreement Holders will participate in the LLOWG to manage young forest patch size towards the distribution in the Order by NDU measured on a 5yr interval.
- a) If a trend toward the young forest patch size distribution cannot be achieved, the Agreement Holders will participate with the LLOWG to provide the appropriate government agency with:
 - i) A rationale for the trend away from the patch size distribution, and
 - ii) A strategy for how the objective will be achieved in the shortest time as is practicable with consideration of the Agreement Holders' harvesting rights.

3.8. Objectives set by government for wildlife and biodiversity – stand level

3.8.1. Wildlife tree retention

High value wildlife trees/areas are or contain large veteran trees with a well branched structure or other trees with cavity nests, hollow stems or internal decay, stick nests, large witch's brooms, bear dens, evidence of active feeding on the tree, or associated with mineral licks and game trails.

Areas most suitable for long-term Wildlife tree recruitment are areas not anticipated to be required to exercise harvesting rights for the period of time required for these areas to develop attributes consistent with a mature seral condition.

“**ADA**” has the same meaning as that in section 3.12 of this FSP.

“**WTR**” means Wildlife Tree Retention.

Result and Strategy:

1. The WTR on the portion of total area of cutblock within an ADA will be 0% of the area within the ADA; and
 - a) For the portion of the total area of cutblock outside the ADA, section 2 below applies to the area of the cutblock outside the ADA.
2. Within each FDU, the Agreement Holders will:
 - a) Ensure for each cutting permit harvested, the total amount of WTR area that relates to those cutblocks in the cutting permit is a minimum of 7% of the total area of cutblocks;
 - b) Ensure for a cutblock greater than 3ha in size, a minimum 3.5% of the total area of that cutblock is in WTR, and the amount of WTR on the cutting permit to which the cutblock relates is a minimum of 7% of the total area of the cutting permit; and

- c) For a cutblock less than or equal to 3ha, there is no minimum WTR, but the Agreement Holders will ensure the amount of WTR on the cutting permit to which the cutblock relates is a minimum of 7% of the total area of the cutting permit.
- d) An Agreement Holder will ensure that the WTR areas specified;
 - i) Have **high wildlife value trees/areas**; unless
 - ii) There are few trees with high value wildlife attributes available, then retention will be located on a priority basis as follows:
 - (1) In areas most suitable for long-term wildlife tree recruitment, and
 - (2) In areas that are representative of the pre-harvest stand.

3.8.2. Restriction on harvesting in wildlife tree retention areas

“Harvest” means to fell and then to remove the timber from the site. The felling alone of timber to address worker safety is not considered as Harvest for the purposes of the following result and strategy.

Result and Strategy:

1. The Agreement Holders, in all FDUs will not harvest timber from a wildlife tree retention area unless:
 - a) the trees on the net area to be reforested for the cutblock to which the wildlife tree retention area relates have developed attributes that are consistent with a mature seral condition, or
 - b) the wildlife tree retention area occupies an access route necessary to access other timber and there is no other practicable route available; in which case the Agreement Holders will retain as much of the WTR as is practicable and establish one or more replacement WTR areas that contain at least an equivalent area and age class, or habitat to that portion of wildlife tree retention area harvested.

3.9. Objectives set by government for visual quality

The Objective set by Government for scenic areas are the following Orders:

1. *Establishment of Scenic Areas (GAR 7(1)) and Visual Quality Objectives (GAR 7(2)) within the Vanderhoof Forest District, Effective September 22, 2008.*
2. *Order establishing Scenic Areas in the Fort St James Forest District Pursuant to Section 7 (1) of the Government Actions Regulation, effective September 20, 2005.*
3. *Order establishing visual quality objectives for the timber supply portion of the Fort St. James Forest District, effective November 2, 2005.*

Area of Application: Vanderhoof and Fort St. James FDU

Table 6. Categories of visually altered forest landscape (FPPR 1.1)

Visual Quality Objective	Extent of Alteration Caused by a Cutblock or Road
Preservation	very small in scale; and not easily distinguishable from the pre-harvest landscape
Retention	difficult to see; small in scale; and (iii) natural in appearance
Partial Retention	easy to see; small to medium in scale; and (iii) natural and not rectilinear or geometric in shape
Modification	very easy to see; and is: (A) large in scale and natural in appearance; or (B) small to medium in scale but with some angular characteristics
Maximum Modification	very easy to see; and is: (A) very large in scale; (B) rectilinear and geometric in shape; or (C) both

Result and Strategy:

1. Within scenic areas in all FDU's, at the completion of Primary Forest Activities carried out by the Agreement Holders:
 - a) The resulting alterations, when assessed from a significant public viewpoint, together with other alterations in the scenic area, achieve the established visual quality objective, as described in Table 6 above.

3.10. Objectives set by Government for Cultural Heritage Resources

In this result and strategy, the following definitions apply;

“CHR” means a cultural heritage resource that is the focus of a traditional use by an Aboriginal people, is of continuing importance to that people and is not regulated under the *Heritage Conservation Act*;

“CHR Evaluation” means an assessment by a qualified person for CHR and includes the following steps:

- i) Evaluation of the location and nature of any CHR;
- ii) Evaluation of the direct impact of proposed forest practices on a CHR;
- iii) Preparation of recommendations to conserve, or if necessary protect a CHR considering the factors in FPPR Schedule 1 (4), to address the objectives of FPPR s.10.

Result and Strategy:

1. The Agreement Holders will, in all FDUs:

- a) Provide information on proposed blocks and roads to First Nations as per the consultation processes defined by government and document CHR brought to the attention of the Agreement Holders through this process.
- b) Conduct a CHR Evaluation of proposed blocks and roads for the presence of CHRs prior to the Agreement Holders submitting an application for a cutting permit or road permit; and
 - i) where CHR are found, the Agreement Holders will ensure primary forest activities are carried out consistent with the recommendations given in the CHR Evaluation; and
 - ii) communicate the results of the CHR Evaluation to the affected Aboriginal group(s) and to the Stuart Nechako Natural Resource District representatives prior to applying for the cutting or road permit.
- c) If encountering a previously unidentified CHR during a primary forest activity:
 - i) modify the activity to the extent necessary to avoid the previously unidentified CHR encountered until a CHR Evaluation is completed;
 - ii) ensure subsequent primary forest activities that are carried out in the CHR area are consistent with the recommendations given in the CHR Evaluation; and
 - iii) communicate the results of the CHR Evaluation to the affected Aboriginal group(s) and to the Stuart Nechako Natural Resource District representatives within 30 days.

3.11. Objectives set by Government for a Recreation Site, Recreation Trail, or Interpretive Forest Site FRPA 180 (i), (j), (k), 181

The Objective set by Government is the following Order:

1. FRPA 181 *Order to Establish Objectives for a Recreation Site, Recreation Trail or Interpretive Site for selected recreation sites in the Fort St. James Forest District* effective April 9, 2001. (*The Vanderhoof Forest District does not have a similar Order under FRPA 181.*)

Result and Strategy:

1. Within each FDU, the Agreement Holders will not carry out primary forestry activities within the boundary of an established recreation site, recreation trail, or interpretive forest site, unless authorized under section 16 of the Forest Recreation Regulation.
2. Within each FDU, prior to applying for a cutting permit or road permit within 100m of the legal boundary of an established recreation site, recreation trail, or interpretive forest site, the Agreement Holders will:
 - a) In cooperation with the District Recreation Officer or designate, identify potential impacts to the recreation site, recreation trail, or interpretive forest site; and
 - b) The Agreement Holders will develop measures necessary to:
 - i) mitigate the potential impact of the cutting permit or road permits on the integrity of a recreation site, recreation trail, or interpretive site that has no established objectives, or
 - ii) mitigate the potential impact of cutting permits or road permits on the integrity and established objectives for a recreation site, recreation trail, or interpretive site that has established objectives.

3.12. Objectives set by Government for Agricultural Development Areas and Settlement Reserve Areas

Result and Strategy:

1. Within all FDU's, the Agreement Holders will undertake to comply with the conditions and practices specified in the Order of the Minister of Agriculture and Lands titled "*Establishing Land Use Objectives Under Section 93.4 of the Land Act for the Purposes of the Forest and Range Practices Act,*" as it was written on November 21, 2006.

4. Measures

4.1. Invasive Plants

For the purpose of these measures the following definitions apply:

“Acceptable Seed” means meeting the minimum grade of Canada Common No. 1 Forage Mixture or Canada No. 1 Ground Cover Mixture as defined by the *Seeds Act Seeds Regulations* and having a Report of Seed Analysis (Seed Certification) that demonstrates the seedlots used do not contain invasive plants.

“Disturbed area or areas disturbed” means contiguous areas of exposed mineral soil greater than 0.1ha, but does not include the running surface of a road unless the running surface has been de-compacted or is a winter road.

“Forestry Contractors” means contractors engaged in harvesting, silviculture and cut block and road layout.

“Invasive Plants” are those listed in the Invasive Plants Regulation

“IAPP” means the Invasive Alien Plant Program maintained by the Provincial Government.

“Priority Invasive Plant Species” means for the applicable geographic area, invasive plants identified in the Nechako and Prince George IPMA as a high priority or on the Regional EDRR list.

“Re-vegetated” means establishment of a 50% cover on areas disturbed that would be reasonably expected to support the establishment of the acceptable forage or ground cover mixture.

“Treatment” means the seeding of areas disturbed within 2 growing seasons.

The following measures will be applied by the Agreement Holders within all FDUs:

1. The Agreement Holders shall use only acceptable seed mixtures during re-vegetation operations.
2. On an annual basis, Agreement Holders’ staff and Forestry Contractors will receive instruction on identification of **priority** invasive plant species.
3. On an annual basis, Agreement Holders’ staff and Forestry Contractors will receive instruction on reporting **priority** invasive plant species locations to the IAPP.
4. On an annual basis, Agreement Holders’ staff and Forestry Contractors will receive information on best practices for preventing the spread of invasive plants during forest management activities.
5. Areas disturbed through harvesting, road construction, maintenance, or deactivation within 200m of an existing road shall receive treatment.

6. Despite 5 above, all disturbed area on newly constructed access roads shall receive treatment to their intersection with the furthest cut block.
7. Despite 5 and 6 above, all disturbed area resulting from the Agreement Holders' harvesting, road construction, maintenance, or deactivation activities that overlap grazing license tenures shall receive treatment.
8. If the treated disturbed areas are not re-vegetated within 2 growing seasons, the area will have a single subsequent treatment.

4.2. Natural Range Barriers

For the purpose of these measures the following definitions apply:

“Natural range barriers or NRBs” mean naturally occurring features that stop or impede livestock movement to and from an adjacent area.

“Mitigation Measures” means a cattle movement control practice or combination of practices that means to lessen the impact of rendering ineffective a natural range barrier.

“Referral” means a notification with a 30-day response deadline to an affected range tenure holder and the District Range Officer or designate about proposed cutblocks and roads and includes a description of the activity and location map in relation to the range tenure.

Within all FDUs:

1. Prior to applying for a cutting permit or road permit within a range tenure, the Agreement Holders:
 - a) Through a referral to the affected range licensee, request information and offer to meet to discuss the potential impact to NRBs of the proposed development.
2. If the District Range Officer or designate or the holder of a range tenure indicates that a proposed cutblock or road will remove or render ineffective a NRB that the range tenure holder depends upon to control their livestock, the Agreement Holders shall:
 - a) Adjust harvest or road building to avoid removing or rendering ineffective the NRB, or
 - b) Develop in cooperation with the range tenure holder(s) mitigation measures that will be implemented.
3. If the range tenure holder does not participate in the referral or development of mitigation measures, the Agreement Holders will provide the range tenure holder and the District Range Officer or designate information on the mitigation measures that will be implemented.
4. The Agreement Holders will implement the mitigation measures within 30 days of the completion of harvest or road construction where practicable if during the grazing season or otherwise before the next grazing season following harvest or construction of road or within any other timeline agreed to with the range tenure holder.

5. Stocking Standards

For the purpose of section 16(1) of the FPPR, section 44(1) of that regulation will apply to each area to which this FSP applies where the Agreement Holders are required to establish a free growing stand.

5.1. General Standards

1. For the area harvested within an ADA, for the purpose of section C.5 of the Order of the Minister of Agriculture and Lands titled “*Establishing Land Use Objectives Under Section 93.4 of the Land Act for the Purposes of the Forest and Range Practices Act*,” section 29 of FRPA will not apply.
2. For the purposes of 16(3) of the FPPR, for each area to which this FSP applies where the Agreement Holders are required to establish a free growing stand:
 - a) The applicable regeneration date and applicable stocking standards referred to in section 44(1)(a) of the FPPR; and
 - b) The applicable free growing height and applicable stocking standards referred to in section 44(1)(b) of the FPPR,are set out in Appendix A opposite the BEC site series that occupies the largest portion of the standards unit, and subject to the special circumstances in section 5.2.
3. The late free growing date for all standard units will be 20 years after the harvest commencement date of the cutblock.
4. The minimum inter-tree distance for all standard units will be 2.0 meters.
5. The stocking standards as described in Appendix A apply to both the regeneration and free growing stocking standards.
6. Uneven aged stocking standards and multi-storied survey procedures will be applied consistent with the current Resource Practices Branch, Silviculture Survey procedures Manual, as amended from time to time, unless specified or varied through provisions of this FSP, on all Standard Units prescribed in a site plan for uneven aged Silviculture systems. The uneven aged stocking standards and application are set forth in Appendix B.
7. Commercial Thinning stocking standards are set forth in Appendix C.

5.2. Special Circumstances

1. Deciduous and brush species will not be considered deleterious competition to crop trees when:
 - a) Located within 20 meters of a classified riparian feature, or
 - b) If not in conflict with an established UWR or WHA for Caribou;

- a. Located within 20 meters of the natural ground of a road ditch line , or
 - b. Located within 20m of a block boundary, or
 - c) In a portion of a standards unit where spruce makes up at least 25% of the crop trees and at least 20% of the spruce crop trees are affected by *Pissodes strobi* (White Pine Weevil), or
 - d) Overstorey deciduous stems if retained at the time of harvest.
2. Minimum inter-tree distance (MITD) can be reduced to 1.6m, where there is a lack of suitable plantable microsites that prevents the achievement of the target regeneration density due to;
 - a) Hygric sites,
 - b) Rocky sites,
 - c) Obstacle planting being used areas with a high potential for cattle congregation,
 - d) Within 5m of the dripline of mature retention,
 - e) Sites where a stump avoidance strategy is employed to manage root rot,
 - f) Xeric sites,
 - g) Plantation failures that require fill planting or under planting,
 - h) Harsh sites where protected microsites are critical for establishment,
 - i) Where site preparation (Site Prep) has occurred (exclusive to mounding and disc trenching).
 3. Exotic or non-acceptable species that are planted in operational research trials not exceeding the lesser of two hectares or 10% of the net area to be reforested in a cutblock will be considered preferred species for that portion of the standard unit.
 4. The regeneration date may be extended to 7 years where natural regeneration or direct seeding is used to achieve regeneration stocking standards.
 5. For blocks not yet declared Regen achieved, where there is an occurrence of wildfire, the area affected within the block may become a new Standard Unit, and the Regen Delay date may be extended by an additional 4 (or 7 for natural regeneration regimes) years from the new disturbance date.
 6. For blocks not yet declared Free Growing achieved, where there is an occurrence of catastrophic fire, the area affected within the block may become a new Standard Unit and the late free growing date may be extended an additional 20 years from the fire disturbance date; with notification given to the District Manager.
 7. In a standard unit consisting of a site series complex of differing site series:
 - a) The preferred and acceptable species for a standard unit will include all of the preferred and acceptable species for all the site series comprising that unit, however potential crop trees will only be preferred or acceptable where they are ecologically suited within the standard unit, and

- b) The target and minimum stocking standard, minimum inter-tree distance, minimum height, regen delay and late free growing date shall be based on the dominant site series.
8. Despite the list of species stated in the stocking standards tables for a site, a species shall be elevated to a preferred species if it made up greater than 20% of gross cruise volume of the original stand, and included as an acceptable species if it made up between 5-20% of the gross cruise volume. Black Spruce however will only be advanced to acceptable (not preferred) regardless of cruise volume.
 9. Well-spaced and Free-growing preferred will apply at the standard unit level as a whole. Well-spaced preferred value will not be a requirement to strata identified within a standard unit at regen and free growing reporting. All other requirements, including target and minimum preferred and acceptable will still apply at the stratification level.
 10. Enhanced stocking standards may be applied to medium, rich and very rich nutrient sites as indicated on the Enhanced Regen and Free Growing Standards table in Appendix A. The enhanced standards will apply to stands planted in excess of 1700 sph and is based on planting density calculated by total trees over total hectares planted.

6. Signatures

Signature of Preparing Forester:



Jaret van der Giessen, RPF
Senior Planning Supervisor
West Fraser Mills Ltd.

Authorized Licensee Signature:

West Fraser Mills Ltd.

Cheslatta Carrier Nation

Kani Forest Tenure Limited Partnership

Appendix A: Even Aged Stocking Standards

Regen and Growing Standards

BGZ	Site Series	Target (p+a)	Min (p+a)	Min (p)	Preferred Species	Acceptable species	Min. FG heights (m)				RGD	Crop tree brush ratio	SSID
							Pli Py Pw	Sx Sb Bl	Fdi	Lw			
ESSF mv1	01	1200	700	600	Sx,Pli	Bl,Fdi,Lw	1.6	0.8	1.0	2.0	4	125	1052354
ESSF mv1	02	1000	500	400	Pli	Bl	1.2	0.6			7	125	1052355
ESSF mv1	03	1000	500	400	Sx,Bl,Pli	Fdi,Lw	1.2	0.6	0.8	2.0	7	125	1052356
ESSF mv1	04,05	1000	500	400	Sx,Bl	Pli	1.2	0.6			4	125	1052357
ESSF mv3	01,04,05,06	1200	700	600	Sx,Bl	Pli	1.6	0.8			4	125	1052358
ESSF mv3	02	1000	500	400	Pli,Sx	Bl	1.2	0.6			4	125	1052359
ESSF mv3	03,07	1000	500	400	Sx,Bl	Pli	1.2	0.6			4	125	1052361
ESSF mv3	08	1000	500	400	Pli,Sx	Bl	1.2	0.6			4	125	1552362
SBS dk	01,04,05,06	1200	700	600	Pli,Sx,Fdi	Lw	2.0	1.0	1.4	2.0	7	150	1052363
SBS dk	02	1000	500	400	Pli,Sx		1.4	0.8			7	150	1052364
SBS dk	07	1000	500	400	Pli,Sx		1.4	0.8			7	150	1052364
SBS dk	03	1200	700	600	Pli,Sx		2.0	1.0			7	150	1052365
SBS dk	08	1200	700	600	Pli,Sx		2.0	1.0			7	150	1052365
SBS dk	09,10	400	200	200	Pli,Sx	Sb	1.4	0.8			4	150	1052366
SBS dw2	01,05,06	1200	700	600	Pli,Sx,Fdi		2.0	1.0	1.4		7	150	1052367
SBS dw2	02	1000	500	400	Pli,Fdi		1.4		1.0		7	150	1052368
SBS dw2	03	1200	700	600	Pli,Fdi		2.0		1.4		7	150	1052369
SBS dw2	04	1200	700	600	Pli,Fdi		2.0		1.4		7	150	1052369
SBS dw2	07	1200	700	600	Pli	Sx,Sb	2.0	1.0			7	150	1052370
SBS dw2	08	1200	700	600	Pli,Sx	Bl,Fdi	2.0	1.0	1.4		4	150	1052372
SBS dw2	09	1200	700	600	Pli,Sx,Fdi	Bl	2.0	1.0	1.4		4	150	1052375
SBS dw2	10	1000	500	400	Pli,Sx	Bl	1.4	0.8			4	150	1052376
SBS dw2	11	400	200	200	Pli,Sx	Sb	1.4	0.8			4	150	1052377
SBS dw3	01,06,08	1200	700	600	Pli,Sx,Fdi	Bl,Lw,Pw,Py	2.0	1.0	1.4	2.0	7	150	1052378
SBS dw3	02	1000	500	400	Pli,Fdi	Sx	1.4	0.8	1.0		7	150	1052380
SBS dw3	03	1200	700	600	Pli	Sx	2.0	1.0			7	150	1052381
SBS dw3	04	1200	700	600	Pli,Fdi	Sx,Bl,Lw,Py,Pw	2.0	1.0	1.4	2.0	7	150	1052383
SBS dw3	05	1200	700	600	Pli	Sx,Sb	2.0	1.0			7	150	1052384
SBS dw3	07	1200	700	600	Pli,Sx	Bl	2.0	1.0			4	150	1052385
SBS dw3	09	1000	500	400	Pli,Sx	Bl	1.4	0.8			4	150	1052387
SBS dw3	10	400	200	200	Pli,Sx,Sb		1.4	0.8			4	150	1052388
SBS mc2	01,04,05,06,08,09	1200	700	600	Pli,Sx	Bl,Lw	1.6	0.8		2.0	7	150	1052389
SBS mc2	02	1000	500	400	Pli	Bl,Sx	1.2	0.6			7	150	1052390
SBS mc2	03	1200	700	600	Pli,Sx	Bl,Sb	1.6	0.8			7	150	1052391
SBS mc2	07	1000	500	400	Pli,Sx,Sb		1.2	0.6			4	150	1052392
SBS mc2	10,11	1000	500	400	Pli,Sx	Bl	1.2	0.6			4	150	1052393
SBS mc2	12	400	200	200	Pli,Sx,Sb		1.2	0.6			4	150	1052394
SBS mc3	01	1200	700	600	Pli,Sx	Bl,Fdi,Lw	1.6	0.8	1.0	2.0	7	150	1052395
SBS mc3	02,03	1200	700	600	Pli	Sx	1.6	0.8			7	150	1052396
SBS mc3	04,07	1200	700	600	Pli,Sx	Bl,Sb	1.6	0.8			7	150	1052397
SBS mc3	05,06	1200	700	600	Pli	Sx,Sb	1.6	0.8			7	150	1052399
SBS mc3	08	1000	500	400	Pli,Sx	Bl	1.2	0.6			4	150	1052400
SBS mc3	09	400	200	200	Pli,Sx,Sb		1.2	0.6			4	150	1052401
SBS mk1	01,05,07	1200	700	600	Pli,Sx,Fdi	Bl	2.0	1.0	1.4		4	150	1052402
SBS mk1	02,03	1200	700	600	Pli	Sx	2.0	1.0			7	150	1052403
SBS mk1	04	1200	700	600	Pli,Fdi	Bl,Sx	2.0	1.0	1.4		7	150	1052404
SBS mk1	06	1200	700	600	Pli	Sx,Sb	2.0	1.0			7	150	1052405
SBS mk1	08	1200	700	600	Pli,Sx	Bl	2.0	1.0			4	150	1052406
SBS mk1	09	1000	500	400	Pli,Sx	Bl	1.4	0.8			4	150	1052407
SBS mk1	10	400	200	200	Pli,Sx,Sb		1.4	0.8			4	150	1052408
SBS wk3	01,04,06,07	1200	700	600	Pli,Sx	Bl	2.0	1.0			4	150	1052409
SBS wk3	02	1000	500	400	Pli	Bl,Sx	1.4	0.8			7	150	1052410
SBS wk3	03	1200	700	600	Pli,Fdi	Sx	2.0	1.0	1.4		7	150	1052411
SBS wk3	05	1200	700	600	Pli	Sx,Sb	2.0	1.0			7	150	1052412
SBS wk3	08	1000	500	400	Pli,Sx	Bl	1.4	0.8			4	150	1052413

Enhanced Regen and Free Growing Standards

								Min. FG tree heights (m)										
BGZ	Site Series	Target (p+a)	Min (p+a)	Min (p)	Enhanced minimum planting density	Preferred Species	Acceptable species	Pli	Py	Pw	Sx	Sb	Bl	Fdi	Lw	RGD	Crop tree Brush ratio	SSID
ESSF mv1	01	1200	700	600	1700	Sx	Bl,Fdi,Lw	1.6	0.8	1.0	2.0					4	125	1071686
ESSF mv1	04,05	1000	500	400	1700	Sx,Bl	Pli	1.2	0.6							4	125	1071687
ESSF mv3	01,04,05,06	1200	700	600	1700	Sx,Bl	Pli	1.6	0.8							4	125	1071688
ESSF mv3	08	1000	500	400	1700	Pli,Sx	Bl	1.2	0.6							4	125	1071689
SBS dk	01,04,05,06	1200	700	600	1700	Pli,Sx,Fdi	Lw	2.0	1.0	1.4	2.0					7	150	1071690
SBS dk	07	1000	500	400	1700	Pli, Sx		1.4	0.8							7	150	1071691
SBS dk	08	1200	700	600	1700	Pli, Sx		2.0	1.0							7	150	1071692
SBSdw2	01,05,06	1200	700	600	1700	Pli, Sx,Fdi		2.0	1.0	1.4						7	150	1071693
SBSdw2	04	1200	700	600	1700	Pli, Fdi		2.0			1.4					7	150	1071694
SBSdw2	08	1200	700	600	1700	Pli,Sx	Bl,Fdi	2.0	1.0	1.4						4	150	1071695
SBSdw2	09	1200	700	600	1700	Pli,Sx,Fdi	Bl	2.0	1.0	1.4						4	150	1071696
SBS dw3	01,06,08	1200	700	600	1700	Pli,Sx,Fdi	Bl,Lw,Pw,Py	2.0	1.0	1.4	2.0					7	150	1071697
SBS dw3	04	1200	700	600	1700	Pli,Fdi	Sx,Bl,Lw,Py,Pw	2.0	1.0	1.4	2.0					7	150	1071698
SBS mc2	01,04,05,06,08,09	1200	700	600	1700	Pli,Sx	Bl,Lw	1.6	0.8			2.0				7	150	1071699
SBS mc3	01	1200	700	600	1700	Pli,Sx	Bl,Fdi,Lw	1.6	0.8	1.0	2.0					7	150	1071701
SBS mc3	04,07	1200	700	600	1700	Pli,Sx	Bl,Sb	1.6	0.8							7	150	1071702
SBS mc3	08	1000	500	400	1700	Pli,Sx	Bl	1.2	0.6							4	150	1071703
SBS mk1	01,05,07	1200	700	600	1700	Pli,Sx,Fdi	Bl	2	1	1.4						4	150	1071704
SBS mk1	04	1200	700	600	1700	Pli,Fdi	Bl,Sx	2	1	1.4						7	150	1071705
SBS mk1	08	1200	700	600	1700	Pli,Sx	Bl	2	1							4	150	1071706
SBS wk3	01,04,06,07	1200	700	600	1700	Pli,Sx	Bl	2.0	1.0							4	150	1071707
SBS wk3	03	1200	700	600	1700	Pli,Fdi	Sx	2.0	1.0	1.4						7	150	1071708

Appendix B: Uneven aged Stocking Standards

Regen and Free Growing Stocking Standards

Target from Appendix A stocking standards (sph)	Layer	Stocking			Target from Appendix A stocking standards (sph)	Layer	Stocking		
		TSS (pa)	MSS (pa)	MSS (p)			TSS (pa)	MSS (pa)	MSS (p)
1200	1	600	300	250	800	1	300	150	150
	2	800	400	300		2	400	200	200
	3	1000	500	400		3	600	300	300
	4	1200	700	600		4	800	400	400
1000	1	400	200	200	400	1	200	100	100
	2	600	300	250		2	300	125	125
	3	800	400	300		3	300	150	150
	4	1000	500	400		4	400	200	200

REGENERATION DELAY

Regeneration date is 7 years. Regen can be met immediately following harvest if the residual stand has no significant damage or pest problems, and meets the minimum stocking standards.

FREE GROWING

The Late Free Growing date is 20 years after commencement of harvest. The Earliest Free Growing date is 24 months after completion of harvest.

SPECIES ACCEPTABILITY AND FREE GROWING HEIGHTS

Preferred and acceptable species and minimum height at free growing are specified in Appendix A.

MINIMUM INTER-TREE DISTANCE

The minimum inter-tree distance for Layers 2-4 is 2m, unless otherwise specified through section 5.2.4.

Minimum inter-tree distance does not apply to Layer 1.

STAND LAYER DEFINITION

Layer 1	Mature	trees $\geq$ 12.5cm DBH
Layer 2	Pole	trees 7.5cm to 12.49cm DBH
Layer 3	Sapling	trees $\geq$ 1.3m height to 7.49cm DBH
Layer 4	Regeneration	trees <1.3m height

APPLICATION

The above standards will be applied on uneven-aged stands having at least three well represented and distinct conifer layer classes. The crown closure of trees in layer 1 and 2 combined must exceed 6%, and layers 3 and/or 4 must also be present.

Appendix C: Commercial Thinning Standards

1. Where a stand is harvested consistent with FPPR section 44(4), it shall be deemed an intermediate harvest where the harvested stand complies with the conditions specified below for a minimum period of 12 months following the completion of harvesting:
 - a. The residual crop basal area ($m^2/ha \geq 7.5cm$ dbh) by Standards Unit (SU) must meet or exceed the average residual basal area specified in Table 7 for the associated leading species, age, and top height, and
 - b. No area greater than 1 ha, or at least 10% of the Standards Unit (SU) area, whichever is less, shall have a residual basal area below the minimum residual basal area specific in Table 7, and
 - c. Trees contributing to the retained basal area must be the species identified as preferred, acceptable, or ecologically suitable in the even-aged stocking standards for the BEC site series in this FSP, and
 - d. Trees contributing to the retained basal area comply with the attributes defined in the Silviculture Surveys Procedures Manual “Free growing damage criteria for single entry dispersed retention stocking standards (SEDRESS) managed stands in Interior Deviation from Potential (DFP) and Layered Surveys.”, except
 - i. A post treatment retained Layer 1 or 2 tree may have a fork above stump height in the bottom 2/3 of the stem where the fork(s) are not appearing to impede height growth.
2. If during the 12-month period following the completion of harvesting, the conditions specified above are not maintained, the licensee shall hold a free growing obligation on the harvested area and the appropriate stocking standards will be applied.

Table 7: Commercial Thinning: Stocking Standard by species

Leading species of stand post treatment	Post thinning stand average top height (m)	Standards Unit post thinning average residual crop basal area (m ² /ha >7.5cm dbh)	No areas >1ha below this minimum post thinning residual crop basal area / maximum of 10% of SU (m ² /ha >7.5cm dbh)
Pli – lodgepole pine	10-15	14-20	12
	16	15-22	14
	17	16-24	15
	18	16-26	15
	19	18-26	15
	20	19-28	16
	21	20-28	17
	22	21-30	18
	23	22-30	19
	24	24-31	20
	25-28	25-32	22
Interior spruce (Sx) or Subalpine fir (Bl)	10-15	12-18	10
	16	14-19	13
	17	16-20	14
	18	17-22	15
	19	18-23	16
	20	19-24	17
	21	20-26	17
	22	22-27	18
	23	23-28	19
	24	24-30	20
	25	25-30	21
	26-28	26-32	22
Interior Douglas-fir (Fdi)	10-15	10-16	10
	16	11-17	10
	17	12-19	11
	18	14-20	12
	19	15-21	13
	20	16-23	14
	21	17-24	14
	22	18-25	15
	23	20-26	16
	24	21-27	17
	25	23-29	18
	26-28	24-32	20

Appendix D Things that are in effect (FPPR 14(2)(b))

FDU	Authority	Item	Effective Date
Fort St. James	FPPR 7(2)	SAR Notice - Northern Caribou	December 30, 2004
Fort St. James	FPPR 7(2)	UWR Notice - Northern Caribou	December 20, 2004
Fort St. James	FRPA 181	Order to Establish Objectives for a Recreation Site, Recreation Trail or Interpretive Forest Site	April 9, 2001
Fort St. James	FRPA 181	Lakeshore Classification: Fort St. James Forest District	August 11, 2000
Fort St. James	FRPA 181	UWR Order U-7-002 Mule Deer	June 19, 2003
Fort St. James	GAR 9(2), 10(1) and 10(2)	WHA Order 7-001 Grizzly Bear	December 8, 2020
Fort St. James	GAR 9(2), 12(1)	UWR Order U-7-003 Mountain Caribou	December 9, 2009
Vanderhoof	FRPA 181	UWR Order U-7-011 Mule Deer	October 6, 2003
Vanderhoof	GAR 9(2), 12(1)	UWR Order U-7-012 Northern Caribou	December 30, 2005
Fort St. James	GAR 9(2), 12(1)	UWR Order U-7-015 Northern Caribou	December 13, 2005
Fort St. James	GAR 9(2), 12(1)	UWR Order U-7-018 Moose	July 4, 2022
Fort St. James	GAR 9(2), 12(1)	UWR Order U-7-019 Mountain Goat	May 31, 2010
Vanderhoof	GAR 9(2), 12(1)	UWR Order U-7-020 Moose	July 4, 2022
Fort St. James	GAR 9(1), 9(2), 12(1)	UWR Order U-7-026 Northern Caribou	May 24, 2016
Fort St. James	GAR 9(2), 10(1)	WHA Order 7-016, 7-019 to 7-022, 7-024 to 7-044, 7-061 Caribou	July 21, 0221
Fort St. James	GAR 9(2), 10(1)	WHA Order 7-023, 7-045 to 7-056, 7-059, 7-060 Caribou	April 22, 2021
Fort St. James	GAR 7(1)	Scenic Areas	September 20, 2005
Fort St. James	GAR 7(2)	Visual Quality Objectives for the Scenic Areas	November 2, 2005
Fort St. James	GAR 14(1) & 14(2)	Fisheries Sensitive Watershed – Fort St. James District	March 12, 2018
Vanderhoof	FPPR 7(2)	SAR Notice - Northern Caribou-	December 30, 2004
Vanderhoof	GAR 7(1)	Scenic Areas	September 22, 2008
Vanderhoof	GAR 7(2)	Visual Quality Objectives for the Scenic Areas	September 22, 2008
Vanderhoof and Fort St. James	FRPA 181	Order Establishing Landscape Biodiversity Objectives for the Prince George Timber Supply Area	October 20, 2004
Vanderhoof and Fort St. James	Land Act 93.4	Establishing Land Use Objectives Under Section 93.4 of the Land Act for the Purposes of the Forest and Range Practices Act (Agriculture Development Areas)	November 21, 2006
Fort St. James	GAR 14(1) & 14(2)	Fisheries Sensitive Watersheds	March 12, 2018

Appendix E: Things that are in effect FPPR 14(3) & (4)

Cutting Permits and Road Permits FPPR 14(3)(j)(k) – See maps for locations.

License	Cutting Permit
A18162	228
A18162	230
A18162	232
A18162	234
A18162	506
A18162	507
A18162	508
A18162	600
A18162	601
A18162	602
A18162	700
A18162	702
A93086	12

License	Road Permit
A18162	R09194
A18162	R09195
A18162	R09196
A18162	R21685
A18162	R22169
A18162	R22884
A93086	R21262

The following blocks are declared under FPPR 14(4) – see maps for locations.

License	FDU	Landscape Unit	Block Identifier	Associated Rds
A18162	Fort St. James	Middle	TAK-001	A18162-TAK-001-SP1 & SP4
A18162	Fort St. James	Middle	TAK-004	
A18162	Fort St. James	Middle	TAL-543A	A18162-TAK-542A-SP1
A18162	Fort St. James	Middle	TAK-807B (701-1)	A18162-TAK-807-SP3
A18162	Fort St. James	Middle	TAK-807C	A18162-TAK-807-SP1