

**Canadian Forest Products Ltd.**



**Mackenzie Fibre Management Corporation**



**Mackenzie Timber Supply Area**

**FOREST STEWARDSHIP PLAN**

*Submitted*  
**November 1, 2018**

*Approved on*

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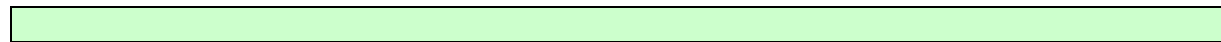
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**1.0 Interpretation**

1.1 In this Forest Stewardship Plan:

- **“Agreement”** means the Forest Licence agreements listed in Table 1.
- **“Agreement holders”** means the companies listed in Table 1 and/or their successors or assigns.
- **“Block roads”** means roads that are not secondary or mainline roads. They occur within a cut block.
- **“Implementation date”** means the date the Term of this FSP begins, as specified in Paragraph 2.2.
- **“FDU”** means a Forest Development Unit as defined in the *Forest Planning and Practices Regulation*.
- **“FPPR”** means the *Forest Planning and Practices Regulation*.
- **“FRPA”** means the *Forest and Range Practices Act*.
- **“FSP”** means this Forest Stewardship Plan.
- **“FLNRORD”** means Ministry of Forests, Lands and Natural Resource Operations and Rural Development.
- **“Mackenzie Fibre”** means Mackenzie Fibre Management Corporation.
- **“Mainline roads”** means permanent, all weather roads including, but not limited to Forest Service Roads. These roads serve as the main access into an operational area.
- **“Secondary roads”** means roads that branch off from mainlines to access groups of blocks. They may be seasonal or all season roads.
- **“THLB”** means Timber Harvesting Land Base
- **“Term”** means the period specified in Paragraph 2.3.

1.2 In this FSP, the singular includes the plural and the plural includes the singular, unless the context indicates otherwise.

1.3 Unless otherwise expressly indicated, or indicated by context, terms used in this FSP have the definition given them, as of the Date of Submission, in FRPA and the Forest Act and the regulations under them.

## 2.0 Date of Submission, Implementation Date, & Term of the FSP

- 2.1 The Date of Submission of this Forest Stewardship Plan, for approval, is November 1<sup>st</sup>, 2018.
- 2.2 The **Implementation Date** of this FSP is to be the approval date.
- 2.3 The **Term** of this FSP is 5 years from the Implementation Date.

## 3.0 Application of the Forest Stewardship Plan

- 3.1 This FSP applies to the **Agreement Holders** and **Agreements** indicated in the following table:

**Table 1: Agreement Holders and Agreements**

Agreement Holder	Agreement Number
Canadian Forest Products Ltd.	FL A15384
Mackenzie Fibre Management Corporation	FL A87345

## 4.0 Identifying Forest Development Units

### 4.1 Forest Development Units in Effect on Date of Submission

This is a replacement FSP for a previously approved FSP for Canadian Forest Products Ltd. – Mackenzie.

### 4.2 New Forest Development Units

The following table lists the FDU in this FSP. Note, unless otherwise limited, all results and strategies, measures and stocking standards apply to this FDU. Refer to Figure 1 for an overview map.

**Table 2: New Forest Development Unit**

FDU Name	Agreement Holder	Agreement Number
Mackenzie	Canadian Forest Products Ltd.	FL A15384
	Mackenzie Fibre Management Corporation	FL A87345

### 4.3 Items Identified in the FDU

The maps included in this **FSP** show the location of the following items that were in effect 4 months before the date this **FSP** was submitted for approval. It is understood that ongoing updates occur and these maps are current based on submission date only.

- (a) Description of items identified at the time of submission of this FSP.

**Table 3: Items identified in the FDU**

Type	Species/Item	FSP maps	FSP section	Related Order(s)
Section 7 notice Species at risk	Mountain Caribou Dec. 2004	No	<b>5.2.1</b>	Partial coverage U7-007 and U7-025
S 9.2 Visual quality	Scenic areas, VQO's	Yes	<b>5.7</b>	
	Established recreation sites	Yes	NA	NA
Biodiversity	Non spatial old forest and old forest interior	No	<b>5.5.1</b>	Non spatial Land use order for Mackenzie district
Biodiversity	Old growth management areas	Yes	<b>5.5.2</b>	Land use order for Mackenzie district
Wildlife Habitat Areas	Mountain Goat	Yes	NA	ORAM-7-01 (U-9-001)
Wildlife Habitat Areas	Northern Caribou	Yes	NA	U-9-035, 9-036, 9-037, 9-038, 9-039, 9-040, 9-102 and 9-103
Ungulate Winter Range	Mountain Goat	Yes	NA	U7-017, U7-029, U7-030
Ungulate Winter Range	Mountain Goat	Yes	<b>5.3</b>	<b>U7-004</b>
Ungulate Winter Range	Elk	Yes	<b>5.3</b>	<b>U7-005, U7-008</b>
Ungulate Winter Range	Elk	Yes	NA	U7-017
Ungulate Winter Range	Stone Sheep	Yes	5.3	<b>U7-006</b>
Ungulate Winter Range	Stone Sheep	Yes	NA	U7-028
Ungulate Winter Range	Stone Sheep	Yes	NA	U9-004
Ungulate Winter Range	Northern Caribou	Yes	5.3	<b>7-001</b>
Ungulate Winter Range	Northern Caribou	Yes	NA	U7-009, U7-007, U7-025, U9-004
Ungulate Winter Range	Moose	Yes	NA	U7-017
Cutting permit		Yes	NA	NA
Road permit		No	Appendix E	NA
Declared area	Previously declared	Yes	NA	NA

As per FPPR s 69 General Wildlife Measures must be followed. Highlighted ungulate winter orders are grandfathered as per FRPA s 181 and s 182.

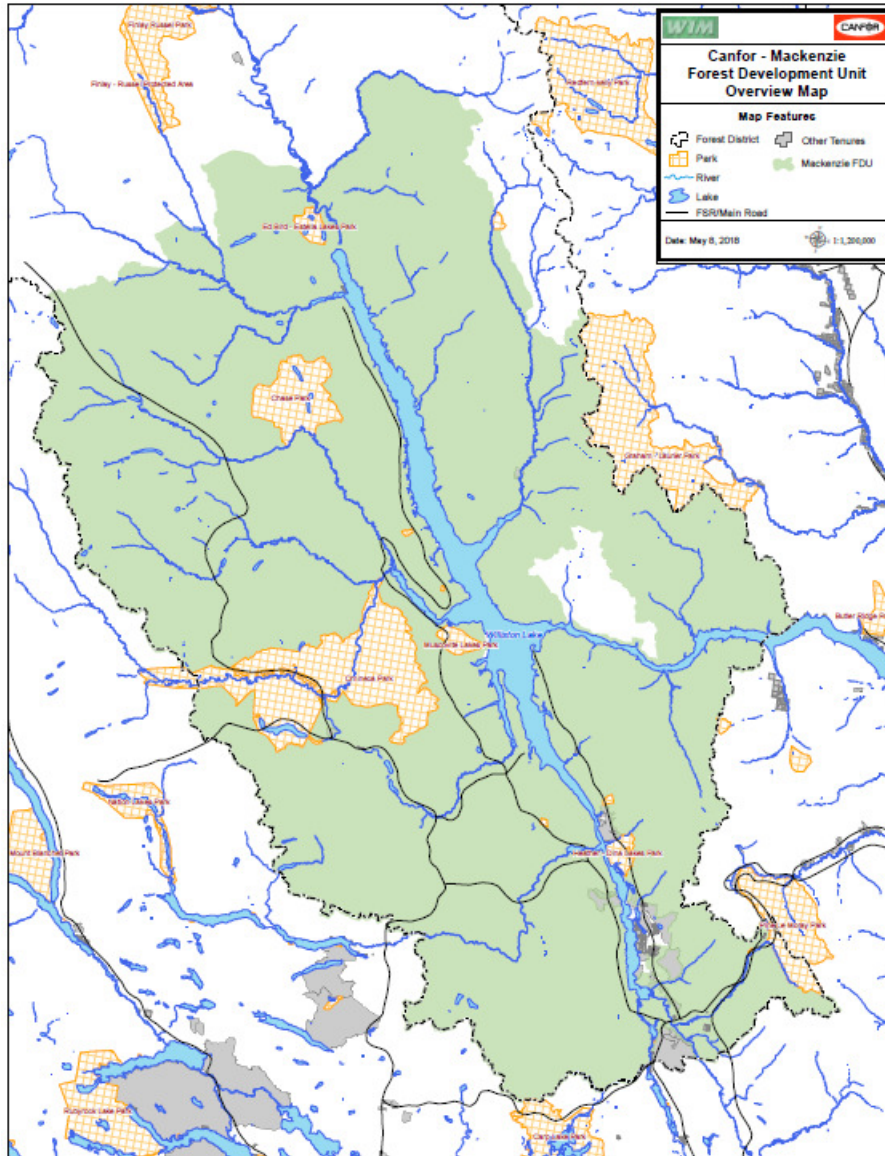


Figure 1: Overview map of Mackenzie Forest Development Unit

## 5.0 Results and Strategies

### 5.1 Objectives Set by Government for Soils - FPPR s.5

- 5.1.1 For the objective set by government for soils as set out in section 5 of the FPPR, in the Mackenzie FDU, the **Agreement holders** adopts, as a result or strategy, sections 35 and 36 of the FPPR for the term of this FSP as those sections were on the date this FSP was submitted.

### 5.2 Objectives Set by Government for Wildlife - FPPR s.7

#### 5.2.1 Section 7 Notice for Species at Risk – Northern Caribou

In relation to the amount, distribution, and attributes identified in the notice (Notice A) entitled “Notice - Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Mackenzie Forest District” issued in December 2004 in accordance with s.7 of the FPPR, the **agreement holders** of this FSP will ensure the result:

The lesser of 10,100 ha or the amount present on the **Implementation date**, of the mature timber harvesting landbase in the Mackenzie Natural Resource District, that meets the distribution and attributes set out in Notice A for the Northern Caribou ecotype for the Term of this FSP is maintained through the following strategy:

- a) The **agreement holders** will review the partial contribution of existing orders U7-007 and U7-025 or future orders to the habitat requirements specified in the notice.
- b) The **agreement holders** will develop a strategy with a wildlife biologist and ministry specialists to address outstanding habitat requirements specified in the notice.
- c) A Qualified Registered Professional will review the strategy in step b) with roads and cutblocks proposed by the **agreement holders** to ensure consistency with that strategy.
- d) The **agreement holders** will not submit any cutting or road permits in habitat areas that meet the distribution and attributes in the notice above, if the result specified above cannot be maintained.

### 5.3 Objectives Set by Government for Wildlife – Grandfathered Orders

For the objectives set by government for FPPR s 7 wildlife there are the following grandfathered orders that apply: U7-001 (Caribou), U7-004 (Mountain goat), U7-005 (Elk), U7-006 (Stone’s sheep) and U7-008 (Elk). The orders contain objectives and more descriptive elements that are similar to general wildlife measures therefore FRPA s 181 and s 182 would maintain the legal status of these orders. The **agreements holders** commit to complying with these orders and offer the following strategies where they lack clarity. These strategies are by no means meant to supersede any official direction provided by government on these orders or amendments to these orders.

#### 5.3.1 Ungulate Winter Range #7-001

**Objective:** Avoid or prevent increased wolf predation on caribou while in the Kennedy Siding UWR area.

**Descriptive element that needs clarity:** “Use appropriate silviculture practices to reduce moose browse”

As a strategy to reduce moose browse the **agreement holders** will adopt the measures specified in U7-025, that specifically address the reduction of moose browse, and apply those measures to meet the related objective in this Ungulate Winter Range order.

**Objective:** Maintain habitat conditions (forage, cover, and snow pack) to support wintering caribou population.

**Descriptive element that needs clarity:** “to avoid terrestrial lichen disturbance, ensure adequate snow cover when harvesting”

As a strategy the **agreement holders** will restrict harvesting activities to a 50cm or greater snowpack threshold to avoid terrestrial lichen disturbance.

### 5.3.2 Ungulate Winter Range #U7-004, U7-005, U7-006, U7-008

**Objective:** For the objectives related to access management in all of the orders above.

**Descriptive element that needs clarity:** No time lines specified.

As a strategy the **agreement holders** will reclaim or debuild roads/trails consistent with the specifications of the orders within 2 years of harvest completion. Any planting will be done in the following year or within 3 years of harvest completion.

## 5.4 Objectives Set by Government for Water, Fish, Wildlife, and Biodiversity within Riparian Areas - FPPR s.8 and s.12(3)

- 5.4.1 The **agreement holders**, when conducting primary forest activities within the Mackenzie FDU, will undertake to comply with the default practice requirements of section 47 (stream riparian classes), 48 (wetland riparian classification), 49 (lake riparian classification), 50, 51, and 52(2) of the FPPR as those sections were on the **implementation date**.
- 5.4.2 For the purposes of section 12 (3) of the FPPR for the retention of trees in the riparian management zones (RMZ), the results that apply to the **agreement holders'** areas of primary forest activity in the Mackenzie FDU are:
- (a) within 30m of an S4 stream, retain a minimum of 20% of the area in an unharvested condition;
  - (b) within 30m of an S5 stream, W3 wetlands, or L3 lake, retain a minimum of 10% of the area in an unharvested condition.
  - (c) within 20m of an S6 stream, retain a minimum of 5% of the area in an unharvested condition.
  - (d) within 5m of a S4, S5, S6 stream, retain over the length of the stream reach naturally occurring ground vegetation, shrubs, advanced regeneration, non-merchantable conifers, and non-merchantable stems, to the extent practicable considering access, safety and partial cutting activities.
  - (e) The minimum targets set out in Table 5 for stream classes S1A, S1B, S2 and S3, W1 and W5 wetlands and L1A and L1B lake classes.



5.4.3 Despite section 5.4.2, the following section 5.4.4 applies to the blocks listed in appendix D:

5.4.4 For the purposes of FPPR section 12 (3) for the retention of trees in the riparian management zones (RMZ), and the cutblocks listed in appendix D, the results that apply to the areas of primary forest activity in the Mackenzie FDU are as per table 4.

Table 4: Retention levels in a Riparian Management Zone for appendix D blocks only

Category	Windthrow Hazard	Retention Amount
Streams S1-A, S1-B, S2, S3; Wetlands W1, W5	Moderate – High	≥ 25% of 100% of the area occupied by trees in the RMZ area
	Low	≥ 0% of 100% of the area occupied by trees in the RMZ area
Streams S4, S5, S6	Low-Moderate-High	≥ 0% of 100% of the area occupied by trees in the RMZ area; <i>or</i> ,
Wetlands W3, Lake L3	Low-Moderate-High	≥ 0% of 100% of the area occupied by trees in the RMZ area
Lakes L1	Moderate – High	≥ 25% of 100% of the area occupied by trees in the RMZ area
	Low	≥ 0% of 100% of the area occupied by trees in the RMZ area

**Table 5 - Riparian Management Area, Reserve Zone and Riparian Management Zone Specifications and Retention Table**

Riparian Class	Riparian Reserve Zone Minimum Width (m)	Riparian Management Zone Minimum Width (m)	Riparian Management Area Minimum Width (m)	Minimum Retention within the RMA.
<b>Streams</b>				
S1 - A	0	100	100	Minimum 25 % of the RMZ area.
S1 - B	50	20	70	Minimum 25 % of the RMZ area.
S2	30	20	50	Minimum 25 % of the RMZ area.
S3	20	20	40	Minimum 25 % of the RMZ area.
S4	0	30	30	As per 5.4.2 a
S5	0	30	30	As per 5.4.2 b
S6	0	20	20	As per 5.4.2 c
<b>Wetlands</b>				
W1	10	40	50	Minimum 25% of the RMZ area.
W3	0	30	30	As per 5.4.2 b
W5	10	40	50	Minimum 25% of the RMZ area.
<b>Lakes</b>				
L1A	0	0	0	
L1B	10	0	10	
L3	0	30	30	As per 5.4.2 b

**5.5 Objectives Set by Government for Wildlife and Biodiversity - Landscape Level - FPPR s.9****5.5.1 Non-Spatial Landscape Biodiversity Objectives**

In relation to Non-Spatial Landscape objectives established under section 93.4 of the Land Act for Mackenzie Forest District, *amended September 23, 2010*, the following result and strategies apply to the Mackenzie FDU.

**Result and Strategy for objective for Old Forest Retention:**

If the harvesting of a cutting permit will cause or continue to cause an old target to be in deficit as per the targets in appendix B, the **agreement holders** will not enter into an agreement for a cutting permit unless there is an approved recruitment strategy for the specific landscape unit or group as per the table in appendix B.

**Result and Strategy for objective for Old Interior Forest Requirements:**

If the harvesting of a cutting permit will cause or continue to cause an old interior target to be in deficit as per the targets in appendix C, the **agreement holders** will not enter into an agreement for a cutting permit unless there is an approved recruitment strategy for the specific biogeoclimatic group as per the table in appendix C.

### 5.5.2 Spatial Old Growth Objectives

In relation to the Old Growth Management Area established under section 93.4 of the Land Act, for *Mackenzie Forest District Area made known September 23, 2010*, the following result applies to the Mackenzie FDU:

#### **Result for objective for Old Growth Management Areas**

The **agreement holders** will ensure that no combination of roads, salvage or harvesting for operational issues exceeds:

- A. 10% of OGMA area for OGMA's less than 50 ha; or
- B. 5% or 40 ha, whichever is less, for OGMA's of 50 ha or greater.

For any planned disturbance in OGMA's as described in A or B, written notification will be provided within cutting permit submissions to **FLNRORD**.

### 5.5.3 Block size, Adjacency and Patch Size Distribution

As per section FPPR 12.1 (3) the **agreement holders** will undertake to comply with FPPR sections 64 and 65 as those sections were at the time of submission, during the term of this plan, for the Mackenzie **FDU**.

## 5.6 Objectives Set by Government for Wildlife and Biodiversity – Stand Level - FPPR s.9.1

### 5.6.1 Wildlife Tree Retention

For the purpose of section 12.5(1) of the FPPR, in relation to the objectives set by government for wildlife and biodiversity at the stand level set out in section 9.1 of the FPPR, the results or strategies that apply to areas of primary forest activity in the Mackenzie **FDU** are:

- (a) If an **agreement holder** completes harvesting in one or more cutblocks during the 12 month period beginning on April 1 of any calendar year, the **agreement holder** will ensure that, at the end of that 12 month period, the total area covered by wildlife tree retention areas at the completion of harvesting that relate to the cutblocks is a minimum of 7% of the total area of the cutblocks, and;
- (b) If an **agreement holder** harvests timber in a cutblock that is greater than 15 hectares in size, the **agreement holder** must ensure that, at the completion of harvesting, the total amount of wildlife tree retention areas that relates to the cutblock is a minimum of 3.5% of the area of the cutblock.

### 5.6.2 Restrictions on harvesting

For the objective set by government for wildlife and biodiversity – stand level as set out in section 9.1 of the FPPR, in the Mackenzie **FDU**, the **agreement holders** will undertake to comply with section 67 of the FPPR for the term of this FSP as that section was on the date this FSP was submitted.

## 5.7 Objectives Set by Government for Visual Quality Objectives and Objectives in Respect of Scenic Areas - FRPA s.180 and s.181, FPPR s.9.2

### 5.7.1 Definitions applicable to this FSP section:

“**Alteration**” means changing or making something different as a result of conducting harvesting or road construction by the **Agreement holder**.

A **Significant Public Viewpoint (SPV)** means a position of importance or consequence to the public, from which a landscape is observed and has relevance to the landscape being assessed.

5.7.2 Scenic areas within the Mackenzie **FDU** are: Estella/Ed Bird Lakes, Fort Ware, Mackenzie Townsite, Omineca/Manson Viewshed Corridors, Peace Arm of Williston Lake, Wasi Lake, Tutizzi Lake, and Highways 97 and 39. These scenic areas apply to the results in sections 5.7.3 and 5.7.4.

5.7.3 The following results and strategies apply in relation to the objectives set by government for Visual Quality set out in section 9.2 (2b) of the FPPR for scenic areas continued under FRPA 180(c) where no visual quality objectives were established.

In this Result:

When evaluated from a **SPV**, the **Alteration** resulting from harvesting conducted by the **agreement holder** will achieve the following results:

In a visual sensitivity class of 1 a result of retention or preservation will be achieved;

In a visual sensitivity class of 2 a result of partial retention or retention will be achieved;

In a visual sensitivity class of 3 a result of modification or partial retention will be achieved

In a visual sensitivity class of 4 a result of modification or partial retention will be achieved

In a visual sensitivity class of 5 a result of maximum modification or modification will be achieved

5.7.4 The following results and strategies apply in relation to the objectives set by government for Visual Quality set out in section 9.2 of the FPPR for scenic areas continued under FRPA 180(c) where there is an established visual quality objective.

In this Result:

When evaluated from a **SPV**, the **Alteration** resulting from harvesting conducted by the **agreement holder** will achieve the following results:

- a) *Preservation (P) VQO/VQC*: Will be, very small in scale and not easily distinguishable from the pre-harvest landscape.
- b) *Retention (R) VQO/VQC*: Will be, difficult to see, small in scale, and natural in appearance.
- c) *Partial retention (PR) VQO/VQC*: Will be easy to see, small to medium in scale, and natural and not rectilinear or geometric in shape.
- d) *Modification (M) VQO/VQC*: Will be very easy to see, and is large in scale and natural in its appearance, or small to medium in scale but with some angular characteristics.
- e) *Maximum modification (MM) VQO/VQC*: Will be very easy to see, and is very large in scale, rectilinear and geometric in shape or both.

## 5.8 Objectives Set by Government for Cultural Heritage Resources - FPPR s.10

*The objective set by government for cultural heritage resources is to conserve, or if necessary, protect cultural heritage resources that are:*

- (a) the focus of a traditional use by aboriginal people that is of continuing importance to that people, and*
- (b) not regulated under the Heritage Conservation Act.*

In this Section:

“**Cultural heritage evaluation**” means the sharing of information and engagement with applicable First Nations, for the purpose of gathering cultural heritage information. This discussion includes, an appraisal of the value of an object, site, or location of a traditional societal practice that is of historical or cultural significance to an aboriginal people. This discussion includes options for mitigating or protection of any impact to that object, site, or location of a traditional societal practice as a result of

the forest practice contemplated. This covers values not regulated under the Heritage Conservation Act and are of continuing importance to aboriginal people.

5.8.1 In relation to the objective set by government for cultural heritage resources set out in section 10 of the FPPR, the strategies that apply to the Mackenzie **FDU** are:

- a) before an **agreement holder** submits an application for cutting authority, the agreement holder will:
  - (i) Gather and summarize information as per consultation processes defined by government.
  - (ii) Ensure that a **cultural heritage evaluation** is completed.
- b) Where an **agreement holder** receives site specific information or identifies a cultural heritage resource the **agreement holder**, will:
  - (i) Make a record of the communication with the affected person or group.
  - (ii) Identify the location and attributes of the cultural heritage resource in question, both on a map and on the ground;
  - (iii) evaluate the direct impact of the planned development on the cultural heritage resource;
  - (iv) conserve or protect the cultural heritage resource at the known location, considering:
    - (A) the relative value or importance of the cultural heritage resource to the continued traditional use by an aboriginal person;
    - (B) the relative abundance or scarcity of the cultural heritage resource;
    - (C) the extent of the traditional use of the cultural heritage resource, and;
    - (D) the impact on the **agreement holder** government granted timber harvesting rights in conserving or protecting the cultural heritage resource,
  - (v) Provide the results of the **cultural heritage evaluation** to government upon request.
- c) The **agreement holder** will ensure all primary forest activities will be consistent with the recommendations given in a **cultural heritage evaluation** referred to in subparagraph (a), and
- d) Where a previously unidentified cultural heritage resource feature is encountered or made known during primary forest activities, the **agreement holder** will cease operations to the extent necessary to protect the feature, until the process described in b) can be carried out.

## 6.0 Measures to Prevent the Introduction or Spread of Invasive Plants - FRPA s.47, FPPR s.17

For the purposes of this measure:

**“Areas Disturbed”** means: areas of exposed mineral soil greater than 0.1 ha contiguous that are associated with access structures or harvesting activities excluding the running surface of permanent roads or pullouts.

**“Re-vegetation”** means the establishment of non-invasive plants over the **Areas Disturbed** such that an estimated overall percent foliage cover of 50% of the area is achieved. This would include natural

fill-in of other non-invasive plants. Re-vegetation could include seeding for purposes other than invasive plants.

“**Seeded**” means using seed that has been checked to ensure regulated or undesirable plants are not introduced and a “certificate of seed analysis” has been obtained as proof of this check. Canada Common Number 1 Forage Mixture or a native seed mix will be used. Seed containing invasive plants will not be used.

“**Area of known**” means areas where invasive plants are known to occur based on the provincial database system for invasive plants and a 500m buffer around those areas.

“**Provincial resources**” means the provincial database system for invasive plants, any relevant reports from the Northwest Invasive Plant Council and qualified **FLNRORD** staff.

The measures for preventing the introduction or spread of invasive plants in the Mackenzie FDU are:

- (a) Invasive Plants are those plants listed in the Invasive Plants Regulation.
- (b) On an annual basis the **agreement holder** will train woodlands staff and longer term (greater than 1 year) woodlands contractors through annual training in:
  - (i) Identifying invasive plants that exist or threaten to establish within the **agreement holder’s** Mackenzie FDU and;
  - (ii) Best Practices for preventing the spread of invasive plants (current document Best Practices for preventing the spread of invasive plants during forest management activities, 2013, or replacement document).
- (c) on an annual basis, the **agreement holder** will identify **area of known** sites and newly identified sites of invasive plants using information gathered from the **provincial resources** and **agreement holder’s** staff;
- (d) Any cutblocks that overlap areas identified in part (c) will have that information identified in the site plan. The site plan will identify at least 2 best practices to follow to prevent the spread of invasive plants.
- (e) where the **agreement holder’s** staff or contractors identify new sites of invasive plants, within the Mackenzie **FDU**, a record containing site location and plant species will be documented and reported using an accepted format (to the Northwest Invasive Plant Council) such as the application “report a weed”.
- (f) within the sites in subparagraph (c), **areas disturbed** by the **agreement holder** will be **seeded** within two years of completion of the harvest/construction to minimize seedbed available for colonization by invasive plants. If the **areas disturbed** are not successfully **re-vegetated** within two years of being disturbed, the seeding will be repeated annually until the area is **re-vegetated**.

## 7.0 Measures to Mitigate the Loss of Natural Range Barriers - FRPA s.48, FPPR s.18

For the purposes of this measure:

“**Natural range barrier**” means:

- a river, rock face, dense timber, or any other naturally occurring feature that impedes livestock movement and;

- is located in an area that is subject to a **Range tenure** and;

“**Range tenure**” means an existing or advertised agreement under the Range Act four months before the date that this **FSP** is submitted for approval.

As per section 48 of the **FRPA** and section 18 of the **FPPR** the following measures will be taken in the Mackenzie **FDU** that contain or are adjacent to **Range tenures**, to mitigate the effect of removing or rendering ineffective **Natural range barriers** by the **agreement holder**:

1. On an annual basis, provide to **Range tenure** holders cutblock plans for comment.
2. Where the **Range tenure** holder or other qualified person indicates the planned development will remove or render ineffective a natural range barrier the **agreement holder** will:
  - a) reach an agreement with the **Range tenure** holder on mitigation measures prior to harvesting; and,
  - b) implement the agreed upon mitigation measure within one snow free season following harvesting, unless an
  - c) alternative timeframe is agreed upon by the **agreement holder** and the **Range tenure** holder;
  - d) if the **agreement holder** and **Range tenure** holder cannot agree on mitigation measures, the **agreement holder** will implement alternative mitigation measures. Examples of mitigation measures include, but not limited to, cattle guard, wing fencing and fence line establishment.
3. Where identified after harvesting or road construction that a **Natural range barrier** has been removed or rendered ineffective by the **agreement holder**, the **agreement holder** will follow the same process as per 2 above except the timeline will be within one snow free season following knowledge of that **Natural range barrier** break.

## 8.0 Stocking Requirements

Definitions:

“**Ecologically suitable**” means: the preferred and acceptable species by BEC variant and site series listed in Appendix F. All ecologically suitable species listed are commercially valuable.

### 8.1 General Standards

For the purposes of section 16(1) of the Forest Planning and Practices Regulation, section 44(1) of that regulation will apply to every area where the **Agreement holder** of this **FSP** is required to establish a free growing stand.

For the purposes of section 16(3) of the Forest Planning and Practices Regulation, for each area where an **Agreement holder** of this **FSP** is required to establish a free growing stand

- (a) The applicable stocking standards and applicable regeneration date referred to in section 44(1)(a) of the Forest Planning and Practices Regulation, and
- (b) The applicable stocking standards and applicable free growing height referred to in section 44(1)(b) of the Forest Planning and Practices Regulation

Are subject to the Variations from General Standards in paragraph 8.2, as set out in Appendix F opposite the Biogeoclimatic Site Series that applies to the Standard Unit.

The holders of this **FSP** do not propose to carry out, on an area; timber harvesting that is restricted to

- (a) Commercial thinning, removal of individual trees or a similar type of intermediate cutting,
- or
- (b) Harvesting of special forest products

And, as such, section 44(4) of the Forest Planning and Practices Regulation has no application to this plan.

#### 8.1.1 **Free Growing Date**

The late free growing date for all Standard Units will be 20 years after the commencement date of the cutblock.

#### 8.1.2 **Application of Regeneration standard**

For the implementation of table F1 in Appendix F the **agreement holders** will use the standards to manage for the purposes of all reforestation efforts up to but not including Free Growing assessments. This includes, but not limited to surveys, assessments and replanting or fill planting as required to maintain the standard.

#### 8.1.3 **Minimum Preferred Well Spaced Density at Free Growing**

The minimum preferred well-spaced density at free growing is equal to the minimum preferred and acceptable well-spaced density at regeneration delay as described in Appendix F, tables F1 and F2.

#### 8.1.4 **Target Density at Free Growing**

The target density at free growing is equal to the target density at regeneration delay as described in Appendix F, tables F1 and F2.

#### 8.1.5 **Maximum Coniferous Density**

The maximum density for Lodgepole Pine leading stands in all site series is 20,000 countable coniferous stems per hectare in the Northern Interior Forest Region. All other species and mixed pine stands in all site series are limited to a maximum of 10,000 countable coniferous stems per hectare.

#### 8.1.6 **Clarification**

Engelmann Spruce (Se) can be replaced with Interior Spruce (Sx) if the use of the Interior Spruce is consistent with the provincial seed transfer guidelines or the "Chief Forester's Standards for Seed Use" when they are established;

#### 8.1.7 **Deciduous Stems Retained at Harvest**

For any opening that is being managed as an even aged stand, any overstory deciduous stems that were retained at the time of harvest will be considered non-deleterious competition for the purpose of free growing assessment.



## 8.2 Variations from General Standards

Despite section 8.1, an **Agreement holder** of this **FSP** will apply the following rules or stocking standards in the following circumstances:

### 8.2.1 Riparian Management Zones

Where brush and deciduous has been retained as part of retention requirements in FSP sections 5.4.2 and 5.4.4 it will be considered non deleterious.

### 8.2.2 Pine Stem Rust Spacing Exemption

In pine-leading strata with greater than 20% incidence of stem rusts and exceeding the Maximum Coniferous Density stated in 8.1.5, the stratum will be exempt from the requirements of Maximum Coniferous Density stated in 8.1.5.


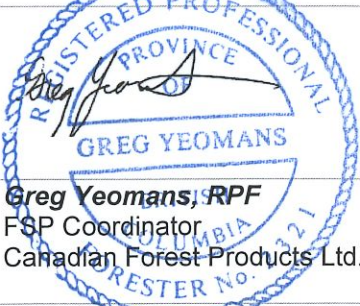
### 8.2.3 Fuel Hazard Mitigation


Fire management stocking standards will be applied in the following circumstances:


- (a) Within 2 km ( $\pm 200$  m) of a Wildland Urban Interface as identified within the Provincial strategic threat analysis map(s).
- (b) Within 2 km ( $\pm 200$  m) of other high value infrastructure or other high resource value on the land base as identified on approved Fire management plan values maps.
- (c) Those areas identified as appropriate for a fire management stocking standard within the District fire management plan.
- (d) Fire management stocking standards will be adjusted in these areas in the following manner:
  - i. Deciduous shall be considered non-deleterious.
  - ii. Coniferous densities shall be half of the required stocking for the site series.
- (e) Within approximately 2 km of other high value infrastructure or other high resource value on the land base as identified on approved Fire management plan values maps.
- (f) Those areas identified as appropriate for a fire management stocking standard within the District fire management plan.

When applying fire management stocking standards deciduous shall be considered non-deleterious and coniferous densities shall be half of the required stocking for the moisture regime.

**9.0 Required Signatures - FRPA s. 5 (3)**

<p>Preparing Forester:</p> <p><i>"I certify that I have determined that this work was performed to an acceptable standard"</i></p>	
	<p><b>Greg Yeomans, RPF</b>                  FSP Coordinator                  Canadian Forest Products Ltd.</p> 

<p>Authorized Licensee Signature:</p>	
	<p><b>Andy Preston, RPF</b>                  Woodlands Manager, Mackenzie                  Division                  Canadian Forest Products Ltd.</p>

<p>Authorized Licensee Signature:</p>	
	<p><b>Brian Quick</b>                  Mackenzie Fibre Management                  Corporation</p>

**APPENDIX A:** FSP Content Maps - 1:100,000 Scale

**Appendix B:** Old Forest Retention Requirements by Landscape Unit (or Landscape Unit Group) for the Mackenzie Forest District.

The following biogeoclimatic groupings apply to the table below:

<b>Biogeoclimatic Group</b>	<b>Biogeoclimatic variants within Biogeoclimatic Group</b>
1	ESSFmcp, ESSFmvp2, ESSFmvp3, ESSFmvp4, ESSFwcp3, SWBmks
2	ESSFmc, ESSFmv2, ESSFmv3, ESSmv4, SWBmk
3	ESSFwc3, ESSFwk2
4	SBSmk1, SBSmk2, SBSwk1
5	SBSvk, SBSwk2
6	BWBSmw1, BWBSwk2 (Con)
7	BWBSdk1 (Con)
6 & 7	BWBS deciduous leading

<b>Landscape Units (or Landscape Unit Group)</b>	<b>Biodiversity Emphasis Option</b>	<b>Biogeoclimatic Group</b>	<b>Minimum % of CFLB Retained as Old Forest</b>
Akie, Akie River	Low	2	9
Akie, Akie River	Low	7	11
Blackwater	Low	2	9
Blackwater	Low	3	9
Blackwater	Low	4,7	11
Buffalohead	Low	2	9
Buffalohead	Low	5	11
Chunamon	Low	2	9
Chunamon	Low	7	11
Chunamon	Low	4	11

<b>Landscape Units (or Landscape Unit Group)</b>	<b>Biodiversity Emphasis Option</b>	<b>Biogeoclimatic Group</b>	<b>Minimum % of CFLB Retained as Old Forest</b>
Collins-Davis	Low	3	19
Collins-Davis	Low	2	9
Collins-Davis	Low	5	9
Collins-Davis	Low	7	11
Collins-Davis	Low	4	11
Germansen Mountain	Low	2,7	9
Mesilinka	Low	2	9

Mesilinka	Low	7	11
Osilinka	Low	2	9
Osilinka	Low	4, 7	11
Aiken	Intermediate	2	9
Aiken	Intermediate	7	11
Clearwater	Intermediate	3	19
Clearwater	Intermediate	2	9
Clearwater	Intermediate	5	9
Discovery, Duckling	Intermediate	2	9
Discovery, Duckling	Intermediate	7	11
Ingenika	Intermediate	2	9
Ingenika	Intermediate	7	11
Lower Ospika	Intermediate	3	19
Lower Ospika	Intermediate	2	9
Lower Ospika	Intermediate	5	9
Lower Ospika	Intermediate	4	11
Morfee	Intermediate	3	19
Morfee	Intermediate	5	9
Morfee	Intermediate	4	11

<b>Landscape Units (or Landscape Unit Group)</b>	<b>Biodiversity Emphasis Option</b>	<b>Biogeoclimatic Group</b>	<b>Minimum % of CFLB Retained as Old Forest</b>
Nabesche	Intermediate	3	19
Nabesche	Intermediate	2	9
Nabesche	Intermediate	5	9
Nabesche	Intermediate	6	11
Nabesche	Intermediate	4	11
Pesika	Intermediate	2	9
Pesika	Intermediate	7	11
Schooler	Intermediate	2	9
Schooler	Intermediate	6	11
Philip, Philip Lake, Tudyah A	Low / Intermediate	2	9
Philip, Philip Lake, Tudyah A	Low / Intermediate	5	9

Philip, Philip Lake, Tudyah A		Low / Intermediate	4	11
Landscape Units (or Landscape Unit Group)	Biodiversity Emphasis Option	Biogeoclimatic Group	Minimum % of CFLB Retained as Old Forest	
Fox	High	2	13	
Fox	High	7	16	
LowAkie, LowPesika	High	2	13	
LowAkie, LowPesika	High	7	16	
Nation	High	4, 5	16	
Nina Creek	High	2	13	
Nina Creek	High	7	16	
North Ingenika, Swannell	High	2	13	
North Ingenika, Swannell	High	7	16	
Obo River	High	2	13	
Obo River	High	7	16	
Pelly	High	2	13	
Pelly	High	7	16	
Selwyn	High	3	28	
Selwyn	High	5, 2	13	
Selwyn	High	6, 4	16	
Thutade	High	2	13	
Thutade	High	7	16	
Tutizza	High	2, 7	13	
Upper Ospika	High	2, 3	13	
Upper Ospika	High	4	16	
LUs with enhanced management emphasis	Low	BWBS (deciduous leading only)	13	
LUs with general management emphasis	Intermediate	BWBS (deciduous leading only)	13	
LUs with special management emphasis	High	BWBS (deciduous leading only)	19	

**Appendix C:** Mackenzie Forest District Old Interior Forest Requirements

<b>Biogeoclimatic Group</b>	<b>Minimum Percent of the Old Forest Retention in Table 1 that must be Old Interior Forest</b>		
	<b>Low BEO</b>	<b>Intermediate BEO</b>	<b>High BEO</b>
2	10	25	25
3	25	50	50
4	10	25	25
5	10	25	25
6	10	25	25
7	10	25	25

**Appendix D:** Cutblocks where old riparian standards apply

Cutblock	Area	Cutblock	Area	Cutblock	Area	Cutblock	Area
MAN010	Manson	GRV012	Germansen	BUR119	Burden	HOL063	Holder
PHI112	Philip Creek	GRV021	Germansen	OSP006	Ospika	HOL071	Holder
PHI181	Philip Creek	GRV022	Germansen	BUR149	Burden	BUR152	Burden
PHI173	Philip Creek	GRV023	Germansen	BUR151	Burden	MAN062	Manson
PHI179	Philip Creek	GRV039	Germansen	BUR153	Burden	MAN066	Manson
PHI180	Philip Creek	EKL088	Eklund	BUR154	Burden	MAN087	Manson
6408	Ospika	6749	Germansen	BUR155	Burden	MAN116	Manson
6464	Ospika	6750	Germansen	6323	Ospika	MAN117	Manson
6481	Ospika	OSI027	Osilinka	6436	Ospika	MAN129	Manson
6484	Ospika	OSI028	Osilinka	PHI044	Philip/Nat	MAN162	Manson
6508	Ospika	3320	Rupert	PHI164	Philip Creek	MAN164	Manson
6549	Ospika	3321	Rupert	PHI042	Philip/Nat	OSP178	Ospika
GRV024	Germansen	3326	Rupert	PHI062	Philip Creek	OSP179	Ospika
GRV029	Germansen	3508	Rupert	PHI072	Philip Creek	OSP180	Ospika
GRV032	Germansen	RUP001	Rupert	PHI073	Philip Creek	4914	Nation
MES007	Mesilinka	CHU021	Chunamon	PHI165	Philip Creek	CHU020	Chunamon
OSP001	Ospika	CHU013	Chunamon	PHI167	Philip Creek	NAT003	Nation
MIS011	Not a Canfor's	CHU014	Chunamon	6324	Ospika	NAT004	Nation
MES001	Mesilinka	CHU025	Chunamon	6353	Ospika	NAT015	Nation
MES002	Mesilinka	CHU026	Chunamon	6485	Ospika	NAT016	Nation
MES003	Mesilinka	CHU027	Chunamon	6486	Ospika	NAT020	Nation
MES005	Mesilinka	CHU053	Chunamon	6546	Ospika	NAT100	Nation
MES011	Mesilinka	CHU028	Chunamon	6554	Ospika	NAT113	Nation
MES030	Mesilinka	EKL137	Eklund	OSP002	Ospika	NAT116	Nation
MES031	Mesilinka	5808	Nation	OSP003	Ospika	NAT118	Nation
GRV038	Germansen	5809	Nation	OSP008	Ospika	PHI005	Philip Creek
GRV037	Germansen	BUR130	Burden	OSP021	Ospika	PHI010	Philip Creek
GRV040	Germansen	BUR131	Burden	HOL025	Holder	PHI101	Rupert
GRV028	Germansen	BUR135	Burden	HOL040	Holder	PHI102	Rupert
GRV036	Germansen	BUR138	Burden	HOL041	Holder	PHI115	Philip Creek
GRV030	Germansen	BUR139	Burden	HOL046	Holder	PHI121	Philip Creek
GRV031	Germansen	BUR140	Burden	HOL050	Holder	PHI160	Philip Creek
PHI166	Philip Creek	BUR142	Burden	HOL052	Holder	PHI163	Philip Creek
GRV003	Germansen	BUR148	Burden	HOL053	Holder	NAT120	Nation
GRV006	Germansen	GRV009	Germansen	HOL058	Holder	4814	Nation
GRV010	Germansen	DAS010	Not a Canfor's	HOL060	Holder	BUR166	Burden
GRV011	Germansen	BUR114	Burden	HOL062	Holder		



**Appendix E:** Road permit list

<b>ROAD_STEWARD</b>	<b>ROAD_PERMIT_ID</b>	<b>ROAD_STEWARD</b>	<b>ROAD_PERMIT_ID</b>
Canfor	R00042	Canfor	R09665
Canfor	R01881	Canfor	R09703
Canfor	R01883	Canfor	R09799
Canfor	R01884	Canfor	R09804
Canfor	R01885	Canfor	R09818
Canfor	R01886	Canfor	R09951
Canfor	R01888	Canfor	R09952
Canfor	R01889	Canfor	R09985
Canfor	R01890	Canfor	R10014
Canfor	R02558	Canfor	R10040
Canfor	R06418	Canfor	R10041
Canfor	R06500	Canfor	R10048
Canfor	R06519	Canfor	R10091
Canfor	R06618	Canfor	R10141
Canfor	R06653	Canfor	R10156
Canfor	R06655	Canfor	R10157
Canfor	R06660	Canfor	R10158
Canfor	R06661	Canfor	R10247
Canfor	R06815	Canfor	R10257
Canfor	R06854	Canfor	R10258
Canfor	R06855	Canfor	R10277
Canfor	R06918	Canfor	R10278
Canfor	R07016	Canfor	R10278
Canfor	R07061	Canfor	R10282
Canfor	R07085	Canfor	R10456
Canfor	R07087	Canfor	R10488
Canfor	R07089	Canfor	R10522
Canfor	R07145	Canfor	R10562
Canfor	R07210	Canfor	R10586
Canfor	R07211	Canfor	R10587
Canfor	R07212	Canfor	R10588
Canfor	R07213	Canfor	R10623
Canfor	R07214	Canfor	R10626
Canfor	R07285	Canfor	R10635
Canfor	R07287	Canfor	R10750
Canfor	R07288	Canfor	R10751
Canfor	R07332	Canfor	R10812
Canfor	R07333	Canfor	R10861
Canfor	R07334	Canfor	R10866
Canfor	R07335	Canfor	R10957
Canfor	R07340	Canfor	R10968
Canfor	R07346	Canfor	R10998
Canfor	R07348	Canfor	R11013
Canfor	R07349	Canfor	R11038
Canfor	R07352	Canfor	R11073

Canfor	R07363	Canfor	R11074
Canfor	R07393	Canfor	R11075
Canfor	R07420	Canfor	R11076
Canfor	R07446	Canfor	R11085
Canfor	R07462	Canfor	R11123
Canfor	R07478	Canfor	R11128
Canfor	R07496	Canfor	R11135
Canfor	R07499	Canfor	R11157
Canfor	R07520	Canfor	R11231
Canfor	R07554	Canfor	R11234
Canfor	R07577	Canfor	R11240
Canfor	R07704	Canfor	R11355
Canfor	R07720	Canfor	R11384
Canfor	R07730	Canfor	R11439
Canfor	R07832	Canfor	R11502
Canfor	R07842	Canfor	R11525
Canfor	R07897	Canfor	R11675
Canfor	R07900	Canfor	R11711
Canfor	R07955	Canfor	R12024
Canfor	R07958	Canfor	R12093
Canfor	R08057	Canfor	R12094
Canfor	R08117	Canfor	R12540
Canfor	R08201	Canfor	R12667
Canfor	R08213	Canfor	R12850
Canfor	R08217	Canfor	R13006
Canfor	R08419	Canfor	R13618
Canfor	R08488	Canfor	R15554
Canfor	R08550	Mackenzie Fibre	R18275
Canfor	R08552	Mackenzie Fibre	R18276
Canfor	R08553	Mackenzie Fibre	R18277
Canfor	R08638	Mackenzie Fibre	R18379
Canfor	R08639	Mackenzie Fibre	R18507
Canfor	R08781	Canfor	R18556
Canfor	R08818	Mackenzie Fibre	R18603
Canfor	R08819	Mackenzie Fibre	R19209
Canfor	R08859	Mackenzie Fibre	R19260
Canfor	R08908	Mackenzie Fibre	R19294
Canfor	R09033	Mackenzie Fibre	R19580
Canfor	R09044	Mackenzie Fibre	R19591
Canfor	R09049	Mackenzie Fibre	R19593
Canfor	R09336	Mackenzie Fibre	R20021
Canfor	R09339	Mackenzie Fibre	R20053
Canfor	R09373	Mackenzie Fibre	R20181
Canfor	R09411	Mackenzie Fibre	R20183
Canfor	R09437	Mackenzie Fibre	R20205
Canfor	R09477	Mackenzie Fibre	R20214
Canfor	R09489	Mackenzie Fibre	R20248
Canfor	R09504	Mackenzie Fibre	R20296

Canfor	R09508	Mackenzie Fibre	R20323
Canfor	R09512	Mackenzie Fibre	R20333
Canfor	R09603	Mackenzie Fibre	R20334
Canfor	R09604	Mackenzie Fibre	R20346
Canfor	R09605	Mackenzie Fibre	R20551
Canfor	R09630	Mackenzie Fibre	R20619
Canfor	R09650	Mackenzie Fibre	R20696

**Appendix F: Mackenzie Stocking standards**

Table F1: Regeneration standards applicable to any surveys or assessments up to but not including Free Growing.

Stocking ID	BWBS		SBS					ESSF					Reforestation Species				Regen Delay (yrs)	MITD (m)	Target (sph)	Min (P) (sph)	Min. P+A (sph)	
	dk	wk2	mk1	mk2	vk	wk1	wk2	mv2	mv3	mv4	wc3	wk2	Preferred		Acceptable							
1056674		103	02, 03, 06	02, 04	02	12	04						PI			Sx		7	2	1200	600	700
1056675	101, 103, 104	104		01, 03			03						PI	Sx				7	2	1200	600	700
1056676		110			05		01	02					PI	Sx				4	2	1200	600	700
1056678								01, 04	01, 04	01		01, 02, 03	Sx			PI		4	2	1200	600	700
1056679											01		Sx			Fd	Lw	4	2	1200	600	700
1056680			04			03							PI	Fd		Sx		7	2	1200	600	700
1056681			01, 05			01, 04, 05							PI	Sx	Fd			4	2	1200	600	700
1056682		101											PI	Sx		Fd		4	2	1200	600	700
1056683					01, 03, 04								Sx	Fd		PI		4	2	1200	600	700
1056684			08	05	07	06, 07, 08				04			PI	Sx				4	1.6	1200	600	700
1056685							05	05	05, 06			04, 05	Sx			PI		4	1.6	1200	600	700
1056686			07										PI	Sx	Fd	Lw		4	1.6	1200	600	700
1056687	102	102					02						PI			Sx		7	2	1200	600	700
1056688								03	02, 08	02, 03			PI	Sx				4	2	1200	600	700
1056689									03		02		Sx			PI		4	2	1200	600	700
1056690						02							PI	Fd		Sx		7	2	1200	600	700
1056691					09								PI			Sx		4	1.6	1200	600	700
1056692	110, 111	111	09	06	06	09, 10							PI	Sx				4	1.6	1200	600	700
1056693					10		06		07				Sx			PI		4	1.6	1200	600	700
1056694			10		08	11							PI	Sx				4	1.6	400	200	200
1056695								06		05	03	06	Sx			PI		4	1.6	400	200	200

Table F2: FG stocking standards. Only to be used for Free Growing assessment.

Stocking ID	BWBS		SBS					ESSF					MITD (m)	Min. FG Height (m)			Target (sph)	Min. (sph)	Preferred FG species								
	dk	wk2	mk1	mk2	vk	wk1	wk2	mv2	mv3	mv4	wc3	wk2		PI	Fd	Other			Primary			Secondary			Tertiary		
																			1	2	3	1	2	3	1	2	
1056674		103 <sup>1</sup>	(02, 03, 06) <sup>1,2</sup>	02 <sup>1,2</sup> , 04 <sup>1</sup>	02 <sup>2</sup>	12 <sup>1,2</sup>	04 <sup>1</sup>						2	2.0	1.4	1.0	1200	700	PI				Sx			Bl	Sb
1056675	101, 103, 104 <sup>1</sup>	104 <sup>1</sup>		01, 03			03						2	2.0	1.4	1.0	1200	700	PI	Sx			Bl				
1056676		110 <sup>1</sup>			05		01	02					2	2.0	1.4	1.0	1200	700	PI	Sx			Bl				
1056678								01, 04	01, 04	01		01 <sup>3</sup> , 02 <sup>3</sup> , 03	2	2.0	1.4	1.0	1200	700	Sx	Bl			PI				
1056679											01 <sup>3</sup>		2	2.0	1.4	1.0	1200	700	Sx				Fd	Bl	Lw	PI	
1056680			04			03							2	2.0	1.4	1.0	1200	700	PI	Fd			Sx	Bl			
1056681			01, 05			01, 04, 05							2	2.0	1.4	1.0	1200	700	PI	Sx	Fd		Bl				
1056682		101											2	2.0	1.4	1.0	1200	700	PI	Sx			Fd				
1056683					01, 03, 04								2	2.0	1.4	1.0	1200	700	Sx	Fd			PI	Bl			
1056684			08	05	07	06, 07, 08				04			1.6	2.0	1.4	1.0	1200	700	PI	Sx			Bl				
1056685							05	05	05, 06			04 <sup>3</sup> , 05 <sup>3</sup>	1.6	2.0	1.4	1.0	1200	700	Sx	Bl			PI				
1056686			07 <sup>2</sup>										1.6	2.0	1.4	1.0	1200	700	PI	Sx	Fd		Bl	Sb	Lw		
1056687	102 <sup>1</sup>	102 <sup>1</sup>					02						2	1.4	1.0	0.8	1200	700	PI				Sx	Bl			
1056688								03	02, 08	02, 03			2	1.4	1.0	0.8	1200	700	PI	Sx			Bl				
1056689									03		02		2	1.4	1.0	0.8	1200	700	Sx	Bl			PI				
1056690						02							2	1.4	1.0	0.8	1200	700	PI	Fd			Sx	Bl			
1056691					09								1.6	1.4	1.0	0.8	1200	700	PI				Sx	Bl			
1056692	110 <sup>1</sup> 111 <sup>1</sup>	111 <sup>1</sup>	09	06	06	09, 10							1.6	1.4	1.0	0.8	1200	700	PI	Sx			Bl				
1056693					10 <sup>3</sup>		06		07				1.6	1.4	1.0	0.8	1200	700	Sx	Bl			PI				
1056694			10 <sup>1</sup>		08	11							1.6	1.4	1.0	0.8	400	200	PI	Sx			Bl	Sb			
1056695								06		05	03 <sup>3</sup>	06 <sup>3</sup>	1.6	1.4	1.0	0.8	400	200	Sx	Bl			PI				

Footnotes:  
 1 Minor component. Bl will not make up more than 20%.  
 2 Minor component. Sb will not make up more than 20%.  
 3 Minor component. Pl will not make up more than 20%.  
 Note Lw are restricted by C.F. Standards for seed use.