Forest Stewardship Plan 780 – Esk'etemc Forest Development Unit
FSP Major Amendment Number 10 - Change Summary and Rationale

FSP Cover Page:

The following changes are being proposed to the FSP cover page:

- Update the Amendment Number reference from 9 to 10
- Update to specify who the amendment was completed by

Supporting Rationale: Administrative change to the FSP. Not a material change.

Amendment History (page 2 of FSP):

The following changes are being proposed on page 2 of the FSP:

- Update the Amendment History table to include reference to amendment 10. Provide a brief description of the amendment scope in table.

Supporting Rationale: Administrative change to the FSP. Not a material change.

Table of Contents:

The following changes are being proposed to the FSP table of contents:

- Update paragraph references and page numbers for the table of contents to reflect updated section numbers and page numbers.

Supporting Rationale: Administrative change to the FSP. Not a material change.

FSP Section 1.1 – Definitions:

The following changes are being proposed to this section of the FSP:

- Inserted definition 20 for the ***"Grassland Habitat Transition Zone"*** that is referenced in the FSP R/S for "5.7.1-2 Wildlife and Biodiversity – Landscape Level (FDU 2)", "5.7.3-2 Seral Stage (FDU 2) and "5.16-2 Grassland Habitats (FDU 2)
- Inserted definition 53 which is a definition for **"Selection Silviculture System"** that is referenced in the FSP R/S for "5.7.1-2 Wildlife and Biodiversity – Landscape Level (FDU 2)" and "5.7.3-2 Seral Stage (FDU 2)
- Inserted definition 57 which is a definition for **"Total Basal Area"** that is referenced in the FSP R/S for "5.7.1-2 Wildlife and Biodiversity – Landscape Level (FDU 2)", "5.7.3-2 Seral Stage (FDU 2) and "5.16-2 Grassland Habitats (FDU 2)"

Supporting Rationale:

The **"Grassland Habitat Transition Zone"** occupies the transition zone between the Grassland Benchmark Areas and the adjacent full forest. As part of this FSP amendment the following definition is being put forward.

> The ***"Grassland Habitat Transition Zone"*** means a 300m slope distance buffer area around the Cariboo Chilcotin Land Use Plan Land Act Order spatial data set: Cariboo-Chilcotin Grassland Benchmark Area that is not overlapped with a *No harvest area*,

Permanent OGMA – static, *Permanent OGMA – rotating*, *Transition OGMA, Lakeshore Management Zone* or *approved Ungulate Winter Range.*

The Grassland Habitat Transition Zone area relates to a management concept that Esketemc First Nations had available to them in a previous FSP and a management tool that they would like to be able to apply moving forward under FSP 780 within FDU 2. As a concept the transition zone between the Grassland Benchmark Area and full forest and the need for this area to be managed differently is firmly entrenched in aspects of the Cariboo Chilcotin Land Use Plan. The Cariboo Chilcotin Grasslands Strategy – Forest Encroachment onto Grasslands and Establishment of a Grassland Benchmark Area (Grasslands Strategy Working Group, January 2001) contains numerous references that align with the concepts being proposed under this revised result/strategy including the following:

- Page 5 – "The recommended grassland benchmark entails an acceptable level of risk to biodiversity as long as tree densities in forests adjacent to the grasslands are also reduced. Many species depend on the open forests adjacent to the grasslands"
- Page 6 – "In a subsequent report, the issue of in-growth into existing open forest stands will also be addressed and additional recommendations provided with respect to recovery of understory grassland condition."
- Page 9 – "….forest in-growth, the filling-in of open forests by tree regeneration, has greatly increased shading and resulted in reduced vigor and abundance of herbaceous vegetation under previously open-grown trees."
- Page 21 – "Grassland ecosystems do not exist in isolation from the adjacent surrounding forests. A strategy to manage grasslands to maintain forage and biodiversity values must also consider management of the adjacent forests…. Many grassland wildlife species also rely on the open, grassy forests adjacent to the grasslands as well as the grasslands themselves."
- Page 21 – "The second part of the grassland strategy for dealing with encroachment and in-growth will be included in the final report and will focus on developing guidelines for stand structure management in forests adjacent to the grassland benchmark area."

The definition for **"Selection Silviculture System"** was adapted from a number of sources including the Silvicultural Systems Handbook for British Columbia (Ministry of Forests – Forest Practices Branch, March 2003), Silvicultural Systems Guidebook (Ministry of Forests, April, 1995) and Dry-Belt Douglas-fir Best Management Practices – Silviculture and Best Management Practices for the Dry-Belt Douglas-fir Area in the Cariboo Forest Region – First Approximation (Day and Wood, August 2023). The definition provided in the FSP is as follows:

> **"Selection Silvicultural System"** means a silvicultural system that removes timber as single scattered individuals or in small groups (groups being a maximum of 25m when measured from stem to stem in the narrow dimension) at relatively short intervals, repeated indefinitely. It has a management goal to produce uneven-aged stands comprised of three or more distinct, well represented age classes. Variations of selection silvicultural systems include Single Tree Selection and Group Selection. Characteristics include:
>
> a. harvesting timber at specified repeated cutting cycles, and
> b. harvesting single scattered individuals or small groups of individual trees, and
> c. facilitating establishment of regeneration in canopy gaps, and
> d. encouraging and maintaining an uneven canopy and an uneven-aged stand

structure of at least three well represented age classes, and

e. intermediate cuttings in immature age classes, concurrent with the harvest of mature timber or otherwise during the cutting cycle, to meet specified stand management goals.

The definition for **"Total Basal Area"** has been added and it applies to FSP results and strategies under FDU 2.

"Total Basal Area" means live basal area of all species ≥ 12.5cm dbh.

The definition has been provided to add clarity and support consistent implementation under applicable FSP results and strategies for FDU 2.

FSP Section 3.2 – Application to Agreements and Holders of Agreements

The following changes are being proposed to this section of the FSP:

- Have updated FSP Table 3.2 - FSP Agreement Holders and Agreements as follows:
  - For the FLA83985 Forest Act agreement held by Esk'etemc keep this applicable to FDU Number 1. Remove reference to the K1C and N2K agreements held by Esketemc.
  - For the K1C and N2K Forest Act agreements held by Esk'etemc create a new line in the table and make this applicable to FDU Number 2.

Supporting Rationale: Administrative change to the FSP. The NRFL FLA83985 Forest Act agreement was a salvage NRFL held by Esk'etemc First Nation with a term beginning on January 1, 2012 and expiring January 1, 2022. The N2K and K1C Forest Act agreements held by Esk'etemc First Nation will be managed consistent with the FSP results, strategies and measures identified as being applicable to FDU 2.

FSP Section 4.1 – Forest Development Unit:

The following changes are being proposed to this section of the FSP:

- Add reference to FDU 2 (FDU Number - 2 and FDU Name - Esketemc) to table 4.1
- Revise language below table 4.1 to align with addition of the new FDU and revised application of FSP results, strategies and measures moving forward. Also include text in section that specifies what FDU each FSP result and strategy applies to. Reference was added under the table that summarizes the government established objective for each result and strategy included in this FSP. Reference added to improve clarity.

Supporting Rationale: Administrative change to the FSP text. No material changes to the actual FSP results and strategies have been made unless otherwise indicated below. Table 4.1 has been updated to reflect the addition of the Esketemc FDU. Specific to the application of the FSP results/strategies, with the addition of FDU 2 for clarity a reference has been added to each result or strategy indicating which FDU it is applicable to.

FSP Section 4.2 – FDU Overview Map:

The following changes are being proposed to this section of the FSP:

- Update the map to reflect the addition of FDU 2

Supporting Rationale: The FDU boundary overview map has been updated to reflect the addition of FDU 2. The spatial for the FDU boundary has been sourced from the government data-set "WHSE_FOREST_TENURE_FTEN_ MANAGED_ LICENCE_POLY_SVW" and includes the N2K and K1C area-based tenures in their entirety. Both tenures are issued tenures held by Esk'etemc First Nation who are currently an agreement holder under FSP 780.

The proposed FDU 2 has a gross area of 88,534.9ha. The percent distribution of BEC for the gross area, CFLB and THLB area by tenure within the FDU 2 can be summarized as follows:

Row Labels	Gross_Area (%)	CFLB_Area (%)	TSR_THLB_Area (%)
K1C	**33.9%**	**31.5%**	**32.0%**
BGxw2	4.4%	4.5%	0.3%
IDFdk3	73.2%	73.5%	82.5%
IDFxm	22.4%	22.0%	17.2%
N2K	**66.1%**	**68.5%**	**68.0%**
IDFdk3	96.5%	96.6%	96.2%
IDFxm	3.3%	3.2%	3.6%
SBPSmk	0.2%	0.2%	0.2%
Grand Total	**100.0%**	**100.0%**	**100.0%**

Within FDU 2 the approximate distribution of Biodiversity Emphasis Option and Landscape unit within the K1C and N2K tenures can be summarized as follows:

Row Labels	CFLB_Area (% of Tenure Total)	TSR_THLB_Area (% of Tenure Total)
K1C	**100.0%**	**100.0%**
H	**15.7%**	**15.3%**
Chimney	15.7%	15.3%
I	**84.3%**	**84.7%**
Alkali	69.5%	70.8%
Dog Creek	14.7%	13.9%
N2K	**100.0%**	**100.0%**
H	**41.2%**	**35.8%**
Chimney	41.2%	35.8%
I	**58.8%**	**64.2%**
Alkali	30.0%	31.8%
Farwell	4.2%	5.4%
Gaspard	4.6%	5.5%
Williams Lake	20.0%	21.4%
Grand Total		

FSP Paragraph 5.7.1-1 – Wildlife and Biodiversity – Landscape Level (FDU 1):

The following changes are being proposed to this section of the FSP:

- Updated section number and name so that it is clear this is applicable to FDU 1 only.

Supporting Rationale: Administrative change to the FSP. No changes are being made to the FSP R/S for Wildlife and Biodiversity – Landscape Level within FDU 1.

FSP Paragraph 5.7.1-2 – Wildlife and Biodiversity – Landscape Level (FDU 2):

The following changes are being proposed to this section of the FSP which was developed using the current approved FSP R/S for "Wildlife and Biodiversity – Landscape Level" as a starting point:

- Remove definitions for *Key Leading Spruce Stand* and *Key Leading Deciduous Stand* given FDU 2 does not overlap with the applicable CCLUP sub-unit management zones to which the definitions apply.
- Modify 1.b.i to include the criterion previously specified under paragraph 5.7.3 (Seral Stage) and make the following changes and additions to the criterion as follows:
    - To improve clarity, rename Criterion A to Criterion Z. No other changes were made to this criterion as currently approved.
    - To improve clarity, rename Criterion B to Criterion Y. Modify criterion to require application of a Selection Silviculture System as defined in FSP Section 1.1 – Definitions. In addition, modify to specify a removal level of no more than 50% of the *total basal area* and a requirement to retain a minimum of 16m^2/ha upon completion of *harvest*. Removed the requirement for harvest to be evenly distributed across all pre-harvest diameter classes or be a thinning from below that removes only intermediate and overtopped crown classes (b.iii in previous version of FSP). In addition, remove the requirement to retain 70% of the pre-harvest stand attributes post-harvest.
    - To improve clarity, rename Criterion C to Criterion X. Modify criterion to allow for the application of a broader range of fuel management treatments within a designated Wildfire Urban Interface Area. Specifically modify to allow for the application of the following clause:

        > (ii) separation of tree crowns among individual trees or clumps within the dominant and co-dominant layers sufficient to mitigate the spread of a passive crown fire, to a maximum spacing of 6 metres between crowns.

    - To improve clarity, rename Criterion D to Criterion W. No other changes were made to this criterion.
    - Add a new criterion V which would exempt *harvest* located within Ungulate Winter Range U-5-002 that is completed consistent with the applicable General Wildlife Measures from the requirement to trend toward the desired patch size targets outlined in table 5.7.1.1
    - Add a new criterion U which would exempt *harvest* located within the *Grassland Benchmark Transition Zone* from the requirement to trend toward the desired patch size targets outlined in table 5.7.1.1
    - Have inserted clause 3 as a new clause which specifies that where criterion Y, X, W, V and/or U is applied a connectivity assessment will not be completed.
    - Have renumbered clause 4 (Clause 3 in previous version of FSP) and modified to remove reference to key leading spruce stands and key leading deciduous stands which, as defined, do not fall within FDU 2.

Supporting Rationale: The proposed changes to this result/strategy are intended to align with the landscape level conditions within FDU 2 as it relates to management of patch size distribution. Specifically, as per the following table, 100% of the K1C tenure and 99.8% of the N2K tenure is located within NDT 4 and as such is being managed in a manner that is generally consistent with Dry-belt Douglas-fir management practices.

Row Labels	Gross_Area (% of Tenure Total)	CFLB_Area (% of Tenure Total)	TSR_THLB_Area (% of Tenure Total)
K1C	**100.00%**	**100.0%**	**100.0%**
4	**100.00%**	**100.0%**	**100.0%**
Alkali	73.29%	69.5%	70.8%
Chimney	13.90%	15.7%	15.3%
Dog Creek	12.81%	14.7%	13.9%
N2K	**100.00%**	**100.0%**	**100.0%**
3a	**0.20%**	**0.2%**	**0.2%**
Williams Lake	0.20%	0.2%	0.2%
4	**99.80%**	**99.8%**	**99.8%**
Alkali	30.47%	30.0%	31.8%
Chimney	41.14%	41.2%	35.8%
Farwell	4.00%	4.2%	5.4%
Gaspard	4.31%	4.6%	5.5%
Williams Lake	19.88%	19.8%	21.3%
Grand Total			

The application of single tree selection and group selection variants of the *selection silviculture system* within Douglas-fir dominated forests within the IDF, combined with the goal to produce uneven-aged stands and retain a minimum of 16m^2/ha of *total basal area* will negate the need to manage for patch size distribution within FDU 2 when applying criterion Y. Given one of the management intents of *a selection silviculture system* is to create canopy gaps to facilitate establishment of regeneration it is expected that some voids will be created and will for these areas result in partial occupancy of the stands growing space. To achieve an average of 16m^2/ha of *total basal area* it is anticipated that some areas will need to be more than this target and other areas may contain no basal area where voids are created. Challenges exist for determining B-level stocking (the lowest density that fully occupies a site) given variability in mean diameter and stand density. Despite the challenges with determining B level stocking estimates have been provided including 17.5m^2/ha for stems > 7.5cm dbh which was provided in the "Stocking Standards for Uneven-aged Interior Douglas-fir" report (Day, 2005). Another example of B level stocking is the minimum residual post-harvest basal area target of 16m^2/ha for Low Stand Structure Habitat Class within Ungulate Winter Range in the Shallow and Moderate Snowpack Zone. In addition to the factors above climate change projections indicate that summers in the local IDF will become warmer and drier, increasing drought stress. Lower stocking typically results in stands that are more resilient to drought stress. K Iverson (pers. comm recent presentation) suggests that stands be planned for conditions appropriate to one BEC zone drier (i.e. IDFdk3 to IDF xm) to address anticipated future moisture deficit. One of the most significant issues with the current IDF landscape is the lack of big trees. This is an artifact of diameter limit harvesting, as well as the continuing mortality of existing large stems from fir bark beetle. The result is reduced heterogeneity of stems size structure within

stands; stands have become homogenous and over stocked with small diameter stems. Esk'etemc values larger trees and desires that over time the structure of forests within the IDF landscape to return to one with plentiful large trees. Stands with lower stocking allow site resources to accrue to fewer individuals. Individual stems in lower stocked stands increase in diameter more rapidly than individuals in stands with higher stocking. Slightly reduced stocking will result in the presence of large trees in relatively less time.

Criterion V is a new criterion added to the FSP R/S. Given that the detailed and prescriptive nature of the General Wildlife Measures for UWR U-5-002 combined with the high levels of post-harvest retention and pre-determined management outcomes it was determined that the management requirements related to patch size distribution management would be largely achieved.

Criterion U is a new criterion added to the FSP R/S. The management intent of the *Grassland Benchmark Transition Zone* is to create open stand conditions. The fact that the areas that it will be applied to are spatially explicit and limited in scope it is felt that requiring management of patch size would negate the management intent for these areas.

The requirement to not have to complete a connectivity assessment when criterion Y, X, W, V or U is predicated on the fact that the criterion will either not result in the creation of an opening, or the management intent of the criterion would be negated by the requirement to trend towards the desired patch size targets.

FSP Paragraph 5.7.3-1 – Seral Stage (FDU 1):

The following changes are being proposed to this section of the FSP:

- Updated section number and name so that this is applicable to FDU 1 only.

Supporting Rationale: Administrative change to the FSP. No changes are being made to the FSP R/S for Wildlife and Biodiversity – Landscape Level within FDU 1.

FSP Paragraph 5.7.3-2 – Seral Stage (FDU 2):

The following changes are being proposed to this section of the FSP:

- Add new definition for **"Desired Future Condition"**, **"Dry-belt Douglas-fir ecosystems"**, **"Mature+Old Forest"**, **"Stand"** and **"Stand Age"** which applies to this FSP R/S that is only applicable to FDU 2.
- Update the current definition for **"Forest Management Land Base"**
- Remove existing definitions for **"Stand Attributes"** as it is deemed to no longer be a required element of this FSP result/strategy
- Rename Criterion A to Criterion Z. No other changes were made to this criterion.
- Rename Criterion B to Criterion Y. Modify Criterion Y under clause 2, sub-clause b to require application of a Selection Silviculture System as defined in FSP Section 1.1 – Definitions. In addition:
    - Add a requirement for Douglas-fir to represents 70% or greater of the planned post-harvest *total basal area* within the *stand*
    - modify to specify a removal level of no more than 50% of the *total basal area* and a requirement to retain a minimum of 16m^2/ha upon completion of *harvest*.
    - Add a requirement for harvest to retain a minimum large tree (> 67.5cm dbh) retention target of 2m^2/ha and a recruitment strategy where this does not exist

    - Add a requirement to specify that upon completion of *harvest* the *stand* remains as *mature + old forest* with **"stand"** and **"mature +old forest"** being defined under this FSP result/strategy.
    - Add a requirement which specifies that the stand achieves and/or trends towards the *desired future condition* with **"desired future condition"** being defined under this FSP result/strategy
- Rename Criterion C to Criterion X. Modify Criterion X under clause 2, sub-clause c to allow for the application of a broader range of fuel management treatments within a designated Wildfire Urban Interface Area. Specifically modify to allow for the application of the following clause:

> (ii) separation of tree crowns among individual trees or clumps within the dominant and co-dominant layers sufficient to mitigate the spread of a passive crown fire, to a maximum spacing of 6 metres between crowns.

- Rename Criterion D to Criterion W. No other changes were made to this criterion.
- Add a new criterion V (under clause 2, sub-clause e) which would exempt harvest located within Ungulate Winter Range that is completed consistent with the applicable General Wildlife Measures from the requirement to trend toward the desired patch size targets outlined in table 5.7.1.1
- Add a new criterion U (under clause 2, sub-clause f) which would exempt harvest located within the Grassland Benchmark Area Transition Zone from the requirement to trend toward the desired patch size targets outlined in table 5.7.1.1
- Have combined clauses 3, 4, and 5 in current version of the FSP and included all under clause 3 of the amended FSP result and strategy.
- Have added clause 4 in the amended FSP result and strategy to add a requirement which states that when criterion Y is used an assessment will be required to demonstrate how the *harvest* will achieve and/or trend towards the **"Desired Future Condition"** as defined in this FSP result and strategy

<u>Supporting Rationale:</u>

The following rationale will speak to those changes that were not previously addressed under the change summary and associated supporting rationale above for FSP Paragraph 5.7.1-2 – Wildlife and Biodiversity – Landscape Level (FDU 2).

The definition for "**Desired Future Condition**" was adapted from several sources including the "Silviculture and Best Management Practices for the Dry-Belt Douglas-fir Area in the Cariboo Forest Region – First Approximation (Day and Wood, Aug 2023)" and the CCLUP Regional Biodiversity Conservation Strategy Report. The definition provided in the FSP is as follows:

> ***"Desired Future Condition"*** means a management strategy for Dry-Belt Douglas-fir ecosystems that will as part of each entry achieve and/or trend towards the following *stand* conditions:
> 1. Minimum large tree (≥ 67.5cm dbh) retention target of 2m^2/ha basal area, and
> 2. Three or more age classes based on harvest cutting cycle, and
> 3. Presence of culturally important plants, and
> 4. Tree species diversity, and

5. Presence of *high value wildlife trees,* and
6. Stand structure that is resistant to disturbance by fire, and
7. Structural diversity, both vertical and horizontal, including patchiness, and
8. Post-harvest *stand* retention goal of 20m^2/ha *total basal area*.

The definition for **"Dry-belt Douglas-fir ecosystems"** was adapted from the "Silviculture and Best Management Practices for the Dry-Belt Douglas-fir Area in the Cariboo Forest Region – First Approximation (Day and Wood, Aug 2023)". The definition provided in the FSP is as follows:

> **"Dry-belt Douglas-fir ecosystems**" for the purposes of this result/strategy means the following Biogeoclimatic subzones (BEC): IDFdk, IDFxh, IDFxm, IDFdw, IDFxw and IDFww.

The scope of the biogeoclimatic subzones included in this definition is limited to areas within the IDF, which in part is a result of alternate management strategies for the grassland benchmark transition zone.

The definition for **"Mature+Old Forest"** proposes an alternate methodology for defining what contributes to meeting Mature+Old targets for Douglas-fir dominated stands in the IDF. Integral to this definition are new definitions for **"stand"** and the introduction of **"stand age"** both of which will be discussed in further detail below. The definition provided in the FSP is as follows:

> **"Mature+Old Forest"** refers to a *stand* where the *stand age* meets or exceeds the mature forest Seral Stage Age Definition defined in Table 5.7.3 for the applicable *Seral Assessment Unit*.

The new definition for "**Stand"** was developed to support implementation moving forward under a *selection silviculture system* and the management intent for repeated cutting cycles through periodic harvest entries. The definition provided in the FSP is as follows:

> **"Stand"** for the purposes of this result/strategy refers to the net area to reforest by *cutblock* within the *harvest* authority boundary.

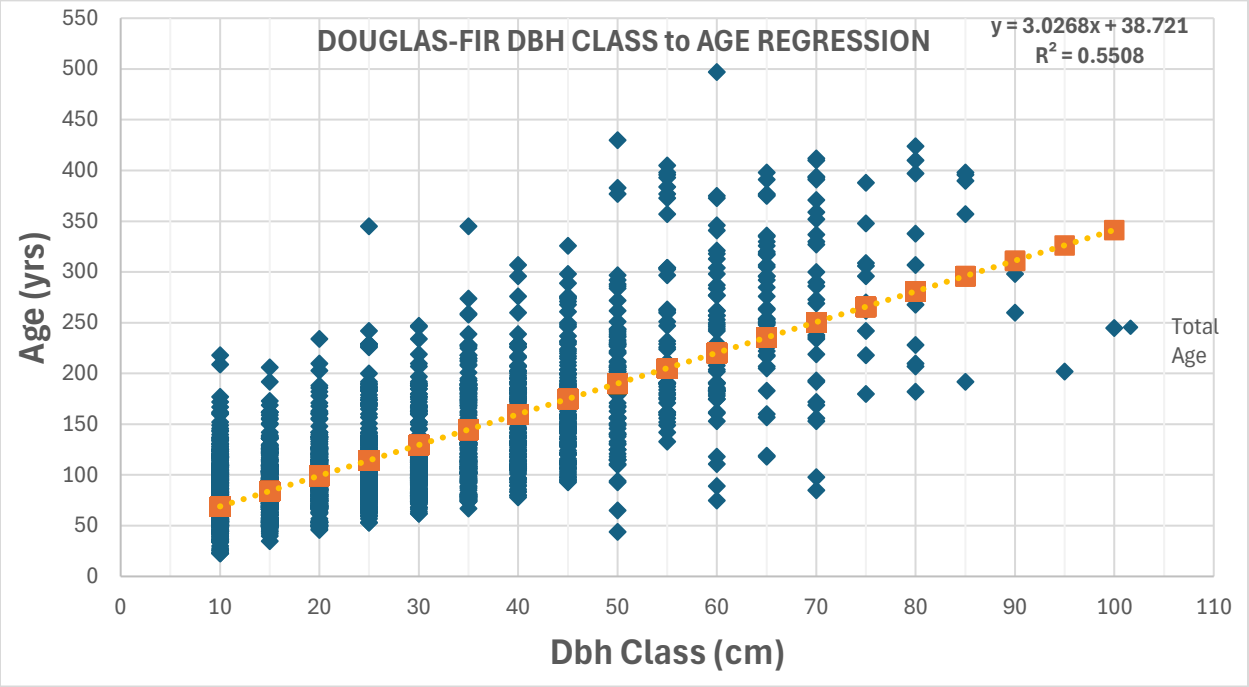
The application to the *cutblock* will allow for development and consistent monitoring overtime towards achievement of the *desired future condition*.

The new definition for **"Stand Age"** is a core aspect of seral stage management moving forward as it provides a tailored approach to determining the age of a stand and ultimately the foundation for determining seral stage at a stand level for Douglas-fir dominated forests in the IDF. The definition provided in the FSP is as follows:

> **"Stand Age" m**eans age weighted by total live Douglas-fir basal area ≥ 12.5cm *dbh* for each diameter class of Douglas-fir present in a *stand* using the cruise compilation for basal area summaries and the following look-up table to assign age by diameter class:

dbh Class (cm)	Age (yrs)	dbh Class (cm)	Age (yrs)
15	84	**50**	190
20	99	**55**	205
25	114	**60**	220
30	130	**65**	235
35	145	**70**	251
40	160	**75**	266
45	175	**≥ 80**	281

Key to this definition is the correlation between dbh class and total corrected age presented in the table above. This table and the predicted ages provided in it are based on regression analysis completed for 2353 sample Douglas-fir trees sourced from Lignum's IFPA growth and yield plot data. The sample trees used in the data where all Douglas-fir, had either a bored or lab derived age and included live trees only. The following chart provides a summary of the data:



The sample trees in the data above used to derive the predicted ages exhibit an expected degree of variability given significant differences in stand structure, site index and disturbance history.

The amendment is also proposing to modify definitions specific to this result and strategy. Revise the definition for **"Forest Management Land Base"** based on the most current Forest Cover Ownership Layer and the updated Ownership Codes and associated Schedule definitions. The current definition in the FSP is based on outdated Ownership Codes and associated Schedules.

The amendment proposes to remove several current definitions from this result/strategy including the definition for **"Old seral target area"** and the definition for **"Stand Attributes"**. Both definitions are no longer referenced in this result/strategy as put forward in the amendment.

Specific to the FSP R/S this section will speak to those aspects not previously discussed under the rationale provided for FSP Paragraph 5.7.1-2 – Wildlife and Biodiversity – Landscape Level (FDU 2). Specific to Criterion Y (clause 2 - sub clause B in the FSP R/S) there are 4 additional conditions that have been added including reference to minimum Douglas-fir percents, and requirements related to retention and/or recruitment of large trees (≥ 67.5cm dbh) within the *stand*. Around 95.5% of the K1C tenure and 99.8% of the N2K tenure is located within the IDF and the majority of this is Douglas-fir dominated. The 70% planned post-harvest threshold represents the minimum Fdi composition required to apply criterion Y based on the

reduced cruise compilation. The large tree reserve requirement of ≥ 67.5cm dbh is consistent with the requirements specified for the IDF working group. The final two additional conditions under criterion Y relate to the *stand* remaining as *mature+old forest* and having to achieve and/or trend towards the *desired future condition* for the stand. Specific to remaining as *mature+old forest* this requires that stand (block)upon completion of *harvest* has an age meets or exceeds the mature forest Seral Stage Age Definition defined in Table 5.7.3 for the applicable *Seral Assessment Unit*. Specific to the final additional condition this requires that upon completion of *harvest* the *stand* achieves and/or trends towards the *desired future condition*. Given the reality of current stand conditions within FDU 2 and variability in current stand structure it is recognized that it will in some cases take time to achieve the desired future condition and therefore acknowledges that some if not all of the aspects of *desired future conditions* may not be achievable immediately. Given this fact a new clause (Clause 4) has been added to the FSP R/S which requires an assessment to be completed to demonstrate how the *harvest* will achieve and/or trend towards the *Desired Future Condition* when Criterion Y is applied as part of the Seral Stage FSP result or strategy. This is a key requirement to support implementation of this FSP result and strategy moving forward.

FSP Paragraph 5.8.2 – Visual Quality – CCLUP:

The following changes are being proposed to this section of the FSP:

- Add clause 6 which states in FDU 2 where Criterion Y is applied under the FSP Result/Strategy contained in paragraph "5.7.1-2 Wildlife and Biodiversity – Landscape Level (FDU 2)" or paragraph "5.7.3-2 Seral Stage (FDU 2)", those portions of the road and/or block that overlap with a Maximum Modification (MM), Modification and/or Partial Retention VQO polygon in a known scenic area are deemed to meet the alteration for the applicable VQO definition specified in Clause 1
- Add clause 7 which states in FDU 2 where Criterion Y is applied under the FSP Result/Strategy contained in paragraph "5.7.1-2 Wildlife and Biodiversity – Landscape Level (FDU 2)" or paragraph "5.7.3-2 Seral Stage (FDU 2)" the harvest areas are deemed to mimic the design characteristics identified under clause 4 when viewed from the high elevation viewpoints.

Supporting Rationale: The application of criterion Y and specifically the requirements to harvest using a selection silvicultural system and retain a minimum of 16m^2/ha basal area post-harvest will satisfy the requirements of clause 1, sub-clauses c, d, and e as well as Clause 4, as such no further assessment or work is required related to these components of the result/strategy. In terms of application this is in harmony with aspects of the Visual Impact Assessment Handbook, 2022. Specifically, the handbook on page 36, table 6 indicates that a removal of 50% of the volume (directly proportional to basal area) in stands 25-30m tall will achieve an impact which meets partial retention requirements. Lower volume removals in practice have less visual impact.

FSP Section 5.16-1 – Grassland Habitats (FDU 1):

The following changes are being proposed to this section of the FSP:
Updated section number and name so that this is applicable to FDU 1 only.

Supporting Rationale: Administrative change to the FSP. No changes are being made to the FSP R/S for Grassland Habitats within FDU 1.

FSP Section 5.16-2 – Grassland Habitats (FDU 2):

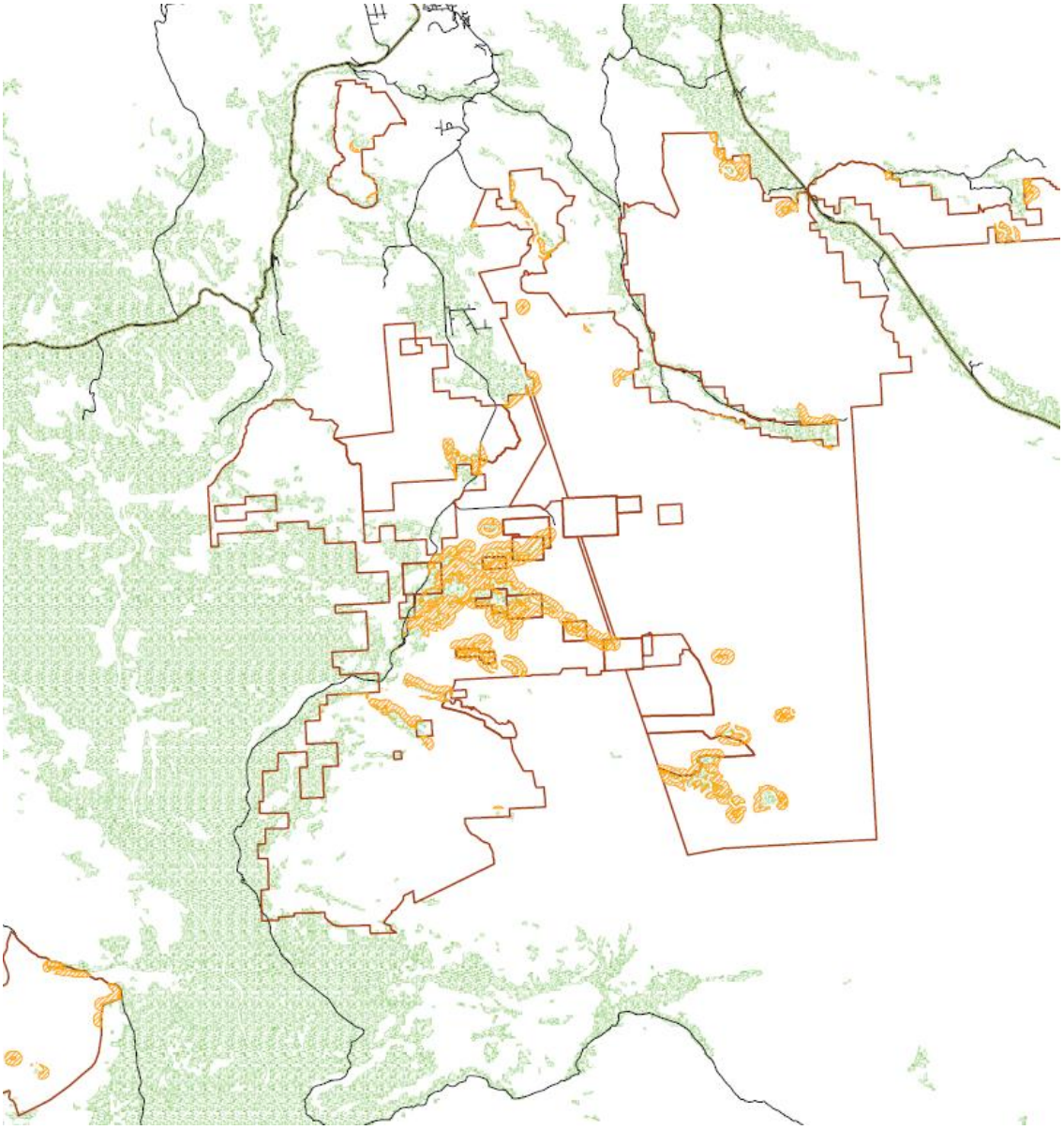
The following changes are being proposed to this section of the FSP:

- Have modified clause 1 so that only sub-clause a is applicable. Sub-clauses b and c have been removed and incorporated into a new clause 2.
- Have inserted clause 2 and included sub-clauses a. and b. (previously b. and c. under clause 1) which apply to *Grassland Habitat* and *Grassland Habitat Transition Zone* as defined in the FSP R/S.
- Have updated reference for clause 3 (was previously clause 2) and removed redundant reference to grassland habitat in sub-clause. No other material changes to this clause or the associated sub-clauses made.
- Have updated reference for clause 4 (was previously clause 3). No other material changes to this clause or the associated sub-clauses made.
- Have inserted clause 5, which is a new clause that specifies the intended results at conclusion of harvesting for the *grassland habitat transition zone*.
- Have updated reference for clause 6 (was previously clause 4). Update the clause so that it applies to *grassland habitat* as well as the *grassland habitat transition zone* as defined in the FSP R/S.

Supporting Rationale:

The revised FSP result/strategy, with the introduction of the management strategy for the *grassland habitat transition zone* is aligned with applicable principles identified in the CCLUP Grassland Strategy. The revised result/strategy is an attempt to deliver on these principles and is aligned with the management objectives of Esketemc First Nation.

A key component of this amended result/strategy is the area used to define the grassland habitat transition zone. A 300m buffer is being put forward and will exclude areas that overlap with Ungulate Winter Range, all Old Growth Management Area's, all Lakeshore Management Zones as well as *No Harvest Areas* as defined in this FSP. In total once the buffer is applied and excluded areas are removed there is a maximum of 4,001.9ha of area within FDU 2 to which the *Grassland Habitat Transition Zone* may apply. The following image shows the areas that are included in the grassland habitat transition zone (Orange crosshatch):



Clause 5 identifies key management outcomes within the transition zone. Specifically, upon conclusion of harvesting there is a requirement to retain a minimum of 10m^2/ha of total stand basal area, retain all stems > 65cm dbh, and retain all deciduous stems > 12.5cm dbh where practicable. A minimum post-harvest basal area target of 10m^2/ha is being put forward to facilitate establishment and maintenance of an open forest condition adjacent to grasslands. The post-harvest basal area target of 10m^2/ha will support a transition from the Grassland Benchmark Areas of around 2m^2/ha to full forest at 18 to 20m2/ha.

APPENDIX A – FOREST STEWARDSHIP PLAN MAP(S):

The following changes are being proposed to Appendix A of the FSP:

- Appendix A maps that overlap with the proposed FDU 2 will be updated and replaced. The Appendix A maps that do not overlap with FDU 2 were not updated. No other changes to the spatial layers displayed on the map were made.
    - Updated map extents 11 and 12 for Biological Diversity and Recreation to show the amended FDU boundary. No other changes were made to the spatial layers.
    - Updated map extents 11 and 12 for Fish Wildlife and Riparian to show the amended FDU boundary. No other changes were made to the spatial layers.

Supporting Rationale: Consistent with section 5(1)(a)(ii) of the Forest and Range Practices Act the FSP needs to include a map that shows the boundaries of all forest development units. Updated maps 11 and 12 for Biological Diversity and Recreation as well as Fish, Wildlife and Riparian. Maps 1 through 10 and 13 through 16 remained unchanged due to no overlap with FDU 2.