Weyerhaeuser

Stewardship Report

Pembina Timberlands

Re-Submission

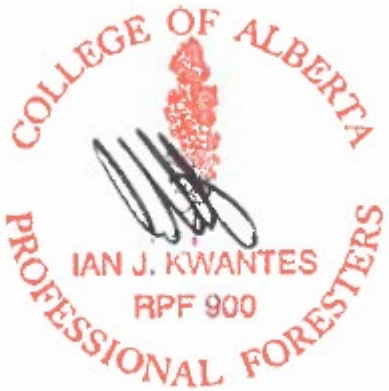
November 9, 2023

Stewardship Report in compliance with Pembina Timberlands' 2016 Forest Management Plan

Acknowledgement

Weyerhaeuser – Pembina Timberlands would like to extend its sincere appreciation to all those who contributed to the completion of this report. This report would not have been possible without the input and involvement of the representatives from overlapping licensees, whose strategic interest in representing their constituents provided the content for meaningful and constructive discussion.

Weyerhaeuser would also like to thank Forcorp for their diligence in seeing the report through to submission.



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Introduction

Stewardship Reporting

This Stewardship Report provides an overview of Weyerhaeuser - Pembina Timberlands' (Weyerhaeuser) five-year performance on commitments made in the 2016 Forest Management Plan (FMP).

Stewardship reporting is a mandatory process summarizing and comparing planned and actual performance with the intent of achieving objectives and targets (VOITs) identified in the approved 2016 FMP, at a point mid-way through the life of the FMP. The report identifies areas where adjustments may be required for VOITs deemed to be outside of the acceptable variance allowed in the FMP.

Preparation of the Stewardship Report is an FMA holder responsibility. Other timber disposition holders are responsible for preparing and providing input to the FMA holder as it relates to their activities within the Defined Forest Area (DFA).

Monitoring

Monitoring will be an ongoing process integrated with Weyerhaeuser's regular operations. Results and variances will be included in stewardship reporting. Monitoring will address the basic aspects of:

- Tracking actual responses to forest management activities compared to expected responses;
- Identifying impacts arising from changes in assumptions, terms of reference or unplanned events; and
- Correcting activities or practices when required.

A variety of data sources including, but not limited to, permanent sample plots, regeneration establishment and performance surveys, and experimental research plots will be used to monitor forest condition and development.

Adaptive management implies adjusting the course of action relative to the variances identified in monitoring. There is an opportunity to make operational adjustments within the implementation of the FMP. These operational adjustments may take the form of corrective activities or compensating activities. The corrective actions directly address the identified shortcoming or variance identified. A prime example of this type of activity would be re-treatment of a regenerating harvest area to meet a particular reforestation standard. This activity would indirectly address the identified variance by way of modifying plans. An example of a compensating adjustment could be re-classification of harvest areas to meet reforestation standards.

Operators

Weyerhaeuser is the FMA holder (#0900046). The following timber operators also operate within the DFA and were involved in the development of the FMP:

- ANC Timber Ltd.
- Blue Ridge Lumber
- Brisco Wood Preservers Ltd.
- Community Timber Permit Program (CTPP)
- Dale Hansen Limited

- EDFOR Cooperative Ltd.
- Canfor (Whitecourt) Forest Products Ltd. (formerly Millar Western Forest Products Ltd.)
- Tall Pine Timber Co Ltd.

All attempts were made to have a complete dataset for this Stewardship Report. In cases where the information was not made available or communicated, information provided is included in this report. For these VOITs, the percentage of the DFA represented are included to provide clarity and transparency.

Reporting Period

Approval Condition 11.1ii from the Forest Management Plan Approval Decision[1] states that the first stewardship reporting period is to cover the period from May 1, 2017 to April 30, 2022 (*i.e*. 2017 to 2021 timber years). This aligns with the effective date of the Spatial Harvest Sequence which is May 1, 2017. The Stewardship for the next period will include the 4-year period from May 1, 2022 to April 30, 2026, as scheduled by the Approval Decision.

[1] Forest Management Plan Approval Decision: Forest Management Unit R15, Weyerhaeuser Company Limited Pembina Timberland. Government of Alberta. September 24, 2018.

Stewardship Report Description

Purpose

The purpose of the Pembina Timberlands 2022 Stewardship Report is to:

- Summarize forestry activities on the DFA over the first 5 years of the 2016 FMP;
- Discuss opportunities for change or adjustments in forest management practices resulting from objectives that deviate from the approved FMP;
- Provide the Government of Alberta (GoA) and the public with an overall assessment of the FMP progress, *i.e.* "*Are we doing what we said we would do?*";
- Identify areas for analysis to understand the cause of deviations; and
- Where required, describe corrective action to be taken.

Content

In 2017, the Government of Alberta released the *Forest Management Planning Standard Interpretive Bulletin: Stewardship Reporting Requirements*[2] (SRR), which standardized the required components of stewardship reporting. The 2022 Stewardship Report contains the mandatory components, reporting VOITs, and other FMP commitments as described within the bulletin.

Mandatory Components

The following mandatory components are included in the Pembina Timberlands 2022 Stewardship Report:

- Status of FMP Approval Decision conditions;
- Regional or DFA-specific management objectives;
- Approved FMP SHS variance assessment;
- Landbase changes;
- AAC review;
- Growth and Yield program maintenance;
- Seed availability and usage; and
- FGRMS reporting.

[2] Forest Management Planning Standard Interpretive Bulletin: Stewardship Reporting Requirements. Government of Alberta. June 15, 2017.

VOITs Reporting

Weyerhaeuser developed 37 VOITs[3] to be monitored and reported on over the course of the FMP. The VOITs were developed according to the standards outlined in the *Alberta Forest Management Planning Standard*[4] (FMPS) and is based on the following 6 CCFM criterion for sustainable forest management:

- Biological diversity;
- Ecosystem productivity;
- Soil and water;
- Global ecological cycles;
- Multiple benefits to society; and
- Accepting society's responsibility for sustainable development.

The SRR divides VOITs into three groups:

- Dynamic – Those impacted by ongoing forest operations;
- Modelled – Based on predicted or modelled indicators; and
- Non-FMPS.

The detailed VOITs table in Appendix II – VOITs Table indicates which group the VOIT falls into based on the reporting requirement. Modelled VOITs do not require reporting in the 5-year Stewardship Report while dynamic VOITs do require reporting. There are no Non-FMPS VOITs in the FMP.

The VOIT Reporting section describes each VOIT, dynamic and modelled, and provides performance reporting for dynamic VOITs only. VOITs were reported by Weyerhaeuser and all quota holders. In the results, values were reported as they were provided. In some cases, a "-" was used in the tables to indicate that the VOIT was not reported by a given operator.

Table 1 describes the current status of each VOIT by identifying whether the variance is within or outside the acceptable range provided in the FMP.

[3] The detailed VOITs table from Chapter 5 of the "Pembina Timberlands 2016-2026 Forest Management Plan" can be found in Appendix I.
[4] Alberta Forest Management Planning Standard, Alberta Sustainable Resource Development, Public Lands and Forests Division, Forest Management Branch, Version 4.1 – April 2006.

Table 1. Identification of acceptable variance for indicators since May 1, 2017.

(NA = Not Applicable; WV = Within Acceptable Variance; OV = Outside Acceptable Variance)

Indicator	Type	Description	Status
1	Modelled	Seral Stages by Ecological Unit	NA
2	Modelled	Opening Patch Size	NA
3	Modelled	Old Interior Forest	NA
4	Dynamic	Permanent All-Weather Forestry Road Density	WV
5	Dynamic	Open Seasonal/Temporary Forestry Road Density	WV
6	Dynamic	Uncommon Plant Communities	WV
7	Dynamic	Salvageable Unsalvaged Burned Forest	WV
8	Dynamic	Salvageable Unsalvaged Blowdown Forest	WV
9	Dynamic	Operating Ground Rules (OGR) Compliance	OV
10	Dynamic	Merchantable Structure Retention	WV
11	Dynamic	Downed Woody Debris	WV
12	Dynamic	Sensitive Sites	WV
13	Dynamic	Forestry Water Crossings	OV
14	Modelled	Suitable Habitat for Native Species	NA
15	Dynamic	In Situ Genetic Conservation	WV
16	Dynamic	Genetic Integrity	WV
17	Dynamic	Trans Boundary Values	WV
18	Dynamic	Reforest All Harvested Areas	WV
19	Dynamic	Regenerated Stand Productivity	WV
20	Dynamic	Productive Forest Conversion	WV
21	Dynamic	Impacts of Insects, Fire, Windthrow, & Natural Events	WV
22	Dynamic	Noxious Weed Program	WV
23	Dynamic	Reforest In-Block Temporary Roads	NA
24	Dynamic	Soil Erosion and Slumping	OV
25	Modelled/Dynamic	Forecasted Changes in Water Yields	WV
26	Dynamic	Effective Riparian Habitats	WV
27	Not Applicable	Global Carbon Cycles	NA
28	Modelled	Appropriate AACs	NA
29	Modelled	Fire Behaviour Potential in FireSmart Communities	NA
30	Modelled	Fire Behaviour Potential in DFA	NA
31	Dynamic	Communication Initiatives	WV
32	Modelled	Regenerated Stand Yield Comparisons	NA
33	Dynamic	Alberta First Nations and Métis Settlement Consultation	WV
34	Dynamic	First Nations and Métis Gathering Sites	WV
35	Dynamic	First Nations and Métis Cultural Sites	WV
36	Dynamic	Public Input into Forest Management Activities	WV
37	Dynamic	First Nations and Métis Service Agreements	WV

Mandatory Components

Status of FMP Approval Condition Decisions

The Government of Alberta's Forest Management Branch identified twelve (12) approval condition decisions during their review of the Weyerhaeuser Pembina 2016 FMP. The approval conditions outline a list of requirements to be met after the approval of the FMP as well as authorize submission dates for important documents and reports as required by provincial law. Table 2 summarizes the completion status of the approval decision conditions.

All approval conditions outside of future dated requirements have been successfully completed and associated commitments implemented. Reporting where required will continue throughout the implementation of the plan. The table below details the approval dates of each condition, where applicable.

Table 2. Approval condition decisions for the Weyerhaeuser Pembina 2016 FMP.

Approval Condition	Approval Condition Description	Due Date	Approval Date	Comments
1.0 Public and Indigenous Consultation				
1.1i	Public Consultation	May 1 Annually	AOP	Submitted annually in the AOP; all concerns identified are tracked through the annual planning process.
1.1 ii	Public Involvement Plan for Operational Planning	01-Dec-18	10-Oct-21	Approved by the GoA. With some adjustments for Covid, we have now fully implemented the Operational Public Involvement Plan (OPIP), including regular community events in Edson and Drayton Valley.
1.2	Indigenous Consultation	Ongoing	n/a	Ongoing as a precursor to the General Development Plan.
2.0 Mountain Pine Beetle				
2.1i	Mountain Pine Beetle	Ongoing	n/a	Rank 1 and 2 stands were prioritized in the sequencing process, and as a result these stands are being harvested. Some infestation from the 2nd decade was prioritized through the SHS variance process.
3.0 Spatial Harvest Sequence				
3.1i	Spatial Harvest Sequence Adherence	Ongoing	FMP	SHS variance tracking is the mechanism for monitoring. Variance is justified and tracked.
3.1ii	Spatial Harvest Sequence Modification	Ongoing	Ongoing with FHP	SHS variance tracking maintains the 100% threshold by ensuring any additions are substituted by deferrals.
3.1iii	Spatial Harvest Sequence Modification	Ongoing	Ongoing with FHP	Additions of non-contributing landbase are justified, tracked, and approved by the GoA.

Approval Condition	Approval Condition Description	Due Date	Approval Date	Comments
3.1iv	Spatial Harvest Sequence Variance Tracking	Ongoing	Ongoing with FHP	All non-GoA operators are using the tracking tables provided.
3.1v	Spatial Harvest Sequence Variance Tracking - Compartment Assessments	n/a	n/a	One quota holder exceeded the 20% threshold in one compartment with approval; however, the combined compartment totals are well within the range.
3.1vi	Spatial Harvest Sequence Variance Tracking - Deferrals and Deletions	Ongoing	Ongoing	The deferral and deletion process is being followed and decisions will be resolved in the 2026 FMP.
3.1vii	Spatial Harvest Sequence Variance Tracking - Reporting	Annually	Annually	SHS variance tracking is being tracked and reported through the annual planning process.
3.1viii	Spatial Harvest Sequence GOA adjustment	n/a	n/a	There have been no requests to adjust SHS beyond the approved tracking mechanism.
4.0 Stand Level Structure Retention				
4.i	Adherence to stand level structure retention standard provincial direction	Ongoing	Ongoing	The OGR defines the requirements and is the mechanism to ensure adherence.
4.1 ii	Adherence to stand level structure retention standard FMP direction	Ongoing	FMP	Structure retention is identified at time of layout to meet the FMP objectives, per the direction of the OGRs.
5.0 Habitat for Species of Concern				
5.1i	Adherence to guideline, direction, recovery, conservation and or implementation for habitat for species of concern	Ongoing	FMP, FHP	Planning processes follow both GoA and DFO direction for species of concern.
6.0 Growth and Yield Program				
6.1i	Implementation of Growth and Yield Program	5 year Stewardship Report	SR	The Weyerhaeuser Pembina Growth and Yield update on commitments is included on pg. 15 of the Stewardship Report.
7.0 Road Corridor Plan				
7.1i	Road Corridor Plan development	31-Oct-19	12-Aug-22	With several iterations and alignment checks, the plan was approved. While there was always alignment on the value of identifying corridors for access development, the definition of corridor took

Approval Condition	Approval Condition Description	Due Date	Approval Date	Comments
				some time to resolve. Work is underway to have the next iteration of the corridor plan in place in conjunction with the 2026 management plan.
8.0 Access				
8	DLO Regulatory Compliance following Corridor plan approval	Ongoing	Ongoing	The DLO process is underway for one disposition on the FMA.
9.0 Delivered Timber Volume Monitoring and Reporting Program				
9.1i	Delivered Timber Volume Monitoring and Reporting	01-Nov-18	31-May-19	The report was developed in 2019, and further enhanced with PowerBI reporting.
10.0 Timber Harvest Planning and Operating Ground Rules				
10.1i	Operating Ground Rule Negotiation	01-May-19	04-Jun-19	Refer to Memo 06332-0101. Provincial OGRs have since replaced the negotiated OGRs, following provincial direction.
11.0 Performance Monitoring and Reporting				
11.1i	Stewardship Report Preparation	Ongoing	Ongoing	The Stewardship Report for the 2022-2026 period will be prepared and submitted in association with the 2026 FMP.
11.1ii	Stewardship Report Submission	01-Nov-22	-	Stewardship Report re-submission is targeted for April 30, 2023.
12.0 Future Forest Management Plan				
12.1i	FMP	01-May-26	-	Plans to be prepared adhere to the GoA Forest Management Planning Standard.

Regional or DFA-Specific Management Objectives

Healthy Pine Strategy

Stewardship reports must include references in response to regional or DFA-specific management objectives, which may include provincial strategies to reduce forest insect risks such as Mountain Pine Beetle (MPB).

With the large area of mature pine on the DFA, the intent was to target MPB susceptible pine stands for harvest during the early stages of the FMP. In 2016, the GoA issued a revised methodology for evaluating stands for pine strategy stand ranking[5]. This method uses the stand susceptibility index (SSI), compartment risk, and a stand level predicted R value to rank stand susceptibility to MPB risk.

Not all stands identified in the landbase as Rank 1 or 2 based on the above criteria were targeted in the TSA model. Because harvest was focused on the most susceptible and/or least salvageable stands in the event of a

[5] Alberta Agriculture and Forestry. Forestry Division. Priority Setting in the Pine Strategy. September 20, 2016.

major infestation, only the Rank 1 and 2 stands that met the following criteria were targeted for harvest as MPB susceptible stands:

- Greater than 10% overstorey pine content;
- Greater than 60 years of age at the landbase effective date (May 1, 2015);
- Contained less than 40% Sw content in the overstorey; and
- Fell within the Aw, AwPl, Pl, or PlAw strata. The remaining strata had little area remaining once filtered for the above Sw content.

The Preferred Forest Management Scenario (PFMS) included an accelerated harvest for the first decade of the plan, and a normal, even-flow AAC from decades 2 to 20.

Table 3 shows how the Rank 1 and 2 stands were scheduled for harvest in the PFMS. While the intent was to realize 100% reduction of Rank 1 and 2 stands over the first 20 years, this was not feasible due to the need to balance all timber and non-timber values, including wildlife habitat and watershed runoff.

Table 3. MPB Rank 1 and 2 stands remaining after 10, 20 and 30 years.

Period	Area (ha)	%
Inventory at time 0	120,676	-
Remaining after 10 years	71,595	59.3%
Remaining after 20 years	36,910	30.6%
Remaining after 30 years	11,019	9.1%

Table 3 shows that the plan was to harvest a total of 49,081 ha of MPB susceptible stands over the first decade or 24,541 ha over five years.

Table 4 summarizes the result of this strategy over the first five years of the SHS for all operators based on flown / as cut harvest areas.

Table 4. MPB mitigation overview on the DFA over the five-year period (2017 – 2021 timber years).

Sustained Yield Unit	Year	MPB Rank	Total Area Remaining (ha)	SHS Area Remaining (ha)	Area Harvested (ha)
R15	2017	Rank 1&2	120,676	49,081	4,037
	2018	Rank 1&2	116,639	45,044	4,116
	2019	Rank 1&2	112,523	40,928	5,618
	2020	Rank 1&2	106,906	35,311	4,901
	2021	Rank 1&2	102,004	30,409	4,587
Period Total			**97,417**	**25,822**	**23,259**

Table 4 shows that the area of Rank 1 and 2 stands harvested on the DFA during the first quadrant (23,259 ha) was 95% of the FMP target of 24,541 ha. The focus on MPB susceptible stands will continue with the objective of achieving the target of 49,081 ha by the end of the first decade.

SHS Variance

The Stewardship Report assesses variance to the approved 20-year Spatial Harvest Sequence (SHS) by decade. The intent of the implementation of the FMP is that operators will stay within 100% of the approved SHS by area, and/or have no more that 20% of the SHS be classified as additions during development of Forest Harvest Plans (FHP). These two thresholds are measured by compartment during consecutive FHPs, at each General Development Plan (GDP), and in the Annual and Stewardship Report.

Weyerhaeuser has automated the process to determine SHS variance. Similar processes were used to measure variance to the SHS in both previous FMPs. Weyerhaeuser was able to run reports for their operations during the reporting period as well as the operations for Dale Hansen Ltd, and Tall Pine Timber Co. Weyerhaeuser was unable to run an inclusive report for the remaining quota holders but received reports from all operators except for the Community Timber Permit Programs. SHS variance by compartment for this reporting period is summarized in Table 5 and the full report outputs are provided in Appendix I – SHS Variance Tables.

Weyerhaeuser's SHS monitoring report shows that we are on target to be below the 20% variance limit and 100% threshold during the first decade of harvest. The deviations are as expected in most compartments and are attributed to operational buffers on ecological features or stand type changes along merchantable boundaries. The two notable exceptions to this are in the Wolf Lake and Baptiste compartments. In Wolf Lake, there were stands from the second decade that had a high Mountain Pine Beetle population that Weyerhaeuser brought forward to decade one. Additionally in the Wolf Lake compartment, Brisco sought approval to salvage blowdown that was out of sequence. This justified departure from the SHS was approved and is represented in the variance table. In Baptiste, there was a large area of storm-damaged deciduous that was brought into the first decade for salvage. In both compartments, the variance is still below the 20% threshold and within acceptable variance.

The CTP program does not currently track variance. While the size of the program would not push any of the compartments outside of variance, this is being pursued as an action item. A '-' in Table 5 below indicates those compartments for which no SHS variance reports were received.

Table 5. Summary of SHS variance reported by operator for the 2017 – 2021 timber year stewardship reporting period.

Compartment	Reported SHS Variance by Compartment & Operator									
	Weyerhaeuser Pembina	ANC Timber Ltd	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	Total
Baptiste	6.7%									6.7%
Beaver Meadows	0.0%								-	0.0%
Brazeau	2.2%							1.2%	-	2.0%
Edson	4.7%					13.2%			-	6.8%
Macmillan	1.3%		7.6%			0.0%	12.3%		-	3.0%
Medicine Lake	0.9%									0.9%
Nordegg	3.8%									3.8%
South Canal	2.5%				0.8%			0.0%		1.8%
West Country	3.2%									3.2%
Wolf Lake	12.0%	1.2%	12.1%	41.7%		0.0%			-	9.9%

Landbase Changes

To conserve the physical environment and productivity of the forest landbase, FMA holders are required to report landbase changes that occur over the life of the FMP. These changes can include, but are not limited to land use withdrawals, administrative changes, and fires. In cases where a 2.5% loss of the contributing landbase occurs, an AAC adjustment is required.

Table 6 summarizes changes to the net forest area as reported annually by the GoA in the annual withdrawals reports. These reports are provided to the FMA holder and report the net forest area of the FMA as well as area attributed to DIDs dispositions and hydrology buffers. This report also reports area returned to active forest over the previous year. Over the first five years of the FMP the net change to the forest landbase was a loss of 0.2% of the area. With this report being generated annually in November, some changes may have occurred between the time of the last report and the end of the 2021 timber year. These changes are not expected to have caused change to push any forest landbase losses close to 2.5%.

Table 6. Summary of the changes to the Weyerhaeuser net landbase based on the annual withdrawal reports generated by the GoA.

	Reporting Date	
Description	30/11/2016	30/11/2021
Gross Area (ha)	953,973.5	953,917.2
DIDs Disposition Area (ha)	61,634.2	63,742.5
% DIDs Dispositions	6.5	6.7
Change in DIDs Dispositions (%)	-	0.2
Hydrology Buffers (ha)	11,058.7	11,052.9
% Hydrology Buffers	1.2	1.2
Net Forest Area (ha)	881,280.6	879,121.8
% Forest Area	92.4	92.2
Change in Forest Area (%)	-	-0.2

Forest losses due to fire over this reporting period were approximately 575 ha and is reported in VOIT 7. This additional area is considered a temporary loss of forest landbase and was not included in Table 6. If losses due to fire were included in Table 6, then the total percent change in forest area would be a loss of approximately 0.3%.

AAC Review

Table 7 summarizes the annual conifer and deciduous projected and delivered yields by timber year during the reporting period. Projected volumes are calculated from the yield curves submitted in the 2016 FMP.

Table 7. Projected and Delivered volume comparison.

Year	Coniferous		Deciduous	
	Projected m^3/ha	Delivered m^3/ha	Projected m^3/ha	Delivered m^3/ha
2017	197.4	201.4	68.7	63.5
2018	200.4	223.5	73.6	74.8
2019	206.1	184.6	68.8	60.7
2020	207.7	221.6	68.3	76.6
2021	190.3	208.4	81.8	101.9
Period Total	**200.8**	**206.4**	**71.7**	**73.6**

The productivity of coniferous stands harvested exceeded the projected values in all years except 2019. For deciduous volumes, the stand productivity exceeded the projected values in 2018, 2020, and 2021 but was lower in the other periods. For the 5-year reporting period, however, projected volumes are being exceeded for both coniferous and deciduous. Weyerhaeuser was the only company that produced the data for all five years of the reporting period, and therefore is the only company represented in this data. This table represents approximately 82% of the harvesting done in the reporting period.

Growth and Yield Program Maintenance

The Growth and Yield program manages the collection and analysis of tree data for current and future timber yield validation purposes. Natural stand permanent sample plots (PSPs) have been established in immature and mature fire origin stands. Regenerating stand PSPs have been established in stands harvested and reforested over the last 30 years. The Growth and Yield Monitoring Program (GYMP) provides greater detail for these plots.

Table 8 summarizes the collection of PSP and GYMP data.

Table 8. Comparison of the planned establishments and measurements of the growth and yield program identified in the 2017 FMP to the actual establishments and measurements that occurred between 2017 and 2021 timber years.

		Natural Stands			Pre-91		Post-91		T.I. Reg. I Sw		T.I. Aspen		Total		
		PSP		TSP	GYM		GYM		RGT		RGT		PSP/GYM		TSP
	Year	Meas.	Estab.	Estab.	Meas.	Estab.	Meas.	Estab.	Meas.	Estab.	Meas.	Estab.	Meas.	Estab.	Estab.
Planned															
	2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2018	36	0	0	16	0	34	20	0	3	0	0	86	20	0
	2019	27	1	0	0	0	0	0	0	0	0	0	27	1	0
	2020	62	0	0	1	0	15	20	0	0	0	0	78	20	0
	2021	0	0	0	5	0	0	0	0	0	0	0	5	0	0
	Total	125	1	0	22	0	49	40	0	3	0	0	196	41	0
Actual															
	2017	0	0	0	6	0	6	10	0	14	0	0	12	10	0
	2018	0	0	0	6	0	6	10	0	8	0	0	12	10	0
	2019	16	0	0	4	0	7	10	0	0	0	0	27	10	0
	2020	90	0	0	1	0	0	10	0	0	0	0	91	10	0
	2021	26	0	100	4	0	27	10	0	10	0	0	57	10	100
	Total	132	0	100	21	0	46	50	0	32	0	0	199	50	100

To date, the following commitments have been met for both establishment and remeasurement of natural and regenerating stands as outlined in the GYMP component of the FMP:

- Weyerhaeuser successfully developed an Oracle database for managing PSP data. Weyerhaeuser is working towards utilizing the Forcorp system for collecting PSP data, allowing more efficient compatibility with PGYI. Once the Oracle database has been converted to Forcorp's database, Weyerhaeuser will be able to efficiently resume transfer of PSP and GYM plots to PGYI.
- 132 measurements of Natural Stand PSP's occurred during the reporting period.
- 21 measurements of pre-91 GYM plots occurred in the reporting period.
- 46 Measurements of post-91 GYM plots occurred during the reporting period.
- 100 additional Temporary Sample Plot (TSP) were established in 2021.
- Weyerhaeuser is on track to establish 100 new Growth and Yield Monitoring plots in RSA-surveyed openings 14 years after harvest. The first plots were installed in 2017 RSA survey blocks and have been proceeding according to plan.
- Weyerhaeuser created an integrated RSA database for all performance-surveyed openings since 2009. New survey data for all stakeholders on the FMA area will be added yearly. Over 26,000 ha of RSA survey population data have already been gathered and reconciled with the Alberta Regeneration Information System (ARIS) records. Another 45,000 ha of RSA performance surveys are expected by 2027. The EFM population of openings will be sampled separately as per the RSA standard. All operators' ARIS data was incorporated into VOITS 18 and 19 and Data Sharing Agreements are in place for continued updates through the development of the next FMP.
- Weyerhaeuser is participating in the FRIAA-funded Realized Gain Trials (RGT) for the I1 white spruce-controlled parentage program (CPP). As of fall 2022, Weyerhaeuser installed 32 Region I plots. The first measurements will commence in 2023.
- Weyerhaeuser is one of the sponsors of the Mountain Pine Beetle PSP network.

- Weyerhaeuser is an active member of the Forest Growth Organization of Western Canada (FGrOW). Weyerhaeuser continues to work with FGrOW to shape the vision for growth and yield in Alberta.

Seed Availability and Usage

Weyerhaeuser currently has an abundance of seed inventory to meet expected reforestation requirements for stands harvested during the life of the FMP based on the PFMS SHS. Table 9 summarizes the current inventory held by Weyerhaeuser. For each species/seed zone combination, Weyerhaeuser has an estimate of the number of seeds in a kilogram of seed. This estimate as well as the assumption of 1.5 seeds per growth cavity in the nursery and a 20% oversow were used to estimate the number of seedlings per kilogram of seed collected. Seed collections typically occur annually with 22 seedlots having been registered between 2017 and 2021. In 2022 70 kilograms of seed was collected from LF2.2. This was to account for the higher than expected consumption and rebuilds to seed inventory to the 10 year target. Regular collections are expected to continue for the remainder of the FMP.

Seedlot deficiencies identified in the FMP are Weyerhaeuser (Section 7.2.8.1), Brisco (Section 7.2.8.4), Dale Hansen Ltd. (Section 7.2.8.5), and EDFOR (Section 7.2.8.5). Weyerhaeuser is supporting the Dale Hansen Ltd operation and will allocate PL LF 2.2 to cover this shortfall. Brisco has plans to purchase seed under strategy 5.

EDFOR has updated their plan as follows:

1. PL-LF-1.5 – EDFOR currently has 4.7kg of seed; deficiencies have been noted. Picking was started 2022 and will continue summer of 2023 to make up the 12.4kg deficiency.
2. PL-LF-2.1 – EDFOR currently has 9.2kg of seed; deficiencies have been noted. Picking was started 2022 and will continue summer of 2023 to make up the 33.4 kg deficiency.
3. PL-UF-1.2 – EDFOR currently has 1.4kg of seed. Seed zone has a relatively small area within the EDFOR quota; all cutblocks are currently within 1km of LF2.1. There is no sequencing planned in areas over 1km from LF2.1 for the next 10 years. No future seed collection planned as there is no harvesting that would require PL-UF-1.2 seed.
4. PL-UF-1.4 – EDFOR currently has 2.35kg of seed. Seed zone has a relatively small area within the EDFOR quota; all cutblocks are currently within 1km of LF2.1. there is no sequencing planned in areas over 1km from LF2.1 for the next 10 years. No future seed collection planned as there is no harvesting that would require PL-UF-1.4 seed.
5. SW-LF-1.5 – EDFOR currently has 13.6 kg of seed. All 13.6 kg were picked 2022 and were added to EDFOR's seedlot inventory December of 2022. EDFOR plants a maximum of 1kg of SW seed per year which includes LF1.5 and LF2.1. No future seed collection planned.
6. SW-LF-2.1 – EDFOR currently has 22.22 kg of seed. 21.55 kg were picked 2022 and were added to EDFOR's seedlot inventory December of 2022. EDFOR plants a maximum of 1kg of SW seed per year which includes LF1.5 and LF2.1. No future seed collection planned.
7. SW-UF-1.2 – The majority of seed zone is within 1km of LF2.1 and will be planted with LF2.1 seed. There is no sequencing or planned EDFOR cutblocks with SW as a leading species over 1km from LF2.1 seed zone in the next 10 years of sequencing. No future seed collection planned as there is no harvesting that would require SW-UF-1.2 seed.
8. SW-UF-1.4 – The majority of seed zone is within 1km of LF2.1 and will be planted with LF2.1 seed. There is no sequencing or planned EDFOR cutblocks with SW as a leading species over 1km from LF2.1 seed zone in the next 10 years of sequencing. No future seed collection planned as there is no harvesting that would require SW-UF-1.4 seed.

Table 9. Current inventory of seed held by Weyerhaeuser and the estimated number of seedlings that can be grown from that seed for each commercial species within the different seed zones of the DFA.

Company/ Seed Owner	Inventory Date	Species	Seed Zone (Stream 1)	CPP Region (Stream 2)	Inventory (kg)	Projected Seed Usage (kg)	Projected Seed Supply (yrs)	Actual Seed Usage (kg)	Actual Seed Supply (yrs)
Weyer	16-Jul-22	PL	CM 3.5		14.689	6.70	20.1	0.724	20.3
Weyer	16-Jul-22	PL	DM 2.3		0.000	0.72	10.0	0.000	10+
Weyer	16-Jul-22	PL	LF 1.5		82.843	81.40	7.5	6.138	13.5
Weyer	16-Jul-22	PL	LF 2.1		160.334	62.84	30.1	8.612	18.6
Weyer	16-Jul-22	PL	LF 2.2		71.245	111.22	6.8	16.857	4.2
Weyer	16-Jul-22	PL	UF 1.4		108.368	38.52	16.8	5.040	21.5
Weyer	16-Jul-22	PL	UF 2.4		44.938	14.44	3.6	2.828	15.9
Weyer	16-Jul-22	PL	SA 1.2		43.836	9.33	53.5	0.987	44.4
Weyer	16-Jul-22	PL	SA 2.2		0.000	0.58	0.6	0.000	10+
Weyer	16-Jul-22	SW		HASOC	79.065	14.89	79.6	4.250	18.6
Weyer	16-Jul-22	SW	CM 3.5		64.671	0.00	NA	0.000	10+
Weyer	16-Jul-22	SW	LF 1.5		125.735	0.00	NA	0.030	50+
Weyer	16-Jul-22	SW	LF 2.1		29.663	0.00	NA	0.001	50+
Weyer	16-Jul-22	SW	LF 2.2		88.422	0.16	552.6	0.003	50+
Weyer	16-Jul-22	SW/SE	UF 1.4		35.174	5.01	70.2	0.216	50+
Weyer	16-Jul-22	SW	UF 2.4		17.381	1.04	185.6	0.267	65.1
Weyer	16-Jul-22	SW	SA 1.2		43.867	5.11	89.3	0.277	50+
Weyer	16-Jul-22	SW	SA 2.2		0.000	0.06	0.1	0.000	0.0

FGRMS Reporting

The Alberta Forest Genetic Resource Management and Conservation Standards (FGRMS) requires that companies establish and report in-situ genetic conservation areas for species under an approved CPP plan. Table 10 summarizes FGRMS Stream 1 (Wild) seed deployment on the DFA and Table 11 summarizes the deployment of Stream 2 (Seed Orchard) seeds on the DFA.

N_e is the effective population size of deployment populations aggregated across years, production units, or production populations[6]. Table 12 presents the 5-year cumulative N_e of Stream 2 deployment. No in-situ conservation areas are required within the DFA at this time.

[6] Alberta Forest Genetic Resource Management and Conservation Standards Volume 1: *Stream 1* and *Stream 2*. Government of Alberta. December 21, 2016.

Table 10. Summary of Stream 1 (wild) seed deployment.

Species	Seed Zone	Year	Area Planted (ha)	Seedlings Planted	Area Replanted or Fill-In (ha)	Seedlings Replanted or Fill-In
PL	LF 2.2	2017	24.8	28,865	-	-
PL		2017	2,978.0	3,709,130	-	-
SW		2017	596.0	716,385	-	-
PL	LF 1.5	2018	319.0	404,765	-	-
PL	LF 2.1	2018	758.0	1,027,020	-	-
PL	LF 2.2	2018	1,558.0	2,048,305	-	-
PL	UF 1.4	2018	158.0	198,180	-	-
PL	UF 2.4	2018	25.4	26,140	-	-
SW	LF 1.5	2018	14.0	15,620	-	-
SW	LF 2.2	2018	2.0	3,370	-	-
AW	LF 1.5	2019	3.0	2,340	-	-
PL	CM 3.5	2019	237.0	316,550	-	-
PL	LF 1.5	2019	397.0	549,720	-	-
PL	LF 2.1	2019	968.0	1,163,045	-	-
PL	LF 2.2	2019	1,074.5	1,621,045	-	-
PL	UF 1.4	2019	530.0	783,000	-	-
PL	UF 2.4	2019	174.0	26,140	-	-
SE/SW	UF 1.4	2019	151.0	209,970	-	-
PL	CM 3.5	2020	40.0	58,320	-	-
PL	LF 1.5	2020	643.0	821,400	-	-
PL	LF 2.1	2020	318.0	429,030	-	-
PL	LF 2.2	2020	1,811.0	2,439,050	-	-
PL	SA 1.2	2020	115.0	182,250	-	-
PL	UF 1.4	2020	266.0	400,950	-	-
PL	UF 2.4	2020	272.0	482,490	-	-
SW	LF 1.5	2020	7.0	10,260	-	-
SW	SA 1.2	2020	198.0	306,900	-	-
SW	UF 2.4	2020	83.0	126,360	-	-
SW	UF 1.4	2020	10.0	32,130	-	-
AW	LF 1.5	2021	8.0	14,130	-	-
PL	LF 1.5	2021	729.0	1,102,410	-	-
PL	LF 2.1	2021	682.0	951,345	-	-
PL	LF 2.2	2021	1,097.3	1,518,885	-	-
PL	SA 1.2	2021	18.8	31,590	-	-
PL	UF 1.4	2021	468.0	666,630	-	-
PL	UF 2.4	2021	80.7	121,230	-	-
SW	LF 1.5	2021	199.5	10,260	-	-
SW	SA 1.2	2021	12.8	17,715	-	-
SW	UF 2.4	2021	113.8	185,490	-	-

Table 11. Summary of Stream 2 (seed orchard) seed deployment.

Species	CPP Region	Year	Area Planted (ha)	Seedlings Planted	Area Replanted or Fill-In (ha)	Seedlings Replanted or Fill-In	Cumulative Stream 2 Seedlings Deployed
SW	HASOC	2018	549.5	674,370	-	-	674,370
SW	HASOC	2019	799.7	1,000,595	-	-	1,000,595
SW	HASOC	2020	613.8	727,435	-	-	727,435
SB	Region L1	2021	11.8	19,980	-	-	19,980
SW	HASOC	2021	956.9	851,015	-	-	851,015

Table 12. Cumulative effective population size for black spruce and white spruce within the HASOC Controlled Parentage Program region.

CPP Region	Species	5-Year Cumulative N_e
HASOC	SB	109.6
HASOC	SW	62.4

Other FMP Commitments

Apart from the VOITs and other commitments discussed in the previous sections, a number of other commitments were made during FMP development. Several of these are discussed in this section.

- Third-party Certification.
  - *Weyerhaeuser became SFI certified in 2009 and continues to maintain this certification through regular audits. Weyerhaeuser is currently updating the systems in place to include the Indigenous and climate strategies that were included in the 2022 SFI standard.*
- Research. The following is a list of some of the research, monitoring, or inventory programs either completed or in progress on the FMA:
  - *Raptor monitoring surveys;*
  - *Songbird monitoring surveys. Work with Strix Ecological has been done over the past decade to define the risk and the mitigation for both the stand types and nesting windows for many species on the FMA;*
  - *Forest Management and Wetland Stewardship Initiative partners include Ducks Unlimited Canada, Weyerhaeuser Canada, Canadian Forest Products Ltd., Mercer International, and West Fraser Timber;*
  - *Biodiversity Monitoring. Alberta Biodiversity Monitoring Institute (ABMI);*
  - *Tree Improvement Industrial Research Chair University of Alberta;*
  - *Western Boreal Growth and Yield Cooperative (WESBOGY);*
  - *Foothills Growth and Yield Association (FGYA);*
  - *Mixedwood Management Association (MWMA); and*
  - *Alberta Forest Growth Organization (AFGO).*
- First Nations and Metis Settlements.
  - *Weyerhaeuser has engaged with several of the communities beyond the consultation requirements. This work has included Traditional Land Use Studies, sponsoring trapping and tanning courses, ceremonies, and other community events. Building capacity in the communities has also been a focus, and training programs and field tours are being held to increase the communities' awareness of forest management practices and give the communities' opportunities to provide feedback.*
- OHV Use.
  - *The Trails Act is in the early stages of implementation, and Weyerhaeuser is working with the province to implement the strategies. Weyerhaeuser has received some preliminary recreation trails to incorporate into planning. One example of a successful integration was the planned re-routing of snowmobile trails that had been rendered impassable by OHV traffic. The opportunity was to keep the trail out of the creek system and route it down the reclaimed block road. Weyerhaeuser will continue to work with stakeholders to preserve access where possible and appropriate. For example, where trails are identified by stakeholders such as trappers or grazing lease operators, the integrity of these trails is maintained post-harvest.*
- MPB Monitoring.
  - *In the fall of each year, Weyerhaeuser staff shares the operational harvesting schedule with the GoA in order to prioritize MPB infestation while avoiding the stands that are already scheduled for harvest in the winter season.*

VOIT Reporting

CCFM Criterion 1 – Biological Diversity

CSA SFM Element 1.1 – Ecosystem Diversity

VOIT 1 – Seral Stages by Ecological Unit	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.3a Maintain biodiversity by retaining the full range of cover types and seral stages
Indicator	Area of Old, Mature, Young and Regenerating Forest by Ecological Unit – DX (Hw); DC (HwPl, HwSw); CD (PlHw, SwHw, SbHw); PL (Pl pure and leading), SW (Sw pure and leading); CX (Sb pure and leading)
Type of VOIT	Modelled
Target	Over the 200-year planning horizon: a) Gross forested landbase: greater than 12% old forest, greater than 23% mature plus old forest, less than 32% young forest; less than 17% regenerating forest; and b) Active forested landbase: greater than 8% old forest, greater than 19% mature plus old forest, less than 54% young forest, less than 28% regenerating forest
Acceptable Variance	Area (ha) of Old; and Mature plus Old forest in the DFA by: Ecological Unit shall be between 90% and 100% of target. Area of young and regenerating forest in each DFA by Ecological Unit shall not exceed 110% of target area.
Status	**Not Applicable**

Since the approved FMP assumptions are maintained and SHS deviation is within acceptable thresholds, 5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report by comparing Time 0 of the previous FMP to the Classified Landbase of the new FMP.

VOIT 2 – Opening Patch Size	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.2a Maintain biodiversity by avoiding landscape fragmentation (part a)
Type of VOIT	Modelled
Indicator	Range of patch sizes for the DFA. Patch size categories are as follows: <=25 ha, 25-100 ha, 100-500 ha, and 500+ ha
Target	Over the long-term the intent is to achieve a distribution of harvest area sizes that will result in a patch size pattern approximating patterns created by natural disturbances. By year ten of the FMP the target is to achieve the following percentages of harvested area by patch size category: <= 25 ha 39.6% 25 – 100 ha 39.1% 100 – 500 ha 19.3% > 500 ha 2.1%
Acceptable Variance	Variance not to exceed +10% of the target to be achieved
Status	**Not Applicable**

Since the approved FMP assumptions are maintained and SHS deviation is within acceptable thresholds, 5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report by comparing Time 0 of the previous FMP to the Classified Landbase of the new FMP.

VOIT 3 – Old Interior Forest	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.2b Maintain biodiversity by avoiding landscape fragmentation (part b)
Type of VOIT	Modelled
Indicator	Area of old interior forest by Ecological Unit on the DFA
Target	Area of old interior forest (OIF) by ecological unit will be no less than the following percentages of the gross forested area within each ecological unit as defined at year 10 of the FMP: DX: 14% of the gross forested DX area at year 2027 DC: 18% of the gross forested DC area at year 2027 CD: 17% of the gross forested CD area at year 2027 C-PL: 32% of the gross forested C-PL area at year 2027 C-SW: 40% of the gross forested C-SW area at year 2027 CX: 42% of the gross forested CX area at year 2027
Acceptable Variance	The target is achieved for at least 80% of the planning period with variance not exceeding 20% below target
Status	**Not Applicable**

Since the approved FMP assumptions are maintained and SHS deviation is within acceptable thresholds, 5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report by comparing Time 0 of the previous FMP to the Classified Landbase of the new FMP.

VOIT 4 – Permanent All-Weather Forestry Road Density	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.3a Maintain biodiversity by minimizing access (part a)
Type of VOIT	Dynamic
Indicator	Permanent all-weather forestry road density by DFA – km/km^2 ***Original Status: 0.036 km/km^2 (383 km) of permanent forestry roads***
Target	Less than 0.05 km/km^2 of permanent all-weather forestry roads built on the DFA
Acceptable Variance	Variance not to exceed +10% of the target to be achieved
Status	**Within Acceptable Variance**

Permanent all-weather forestry roads refer to all Department Licenses of Occupation (DLOs and other dispositions with similar usage descriptions) within the FMP area. When the FMP was approved, there were 0.036 km/km^2 of permanent all-weather forestry roads (383 km) on the DFA, which was a density of 0.036 km/km^2.

To determine the current density, the current total road lengths were extracted from Forcorp's eLands application. It was determined that there are 452.4 km of high density, medium density, and unclassified permanent roads on the DFA. Permanent winter roads, reclaimed permanent roads, and temporary roads were not included in this classification. The density of the roads was calculated by dividing the sum of the roads by the total DFA area (10,674 km^2) (Table 13). The calculated density remains under the target of 0.05 km/km^2 by 16%. Based on the current values reported, the current density of all weather forest roads meets the target density that was set out in the FMP.

Table 13. Calculated target and maximum densities of all-weather forestry roads as presented in Weyerhaeuser's VOITs, and the current length and density found on the DFA.

VOIT		Current Status		
Target Density (km/km^2)	Maximum Density (km/km^2)	Total Length (km)	Density (km/km^2)	Percent Variance (%)
0.050	0.055	452.4	0.042	-16.0

VOIT 5 – Open Seasonal/Temporary Forestry Road Density	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.3b Maintain biodiversity by minimizing access (part b)
Type of VOIT	Dynamic
Indicator	5a) Permanent forestry winter (seasonal) road density on the DFA ***Original Status: 0.0084 km/km² (89 km)*** 5b) Active temporary external block forestry road density on the DFA ***Original Status: 0.002 km/km² (21 km)***
Target	5a) Less than 0.03 km/km² of permanent winter (seasonal) forestry roads on the DFA 5b) Less than 0.002 km/km² of temporary external block forestry roads on the DFA
Acceptable Variance	Variance not exceeding +/- 20% must be achieved
Status	**Within Acceptable Variance**

Open seasonal/temporary forestry roads typically describe roads used in the winter under frozen condition only. When the FMP was approved, there was 0.0084 km/km^2 (89 km) of permanent forestry winter (seasonal) roads and 0.002 km/km^2 of (21 km) active temporary external forestry roads on the DFA. Table 14 summarizes permanent forestry winter (seasonal) road length, by operator, and total density on the DFA. Table 16 summarizes active temporary external block forestry road length, by operator, and total density on the DFA.

There is currently 153.8 km of permanent forestry winter (seasonal) roads on the DFA. This equates to a road density of 0.014 km/km^2, which is well within acceptable variance for indicator 5a (Table 15). There is currently 16.2 km of active temporary external block forestry roads on the DFA. This equates to a road density of 0.002 km/km^2, which is also within the acceptable variance for indicator 5b (Table 17).

Table 14. Permanent forestry winter (seasonal) road density on the DFA

Permanent Winter (Seasonal) Forestry Roads											
	Weyerhaeuser Pembina	ANC Timber Ltd	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operators Total	
Reporting Year	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Total Length (km)	Density (km/km^2)
FMP Start 2016	53.0					11.4					
2017	18.3	0	0	0	0	0	0	0	-	18.3	0.002
2018	33.3	0	0	0	0	0	0	0	-	33.3	0.003
2018	14.7	0	0	0	0	0	0	0	-	14.7	0.001
2020	22.4	0	0	0	0	0	0	0	-	22.4	0.002
2021	0.7	0	0	0	0	0	0	0	-	0.7	0.000
Year 1-5 Total	**142.4**	**0**	**0**	**0**	**0**	**11.4**	**0**	**0**	**-**	**153.8**	**0.014**

Table 15. Variance summary for the permanent forestry winter seasonal) roads on the DFA.

VOIT		Current Status		
Target Density (km/km^2)	Maximum Density (km/km^2)	Total Length (km)	Density (km/km^2)	Percent Variance (%)
0.030	0.036	153.8	0.014	-39.0

Table 16. Active temporary external block forestry road density on the DFA

Temporary External Block Roads											
	Weyerhaeuser Pembina	ANC Timber Ltd	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operators Total	
Reporting Year	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Length (km)	Total Length (km)	Density (km/km^2)
2017	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	-	1.8	0.000
2018	0.0	0.5	0.8	0.0	0.0	0.0	0.0	0.0	-	1.3	0.000
2018	0.0	3.8	4.9	0.0	0.0	0.0	1.5	0.0	-	10.2	0.001
2020	7.5	4.4	1.9	0.0	0.0	3.2	0.0	0.0	-	17.0	0.002
2021	4.7	0.0	0.9	0.0	0.0	3.8	0.0	0.0	-	9.4	0.001
Year 1-5 Total	**4.7**	**0.0**	**0.9**	**0.0**	**0.0**	**3.8**	**0.0**	**0.0**	**-**	**9.4**	**0.001**

Table 17. Variance summary for the active temporary external block forestry roads on the DFA.

VOIT		Current Status		
Target Density (km/km^2)	Maximum Density (km/km^2)	Total Length (km)	Density (km/km^2)	Percent Variance (%)
0.0020	0.0024	9.4	0.0009	-63.2

VOIT 6 – Uncommon Plant Communities	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.4 Maintain plant communities uncommon in DFA or province
Type of VOIT	Dynamic
Indicator	Area or occurrence of each identified uncommon plant community within the DFA
Target	When encountered, maintain 80% of the identified uncommon plant community area, for each community confirmed to exist within the FMA, as defined within the Alberta Conservation Information Management System (ACIMS)
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

The Alberta Conservation Information Management System (ACIMS) is s a data centre that provides biodiversity information on Alberta's species, natural ecological communities, and sites. Information about the location, condition, status, and trends of selected elements is collected, updated, analyzed, and disseminated.

Within the DFA there were two non-sensitive element occurrences that overlapped with harvest activities as summarized in Table 18. Non-sensitive element occurrences are locations which contain rare species and knowledge of the location is not restricted. For these elements, the harvest records were intersected with the spatial boundary provided by ACIMS. For both elements, less than 5% of the community was harvested.

Table 18. Uncommon plant communities protected on the DFA

Non-Sensitive Element Occurrences	Element ID	Total Area of Community (ha)	Area Harvested (ha)	Percent of Community Harvested (%)
Splachnum rubrum	4668	1953.0	84.16	4.31
Splachnum rubrum	4676	1953.0	80.82	4.14

VOIT 7 – Salvageable Unsalvaged Burned Forest	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.5a Maintain unique habitats provided by wildfire and blowdown events (part a)
Type of VOIT	Dynamic
Indicator	Area of unsalvaged burned forest
Target	a) Fires < 1000 hectares of Active Landbase: Follow FMP structure retention strategy consistent with normal harvesting practices (see VOIT 10 for retention percent) b) Fires > 1000 hectares of Active Landbase: Retain all unburned trees in green islands and retained patches recognizing timber condition, access, non-timber needs
Acceptable Variance	Target is achieved or exceeded for both a) and b)
Status	**Within Acceptable Variance**

Salvageable burned forest describes trees killed by fire that are still commercially viable as merchantable if harvested. Unsalvaged burned forest describes commercially viable trees left in the state they are found because of the fire.

Table 19 summarizes fire occurrence on the DFA from 2017 to 2021 timber years. These data were taken from the historic wildfire layer developed by the GoA, which is updated annually for fires that occurred during the most recent fire year. There were no fires > 1,000 ha on the DFA during the reporting period, as a result there was no requirement by Weyerhaeuser or the quota holders to treat the burned areas differently than they would for other harvest activities.

Table 19. Fire occurrence on the DFA.

Fire Year	Fire Count	Total Area (ha)	Mean Area (ha)
2017	3	7.5	2.5
2018	2	18.4	9.2
2019	4	178.0	44.5
2020	1	10.5	10.5
2021	9	361.6	40.2
Total	**19**	**575.9**	**30.3**

VOIT 8 – Salvageable Unsalvaged Blowdown Forest	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.5a Maintain unique habitats provided by wildfire and blowdown events (part b)
Type of VOIT	Dynamic
Indicator	Area of unsalvaged blowdown of merchantable forest
Target	In areas of significant (>100 ha) merchantable blowdown, greater than 10% area will be left unsalvaged
Acceptable Variance	Target is achieved or exceeded where areas of blowdown of merchantable forest of greater than 100 ha
Status	**Within Acceptable Variance**

In this case, unsalvaged describes commercially viable trees left in the state they are found as a result of wind disturbance. For this VOIT, operators provided the areas of blowdown forest that were harvested in which the operators applied for dues relief. A summary of timber recovery in areas affected by blowdown can be found in Table 20. The total area of disturbance for each year was summed from multiple blocks with there being no significant (>100 ha) blowdown events occurring during the reporting period.

Table 20. Timber recovery in areas affected by blowdown, by operator, on the DFA.

Year		Timber Recovery in Area Affected by Blowdown									
		Weyerhaeuser Pembina	ANC Timber Ltd	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operators Total
2017	Total Area of Blowdown Salvaged	0	0	0	50.4	0	0	0	0	-	50.4
	Total Area of Blowdown Unsalvaged	0	0	0	0	0	0	0	0	-	0
	Total Area of Disturbance	0	0	0	50.4	0	0	0	0	-	50.4
2018	Total Area of Blowdown Salvaged	146.6	0	0	0	0	0	0	0	-	0
	Total Area of Blowdown Unsalvaged	0	0	0	0	0	0	0	0	-	0
	Total Area of Disturbance	146.6*	0	0	0	0	0	0	0	-	0
2019	Total Area of Blowdown Salvaged	50.7	0	0	0	0	0	0	0	-	50.7
	Total Area of Blowdown Unsalvaged	0	0	0	0	0	0	0	0	-	0
	Total Area of Disturbance	50.7	0	0	0	0	0	0	0	-	50.7
2020	Total Area of Blowdown Salvaged	107.4	0	0	0	0	0	0	0	-	107.4
	Total Area of Blowdown Unsalvaged	0	0	0	0	0	0	0	0	-	0
	Total Area of Disturbance	107.4*	0	0	0	0	0	0	0	-	0
2021	Total Area of Blowdown Salvaged	270.2	-	0	25.4	0	5.64	0	0	-	301.24
	Total Area of Blowdown Unsalvaged	0	-	0	0	0	0	0	0	-	0
	Total Area of Disturbance	270.2*	-	0	25.4	0	5.64	0	0	-	31.04
Year 1-5 Totals		**428.3**	**0**	**0**	**75.8**	**0**	**5.64**	**0**	**0**	**0**	**509.74**

*Total area of disturbance is summed from multiple blocks

VOIT 9 – Operating Ground Rules (OGR) Compliance	
Value	1.1.1 Landscape scale biodiversity
Objective	1.1.1.6 Retain ecological values and functions associated with riparian zones
Type of VOIT	Dynamic
Indicator	Compliance with Operating Ground Rules (OGR)
Target	No warnings or penalties assessed regarding riparian zones
Acceptable Variance	The target is achieved
Status	**Outside Acceptable Variance**

Riparian zones are strips of green vegetation influenced by water and found around creeks, sloughs, rivers, and lakes. One warning regarding a riparian zone was received by EDFOR Cooperative Ltd. in 2020. No penalties were received by reporting operators during the 5-year period.

Due to this one incident by a single licensee, this VOIT is being reported as outside acceptable variance.

For corrective actions, EDFOR procedures were adjusted to ensure proposed amendment and site conditions are confirmed and ribboned before changes are made.

Table 21. Warnings or penalties received regarding riparian zones.

Reporting Year	Warning/Penalties																			
	Weyerhaeuser Pembina		Alberta Newsprint Company		Blue Ridge Lumber		Brisco Wood Preservers		Dale Hansen Ltd		Edfor Cooperative Ltd		Canfor (Whitecourt) Forest Products Ltd		Tall Pine Timber Co		Community Timber Permit Programs		All Operators Total	
	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties
2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2020	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-	-	**1**	**0**
2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
Year 1-5 Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

VOIT 10 – Merchantable Structure Retention	
Value	1.1.2 Local/Stand Scale Biodiversity
Objective	1.1.2.1a Retain stand level structure (part a)
Type of VOIT	Dynamic
Indicator	Percent of area with merchantable structure within the harvested area, representative of the status, sizes, and species of the overstorey trees within the harvested areas on the DFA
Target	A combination of merchantable single stems, clumps, and patches, that are representative of the stands harvested, comprising 4% of the harvested area within the DFA. Conifer and Deciduous (Note: A wide range in variability in harvest area-level retention is desired as long as the target level is achieved)
Acceptable Variance	At the end of the 10-year FMP term the target is achieved or exceeded
Status	**Within Acceptable Variance**

Merchantable residual structure describes live, commercially viable trees retained post-harvest to create old forest characteristics in young and mid-aged regenerating stands. Retention is merchantable timber left standing within the planned harvest area boundary, generally expressed as a percent of the total estimated merchantable area in the block. Retention can be concentrated in larger patches or dispersed (individual trees and small groups of trees).

Table 22 summarizes the estimated percentage of retained area (structure) on the DFA for the reporting period. Retention is managed at the compartment level during the planning phases and monitored during the establishments of new plans. Variation as harvest scheduling progresses throughout the plans is expected to net out during the implementation phase. Operators report their merchantable retention as part of their harvest activities. Companies capture the extent of these areas using a combination of GPS and aerial photo interpretation.

Based on reports received from most operators on the DFA, this VOIT is considered within variance at the DFA level over the 5-year reporting period. The missing operator reports are unlikely to cause the DFA averages to drop below 4%. Those tenure holders not currently meeting the target are expected to leave additional structure retention to correct for the variance by the end of the 10-year FMP term.

Table 22. Estimated retained merchantable area (structure), by operator, on the DFA.

Reporting Year	Cover Type	Estimated percent of retained merchantable area									
		Weyerhaeuser Pembina	Alberta Newsprint Company	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co*	Community Timber Permit Programs	Total
2017	Conifer	5.3	2.0	0.0	0.9	0.0	1.7	0.0	0.0	-	4.9
	Deciduous	3.9	0.0	0.0	0.0	0.0	2.0	0.0	0.0	-	3.8
2018	Conifer	6.2	2.1	5.6	0.0	2.0	1.5	0.0	0.0	-	5.4
	Deciduous	5.0	0.0	0.9	0.0	0.0	2.1	0.0	0.0	-	4.7
2019	Conifer	4.5	5.2	4.3	0.0	6.8	1.7	3.3	0.0	-	4.4
	Deciduous	5.3	0.0	0.6	0.0	0.0	1.6	2.9	0.0	-	5.1
2020	Conifer	4.7	4.9	9.0	0.0	5.2	1.8	0.0	0.0	-	4.6
	Deciduous	5.0	0.0	1.2	0.0	0.0	1.7	0.0	0.0	-	4.5
2021	Conifer	6.1	-	2.9	1.2	0.0	1.6	4.5	4.9	-	5.5
	Deciduous	4.0	-	0.7	0.0	0.0	1.7	3.1	0.0	-	4.0
Year 1-5 Total	Conifer	**5.2**	**4.4**	**5.0**	**0.9**	**4.5**	**1.7**	**3.5**	**4.9**	**-**	**4.8**
	Deciduous	**4.9**	**0.0**	**0.8**	**0.0**	**0.0**	**1.8**	**2.9**	**0.0**	**-**	**4.7**

VOIT 11 – Downed Woody Debris	
Value	1.1.2 Local/Stand Scale Biodiversity
Objective	1.1.2.1b Retain stand level structure (part b)
Type of VOIT	Dynamic
Indicator	Percentage of harvested area within the DFA with downed woody debris equivalent to preharvest conditions
Target	All harvest areas have downed woody debris retained on site – exception is roadside slash piled and burned
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

Downed woody debris refers to dead trees that are present in the stand prior to logging, either vertical or horizontal in stature. No removal of downed woody debris has occurred on the DFA. Only roadside slash and logging debris has been intentionally removed from sites.

VOIT 12 – Sensitive Sites	
Value	1.1.2 Local/Stand Scale Biodiversity
Objective	1.1.2.2 Maintain integrity of sensitive sites
Type of VOIT	Dynamic
Indicator	Sensitive sites (*e.g.* mineral licks, raptor nests, bear dens, unique ecological areas, etc.) within the DFA
Target	Protect and report on all identified sites
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

Sensitive sites may include mineral licks, raptor nests, bear dens, and unique ecological areas. Identified sensitive sites are protected following OGR guidance and are often incorporated, where possible, into stand level structure retention and contribute to targets. Alternatively, they are removed from the planned block area completely where the spatial harvest sequence block boundary allows. 56 sensitive sites were protected by Weyerhaeuser during the reporting period (Table 23).

Table 23. The number of sensitive sites identified during each timber year.

Timber Year	Number of Sensitive Features Identified
2017	14
2018	10
2019	7
2020	9
2021	16
Grand Total	**56**

VOIT 13 – Forestry Water Crossings	
Value	1.1.2 Local/Stand Scale Biodiversity
Objective	1.1.2.3 Maintain aquatic biodiversity by minimizing impacts of water crossings
Type of VOIT	Dynamic
Indicator	Forestry water crossings in compliance with Code of Practice for Water Course Crossings within the DFA
Target	No warnings or penalties for non-compliances for the Code of Practice or OGRs for water course crossing
Acceptable Variance	The target is achieved
Status	**Outside Acceptable Variance**

Forestry water crossings are the locations and structures designated within harvest areas for which machinery to move across watercourses. One warning regarding a non-compliant water course crossing was received by EDFOR Cooperative Ltd. in 2020 (Table 24). No penalties were received by reporting operators during the 5-year period.

Due to this one incident by a single licensee, this VOIT is being reported as outside acceptable variance.

For corrective actions, EDFOR procedures were adjusted to ensure stream assessments occur in conditions when classifications are clearly defined.

Table 24. Warnings or penalties received for non-compliances for the Code of Practice or OGRs for watercourse crossings.

Reporting Year	Warning/Penalties																			
	Weyerhaeuser Pembina		Alberta Newsprint Company		Blue Ridge Lumber		Brisco Wood Preservers		Dale Hansen Ltd		Edfor Cooperative Ltd		Canfor (Whitecourt) Forest Products Ltd		Tall Pine Timber Co		Community Timber Permit Programs		All Operators Total	
	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties
2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2020	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-	-	**1**	**0**
2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
Year 1-5 Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

CSA SFM Element 1.2 – Species Diversity

VOIT 14 – Suitable Habitat for Native Species	
Value	1.2.1. Viable populations of identified plant and animal species
Objective	1.2.1.1 Maintain habitat for identified high value species (*i.e.*, economically valuable, socially valuable, species at risk, species of management concern)
Indicator	a) Number of hectares of primary and secondary habitat by DFA from the fRI Grizzly Bear model, as measured at time 0 (start of modelling time 0 - 2017) b) percent change in the Barred owl RSF habitat value and potential breeding pairs habitat value from 2017 by DFA c) percent change in relative abundance value of four songbird species (Black-throated Green Warbler, Brown Creeper, Ovenbird, Varied Thrush) from 2017 by DFA d) East Slopes Cold Water Fish
Type of VOIT	Modelled
Target	ai) Maintain or increase the number of hectares of combined primary and secondary habitat from the fRI Grizzly Bear model, as measured at time 0 (TSA modelling time 0 - 2017) aii) 100% of temp roads will have effective access controls within the core and secondary grizzly bear range, during active grizzly bear season (May to December) b) maximum 15% reduction in the RSF indicators at 10 and 20 years and a maximum 15% reduction in the breeding pairs indicator at 10 and 20 years c) maximum 15% reduction in the indicator over the 200-year planning horizon di) ECA target is 30% in Athabasca Rainbow Trout Ecologically Significant Habitat (see ARTR Recovery Plan). Watersheds with ECA values >30% due to existing (year 0) modelled disturbance, ECA values must demonstrate a continuous downward trend or not exceed 35% in years 0-20. ESH watersheds: West Carrot, East Carrot, Upper Moose, Upper Sang, Embarras, Erith, Rodney, Minnow, Svedberg, Swartz, Half Moon, Coyote, Raven, Cairn, Oldman, Shiningbank, Trout, Whitefish, Deer, Prairie, Mason, Sundance East, Obed, Athabasca, Sundance West, Edson, Groat, Mcleod dii) ECA target is 30% for Bull Trout Watersheds, Watersheds with high ECA values >30% due to existing (year 0) modelled disturbance, ECA values must demonstrate a continuous downward trend or not to exceed 35% in years 0-20. Blackstone watersheds:(merged watersheds < 10,000ha): (Middle Blackstone, Hansen), East Rundell, Chungo, Upper Brown, Lower Wapiabi, Penti, Lookout, Sturrock, Upper Wapiabi, South Lookout, East Sturrock; Nordegg watersheds: East Nordegg, (North Rapid, Rapid) Nordegg, Owl, North Brewster, (North Colt, Sutherland) Wawa, Stephens, Grey Owl; Brazeau watersheds: Broken Arm, Lower Blackstone, Negraiff, North Elk, Middle Marshybank, North Marshybank, South Marshybank ; (Elk River watersheds: South Elk diii) ECA target is 30% for Arctic Grayling within the Pembina River watershed. Watersheds with high ECA values due to existing modelled disturbance ECA values must demonstrate a continuous downward trend or not to exceed 35% in years 0-20. Arctic Grayling watersheds: Paddy, Middle Pembina, Jerry, Rehn, Dismal, Baker, Upper Pembina, Tall Pine, Reservoir, Upper North Rat, (West Eta, Varty) East Eta, (Dzida, Tom), Lower North Rat, , East Zeta, West Zeta, South Rat
Acceptable Variance	At the end of the 10-year FMP term targets are achieved or exceeded
Status	**Not Required**

Since the approved FMP assumptions are maintained and SHS deviation is within acceptable thresholds, 5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report.

CSA SFM Element 1.3 – Genetic Diversity

VOIT 15 – In Situ Genetic Conservation	
Value	1.3.1 Genetic integrity of natural tree populations
Objective	1.3.1.1 Retain “wild forest populations” for each native tree species in each seed zone through maintenance and/or establishment of in-situ reserves, by Alberta and disposition holders
Type of VOIT	Dynamic
Indicator	The appropriate number and area (ha) of in-situ tree gene conservation reserves as directed by the FGRMCS
Target	Owners of the tree improvement program will determine the number of in situ gene conservation stands and allocate them to FMA holders who are partners in the tree improvement program. When this is done, individual FMA holders are responsible for conservation. This has yet to be determined
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

A seed zone is a geographic area with relatively uniform ecology and genetic population structure. Limiting the reforestation of cutblocks to seedlings from the corresponding seed zone allows native trees, and by extension native plants of all species, to be moved some distance without risk of mal-adaptation or erosion of genetic integrity and conserves genetic biodiversity.

Weyerhaeuser is committed to establishing in-situ reserves as directed by the FGRMCS; however, determination of the number of in-situ tree gene conservation reserves required for members of the tree improvement program has not been completed to date. Therefore, no in-situ reserves are currently required.

VOIT 16 – Genetic Integrity	
Value	1.3.1 Genetic integrity of natural tree populations
Objective	1.3.1.2 Retain wild forest genetic resources through ex-situ conservation for species under CPP programs
Type of VOIT	Dynamic
Indicator	Number of provenances, families and clone trials and clone banks; and seed in the seed archive
Target	Establish and maintain active ex-situ conservation program for species under CPP programs in cooperation with GoA and in accordance with FGRMCS Section 17 and 29 and ex-situ conservation criteria (Appendix 4, Footnote 1). Subject also to Section 6.3 of the Gene Conservation Plan for Native Trees of Alberta (2008).
Acceptable Variance	No variance from targets as set by GoA is anticipated, but adjustment to targets and objectives are allowable as more research and development bring new data and parameters forward
Status	**Within Acceptable Variance**

A gene bank is a repository of tree genetic material for the purposes of maintaining diverse samples for reforestation. The Tree Improvement Program is the regulation and development of forest reproductive materials and gene conservation for the sustained productivity and health of the forest.

Over the course of the reporting period Weyerhaeuser did not deploy any seed with restricted registration or plant any Stream 2 clonal material. All seed orchards, progeny trials, clonal seed banks and other trials are documented with the Alberta Tree Improvement and Seed Centre (ATISC) and all installations continue to be maintained. The current status of Weyerhaeuser's current seed archive is summarized in Table 25.

Table 25. Summary of the seed supply that was held by Weyerhaeuser in 2016 and the current seed supply.

		Seed Supply (kg)	
Seed Zone	Species	2016	2021
CM 3.5	PL	14.0	14.7
DM 2.3	PL	0.0	0.0
LF 1.5	PL	60.7	82.8
LF 2.1	PL	189.3	160.3
LF 2.2	PL	75.8	71.2
UF 1.4	PL	64.5	108.4
UF 2.4	PL	5.2	44.9
SA 1.2	PL	50.0	43.8
SA 2.2	PL	0.0	0.0
HASOC I	SW	118.6	79.1
CM 3.5	SW	65.0	64.7
LF 1.5	SW	126.4	125.7
LF 2.1	SW	29.7	29.7
LF 2.2	SW	88.4	88.4
UF 1.4	SW/SE	35.2	35.2
UF 2.4	SW	19.3	17.4
SA 1.2	SW	45.6	43.9
SA 2.2	SW	0.0	0.0

CSA SFM Element 1.4 – Protected Areas

VOIT 17 – Trans Boundary Values	
Value	1.4.1. Areas with minimal human disturbances within managed landscapes
Objective	1.4.1.1 Integrate trans-boundary values and objectives into forest management
Type of VOIT	Dynamic
Indicator	Stakeholder consultation
Target	Ongoing consultation with relevant protected areas agencies as required
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

A stakeholder is a person, group, agency, or other entity that has a share or interest in the FMP and the activities occurring on the DFA. Consultation with relevant protected area agencies may be required throughout the life of the FMP. A summary of consultation on relevant protected areas can be found in Table 26. Consultation on two Protective Notations (PNTs) was completed by Weyerhaeuser in 2021. Consultation was also completed by Blue Ridge Lumber and Edfor during the reporting period.

Table 26. Summary of consultation activities on relevant protected areas.

Consultation on relevant protected areas										
Reporting Year	Weyerhaeuser Pembina	Alberta Newsprint Company	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operators Total
2017	0	0	0	0	0	1	0	0	-	**1**
2018	0	0	0	0	0	1	0	0	-	**1**
2019	0	0	1	0	0	3	0	0	-	**4**
2020	0	0	0	0	0	2	0	0	-	**2**
2021	2	0	0	0	0	2	0	0	-	**4**
Year 1-5 Total	**2**	**0**	**1**	**0**	**0**	**9**	**0**	**0**	**-**	**12**

CCFM Criterion 2 – Ecosystem Productivity

CSA SFM Element 2.1 – Ecosystem Resilience

VOIT 18 – Reforest All Harvested Areas	
Value	2.1.1 Reforested harvest areas
Objective	2.1.1.1 Reforest all harvested areas
Type of VOIT	Dynamic
Indicator	Annual % of openings that: a) meet or exceed the RSA establishment survey minimum stocking and species composition standards for the declared regenerated yield stratum; and b) meet or exceed the RSA establishment survey minimum stocking and species composition standards for an alternate regenerated yield stratum, and c) do not achieve the RSA establishment survey minimum stocking and/or species composition standards for any regenerated yield strata and are re-treated within one year. Indicators a, b and c are to be reported separately
Target	The sum of Indicators a, b and c = 100% of openings
Acceptable Variance	None
Status	**Within Acceptable Variance**

The Reforestation Standard of Alberta (RSA) is the Alberta government's standard for sustained yield management on crown land. Harvested blocks must meet certain stocking requirements in both the establishment and performance stages for forest operators to successfully meet reforestation obligations.

Table 27 summarizes the annual RSA establishment survey results for all operators throughout the reporting period. The sum of indicators a, b & c = 100% of openings.

To determine these values the establishment survey results reported to ARIS for each operator were reviewed. When an opening was assigned an establishment survey result of SR (sufficiently restocked) and the initial landscape designation matched the landscape designation assigned at the establishment survey then the opening was assigned to group "a". When an opening was assigned an establishment survey result of SR but the initial landscape designation did not match the landbase designation assigned at the establishment survey then the opening was assigned to group "b". Any openings assigned an establishment survey result of NSR (not sufficiently restocked) was assigned to group "c".

There were two assumptions made as part of these calculations. The first is that other establishment survey results listed for the same opening, typically retreatments (RTD) from failed surveys in the current or previous report period, were not included in the opening calculations. Including these values would have resulted in double counting the number of openings assigned to group "c". Additionally, the VOIT states that retreatment needs to occur within one year. It is assumed that companies with surveys that resulted in NSR will retreat their blocks within one year.

Table 27. Summary of annual RSA establishment survey results.

Timber Year	Establishment Survey Results	Weyerhaeuser Pembina	Alberta Newsprint Company	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	FRIAA	Canfor (Whitecourt) Forest Products Ltd	Sundre Forest Products	Tall Pine Timber Co
2017	% Openings of matched RSA stratum (a)	85	100	0	43	0	80	58	0	0	100
	% Openings of unmatched RSA stratum (b)	4	0	0	0	0	0	25	0	0	0
	% Openings requiring treatment within one year (c)	11	0	0	57	0	20	17	0	0	0
	Total % Openings surveyed for establishment	100	100	0	100	0	100	100	0	0	100
2018	% Openings of matched RSA stratum (a)	77	0	0	0	0	89	86	0	0	88
	% Openings of unmatched RSA stratum (b)	3	0	0	0	0	0	14	0	0	13
	% Openings requiring treatment within one year (c)	19	0	0	0	0	11	0	0	0	0
	Total % Openings surveyed for establishment	100	0	0	0	0	100	100	0	0	100
2019	% Openings of matched RSA stratum (a)	79	100	0	0	0	73	100	100	0	69
	% Openings of unmatched RSA stratum (b)	16	0	0	0	0	8	0	0	0	6
	% Openings requiring treatment within one year (c)	5	0	0	0	0	19	0	0	0	25
	Total % Openings surveyed for establishment	100	100	0	0	0	100	100	100	0	100
2020	% Openings of matched RSA stratum (a)	87	0	88	0	0	100	100	0	100	73
	% Openings of unmatched RSA stratum (b)	5	0	8	0	0	0	0	0	0	18
	% Openings requiring treatment within one year (c)	7	0	4	0	0	0	0	0	0	9
	Total % Openings surveyed for establishment	100	0	100	0	0	100	100	0	100	100
2021	% Openings of matched RSA stratum (a)	90	100	96	0	0	79	100	100	0	75
	% Openings of unmatched RSA stratum (b)	10	0	0	0	0	0	0	0	0	25
	% Openings requiring treatment within one year (c)	1	0	4	100	0	21	0	0	0	0
	Total % Openings surveyed for establishment	100	100	100	100	0	100	100	100	0	100

VOIT 19 – Regenerated Stand Productivity	
Value	2.1.1 Reforested harvest areas
Objective	2.1.1.2 Meet or exceed the C and D MAI standard for the population of openings surveyed in a given quadrant by the end of the fifth year of the plan
Type of VOIT	Dynamic
Indicator	Summed difference between target and actual C and D MAIs for openings surveyed in a five-year quadrant, as reported to ARIS
Target	100%
Acceptable Variance	Meet or exceed the target C and D MAI for the DFA
Status	**Within Acceptable Variance**

The Mean Annual Increment (MAI) is the average annual growth rate of individual trees or stands up to a specified point in time, expressed as volume/hectares/year. C refers to the conifer component and D refers to the deciduous component.

While this VOIT only requires reporting of the summed differences between target and actual MAIs, the area-weighted MAIs and differences are also included in Table 28. For all operators, actual MAIs for completed surveys were taken from ARIS while target MAIs for the corresponding time frame were as reported in the spreadsheet '*af-appendix-1-rsa-landbase-designation-code-annual-increment-standard-database.xlsx'.*

With the exception of Dale Hansen conifer and Brisco deciduous, the MAI summed differences are positive for all operators, indicating that, on average actual MAIs exceed targets. The Dale Hansen and Brisco outages represent only a few openings (Brisco 8 and Dale Hansen 1). Overall for the DFA, the C and D MAI targets are exceeded.

Table 28. Summary of RSA performance survey results.

Performance Survey Results	Weyerhaeuser Pembina	Alberta Newsprint Company	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Sundre Forest Products	Community Timber Permit Programs
Conifer										
Target Average MAI	1.26	1.69	1.69	1.85	1.63	1.64	1.69	1.77	2.11	1.48
Actual Average MAI	1.78	2.79	3.26	2.65	0.95	2.08	2.13	1.96	2.93	2.17
Difference (Actual - Target)	**0.52**	**1.09**	**1.57**	**0.80**	**-0.68**	**0.45**	**0.43**	**0.19**	**0.82**	**0.69**
Sum of Differences	449.1	75.0	33.0	5.6	-0.7	16.1	6.8	4.6	32.1	104.4
Deciduous										
Target Average MAI	1.36	0.68	0.68	0.48	1.08	0.75	0.68	0.87	0.31	1.00
Actual Average MAI	1.91	1.44	0.90	0.45	1.80	1.28	1.60	1.73	0.68	1.70
Difference (Actual - Target)	**0.54**	**0.76**	**0.22**	**-0.03**	**0.72**	**0.53**	**0.92**	**0.86**	**0.37**	**0.71**
Sum of Differences	479.8	53.26	4.5	-0.5	0.7	8.8	11.8	25.9	17.0	100.0

Sum of Differences = sum(opening actual MAI - target MAI)

VOIT 20 – Productive Forest Conversion	
Value	2.1.2 Maintenance of forest landbase
Objective	2.1.2.1 Limit conversion of productive forest landbase to other uses
Type of VOIT	Dynamic
Indicator	Amount of change in forest landbase
Target	Report on the loss of the gross forest landbase area
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

The gross forest landbase is the area contained within the boundary of the DFA. This includes the company's FMA area, and the grazing leases contained within the DFA. In other words, the active and passive landbase together constitute the gross landbase. To estimate the amount of productive forest conversion the annual land withdrawals report was used as it provides a calculation of the amount of DIDs dispositions on the net landbase that affect productive area. Reports are generated annually the 30th of November. The report for 2016 was used to determine the number of dispositions at the start of the reporting period reports were summarized for the timber years of 2017 through 2021, with the 2021 report being the report generated as close to end of the five-year period.

Overall, there was a net reduction in productive area of approximately 2,100 ha which amounted to 0.22% of the gross area. A summary of the net changes in disposition area on the DFA can be found in Table 29.

Table 29. Net changes in disposition area on the DFA.

Description	Reporting Year					
	2016	2017	2018	2019	2020	2021
Ranked Crown Disposition Areas (ha)	7,876.4	9,397.6	9,398.1	9,442.1	9,443.0	9,433.0
Ranked Industrial Disposition Areas (ha)	53,757.8	53,115.7	55,047.5	54,562.1	54,349.8	54,309.5
Total Disposition Area (ha)	61,634.2	62,513.3	64,445.6	64,004.2	63,792.8	63,742.5
Gross FMA Area (ha)	953,973.5	954,276.4	953,973.1	953,924.2	953,923.7	953,917.2
Disposition Percent of Gross Area (%)	6.46	6.55	6.76	6.71	6.69	6.68
Change in Disposition Percent Since 2016 (%)	-	0.09	0.29	0.25	0.23	0.22

VOIT 21 – Impacts of Insects, Fire, Windthrow, and Other Natural Events	
Value	2.1.2 Maintenance of forest landbase
Objective	2.1.2.2 Recognize lands affected by insects, disease or other natural events
Type of VOIT	Dynamic
Indicator	Amount of area affected by significant impacts of insects, fire, windthrow and other natural events
Target	Report the area affected by impacts of insects, fire, windthrow or other natural events
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

Disturbance agents affecting the DFA during the reporting period include natural events (*e.g.* hail, flooding, lightning), insect pests (*e.g.* large aspen tortrix), and disease (*e.g.* pine needle cast, armillaria root disease, aspen dieback).

The GoA conducts annual surveys to assess forest health across the province. The results of these surveys are provided to the public in the form of spatial files (*e.g.* shapefiles, geodatabase feature classes) and are reported in Table 30. For this reporting period the insect pest damage within the DFA was attributed to large aspen tortrix, eastern larch beetle, linden looper, grey willow leaf beetle, willow leaf miner, and aspen defoliator complex. Diseases identified within the DFA include pine needle cast, armillaria root disease, aspen dieback and root disease. Weather events that occurred within the DFA that caused damage were attributed to hail, flooding and lightning. In 2020, approximately 3,400 ha of area were identified in the survey as being affected by multiple agents, although those agents were not specified. Additionally, a total of 178,501 ha was identified as being affected by unknown agents with no further information provided. A summary of areas affected by natural events can be found in Table 30.

Table 30. Area affected by natural events on the DFA.

Year	Fire (ha)	Insects (ha)	Disease (ha)	Windthrow (ha)	Weather (ha)	Multiple Agents (ha)	Total Area (ha)
2017	7.5	586.4	2,222.4	0.0	36.8	0.0	2,853.1
2018	18.4	15,749.0	1,197.7	0.0	0.0	0.0	16,965.1
2019	178.0	627.1	10,616.2	0.0	14.3	0.0	11,435.6
2020	10.5	413.4	1,316.1	377.3	0.3	3,417.9	5,535.5
2021	361.6	1,577.3	1,407.4	60.7	5,906.6	0.0	9,313.6
Year 1 to 5 Subtotal	**575.9**	**18,953.2**	**16,759.6**	**438.1**	**5,957.9**	**3,417.9**	**46,102.6**

VOIT 22 – Noxious Weed Program	
Value	2.1.3 Control invasive species
Objective	2.1.3.1 Control non-native plant species (weeds)
Type of VOIT	Dynamic
Indicator	Noxious weed program
Target	Effective suppression of noxious weeds
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

A noxious weed is a plant designated in accordance with the Alberta Weed Control Regulation as a noxious weed and includes the plant's seeds. A person shall control a noxious weed that is on land the person owns or occupies. Annual survey programs identify areas requiring treatment.

Annually, two programs target noxious weed populations; areas along right of ways and areas under grazing agreements are monitored and treated accordingly. Table 31 summarizes grazing and roadside areas treated during the reporting period. Roadside areas treated are typically recorded in linear distances. Areas were estimated based on the linear distance and the amount of herbicide used during treatment. A total of 286.8 ha was treated during the reporting period.

Table 31. Areas treated annually as part of different noxious weed control programs.

	Grazing Area Treated	Roadside Areas Treated		
Treatment Year	Area (ha)	Distance (km)	Estimated Area (ha)	Total Area Treated (ha)
2017	22.1	66.2	42.4	64.5
2018	38.9	166.4	13.7	52.5
2019	21.0	139.0	46.9	67.9
2020	23.6	126.0	31.0	54.6
2021	26.5	131.0	20.7	47.2
Grand Total	**132.1**	**628.6**	**154.7**	**286.8**

CCFM Criterion 3 – Soil and Water Resources

CSA SFM Element 3.1 – Soil Quantity and Quality

VOIT 23 – Reforest In-Block Temporary Roads	
Value	3.1.1 Soil productivity
Objective	3.1.1.1 Minimize impact of roading and bared areas in forest operations
Type of VOIT	Dynamic
Indicator	Silviculture Strategy Table (SST) that includes tactic to reforest temporary in-block roads
Target	Follow Silviculture Strategy Table
Acceptable Variance	The target is achieved
Status	**Not Applicable**

5-year stewardship reporting is not required for this VOIT. Variance will be assessed as part of the 10-year Stewardship Report.

VOIT 24 – Soil Erosion and Slumping	
Value	3.1.1 Soil productivity
Objective	3.1.1.2 Minimize incidence of soil erosion and slumping
Type of VOIT	Dynamic
Indicator	Incidence of soil erosion and slumping
Target	No warnings or penalties assessed regarding soil erosion or slumping
Acceptable Variance	The target is achieved
Status	**Outside Variance**

One warning regarding soil erosion or slumping was received by Blue Ridge Lumber in 2021 (Table 32). No penalties were received by reporting operators during the 5-year period.

Due to this one incident by a single licensee, this VOIT is being reported as outside acceptable variance.

For corrective actions, this operator reviewed the process for operating around historical resources and importance of “stop and ask” with staff and contractors”

Table 32. Warnings or penalties received regarding soil erosion or slumping.

Reporting Year	Weyerhaeuser Pembina		Alberta Newsprint Company		Blue Ridge Lumber		Brisco Wood Preservers		Dale Hansen Ltd		Edfor Cooperative Ltd		Canfor (Whitecourt) Forest Products Ltd		Tall Pine Timber Co		Community Timber Permit Programs		All Operators Total	
	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties	Warnings	Penalties
2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	**0**	**0**
2021	0	0	0	0	1	-	0	0	0	0	0	0	0	0	0	0	-	-	**1**	**0**
Year 1-5 Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

CSA SFM Element 3.2 – Water Quality and Quantity

VOIT 25 – Forecasted Changes in Water Yields	
Value	3.2.1 Water quantity
Objective	3.2.1.1 Limit impact of timber harvesting on water yield
Type of VOIT	Modelled
Indicator	Forecasted changes in water yields resulting from the approved SHS, as measured by Equivalent Clearcut Area (ECA)
Target	a) ECA <30% b) Zero Water Act penalties
Acceptable Variance	<20% variance to the SHS
Status	**Within Acceptable Variance**

5-year stewardship reporting of SHS variance and penalties to the Water Act are required. The 10-year Stewardship Report will compare Time 0 of the previous FMP to the Classified Landbase of the new FMP.

There were zero Water Act penalties received by operators during the 5-year period.

VOIT 26 – Effective Riparian Habitats	
Value	3.2.2 Effective riparian habitats
Objective	3.2.2.1 Minimize impact of operations in riparian areas
Type of VOIT	Dynamic
Indicator	Riparian buffers maintained as outlined in OGRs
Target	No warnings or penalties assessed regarding riparian zones
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

Riparian zones are strips of green vegetation influenced by water and found around creeks, sloughs, rivers, and lakes. There were zero warnings or penalties received regarding appropriate buffer widths by reporting operators during the 5-year period (Table 33).

Table 33. Warnings or penalties assessed regarding riparian zones.

Reporting Year	Weyerhaeuser Pembina	Alberta Newsprint Company	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operators Total
	Warning/Penalties									
2017	0	0	0	0	0	0	0	0	-	**0**
2018	0	0	0	0	0	0	0	0	-	**0**
2019	0	0	0	0	0	0	0	0	-	**0**
2020	0	0	0	0	0	0	0	0	-	**0**
2021	0	0	0	0	0	0	0	0	-	**0**
Year 1-5 Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**0**

CSA SFM Element 4.1 – Carbon Uptake and Storage

VOIT 27 – Global Carbon Cycles	
Value	4.1.1 Sustainable timber supplies
Objective	4.1.1.1 Maintain functioning forest ecosystems capable of contributing to global carbon cycles
Type of VOIT	Not Applicable
Indicator	Results of carbon budget modeling
Target	N/A
Acceptable Variance	N/A
Status	**Not Applicable**

This VOIT was not included in the 2016 FMP.

CCFM Criterion 5 – Multiple Benefits to Society

CSA SFM Element 5.1 – Timber and Non-Timber Benefits

VOIT 28 – Appropriate AACs	
Value	5.1.1 Sustainable timber supplies
Objective	5.1.1.1 Establish appropriate AACs
Type of VOIT	Modelled
Indicator	Process described in Annex 1 is followed and standards are met
Target	Complete compliance. GoA approves AACs as determined by the Timber Supply Analysis (TSA)
Acceptable Variance	Issue specific
Status	**Not Applicable**

5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report.

CSA SFM Element 5.2 – Communities and Sustainability

VOIT 29 – Fire Behavior Potential in FireSmart Communities	
Value	5.2.1 Risk to communities and landscape values from wildfire is low
Objective	5.2.1.1a To reduce wildfire threat potential by reducing fire behavior, fire occurrence, threats to values at risk and enhancing fire suppression capability (part a)
Type of VOIT	Modelled
Indicator	Reduction in Fire Behavior Potential (FBP) within the FireSmart Community Zone
Target	Reduce the area (ha) in the high, very high, and extreme Fire Behavior Potential rating categories within the FireSmart Community Zones by 8% in 2027
Acceptable Variance	The target is achieved
Status	**Not Applicable**

5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report by comparing Time 0 of the previous FMP to the Classified Landbase of the new FMP.

VOIT 30 – Fire Behavior Potential in DFA	
Value	5.2.1 Risk to communities and landscape values from wildfire is low
Objective	5.2.1.1b To reduce wildfire threat potential by reducing fire behavior, fire occurrence, threats to values at risk and enhancing fire suppression capability (part b)
Type of VOIT	Modelled
Indicator	Reduction of Fire Behavior Potential (FBP) across the DFA
Target	Reduce the area (ha) in the high, very high, and extreme Fire Behavior Potential rating categories within the DFA by 9% in 2027
Acceptable Variance	The target is achieved
Status	**Not Applicable**

Since the approved FMP assumptions are maintained and SHS deviation is within acceptable thresholds, 5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report by comparing Time 0 of the previous FMP to the Classified Landbase of the new FMP.

VOIT 31 – Communication Initiatives	
Value	5.2.2 Provide opportunities to derive benefits and participate in use and management
Objective	5.2.2.1 Integrate other uses and timber management activities
Type of VOIT	Dynamic
Indicator	Public Consultation Processes
Target	Engage with interested users/user groups
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

Weyerhaeuser and other operators on the DFA have engaged with interested user and groups throughout the 5-year reporting period. A summary of engagement with interested users and groups can be found in Table 34.

Table 34. Summary of engagement with interested users and user groups.

Reporting Year		Weyerhaeuser Pembina	ANC Timber Ltd.	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operators Total
2017	Users Engaged	63	0	0	0	-	2	0	-	-	65
	Issues Addressed	63	0	0	0	-	3	0	-	-	66
2018	Users Engaged	52	1	0	0	-	3	0	-	-	56
	Issues Addressed	52	1	0	0	-	1	0	-	-	54
2019	Users Engaged	9	1	0	0	-	3	0	-	-	13
	Issues Addressed	9	1	0	0	-	2	0	-	-	12
2020	Users Engaged	14	0	0	0	-	2	0	-	-	16
	Issues Addressed	13	0	0	0	-	1	0	-	-	14
2021	Users Engaged	35	-	0	0	-	2	0	-	-	37
	Issues Addressed	35	-	0	0	-	2	0	-	-	37
Year 1-5 Totals	**Issues Addressed**	**172**	**2**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**183**

VOIT 32 – Regenerated Stand Yield Comparison	
Value	5.2.3 Forest productivity
Objective	5.2.3.1 Maintain Long Run Sustained Yield Average
Type of VOIT	Modelled
Indicator	Regenerated stand yields compared to natural stand yields
Target	No decrease from the natural stand strata yields
Acceptable Variance	The target is achieved
Status	**Not Applicable**

Since the approved FMP assumptions are maintained and SHS deviation is within acceptable thresholds, 5-year stewardship reporting is not required for modelled VOITs. Variance will be assessed as part of the 10-year Stewardship Report.

CCFM Criterion 6 – Accepting Society's Responsibility for Sustainable Development

CSA SFM Element 6.1 – Aboriginal and Treaty Rights and Forest Values

VOIT 33 – Alberta First Nations and Métis Settlement Consultation Expectations	
Value	6.1.1 Compliance with government regulations and policies
Objective	6.1.1.1 Implement Public Involvement Program
Type of VOIT	Dynamic
Indicator	Meet Alberta's current expectations for First Nations and Métis Settlement consultation
Target	Consult at the community level with designated representatives of affected First Nations and Métis Settlements
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

The opportunity to consult was significantly reduced during the 2020 and 2021 years due to the COVID-19 pandemic. Operators typically reported the number of community level interactions that occurred over the reporting period. For Weyerhaeuser, open houses held with both the Alexis Nakota Sioux Nation and Paul First Nation are reported. Both Tall Pine Timber and Dale Hansen Ltd were included in the open houses. A summary of Indigenous consultation activities conducted by all operators over the reporting period can be found in Table 35.

Table 35. Summary of Indigenous consultation activities.

Issues or Concerns Raised	Weyerhaeuser Pembina	Alberta Newsprint Company	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operator Total
2017	2	5	0	0	2	2	0	0	-	11
2018	2	0	0	0	2	3	0	2	-	9
2019	2	0	0	0	2	3	0	2	-	9
2020	0	0	0	0	0	2	0	0	-	2
2021	0	0	0	0	0	3	0	0	-	3
Year 1-5 Totals	**6**	**5**	**0**	**0**	**6**	**13**	**0**	**4**	**0**	**34**

VOIT 34 – Alberta First Nations and Métis Settlement Consultation Expectations	
Value	6.1.1 Compliance with government regulations and policies
Objective	6.1.1.2 Exercise of Treaty and Aboriginal rights on the DFA
Type of VOIT	Dynamic
Indicator	First Nations and Métis gathering sites
Target	Protect all site-specific gathering areas (*e.g.* hunting, fishing, harvesting of forest resources) identified during any consultation process or shared by the First Nation or Métis Community
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

As the FMA holder, Weyerhaeuser is responsible for consulting with First Nations and/or Métis on sequencing on behalf of all operators. No First Nations or Métis gathering sites were identified or disturbed over the reporting period (Table 36).

Table 36. Summary of the number of Indigenous gathering sites identified.

Reporting Year	First Nations and Métis gathering sites Identified
2017	0
2018	0
2019	0
2020	0
2021	0
Year 1-5 Total	**0**

VOIT 35 – Alberta First Nations and Métis Settlement Consultation Expectations	
Value	6.1.1 Compliance with government regulations and policies
Objective	6.1.1.2 Exercise of Treaty and Aboriginal rights on the DFA
Type of VOIT	Dynamic
Indicator	First Nations and Métis cultural sites
Target	Protect all site-specific cultural sites identified during any consultation process or shared by the First Nation or Métis Community
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

As the FMA holder, Weyerhaeuser is responsible for consulting with First Nations and/or Métis on sequencing on behalf of all operators. No First Nations or Métis cultural sites were identified or disturbed over the reporting period (Table 37).

Table 37. Summary of the number of the Indigenous cultural sites disturbed.

Reporting Year	First Nations and Métis cultural sites disturbed
2017	0
2018	0
2019	0
2020	0
2021	0
Year 1-5 Total	**0**

VOIT 36 – Public Input into Forest Management Activities	
Value	6.2.1 Meaningful public involvement is achieved
Objective	6.2.1.1. Implement Public Participation
Type of VOIT	Dynamic
Indicator	Opportunities provided for public input into the Forest Management Plan, Annual Operating Plan, General Development Plan and Herbicide Plan
Target	Provide ongoing opportunities for public involvement into the Forest Management Plan, Annual Operating Plan, General Development Plan and Herbicide Plan
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

Public participation can be implemented through various means. Operators reported their public participation in a variety of ways with open houses, presentations to stakeholders, field/mill tours, school presentations and other/unspecified events being held. The summary of the number of events hosted by each operator over the course of the reporting period are presented in Table 38.

Table 38. Summary of public participation activities.

Reporting Year		Weyerhaeuser Pembina	ANC Timber Ltd.	Blue Ridge Lumber	Brisco Wood Preservers	Dale Hansen Ltd	Edfor Cooperative Ltd	Canfor (Whitecourt) Forest Products Ltd	Tall Pine Timber Co	Community Timber Permit Programs	All Operators Total
2017	Open House	4	3	5	0	-	0	1	-	-	13
	Presentations to Stakeholders	2	0	2	0	-	0	0	-	-	4
	Field/Mill Tours	1	2	0	0	-	0	0	-	-	3
	School Presentations	2	1	0	0	-	0	0	-	-	3
	Other	2	0	0	0	-	1	0	-	-	3
	Sub Total	11	6	7	0	0	1	1	0	0	26
2018	Open House	4	4	5	0	-	0	1	-	-	14
	Presentations to Stakeholders	2	2	2	0	-	0	0	-	-	6
	Field/Mill Tours	1	0	0	0	-	0	0	-	-	1
	School Presentations	2	2	0	0	-	1	0	-	-	5
	Other	2	0	0	0	-	0	0	-	-	2
	Sub Total	11	8	7	0	0	1	1	0	0	28
2019	Open House	2	1	5	0	-	0	1	-	-	9
	Presentations to Stakeholders	0	2	2	0	-	0	0	-	-	4
	Field/Mill Tours	0	0	0	0	-	0	0	-	-	0
	School Presentations	0	2	0	0	-	0	0	-	-	2
	Other	0	0	0	0	-	1	0	-	-	1
	Sub Total	2	5	7	0	0	1	1	0	0	16
2020	Open House	2	1	5	0	-	0	0	-	-	8
	Presentations to Stakeholders	0	2	2	0	-	0	0	-	-	4
	Field/Mill Tours	0	0	0	0	-	0	0	-	-	0
	School Presentations	0	0	0	0	-	0	0	-	-	0
	Other	0	0	0	0	-	2	1	-	-	3
	Sub Total	2	3	7	0	0	2	1	0	0	15
2021	Open House	2	-	5	0	-	0	0	-	-	7
	Presentations to Stakeholders	0	-	2	0	-	0	0	-	-	2
	Field/Mill Tours	0	-	0	0	-	0	0	-	-	0
	School Presentations	0	-	0	0	-	0	0	-	-	0
	Other	0	-	0	0	-	2	1	-	-	3
	Sub Total	2	0	7	0	0	2	1	0	0	12
Year 1-5 Totals		**28**	**22**	**35**	**0**	**0**	**7**	**5**	**0**	**0**	**97**

VOIT 37 – Alberta First Nations and Métis Settlement Consultation Expectations	
Value	6.2.2 First Nation Economic Participation
Objective	6.1.1.1 Promote economic opportunities between the company and First Nations or Métis Settlements
Type of VOIT	Dynamic
Indicator	First Nations/Métis Settlement service agreements
Target	Report on service agreements or in-kind services provided to First Nations and Métis Settlements
Acceptable Variance	The target is achieved
Status	**Within Acceptable Variance**

To promote the economic opportunities between Weyerhaeuser and neighbouring Indigenous communities, Weyerhaeuser entered into nine service contracts with three First Nations over the course of the reporting period. These contracts included burning contracts with the Paul and Stoney First Nations and fire services contracts with the Alexander First Nation. The number of agreements per year are reported in Table 39.

Table 39. Number of service agreements signed between operators and Indigenous communities for services to be rendered within the DFA.

Reporting Year	Service Agreements with Indigenous Communities
2017	1
2018	1
2019	2
2020	2
2021	3
Year 1-5 Total	**9**

Appendix I – SHS Variance Tables

Operator: Weyerhaeuser

Sequence Operator(s): WEYR

Harvest Profile					As-Built																Planned for Harvest (ha)						Combined As-Built & Planned									
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)												Variance				SHS Assessment (Excluding Slivers)			
											Substantial			Sliver															Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Baptiste	All	All	4371	4371	1305	51	186	73	52	1667	272	9	26	91	100	191	11.5	6.2	0.8	237	-2704	606	19	0	20	40	685	291	21	54	154	162	316	13.4	6.7	1.7	216	-2019
Aw	Hw	Hw	157	157	144	38	163	53	3	402	234	0	0	23	7	30	7.5	148.7	0.0	234	244	5	4	0	4	0	13	238	0	0	27	7	35	8.3	151.4	0.0	238	257
AwPl	HwPx	HwPx	493	493	117	0	0	0	1	118	0	0	0	1	12	13	10.8	0.0	0.0	0	-375	53	0	0	2	0	55	0	0	10	4	17	21	12.2	0.0	2.1	-10	-320
AwSx	HwSx	HwSx	94	94	37	0	14	2	4	57	16	0	0	4	4	7	12.3	17.3	0.0	16	-37	3	7	0	4	0	14	23	0	2	8	4	11	15.8	24.5	2.2	21	-23
Pl	Pl	Pl	2594	2594	665	13	5	11	14	708	18	2	11	25	57	82	11.6	0.7	0.5	6	-1886	413	0	0	4	17	435	18	6	22	47	101	148	13.0	0.7	1.1	-10	-1451
PlAw	PxHw	PxHw	909	909	276	0	0	1	4	282	0	7	15	6	14	20	7.1	0.0	2.3	-21	-628	121	8	0	1	2	132	8	15	20	9	23	32	7.7	0.8	3.8	-27	-496
Sb	Sb	Sb	4	4	2	0	0	0	7	9	0	0	0	7	2	9	96.6	0.0	0.0	0	5	0	0	0	1	14	15	0	0	0	22	2	24	99.1	0.0	0.0	0	20
SbAw	SbHw	SbHw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0
Sw	Sw	Sw	97	97	53	0	0	5	2	60	0	0	0	7	4	12	19.2	0.0	0.0	0	-37	7	0	0	4	0	11	0	0	0	12	8	20	27.2	0.0	0.0	0	-25
SwAw	SwHw	SwHw	21	21	11	0	4	1	0	15	4	0	0	1	0	1	5.7	17.6	0.0	4	-6	4	0	0	0	0	4	4	0	0	1	0	1	5.0	17.6	0.0	4	-2
X	X	X	0	0	0	0	0	0	17	17	0	0	0	17	0	17	100.0	0.0	0.0	0	17	0	0	0	0	7	7	0	0	0	24	0	24	100.0	0.0	0.0	0	24

Sequence Operator(s): WEYR

Harvest Profile						As-Built														Planned for Harvest (ha)						Combined As-Built & Planned									
						Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance						SHS Assessment (Excluding Slivers)			
												Substantial			Sliver											Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Brazeau	All	All	10027	8077	4300	18	59	141	186	4704	165	106	137	236	476	712	15.1	2.0	3.0	-78	-3373	1000	0	2	28	66	1096	179	124	231	319	612	931	16.1	2.2	4.4	-176	-2277
Aw		Hw	1155	1116	697	6	27	68	9	807	77	6	5	33	67	100	12.4	6.9	1.0	65	-309	80	0	0	9	3	92	77	6	31	45	74	119	13.2	6.9	3.3	40	-217
AwPl		HwPx	508	503	223	0	0	5	5	233	0	0	9	10	22	33	14.0	0.0	1.8	-9	-270	78	0	0	1	0	80	0	0	9	12	28	40	12.8	0.0	1.8	-9	-190
AwSx		HwSx	95	91	65	0	0	5	1	70	0	0	0	5	2	8	10.7	0.0	0.0	0	-21	11	0	2	1	0	14	2	0	3	7	7	14	16.2	2.6	2.8	0	-7
Pl		Pl	7089	5458	2888	12	24	38	99	3060	75	61	106	97	335	432	14.1	1.4	3.1	-93	-2398	786	0	0	13	34	832	84	79	150	135	440	575	14.8	1.5	4.2	-145	-1566
PlAw		PxHw	848	637	308	0	0	7	3	318	3	27	5	7	36	43	13.6	0.5	5.0	-29	-320	17	0	0	1	0	18	3	27	15	7	40	48	14.2	0.5	6.6	-39	-301
Sb		Sb	50	37	15	0	0	0	50	64	2	0	0	47	1	48	75.3	6.4	0.0	2	27	1	0	0	0	22	23	5	0	0	66	2	68	78.0	13.4	0.0	5	50
SbAw		SbHw	2	2	0	0	0	0	0	1	0	0	0	0	1	2	253.5	0.0	0.0	0	-1	0	0	0	0	0	0	0	0	0	0	1	2	253.4	0.0	0.0	0	-1
Sw		Sw	189	143	76	0	8	15	3	102	8	6	2	18	8	26	25.2	5.6	5.5	0	-41	18	0	0	2	1	21	8	6	4	21	15	36	29.4	5.6	7.0	-2	-20
SwAw		SwHw	91	88	28	0	0	3	0	30	0	6	10	3	4	6	21.2	0.0	18.2	-16	-57	9	0	0	1	0	10	0	6	19	4	5	9	21.6	0.0	28.5	-25	-47
X		X	0	0	0	0	0	0	16	16	0	0	0	16	0	16	100.0	0.0	0.0	0	16	0	0	0	0	6	6	0	0	0	22	0	22	100.0	0.0	0.0	0	22

Sequence Operator(s): WEYR

Harvest Profile						As-Built														Planned for Harvest (ha)						Combined As-Built & Planned									
						Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance						SHS Assessment (Excluding Slivers)			
												Substantial			Sliver											Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Edson	All	All	10415	6214	1414	32	70	122	47	1685	182	0	59	87	154	241	14.3	2.9	0.9	123	-4529	1232	65	26	60	39	1422	292	0	292	172	302	474	15.3	4.7	4.7	0	-3107
Aw		Hw	4683	4614	1076	32	55	72	13	1248	141	0	29	31	97	128	10.3	3.1	0.6	112	-3366	1013	65	13	26	2	1118	223	0	211	54	210	264	11.1	4.8	4.6	12	-2247
AwPl		HwPx	743	706	87	0	0	12	1	101	11	0	25	2	13	16	15.4	1.6	3.5	-13	-605	117	0	0	1	0	119	11	0	37	4	31	35	16.1	1.6	5.2	-25	-486
AwSx		HwSx	757	742	187	0	5	13	4	209	13	0	2	8	27	35	16.7	1.8	0.3	12	-533	98	0	2	1	1	102	16	0	32	10	42	52	16.7	2.1	4.3	-16	-431
Pl		Pl	2401	53	24	0	0	4	12	40	4	0	3	11	9	20	50.6	8.2	4.7	2	-13	2	0	0	2	8	12	6	0	3	20	9	29	55.3	12.0	4.7	4	-1
PlAw		PxHw	902	31	14	0	0	1	0	15	0	0	0	1	0	2	12.6	0.0	0.0	0	-16	2	0	0	0	0	2	0	0	0	2	1	2	12.5	0.0	0.0	0	-14
Sb		Sb	167	6	3	0	0	0	9	12	0	0	0	9	1	11	88.4	0.0	0.0	0	6	0	0	0	0	13	13	0	0	0	23	1	24	94.5	0.0	0.0	0	19
SbAw		SbHw	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-2	0	0	0	0	4	4	2	0	0	2	0	2	44.6	123.2	0.0	2	2
Sw		Sw	427	51	18	0	10	15	0	43	13	0	0	12	6	18	41.4	25.6	0.0	13	-8	0	0	8	19	2	30	25	0	9	30	6	36	48.7	48.9	17.1	16	22
SwAw		SwHw	328	9	5	0	0	5	2	12	0	0	0	7	1	8	64.6	0.0	0.0	0	3	0	0	3	11	0	14	9	0	0	12	2	13	51.9	99.6	0.0	9	17
X		X	0	0	0	0	0	0	6	6	0	0	0	6	0	6	100.0	0.0	0.0	0	6	0	0	0	0	9	9	0	0	0	15	0	15	100.0	0.0	0.0	0	15

Sequence Operator(s): WEYR

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned									
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance				SHS Assessment (Excluding Slivers)			
											Substantial			Sliver													Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Macmillan	All	All	12570	7532	2669	0	33	66	102	2870	63	10	112	137	249	386	13.4	0.8	1.6	-59	-4662	1582	2	7	94	71	1756	95	18	208	281	455	736	15.9	1.3	3.0	-131	-2906
Aw	Hw	Hw	5232	4355	1740	0	2	34	43	1819	11	7	82	68	161	228	12.6	0.3	2.0	-78	-2536	889	0	2	43	13	948	29	9	164	108	248	357	12.9	0.7	4.0	-144	-1588
AwPl	HwPx	HwPx	869	713	119	0	0	1	1	121	0	0	0	1	9	10	8.6	0.0	0.0	0	-593	98	0	0	4	1	103	0	0	4	6	33	39	17.6	0.0	0.5	-4	-490
AwSx	HwSx	HwSx	1253	1003	333	0	0	3	4	341	0	3	11	8	26	33	9.8	0.0	1.3	-13	-663	270	2	3	10	8	294	5	9	14	26	63	89	14.0	0.5	2.3	-18	-369
Pl	Pl	Pl	3040	729	179	0	3	3	12	197	3	0	17	15	22	37	18.8	0.5	2.3	-14	-532	187	0	0	8	15	210	10	0	17	32	49	80	19.7	1.3	2.3	-7	-322
PlAw	PxHw	PxHw	660	181	79	0	0	3	1	82	0	0	2	3	4	8	9.1	0.0	1.1	-2	-99	38	0	2	1	0	41	2	0	4	5	8	13	10.8	1.2	2.4	-2	-57
Sb	Sb	Sb	100	15	8	0	0	1	9	18	0	0	0	10	1	11	57.6	0.0	0.0	0	4	0	0	0	1	15	17	0	0	0	27	2	29	80.6	0.0	0.0	0	21
SbAw	SbHw	SbHw	5	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0
Sw	Sw	Sw	642	255	75	0	28	10	11	125	37	0	0	13	8	21	16.9	14.5	0.0	37	-130	66	0	0	9	2	77	37	0	2	23	24	47	23.4	14.5	0.8	35	-53
SwAw	SwHw	SwHw	770	282	136	0	0	11	9	156	12	0	0	7	18	25	16.1	4.4	0.0	12	-126	34	0	0	18	1	53	12	0	3	26	28	54	26.0	4.4	0.9	10	-73
X	X	X	0	0	0	0	0	0	12	12	0	0	0	12	0	12	100.0	0.0	0.0	0	12	0	0	0	0	16	16	0	0	0	28	0	28	100.0	0.0	0.0	0	28

Sequence Operator(s): WEYR

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned									
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance				SHS Assessment (Excluding Slivers)			
											Substantial			Sliver													Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Medicine Lake	All	All	2853	2853	244	0	0	5	4	253	0	0	8	10	31	41	16.2	0.0	0.3	-8	-2600	677	0	9	31	42	759	26	13	39	65	101	166	16.4	0.9	1.8	-26	-1841
Aw	Hw	Hw	185	185	123	0	0	1	1	125	0	0	3	2	10	12	9.4	0.0	1.7	-3	-60	35	0	0	12	1	48	0	5	3	14	16	31	17.7	0.0	4.2	-8	-12
AwPl	HwPx	HwPx	38	38	4	0	0	2	0	6	0	0	0	2	1	3	57.3	0.0	0.0	0	-32	22	0	2	5	2	30	2	3	0	8	2	11	30.0	5.8	6.9	0	-2
AwSx	HwSx	HwSx	17	17	8	0	0	0	0	9	0	0	0	1	0	1	11.3	0.0	0.0	0	-8	3	0	2	0	0	6	2	0	0	1	0	1	8.0	14.3	0.0	2	-2
Pl	Pl	Pl	2236	2236	90	0	0	1	1	92	0	0	5	2	16	18	19.2	0.0	0.2	-5	-2144	539	0	0	1	7	547	2	2	25	8	67	74	11.6	0.1	1.2	-25	-1596
PlAw	PxHw	PxHw	331	331	16	0	0	0	0	16	0	0	0	0	4	5	28.6	0.0	0.0	0	-315	46	0	0	1	0	48	0	3	5	2	12	14	21.6	0.0	2.5	-8	-267
Sb	Sb	Sb	11	11	1	0	0	0	2	3	0	0	0	2	0	2	62.3	0.0	0.0	0	-8	3	0	0	0	26	28	15	0	6	12	1	14	43.6	134.4	53.2	9	20
SbAw	SbHw	SbHw	0	0	0	0	0	1	0	1	0	0	0	1	0	1	100.0	0.0	0.0	0	1	0	0	0	0	2	2	0	0	0	2	0	2	100.0	0.0	0.0	0	2
Sw	Sw	Sw	35	35	2	0	0	0	0	3	0	0	0	0	0	0	12.0	0.0	0.0	0	-32	29	0	5	11	0	46	5	0	0	12	3	15	30.7	13.3	0.0	5	13
SwAw	SwHw	SwHw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	100.0	0.0	0.0	0	1
X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0	0	0	0	0	4	4	0	0	0	5	0	5	100.0	0.0	0.0	0	5

Sequence Operator(s): WEYR

Harvest Profile						As-Built														Planned for Harvest (ha)						Combined As-Built & Planned									
						Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance				SHS Assessment (Excluding Slivers)			
												Substantial			Sliver											Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Nordegg	All	All	5845	5845	3092	2	42	59	65	3260	76	32	146	94	275	369	11.3	1.3	3.0	-102	-2585	944	18	70	55	115	1202	222	45	320	206	365	571	12.8	3.8	6.2	-143	-1383
Aw		Hw	29	29	12	0	9	13	0	34	11	0	0	11	2	13	38.6	37.9	0.0	11	5	0	5	3	8	0	16	19	0	0	19	2	21	42.7	64.3	0.0	19	21
AwPl		HwPx	252	252	65	0	0	2	0	67	0	0	0	2	5	8	11.5	0.0	0.0	0	-184	105	0	0	1	0	106	0	3	22	3	7	10	5.9	0.0	10.1	-25	-78
AwSx		HwSx	36	36	2	0	0	1	0	3	0	0	0	1	0	1	33.7	0.0	0.0	0	-33	4	0	0	0	0	4	0	0	22	1	0	1	17.3	0.0	59.5	-22	-29
Pl		Pl	4665	4665	2460	2	24	22	39	2547	44	32	114	45	200	245	9.6	0.9	3.1	-102	-2118	784	13	60	39	78	974	173	42	193	105	284	390	11.1	3.7	5.0	-82	-1144
PlAw		PxHw	212	212	80	0	0	11	0	91	9	0	5	2	14	16	17.6	4.5	2.2	5	-121	24	0	4	1	0	29	14	0	24	3	16	19	16.0	6.4	11.5	-11	-92
Sb		Sb	21	21	3	0	0	0	10	13	3	0	14	8	2	10	71.3	12.4	64.0	-11	-8	2	0	0	0	27	30	3	0	14	35	2	37	86.4	12.4	64.0	-11	22
Sw		Sw	604	604	463	0	9	10	7	489	9	0	13	16	51	67	13.8	1.5	2.1	-4	-115	15	0	3	5	1	24	13	0	38	22	53	76	14.8	2.1	6.3	-25	-91
SwAw		SwHw	26	26	7	0	0	0	0	7	0	0	0	0	1	1	13.7	0.0	0.0	0	-19	10	0	0	1	0	10	0	0	7	1	1	2	9.1	0.0	26.2	-7	-9
X		X	0	0	0	0	0	0	9	9	0	0	0	9	0	9	100.0	0.0	0.0	0	9	0	0	0	0	9	9	0	0	0	17	0	17	100.0	0.0	0.0	0	17

Sequence Operator(s): WEYR

Harvest Profile						As-Built														Planned for Harvest (ha)						Combined As-Built & Planned									
						Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance				SHS Assessment (Excluding Slivers)			
												Substantial			Sliver											Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
South Canal	All	All	5272	3507	1087	0	3	68	23	1181	52	20	94	42	122	164	13.9	1.5	3.3	-62	-2326	724	0	4	33	65	826	86	25	162	110	195	305	15.2	2.5	5.3	-101	-1500
Aw		Hw	48	36	34	0	0	1	0	35	0	0	0	1	1	2	6.3	0.0	0.0	0	0	0	0	4	6	0	10	4	0	0	7	1	9	19.0	10.0	0.0	4	9
AwPl		HwPx	380	355	32	0	0	0	0	32	0	0	0	0	7	7	21.7	0.0	0.0	0	-323	56	0	0	3	1	60	0	0	5	4	12	16	17.5	0.0	1.4	-5	-263
AwSx		HwSx	51	47	15	0	0	0	0	15	0	0	0	0	1	2	10.0	0.0	0.0	0	-32	0	0	0	2	0	2	0	0	0	2	1	4	20.8	0.0	0.0	0	-30
Pl		Pl	4031	2624	873	0	3	27	8	911	22	12	78	16	92	109	11.9	0.8	3.4	-68	-1714	642	0	0	13	36	692	41	14	133	46	155	201	12.6	1.6	5.6	-106	-1022
PlAw		PxHw	443	211	46	0	0	2	0	48	0	0	6	2	5	7	14.9	0.0	2.8	-6	-163	21	0	0	1	0	22	0	0	11	3	8	11	15.1	0.0	5.2	-11	-141
Sb		Sb	21	21	6	0	0	1	13	19	0	0	10	13	1	15	75.7	0.0	47.8	-10	-2	2	0	0	0	17	19	3	0	10	27	2	29	74.0	15.1	47.8	-7	18
Sw		Sw	260	213	81	0	0	37	2	120	30	8	0	9	15	24	20.1	14.1	3.8	22	-93	3	0	0	7	8	18	38	11	3	16	16	32	23.1	17.6	6.5	24	-75
SwAw		SwHw	37	0	0	0	0	0	0	1	0	0	0	1	0	1	100.0	0.0	0.0	0	1	0	0	0	1	0	1	0	0	0	2	0	2	100.0	0.0	0.0	0	2
X		X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0	0	0	0	0	3	3	0	0	0	3	0	3	100.0	0.0	0.0	0	3

Sequence Operator(s): WEYR

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned									
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)											Variance						SHS Assessment (Excluding Slivers)			
											Substantial			Sliver													Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operations)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
West Country	All	All	4684	4684	1242	0	29	35	65	1371	76	7	80	54	127	181	13.2	1.6	1.9	-11	-3313	880	0	44	21	47	992	151	25	153	90	175	265	11.2	3.2	3.8	-27	-2321
Aw		Hw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0
AwSx		HwSx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0
Pl		Pl	3729	3729	817	0	12	27	39	895	50	7	65	28	70	98	11.0	1.3	1.9	-22	-2834	830	0	44	20	37	931	120	22	138	59	115	175	9.6	3.2	4.3	-40	-1903
Sb		Sb	0	0	0	0	0	0	9	9	2	0	0	7	0	7	77.3	1691.1	0.0	2	9	0	0	0	0	1	1	2	0	0	8	0	8	78.1	1691.1	0.0	2	10
Sw		Sw	954	954	425	0	17	8	10	460	17	0	15	18	57	75	16.3	1.8	1.6	1	-495	50	0	0	1	1	53	17	3	15	20	60	80	15.6	1.8	2.0	-2	-442
X		X	0	0	0	0	0	0	7	7	7	0	0	1	0	1	9.8	0.0	0.0	7	7	0	0	0	0	8	8	12	0	0	3	0	3	21.4	0.0	0.0	12	15

Sequence Operator(s): WEYR

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned									
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)											Variance						SHS Assessment (Excluding Slivers)			
											Substantial			Sliver													Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operations)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Wolf Lake	All	All	17167	12467	4722	654	187	444	308	6315	1210	12	181	382	447	829	13.1	9.7	1.5	1017	-6152	2590	169	62	117	174	3112	1498	24	1405	616	682	1298	13.8	12.0	11.5	69	-3040
Aw		Hw	2757	2702	755	20	2	32	15	824	38	0	35	31	49	80	9.7	1.4	1.3	4	-1878	586	5	3	30	9	633	58	0	281	58	95	153	10.5	2.2	10.4	-223	-1245
AwPl		HwPx	856	830	96	91	0	10	1	198	97	4	0	6	17	22	11.3	11.7	0.4	94	-632	230	10	17	6	6	269	126	4	29	15	31	47	10.0	15.2	4.0	93	-363
AwSx		HwSx	449	445	110	0	3	7	1	120	3	0	8	8	14	21	17.9	0.6	1.9	-6	-325	63	20	0	8	7	98	28	0	30	18	25	42	19.5	6.3	6.8	-2	-227
Pl		Pl	10785	6816	3210	508	161	322	151	4352	960	6	114	182	284	466	10.7	14.1	1.8	841	-2464	1464	134	27	49	68	1743	1154	11	731	267	420	687	11.3	16.9	10.9	413	-721
PlAw		PxHw	867	425	184	12	10	13	4	223	26	0	3	13	18	31	14.0	6.1	0.7	23	-202	75	0	0	2	2	79	26	0	25	17	24	41	13.7	6.1	5.9	1	-123
Sb		Sb	214	175	55	0	0	27	110	192	28	0	4	109	17	126	65.5	15.9	2.2	24	17	15	0	0	3	63	82	33	0	20	171	26	197	71.9	18.6	11.5	12	99
Sw		Sw	1062	939	261	18	8	32	7	325	51	2	17	13	42	55	17.0	5.4	2.1	31	-614	138	0	15	14	1	168	66	9	243	28	54	82	16.7	7.0	26.9	-186	-446
SwAw		SwHw	178	135	51	5	3	1	1	60	7	0	0	2	6	8	13.0	5.5	0.0	7	-75	19	0	0	5	0	24	7	0	46	7	7	14	16.1	5.6	33.9	-38	-51
X		X	0	0	0	0	0	0	18	18	0	0	0	18	0	18	100.0	0.0	0.0	0	18	0	0	0	0	18	18	0	0	0	35	0	35	100.0	0.0	0.0	0	35

Operator: ANC Timber Ltd

Harvested Profile				Final Harvest Area															
				Harvested (ha)						Variance							SHS Variance		
										Substantial			Slivers				(Excluding Slivers)		
Compartment	Provincial Yield Strata	Approved DFA 10 Year SHS	Operator Approved FMP 10 Year SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions	Deletions	Deferrals	Additions	Deletions & Deferrals	Total	Total Slivers (%)	SHS Variance (Additions %)	Difference in Area (Subst. Add – D&D)	Difference in Area Total Harvested - 10yr FMP SHS
Wolf Lake - ANC	All	6,182	3,994	1,604.2	14.4	4.7	18.9	9.2	1,651.4	47.2	21.9	2.0	95.2	188.6	283.9	17%	1.2%	25.3	-2,342.6
	Hwd	1,586	55	45.7		4.7	3.0	3.3	56.7	11.0			10.5	5.2	15.7	28%	20%	11.0	1.7
	Hwd/Pl	369	26	11.8					11.8		2.3		4.2	1.0	5.2	44%	0%	-2.3	-14.2
	Hwd/Sw	209	4	3.0					3.0				1.0	0.1	1.1	36%	0.0%	0.0	-1.0
	Sw/Hwd	50	30	21.7					21.7				0.4	2.8	3.2	0.1	0.0%	0.0	-8.3
	Pl/Hwd	335	329	135.9					135.9		2.3		3.7	28.6	32.3	24%	0%	-2.3	-193.1
	Sb/Hwd	0	0						0.0				0.5		0.5			0.0	0.0
	Sw	87	78	32.2					32.2				5.4	3.0	8.4	26%	0%	0.0	-45.8
	Pl	3,513	3,442	1,332.3	14.4		15.9	5.9	1,368.5	36.2	17.3	2.0	43.1	144.6	187.7	14%	1%	18.9	-2,073.5
	Sb	33.0	31.0	21.6					21.6				20.2	3.3	23.5	109%	0%	0.0	-9.4
	n/a								0.0				6.3		6.3			0.0	0.0

Operator: Blue Ridge Lumber

Harvest Profile					Final Harvest Area															Planned for Harvest (ha)						Combined As-Built & Planned					
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)									Variance			SHS Assessment (Excluding Slivers)		
											Substantial			Slivers												Substantial					
Compartment	Compamy Specific Yield Strata	Provincial Stratification / Yield Strata	Approved DFA 10 Year SHS	Operator Approved FMP 10 Year SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions	Deletions *	Deferrals *	Additions	Deletions & Deferrals	Total	Total Slivers (%)	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested - 10yr FMP SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70yr	Contributing Landbase	Non-Contributing Landbase	Total	Additions	Deletions *	Deferrals *	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Wolf Lake - Minnow Lake	All	All	**324**	**248**	-	-	-	-	-	-	-	-	-	32	15	47	**27%**	0%	-	(248)	144	-	7	8	15	**174**	30	1	12	12%	17	74
	Deciduous	1	21	-						-	-			1		1	17%	0%	-	-			3	3		**6**	6	-	10	0%	(4)	(6)
	HWD/Pine	2	28	-						-	-					-	0%	0%	-	-	2					**2**	-	-	-	0%	-	(2)
	HWD/Spruce	3		-						-	-					-	0%	0%	-	-						**-**	-	-	-	0%	-	-
	SW/HWD	4	3	-						-	-					-	0%	0%	-	-			2	2		**4**	4	-	-	0%	4	(4)
	Pine/HWD	5	86	**74**						-	-			3	2	5	20%	0%	-	(74)	24					**24**	-	1	-	0%	(1)	50
	Sb/HWD	6		-						-	-					-	0%	0%	-	-						**-**	-	-	-	0%	-	-
	SW	7	6	**6**						-	-			2	1	3	300%	0%	-	(6)	1					**1**	-	-	-	0%	-	5
	P	8	179	**167**						-	-			6	12	18	15%	0%	-	(167)	116		3	3	2	**124**	8	-	2	5%	6	43
	Sb	9	1	**1**						-	-			17		17	131%	0%	-	(1)	1				12	**13**	12	-	-	1714%	12	(12)
	Douglas Fir	10		-						-	-					-	0%	0%	-	-						**-**	-	-	-	0%	-	-
	Not-Classified	0		-						-	-			3		3	245%	0%	-	-					1	**1**	1	-	-	0%	1	(1)

Harvest Profile					Final Harvest Area																				Planned for Harvest (ha)					Combined As-Built & Planned					
					Harvested (ha)							Variance							SHS Assessment (Excluding Slivers)											Variance			SHS Assessment (Excluding Slivers)		
												Substantial			Slivers															Substantial					
Compartment	Company Specific Yield Strata	Provincial Stratification / Yield Strata	Approved DFA 10 Year SHS	Operator Approved FMP 10 Year SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions	Deletions *	Deferrals *	Additions	Deletions & Deferrals	Total	Total Slivers (%)	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested - 10yr FMP SHS	SHS 1-10yr	SHS 11-20yr	Contributing Landbase	Non-Contributing Landbase	Total	Additions	Deletions *	Deferrals *	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
MacMillan - North Rat	All	All	**1,466**	**849**	294	3	3	-	8	**308**	14	5	-	62	82	144	**47%**	2%	9	(541)	412	8	19	40	**479**	81	11	100	10%	(30)	62
	Deciduous	1	531	**4**		3				**3**	3			6	3	9	**300%**	75%	3	(1)	8	7	1		**16**	11	-	21	275%	(10)	(15)
	HWD/Pine	2	73	**12**						**-**	-			5	1	6	**0%**	0%	-	(12)	16		3		**19**	3	-	-	25%	3	(7)
	HWD/Spruce	3	19	**3**	3		3			**6**	3			1		1	**0%**	100%	3	3	5				**5**	3	-	-	100%	3	(8)
	SW/HWD	4		**-**						**-**	-					-	**0%**	0%	-	-					**-**	-	-	-	0%	-	-
	Pine/HWD	5	135	**133**	32					**32**	-			3	17	20	**63%**	0%	-	(101)	77		3		**80**	3	2	5	2%	(4)	21
	Sb/HWD	6		**-**						**-**	-					-	**0%**	0%	-	-					**-**	-	-	-	0%	-	-
	SW	7	6	**6**	4					**4**	-			3	2	5	**125%**	0%	-	(2)			3		**3**	3	-	-	50%	3	(1)
	P	8	698	**687**	251				8	**259**	8	5		28	59	87	**34%**	1%	3	(428)	306	1	9	10	**326**	28	9	72	4%	(53)	102
	Sb	9	4	**4**	4					**4**	-			9		9	**225%**	0%	-	-				28	**28**	28	-	2	700%	26	(28)
	Douglas Fir	10		**-**						**-**	-					-	**0%**	0%	-	-					**-**	-	-	-	0%	-	-
	Not-Classified	0		**-**						**-**	-			7		7	**350%**	0%	-	-				2	**2**	2	-	-	0%	2	(2)

Harvest Profile					Final Harvest Area																				Planned for Harvest (ha)					Combined As-Built & Planned					
					Harvested (ha)							Variance							SHS Assessment (Excluding Slivers)											Variance			SHS Assessment (Excluding Slivers)		
												Substantial			Slivers															Substantial					
Compartment	Company Specific Yield Strata	Strata	Approved DFA 10 Year SHS	Operator Approved FMP 10 Year SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions	Deletions *	Deferrals *	Additions	Deletions & Deferrals	Total	Total Slivers (%)	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested - 10yr FMP SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions	Deletions *	Deferrals *	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
MacMillan - Tower and Nine Mile	All	**All**	**22,485**	**1,023**	**656**		**6**	**2**	**17**	**681**	**25**	**27**	**40**	**78**	**99**	**177**	**26%**	**2%**	**(42)**	**(343)**	**233**	**5**	**17**	**0**	**14**	**269**	**62**	**27**	**40**	**6%**	**(5)**	**73**
	Deciduous	1	4,163	19	21			0		21	0	0		8	2	10	49%	0%	(0)	2	8	5	5	0		19	11	0	-	57%	11	(21)
	HWD/Pine	2	612	26	36		1			37	1	1		2	1	3	7%	5%	(0)	11	4					4	1	1	-	5%	(0)	(15)
	HWD/Spruce	3	1,633							-	-			0		0	0%	0%	-	-	2		0			2	0	-	-	0%	0	(2)
	SW/HWD	4	1,442	64	44					44	-	2		2	5	7	15%	0%	(2)	(20)	13		0	0		13	0	2	-	0%	(2)	7
	Pine/HWD	5	602	182	51					51	-	5	9	1	18	19	38%	0%	(14)	(131)	98		1		0	100	1	5	9	1%	(12)	31
	Sb/HWD	6								-	-					-	0%	0%	-	-						-	-	-	-	0%	-	-
	SW	7	1,367	13	0					0	-	2	2	7	3	10	4237%	0%	(4)	(12)	5		8		0	13	8	2	2	66%	4	(1)
	P	8	2,977	662	451		4	2	11	468	18	16	29	25	63	87	19%	3%	(28)	(194)	102		2		12	117	32	16	29	5%	(14)	77
	Sb	9	3,876	59	50				6	56	6	0		21	7	28	50%	9%	5	(3)	1				2	2	7	0	-	12%	7	0
	Not-Classified	0	5,812	3	3				1	3	1			13	0	13	412%	21%	1	0					0	0	1	-	-	23%	1	(0)

Operator: Brisco Wood Preservers

Harvest Profile				As-Builts														Planned for Harvest										Combined As-Built & Planned					
				Harvested (ha)					Variance							SHS Assessment (Excluding Slivers)				Harvested Area				Variance						Variance		SHS Assessment (Excluding Slivers)		
									Substantial				Slivers											Substantial			Slivers			Sustantial					
Compartment	Provincial Yield Strata	Approved DFA 10 Year SHS*	Operator Approved FMP 10 Year SHS*	SHS 1-10yr	SHS 11-20yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (included in harvested area)	Deletions	Deferrals	Total	Additions	Deletions & Deferrals	Total	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested - 10yr FMP SHS	SHS 1-10yr	SHS 11-20yr	Non-Contributing Landbase	Total	Additions (included in harvested area)	Deletions	Deferrals	Total	Additions	Deletions & Deferrals	Total	Additions	Deletions	Deferrals	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Remaining Available Area (SHS & Non - SHS)
Wolf Lake	All	221.9	221.9	39.3	7.4	92.5	0.0	139.2	92.5	3.7	0.0	96.2	0.0	2.4	2.4	41.7%	88.9	-82.7	81.0	25.6	0.0	113.2	0.0	6.7	0.0	6.7	6.6	1.1	7.7	92.5	10.4	0.0	41.7%	82.2	-30.5
	Pl	218.4	218.4	39.3	7.4	92.5		139.2	92.5	3.7	0.0	96.2	0.0	2.4	2.4	42.4%	88.9	-79.2	81.0	25.6		113.2	0.0	6.7	0.0	6.7	6.6	1.1	7.7	92.5	10.4	0.0	42.4%	82.2	-34.0
	Sb	1.8	1.8					0.0				0.0			0.0	0.0%	0.0	-1.8				0.0				0.0			0.0	0.0	0.0	0.0	0.0%	0.0	1.8
	Sw	1.7	1.7					0.0				0.0			0.0	0.0%	0.0	-1.7				0.0				0.0			0.0	0.0	0.0	0.0	0.0%	0.0	1.7
	ukn	0.0	0.0					0.0				0.0			0.0	0.0%	0.0	0.0				0.0				0.0			0.0	0.0	0.0	0.0	0.0%	0.0	0.0

*These two columns are the same because we don't have other operator's SHS layers

Operator: Canfor (Whitecourt)

Harvest Profile				Planned for Harvest (ha)						Combined As-Built & Planned					
										Variance Substantial			SHS Assessment (Excluding Slivers)		
Compartment	Company Specific Yield Strata	Approved DFA 10 Year SHS	Operator Approved FMP 10 Year SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70yr	Contributing Landbase	Non-Contributing Landbase	Total	Additions	Deletions *	Deferrals *	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
MacMillan - ETA Lake	All	2351.6	487.8	408.1	6.6	21.3	28.6	3.2	467.8	59.8	73.7	5.6	12.3%	-19.5	-20.1
	AP	64.6	3.4	3.2	-	1.6	-	-	4.8	1.6	0.2	-	47.3%	1.4	1.4
	AS	234.2	5.8	5.9	0.4	3.4	0.5	-	10.1	4.3	-	-	73.8%	4.3	4.3
	AW	1342.1	9.6	16.7	3.3	3.1	3.2	-	26.4	9.7	0.7	0.1	100.0%	8.8	16.8
	PA	79.2	54.6	42.4	-	-	0.4	-	42.8	0.4	11.4	-	0.8%	-11.0	-11.7
	PL	288.3	226.1	190.5	2.9	9.1	9.3	-	211.7	21.3	30.3	5.3	9.4%	-14.4	-14.4
	SA	103.5	35.1	21.0	-	0.2	0.3	-	21.5	0.5	7.8	0.1	1.4%	-7.4	-13.6
	SB	6.3	2.5	2.4	-	-	13.6	-	16.0	13.6	0.2	-	100.0%	13.4	13.5
	SW	233.5	150.8	126.0	-	3.0	1.2	-	131.2	5.2	23.2	-	3.5%	-18.0	-19.6
	X	-	-	-	-	-	-	3.2	3.2	3.2	-	-	100.0%	3.2	3.2

Operator: Dale Hansen Ltd.

Sequence Operator(s): DHL

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned								
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance					SHS Assessment (Excluding Slivers)			
											Substantial			Sliver													Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
South Canal	All	All	5272	861	167	4	3	3	7	184	7	3	4	11	10	21	11.4	0.8	0.8	0	-677	92	0	0	3	3	98	7	3	6	18	13	31	11.0	0.8	1.1	-2	-579
Aw		Hw	48	0	0	4	0	0	0	4	4	0	0	0	0	0	0.0	0.0	0.0	4	4	0	0	0	0	0	0	4	0	0	0	0	0	0.0	0.0	0.0	4	4
AwPl		HwPx	380	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0
AwSx		HwSx	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0
Pl		Pl	4031	747	152	0	3	2	1	159	3	3	4	4	10	13	8.3	0.4	1.0	-4	-588	92	0	0	1	2	95	3	3	6	6	13	19	7.5	0.4	1.3	-6	-493
PlAw		PxHw	443	110	15	0	0	0	0	15	0	0	0	0	0	0	2.8	0.0	0.0	0	-95	0	0	0	0	0	0	0	0	0	0	0	0	2.8	0.0	0.0	0	-95
Sb		Sb	21	0	0	0	0	0	6	6	0	0	0	6	0	6	100.0	0.0	0.0	0	6	0	0	0	0	1	1	0	0	0	8	0	8	100.0	0.0	0.0	0	8
Sw		Sw	260	4	0	0	0	1	0	1	0	0	0	1	0	1	100.0	0.0	0.0	0	-3	0	0	0	2	0	2	0	0	0	3	0	3	100.0	0.0	0.0	0	-1
SwAw		SwHw	37	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0
X		X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	100.0	0.0	0.0	0	1

Operator: Edfor Cooperative Ltd.

Sequence Operator(s): EDF

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned									
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)										Variance						SHS Assessment (Excluding Slivers)			
											Substantial			Sliver													Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operatabrs)	Operatbr Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Edson	All	All	10423	3964	675	125	66	118	142	1126	257	0	82	195	125	320	28.4	6.5	2.1	175	-2838	869	23	34	83	125	1134	342	0	373	373	281	654	28.9	8.6	9.4	-31	-1704
Aw		Hw	4691	53	8	2	0	16	1	28	2	0	0	18	2	20	69.7	4.3	0.0	2	-25	11	0	5	13	0	28	7	0	4	31	4	34	60.4	13.4	7.9	3	4
AwPl		HwPx	743	37	5	0	0	4	0	9	0	0	0	4	4	8	86.8	0.0	0.0	0	-27	2	0	0	7	0	9	5	0	4	6	4	10	57.2	13.3	10.4	1	-18
AwSx		HwSx	757	11	0	0	9	4	1	14	9	0	0	5	0	5	35.1	81.7	0.0	9	3	0	0	6	14	1	21	17	0	3	17	2	19	54.4	153.7	25.4	14	23
Pl		Pl	2401	2294	477	112	46	60	41	736	188	0	52	70	76	146	19.8	8.2	2.3	136	-1558	535	12	16	29	26	618	221	0	152	120	164	284	21.0	9.6	6.6	69	-940
PlAw		PxHw	902	774	126	7	5	6	1	146	12	0	24	8	23	31	21.2	1.6	3.1	-11	-628	124	8	4	3	2	141	24	0	74	13	40	53	18.6	3.1	9.6	-50	-487
Sb		Sb	167	160	1	0	0	5	89	95	36	0	0	58	4	62	65.1	22.4	0.0	36	-65	31	0	0	2	88	121	52	0	60	131	18	150	69.3	32.7	37.1	-7	55
SbAw		SbHw	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-5	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-5
Sw		Sw	427	355	43	0	6	22	4	74	6	0	6	25	9	34	45.9	1.7	1.7	0	-281	98	3	3	14	1	119	12	0	50	41	31	72	37.3	3.3	14.1	-38	-162
SwAw		SwHw	328	275	15	4	0	1	1	22	4	0	0	3	7	10	45.1	1.5	0.0	4	-253	68	0	0	1	1	69	4	0	26	4	18	22	24.1	1.5	9.3	-22	-184
X		X	0	0	0	0	0	0	4	4	0	0	0	4	0	4	100.0	0.0	0.0	0	4	0	0	0	0	6	6	0	0	0	10	0	10	100.0	0.0	0.0	0	10

Operator: Tall Pine

Sequence Operator(s): TP

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned							
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)									Variance				SHS Assessment (Excluding Slivers)			
											Substantial			Sliver												Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
Brazeau	All	All	10027	1777	414	0	0	13	37	464	15	54	66	34	81	115	24.8	0.8	6.8	-105	-1313	185	0	3	6	11	205	22	54	83	46	108	154	23.0	1.2	7.7	-115	-1108
Aw	Hw	Hw	1155	37	7	0	0	0	0	7	0	0	0	0	0	0	2.4	0.0	0.0	0	-29	0	0	0	0	0	0	0	0	0	0	0	0	2.4	0.0	0.0	0	-29
AwPl	HwPx	HwPx	508	4	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	-4	1	0	0	1	0	2	0	0	0	1	0	1	55.4	0.0	0.0	0	-2
AwSx	HwSx	HwSx	95	4	0	0	0	1	0	1	0	0	0	1	0	1	100.0	0.0	0.0	0	-3	0	0	0	0	0	0	0	0	0	1	0	1	100.0	0.0	0.0	0	-3
Pl	Pl	Pl	7089	1530	378	0	0	10	20	407	9	51	62	21	78	99	24.4	0.6	7.4	-104	-1122	174	0	3	5	6	187	16	51	79	27	105	133	22.3	1.0	8.5	-114	-935
PlAw	PxHw	PxHw	848	176	29	0	0	0	0	29	0	3	4	0	3	3	11.5	0.0	4.0	-7	-147	10	0	0	0	0	10	0	3	4	0	3	3	8.6	0.0	4.0	-7	-137
Sb	Sb	Sb	50	8	0	0	0	0	14	14	6	0	0	7	0	7	52.7	84.7	0.0	6	6	0	0	0	0	5	5	6	0	0	12	0	13	67.5	84.7	0.0	6	11
SbAw	SbHw	SbHw	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0
Sw	Sw	Sw	189	19	0	0	0	2	0	2	0	0	0	2	0	2	100.0	0.0	0.0	0	-17	0	0	0	0	0	0	0	0	0	2	0	2	100.0	0.0	0.0	0	-17
SwAw	SwHw	SwHw	91	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	0	0
X	X	X	0	0	0	0	0	0	3	3	0	0	0	3	0	3	100.0	0.0	0.0	0	3	0	0	0	0	0	0	0	0	0	3	0	3	100.0	0.0	0.0	0	3

Sequence Operator(s): TP

Harvest Profile					As-Built															Planned for Harvest (ha)						Combined As-Built & Planned							
					Harvested (ha)						Variance						SHS Assessment (Excluding Slivers)									Variance				SHS Assessment (Excluding Slivers)			
											Substantial			Sliver												Substantial			Slivers (<2ha)						
Compartment	FMP Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS (All Operators)	Operator Approved FMP 10 Yr SHS	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions & Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D&D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area (Total Harvested - 10yr FMP SHS)	SHS 1 - 10 yr	SHS 11 - 20 yr	SHS 21 - 100 yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions (ha)	Deletions (ha)	Deferrals (ha)	Additions (ha)	Deletions and Deferrals (ha)	Total Slivers (ha)	Total Slivers (%)	SHS Variance (Additions %)	SHS Variance (D & D %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
South Canal	All	All	5272	904	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-904	13	0	0	0	0	13	0	0	2	0	0	0	0.0	0.0	0.2	-2	-891
Aw	Hw	Hw	48	12	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-12	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-12
AwPl	HwPx	HwPx	380	26	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-26	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-26
AwSx	HwSx	HwSx	51	4	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-4	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-4
Pl	Pl	Pl	4031	660	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-660	13	0	0	0	0	13	0	0	2	0	0	0	0.0	0.0	0.4	-2	-648
PlAw	PxHw	PxHw	443	122	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-122	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-122
Sb	Sb	Sb	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0
Sw	Sw	Sw	260	43	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-43	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-43
SwAw	SwHw	SwHw	37	37	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-37	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	-37
X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0	0

Appendix II – VOITs Table

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CCFM Criterion 1 - Biological Diversity										
CSA SFM Element - 1.1 Ecosystem Diversity: Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the FMA.										
Value - 1.1.1 Landscape scale biodiversity.										
1	1.1.1.1 Maintain biodiversity by retaining the full range of cover types and seral stages.	Area of Old, Mature, Young and Regenerating Forest by Ecological Unit - DX,(Hw); DC (HwPl, HwSw); CD(PlHw, SwHw, SbHw); PL (Pl pure and leading), SW (Sw pure and leading); CX (Sb pure and leading)	Over the 200-year planning horizon; a) Gross forested landbase: greater than 12% old forest, greater than 23% mature plus old forest, less than 32% young forest; less than 17% regenerating forest, and b) Active forested landbase: greater than 8% old forest, greater than 19% mature plus old forest, less than 54% young forest, less than 28% regenerating forest.	Targets and seral stage definitions shall be based on sound science, ecological considerations, wildlife zones, and disturbance regimes. Target shall ensure representation of natural range of ecosystem attributes (*e.g.*, productivity class).	Planning Standard.	Spatial Harvest Sequence.	Periodic updates to DFA area inventory.	**FMP:** - Tables of indicators (values and targets) at 0, 10, 50, 100 and 200 years. - Maps of seral stages at 0, 10 and 50 years. **Performance:** 5 year Stewardship Reporting: none. 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP	Area (ha) of Old; and Mature plus Old forest in the DFA by: Ecological Unit shall be between 90% and 100% of target. Area of young and regenerating forest in each DFA by Ecological Unit shall not exceed 110% of target area.	Adjust strategies in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
2	1.1.1.2 Maintain biodiversity by avoiding landscape fragmentation.	a) Range of patch sizes for the DFA. Patch size categories are as follows: <=25 ha, 25-100 ha, 100-500 ha and 500+ ha.	Over the long-term the intent is to achieve a distribution of harvest area sizes that will result in a patch size pattern approximating patterns created by natural disturbances. By year ten of the FMP the target is to achieve the following percentages of harvested area by patch size category: <= 25 ha 39.6% 25 – 100 ha 39.1% 100 – 500 ha 19.3% > 500 ha 2.1%	Targets shall be based on sound science, ecological considerations, wildlife zones, and disturbance regimes. Target shall ensure representation of natural range of ecosystem attributes (*e.g.* cover class and productivity class).	Planning Standard.	Spatial Harvest Sequence.	Periodic updates to DFA inventory.	**FMP:** - Tables of area of forest in each harvest area size class on the DFA at 0, 10, and 50 years. Maps of harvest area size classes at 0, 10, and 50 yrs. **Performance:** 5 year Stewardship Reporting: none 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP	The target distribution is achieved; or demonstrated progress to achieving target in one rotation where the pattern has deviated significantly from the target.	Adjust strategies in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
3	1.1.1.2 Maintain biodiversity by avoiding landscape fragmentation.	b) Area of old interior forest by Ecological Unit on the DFA.	b) Area of old interior forest (OIF) by ecological unit will be no less than the following % of the gross forested area within each ecological unit as defined at year 10 of the FMP. DX : 14% of the gross forested DX area at year 2027 DC : 18% of the gross forested DC area at year 2027 CD : 17% of the gross forested CD area at year 2027 C-PL : 32% of the gross forested C-PL area at year 2027 C-SW : 40% of the gross forested C-SW area at year 2027 CX : 42% of the gross forested CX area at year 2027	TSA output at year 10 of the PFMS	Planning Standard.	Spatial Harvest Sequence.	Periodic updates to forest inventory.	**FMP:** - Tables of indicators (values and targets) at Year 0, 10 and 50. - Maps of interior older forest at Year 0, 10 and 50. **Performance:** 5 year Stewardship Reporting: none 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP	The target is achieved for at least 80% of the planning period with variance not exceeding 20% below target.	Adjust strategies in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
4	1.1.1.3 Maintain biodiversity by minimizing access.	a) Permanent all-weather forestry road density by DFA - km/km^2 Current Weyerhaeuser Status- 0.036 km/km^2 forestry roads (383 km of permanent forestry roads)	Less than 0.05 km/km^2 of permanent all-weather forestry roads built on the DFA through 2026.	Analysis of permanent all-weather forestry road densities for current and planned all-weather roads to be developed through 2026 Average DLO plan is approximately 10-20 km per year of permanent all-weather road construction	Planning Standard.	Coordinating access with other resource users, road closures and decommissio ning.	Regular updates to forest inventory.	**FMP:** - Amount of permanent all-weather road density for the DFA at 0 and 10 years. - Map of existing open all-weather forestry roads **Performance:** Stewardship reports of permanent forestry road density on the DFA	Variance not to exceed +10% of the target to be achieved.	Adjust strategies in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
5	1.1.1.3 Maintain biodiversity by minimizing access.	5a) Permanent forestry winter (seasonal) road density on the DFA Current Weyerhaeuser Status: 0.0084km/km^2 - 89 km of road 5b) Active temporary external block forestry road density on the DFA area. Current Weyerhaeuser Status: 0.002 km/km^2 - 21 km of roads	5a) Less than 0.03 km/km^{2}of permanent winter (seasonal) forestry road on the DFA 5b) Less than 0.002 km/km^2 of temporary external forestry road on the DFA	5a) Analysis of current status of permanent winter (seasonal) forestry road densities on the DFA by year 5b) Analysis of current status of temporary external block roads on the DFA	Planning Standard.	Road construction, maintenance and reclamation activities.	Road plan OGR 11.2.	**FMP:** Estimate of existing density of permanent winter forestry roads on the DFA **Performance:** 5a) Stewardship Reports of density of permanent winter (seasonal) forestry roads on DFA 5b) Stewardship Reports of density of temporary external block forestry roads on DFA area by year.	A variance not exceeding +/- 20% must be achieved.	Adjust strategies in subsequent FMPs.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
6	1.1.1.4 Maintain plant communities uncommon in DFA or province.	Area or occurrence of each identified uncommon plant community within the DFA area.	When encountered, maintain 80% of the identified uncommon plant community area, for each community confirmed to exist within the FMA, as defined within the Alberta Conservation Information Management System (ACIMS).	Alberta Conservation Information Management System (ACIMS) plant community classification and tracking list. Predict and identify occurrence of uncommon plant community. Maintaining a process to protect identified uncommon plant communities upon the DFA	Planning Standard.	Coordinating with other resource users, spatial planning of harvest and road construction, OGR.	Periodic updates to inventory.	**FMP:** Table with descriptive list of identified uncommon plant communities known to exist on the DFA (see chapter 3) **Performance:** Stewardship Reports of area of uncommon plant communities identified and percent area maintained.	The target is achieved.	Adjust strategies in subsequent FMPs.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
7	1.1.1.5 Maintain unique habitats provided by wildfire and blowdown events.	Area of unsalvaged burned forest.	a) Fires<1000 hectares of Active Landbase Follow FMP structure retention strategy consistent with normal harvesting practices (see VOIT 10 for retention percent) b) Fires>1000 hectares of Active Landbase Retain all unburned trees in green islands and retained patches recognizing timber condition, access, non-timber needs.	Targets based on "Fire Salvage Planning and Operations - Directive No. 2007-01". Ensure consistency with FireSmart objectives	"Fire Salvage Planning and Operations - Directive No. 2007-01"	Salvage planning.	Organization reports, FHPs	**FMP:** Table and map of fire disturbance history (see chapter 3) **Performance:** Stewardship Reports of fire disturbance by area for: a) fires less than 1000ha of active landbase - report totals only b) fires greater than 1000ha of active landbase - report totals salvaged, unsalvaged and total area disturbed.	Target is achieved or exceeded for both a) and b)	Adjust strategies in subsequent AOP's

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
8	1.1.1.5 Maintain unique habitats provided by wildfire and blowdown events.	Area of unsalvaged blowdown of merchantable forest.	In areas of significant (> 100 ha) merchantable blowdown, greater than 10% area will be left unsalvaged.	Targets are to be based on sound science, ecological considerations and disturbance regimes.	Planning Standard.	Salvage planning.	Final Harvest Plans	**FMP:** none **Performance:** Stewardship Reports of area of merchantable blowdown - salvaged, unsalvaged and total area disturbed.	The target is achieved or exceeded where areas of blowdown of merchantable forest of greater than 100 ha.	Adjust strategies in subsequent FMPs.
9	1.1.1.6 Retain ecological values and functions associated with riparian zones.	Compliance with Operating Ground Rules (OGR).	No warnings or penalties assessed regarding riparian zones	OGR.	Federal Fisheries Act, Water Act.	Planning, OGR.	Compliance reporting systems.	**FMP:** none **Performance:** Stewardship Reporting of penalties assessed regarding riparian zones	The target is achieved.	Immediate remedial action and / or administrative penalty.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
Value - 1.1.2 Local/stand scale biodiversity.										
10	1.1.2.1. Retain stand level structure.	Percent of area with merchantable structure within the harvested area, representative of the status, sizes, and species of the overstorey trees within the harvested areas on the DFA.	A combination of merchantable single stems, clumps, and patches, that are representative of the stands harvested, comprising 4% of the harvested area within the DFA area. Conifer and Deciduous Note: A wide range in variability in harvest area-level retention is desired as long as the target level is achieved.	Wildlife zones, roadside vegetation screens, recreational values, aesthetics, local knowledge, ACIMS, Biodiversity / Species Observation Database (BSOD). **See Feb 3, 2015 Forest Management Planning Standard Annex 4 for wording change**	Occupational Health and Safety Act, Forest and Prairie Protection Act.	Implement residual structure retention strategies in OGRs.	Organization reports, air photo interpretation, ground surveys, post harvest assessments.	**FMP**: none **Performance:** Stewardship Reporting of the Percent of structure retention in harvest areas on the DFA area.	At the end of the 10-year FMP term the target is achieved or exceeded.	Adjust strategies in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
11	1.1.2.1. Retain stand level structure.	Percentage of harvested area within the DFA with downed woody debris equivalent to preharvest conditions.	All harvest areas have downed woody debris retained on site - exception is roadside slash piled and burned	Sound ecological science	Planning Standard.	Minimize the occurrences of harvest area debris removal and/or disposal (other than roadside slash)	ARIS, Silviculture prescriptions	**FMP:** none **Performance**: Stewardship Reports of area of total disposal of DWD	The target is achieved.	Adjust strategies in subsequent FMP.
12	1.1.2.2. Maintain integrity of sensitive sites.	Sensitive sites (*e.g.* mineral licks, raptor nests, bear dens, unique ecological areas, etc.) within the DFA area.	Protect and report on all identified sites	Local knowledge, FHPs	Planning Standard.	Organization developed standards for sensitive site protection, OGRs 7.7.4.	Final Harvest Plans.	**FMP:** none **Performance:** Stewardship Reports of the number of identified sites consistent with OGRs	The target is achieved.	Adjust strategies in subsequent FMPs.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
13	1.1.2.3. Maintain aquatic biodiversity by minimizing impacts of water crossings.	Forestry water crossings in compliance with Code of Practice for Water Course Crossings within the DFA.	No warnings or penalties for non-compliances for the Code of Practice or OGRs for water course crossing	Code of Practice for Water Course Crossings: Sections 7 - 9 and Schedule 2.	Code of Practice for Water Course Crossings.	Road construction, maintenance and reclamation activities.	Road plan and OGR 11.4 (Watercourse Crossings).	**FMP**: none **Performance:** Stewardship Reports of warnings and penalties related to non-compliance with Codes of Practice for Water Course Crossings.	The target is achieved.	Act immediately to eliminate problems and adjust strategies in subsequent AOPs.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CSA SFM Element - 1.2 Species Diversity: Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained throughout time.										
Value - 1.2.1. Viable populations of identified plant and animal species.										
14	1.2.1.1. Maintain habitat for identified high value species (*i.e.*, economically valuable, socially valuable, species at risk, species of management concern).	a) Number of hectares of primary and secondary habitat by DFA from the fRI Grizzly Bear model, as measured at time 0 (start of modelling time 0 - 2017). b) percent change in the Barred owl RSF habitat value and potential breeding pairs habitat value from 2017 by DFA; and c) Percent change in relative abundance value of four songbird species (Black-throated Green Warbler, Brown Creeper, Ovenbird, Varied Thrush) from 2017 by DFA.	ai) - Maintain or increase the number of hectares of combined primary and secondary habitat from the fRI Grizzly Bear model, as measured at time 0 (TSA modelling time 0 - 2017). aii) - 100% of temp roads will have effective access controls within the core and secondary grizzly bear range, during active grizzly bear season (May to December). b) maximum 15% reduction in the RSF indicators at 10 and 20 years and a maximum 15% reduction in the breeding pairs	Habitat models (provided by the Government of Alberta (GOA)).	Recovery plans for species at risk, Federal Species at Risk Act.	Spatial Harvest Sequence.	Updates to vegetation inventory and habitat modelling.	**FMP:** a) table and maps of current (time zero) and future (10 and 20 years) landscape condition for Core and Secondary habitat zones; b) tables of RSF and breeding pairs at 0, 10, 20, 50, 100 & 200 years and maps at 0, 10, 20 & 50 yrs. c) tables of relative abundance at 0, 10, 20, 50, 100 and 200 years and maps of relative abundance at 0,	At the end of the 10-year FMP term targets are achieved or exceeded.	Adjust strategies in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
		d) East Slopes Cold Water Fish	indicator at 10 and 20 years; c) maximum 15% reduction in the indicator over the 200 year planning horizon; and di) ECA target is 30% in Athabasca Rainbow Trout Ecologically Significant Habitat (see ARTR Recovery Plan). Watersheds with ECA values >30% due to existing (year 0) modelled disturbance, ECA values must demonstrate a continuous downward trend or not exceed 35% in years 0-20. ESH watersheds: West Carrot, East Carrot, Upper Moose, Upper Sang, Embarras, Erith, Rodney, Minnow, Svedberg, Swartz, Half Moon, Coyote, Raven, Cairn, Oldman, Shinningbank, Trout, Whitefish, Deer, Prairie, Mason, Sundance East, Obed,					10, 20 and 50 years; di-diii) Document effort made to modify SHS sequence to reduce ECA yield in FMP development **Performance:** 5 year Stewardship Report: none 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP		

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
			Athabasca, Sundance West, Edson, Groat, Mcleod) dii) ECA target is 30% for Bull Trout Watersheds, Watersheds with high ECA values >30% due to existing (year 0) modelled disturbance, ECA values must demonstrate a continuous downward trend or not to exceed 35% in years 0-20. Blackstone watersheds:(merged watersheds < 10,000ha): (Middle Blackstone, Hansen), East Rundell, Chungo, Upper Brown, Lower Wapiabi, Penti, Lookout, Sturrock, Upper Wapiabi, South Lookout, East Sturrock; Nordegg watersheds: East Nordegg, (North Rapid, Rapid) Nordegg, Owl, North Brewster, (North Colt, Sutherland) Wawa, Stephens, Grey Owl; Brazeau watersheds: Broken Arm, Lower							

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
			Blackstone, Negraiff, North Elk, Middle Marshybank, North Marshybank, South Marshybank ; (Elk River watersheds: South Elk. diii) ECA target is 30% for Arctic Grayling within the Pembina River watershed. Watersheds with high ECA values due to existing modelled disturbance ECA values must demonstrate a continuous downward trend or not to exceed 35% in years 0-20. Arctic Grayling watersheds: Paddy, Middle Pembina, Jerry, Rehn, Dismal, Baker, Upper Pembina, Tall Pine, Reservoir, Upper North Rat, (West Eta, Varty) East Eta, (Dzida, Tom), Lower North Rat, , East Zeta, West Zeta, South Rat.							

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CSA SFM Element - 1.3 Genetic Diversity: Conserve genetic diversity by maintaining the variation of genes within species.										
Value - 1.3.1. Genetic integrity of natural tree populations.										
15	1.3.1.1. Retain "wild forest populations" for each native tree species in each seed zone through maintenance and/or establishment of in-situ reserves by Alberta and disposition holders.	The appropriate number and area (ha) of in-situ tree gene conservation reserves as directed by the FGRMCS.	Owners of the tree improvement program will determine the number of in situ gene conservation stands and allocate them to FMA holders who are partners in the tree improvement program. When this is done, individual FMA holders are responsible for conservation. This has yet to be determined.	Direction and detail as per FGRMCS Section 20.0, "In-situ Gene Conservation", in consultation with the other associate FMA holders and GoA	Standards regulated through Timber Management Regulation 144.2 and the FGRMCS and GoA	Field reconnaissance or survey to locate appropriate in-situ tree gene conservation reserves on the ground. Establish protective notation to identify in-situ tree gene conservation reserves in land standing records, and management plan to protect genetic resources.	Within each FMP and at each stewardship report interval, determine the status of all existing and planned *in-situ* reserves.	**FMP:** NA **Performance:** Stewardship Reports: update status	The target is achieved.	GoA will direct any required amendments or adjustments to targets.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
16	1.3.1.2 Retain wild forest genetic resources through ex-situ conservation for species under CPP programs.	Number of provenances, families and clone in trials and clone banks; and seed in the seed archive.	Establish and maintain active ex-situ conservation program for species under CPP programs in cooperation with GoA and in accordance with FGRMCS Section 17 and 29 and ex-situ conservation criteria (Appendix 4, Footnote 1). Subject also to Section 6.3 of the Gene Conservation Plan for Native Trees of Alberta (2008).	Adequacy of the ex-situ conservation program to capture a representative sample of wild tree genetic resources in ex-situ gene archives. Information for this to be provided by GoA.	Standards regulated through Timber Management Regulation 144.2 and the FGRMCS and consultation with GoA.	Seed collections, clone banking and establishment of genetic lines in genetic trials.	Conservation activities identified in FMP as per FGRMS.	**FMP:** Table showing number of genetic conservation areas required in each seed zone and number provided in DFA. Map showing locations of genetic conservation areas. (see Annex V) **Performance:** Stewardship Reports: Update status	No variance from targets as set by GoA is anticipated, but adjustment to targets and objectives are allowable as more research and development bring new data and parameters forward.	GoA will direct any required amendments or adjustments to targets.

VOIT#	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CSA SFM Element - 1.4 Protected Areas: Respect protected areas identified through government processes.										

VOI T#	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
Value - 1.4.1. Areas with minimal human disturbances within managed landscapes.										
17	1.4.1.1 Integrate transboundary values and objectives into forest management.	Stakeholder consultation.	Ongoing consultation with relevant protected areas agencies as required	FHPs	Planning Standard.	Operation Planning of FHPs	Silvacom (or other as developed) Consultation Tracking Program	**FMP:** None **Performance:** Stewardship Reports of consultation initiatives undertaken with protected area agencies.	The target is achieved.	Adjust strategies in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CCFM Criterion 2 - Ecosystem Productivity										
CSA SFM Element - 2.1 Ecosystem Resilience:										
Value - 2.1.1 Reforested harvest areas.										
18	2.1.1.1 Reforest all harvested areas	Annual % of openings that: a) meet or exceed the RSA establishment survey minimum stocking and species composition standards for the declared regenerated yield stratum; and b) meet or exceed the RSA establishment survey minimum stocking and species composition standards for an alternate regenerated yield stratum, and c) do not achieve the RSA establishment	The sum of Indicators a, b and c = 100% of openings	Direction from Alberta	Timber Management Regulations 141.6(1) and 141.6(2); Reforestation Standard of Alberta	Implementation of silviculture strategies that ensure the target stocking and species composition is achieved for the opening.	RSA establishment survey protocols	**FMP:** ARIS, AOP **Performance:** Stewardship Reports of: a) area that meets the RSA stratum requirements, and b) area that meets a different RSA stratum requirement, and c) area not meeting any RSA stratum requirements and require	None	Adjust silviculture strategies.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
		survey minimum stocking and/or species composition standards for any regenerated yield strata and are re-treated within one year. Indicators a, b and c are to be reported separately.						retreatment within one-year		
19	2.1.1.2 Meet or exceed the C and D MAI standard for the population of openings surveyed in a given quadrant by the end of the fifth year of the plan.	Summed difference between target and actual C and D MAIs for openings surveyed in a five year quadrant, as reported to ARIS.	100%	Direction from Alberta	Timber Management Regulation 141.7(1) and 141.7(2); Reforestation Standard of Alberta	Implementation of silviculture strategies that ensure the target productivity is achieved for the population of openings.	RSA performance survey protocols.	**FMP:** MAI targets by yield group (see chapter 7 and Annex VII) **Performance:** Stewardship Reporting : Comparison of RSA MAI results for C and D and forecasted targets by Yield Group	Meet or exceed the target C and D MAI for the DFA	Adjust silviculture strategies and/ or Alberta adjusts AAC.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
Value - 2.1.2 Maintenance of forest landbase.										
20	2.1.2.1 Limit conversion of productive forest landbase to other uses.	Amount of change in forest landbase.	Report on the loss of the gross forest landbase area.	Forest inventory and land use data.	Planning Standard.	Promoting the minimization of non-forestry impacts to the landbase	GoA tracking of withdrawals and cancellations by FMA	**FMP:** none **Performance:** Stewardship Reporting of additions and deletions to the gross forest landbase	The target is achieved.	Adjust strategies next FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
21	2.1.2.2 Recognize lands affected by insects, disease or other natural events.	Amount of area affected by significant impacts of insects, fire, windthrow and other natural events.	Report the area affected by impacts of insects, fire, windthrow or other natural events.	GoA forest health surveys, inventory updates, fire reporting. Events that exceed 100 hectares in size will be reported, with the exception of fires. GoA tracks all fires on the DFA.	Planning Standard, Alberta Forest Health Strategy and Shared Roles and Responsib ilities between GoA and the Forest Industry.	Maintain up-to-date information.	Alberta surveys with industry cooperation.	**FMP**: none **Performance**: Stewardship Reports of areas impacted by fire, insects, windthrow and other natural events	The target is achieved.	Address events as they occur.
Value - 2.1.3 Control invasive species										
22	2.1.3.1 Control non-native plant species (weeds).	Noxious weed program.	Effective suppression of noxious weeds	Noxious weed directive 2001-06	Directive 2001-06.	Noxious weed program	Field surveys	**FMP**: none **Performance**: Stewardship Reports of control efforts	The target is achieved.	Effective suppression of weeds.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CCFM Criterion 3 - Soil and Water Resources										
CSA SFM Element - 3.1 Soil quantity and quality - Conserve soil resources by maintaining soil quality and quantity.										
Value - 3.1.1 Soil productivity.										
23	3.1.1.1 Minimize impact of roading and bared areas in forest operations.	Silviculture Strategy Table (SST) that includes tactic to reforest temporary in-block roads	Follow Silviculture Strategy Table	Direction from Alberta.	OGRs and Soils Guidelines .	Silviculture strategy to reforest all roads within harvest areas while minimizing bared areas within harvest areas	Field inspection reports and audits.	**FMP:** None **Performance:** Stewardship Reports: none	The target is achieved.	Adjust strategies in next FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
24	3.1.1.2 Minimize incidence of soil erosion and slumping.	Incidence of soil erosion and slumping.	No warnings or penalties assessed regarding soil erosion or slumping.	Direction from Alberta.	OGRs and Soils Guidelines.	Effective planning and supervision of operations and adherence to relevant OGRs.	Field inspection reports and GoA FOMP reports	**FMP:** None **Performance:** Stewardship reports of non-compliance (warnings and penalties assessed)	The target is achieved.	Immediate remedial action to correct.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CSA SFM Element - 3.2 Water quantity and quality - Conserve water resources by maintaining water quality, flow regime and water quantity.										
Value - 3.2.1 Water quantity.										
25	3.2.1.1 Limit impact of timber harvesting on water yield.	Forecasted changes in water yields resulting from the approved SHS, as measured by Equivalent Clearcut Area (ECA)	a) ECA <30% b) Zero Water Act penalties	Equivalent Clearcut Area (ECA) water yield modelling	Water Act, Planning Standard.	Follow the SHS.	Spatial harvest sequence variance reporting	**FMP:** ECA results by watershed in excess of 500 hectares size **Performance:** a) 5-year Stewardship Report: SHS variance b) 5-year Stewardship report: penalties to the Water Act. 10-year Stewardship Report: comparing time 0 of previous FMP to Classified Landbase of new FMP	<20% variance to the SHS	Adjust strategies in the next FMP

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
Value - 3.2.2 Effective riparian habitats.										
26	3.2.2.1 Minimize impact of operations in riparian areas.	Riparian buffers maintained as outlined in OGRs.	No warnings or penalties assessed regarding riparian zones	Direction from Alberta.	OGRs.	Effective planning and supervision of operations and adherence to relevant OGRs.	Field inspection reports and GoA FOMP reporting.	**FMP:** None **Performance:** Stewardship reports of warnings and penalties assessed	The target is achieved	Immediate correction and / or administrative penalty.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CCFM Criterion 4 - Global Ecological Cycles										
CSA SFM Element - 4.1 Carbon uptake and storage										
Value - 4.1.1 Impact of forestry operations on carbon budgets.										
27	4.1.1.1 Maintain functioning forest ecosystems capable of contributing to global carbon cycles.	Results of carbon budget modeling.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CSA SFM Element - 4.2 Forest land conversion										
	There is no VOIT in support of Element 4.2.									

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CCFM Criterion 5 - Multiple Benefits to Society										
CSA SFM Element - 5.1 Timber and non-timber benefits										
Value - 5.1.1 Sustainable timber supplies.										
28	5.1.1.1 Establish appropriate AACs.	Process described in Annex 1 is followed and standards are met.	Complete compliance. GoA approves AACs as determined by the Timber Supply Analysis (TSA)	TSA and development of the Preferred Forest Management Scenario (PFMS) that results in the SHS	Forests Act and Timber Management Regulation; planning standard	Effective implementation of planning standard	Multiple means: TPRS, ARIS, AOPs, Stewardship Reports, filed inspection reports.	**FMP**: see chapter 6 - PFMS **Performance:** 5 year Stewardship Reporting: none 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP	Issue specific.	Adjust AAC using most current and relevant information.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CSA SFM Element - 5.2 Communities and sustainability										
Value - 5.2.1 Risk to communities and landscape values from wildfire is low.										
29	5.2.1.1 To reduce wildfire threat potential by reducing fire behaviour, fire occurrence, threats to values at risk and enhancing fire suppression capability.	1) Reduction in Fire Behaviour Potential within the FireSmart Community Zone.	Reduce the area (ha) in the high, very high and extreme Fire Behaviour Potential rating categories within the FireSmart Community Zones by 8% in 2027	Wildfire Threat Assessment completed by GoA and incorporated in the final SHS.	Planning Standard.	Spatial harvest sequence, thinning, partial harvest techniques.	Periodic updates to inventory	**FMP:** Maps and Tables of indicator at 0, 10, 20, and 50 yrs. **Performance:** 5-year Stewardship Report: None 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP	The target is achieved.	Adjust strategies next FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
30	5.2.1.1 To reduce wildfire threat potential by reducing fire behaviour, fire occurrence, threats to values at risk and enhancing fire suppression capability.	2) Reduction of Fire Behaviour Potential across the DFA area.	Reduce the area (ha) in the high, very high and extreme Fire Behaviour Potential rating categories within the DFA by 9% in 2027	Wildfire Threat Assessment completed by GoA and incorporated in the final SHS.	Planning Standard.	Spatial harvest sequence, thinning, partial harvest techniques.	Periodic updates to inventory	**FMP**: Maps and Tables of indicator at 0, 10, 20, and 50 yrs. **Performance**: 5-year Stewardship reports: None 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP	The target is achieved.	Adjust strategy in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
Value - 5.2.2 Provide opportunities to derive benefits and participate in use and management										
31	5.2.2.1 Integrate other uses and timber management activities.	Public Consultation Processes	Engage with interested users/users groups	Identification of interests	OGR	FHPs, AOPs, GDPs, GTAs	FHPs	**FMP**: Public Involvement Process undertaken and issues addressed in the FMP (see chapter 2) **Performance**: Stewardship Reporting of Number of Consultations with interested parties	The target is achieved.	Adjust activities

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
Value - 5.2.3 Forest productivity.										
32	5.2.3.1 Maintain Long Run Sustained Yield Average.	Regenerating stand yields compared to natural stand yields.	No decrease from the natural stand strata yields.	FMP Timber Supply Analysis.	Planning Standard.	Effective implementation of plans.	Stewardship Report.	**FMP:** Summary in the Timber Supply of LRSY (see chapter 6) **Performance:** 5 year Stewardship Reporting: none 10 year Stewardship Report comparing time 0 of previous FMP to Classified Landbase of new FMP	The target is achieved.	Adjust strategy in subsequent FMP.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CCFM Criterion 6 - Accepting Society's Responsibility for Sustainable Development										
CSA SFM Element - 6.1 Aboriginal and treaty rights and Aboriginal forest values										
Value - 6.1.1 Compliance with government regulations and policies.										
33	6.1.1.1 Implement Public Involvement Program.	Meet Alberta's current expectations for First Nations and Métis consultation.	Consult at the community level with designated representatives of affected First Nations and Métis Settlements.	Alberta to provide direction.	Alberta's First Nations and Métis Consultation guidelines on Land and Natural Resource Management	Effective implementation of Alberta's First Nations and Métis Settlement consultation requirements.	Consultation Logs and effectiveness of consultation process	**FMP:** First Nation and Métis consultation plan (see chapter 2) **Performance:** Stewardship reports summarizing First Nation and Métis consultation.	The target is achieved.	Adjust strategy to reflect GoA direction.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
34	6.1.1.2 Exercise of Treaty and Aboriginal rights on the DFA	First Nation and Métis gathering sites	Protect all site specific gathering areas (*e.g.* hunting, fishing, harvesting of forest resources) identified during any consultation process or shared by the First Nation or Métis Community	First Nations and Métis Settlement Consultation	Alberta's First Nations and Métis Settlement Consultation guidelines on Land and Natural Resource Management	Effective implementation of Alberta's First and Métis Settlement Nation consultation requirements.	Consultation Logs and effectiveness of consultation process	**FMP:** First Nation and Métis Settlement consultation plan (see chapter 2) **Performance:** Stewardship reports summarizing of disturbance of sites	The target is achieved.	Adjust strategy to reflect GoA direction.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
35	6.1.1.2 Exercise of Treaty and Aboriginal rights on the DFA	First Nation or Métis cultural sites	Protect all site specific cultural sites identified during any consultation process or shared by the First Nation or Métis Community	First Nations and Métis Settlement Consultation	Alberta's First Nations and Métis Settlement Consultation guidelines on Land and Natural Resource Management	Effective implementation of Alberta's First Nation and Métis Settlement consultation requirements.	Consultation Logs and effectiveness of consultation process	**FMP:** First Nation and Métis Settlement consultation plan (see chapter 2) **Performance:** Stewardship reports summarizing of disturbance of sites	The target is achieved.	Adjust strategy to reflect GoA direction.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
CSA SFM Element - 6.2 Public participation and information for decision-making										
Value - 6.2.1 Meaningful public involvement is achieved.										
36	6.2.1.1 Implement Public Participation	Opportunities provided for public input into the Forest Management Plan, Annual Operating Plan, General Development Plan, and Herbicide Plan.	Provide ongoing opportunities for public involvement into the Forest Management Plan, Annual Operating Plan, General Development Plan and Herbicide Plan.	Public involvement processes	Planning Standard.	Hold open houses or other venues to seek public input into plans annually	Silvacom (or other as developed) Consultation Tracking Program	**FMP**: Summary of public consultation in FMP development process. **Performance**: Stewardship Reports of opportunities provided to the public for input in forest management planning	The target is achieved.	Adjust activities.

VOIT #	Objective	Indicator	Target	Means to Identify Target	Legal/ Policy Require-ments	Means of Achieving Objective and Target	Monitoring and Measure-ment	Reporting	Acceptable Variance	Response
37	6.2.2.1 Promote economic opportunities between the company and First Nations and Métis Settlements	First Nations / Métis Settlement service agreements.	Report on service agreements or in-kind services provided to First Nations and Métis Settlements	First Nations and Métis Settlement Consultation	Alberta's First Nations and Métis Settlement Consultation guidelines on Land and Natural Resource Management	Effective implementation of Alberta's First Nation and Métis Settlement consultation requirements.	Consultation Logs and effectiveness of consultation process	**FMP:** First Nation and Métis Settlement consultation plan **Performance:** Stewardship reports summarizing First Nation & Métis service agreements.	The target is achieved.	Adjust strategy to reflect GoA direction.