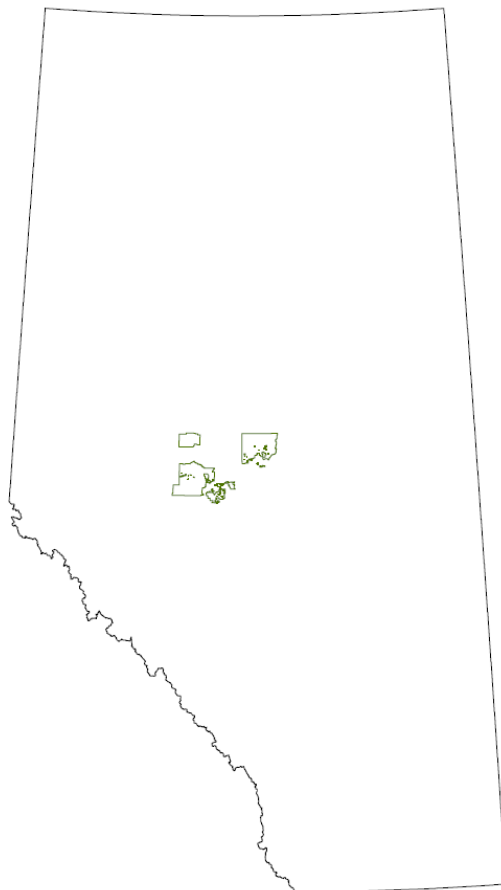


Forest Management Plan Approval Decision

**Forest Management Units W11 and W13
Millar Western Forest Products Ltd. 2017**

Forest Management Agreement 9700034



Date: October 3, 2017

Annual Allowable Cut
Effective Date: May 1, 2017

Approved by: Original Signed
Darren Tapp, MBA, MF, RPF
Executive Director,
Forest Management Branch

Executive Summary

The Millar Western Forest Products Ltd. 2017-2027 Detailed Forest Management Plan (FMP) dated March 2017 is approved subject to the satisfactory completion of the Approval Conditions presented in this document.

The Conditions herein are consistent with the terms of the Forest Management Agreement (FMA). Failure by Millar Western Forest Products Ltd. to fulfill the direction provided in this Approval Decision may place the Company in default of its FMA.

The Forest Management Plan has been validated by Regulated Forestry Professionals (RFP). The department recognizes RFP-validated work as complete, accurate, and prepared with professional due diligence. The Forest Management Plan has been reviewed and approved by Alberta Government RFPs.

Approval Decision Conditions

Approval Condition	Page	Requirement	Approval Authority	Date
1.1	2	Public Consultation	Forestry Manager, Whitecourt Forest Area	Ongoing
1.2	3	Aboriginal Consultation	Forestry Manager, Whitecourt Forest Area	Ongoing
3.1	3	Spatial Harvest Sequence	Director, Forest Resource Management Forestry Manager, Whitecourt Forest Area	Ongoing
4.1	4	Stand Level Structure Retention	Director, Timber Production Auditing and Revenue	January 1 annually
5.1	5	Habitat for Species of Concern	Director, Forest Resource Management	Ongoing and Upon Caribou Range Plan Approval
6.1	5	Growth and Yield	Director, Forest Resource Management	November 1, 2022 and November 1, 2027
7.1	5	Silviculture	Director, Forest Health and Adaptation	May 19, 2018
11.1	7	Timber Harvest Planning and Operating Ground Rules	Director, Forest Resource Management	April 30, 2018
12.1	7	Performance Monitoring and Reporting	Director, Forest Resource Management	November 1, 2022 and November 1, 2027

Approval Condition	Page	Requirement	Approval Authority	Date
13.1	7	Future Forest Management Plans	Executive Director, Forest Management Branch	May 1, 2027

Approved Annual Allowable Cuts

The Approved Annual Allowable Cuts (AAC) for May 1, 2017 – April 30, 2027 are:

- *FMU W11 Coniferous AAC: 103,000 m³ per year*
- *FMU W13 Coniferous AAC: 347,000 m³ per year*
- *FMU W11 Deciduous AAC: 115,000 m³ per year*
- *FMU W13 Deciduous AAC: 203,000 m³ per year*

Refer to Tables 1 and 6 for the Historical Allocations, Tables 2, and 7 for the Approved Annual Allowable Cuts, and Tables 3 and 8 for the Quadrant Allowable Cuts.

The approved landbase is defined as being ‘single-combined’ or otherwise known as having been ‘dissolved’, there are no separate or distinct primary or secondary AACs.

Approved Utilization

- *Coniferous: 15/10/15 cm*
- *Deciduous: 15/10/15 cm*

Authorization

The Forest Management Plan for Forest Management Units W11 and W13 dated March 2017 is approved subject to the Approval Conditions and Annual Allowable Cuts (Tables 2 and 7) presented in this Approval Decision.

This Forest Management Plan replaces the 2007 Detailed Forest Management Plan approved April 16, 2008.

The AACs are effective beginning May 1, 2017. The AACs are predicated on the company harvesting the species profile in the proportions identified in the spatial harvest sequence, within the variance tolerances, and implementing the silviculture prescriptions and other activities as presented in the plan.

The SHS is effective beginning May 1, 2017.

The next FMP is due by May 1, 2027.

Introduction

This Forest Management Plan (FMP) is prepared to meet Forest Management General Provisions 10 (1) of the Millar Western Forest Products Ltd. (MWFP) Forest Management Agreement (FMA) dated March 19, 2014. Acceptable FMPs are approved by the Executive Director, Forest Management Branch (FMB), Alberta Agriculture and Forestry (department). This Approval Decision presents the rationale and establishes Conditions of Approval for the MWFP FMP dated March 2017.

The Conditions herein are consistent with the terms of the FMA and failure by MWFP to fulfill the direction provided in this Approval Decision may place the company in default of its FMA. The Conditions contained herein are non-negotiable.

The FMP has been validated by Regulated Forestry Professionals (RFP). The department recognizes RFP-validated work as complete, accurate, and prepared with professional due diligence. The FMP has been reviewed and approved by government RFPs.

Forest Management Planning Area

The forest management planning area under consideration is FMA 9700034, allocated to Millar Western Forest Products Ltd. through legislative Order-in-Council (O.C. 81/2014) dated March 19, 2014.

The FMA area is located in central Alberta; it falls within Upper Foothills, Lower Foothills, and Central Mixedwood natural sub-regions. The MWFP FMA area is located within the Upper Peace and Upper Athabasca Land-Use Framework planning regions. Where strategic land use and integrated resource management plans are approved after an FMP has been approved, Alberta and MWFP shall discuss implementation of the strategic land use and integrated resource plan and Alberta may require the FMP to be amended.

Background

The department approved MWFP's Forest Management Plan on April 16, 2008, effective date May 1, 2007. The FMP was prepared according to the *Alberta Forest Management Planning Standard (ver 4.1, 2006)*; hereafter, FMPS). The 2017 FMP replaces the previous plan and introduces new information used in planning, implementing and monitoring forestry operations on the FMA area.

The publication of this Approval Decision concludes the department's appraisal of the MWFP 2017 FMP.

Approval Decision Scope

This Approval Decision addresses the MWFP FMP dated March 2017. It supersedes previous FMPs, timber supply analyses, and their associated approval conditions. All timber disposition holders within the FMA area shall conduct their activities in accordance with the approved FMP and this Approval Decision and associated conditions.

MWFP shall meet the requirements of the FMP Approval Conditions unless the Executive Director, FMB, agrees to alternate requirements in writing.

In this document, **bolded text** identifies specific timelines, requirements, and the department senior manager accountable for the review. Non-bolded text presents the rationale for the condition and specific considerations to be addressed to meet the condition.

Company specific standard operating procedures are referenced in the FMP to provide practitioners with confidence that a process exists to address a concern or value. The FMP approval decision does not cover the content within those standard operating procedures, work instructions, and woodland operating guidelines.

In the event of an inconsistency between the FMP, the Approval Decision, company procedures, as indicated above, and existing, new or revised legislation or regulation, the legislation or regulation shall apply.

Forest Management Plan Approval Conditions

The Approval Conditions direct MWFP to complete additional work on an ongoing basis. The department posts approved FMPs on its website to support public access to plans.

MWFP remains obligated to make the approved FMP available to the public. MWFP shall update the content of the FMP as these approval conditions are met.

1.0 Public and Aboriginal Consultation

Alberta delegates the responsibility for public and Aboriginal consultation on proposed FMPs to the FMA holder through the FMA Order-in-Council and Alberta's Aboriginal Consultation policies and guidelines.

MWFP's First Nations consultation has been deemed adequate and in alignment with Alberta's current policies. MWFP engaged in reasonable and ongoing public and stakeholder consultation, and addressed the issues raised to the extent possible given the limited scope of the FMP. MWFP is encouraged to maintain its efforts to conduct meaningful public and Aboriginal consultation throughout the FMP implementation.

Approval Condition 1.1 Public Consultation

- i. MWFP shall keep written documentation of the issues and comments raised by the public during operational plan consultation, as well as responses and actions to address the concerns. This shall be made available to the Government of Alberta upon request.**

Approval Condition 1.2 Aboriginal Consultation

- i. MWFP shall adhere to the provincial policies and guidelines for Aboriginal Consultation.**
- ii. MWFP shall document consultation efforts and activities, issues raised, and timber disposition holders' responses. This documentation shall be made available to the Government of Alberta upon request.**

2.0 Forest Health

The mountain pine beetle (MPB) infestation extends into the MWFP FMA area. The implementation of this FMP is not intended to control the current MPB outbreak but rather direct harvest to the most susceptible stands to create a forest that is more resistant to such outbreaks by reducing the overall susceptibility of the mature pine forest. MWFP's ongoing and timely communication with local department staff is essential to access affected timber.

3.0 Spatial Harvest Sequence

The spatial (mapped) harvest sequence (SHS) is the most important output of the FMP as it provides the implementation strategy MWFP must follow to achieve the forecasted future forest conditions. While dependent on many factors, the future condition is strongly influenced by harvest patterns, intensity and schedules. It presents spatially and temporally how the integration of environmental, economic, and social values will be achieved on the FMA area.

MWFP proposes to harvest a large proportion of coniferous and mixedwood stands below 80 years of age starting in the fourth decade and peaking in the fifth decade. MWFP must remain committed to harvesting managed coniferous and mixedwood stands as planned in the harvest schedule to maintain the proposed coniferous harvest level throughout the planning horizon. Some stands do not reach their minimum harvest age until year 16 of this 20-year plan. Both MWFP and the department will monitor adherence to the spatial harvest sequence.

Approval Condition 3.1 Spatial Harvest Sequence

- i. MWFP shall ensure lands are eligible for operational harvesting to proceed, specifically considering municipal or federal land ownership in operational plans.**
- ii. MWFP shall follow the approved (mapped) twenty-year spatial harvest sequence developed to meet this SHS approval condition.**
- iii. MWFP may modify the approved SHS by deleting and replacing stands from the contributing landbase provided that:**
 - a. The additions include no more than 20% of the total sequenced area in each compartment per decade.**

- b. **Harvesting does not exceed 100% of the total area within the approved SHS by compartment by decade.**
- c. **MWFP shall not have more additions than combined area in deletions and deferrals. Preference shall be given to the second ten-year period for additions.**
- iv. **Stands may be added from the non-contributing landbase subject to department approval. Stands with MPB shall follow the Mountain Pine Beetle Level 2 Harvest Priorities and Approval Process Directive 2013-01.**
- v. **MWFP shall track the variance using additions and strata distribution tables according to the Interpretive Bulletin: Stewardship Reporting Requirements.**
- vi. **Should MWFP exceed the thresholds described in (Approval Condition 3.1 iii), the Forestry Manager, Whitecourt Forest Area, may require the completion of a Compartment Assessment and the Director, Forest Resource Management, may recommend the reduction of the approved AAC to reflect the impact of the variance.**
- vii. **The department requires the deviation from the approved SHS to be reported annually as per the Operating Ground Rules reporting requirements. The five-year Stewardship Report (Approval Condition 12.1) shall include an analysis of the deviation from the approved SHS (Approval Condition 3.1 iii) and describe the impacts of the deviation on forecasts made in the FMP.**
- viii. **Generally, the department will not request a modification to the approved SHS unless required by a change in legislation, a policy approved by the Minister, or a deviation from acceptable SHS thresholds.**

4.0 Stand Level Structure Retention

MWFP proposes a stand level structure retention strategy in Annex VIII. Contrary to what is proposed in Annex VIII the riparian zones and proximal areas cannot be included toward the structure retention target. The structure retention strategy as laid out in Appendix II of Chapter 7 will guide operations. For further clarity, structure retention will be representative of the "individual harvest area" and not the forest harvest area across the landscape. The MWFP proposed potential one-year lag in reporting of structure retention volume drain is not approved.

Approval Condition 4.1 Stand Level Structure Retention

- i. **All tenure holders shall report the structure retention volume to be drained from the AAC annually by January 1 following the end of the timber year acceptable to the Director, Timber Production Auditing and Revenue.**

- ii. **All tenure holders shall follow the provincial stand level retention standard on structure retention when finalized. MWFP operating ground rules shall be updated to reflect this standard. In the absence of a provincial stand level retention standard, all tenure holders shall follow the stand level structure retention objectives identified in the FMP.**

5.0 Habitat for Species of Concern

Within the MWFP FMA area there is habitat for wildlife and fisheries species of concern.

Ongoing communication with the forest area should address these issues in annual operational planning. MWFP is encouraged to enhance its practice of integrated land management.

Approval Condition 5.1 Habitat for Species of Concern

- i. **MWFP shall comply with GOA guidelines, direction, recovery and/or implementation plans regarding sensitive wildlife species, including, but not limited to grizzly bear and Athabasca rainbow trout.**
- ii. **Alberta is preparing range plans for woodland caribou. When applicable plans are approved, MWFP shall review its FMP with the department to ensure its alignment and compliance with all requirements.**

6.0 Growth and Yield

A credible and comprehensive Growth and Yield Program gathers key information for use in future timber supply analyses and to monitor current FMP timber growth and yield assumptions.

Approval Condition 6.1 Growth and Yield

- i. **MWFP shall implement the growth and yield program and meet commitments made in the growth and yield program. Stewardship reporting (Approval Condition 12.1) shall provide an update on the progress of meeting the commitments.**

7.0 Silviculture

Seed supply deficiencies are identified for MWFP.

Approval Condition 7.1 Silviculture

- i. **By May 19, 2018, MWFP shall submit a seed collection plan and timeline for white spruce Upper Foothills 1.1 and lodgepole pine Central Mixedwood 3.2 seed zones acceptable to the Director, Forest Health and Adaptation.**

8.0 Seral Stages

MWFP defines seral stages within the value, objective, indicator and target (VOIT) for seral stages by broad cover group. The department accepts the information graphically presented in the summary for the preferred management scenario 64006 as the target for each seral stage by broad cover group.

9.0 Access

The FMA grants the holder the right to access Crown fibre. MWFP road construction and related stream crossing construction will follow rules and guidelines contained within the Timber Harvest Planning and Operating Ground Rules as they relate to non-DLO roads. Departmental Licence of Occupation (DLO) road construction and related stream crossing construction will follow rules and guidelines contained within the disposition conditions.

The department agrees in principle with the proposed road corridor plan; however, this does not constitute approval of the formal disposition. Agreement within this approval decision does not meet the consultation requirements of a DLO road application process. MWFP shall follow the access development process for DLOs led by Alberta Environment and Parks. The specific location, duration and classification of the road shall be followed through the road application process identified at application time.

10.0 Delivered Timber Volume Monitoring and Reporting Program

The Timber Harvest Planning and Operating Ground Rules will be consistent with the Alberta Timber Scaling Manual for defining a merchantable piece.

Delivered timber volumes must be monitored and reported to allow comparisons between forecasted and harvested volumes as per the FMP. Collection and analysis of this information will be used in conjunction with growth and yield data to inform future yield forecasts.

The department in its letter of December 17, 2015 to the Alberta Forest Products Association (Appendix 1) has provided guidance with regards to fibre utilization. Alberta's scaling system has been developed to quantify the amount of volume harvested; the system is dependent on the resources being accurately measured and is dependent on all harvested timber crossing an approved scale either at the final processing facility or an approved off-site storage yard.

The determination of the annual allowable cut is based on tree length utilization and incorporates an identified reduction for defect as defined by the Alberta Timber Scaling Manual. Operationally, only cull that meets the requirements of the Alberta Timber Scaling Manual shall be accepted and defect left in blocks as a result of a company log quality specifications shall be considered unacceptable waste. Any cut to length operations cannot make a piece unmerchantable. Operations cannot leave merchantable material associated with bucking activities.

11.0 Timber Harvest Planning and Operating Ground Rules

MWFP makes a number of commitments and proposes strategies for mitigating risks within the FMP. Upon completion of the negotiations, the MWFP Timber Harvest Planning and Operating Ground Rules (OGRs) shall be in line with the FMP. The relevant pieces of the standard operating procedures, work instructions and woodland operating guidelines referred in to in the FMP may be included into the applicable OGRs. The MWFP Timber Harvest Planning and Operating Ground Rules shall define how structure left is determined to be "representative" of what was harvested.

Approval Condition 11.1 Timber Harvest Planning and Operating Ground Rules

- i. By April 30, 2018, MWFP and the department shall complete negotiations on the MWFP Timber Harvest Planning and Operating Ground Rules acceptable to the Director, Forest Resource Management.**

12.0 Performance Monitoring and Reporting

Five-year Stewardship Reports monitor the successful implementation of FMPs.

Approval Condition 12.1 Performance Monitoring and Reporting

- i. MWFP shall prepare five-year Stewardship Reports that documents the operational performance of each timber operator's activities implementing the FMP. All disposition holders shall cooperate in providing supporting information to MWFP. Where deviations from the planned outcomes exist, analyses shall discuss the reasons for the deviations and describe each timber operator's corrective action, taken or proposed.**
- ii. By November 1, 2022, MWFP shall submit a Stewardship Report, covering the period from May 1, 2017 to May 1, 2022 and a second report, to cover the period May 1, 2022 to May 1, 2027, due by November 1, 2027. These reports shall be acceptable to the Director, Forest Resource Management.**
- iii. MWFP shall use forest patch size classes as described in the Landscape Assessment for reporting in the stewardship reports.**

13.0 Future Forest Management Plans

In accordance with the FMA, MWFP shall prepare a subsequent FMP for department review by May 1, 2027, unless otherwise approved by the Minister.

Approval Condition 13.1 Future Forest Management Plans

- i. By May 1, 2027, MWFP shall submit a new FMP for department review that meets the FMPS unless otherwise approved by the Minister.**

Table 1. Historical Coniferous Allocations and Annual Allowable Cuts

FMU	Company Name	Disposition Number	Landbase Management Type	Source	Cover Group / Species	Primary Disposition Allocation (%)	Primary Coniferous AAC (m ³) See notes for utilization	Total Approved AAC (m ³)
W11	Spruceland Millworks Inc.	CTQW110008	Single Combined	All-FMU	C, CD, DC, D	100.0000%	94,903	94,903
FMU W11 Total							94,903	94,903
W13	Millar Western Forest Products Ltd.	FMA9700034	Single Combined	FMA-Only	C, CD, DC, D		396,189	396,189
W13	Millar Western Forest Products Ltd.	CTQW130001	Single Combined	Non-FMA	C, CD, DC, D	2.2152%	9,655	9,655
W13	CTPP	CTPP	Single Combined	FMA-Only	C, CD, DC, D		30,000	30,000
FMU W13 Total							435,844	435,844
FMA Total							530,747	530,747

Notes:

Effective May 1, 2007.

W11 utilization standard is 15+/10/30 cm.

W13 utilization standard is 15+/10/30 cm for Sw and 15+/10/20 cm for all other coniferous species.

CTQW130001 percentage as per quota certificate dated May 30, 2017.

1,000 m³/yr of coniferous or deciduous (birch) volume is available for local use. Local use volume is from entire FMA and is included in Millar Western Forest Products Ltd. FMA volume as per FMA document 8(2)(a)(i) and 8(2)(a)(ii).

Table 2. Approved Coniferous Allocations and Annual Allowable Cuts

Effective Date: May 1, 2017

FMU	Company Name	Disposition Number	Landbase Management Type	Source	Cover Group / Species	Disposition Allocation (%)	Coniferous AAC (m ³) 15+ / 10 / 15 cm	Total Approved AAC (m ³)
W11	Spruceland Millworks Inc.	CTQW110008	Single Combined	All-FMU	C, CD, DC, D	100.0000%	103,000	103,000
FMU W11 Total							103,000	103,000
W13	Millar Western Forest Products Ltd.	FMA9700034	Single Combined	FMA-Only	C, CD, DC, D		311,121	311,121
W13	Millar Western Forest Products Ltd.	CTQW130001	Single Combined	Non-FMA	C, CD, DC, D	1.6942%	5,879	5,879
W13	CTPP	CTPP	Single Combined	FMA-Only	C, CD, DC, D		30,000	30,000
FMU W13 Total							347,000	347,000
FMA Total							450,000	450,000

Notes:

FMA total includes 1000 m³ of local use volume that is chargeable for the FMA and could be from coniferous or deciduous, including birch, volumes.

The CTQW130001 volume is the 20 year average of volume identified in the spatial harvest sequence.

The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.

Table 3. Coniferous Periodic Allowable and Quadrant Authorized Allowable Cuts

3.1	W11	Spruceland Millworks Inc.	Disposition: CTQW110008					
		Quadrant Start	1-May-16	Quadrant End	30-Apr-21			
		Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Approved Harvest Level (m³/yr)	Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes
1		1-May-16	30-Apr-17	1.0000000000	94,903	94,903.0000	94,903.0000	
2		01-May-17	30-Apr-21	4.0000000000	103,000	412,000.0000	412,000.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
Quadrant Reconciliation Volume (m ³)						90,696	90,696	Effective May 1, 2017, this is the first 4 years of the 10 years of unused volume (22,674 m ³ /yr) as per Table 6-9 of the Millar Western Forest Products Ltd. 2017-2027 DFMP. Under produced volume as per November 1, 2016 from D. Tapp re: Under Production Request.
QAAC Total						597,599	597,599	
3.2	W13	Millar Western Forest Products Ltd.	Disposition: FMA9700034					
		Period Start:	1-May-16	Period End:	30-Apr-21			
		Period Segment Start Date	Period Segment End Date	Years in Period Segment	Approved Harvest Level (m³/yr)	PAC Contribution (m³)	Total PAC Contribution (m³)	Notes
1		1-May-16	30-Apr-17	1.0000000000	396,189	396,189.0000	396,189.0000	
2		01-May-17	30-Apr-21	4.0000000000	311,121	1,244,484.0000	1,244,484.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
Periodic Reconciliation Volume (m ³)						368,000	368,000	Effective May 1, 2017, this is the first 4 years of the 5 years of unused volume (42,000 m ³ /yr) as per Table 6-9 of the Millar Western Forest Products Ltd. 2017-2027 DFMP. Additional unused volume of 200,000m ³ of unused volume from 2016/2017 timber year as per October 26, 2016 from D. Tapp re: Unused Volume Request.
PAC Total						2,008,673	2,008,673	
3.3	W13	Millar Western Forest Products Ltd.	Disposition: CTQW130001					
		Quadrant Start	1-May-16	Quadrant End	30-Apr-21			
		Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Approved Harvest Level (m³/yr)	Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes
1		1-May-16	30-Apr-17	1.0000000000	9,655	9,655.0000	9,655.0000	The CTQW130001 volume is the 20 year average of volume identified in the spatial harvest sequence.
2		01-May-17	30-Apr-21	4.0000000000	5,879	23,516.0000	23,516.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
Quadrant Reconciliation Volume (m ³)						0	0	
QAAC Total						33,171	33,171	

3.4	W13	CTPP	Disposition: CTPP				
	Quadrant Start 1-May-16		Quadrant End 30-Apr-21				
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Approved Harvest Level (m ³ /yr)	Quadrant Contribution (m ³)	Total Quadrant Contribution (m ³)	Notes
1	1-May-16	30-Apr-21	5.0000000000	30,000	150,000.0000	150,000.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
	Quadrant Reconciliation Volume (m ³)				0	0	
	QAAC Total				150,000	150,000	

Table 4. Millar Western Forest Products Ltd. FMA Coniferous Chargeability

Effective Date: May 1, 2017

FMU	Company Name	Disposition Number	Coniferous Species Used in AAC	Species NOT Chargeable to AAC	Rights to Species NOT Chargeable to AAC	Structure Retention (%)	Structure Retention (%) Accounted for in AAC	Net Landbase Deletions and Deferrals	Net Landbase Deletions and Deferrals: Rights to Timber	Industrial Salvage Chargeability Strategy
All dispositions and FMUs (unless otherwise noted)			Fb, Pl, Sb, Sw, Lt	None	None	3	Structure retention is not accounted for in the AAC at the timber supply analysis stage.	n/a	n/a	All industrial salvage is AAC chargeable.

Table 5. Millar Western Forest Products Ltd. FMA Coniferous Utilization

Effective Date: May 1, 2017

FMU	Company Name	Disposition Number	AAC Type	Cover Group / Species	Utilization used to determine Harvest Level in PFMS				Operational Utilization				Coniferous Harvest Level (m ³ /yr) based on Operational Utilization	
					Top Diameter (cm)	Stump Diameter (cm)	Minimum Length (m)	Stump Height (cm)	Top Diameter (cm)	Stump Diameter (cm)	Minimum Length (m)	Stump Height (cm)		
All dispositions, FMUs and AAC types (unless otherwise noted)				All	Fb, Pl, Sb, Sw, Lt	10	15	4.88	15	n/a	n/a	n/a	n/a	n/a

Table 6. Historical Deciduous Allocations and Annual Allowable Cuts

FMU	Company Name	Disposition Number	Landbase Management Type	Source	Cover Group / Species	Primary Deciduous AAC (m ³) See notes for utilization	Total Approved AAC (m ³)
W11	Millar Western Forest Products Ltd.	FMA9700034	Single Combined	FMA-Only	C, CD, DC, D	103,520	103,520
W11	Millar Western Forest Products Ltd.	DTAW110002	Single Combined	Non-FMA	C, CD, DC, D	2,529	2,529
FMU W11 Total						106,049	106,049
W13	Millar Western Forest Products Ltd.	FMA9700034	Single Combined	FMA-Only	C, CD, DC, D	157,960	157,960
W13	Weyerhaeuser Company Limited	DTAW130001	Single Combined	FMA-Only	C, CD, DC, D	45,000	45,000
W13	Millar Western Forest Products Ltd.	DTAW130002	Single Combined	Non-FMA	C, CD, DC, D	6,452	6,452
FMU W13 Total						209,412	209,412
FMA Total						315,461	315,461

Notes:

Effective May 1, 2007.

W11 utilization standard is 15+/10/30 cm.

W13 utilization standard is 15+/10/20 cm.

1,000 m³/yr of coniferous or deciduous (birch) volume is available for local use. Local use volume is from entire FMA and is included in Millar Western Forest Products Ltd. FMA volume as per FMA document 8(2)(a)(i) and 8(2)(a)(ii).

Table 7. Approved Deciduous Allocations and Annual Allowable Cuts

Effective Date: May 1, 2017

FMU	Company Name	Disposition Number	Landbase Management Type	Source	Cover Group / Species	Deciduous AAC (m ³) 15+ / 10 / 15 cm	Total Approved AAC (m ³)
W11	Millar Western Forest Products Ltd.	FMA9700034	Single Combined	FMA-Only	C, CD, DC, D	113,894	113,894
W11	Millar Western Forest Products Ltd.	DTAW110002	Single Combined	Non-FMA	C, CD, DC, D	1,106	1,106
FMU W11 Total						115,000	115,000
W13	Millar Western Forest Products Ltd.	FMA9700034	Single Combined	FMA-Only	C, CD, DC, D	151,472	151,472
W13	Weyerhaeuser Company Limited	DTAW130001	Single Combined	FMA-Only	C, CD, DC, D	45,000	45,000
W13	Millar Western Forest Products Ltd.	DTAW130002	Single Combined	Non-FMA	C, CD, DC, D	6,528	6,528
FMU W13 Total						203,000	203,000
FMA Total						318,000	318,000

Notes:

FMA total includes 1000 m³ of local use volume that is chargeable for the FMA and could be from coniferous or deciduous, including birch, volumes.

Volume as per DTAW130001.

The DTAW110002 and DTAW130002 volumes are the 20 year average of volume identified in the spatial harvest sequence.

The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.

Table 8. Deciduous Periodic Allowable and Quadrant Authorized Allowable Cuts

8.1	W11	Millar Western Forest Products Ltd.	Disposition: FMA9700034					
	Period Start: 1-May-16		Period End: 30-Apr-21					
	Period Segment Start Date	Period Segment End Date	Years in Period Segment	Approved Harvest Level (m³/yr)	PAC Contribution (m³)	Total PAC Contribution (m³)	Notes	
	1	1-May-16	30-Apr-17	1.0000000000	103,520	103,520.0000	103,520.0000	
	2	01-May-17	30-Apr-21	4.0000000000	113,894	455,576.0000	455,576.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
	Periodic Reconciliation Volume (m ³)				119,000	119,000		Effective May 1, 2017, this is the first 4 years of the 5 years of unused volume (26,000 m ³ /yr) as per Table 6 of the Millar Western Forest Products Ltd. 2017-2027 DFMP. Additional unused volume of 15,000m ³ from 2016/2017 timber year as per October 26, 2016 from D. Tapp re: Unused Volume Request.
	PAC Total				678,096	678,096		

8.2	W11	Millar Western Forest Products Ltd.	Disposition: DTAW110002					
	Quadrant Start 1-May-16		Quadrant End 30-Apr-21					
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Approved Harvest Level (m³/yr)	Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes	
	1	1-May-16	30-Apr-17	1.0000000000	2,529	2,529.0000	2,529.0000	The DTAW110002 volume is the 20 year average of volume identified in the spatial harvest sequence.
	2	01-May-17	30-Apr-21	4.0000000000	1,106	4,424.0000	4,424.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
	Quadrant Reconciliation Volume (m ³)				0	0		
	QAAC Total				6,953	6,953		

8.3	W13	Millar Western Forest Products Ltd.	Disposition: FMA9700034					
	Period Start: 1-May-16		Period End: 30-Apr-21					
	Period Segment Start Date	Period Segment End Date	Years in Period Segment	Approved Harvest Level (m³/yr)	PAC Contribution (m³)	Total PAC Contribution (m³)	Notes	
	1	1-May-16	30-Apr-17	1.0000000000	157,960	157,960.0000	157,960.0000	
	2	01-May-17	30-Apr-21	4.0000000000	151,472	605,888.0000	605,888.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
	Periodic Reconciliation Volume (m ³)				246,880	246,880		Effective May 1, 2017, this is the first 4 years of the 5 years of unused volume (31,720 m ³ /yr) as per Table 6 of the Millar Western Forest Products Ltd. 2017-2027 DFMP. Additional unused volume of 120,000m ³ from 2016/2017 timber year as per October 26, 2016 from D. Tapp re: Unused Volume Request.
	PAC Total				1,010,728	1,010,728		

8.4	W13	Weyerhaeuser Company Limited	Disposition: DTAW130001					
		Quadrant Start	1-May-16	Quadrant End	30-Apr-21			
		Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Approved Harvest Level (m ³ /yr)	Quadrant Contribution (m ³)	Total Quadrant Contribution (m ³)	Notes
	1	1-May-16	30-Apr-21	5.0000000000	45,000	225,000.0000	225,000.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
		Quadrant Reconciliation Volume (m ³)				81,120	81,120	Effective May 1, 2017, this is the first 4 years of the 5 years of unused volume (20,280 m ³ /yr) as per Table 6 of the Millar Western Forest Products Ltd. 2017-2027 DFMP.
		QAAC Total				306,120	306,120	

8.5	W13	Millar Western Forest Products Ltd.	Disposition: DTAW130002					
		Quadrant Start	1-May-16	Quadrant End	30-Apr-21			
		Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Approved Harvest Level (m ³ /yr)	Quadrant Contribution (m ³)	Total Quadrant Contribution (m ³)	Notes
	1	1-May-16	30-Apr-17	1.0000000000	6,452	6,452.0000	6,452.0000	The DTAW130002 volume is the 20 year average of volume identified in the spatial harvest sequence.
	2	01-May-17	30-Apr-21	4.0000000000	6,528	26,112.0000	26,112.0000	The approved landbase is defined as being 'single-combined' or otherwise known as having been 'dissolved', there are no separate or distinct primary or secondary AACs.
		Quadrant Reconciliation Volume (m ³)				0	0	
		QAAC Total				32,564	32,564	

Table 9. Millar Western Forest Products Ltd. FMA Deciduous Chargeability

Effective Date: May 1, 2017

FMU	Company Name	Disposition Number	Deciduous Species Used in AAC	Species NOT Chargeable to AAC	Rights to Species NOT Chargeable to AAC	Structure Retention (%)	Structure Retention (%) Accounted for in AAC	Net Landbase Deletions and Deferrals	Net Landbase Deletions and Deferrals: Rights to Timber	Industrial Salvage Chargeability Strategy
All dispositions and FMUs (unless otherwise noted)			Aw, Pb, Bw	n/a	n/a	3	Structure retention is not accounted for in the AAC at the timber supply analysis stage.	n/a	n/a	All industrial salvage is AAC chargeable.

Table 10. Millar Western Forest Products Ltd. FMA Deciduous Utilization

Effective Date: May 1, 2017

FMU	Company Name	Disposition Number	AAC Type	Cover Group / Species	Utilization used to determine Harvest Level in PFMS				Operational Utilization				Deciduous Harvest Level (m ³ /yr) based on Operational Utilization
					Top Diameter (cm)	Stump Diameter (cm)	Minimum Length (m)	Stump Height (cm)	Top Diameter (cm)	Stump Diameter (cm)	Minimum Length (m)	Stump Height (cm)	
All dispositions, FMUs And AAC Types(unless otherwise noted)			All	Aw, Pb, Bw	10	15	4.88	15	n/a	n/a	n/a	n/a	n/a

Table 11. Fiber Transfer Agreements within the Millar Western Forest Products Ltd. FMA Area

Source Company	Source Disposition Number	Transfer Type	Company Directed To	Species Group	Volume (m ³ /yr)	Comments
Millar Western Forest Products Ltd.	FMA 9700034	VSA	Weyerhaeuser Company Limited (Pembina)	Deciduous	30,000	FMA clause 20 (5)
Millar Western Forest Products Ltd.	FMA 9700034	CTP	W13 Community Timber Program	Coniferous	30,000	FMA clause 8(2)(d)(i)
Millar Western Forest Products Ltd.	FMA 9700034	CTP	Local Use	Coniferous and Deciduous	1,000	FMA clause 8(2)(a)(i)

Appendix 1

December 17, 2015

Mr. Keith Murray
Alberta Forest Products Association
900, 10707 100 Avenue
Edmonton, Alberta T5J 3M1

Subject: TREE LENGTH UTILIZATION IN HARVEST OPERATIONS

Dear Mr. Murray:

In recent years, an increasing number of forest products companies have been moving their operations from a conventional tree length harvest system to a cut-to-length harvest system. As a result, the department, through its Forest Operations Monitoring Program (FOMP) has noticed an increasing amount of merchantable waste. Although, some companies have taken steps to try and account for this, there is no ability for the department to assess these estimates against the actual volume not utilized.

The department does not want to define what processing methods a company must utilize. It is however, paramount that all volume included in the Annual Allowable Cut (AAC) determination be drained appropriately and dues collected. Ensuring consistency between the utilization assumptions in the Forest Management Plan (FMP) and harvest operations is critical to sustainability. Alberta's scaling system has been developed to quantify the amount volume harvested; the system is dependent on the resource being accurately measured and is dependent on all harvested timber crossing an approved scale either at the final processing facility or an approved off-site storage yard.

It is becoming increasingly common that cut-to-length processing methods within a harvest area or off-site storage yards are altering the utilization of the harvested timber and leaving merchantable timber volume un-used. This operational practice compromises Alberta's ability to accurately account for harvested volume and ensure compatibility with the yield assumptions of the FMP. As a result the department is providing the following guidance prior to the development of a formal directive:

Forest Management Planning

- The determination of the AAC will be based on tree length utilization and not cut-to-length, with one single utilization standard for conifer and one for deciduous per sustained yield unit (SYU).
- All yield estimates used in the FMP will be compiled to a tree length utilization standard with a defined minimum stump diameter outside bark, minimum top diameter inside bark, stump height, and minimum merchantable tree length specific to conifer and deciduous.
- Where alternative utilization standards are employed in a SYU, yield estimates shall be derived for each prevailing standard. Adjustment factors between the alternative utilization standards and the AAC utilization standard will be calculated. All adjustment

factors should be explicitly presented in the FMP. Only tree length utilization standards will be entertained.

- There will be no adjustment factors in the FMP for operational merchandizing (e.g. processing methodologies, cut to length, preferred lengths, log quality programs, etc).

Operational Approvals

- Harvest and processing operations to any utilization standard other than the approved AAC utilization standard in the FMP needs to be approved by the department on an annual basis, i.e. each timber year. Note: Only alternative utilization standards that were included in the FMP will be considered for approval.

Operational Monitoring

- It is the expectation of the department, that all harvested timber be utilized in alignment with the approved FMP and applicable regulations and policies, i.e. Provincial Scaling manual. A company's operational practices, i.e. log quality specifications shall not make a merchantable log un-merchantable.
- Under-utilization or waste found during a FOMP inspection will be investigated.

Timber Harvest Reporting

- It is the expectation that all merchantable volume be measured in accordance with the Alberta Timber Scaling Manual i.e. crosses a certified scale and scaled as required.
- Where an approved alternative utilization standard is employed that represents an increase in utilization as compared to the approved FMP, no adjustment is required, refer to the Alberta Timber Scaling Manual.
- Where an approved alternative utilization standards is employed and this utilization standard represents decreased utilization of fiber compared to the AAC utilization standard, the scaled volume is reported to TPRS. An adjustment factor, as defined in the FMP, is then used to enter an additional timber return to account (i.e. dues and drain) for the unutilized fibre for the openings that were operated to this alternative utilization standard.

If you have any questions or would like to discuss this topic further please contact Doug Schultz, Director, Timber Production Auditing and Revenue.

Yours truly,



Darren Tapp, MBA, MF, RPF
Executive Director

cc Doug Schultz, Director Timber Product Auditing and Revenue, FMB
Darren Aitken, Manager, Forest Biometrics, FMB
Daryl Price, Director, Forest Resource Analysis, FMB
Robert J. Popowich, Director, Forest Resource Management, FMB