

Forest Management Plan

**Coniferous Timber Supply Analysis
Approval Decision**

Tolko Industries Ltd. (High Prairie)

**Forest Management Agreement
#9700033**

**Approval Date: May 3, 2011
Effective: May 1, 2010**

Approved by: *Original signed by* _____
**Darren Tapp, RPF
Executive Director
Forest Management Branch
Forestry Division**

Executive Summary

The Coniferous Timber Supply Analysis for the Tolko Industries Ltd. (High Prairie) Forest Management Area (FMA) is approved with Conditions as presented in this document.

Approval Decision Conditions Timeline Summary

<i>Approval Condition</i>	<i>Requirement</i>	<i>Approval Authority</i>	<i>Date</i>
<i>4.1 i</i>	<i>Spatial Harvest Sequence Operational Review</i>	<i>Senior Manager, Forest Planning Section</i>	<i>August 31, 2011</i>
<i>4.1 ii</i>	<i>Publish Revised Spatial Harvest Sequence</i>	<i>Senior Manager, Forest Planning Section</i>	<i>September 30, 2011</i>

Approved Annual Allowable Cuts

<i>Timber Type</i>	<i>FMA Total AAC</i>
<i>Coniferous</i>	<i>79,492 m³</i>
<i>Deciduous</i>	<i>506,322 m³</i>
<i>Total</i>	<i>585,814 m³</i>

The sustainable coniferous harvest level is derived from a divided landbase excluding the deciduous (D) cover group.

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

Authorization

The coniferous allowable cuts presented in this approval replace those in the 2005 Forest Management Plan (FMP) approved May 30, 2005.

The coniferous AAC (79,492 m³) is effective beginning May 1, 2010. The deciduous AAC (506,322 m³) is effective beginning May 1, 2010 (no change from the 2005 FMP).

The next FMP must be approved prior to April 30, 2015.

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1.0 Introduction

The Executive Director, Forest Management Branch (FMB), Forestry Division of the Department of Sustainable Resource Development (SRD) is the delegated authority for Forest Management Plan (FMP) approvals. This Approval Decision documents the rationale and conditions of approval for the coniferous timber supply analysis completed by SRD for Forest Management Unit (FMU) S19.

2.0 Background

To address an emerging coniferous timber supply shortfall in FMU S19 the department updated the timber supply analysis. The deciduous harvest level was not altered in this analysis.

The following compounding factors necessitated the review:

- a) Sufficient merchantable coniferous timber to meet the approved annual allowable cut (AAC) was difficult to locate; and
- b) Secondary coniferous timber normally generated from Tolko Industries' deciduous timber operations was not produced due to mill curtailments at High Prairie and Slave Lake.

3.0 Approval Decision Scope

This Approval Decision relates to the 2011 timber supply update and its implementation. All timber operators within the FMA planning area shall conduct their activities in accordance with this Approval Decision, the FMP and the May 30, 2005 Approval Decision.

The timber supply update is consistent with the May 30, 2005 Approval Decision Section 16.0 Timber Allocation. For the purpose of this analysis, Volume Supply Area (VSA) 1 and VSA 2 are treated as separate sustained yield units with a coniferous AAC calculated for each.

The current deciduous AAC applies to the entire S19 FMU.

4.0 Spatial Harvest Sequence

The spatial (mapped) harvest sequence (SHS) has been updated for coniferous timber operations in this timber supply analysis, but still requires confirmation by the timber operators. Adherence to a properly planned harvest sequence is imperative to achieving the forecasted future forest. The department recognizes that changes to the SHS will be required to manage future MPB infestations as they occur. The operators are expected to follow the SHS and monitor and report approved variances to the SHS.

The following is required:

Approval Condition 4.1 – Spatial Harvest Sequence

- i. All timber operators shall reach agreement on an operationally feasible 20-year SHS by August 31, 2011. Each stand in the SHS shall be assigned to a timber operator for harvest.
- ii. The Senior Manager, Forest Planning Section shall publish a revised 20-year SHS by September 30, 2011.
- iii. To address operational planning concerns, all timber disposition holders are authorized to modify the SHS by deleting no more than 20% of the total sequenced area in each compartment by decade, while harvesting no more than 100% of the total area within the SHS by compartment, by decade.
- iv. Preference shall be given to selecting stands from the second 10-year period of the SHS when replacing deleted stands (from iii above). Where this is not feasible, replacements may be from any other stands identified in the approved net landbase of the FMP, with priority given to pine stands that are ranked highly susceptible to MPB infestations.
- v. Should timber operators exceed the variance described in (iii), the Area Manager, Lesser Slave Area may require the completion of a Compartment Assessment and the Senior Manager, Forest Planning Section may recommend the adjustment of the approved AAC to reflect the impact of the variance.
- vi. The department requires the variance from the SHS to be reported annually, and for the 5-year Stewardship Report to analyze the cumulative variance from the SHS and describe the potential impacts of the actual variance on the forecasts made in the FMP.
- vii. The department will generally not modify the approved harvest sequence for the first 10 years of the planning period unless required by a change in legislation or a policy approved by the Minister (e.g. Lower Peace Regional Plan).

5.0 Long Term Fibre Sustainability

The total coniferous harvest level of 79,492 m³ per year for 10-years proposed is acceptable for FMU S19 inside and outside the FMA area.

The harvest level is predicated on the current conditions where secondary coniferous timber volume is not generated from deciduous timber harvest. At the time deciduous operations resume, the secondary coniferous volume shall be made available to the operators in addition to primary coniferous volumes based on the allocated percentages of the dispositions holders.

6.0 Approved Annual Allowable Cuts

Timber Type	FMA Total AAC
Coniferous	79,492 m ³
Deciduous	506,322 m ³
Total	585,814 m³

The sustainable coniferous harvest level is determined using a divided landbase excluding the deciduous (D) cover group.

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

7.0 Authorization

The coniferous allowable cuts presented in this approval replace those in the 2005 FMP approved May 30, 2005.

The coniferous AAC (79,492 m³) is effective beginning May 1, 2010. The deciduous AAC (506,322 m³) is effective beginning May 1, 2010 (no change from the 2005 FMP).

The next FMP must be approved prior to April 30, 2015.

Table 1. Historical Coniferous Allocations and Annual Allowable Cuts

FMU	Company Name	Disposition Number	Landbase Management Type	Source	Volume Supply Area	Cover Group / Species	Primary Disposition Allocation (%)	Primary Coniferous AAC (m ³) 15+/11/30 cm	Total Approved AAC (m ³)
S19	Lakeshore Timber Company Ltd.	CTQS190001	Single Combined	FMA-Only	VSA 2	C, CD, DC, D	13.8800%	23,180	23,180
S19	Smoky River Loggers Ltd.	CTQS190002	Single Combined	FMA-Only	VSA 2	C, CD, DC, D	11.8000%	19,706	19,706
S19	West Fraser Mills Ltd.	CTQS190003	Single Combined	FMA/Non-FMA	VSA 1	C, CD, DC, D	64.2000%	107,236	107,236
S19	CTPP	CTPP	Single Combined	FMA-Only	VSA 2	C, CD, DC, D		16,909	16,909
FMU S19 Total								167,031	167,031

Notes:
Previous effective date: May 1, 2004.

Table 2. Approved Coniferous Allocations and Annual Allowable Cuts

Effective Date: May 1, 2010

FMU	Company Name	Disposition Number	Landbase Management Type	Source	Volume Supply Area	Cover Group / Species	Primary Disposition Allocation (%)	Primary Coniferous AAC (m ³) 15+/11/30 cm	Total Approved AAC (m ³)
S19	Lakeshore Timber Company Ltd.	CTQS190001	Separate Distinct	FMA-Only	VSA 2	C, CD, DC	10.8137%	8,596	8,596
S19	Smoky River Loggers Ltd.	CTQS190002	Separate Distinct	FMA-Only	VSA 2	C, CD, DC	8.1065%	6,445	6,445
S19	West Fraser Mills Ltd.	CTQS190003	Separate Distinct	FMA/Non-FMA	VSA 1	C, CD, DC	74.1270%	58,925	58,925
S19	CTPP	CTPP	Separate Distinct	FMA-Only	VSA 2	C, CD, DC		5,526	5,526
FMU S19 Total								79,492	79,492

Notes:

As per the 2005 Tolko Industries Ltd. (High Prairie) Forest Management Plan the following list identifies the source of the coniferous AAC's (annual allowable cuts) by Volume Supply Area (VSA):

1. West Fraser Mills Ltd. AAC is sourced entirely from within VSA 1, further identified as the Utikuma and Whitefish Operating Area.
2. Smoky River Loggers Ltd. AAC is sourced from within VSA 2, further identified as the Whitemud Operating Area.
3. Lakeshore Timber Company Ltd. AAC is sourced from with VSA 2, further identified as the Salt Operating Area.

Table 3. Coniferous Periodic Allowable and Quadrant Authorized Allowable Cuts

3.1	S19	Lakeshore Timber Company Ltd.	Disposition: CTQS190001					
	Quadrant Start		1-May-09	Quadrant End		30-Apr-14		
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Primary Approved Harvest Level (m³/yr)	Primary Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes	
	1	1-May-09	30-Apr-10	1.0000000000	23,180	23,180.0000	23,180.0000	
	2	01-May-10	30-Apr-14	4.0000000000	8,596	34,384.0000	34,384.0000	
	Quadrant Reconciliation Volume (m ³)					0	0	
QAAC Total					57,564	57,564		
3.2	S19	Smoky River Loggers Ltd.	Disposition: CTQS190002					
	Quadrant Start		1-May-09	Quadrant End		30-Apr-14		
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Primary Approved Harvest Level (m³/yr)	Primary Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes	
	1	1-May-09	30-Apr-10	1.0000000000	19,706	19,706.0000	19,706.0000	
	2	01-May-10	30-Apr-14	4.0000000000	6,445	25,780.0000	25,780.0000	
	Quadrant Reconciliation Volume (m ³)					0	0	
QAAC Total					45,486	45,486		
3.3	S19	West Fraser Mills Ltd.	Disposition: CTQS190003					
	Quadrant Start		1-May-09	Quadrant End		30-Apr-14		
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Primary Approved Harvest Level (m³/yr)	Primary Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes	
	1	1-May-09	30-Apr-10	1.0000000000	107,236	107,236.0000	107,236.0000	
	2	01-May-10	30-Apr-14	4.0000000000	58,925	235,700.0000	235,700.0000	
	Quadrant Reconciliation Volume (m ³)					0	0	
QAAC Total					342,936	342,936		
3.4	S19	CTPP	Disposition: CTPP					
	Quadrant Start		1-May-09	Quadrant End		30-Apr-14		
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Primary Approved Harvest Level (m³/yr)	Primary Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes	
	1	1-May-09	30-Apr-10	1.0000000000	16,909	16,909.0000	16,909.0000	
	2	01-May-10	30-Apr-14	4.0000000000	5,527	22,108.0000	22,108.0000	
	Quadrant Reconciliation Volume (m ³)					0	0	
QAAC Total					39,017	39,017		

Table 4. Tolko Industries Ltd. (High Prairie) FMA Coniferous Chargeability
Effective Date: May 1, 2010

FMU	Company Name	Disposition Number	Cover Group Used in AAC	Cover Group NOT Chargeable to AAC	Rights to Secondary Coniferous Species	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
S19	Lakeshore Timber Company Ltd.	CTQS190001	C, CD, DC	D	All Secondary Coniferous within VSA 2 (Salt Operating Area).	3	Structure Retention is AAC Chargeable. Minimum 1% with an average of 3%.	Net Landbase Determination. Table 3-4, Page 3-18 Landbase Summary: Entire FMA.	Deletions and Deferrals do not contribute to the AAC.	All Industrial Salvage is AAC Chargeable.
S19	Smoky River Loggers Ltd.	CTQS190002	C, CD, DC	D	All Secondary Coniferous within VSA 2 (Whitemud Operating Areas).	3	Structure Retention is AAC Chargeable. Minimum 1% with an average of 3%.	Net Landbase Determination. Table 3-4, Page 3-18 Landbase Summary: Entire FMA.	Deletions and Deferrals do not contribute to the AAC.	All Industrial Salvage is AAC Chargeable.
S19	West Fraser Mills Ltd.	CTQS190003	C, CD, DC	D	All Secondary Coniferous within VSA 1.	3	Structure Retention is AAC Chargeable. Minimum 1% with an average of 3%.	Net Landbase Determination. Table 3-4, Page 3-18 Landbase Summary: Entire FMA.	Deletions and Deferrals do not contribute to the AAC.	All Industrial Salvage is AAC Chargeable.
S19	CTPP	CTPP	C, CD, DC	D	No Secondary Coniferous Rights.	3	Structure Retention is AAC Chargeable. Minimum 1% with an average of 3%.	Net Landbase Determination. Table 3-4, Page 3-18 Landbase Summary: Entire FMA.	Deletions and Deferrals do not contribute to the AAC.	All Industrial Salvage is AAC Chargeable.

Table 5. Tolko Industries Ltd. (High Prairie) FMA Coniferous Utilization

Effective Date: May 1, 2010

FMU	Company Name	Disposition Number	AAC Type	Cover Group / Species	Utilization used to determine Harvest Level in PFMS				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)	Coniferous Harvest Level (m ³ /yr) based on Operational Utilization
All dispositions, FMUs and AAC types (unless otherwise noted)			All	C, CD, DC	11	15	2.44	30	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	Volume Supply Area	Cover Group / Species	Primary Deciduous AAC (m³) 15+/10/30 cm	Total Approved AAC (m³)
<i>S19</i>	<i>Tolko Industries Ltd.</i>	<i>FMA9700033</i>	<i>Single Combined</i>	<i>FMA-Only</i>	<i>VSA 1, VSA 2</i>	<i>C, CD, DC, D</i>	<i>407,750</i>	<i>407,750</i>
<i>S19</i>		<i>Local Use</i>	<i>Single Combined</i>	<i>FMA-Only</i>	<i>VSA 1, VSA 2</i>	<i>C, CD, DC, D</i>	<i>2,000</i>	<i>2,000</i>
<i>S19</i>	FMA AAC Subtotal	<i>FMA9700033</i>	<i>Single Combined</i>	<i>FMA-Only</i>	<i>VSA 1, VSA 2</i>	<i>C, CD, DC, D</i>	<i>409,750</i>	<i>409,750</i>
<i>S19</i>	<i>Tolko Industries Ltd. and 1108459 Alberta Ltd.</i>	<i>DTAS190001</i>	<i>Single Combined</i>	<i>Non-FMA</i>	<i>VSA 1</i>	<i>C, CD, DC, D</i>	<i>50,000</i>	<i>50,000</i>
<i>S19</i>	<i>Unallocated</i>	<i>Unallocated</i>	<i>Single Combined</i>	<i>Non-FMA</i>	<i>VSA 1</i>	<i>C, CD, DC, D</i>	<i>46,572</i>	<i>46,572</i>
FMU S19 Total							506,322	506,322

Notes:
Previous effective date: May 1, 2004.

Table 7. Approved Deciduous Allocations and Annual Allowable Cuts

Effective Date: May 1, 2010

FMU	Company Name	Disposition Number	Landbase Management Type	Source	Volume Supply Area	Cover Group / Species	Primary Deciduous AAC (m ³) 15+/10/30 cm	Total Approved AAC (m ³)
S19	Tolko Industries Ltd.	FMA9700033	Single Combined	FMA-Only	VSA 1, VSA 2	C, CD, DC, D	407,750	407,750
S19		Local Use	Single Combined	FMA-Only	VSA 1, VSA 2	C, CD, DC, D	2,000	2,000
S19	FMA AAC Subtotal	FMA9700033	Single Combined	FMA-Only	VSA 1, VSA 2	C, CD, DC, D	409,750	409,750
S19	Tolko Industries Ltd. and 1108459 Alberta Ltd.	DTAS190001	Single Combined	Non-FMA	VSA 1	C, CD, DC, D	50,000	50,000
S19	Unallocated	Unallocated	Single Combined	Non-FMA	VSA 1	C, CD, DC, D	46,572	46,572
FMU S19 Total							506,322	506,322

Table 8. Deciduous Periodic Allowable and Quadrant Authorized Allowable Cuts

8.1	S19	Tolko Industries Ltd.	Disposition: FMA9700033				
	Period Start: 1-May-09		Period End: 30-Apr-14				
	Period Segment Start Date	Period Segment End Date	Years in Period Segment	Primary Approved Harvest Level (m³/yr)	Primary PAC Contribution (m³)	Total PAC Contribution (m³)	Notes
	1-May-09	30-Apr-14	5.0000000000	409,750	2,048,750.0000	2,048,750.0000	
	Periodic Reconciliation Volume (m ³)				0	0	
PAC Total					2,048,750	2,048,750	
8.2	S19	Tolko Industries Ltd. and 1108459	Disposition: DTAS190001				
	Quadrant Start 1-May-09		Quadrant End 30-Apr-14				
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Primary Approved Harvest Level (m³/yr)	Primary Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes
	1-May-09	30-Apr-14	5.0000000000	50,000	250,000.0000	250,000.0000	
	Quadrant Reconciliation Volume (m ³)				0	0	
QAAC Total					250,000	250,000	
8.3	S19	Unallocated	Disposition: Unallocated				
	Quadrant Start 1-May-09		Quadrant End 30-Apr-14				
	Quadrant Segment Start Date	Quadrant Segment End Date	Years in Quadrant Segment	Primary Approved Harvest Level (m³/yr)	Primary Quadrant Contribution (m³)	Total Quadrant Contribution (m³)	Notes
	1-May-09	30-Apr-14	5.0000000000	46,572	232,860.0000	232,860.0000	
	Quadrant Reconciliation Volume (m ³)				0	0	
QAAC Total					232,860	232,860	

Table 9. Tolko Industries Ltd. (High Prairie) FMA Deciduous Chargeability
 Effective Date: May 1, 2010

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)			All	None	N/A	3	Structure Retention is AAC Chargeable. Minimum 1% with an average of 3%.	Net Landbase Determination. Table 3-4, Page 3-18 Landbase Summary: Entire FMA.	Deletions and Deferrals do not contribute to the AAC.	All Industrial Salvage is AAC Chargeable.

Table 10. Tolko Industries Ltd. (High Prairie) FMA Deciduous Utilization
Effective Date: May 1, 2010

FMU	Company Name	Disposition Number	AAC Type	Cover Group / Species	Utilization used to determine Harvest Level in PFMS				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)	Deciduous Harvest Level (m ³ /yr) based on Operational Utilization
All dispositions, FMUs and AAC Types (unless otherwise noted)			All	C, CD, DC, D	10	15	2.44	30	N/A	N/A	N/A	N/A	N/A

Table 11. Fiber Transfer Agreements within the Tolko Industries Ltd. (High Prairie) FMA Area

Source Company	Source Dispositon Number	Transfer Type	Company Directed To	Species Group	Volume (m³/yr)	Comments
N/A	N/A	N/A	N/A	N/A	N/A	N/A