

Forest Management Plan Amendment

Mountain Pine Beetle Addendum Forest Management Unit R12 Approval Decision

**Weyerhaeuser Company Ltd.
Pembina Forestlands
Drayton Valley, Alberta**

Forest Management Agreement #0500042

Date: June 24, 2008*
Effective: May 1, 2007

Approved by: Original Signed by
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Executive Director
Forest Management Branch
Forestry Division

* Tables revised September 15, 2008 with existing approval conditions

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1.0 Introduction

Alberta is experiencing a significant outbreak of mountain pine beetle (MPB) and is implementing control strategies with respect to this outbreak and strategies to prevent future outbreaks¹. Weyerhaeuser Company Ltd. (Weyerhaeuser) addendum to its recently approved Forest Management Plan (FMP) meets the requirements established by Alberta for such amendments². This decision provides the rationale for approval and direction for ongoing work.

It is important to note the implementation of this plan is not intended to control the current MPB outbreak but rather to take actions over the next twenty years to create a forest that is more resistant to such outbreaks by dramatically reducing the overall susceptibility of the pine forest (Pine Strategy). This is a prudent and necessary strategy to avoid the types of catastrophic changes being seen in British Columbia's pine forests, if the extent of the current outbreak is limited. However, if the current outbreak in Alberta expands as rapidly as the British Columbia outbreak, the strategies in this plan will have to be modified to address that reality.

Alberta has directed³ that the key outcomes of three scenarios (the current management plan or status quo, the Pine Strategy and a MPB outbreak) be presented. I believe given the MPB outbreak in Alberta, the current management plans do not present likely scenarios and considering today's circumstances, comparison of the Pine Strategy and the MPB outbreak scenarios are the pertinent analyses.

Alberta's goal is to mitigate the effects of MPB on the social, environmental, and economic values of Alberta's forests. To achieve this goal, Alberta must make trade-offs which involve achieving a desired result, generally at the complete or partial expense of something else. Stakeholders are often interested in only one value and are not prepared to consider trade-offs; whereas Alberta must make trade-off decisions in order to reasonably meet its goal for the overall benefit of Albertans.

2.0 Forest Management Plans (FMP) and Priority of MPB Control Strategies

The approval of the FMP amendment results in a new spatial harvest sequence and timber supply. Commitments in the balance of the existing FMP remain in effect until they are replaced by a new FMP expected by April 1, 2016. The status of the MPB outbreak will likely be apparent in time for the preparation of the new FMP which will then be able to better address the trade-offs between key outcomes.

The major MPB infestation in British Columbia has spread into Alberta: specifically the Eastern Slopes of the Rocky Mountains, Banff and Jasper National Parks, the Bow Corridor in Kananaskis Country, the Crowsnest Pass, the Grande Prairie region, and east to Slave Lake. MPB infestations are located to the north, south and west of the Weyerhaeuser Drayton Valley FMA. In the event of an outbreak in the forest management unit (FMU), it will be crucial to take all appropriate steps to control the infestation by executing control activities (Level 1 and Level 2⁴) which will take priority over the spatial sequence in this amendment. I expect

¹ See the *Mountain Pine Beetle Action Plan for Alberta (AP)* and the *Interpretive Bulletin - Planning Mountain Pine Beetle Response Operations (IP)* on the department of Sustainable Resource Development (SRD) website

² See the *Interpretive Bulletin - Planning Mountain Beetle Response Operations* on SRD website.

³ See IP

⁴ See AP for definitions

activities over the next few years to be a combination of control (Level 1 and Level 2) and prevention (Pine Strategy), and operational changes necessary to accomplish both will be handled through annual operating plans.

3.0 Habitat for Species of Special Concern (Grizzly Bear Habitat)

Grizzly Bear Model outputs indicate the implementation of Weyerhaeuser's Pine Strategy Plan impacts grizzly bear habitat. Existing linear disturbance density is reported as 0.66 km/km² and is predicted to increase to 0.72 km/km² as the Pine Strategy Plan is implemented. Operational planning can mitigate many of the impacts of timber harvest and should be used where conditions dictate.

Alberta's Grizzly Bear Recovery Plan (GBRP) has been accepted by the Minister of Sustainable Resource Development. The GBRP recognizes that reduced grizzly bear survival and reproductive success are linked to human activity in priority habitats. Access development increases this activity. The department is developing an implementation plan for the GBRP in the near term. When this is published the Company shall address these requirements in its operational plans and the next forest management plan will address this issue further.

4.0 Access

A Road Corridor Plan is presented outlining access to operating compartments. Access is essential to the management of MPB and the impacts will be mitigated with Weyerhaeuser's continued good planning, effective construction, timely reclamation, and reforestation. The company can act to make roads impassable and to quickly reclaim access into completed compartments. Access is difficult to restrict once routes are built and the government must take a solid stance on this issue in priority habitats. The plan is reasonable and implements the MPB Strategy efficiently.

5.0 Water Yield

Weyerhaeuser assessed the impact of the Pine Strategy Plan on the watersheds in the FMA. Maximum annual water yield increases range between 0.6 % and 25%. Seven watersheds (Stevens (25%), Colt (21%) Blanchard (19%), Wawa (18.3%), Tallpine (17.9%), Rehn (16.9%), and Big Beaver (15.3%) exceeded a 15% increase. The peaks are forecast to occur between year 14 and 28. The results are not unexpected and are acceptable outcomes from the planned operations to address MPB susceptible pine reduction.

6.0 Long Term Fibre Sustainability

The fibre flow proposed in the MPB Preferred Scenario is acceptable for the forest management unit. The coniferous increase from 489,292 m³ to 954,301 m³ is planned for 18 years followed by a reduction to 440,363 m³ beginning in year 2025.

7.0 Pine Strategy Implementation

The department recognizes that uncertain economic conditions may limit the company's ability to fully implement the Pine Strategy amendment. At the time of this approval, the Weyerhaeuser Drayton Valley oriented strand board mill has curtailed its production indefinitely. This will severely impact the utilization of deciduous timber generated on this management unit.

The company has developed a rational and feasible FMP that achieves a significant reduction in MPB susceptible pine on its management area. On-going and timely communication with local government staff is essential to manage the issues identified, and those yet to be identified. Weyerhaeuser is encouraged to continue its efforts to keep the public and stakeholders advised of its operational plans and accomplishments in addressing the MPB situation.

The implementation of the Pine Strategy does not guarantee prevention of an outbreak in the near future, but in twenty years, will create a forest that is very resistant to such outbreaks. Should it occur, salvage strategies will address the outbreak to minimize the socio-economic and environmental impacts.

8.0 Embedded Timber Operators

Weyerhaeuser Company Ltd. has reached agreement with the embedded timber operators and the department regarding operational sequencing and annual allowable cut (AAC) sharing. Table 2 presents the approved AACs for each forest management unit and operator.

9.0 Performance Monitoring and Reporting

The effective implementation of the Pine Strategy throughout Alberta is very important, and timely information is vital to ensuring the best decisions are made and the most appropriate management strategies are developed. Considering this, the department will require Pine Strategy progress reports to be prepared to keep the department, other agencies and the public knowledgeable and current on the work completed. The department will publish these requirements at a later date.

10.0 Authorization

The Forest Management Plan Amendment for Forest Management Agreement 0500042 dated March 20, 2008 is approved as per the annual allowable cuts presented in Table 2.

The annual allowable cuts are effective beginning May 1, 2007.

The next forest management plan shall be received by the department in time for approval by April 1, 2016.

Table 1. Historical Annual Allowable Cuts (AAC) for FMU R12¹

Company Name	Disposition #	Land Base Stand Type/Source	Coniferous Timber		Deciduous Timber	
			FMU Allocation (%)	AAC ² m ³ /yr	FMU Allocation (%)	AAC ³ (m ³ /yr)
Weyerhaeuser	FMA0500042	C, CD, DC & D	86.05%	421,025	91.94%	263,090
Weyerhaeuser	CTQR120005	C, CD, DC & D	4.22%	20,669		
Weyerhaeuser	DTAR120001	C, CD, DC & D			7.13%	20,402
Dale Hansen	CTQR1200001 (R1 Q7)	C & CD	1.76%	8,600		
Tall Pine Timber Co. Ltd.	CTQR120002 (R1 Q4)	C & CD	3.23%	15,806		
Tall Pine Timber Co. Ltd.	CTQR120003 (R4 Q5)	C & CD	0.67%	3,269		
Tall Pine Timber Co. Ltd.	CTQR12004 (R4 Q11)		2.30%	11,254		
Lodgepole Community Timber Program	CTP	C & CD	0.82%	4,000 (fixed volume)		
Miscellaneous Timber Use	LTP	C, CD, DC & D	0.95%	4,669	0.93%	2,657
Total			100.00%	489,292	100.00%	286,149

¹ Period beginning November 18, 2000

² Coniferous utilization standard is 15/11/15 cm

³ Deciduous utilization standard is 15/10/15 cm

Table 2. Approved Annual Allowable Cuts (AAC) for FMU R12¹

Company Name	Disposition #	Land Base Stand Type/Source	Coniferous Timber		Deciduous Timber	
			FMU Allocation (%)	AAC ² m ³ /yr	FMU Allocation (%)	AAC ³ (m ³ /yr)
Weyerhaeuser	FMA0500042 ⁴	C, CD, DC, D	87.40%	834,067	92.87%	258,524
Weyerhaeuser	CTQR120005	C, CD, DC, D	4.22%	40,272		
Weyerhaeuser	DTAR120001	C, CD, DC, D			7.13%	19,848
Dale Hansen	CTQR120001 (R1 Q7)	C, CD	1.76%	16,796		
Tall Pine Timber Co. Ltd.	CTQR120002 (R1 Q4)	C, CD	3.23%	30,824		
Tall Pine Timber Co. Ltd.	CTQR120003 (R4 Q5)	C, CD	0.67%	6,394		
Tall Pine Timber Co. Ltd.	CTQR120004 (R4 Q11)	C, CD	2.30%	21,949		
Lodgepole Community Timber Program	CTP (fixed volume)	C, CD	0.42%	4,000		
Total			100.00%	954,301	100.00%	278,372

¹ Effective beginning May 1 2007 and ending November 17, 2025

² Coniferous utilization standard is 15/11/15 cm

³ Deciduous utilization standard is 15/10/15 cm

⁴ Pursuant to clause 7 (2) (a) (ii) of Weyerhaeuser Company Ltd.'s Forest Management Agreement (O.C. 514/2005) up to 1% of the Weyerhaeuser FMA coniferous (up to 8,341 m³/yr. at 15/11/15 cm utilization) and deciduous (up to 2,585 m³/yr. at 15/10/15 cm utilization) allocation is available for local timber use permits.

Table 3. Quota Periodic Allowable and Quadrant Cuts For 2006 to 2011

Company Name	Disposition Number	FMU	Periodic/Quadrant Cut Control Period	Approved Conifer Quadrant Reconciliation Volume (m ³)	Approved Deciduous Quadrant Reconciliation Volume (m ³)	Coniferous Periodic/Quadrant Allowable Cut (m ³)	Deciduous Periodic/Quadrant Allowable Cut (m ³)	Comments
Weyerhaeuser Company Ltd.	FMA0500042 ¹	R12	May 1, 2006 to April 30, 2011	-124,279	194,201	3,422,387	1,491,387	Assuming ((0.5863 yrs x 421,025 m ³ /yr.coniferous at 15/11/15 cm) + (0.4137 yrs. x 395,764 m ³ coniferous at 15/13/15 cm) + (4 yrs. x 784,023m ³ /yr. coniferous at 15/13/15 cm) - 124,279 m ³ coniferous overcut at 15/13/15 from 2005-2006). Assuming (1 yr. x 263,090 m ³ /yr deciduous at 15/10/15) + (4 yrs. 258,524 m ³ deciduous at 15/10/15 cm) + 194,201 m ³ at 15/10/15 cm deciduous AAC reconciliation volume from 2005-2006)).
Weyerhaeuser Company Ltd.	CTQR120005	R12	May 1, 2006 to April 30, 2011	105,868	0	277,446	0	Assuming (0.5863 yrs. x 20,669 m ³ coniferous at 15/11/15)+ (0.4137 yrs. x 19,429 m ³ /yr coniferous at 15/13/15) + (4 yrs. x 37856 m ³ /yr coniferous at 15/13/15) + (105,868 m coniferous at 15/13/15 AAC reconciliation volume from November 18, 2000 to April 30, 2006).
Weyerhaeuser Company Ltd.	DTAR120001	R12	May 1, 2006 to April 30, 2011	0	111,170	0	210,964	Assuming (1 yrs. x 20,402 m ³ /yr).+ (4 yrs. x 19,848 m ³ /yr). + 111,170 m ³ AAC reconciliation volume from November 18, 2000 to April 30, 2006.
Hansen, Dale	CTQR120001	R12	May 1, 2006 to April 30, 2011	-5,859	0	69,925	0	Assuming 1 year x 8,600 at 15/11/15 cm + 4 yrs. x 16,796 m ³ /yr. at 15/11/15 cm - 5,859 m ³ at 15/11/15 cm overproduction from 2004-2006
Tall Pine Timber Company	CTQR120002	R12	May 1, 2006 to April 30, 2011	6,736	0	145,838	0	Assuming 1 yr x 15,806 + 4 yrs. at 15/11/15 cm x 30,824 m ³ /yr. at 15/11/15 cm + 6,736 m ³ at 15/11/15 cm AAC reconciliation volume from 2004-2006.
Tall Pine Timber Company	CTQR120003	R12	May 1, 2006 to April 30, 2011	-1,986	0	26,859	0	Assuming 1 yr x 3,269 at 15/11/15 cm + 4 yrs. x 6,394 m ³ /yr at 15/11/15 cm. - 1,986 m ³ at 15/11/15 cm overproduction from 2004-2006.
Tall Pine Timber Company	CTQR120004	R12	May 1, 2006 to April 30, 2011	42,178	0	141,228	0	Assuming 1 yr x 11,254 at 15/11/15 cm + 4 yrs. x 21,949 m ³ /yr. at 15/11/15 cm + 42,178 m ³ at 15/11/15 cm AAC reconciliation volume from 2004-2006.
Community Timber Program	CTPS	R12	May 1, 2006 to April 30, 2011	0	0	20,000	0	Assuming 5 yrs. x 4,000 m ³ /yr. (coniferous) at 15/11/15 cm
Total						4,103,683	1,702,351	

¹ Pursuant to clause 7 (2) (a) (ii) of Weyerhaeuser Company Ltd.'s Forest Management Agreement (O.C. 514/2005) up to 1% of the Weyerhaeuser FMA coniferous PAC (up to 38,033 m³ at 15/11/15 cm utilization) and deciduous PAC (up to 12,997 m³ at 15/10/15 cm utilization) allocation is available for local timber use permits. Weyerhaeuser will apply a conversion factor of 0.94 when reporting coniferous volume harvested at 15/11/15 cm to convert production to 15/13/15 cm.