



Forest Management Plan Approval Decision

**Manning Diversified Forest Products Ltd.
Manning, Alberta**

**Forest Management Agreement
0200041**

**Date: December 14, 2007
Effective: May 1, 2007**

Approved by:

Original Signed By

**D. (Doug) A. Sklar, RPF
Executive Director
Forest Management Branch
Forestry Division**

Executive Summary

The Conditions herein are consistent with the terms of the Forest Management Agreement (FMA) and failure by Manning Diversified Forest Products (MDFP) to fulfill the direction provided in this Approval Decision will place the Company in default of its FMA.

The Forest Management Plan (FMP) has been validated¹ by a Regulated Forestry Professional (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.

Approval Decision Conditions

<i>Condition</i>	<i>Requirement</i>	<i>Approval Authority</i>	<i>Date</i>
<i>Approval Condition 6.1</i>	<i>Public and First Nation Consultation</i>	<i>Senior Manager, Forest Planning Section</i>	<i>On-going</i>
<i>Approval Condition 7.1(i)</i>	<i>Timber Supply Analysis (TSA)</i>	<i>Senior Manager, Forest Planning Section</i>	<i>On-going</i>
<i>Approval Condition 7.1 (ii)</i>	<i>TSA Technical Issues</i>	<i>Senior Manager, Forest Planning Section</i>	<i>March 1, 2008</i>
<i>Approval Condition 8.1</i>	<i>Productive Land Base Losses</i>	<i>Senior Manager, Forest Planning Section</i>	<i>April 30, 2008</i>
<i>Approval Condition 9.1</i>	<i>Stand Level Structure Retention</i>	<i>Senior Manager, Forest Planning Section</i>	<i>On-going</i>
<i>Approval Condition 10.1</i>	<i>Pine Strategy Performance Monitoring and Reporting</i>	<i>Senior Manager, Forest Planning Section</i>	<i>On-going</i>
<i>Approval Condition 12.1(i)</i>	<i>Alternative Regeneration Strategy (ARS)</i>	<i>Senior Manager, Reforestation Section</i>	<i>February 1, 2008</i>
<i>Approval Condition 12.1 (ii)</i>	<i>ARS Implementation</i>	<i>Senior Manager, Reforestation Section</i>	<i>May 1, 2010</i>
<i>Approval Condition 14.1</i>	<i>Spatial Harvest Sequence</i>	<i>Senior Manager, Forest Planning Section</i>	<i>On-going</i>
<i>Approval Condition 15.1</i>	<i>Growth and Yield</i>	<i>Senior Manager, Forest Planning Section</i>	<i>April 30, 2008</i>
<i>Approval Condition 16.1</i>	<i>Watershed Management</i>	<i>Senior Manager, Forest Planning Section</i>	<i>March 12, 2017</i>
<i>Approval Condition 17.1</i>	<i>Performance Monitoring and Reporting</i>	<i>Senior Manager, Forest Planning Section</i>	<i>October 1, 2012</i>

¹ Refer to the Alberta Forest Management Planning Standard, Annex 2 for professional validation requirements.

Approved Annual Allowable Cuts

*Refer to Tables 1 and 2, Historical Allocations and Approved Annual Allowable Cuts.
Refer to Tables 3 and 4, Quadrant Allowable Cuts.*

Authorization

This FMP replaces the approved MDFP Preliminary Forest Management Plan dated May 17, 2004.

The Forest Management Plan 2007 – 2017 for the Manning Diversified Forest Products FMA area dated May 31, 2007 is approved subject to the Approval Conditions and the Annual Allowable Cuts presented in this Approval Decision.

The Annual Allowable Cuts are effective beginning May 1, 2007.

The next FMP is due by March 11, 2017.

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1.0 Introduction

Manning Diversified Forest Products (MDFP) prepared its forest management plan concurrent with the province developing the *Alberta Forest Management Planning Standard*. Consistent with the Standard, this FMP is a transition plan that spans the requirements of the *1998 Interim Forest Management Planning Manual* and the *Alberta Forest Management Planning Standard*. I appreciate the Company's cooperation in meeting the intent of the new Standard and recognize that the transition from one process to another added some complexity to the path originally embarked upon. The professionalism and diligent work of company staff to complete this plan is recognized and greatly appreciated.

The Conditions herein are consistent with the terms of the Forest Management Agreement (FMA) and failure by MDFP to fulfill the direction provided in this Approval Decision will place the Company in default of its FMA. The Conditions contained herein are non-negotiable.

The FMP has been validated² by a Regulated Forestry Professional (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.

2.0 Forest Management Planning Area

The area under consideration is the Forest Management Agreement area of MDFP FMA #0200041 allocated to MDFP via legislative Order-in-Council (O.C. 28/2002), dated February 6, 2002.

The FMA is located in northwestern Alberta. The FMA falls predominantly within the Lower Boreal Highlands Natural Sub-region and to a lesser degree, the Central Mixedwood, Dry Mixedwood, and Upper Boreal Sub-regions. The forest management unit P16 is geographically separated into two management areas (formerly designated as FMU P6 (south portion), and FMU P9 (north portion)).

3.0 Background

The department approved MDFP's Preliminary Forest Management Plan on July 22, 2004. This FMP replaces the preliminary plan and introduces new information used in planning, implementing and monitoring forestry operations on the FMA. This Approval Decision represents the culmination of the department's appraisal process.

² Refer to the Alberta Forest Management Planning Standard, Annex 2 for professional validation requirements.

4.0 Approval Decision Scope

This Approval Decision relates to the MDFP FMP dated May 31, 2007. All timber operators within the FMA area (FMU P16) shall conduct their activities in accordance with the approved FMP and the conditions of this Approval Decision.

MDFP shall meet the requirements (dates and content) of the Approval Decision conditions unless the Executive Director, Forest Management Branch, agrees to alternate requirements in writing.

In this Approval Decision **bolded text** identifies specific timelines, requirements and the department manager responsible for the review. Non-bolded text provides the rationale for the condition and specific considerations to be addressed in meeting the condition.

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

5.0 Forest Management Plan

The Approval Conditions contained herein direct MDFP to complete additional work to enhance the information presented and to further align the FMP with the *Alberta Forest Management Planning Standard*. At the completion of this work, the FMP shall be amended to reflect the changes and additions.

The department posts approved FMPs on its website for enhanced public access to plans. This does not release MDFP from its obligations for making the FMP available to the public.

6.0 Public and First Nations Consultation

MDFP took a different approach to public consultation than is commonly practiced by FMA holders. The Company does not have a Public Forest Advisory Committee but relies on one-on-one meetings and larger group meetings where individuals receive an invitation to participate. Although not a standard practice in the industry, this approach worked well for the company and achieved the results expected by the department for public consultation.

Regardless of the process used, opportunities for meaningful public involvement must be made available. Meaningful public involvement is characterized by sincere efforts to explain the issues and seek practical and sensible solutions to issues. The objective is to ensure that those who are interested and/or affected are able to become informed of the planned activities, may express their concerns, and receive an answer that explains how their concerns are addressed, or if not addressed, why.

The department acknowledged that there were no first nations residing in the FMA area and advised MDFP to not include aboriginal consultation in its plans for public involvement. This

direction was appropriate at the time and the department has not received any comments or recognized any first nations issues to date in this area.

Considering this, the following applies:

Approval Condition 6.1 – Public and First Nations Consultation

- i. In the event that new information is provided to SRD indicating a need for First Nations consultation, MDFP will be required to develop a consultation plan for that purpose.**
- ii. MDFP shall keep written documentation of all issues and comments raised by the public as well as the company's responses to address the concerns.**

7.0 Timber Supply Analysis

MDFP proposes an increase from the historic coniferous and deciduous timber supplies. The increases are attributed to several key inputs that have been updated for this FMP. Namely, a new net landbase, a new Alberta Vegetation Inventory, management of the coniferous understorey, and developing a Pine Strategy for mountain pine beetle susceptibility reduction. The timber supply is reasonable and fully supported by the information provided. The department has approved similar harvest level changes in FMPs as updated data and new management strategies are incorporated into FMPs.

Of note is the significant decrease in the contribution of the D/u(a) stratum to the timber supply decreases after 20 years. The current harvest level for this stratum must be re-assessed in future FMPs, but it is appropriate to utilize this fibre now. In addition, a large proportion of the deciduous harvest results from secondary species on the coniferous landbase. Secondary species volumes have traditionally been difficult to manage and therefore operators must be vigilant to maintain consistent flows while staying within the approved harvest levels.

For completeness, some additional technical data and descriptions are required. These will have no measurable impact on the harvest levels or forest sustainability but will make the document more complete. The department will provide these under separate cover.

The following applies:

Approval Condition 7.1 – Timber Supply Analysis

- i. As a priority, MDFP and Daishowa-Marubeni International shall jointly manage the flow and utilization of secondary coniferous and deciduous timber volumes produced from each company's operations. Annual Operating Plans and General Development Plans shall demonstrate that full utilization of secondary species volumes is addressed.**

- ii. **By March 1, 2008, MDFP shall develop an action plan to address the technical issues presented in the Timber Supply Analysis review comments. The action plan shall be acceptable to the Senior Manager, Forest Planning Section.**

8.0 Productive Land Base Losses

MDFP does not present its methodology to gather data and assess the success of reforestation on roads and timber decking areas. Without measuring the impacts of roads and decking areas, the forest manager cannot effectively manage for, or be certain forest productivity is maintained.

The monitoring and reporting program, as discussed in section 8.0 above, shall be incorporated into the Growth and Yield Plan and be submitted no later than April 30, 2008 (see approval condition 8.1).

The MDFP Regulated Forestry Professional (RFP) validated checklist describes the FMP's compliance with the Forest Management Planning Standard (FMPS). It is a compilation of the standards from the FMPS and demonstrates the accountable RFP's due diligence in meeting each standard. The validated checklist is intended to guide the department's appraisal of the adequacy of the submitted FMP. During its review, Alberta noted that standard 5.9.9 (i) was not met whereas the checklist indicates it was. The department holds accountable the RFP's validating the work. RFP validation provides assurance to Alberta that the work is complete and accurate and has been prepared with due diligence.

Approval Condition 8.1 - Productive Land Base Losses

- i. **By April 30, 2008, MDFP shall develop a monitoring and reporting program to quantify productive forest land base losses due to roads and decking areas. The program must be, acceptable to the Senior Manager, Forest Planning Section and incorporated into the Growth and Yield Plan. Failure to meet this deadline will result in a reduction of the FMA AAC by 5% effective May 1, 2007 (see Table 3).**

9.0 Stand Level Structure Retention

Throughout the province, forest industries practice green tree retention within harvested areas to create residual stand structure. A variety of approaches and retention targets have been approved in FMPs with the view that the result will be a range of forest conditions that when assessed will enable a refinement of future targets. MDFP proposes a target of 6% that is the sum of "*a minimum of 3% merchantable + a maximum of 3% non-merchantable*".

The strategy applies to all operators on the FMA and I support the single integrated approach by the coniferous and deciduous operators for both implementation and monitoring.

I agree with this reasonable and practical approach to stand level structure retention and encourage the companies to continue to investigate their options for achieving the desired result while reducing the associated costs.

The following applies:

Approval Condition 9.1 – Stand Level Structure Retention

- i. All operators on the FMA will plan and carry out their operations to achieve the FMP structure retention target for coniferous and deciduous land base. Species composition and timber profile of the original stand conditions shall be retained for the merchantable component to achieve acceptable biodiversity results.**
- ii. Merchantable volume retained for structure is chargeable as AAC production and shall be reconciled every five years at the end of each cut control period.**

10.0 Forest Health

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 outbreaks³. MPB and Spruce Beetle are noted as the most important forest health issues on the FMA area. MDFP has sequenced the four MPB priority areas to target the highest ranked stands in response to SRD requirements.⁴

It is important to note that 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 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'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 Alberta.

³ 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 website <http://www.srd.alberta.ca/forests/managing/manuals>

⁴ See the Interpretive Bulletin *Planning Mountain Beetle Response Operations* on SRD website. <http://www.srd.alberta.ca/forests/managing/manuals>

It is crucial to take all appropriate steps to limit the extent of the current outbreak which means that execution of control activities (Level 1 and Level 2⁵) takes priority over the spatial sequence. It is most likely that activities over the next few years will be a combination of control and prevention, and changes to the sequence necessary to do both will be handled through the annual operating plan.

Approval Condition 10.1 – Pine Strategy 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.

- i. MDFP will prepare summary reports on the FMP implementation, from time to time, at the department's request.**

11.0 Silviculture Strategy

Defining the silviculture practices that will be used to establish managed stands is important. FMPs must present the reforestation strategies to be used to achieve the projected timber yields from the regenerated stands. The knowledge, expertise and experience of forestry professionals are relied on for selecting silvicultural practices appropriate for the local range of conditions.

The companies have agreed to jointly access the coniferous D/u(a) landbase (see FMP TSA Section 6.1.3, p 52) to more fully utilize the deciduous fibre and manage each company's reforestation liabilities. The success of the D/u (a) strategy (including reforestation to the DC standard, coniferous understorey protection techniques, and the maintenance of incidental timber volumes) will be assessed for its continued use in future FMPs.

A reforestation monitoring program will be developed as part of the Alternative Regeneration Strategy (see Approval Condition 12.1) to ensure that volume commitments including incidental volumes will be met.

12.0 Alternative Regeneration Strategy

The department requires that all FMA holders implement alternative regeneration strategies (ARS) by May 1, 2010. MDFP is not currently working on ARS. ARS will benefit the company by increasing regeneration survey efficiency, realizing AAC gains through effective management treatments, and validating timber supply analysis assumptions and projections.

The following applies:

⁵ See AP for definitions

Approval Condition 12.1 – Alternative Regeneration Strategy

- i. By February 1, 2008, MDFP shall meet with the Senior Manager, Reforestation Section to discuss its plans for initiating ARS for the FMA.**
- ii. By May 1, 2010, MDFP shall implement an ARS on the FMA to the satisfaction of the Senior Manager, Reforestation Section.**

13.0 Caribou Habitat Supply

The FMP maintains and manages caribou habitat within the caribou zone and through vegetation management strategies outside the zone to augment the available habitat. Forest management is a practical tool to create landscape conditions suitable for a variety of species. Rational designs, responsive timing and well implemented operations contribute to the effective management of wildlife habitat.

The FMP has addressed the planning aspects of caribou habitat management in a practical and feasible way. The company is well advised to follow the discussions of the future Chinchaga Caribou Landscape Team. The outcomes from this team will have implications for forestry operations on the FMA and for future forest management planning.

14.0 Spatial Harvest Sequence

The spatial (mapped) harvest sequence (SHS) is the most important output of the FMP as it implements the strategies the companies must follow to achieve the predicted future forest condition. While dependent on many factors, the future forest 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. 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 mountain pine beetle infestations as they are found. MDFP commits to following the SHS and tracking variance.

The following is required:

Approval Condition 14.1 – Spatial Harvest Sequence

- i. MDFP shall follow the mapped 20-year harvest sequence as presented in the FMP.**
- ii. 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.**

- a. **Preference should be given to selecting stands from the second 10-year period of the SHS (years 2017-2027) when replacing deleted stands (from ii 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.**
- iii. **Where timber operators exceed the variance described in (ii), the Area Manager, may require the completion of a compartment assessment and the Senior Manager, Forest Planning Section may recommend the adjustment of the approved annual allowable cut (AAC) to reflect the impact of the variance.**
- iv. **The department requires the variance from the SHS to be reported annually, and the 5-year Stewardship Report to analyze the variance from the SHS.**
- v. **The department will generally not request a modification of the approved harvest sequence for the first 15 years of the planning period unless required by a change in legislation or a policy approved by the Minister.**

15.0 Growth and Yield

A credible Growth and Yield Program gathers key information to use in future timber supply analyses and monitors and verifies FMP timber yield assumptions. The Growth and Yield Plan of the 2007-2017 Forest Management Plan indicates that the PSP field manual is being revised to reflect the data collection protocols and will be submitted for Department approval.

Approval Condition 15.1 – Growth and Yield Plan

- i. **By April 30, 2008, MDFP shall submit the revised manual to the Department.**

16.0 Watershed Management

Water management and the provision of continuous supplies of high quality water is a priority for the Government of Alberta and a significant value for Albertans. Forest managers must assess the impacts their plans will have on water and mitigate the long-term impacts. **MDFP completed a watershed assessment on a selected set of watersheds in the Forest Management Agreement Area.**

Approval Condition 16.1 – Watershed Management

- i. The next FMP (due 2017) MDFP shall revisit the SHS in the next FMP with consideration for reducing long-term impacts to watersheds and stream morphology.**

17.0 Performance Monitoring and Reporting

Annual reports and 5-year Stewardship reports are used to monitor the successful implementation of FMPs.

Approval Condition 17.1 – Performance Monitoring and Reporting

- i. MDFP shall submit Annual Reports and Stewardship Reports that document the operational performance of the Company’s activities in implementing the FMP. Where variances from the planned outcomes exist, an analysis shall discuss the reason for the variance and the Company’s corrective action taken or proposed.**
- ii. A Stewardship Report acceptable to the Senior Manager, Forest Planning Section shall be submitted by October 1, 2012.**

18.0 Approved Annual Allowable Cuts

Refer to Tables 1 and 2, Historical Allocations and Approved Annual Allowable Cuts.
Refer to Tables 3 and 4, Quadrant Allowable Cuts.

19.0 Authorization

This FMP replaces the approved MDFP Preliminary Forest Management Plan dated May 17, 2004.

The Forest Management Plan 2007 – 2017 for the Manning Diversified Forest Products FMA area dated May 31, 2007 is approved subject to the Approval Conditions and the Annual Allowable Cuts presented in this Approval Decision.

The Annual Allowable Cuts are effective beginning May 1, 2007.

The next FMP is due by March 11, 2017.

Table 1.0 FMU P16 Historical Allocations and Annual Allowable Cuts
Effective Date of AACs – May 1, 2002

Company Name	Disposition #	FMU	Utilization	Coniferous AAC (m ³)		Deciduous AAC (m ³)		Total AAC (m ³)	
				Primary	Secondary	Primary	Secondary	Coniferous	Deciduous
Manning Diversified Forest Products Ltd.	FMA0200041	P16	15/11	196,897	14,404			211,301	
Daishowa-Marubeni International Ltd.	DTAP 160001	P16	15/10			129,849	42,692		172,541

Table 2.0 FMU P16 Allocations and Approved Annual Allowable Cuts
Effective Date – May 1, 2007

Company Name	Disposition #	FMU	Utilization	Coniferous AAC (m ³)		Deciduous AAC (m ³)			Total AAC (m ³)		Annual Allowable Cut with 5% Reduction Applied (m ³) ²	
				Primary	Secondary	Primary	Secondary		Coniferous Dispositions	Deciduous ¹ Dispositions	Coniferous Dispositions	Deciduous ¹ Dispositions
							D/u(a) ¹	Other				
Manning Diversified Forest Products Ltd.	FMA0200041	P16	15/11	301,817	12,736				314,553		298,825	
Daishowa-Marubeni International Ltd.	DTAP 160001	P16	15/10			73,619	26,081	72,841		172,541		163,914
Unallocated	n/a	P16	15/10				80,376	0		80,376		76,357
FMU Total	n/a	P16	n/a	301,817	12,736	73,619	106,457	72,841	314,553	252,917	298,825	240,271

Notes:

¹ The current volume contributed by the D/u(a) landbase is not available after the first 20 years.

² The 5% AAC reduction will apply if approval condition 8.1 "Productive Land Base Losses" is not addressed by April 30, 2008.

Table 3.0 FMU P16 Periodic Allowable and Quadrant Cuts for 2004 to 2012

Company Name	Disposition Number	FMU	Periodic/Quadrant Cut Control Period	Approved Reconciliation Volume (m ³)	Primary Coniferous Periodic/Quadrant Allowable Cut ¹ (m ³)	Secondary Coniferous Periodic/Quadrant Allowable Cut (m ³)	Primary Deciduous Periodic/Quadrant Allowable Cut ¹ (m ³)	Secondary Deciduous Periodic/Quadrant Allowable Cut (m ³)	Total Periodic/Quadrant Allowable Cut (m ³)	Comments
Manning Diversified Forest Products Ltd.	FMA0200041	P16	May 1, 2007 to April 30, 2012	-36,496	1,472,589	63,680	0	0	1,536,269	Assuming 5 yrs. x 301,817 m ³ /yr primary coniferous at 15/11/30 cm - 36,496 m ³ primary coniferous overcut at 15/11/30 cm from 2002-2007. Assuming 5 yrs. x 12,736 m ³ /yr secondary coniferous at 15/11/30 cm.
Daishowa-Marubeni International Ltd.	DTAP 160001	P16	May 1, 2004 to April 30, 2009	18,915	0	0	555,700	325,920	881,620	Assuming (3 yrs. (May 1, 2004 to Apr. 31, 2007) x 129,849 m ³ /yr primary deciduous at 15/10/30 cm. + (2yrs. (May 1, 2007 to Apr. 30, 2009) x 73,619 m ³ /yr. primary deciduous at 15/10/30 cm + 18,915 m ³ primary deciduous AAC reconciliation volume at 15/10/30
Unallocated	n/a	P16	May 1, 2007 to April 30, 2012	0	0	0	0	401,880	401,880	Assuming 5 yrs. (May 1, 2007 to April 30, 2012) at 80,376 m ³ secondary deciduous at 15/10/30 cm.

Table 4.0 FMU P16 Periodic Allowable and Quadrant Cuts For 2007 to 2017

Company Name	Disposition Number	FMU	Periodic/Quadrant Cut Control Period	Primary Coniferous Periodic/Quadrant Allowable Cut (m ³)	Secondary Coniferous Periodic/Quadrant Allowable Cut (m ³)	Primary Deciduous Periodic/Quadrant Allowable Cut (m ³)	Secondary ¹ Deciduous Periodic/Quadrant Allowable Cut (m ³)	Total Periodic/Quadrant Allowable Cut (m ³)	Comments
Manning Diversified Forest Products Ltd.	FMA0200041	P16	May 1, 2012 to April 30, 2017	1,509,085	63,680	0	0	1,572,765	Assuming 5 yrs. (May 1, 2012 to April 30, 2017) x 301,817 m ³ primary coniferous at 15/11/30 cm. Assuming 5 yrs. x 12,736 m ³ secondary coniferous at 15/11/30 cm.
Daishowa-Marubeni International Ltd.	DTAP 160001	P16	May 1, 2009 to April 30, 2014	0	0	368,095	494,610	862,705	Assuming 5 yrs. (May 1, 2009 to April 30, 2014) x 73,619 m ³ /yr. primary deciduous at 15/10/30 cm and 98,922 m ³ /yr. secondary deciduous at 15/10/30 cm.
Unallocated	n/a	P16	May 1, 2007 to April 30, 2012	0	0	0	401,880	401,880	Assuming 5 yrs. (May 1, 2012 to April 30, 2017) x 80,376 m ³ /yr. secondary deciduous at 15/10/30 cm.

Note: ¹ The current volume contributed by the D/u(a) landbase is not available after the first 20 years.