



Millar Western Forest Products Ltd.

Chapter 4 – Previous FMPs and Significant Events

2007-2016 Detailed Forest Management Plan

November 15, 2007



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1. Introduction

Millar Western is committed to the principle of adaptive management striving for continuous improvement in how it manages the forest. A key part of the adaptive management process is considering the commitments and implementation success of previous Forest Management Plans (FMP) and applying lessons learned to the development and implementation of future plans. This chapter summarizes commitments made in previous FMPs, reports on the current status of those commitments and, where appropriate, links past commitments to new Values, Objectives, Indicators & Targets (VOITs) and/or Company Commitments included in the 2007-2016 Detailed Forest Management Plan (DFMP). It also describes how the company has used new knowledge and greater experience to improve its forest management practices. The chapter ends with a review of significant events that have occurred since the submission of the 1997-2006 DFMP.

Over the past 10 years, Millar Western's forest management activities have been guided by several different plans. After receiving its Forest Management Agreement (FMA) in 1997, which at the time consisted of Forest Management Unit (FMU) W13, Millar Western submitted a Preliminary Forest Management Plan (PFMP), which was followed up with a more comprehensive DFMP in 2000. With the expansion of the FMA in 2002, Millar Western developed a PFMP for the new area, W11, which was submitted in 2004. The two plans currently in effect, the 1997-2006 DFMP for W13 and the 2004 PFMP for W11, are summarized and evaluated in this chapter.

The basis for much of the evaluation in this chapter is the 1997-2001 Stewardship Report, which covers the timber years 1997 to 2001 for FMU W13. This document discusses the status of the commitments and other reporting commitments at the mid-way point of the 1997-2006 DFMP implementation period. Because FMU W11 was only incorporated into the FMA in 2002, a stewardship report for this area has not yet been prepared.



One of the most significant improvements in the 2007-2016 DFMP is the inclusion of a complete list of commitments. While Millar Western did discuss some commitments in its 1997-2006 DFMP, the list was incomplete. To ensure that all obligations arising from this DFMP are easily accessed, understood and realized, Millar Western has elected to consolidate all commitments, including those being carried forward from the 1997-2006 DFMP, in one location: *Appendix XXIII – Commitments*. Only commitments contained within this appendix are to be construed as obligations of the company.

Throughout this chapter, text from other documents is quoted and identified in *italic font*. Italic font is also used to identify 2007-2016 DFMP chapter and appendix names. **Bold font** is used to highlight specific 2007-2016 DFMP VOITs and Company Commitments.



2. W11 – Previous FMP Summary

This section summarizes the development, submission and approval conditions of Millar Western's 2004 PFMP for W11, which was submitted to the Alberta government in 2004, after W11 was incorporated into the Millar Western FMA. It also provides a status report for each approval condition.

2.1 2004 PFMP Summary

Historically, PFMPs have been relatively simple plans, meant to bridge the period until a full DFMP can be completed. In developing its PFMP for W11, however, Millar Western elected to conduct more complex analyses, to establish a firm foundation for its management of the area and for the plans that would follow. The development process included intergating the Fort Assinboine Local Deciduous Timber Committee, to allocate the deciduous harvest, as well as the establishment of a process to involve conifer and deciduous operators in the assignment of blocks and balancing of the annual harvest and wood delivery volumes by species. The final PFMP included interim forest management values and harvest levels; values and objectives; terms of reference for the development of the 2007-2016 DFMP; a communications plan; and a timber supply analysis (TSA) with revised annual allowable cut (AAC) and SHS for W11.

In developing the PFMP, Millar Western had initially intended to review the W11 timber supply for the purposes of due diligence and to update the Alberta government analysis, completed in 2000, to account for recent landbase changes; however, the company had concerns with the yield curves and timber supply policy assumptions. This led to a new TSA that utilized localized yield curves, an updated landbase and a new forest management forecasting tool, Patchworks. Two timber supply scenarios were then presented to the Alberta government for its review: an even-flow harvest level scenario and a conifer surge-cut scenario developed at the request of the conifer quota holders to to mitigate their impacts from the drop in conifer harvest levels. A



conifer cut of 95,000 m³/yr was approved for the period 2003 until 2016, dropping down to an even-flow level of 55,638 m³/yr afterward. (The 12-year time frame was selected to align with DFMP renewal.) The Alberta government also approved a deciduous harvest level of 109,863 m³/yr for 2003-2016, dropping to an even-flow level of 106,797 m³/yr. Due to the incidental volume associated with the conifer surge cut, a small deciduous surge cut was required to balance other objectives and make the SHS operational. In addition to these stated harvest levels, the Alberta government approved a carry-over volume from Millar Western's recent timber-production audit, which was included in the TSA/SHS analysis.

One of the primary issues addressed in the W11 PFMP was the move away from the traditional divided landbase approach to a combined landbase approach and the associated integration of harvest operations. Previous management plans based on the divided landbase approach treated conifer and deciduous landbases as separate entities. Harvest operations were not well integrated, and incidental volumes (i.e. deciduous volume in conifer blocks and coniferous volume in deciduous blocks) often went unharvested. Incidental volumes were treated as uneven-flow harvest volume and not always chargeable to the existing dispositions. However, the tightening of the timber supply meant that all volumes harvested had to be accounted for and chargeable to the dispositions. To manage the flow of timber, all harvested volumes had to be managed, including incidental volume, and thus incidental volume was incorporated into the timber supply to predict and control harvested volume flows. To accomplish this, a combined landbase approach and the integration of all the operators in the FMU was required. This had the added advantage of mitigating the impact of the reduction in conifer harvest levels for the conifer operators as incidental volume was now directed towards the operators and charged to their dispositions. This meant that all harvest volumes were AAC chargeable to dispositions and those operators had to coordinate their planning and harvesting operations so that the total combined conifer and deciduous volumes would be harvested each year. This was a fundamental shift in direction and required an entirely new way of operating. The new approach was especially challenging in W11, where other forestry operators had a history of working alone, with little operational integration. It became clear to all operators in W11 that integration needed to occur not only at a strategic level (i.e. General Development Plan (GDP)) but also annually at a stand level.

To ensure that conifer and deciduous flows met the needs of all operators, it was apparent that planning and confirmation of block selection for each year's operations would need to begin earlier than in the past. A couple of years into the implementation of the PFMP, it also became clear that the province's coniferous licence issuance process did not satisfactorily mirror the required volume flows for each forest operator (i.e. stands available in each company's licence did not balance properly with the other operators, resulting in an uneven flow of fibre over the long-term). As a result, some Millar Western compartments are left with hundreds of thousands of cubic meters of pure deciduous volume standing and unharvested, now that conifer operators have completed operations in those areas. In part due to its experience in W11, Millar Western formed the DFA Harvest Planning Committee as part of the 2007-2016 DFMP development process, to provide an ongoing mechanism to deal with the challenges and tradeoffs inherent in the current system. (Refer to *Appendix XVI - Terms of Reference – DFA Harvest planning Committee* for the committee's terms of reference.)



Since it was only incorporated into the FMA in 2002, a stewardship report for W11 has not yet been prepared; however, in this chapter, Millar Western will report on selected aspects of the 2004 PFMP, to demonstrate its adherence to the plan. W11 will be covered in the 2006 Stewardship Report, which will review the 2002-2006 timber years.

2.2 2004 PFMP Approval Letter Conditions

The Alberta government approved Millar Western's 2004 PFMP for W11 on November 1, 2004. The approval letter contained four conditions (refer to Annex 1 for a copy of the letter) that are summarized in this section, along with the current status of each condition and implications for the 2007-2016 DFMP. In addition to these four conditions, the province also requested that Millar Western assess the NSR in W11, the status of which is also explained below.

Condition 1: Growth and Yield Plan

Millar Western shall develop a growth and yield plan acceptable to the department by January 30, 2005 for inclusion in the Millar Western Detailed Forest Management Plan (DFMP) to be submitted in 2006.

Current Status:

Commitment achieved.

Millar Western submitted a Growth and Yield Plan to the Alberta government on January 30, 2006. On March 23, 2006, the government responded with a number of recommendations for improvement. It identified three main concerns: monitoring of crop plans, monitoring of tree improvement plantations and the size of PSP protective buffers. The government added that the Growth and Yield Plan could need updating once the SHS's impacts upon the permanent sample plots (PSP) are known. Millar Western submitted a revised Growth and Yield Plan (dated May 31, 2006) on June 13, 2006, and will revise and resubmit another version by February 2008 (refer to **Company Commitment 10 – Implement growth and yield initiatives.**).

Condition 2: SHS Implementation

This condition provided requirements for SHS implementation and variance reporting. The quotation of the alternatives is not repeated here due to their length.

Current Status:

Commitment achieved.

Since the PFMP approval, W11 operators have implemented the SHS, with variance reporting to be included in the 2006 Stewardship Report. While Millar Western has found the 10% variance



requirement difficult to achieve due to shortcomings with the original SHS, it has worked closely with the W11 quota holders to make many operational improvements, which are reflected in the 2007-2016 DFMP. Millar Western expects its latest SHS to be more viable from an operational standpoint, which will make the variance target easier to achieve.

Condition 3: Coniferous Volume Replacement

Millar Western shall monitor and report area of pure deciduous stands harvested annually. Coniferous volumes from pure deciduous stands will be replaced by converting pure deciduous stands to pure coniferous stands according to the following formula:

i) [Yield curve estimate of incidental coniferous volume per ha in pure deciduous stands at 80 years] / Yield curve estimate of coniferous volume per ha in pure coniferous stands at 80 years] = [ha of pure deciduous stands to be converted per ha cut] or, 1 ha reforested to pure coniferous for every 2.2 ha of pure deciduous strata harvested.

ii) Millar and the embedded operators shall replace the default formula (3.i) above by developing an optimal incidental replacement strategy for coniferous and deciduous volumes acceptable to the Executive Director, Forest Management Branch, for inclusion in the DFMP due in 2006.

Current Status:

Commitment achieved.

Millar Western and the W11 conifer operators have coordinated the conversion of approximately 382 hectares of pure deciduous stands to pure conifer, under approval Condition 3 of the W11 PFMP (Table 1).

Table 1. W11 pure deciduous stands converted to pure conifer.

Timber Year	Area Converted (ha)
2004/05	107.9
2005/06	123.7
2006/07	150.4
Total	382.0

During the development of the 2007-2016 DFMP, Millar Western investigated the effects of a new conifer incidental replacement strategy and the implications of a new inventory and volume sampling program on harvesting levels, the results of which were presented to the TSA Impact Assessment Group (IAG) (refer to *Chapter 5 – Forecasting and the Preferred Forest Management Scenario* for more information). It was determined that the overall outcome would be a reduction in conifer harvest levels, and that any advantages of a new inventory and volume sampling program would be overshadowed by many significant drawbacks. To date, the Alberta government, the quota holders and Millar Western have not reached an agreement on a new



conifer replacement strategy, other than to update the inputs into the Alberta government's formula (i) and to produce a revised pure-deciduous-to-conifer conversion ratio for 2007-2016 DFMP. Millar Western and the quota holders have no intention of implementing the current conifer replacement strategy in the 2007-2016 DFMP. Their approach is to follow the strata-based regeneration targets derived from the preferred forest management scenario and to meet provincial regeneration standards until they are replaced by DFA specific Alternative Regeneration Standards.

Condition 4: Industrial Salvage

Millar Western shall track the merchantable coniferous and deciduous timber volumes generated from industrial operations (salvage and non-salvaged) on the FMA area and annually submit this information to the Senior Manager, Timber Production, Auditing and Revenue Section. Where these volumes have not been charged to a timber disposition within the FMA area, SRD shall charge these volumes to the operators' periodic or quadrant cuts within the originating FMU. These volumes shall be applied proportionally based on the embedded operator's share of the FMU AAC. Millar Western's regional volume tables may be used to determine volumes chargeable in place of provincial TDA tables for salvaged and non-salvaged merchantable timber volumes.

Current Status:

Commitment ongoing.

Over the last quadrant period, Millar Western has tracked and reported deciduous industrial-salvage volumes resulting from the land withdrawals in W11 to the Timber Revenue Branch of Alberta. These volumes, which were calculated using Millar Western's operational volume tables, were included in its quarterly timber returns, along with the timber dues owing, a process consistent with that used for the W13 portion of the FMA. Millar Western does not have the ability to track or report on the activities of other coniferous timber operators in W11.

Millar Western has committed to developing and implementing a revised process for tracking industrial salvage (**Company Commitment 4 – Develop and implement industrial salvage tracking process**). An update on the status of this condition will be included in the 2006 Stewardship Report.

Commitment Letter Request

The Alberta government included the following request in the W11 PFMP approval letter.

In closing, the department requests that Millar Western assess the NSR area in W11 during the development of the DFMP. A significant area of the FMA landbase is not satisfactory restocked at this point in time. Commitments (timelines and detailed silviculture plan) by timber disposition holders to bring



these areas to a fully stocked condition would affect the AAC in a positive way. Strategies to address this issue should be pursued in the DFMP.

Current Status:

Commitment Ongoing.

During production of the DFMP, Millar Western led a review of cutblocks and regenerated yield curve assignments in W11 that included the identification of regeneration liability, treatments and new regeneration survey information. The blocks that the government has identified as not being satisfactorily restocked are conifer blocks belonging to other disposition holders. Millar Western has no legal authority over these blocks; the liability and authority for regeneration rests with either the conifer operators or the Government of Alberta, depending upon the date of harvest and Millar Western will not undertake regeneration activities on other disposition holder's blocks. To Millar Western's knowledge none of the conifer timber disposition holders have presented timelines or detailed silviculture plans to address this issue.



3. W13 – Previous FMP Summary

This section provides a general description of the 1997-2006 Detailed Forest Management Plan (DFMP), as well as a summary of Alberta’s approval conditions and what Millar Western has done to address them. It also includes a review of Millar Western’s commitments within the 1997-2006 DFMP, emphasizing those that will be carried forward as commitments in the 2007-2016 DFMP implementation period. In keeping with its adaptive management approach, this section further reflects on the knowledge and experience gained from the completion of the previous plans and explains how this understanding has influenced the development of the 2007-2016 DFMP.

3.1 1997 DFMP Summary

Upon receiving its FMA in 1997, which initially encompassed W13 only, Millar Western developed a Preliminary Forest Management Plan (PFMP). It was intended to direct forest management activities for a three-year period, 1997-2000, until such a time as the 1997-2006 DFMP could be developed and implemented. (Although titled the 1997-2006 DFMP, the plan only covered 2000 to 2006.)

In many respects, the Millar Western 1997-2006 DFMP was forward-thinking and innovative, introducing several new concepts to forest management planning in Alberta. The plan was fully spatial and one of the first to include spatial harvest sequences for the purpose of directing harvesting operations. Millar Western also assembled and involved Impact Assessment Groups (IAG) – teams of scientists and other specialists who brought a new degree of science and scientific expertise into the decision making process. The company also initiated the Biodiversity Assessment Project (BAP), which developed coarse and fine-filter spatial biodiversity assessments to analyze management alternatives with respect to their impact on biological values.



Concerned about losses due to catastrophic disturbance events such as fire and insects, Millar Western also partnered with the Canadian Forest Service and the Alberta government to undertake the province's first integrated fire-regime analysis, landscape planning and long-term fire risk reduction study. Much of this work formed the basis for the landscape component in Alberta's FireSmart program.

Millar Western also worked with the Alberta government and Western Heritage Resources to develop a process for managing cultural and heritage resources. The process, which included predictive modeling of risk assessment, follow-up field sampling and operational procedures, has served as a template for cultural and heritage resource protection in forest management and has since been implemented across Alberta.

3.2 1997 DFMP Approval Letter Conditions

Millar Western submitted a first draft of the 1997-2006 DFMP on May 3, 2000. The plan was approved on September 19, 2000, with five conditions. The company submitted a revised DFMP in January 2001; after an internal review, the Alberta government removed three of the five conditions. The two remaining conditions – the development of reforestation standards and a performance matrix – have never been formally removed, although the company has made progress on both. A short summary of the status of these two conditions follows.

Condition 3: FMA specific reforestation standards

Condition 3 relates to the development of FMA-specific reforestation standards. Millar Western worked with the Alberta government to develop Model II regeneration standards, which were submitted in December 2002. After receiving the Alberta government's initial feedback, Millar Western submitted a revised draft on October 6, 2003; however, the proposed regeneration standards were not approved. As a result, the provincial regeneration standards continue to remain in effect on the Millar Western FMA. Staff of the Alberta government and Millar Western have since held many discussions on the direction for new standards. In a July 18, 2006 letter to the Alberta government, Millar Western has outlined what it sees as the outstanding issues and expressed its interest in working with the province to develop alternative regeneration standards (ARS) once the 2007-2016 DFMP is approved.

Condition 5: Performance monitoring matrix

Condition 5, which requests the completion of a performance monitoring matrix for the FMA, was addressed after considerable discussion between Millar Western and the Alberta government in the 2001 Stewardship Report. Although the Alberta government commented upon the stewardship report submission, it has never formally removed the condition. The status of this and other outstanding 1997-2006 DFMP commitments arising from the company's 2001 Stewardship Report are discussed in the following section.



3.3 Commitments from 1997-2006 DFMP

To establish clarity with respect to Millar Western’s commitments arising from the 1997-2006 DFMP, the Alberta government developed a commitment matrix. In response, Millar Western produced the 2001 Stewardship Report, which reported on the status of the commitments for the first five years of the 1997-2006 DFMP and identified which items from the Alberta government’s commitment matrix, were in the company’s opinion, not commitments. Millar Western classified each of the Alberta government’s 174 commitment matrix items into one of three categories:

- Items to be addressed in the next DFMP (23);
- Future stewardship reporting items (123); and
- Items with no formal commitments (28).

The current status of each of the 23 items to be addressed in the 2007-2016 DFMP is discussed in the following section. In addition, 28 of the 123 stewardship reporting items that were identified as ongoing reporting items are addressed in the following section. Reporting on the remaining (123-28 = 95) 95 items was completed with the Stewardship Report and have no future reporting commitments. No updates will be provided on those items that were identified as completed in the 2001 Stewardship Report.

3.4 Items to be Addressed in the 2007-2016 DFMP

The current status of each of the items listed as reporting items in the 2001 Stewardship Report is discussed below. The text under the headings “*Government Request*” and “*Company Response*” are direct quotes from the Stewardship Report. (Note that the DFMP date of 2006-2016 has been revised to 2007-2016). The “*Stewardship Commitment*” heading is a summary of the actual commitment and is provided for clarification. The “*Current status*” describes the status as of the 2007 DFMP production. A summary of the current status of the 1997-2006 DFMP commitments identified in the 2001 Stewardship Report is presented in Table 2.

**Table 2. Status of 1997 DFMP Commitments.**

DFMP Reporting Item from 1997-2001 Stewardship Report	Commitment Status
Wildlife: Indicator Species (3.2.1)	Achieved
Potential Indicators (3.2.2)	Achieved
Protect Rare and Endangered Species (3.2.3)	Direction change
Maintain Ecosystem and Species Diversity(3.2.4)	Ongoing
Maintain Genetic Diversity of Commercial and Non-commercial Tree Species (3.2.5)	Achieved
Bioindicators (3.2.6)	Achieved
Maintain Carbon Balance (3.2.7)	Achieved
Maintain the Supply of Non-Timber Forest Products (3.2.8)	Ongoing
Trade-off Analysis (3.2.9)	Achieved
Forest Value Assessment (3.2.10)	Ongoing
Boreal Forest Natural Region Road Density (3.2.11)	Ongoing
Roads and Rare Plants (3.2.12)	Ongoing
Aquatic Inventory (3.2.13)	Achieved
Stewardship Report (3.2.14)	Achieved
Habitat Classification (3.2.15)	Achieved
SHE Models (3.2.16)	Achieved
Amphibian Study (3.2.17)	Achieved
Heritage Values Model Development (3.2.18)	Achieved
Archaeological Dataset (3.2.19)	Achieved
	Not Achieved
Recreational Activities Assessment (3.2.20)	Millar Western has reconsidered and will not be reporting on this element.
Virginia Hills Fire (3.2.21)	Achieved
Black Spruce (3.2.22)	Ongoing
Inoperable Black Spruce (3.2.23)	Achieved

Wildlife: Indicator Species (3.2.1)

Government Request:

Report on habitat amounts/changes actual versus projected. Provide rationale and evaluation of impact.

Company Response:

Millar Western evaluates the current status of wildlife habitat amounts using coarse- and fine-filter habitat supply modeling techniques. As stated in section 1.4.4 of the 1997-2006 DFMP, the “habitat requirements of 17 (bioindicator) species are analyzed under BAP”. The input for BAP models was incorporated into the DFMP landbase projection. Millar Western is currently updating the habitat models and the results will be incorporated into the 2007-2016 DFMP process. The impacts of forest management will be evaluated and rationalized in the next DFMP and are therefore not a stewardship reporting issue.



Stewardship Commitment:

Update BAP habitat models and apply revised models to the 2007-2016 DFMP development process. The impacts on forest management will be evaluated and rationalized in the 2007-2016 DFMP.

Current Status:

Commitment achieved.

Four habitat models (Canada lynx, northern goshawk, varied thrush and least flycatcher) were field verified and updated during the term of the 1997-2006 DFMP. Revised models were applied to the development of the 2007-2016 DFMP.

Refer to **VOIT 15 – Area of suitable habitat within each FMU for each biodiversity assessment species (1.2.1.1)**, which addresses reporting on species habitat values.

Potential Indicators (3.2.2)

Government Request:

Refine and report on progress.

Company Response:

The potential indicators described in the 1997-2006 DFMP may be considered in subsequent plans. As stated in Section 2.1.2:

For other indicators developed during the planning process, the data necessary to suggest an appropriate objective did not exist. These are listed as potential indicators for future consideration in subsequent plans. Objectives statements for these indicators fail the test of ambiguity as defined above. Hence, these objectives read more like strategy statements but are included here for the record to serve future planning efforts.

New and existing impact assessment groups are currently being convened for the production of 2007-2016 DFMP. These groups will be involved in the development and refinement of Millar Western's forest management indicators and objectives. As stated, this item is not intended for stewardship reporting and will be addressed in the next DFMP.

Stewardship Commitment:

Convene new Impact Assessment Groups (IAG) and apply their findings to the development and refinement of Millar Western's forest management indicators and objectives in the 2007-2016 DFMP.



Current Status:

Commitment achieved.

IAGs were formed to address timber supply analysis, biodiversity assessment, hydrologic assessment, carbon assessment and fire assessment in the development of the 2007 DFMP. In addition to the IAGs, Landscape Projection Groups (LPG) were established to predict long-term cumulative impacts from population growth, oil and gas activity and climate change. Generally, the LPGs did not impact the development of the PFMS, with the exception of the landscape modeling group, which identified the natural disturbance regime for the DFA. This regime was used to quantify the natural range of variation for the purposes of setting benchmarks in the BAP analysis.

Protect Rare and Endangered Species (3.2.3)

Government Request:

Report on indicators and objectives.

Company Response:

Millar Western's Operating Ground Rules, approved on March 2, 2002, provide direction for fish and wildlife management during harvest planning and operations. Specifically, Section B4.1 "(provides) direction to planners for designing the size and shape of harvest blocks". Section B4.2 provides landscape-planning guidelines for ecological integrity, and states that "wildlife species of management concern are major considerations in compartment design and in the timing/placement of access". Finally, Section B4.3 provides rules to ensure the health and diversity of fish and the aquatic environment. In following its Ground Rules, the Company is adhering to its commitment to protect rare and endangered species. During development of the 2007-2016 DFMP, Millar Western will undertake an analysis of the total area harvested and compare it to the rare habitat types and habitat types deemed to have a very high likelihood of containing rare species to determine whether the Company stayed within the stated 5% level.

Stewardship Commitment:

During development of the 2007-2016 DFMP, Millar Western will undertake an analysis of the total area harvested and compare it to the rare habitat types and habitat types deemed to have a very high likelihood of containing rare species, to determine whether it stayed within the stated 5% range.

Current Status:

Direction change.

During the development of the 1997-2006 DFMP, a predictive model was developed that used ecosite classification to generate a coverage that could predict the likelihood of encountering rare plant habitat. The spatial harvest sequence was compared to the rare-habitat coverage to



determine the percent of potentially rare types that could be harvested. During the development of the 2007-2016 DFMP, the approach changed from a predictive landscape level modeling system into an expert operational system, to be employed on the ground and managed as part of Millar Western's environmental management system. This approach will identify locations where the likelihood of encountering rare plant communities is high so that operational personnel can be on the lookout for them and, if found, adjust their activities accordingly. This will require that operational staff be trained to identify rare plants in the field. The corresponding 2007-2016 DFMP commitment is defined in **VOIT 6 – Existence of process for maintaining plant communities uncommon in the DFA and/or Province (1.1.1.4)**.

This reporting item is related to reporting items 3.3.25 and 3.3.52 in the 2001 Stewardship Report.

Maintain Ecosystem and Species Diversity (3.2.4)

Government Request:

Report on projected vs. actual for values in table 2.2.1. Rationale for deviation.

Company Response:

In Section 2.2.1 of the 1997-2006 DFMP, Millar Western stated that they “will select forest management strategies and procedures that are designed to maintain ecosystem and species diversity within the bounds of natural variation”. The Company has met this goal through the selection of the PFM Strategy in the DFMP, which relied on output from BAP models. For the 2007-2016 planning period, ecosystem and species impact assessments will drive the selection of a new PFM strategy. Reporting on projected versus actual values for natural ranges of variation is a fine-filter technique intended for higher level planning. As such, this issue will be addressed in the 2007-2016 DFMP and is not intended for stewardship reporting.

Stewardship Commitment:

Ecosystem and species diversity will be addressed through the development of the PFMS, which will consider ecosystem and species diversity and the natural range of variation as identified in the VOITs and by BAP. Reporting on projected versus actual values will be addressed in the 2007-2016 DFMP.

Current Status:

Commitment achieved.

Millar Western updated its ecosystem and biodiversity predictions and VOITs for the 2007-2016 DFMP, but a comparison of predicted versus actual values will only be completed for selected coarse-filter metrics. A process for comparing coarse filter indicators has been developed and is described in the following VOITs which can be found in *Appendix XXIII – Commitments*:



- **VOIT 1 – Area of opening, mature + old, old and oldgrowthness forest by species strata (1.1.1.1).**
- **VOIT 2 – Opening patch size distribution (1.1.1.2a).**
- **VOIT 3 – Percent of overall oldgrowthness forest area that is interior oldgrowthness forest (1.1.1.2b).**

Maintain Genetic Diversity of Commercial and Non-commercial Tree Species (3.2.5)

Government Request:

Report on indicators and objectives.

Company Response:

In Section 2.2.1 of the 1997-2006 DFMP, Millar Western suggested that maintaining ecosystem diversity can ensure genetic diversity of non-commercial tree species. This issue will be addressed through BAP. This is a higher level planning issue and will therefore be addressed in the 2007-2016 DFMP.

Stewardship Commitment:

Address the maintenance of genetic diversity of non-commercial tree species in the 2007 DFMP.

Current Status:

Commitment achieved.

This item is addressed in **VOIT 16 – Establishment of in-situ genetic conservation area (1.3.1.1)** as described in *Appendix XXIII – Commitments*.

Bioindicators (3.2.6)

Government Request:

Further evaluate bioindicators and report on progress/initiatives.

Company Response:

In Section 2.2.1 of the 1997-2006 DFMP, Millar Western stated:

At the present time, only one-third of the selected bioindicators fall within the range of natural variation. Since staying within the range of natural variation is a desirable goal and a useful reference point, some important questions arise.



Are our selected bioindicators relevant? Are our methods of defining the range of natural variation appropriate? These questions cannot be answered within the current DFMP but will be pursued (within a research context) during the planning period as described in Chapter 5.

As stated, further evaluation of these indicators will be addressed in the 2007-2016 DFMP.

Stewardship Commitment:

Address the relevance of bioindicators selected and the methods used to define natural range of variation.

Current Status:

Commitment ongoing.

A new method was developed to generate the natural range of variation, which was used to provide specific direction for the bioindicators selected. Revised bioindicators were developed by BAP (e.g. oldgrowthness) and used in the development of the PFMS. BAP also developed a compartment biodiversity ranking based on bioindicators for the operational ranking of compartments for harvesting (*Appendix XI – Biodiversity Based Compartment Prioritization*). Refer to the *Appendix X – Biodiversity Analysis of the PFMS*, for more information.

Maintain Carbon Balance (3.2.7)

Government Request:

Report on indicators and objectives.

Company Response:

Millar Western made a commitment to “commission a review on carbon balance and report the findings in the next DFMP” (Section 2.2.4 of the 1997-2006 DFMP). Impact assessment groups are currently being convened to address this issue for the 2007-2016 DFMP; progress will be presented in the 2007-2016 Terms of Reference. The potential indicators in the 1997-2006 DFMP were presented as a record to “serve for future planning purposes” and are not intended for stewardship reporting.

Stewardship Commitment:

Commission a review of carbon balance and report the findings in the 2007-2016 DFMP.

Current Status:

Commitment achieved.



Refer to *Appendix XV – Carbon Accounting on the DFA* and to **VOIT 36 – Existence of carbon budget analysis on the Preferred Forest Management Scenario (4.1.1.1)**.

Maintain the Supply of Non-Timber Forest Products (3.2.8)

Government Request:

Report on indicators and objectives.

Company Response:

Millar Western remains committed to maintaining the supply of non-timber forest products. Section 2.2.5 of the 1997-2006 DFMP states that the Company will “select forest management strategies and procedures that maintain opportunities for public use of non-timber forest products”. As stated, this goal is addressed through the selection of the current and future PFM Strategies and is not a stewardship reporting issue. The Company has reviewed the potential indicators with all but the second indicator being developed for incorporation within the next DFMP.

Stewardship Commitment:

The company has reviewed the potential indicators with all but the second indicator (see below) being developed for incorporation within the 2007-2016 DFMP.

Current Status:

During the development of the 2007-2016 DFMP, the company again reviewed the potential indicators. As noted below, the lack of information for some of the indicators made it impossible to meet the Stewardship commitment. The commitment status of the indicators is as follows:

- Bioindicators – commitment achieved. Applied in BAP;
- Road density and use indicators – commitment achieved. The stewardship commitment was to not apply the “road density and use indicator”; however, road density was incorporated (refer to **VOIT 4 – Open all-weather forestry road density (1.1.1.3A)** and **VOIT 5 – Open seasonal/temporary forestry road density (1.1.1.3B)**) but road use indicators will not be reported upon due to logistical constraints;
- Trapping yield and success – commitment not achieved. Trapping yield numbers were not available in a useable format from the Alberta government;
- Grazing use and carrying capacity – commitment not achieved. Numbers were not available from the Alberta government; and



- Number of complaints from other users – commitment achieved. This will be reported upon in the 2006 Stewardship Report, following the direction provided in Appendix V – *DFMP Implementation Communication Plan*.

Trade-off Analysis (3.2.9)

Government Request:

Commit to timelines and report on progress.

Company Response:

In section 2.4 of the 1997-2006 DFMP, Millar Western indicated that a framework for trade-off analysis “will be explored for potential application in the next DFMP”. As stated, the Company will address this issue in the 2007-2016 DFMP.

Stewardship Commitment:

A framework for trade-off analysis will be explored for potential application in the 2007-2016 DFMP.

Current Status:

Commitment achieved.

A trade-off analysis framework was created and implemented in the development and selection of the PFMS. Refer to *Chapter 5 – Forecasting and the Preferred Forest Management Scenario* for more information.

Forest Value Assessment (3.2.10)

Government Request:

Report on initiatives to better understand these values and relationship to forest management activities.

Company Response:

Section 3.1 of the 1997-2006 DFMP introduces the impact assessments by saying that “some forest values did not lend themselves to dynamic or static impact assessments as part of the planning process”. Other resource values “were not formally assessed due to the availability of Millar Western’s planning resources for this planning period”. Therefore, “general impact assessments (were) described for carbon, forest invertebrates and disease, amphibians, and traditional land use with information drawn from literature and expert opinion”.



These issues are currently being organized for presentation within the 2007-2016 DFMP. Progress and results will be reported at such time.

Stewardship Commitment:

Forest value assessments will be organized for carbon, forest invertebrates, disease, amphibians, and traditional land use and presented in the 2007-2016 DFMP.

Current Status:

Commitment ongoing.

The status of the values identified in the commitment is as follows:

- A carbon budget was prepared for the PFMS (*Appendix XV – Carbon Accounting for DFA*).
- Forest invertebrates are not addressed at this time pending the resolution of issues identified in the 1997-2006 DFMP surrounding the selection of a suitable scale for prediction.
- When disease is identified by Millar Western staff or the Alberta government monitoring programs, appropriate action is taken at the operational level.
- Millar Western has undertaken an amphibian research study on the FMA. Refer to **VOIT 28 – Existence of programs to select and monitor amphibian and soil micro-organism indicator species (2.2.1.1)** for more information.
- Traditional land use is addressed as part of Environmental Co-Stewardship Committee (ECSC) within the Forestry and Economic Development Agreement (FEDA) and with support from Alberta’s International, Intergovernmental and Aboriginal Relations, which is allocating funds for this initiative. Millar Western developed and implemented a process whereby all trappers were provided with a copy of the 2007-2016 DFMP spatial harvest sequence and a report describing the impacts on the seral stages of stands in the vicinity of their traplines.

Boreal Forest Natural Region Road Density (3.2.11)

Government Request:

Report on Roads by class (km/km²).

Company Response:

Millar Western conducted a static impact assessment of soil resources in the 1997-2006 DFMP (Section 3.4.1). Results from this assessment were incorporated into the selection of the PFMS. As background to the assessment methods, the DFMP states, “71% of the Boreal Forest Natural



Region has a road density of 1 km for every km²". This observation does not represent a reporting commitment, and the Company does not collect information on road km per km² by class at present. However, a review of this measure has been completed and the Company has decided to commit to reporting on this item by watershed at the start of the next DFMP, along with new road construction by class and length.

Stewardship Commitment:

Millar Western will report on road class density by watershed and new road construction by class and length in the 2007-2016 DFMP.

Current Status:

Commitment ongoing.

The following VOITs were developed for the 2007-2016 DFMP to address forestry road density:

- **VOIT 4 – Open all-weather forestry road density by FMU (1.1.1.3A); and**
- **VOIT 5 – Open seasonal/temporary forestry road length by FMU (1.1.1.3B).**

Millar Western will not report on road metrics by watershed but, rather, by FMU. FORWARD's watersheds used in the 2007-2016 DFMP are more numerous than those used in the 1997-2006 DFMP and thus reporting by watershed would not be a useful exercise. Road targets are applicable only at the FMU level, not the compartment level. This reporting item is related to 3.2.12, 3.3.25 and 3.3.52 in the 2001 Stewardship Report.

Roads and Rare Plants (3.2.12)

Government Request:

Report species/habitat protected and protective measures.

Company Response:

In Section 4.4.2 of the 1997-2006 DFMP, Millar Western stated that they would "consider rare plant species and habitat types during the planning of roads". The Company is currently incorporating this aspect of rare plants into the SOP's for road planning. A review of these procedures will be incorporated into the 2007-2016 DFMP.

Stewardship Commitment:

Millar Western will incorporate rare plant assessments into the standard operating procedures (SOP) for road planning and review procedures for the 2007-2016 DFMP.



Current Status:

Commitment ongoing. Direction changed.

Rare plant assessments associated with roads will be incorporated into rare plant community assessments, and an associated SOP will be produced, as committed under **VOIT 6 – Existence of process for maintaining plant communities uncommon in the DFA and/or Province (1.1.1.4)**.

Aquatic Inventory (3.2.13)

Government Request:

Report on progress/status.

Company Response:

As stated in Section 4.8.4 of the 1997-2006 DFMP, “Millar Western plans to complete an inventory of all aquatic and wetland areas within the FMA area by 2004”. As this timeline has not been reached yet, the results of the inventory will be reported in the 2007-2016 DFMP.

Stewardship Commitment:

Millar Western plans to complete an inventory of all aquatic and wetland areas within the FMA area by 2006.

Current Status:

Commitment achieved.

The Forest Watershed and Riparian Disturbance (FORWARD) group developed wetland classification protocols for hydrologic modeling purposes over the greater FORWARD research area, which includes Millar Western’s FMA. A wetland inventory based on these protocols was created to better reflect wetlands classified according to water retention and movement. The FORWARD group also classified streams and rivers according to the Strahler classification to produce a single-line network for hydrologic modeling. Both the wetland inventory and the Strahler stream classification are summarized in *Chapter 2 – Comprehensive Description of the DFA*. In addition, the wetland inventory and Strahler stream classification were applied as part of the runoff coefficient modeling work for the forecasting and PFMS development. Refer *Chapter 5 – Forecasting and the Preferred Forest Management Scenario* and *Appendix XIV – FORWARD Contributions* for more information on the processes and dataset creation.



Stewardship Report (3.2.14)

Government Request:

Incorporate Stewardship Report into next DFMP.

Company Response:

Stewardship reporting is a key aspect of adaptive forest management. As stated in Section 4.8.10 of the 1997-2006 DFMP, this Stewardship Report “will form the body of the first chapter of the 2007-2016 DFMP.”

Stewardship Commitment:

Millar Western will incorporate a stewardship report in the 2007-2016 DFMP.

Current Status:

Commitment achieved.

Updated stewardship reporting for selected indicators has been incorporated the 2007-2016 DFMP in this chapter. After investigating the best layout for the 2007-2016 DFMP, stewardship reporting was not included in the first chapter but rather in the forth chapter.

Habitat Classification (3.2.15)

Government Request:

Report on research activities/program status and progress. Incorporate results into next DFMP.

Company Response:

The BAP runs coarse- and fine-filter analyses on the habitat suitability of different forest management scenarios. The habitat classification system used for BAP was adjusted so that pure stands are defined as stands in which at least 70% of the trees are of the same species. Under this system, the FMA appeared to contain abundant hardwood stands but few hardwood-dominated mixedwood stands. From Section 5.5.3 of the DFMP, “since a number of wildlife species tend to prefer deciduous-dominated stands, a classification system that does not accurately portray the tree species distribution within the FMA area may skew the results of the HSMs.” Millar Western also stated, “it is important that the uncertainty associated with system habitat classification is cleared up prior to the development of the next DFMP.” The habitat classification system for BAP is currently under review, and progress towards updating the system will be addressed in the 2007-2016 DFMP.



Stewardship Commitment:

Millar Western will review the BAP habitat classification system and incorporate results in the 2007-2016 DFMP.

Current Status:

Commitment achieved.

In the 2007-2016 DFMP, stratification protocols were rationalized between the IAGs. The strata assignments used for timber-supply forecasting, BAP, FireSmart, FORWARD and landscape modeling were all based on Alberta's extended stratification, which was rolled up into BAP strata and timber supply yield strata. Refer to *Appendix VI – Development of the Landbase* for the assignment rules.

Special Habitat Element (SHE) Models (3.2.16)

Government Request:

Report on research activities/program status and progress. Incorporate results into next DFMP.

Company Response:

The following DFMP source text, from section 5.5.3, was cited for this reporting request:

It is essential that the data collected provide insightful information at an efficient cost. To improve the quality of the information entering BAP analyses, it is necessary to add, remove, and modify certain measurements. In addition, it is essential that the relationships suggested between fire- and harvest-origin stands and SHE's (Special Habitat Elements) are field verified.

Within-stand habitat elements, including shrub, grass and lichen cover, and habitat or ecosite type, will be verified and enhanced by information extracted from Millar Western's temporary and permanent sample plot databases as well as regeneration surveys. As requested by the Alberta government, a more detailed report on research activities and results will be incorporated into the next DFMP.

Stewardship Commitment:

Review BAP Special Habitat Elements (SHE) models and update models with new data for inclusion in the 2007-2016 DFMP.

Current Status:

Commitment achieved.



The updated permanent sample plot (PSP) and temporary sample plot (TSP) dataset together with a new evaluation process were used to determine revised SHE values for the 2007-2016 DFMP (refer to *Appendix X – Biodiversity Analysis of the PFMS*; and *Appendix XII – BAP SHE Yield Curve Documentation*). Millar Western led a workshop to determine selected SHE attributes in the form of plant community diagrams under operational silviculture treatments and tied these into operational treatment assignment rules and the regeneration matrix for the 2007-2016 DFMP. This process is described in *Appendix IX – Silviculture Generic Establishment Regimes (GER)*.

Amphibian Study (3.2.17)

Government Request:

Report on research activities/program status and progress.

Company Response:

Millar Western decided at the Blue Lake Retreat to allocate funds to the assessment of the presence and distribution of aquatic biota “within the next 10-year period”. The Company remains committed to this task and intends to provide a full report on the status of this project for the 2007-2016 DFMP.

Stewardship Commitment:

Millar Western will initiate and report on the status of research into the presence and distribution of aquatic biota (amphibians) before the end of 2006.

Current Status:

Commitment achieved.

Millar Western initiated the Study of Forestry & Amphibians (SOFA) research project on the FMA in 2006. Refer to **VOIT 28 – Existence of programs to select and monitor amphibian and soil micro-organism indicator species (2.2.1.1)** for future commitments.

Heritage Values Model Development (3.2.18)

Government Request:

Report on status/progress and implications for forest management.



Company Response:

In Section 5.5.5 of the 1997-2006 DFMP, Millar Western committed to “testing the Heritage Potential Model 3B within three years of the last DFMP.” According to Alberta Western Heritage Inc. 1:

Model 3B has since been superseded by two subsequent updates and is now in the process of being updated to Generation 3, which will be in place by the start of the 2007-2016 DFMP. No formal reports have been written on the specific updating of the Heritage Potential Model in Millar Western’s FMA; however, all models have been vetted through and approved by Alberta Community Development.

The procedures for archaeological field work for Millar Western’s forestry and non-forestry developments, i.e. pre-and post-impact heritage assessments, are documented in three final reports (Bereziuk 2002a; Bereziuk 2002b; Bereziuk and Gibson 2001). For pre- and post-impact assessments, auditors conduct visual examinations of harvest blocks and associated access roads, and also conduct shovel testing in areas that exhibit moderate to high archaeological potential. The primary focus of the assessments is to discover all heritage resources sites within the proposed development areas. For the pre-impact assessments, secondary considerations include the determination of the differential heritage resources potential. For the post-impact fieldwork, secondary considerations include “observation of the amount of sub-surface disturbance created by the Millar Western winter harvest operations”, as well as determination of the differential heritage resources potential for the operating areas surveyed within the Millar Western FMA. The history of model development and implementation will be included within the 2007-2016 DFMP.

Stewardship Commitment:

The history of heritage model development and implementation will be included within the 2007-2016 DFMP.

Current Status:

Commitment achieved.

The heritage potential model along with the heritage review process continues to evolve. Site observations from the previous year’s field season and any other available Alberta government data relating to heritage resources are used to update the heritage potential model on an annual basis. Millar Western has developed an automated spatial process that defines the probability of heritage resource occurrence for each block and road within planned areas of operation. This data is then provided to the archeologist for review and determination of the appropriate course of action: pre-impact assessment, post-impact assessment or clearance. Implementation is

¹ Terrance Gibson and Daryl Bereziuk, Alberta Western Heritage Inc., personal communication, July 23, 2003.



ongoing and not directly related to the 2007-2016 DFMP. Heritage resources are now addressed in **VOIT 40 – Number of non-conformance incidents as per The Heritage Resources Act (5.1.2.2)**. This reporting item is related to items 3.2.19 and 3.3.92 in the 2001 Stewardship Report.

Archaeological Dataset (3.2.19)

Government Request:

Report on status/progress and implications for forest management.

Company Response:

The DFMP source text cited for this request is from Section 5.5.5 of the 1997-2006 DFMP:

Millar Western will conduct ongoing archaeological fieldwork to collect additional data. However, it would take up to five years to collect sufficient data to improve the model using this approach. To speed this process, data collection would need to be focused toward model improvement. This could be accomplished with the use of a specialized data recovery program that would assign detailed archaeological surveys to areas that are representative of stands expected to be harvested or otherwise developed within the FMA area. These data would be used to recalibrate the model.

Millar Western is conducting ongoing archaeological field work to collect additional data. This is a higher-level planning issue, and any data updates will be addressed in the 2007-2016 DFMP. In addition, Section 3.2.18 addresses the Heritage Potential Model development, and Section 3.3.16 speaks to the protection of Heritage Resources.

Stewardship Commitment:

Millar Western will report on the status of dataset updates for the Heritage Potential Model in the 2007-2016 DFMP.

Current Status:

Commitment achieved.

See previous reporting item. Sufficient field data was collected by Alberta Western Heritage within the first four years to provide an accurate and realistic starting point for correlating probability modeling to field observations. Annual updates of the model are created to incorporate new findings. Refer to **VOIT 40 – Number of non-conformance incidents as per The Heritage Resources Act (5.1.2.2)**. This reporting item is related to items 3.2.18 and 3.3.92 in the 2001 Stewardship Report.



Recreational Activities Assessment (3.2.20)

Government Request:

Report on status/progress. Report on recreational uses.

Company Response:

Millar Western has yet to develop a recreational monitoring system. This will be in place for the next planning period, and progress will be provided in the 2007-2016 DFMP.

Stewardship Commitment:

Millar Western will develop a recreational monitoring system for the 2007-2016 DFMP.

Current Status:

Commitment not achieved.

Millar Western has reconsidered investing in recreation monitoring, as it believes this is the responsibility of the Alberta government, not FMA holders.

Virginia Hills Fire (3.2.21)

Government Request:

Monitor and verify that this is occurring.

Company Response:

The context for the government’s request is from Section 6.5.2 of the 1997-2006 DFMP: “Any managed stands (historical harvest areas) burnt in the fire were assigned an age of 0 with the assumption that these areas would be planted within the next five years.” Millar Western assumes total silvicultural liability for areas harvested. However, this is not a reporting criterion within the context of the DFMP. Reforestation obligations are a legal requirement handled with annual government submissions in the silviculture operating plans. Actual information regarding these stands will be addressed and incorporated within the 2007-2016 DFMP.

Stewardship Commitment:

Millar Western will incorporate information on the regeneration status of stands affected by the 1998 Virginia Hills burn in the 2007-2016 DFMP.



Current Status:

Commitment achieved

Assignment rules for the regeneration of stands were developed and vetted through the TSA IAG. Regeneration success was incorporated into the regeneration assignment of regenerated yield strata to cutblocks, which were applied to the forecasting landbase for use in forecasting and timber supply determination. Refer to *Appendix VI – Development of the Landbase* for more information on the process and the impacts. This reporting item is related to item 2.6.24 in the 2001 Stewardship Report.

Black Spruce (3.2.22)

Government Request:

Develop plans, submit for review. Monitor and report.

Company Response:

The DFMP source text for this request is from Section 6.8.4:

Stand-specific plans will be developed for these areas to integrate harvesting and regeneration operations to enhance natural regeneration while producing a viable timber crop.

Millar Western is in the process of developing stand-level plans for black spruce harvesting. Black spruce is currently being logged via clear-cut systems as it is encountered during harvest operations. Stand-specific plans will be reported in the 2007-2016 DFMP.

Stewardship Commitment:

Millar Western will report on the status of black spruce harvesting, including stand-specific plans for regeneration treatments, in the 2007-2016 DFMP.

Current Status:

Commitment ongoing.

Stand-specific black spruce regeneration plans were not developed during the 1997-2006 DFMP period as Millar Western developed a revised subjective deletion process for black spruce and partial harvesting of black spruce stands proved uneconomical. For more information on black spruce harvest and how it is addressed in the 2007-2016 DFMP, refer to *Chapter 5 – Forecasting and the Preferred Forest Management Scenario*. The amount of black spruce harvested by operator is presented in the harvest area targets reporting item 3.3.46, and is related to reporting item 3.2.23 in the 2001 Stewardship Report.



Inoperable Black Spruce (3.2.23)

Government Request:

Monitor and report.

Company Response:

The DFMP source text for this request is from Section 6.8.4:

Some of the fair and medium site black spruce stands identified for harvest in this DFMP will not be operable in the foreseeable future. Inoperable stands will be identified and re consolidated during the preparation of the next DFMP.

Inoperable stands will be identified and re consolidated during the preparation of the 2007-2016 DFMP, and reported at that time. In addition, a black spruce strategy will be developed for incorporation within the 2007-2016 DFMP.

Stewardship Commitment:

Millar Western will identify and reconcile inoperable black spruce stands in the preparation of the 2007-2016 DFMP and develop a black spruce strategy to address implementation of black spruce stands.

Current Status:

Commitment achieved.

During development of 2007-2016 DFMP, the TSA IAG developed and approved protocols to identify inoperable black spruce stands, delete them from the SHS, and account for the AAC implications. These protocols were implemented as refinements of the SHS and the AAC. Refer to *Chapter 5 – Forecasting and the Preferred Forest Management Scenario* for more information. This item has linkages to reporting item 3.2.22 in the 2001 Stewardship Report.

3.5 Future Stewardship Reporting Items

Of the 123 reporting items identified in the 2001 Stewardship Report, 28 were identified as ongoing reporting items to be reported on in future stewardship reports, with the remainder having no further reporting obligations beyond the 2001 Stewardship Report. The 28 ongoing reporting items are identified and described within this section, with updated information provided where relevant to the production of the 2007-2016 DFMP. The intent of this section is to tie the 2007-2016 DFMP to future stewardship reporting, not to replace existing commitments or introduce new commitments. All commitments in the 2007-2016 DFMP are described in *Appendix XXIII – Commitments*. Note that where identified, the items reported in this section



will be updated and reported in the 2006 Stewardship Report, due 18 months after the end of the 2006 timber year. This section should be considered an interim report and not a replacement for the 2006 Stewardship Report.

The purpose of this reporting update is threefold: to show how these items have been incorporated into the development 2007-2016 DFMP; to demonstrate that Millar Western has implemented changes in response to the findings of the 2001 Stewardship Report; and to explain how incorporating these changes will help Millar Western to better meet its DFMP targets.

Each of the 28 ongoing stewardship reporting items is discussed under a separate heading. The bracketed numbers at the end of the heading refer to the heading number in the 2001 Stewardship Report. Background text from the 2001 Stewardship Report is not included in this section – only the current status, DFMP implications and clarification, where necessary. A summary of future stewardship reporting items and how they have been addressed in the 2007-2016 DFMP are presented in Table 3.

**Table 3. 2007-2016 DFMP mechanisms to address future stewardship reporting items.**

Future Stewardship Reporting Item	Addressed in 2007 DFMP
Legislative Requirements (3.3.6)	EMS
Maintain Physical and Biological Soil Properties (3.3.12)	Ch. 6, App. XXIII - Commitments VOIT 4 & VOIT 5
Maintain or Improve the Supply of Timber Products (3.3.14)	Ch. 5: Piece size forecasting
Facilitate Continuous Learning (3.3.19)	EMS
Environmental Management System (3.3.21)	EMS
Coarse Woody Debris (3.3.23)	Ch. 6, App. XXIII - Commitments VOIT 12
Operating Ground Rules for Rare Plants (3.3.25)	Ch. 6, App. XXIII - Commitments VOIT 6
Technical Competency (3.3.28)	EMS
RFAC Membership Status (3.3.30)	App. V - DFMP/SFMP Implementation Communication Plan
Public Involvement (3.3.34)	App. V - DFMP/SFMP Implementation Communication Plan
Pre-Harvest Assessments (3.3.40)	Not addressed
Harvest Area Targets (3.3.46)	Ch. 6, App. XXIII - Commitments Company Commitments 3 and 6
Soil Conservation (3.3.50)	Operating Ground Rules
Riparian Area Management (3.3.51)	Ch. 6, App. XXIII - Commitments VOIT 10
Rare Plants (3.3.52)	Ch. 6, App. XXIII - Commitments VOIT 6
Structure Retention (3.3.54)	Ch. 6, App. XXIII - Commitments VOIT 11
Permanent Sample Plots (3.3.67)	App. VIII - Growth & Yield Plan
Watercourse Crossing Inventory (3.3.68)	Ch. 6, App. XXIII - Commitments VOIT 14
FORESTCARE Audit (3.3.71)	Not addressed - FORESTCARE auditing is not a part of DFMP development but a separate process outside of the DFMP scope.
Barred Owl (3.3.79)	Not addressed - Research project was canceled after nesting boxes were not used by Barred Owls.
CRICS Heritage Values (3.3.92)	Ch. 6, App. XXIII - Commitments VOIT 40
Volumes from Athabasca Flat Annual Cut (3.3.102)	Ch. 5 App. VI - Development of the Landbase
Landbase Deletions (3.3.104)	App. VI - Development of the Landbase
Virginia Hills Fire Non-salvage Areas (3.3.107)	Ch. 5 App. VI - Development of the Landbase
Annual Silviculture Targets (3.3.109)	App. XVII: T of R - DFA Silviculture Committee
Disposition Activity (3.3.111)	Ch. 6, App. XXIII - Commitments Company Commitment 4 App. VI - Development of the Landbase
Other Silviculture Treatments (3.3.114)	Ch. 5
Strata Conversion (3.3.115)	App. XVII: T of R - DFA Silviculture Committee

Legislative Requirements (3.3.6)

Current Status:

Millar Western implemented an environmental management system (EMS) as part of its International Standards Organization (ISO) 14001 2002 certification in March 2005, to better identify and manage these issues. The company's successful registration under Canadian



Standards Association (CSA) Z809-2002 certification, obtained in December 2006, provides additional processes to track and reduce non-conformance incidents.

Maintain Physical and Biological Soil Properties (3.3.12)

Current Status:

In the 2001 Stewardship Report, the company committed to reporting on road density by watershed and on new road construction by class. Two classes of road density targets by FMU have been incorporated into **VOIT 4 – Open all-weather forestry road density by FMU (1.1.1.3A)** and **VOIT 5 – Open seasonal/temporary forestry road length by FMU (1.1.1.3B)**. After a review of this objective the company has decided not to report by watershed. Refer to 2.5.11 of the 2001 Stewardship Report.

Maintain or Improve the Supply of Timber Products (3.3.14)

Current Status:

The 2007-2016 DFMP does not include any specific requirements to meet this commitment. A piece-size prediction was included in the 2007-2016 DFMP's forecasting and timber supply modeling (refer to *Chapter 5 – Forecasting and the Preferred Forest Management Scenario*).

Facilitate Continuous Learning (3.3.19)

Current Status:

The 2007-2016 DFMP does not include any specific requirements to meet this commitment; however, Millar Western has developed a cross-training program within its Woodlands department, which will be documented within its EMS.

Environmental Management System (EMS) (3.3.21)

Current Status:

Millar Western's EMS was implemented and successfully certified as part of the company's ISO 14001 2002 standard in March 2005. Millar Western was further certified to the CSA Z-809-2002 standard for Sustainable Forest Management (SFM) in December 2006. The 2007-2016 DFMP was assembled consistent with this standard and the company's Sustainable Forest Management Plan (SFMP).



Coarse Woody Debris (CWD) (3.3.23)

Current Status:

Coarse woody debris (CWD) protocols were incorporated into the operating ground rules for the 1997-2006 DFMP implementation. In the 2007-2016 DFMP, operational protocols were revised for tighter linkages to Biodiversity Assessment Projects (BAP) Special Habitat Element (SHE) models. CWD is addressed in **VOIT 12 – Percent of harvested area by FMU, with downed woody debris volume equivalent to pre-harvest conditions (1.1.2.1B)**.

Operating Ground Rules for Rare Plants (3.3.25)

Current Status:

The 2001 Stewardship Report committed to having procedures for rare plant identification or mitigation activities for rare plant protection finalized and implemented before the 2007-2016 DFMP; however, it was not possible to have effective protocols developed and implemented within this timeline. Rare plant identification is addressed in **VOIT 6 – Existence of process for maintaining plant communities uncommon in the DFA and/or Province (1.1.1.4)**.

Refer to 3.2.3 and 3.3.52 in the 2001 Stewardship Report for linkages.

Technical Competency (3.3.28)

Current Status:

The 2007-2016 DFMP does not include any specific requirements to meet this commitment. This item is addressed in the company's EMS.

RFAC Membership Status (3.3.30)

Current Status:

Millar Western committed to maintaining an association with the Regional Forest Advisory Committee (RFAC) and to continuing to foster a positive working relationship with the public. A new comprehensive communication plan was developed for the 2007-2016 DFMP, which details the company's long-term communication strategies and activities. In it, Millar Western indicates that it will discontinue its membership in the RFAC, due to the fact that this group does not meet its public consultation requirements under CSA. Instead, the company has established a new stakeholder group – the Millar Western Public Advisory Committee. Members were recruited in the spring of 2007 and the first meeting was held in June 2007. The mandate of the committee, as well as other communications and public participation activities, are described in *Appendix V*



– *DFMP Implementation Communication Plan*, and **VOIT 52 – Establishment of permanent Public Advisory Committee (PAC) and number of group meetings (6.3.2.1)**.

Public Involvement (3.3.34)

Current Status:

The 2007-2016 DFMP includes several specific initiatives to meet this commitment, as described in *Appendix V - DFMP Implementation Communication Plan* describes the public involvement process. They include the creation of a permanent public advisory committee (see previous commitment) and, in addition to regular open houses, the creation of a virtual open house on the corporate website. Millar Western will no longer track the satisfaction rating from tours due to the subjective nature of this indicator.

Pre-Harvest Assessments (PHA) (3.3.40)

Current Status:

Millar Western originally committed to conducting pre-harvest assessments (PHA) within two years prior to harvest and to reporting upon the success of this process in the next stewardship report. PHAs were discontinued in 2004, because results were not satisfactory. Millar Western will not be completing pre-harvest assessments as part of the 2007-2016 DFMP.

Harvest Area Targets (3.3.46)

Current Status:

The 2001 Stewardship Report identified some discrepancies between the areas that were actually harvested and regenerated and the targets set out in the 1997-2006 DFMP. Some of these inconsistencies were due to weaknesses in strata identification and tracking mechanisms. Because of its experience in implementing the W11 PFMP harvest targets without the W13 DFMP flexibility in the SHS and the tight integration of the numerous operators, Millar Western created two standing operational implementation subgroups of the TSA IAG: one for harvesting and one for regeneration. During DFMP development, the subgroups were renamed the DFA Harvest Planning Committee and the DFA Silviculture Committee. Terms of reference for each committee can be found in *Appendix XVI – Terms of Reference – DFA Harvest Planning Committee* and *Appendix XVII – Terms of Reference – DFA Silviculture Committee*. Commitments regarding the ongoing functioning of these committees can be found in *Appendix XXIII – Commitments*, under **Company Commitments 3 – Maintain DFA Harvest Planning Committee** and **Company Commitment 6 – Maintain DFA Silviculture Committee**.

As a result of the work of these subcommittees, adjustments were made to both the reporting and tracking of this commitment in order to achieve targets set out in the 1997-2006 DFMP. Three additional timber years of data were added to the stewardship reporting requirement, to provide



an update for the 2007-2016 DFMP. Table 4 presents the area harvested by FMU, operator and silviculture system for the timber years 1997 to 2004.

Table 4. Area harvested by silviculture system, block group, operator and FMU between 1997 to 2004.

Silviculture System	Block Group	Operator	Volume harvested by Timber Year (ha)							Total	
			1997	1998	1999	2000	2001	2002	2003		2004
W11											
Clearcut	Normal clearcut	MTU	425	112	517	261	650	771	35		2,771
		Spruceland	213				431		77	393	1,115
		Millar Western			175		21	115	417	201	929
Clearcut Total			638	112	692	261	1,103	886	529	594	4,816
W13											
Clearcut	Normal Clearcut	MTU	114	9	248	110	252	288	126	179	1,326
		Mostowich		419		169		185	155		928
		Millar Western	1,420	303	1,215	1,296	969	1,544	1,741	1,747	10,236
		Weyerhaeuser	307	95	144	234	305	512	140	226	1,962
		Normal Clearcut Total		1,841	825	1,607	1,808	1,527	2,529	2,162	2,153
Fire Salvage	Millar Western		4,219	2,842	72					7,133	
Clearcut Total			1,841	5,044	4,449	1,880	1,527	2,529	2,162	2,153	21,585
Thinning	Athabasca flats	Millar Western	122	95			41	118	169	38	584
	Commerical Thin	Millar Western	149	1	281	546	201	119			1,298
Thinning Total			272	96	281	546	243	238	169	38	1,882
Clearcut and Thinning Total			2,113	5,140	4,730	2,426	1,769	2,767	2,332	2,190	23,468
Grand Total			2,751	5,252	5,422	2,687	2,872	3,653	2,861	2,785	28,283

Historical data going back to the 1997 timber year is presented for W11 for information purposes only. PFMP targets were not effective until approved in 2004; therefore, the data for areas harvested before 2004 are of little value at this time. For comparison to the PFMP, W11 annual harvest targets are 496 ha of conifer landbase and 931 ha of deciduous landbase, for a total of 1,427 ha (refer to Table 10-3 on page 73 of the W11 PFMP). The PFMP predicted harvest areas would be higher than the historical area harvested and higher than the areas reported since the FMA was amended to incorporate W11. This reflects the lower harvest level before the surge cut and perhaps historically higher yields than predicted in the PFMP.

In 2003-04, after the completion of fire salvage operations resulting from the Virginia Hills fire, W13 harvesting stabilized at around 2,800 ha, which is slightly below the 1997-2006 DFMP target of 3,143 ha. Average clear-cut harvesting during the period was 1,798 ha, which is well below the 2,715 ha average annual 1997-2006 DFMP harvest target. Commercial thinning of existing stands has been phased out because all eligible stands have been thinned. 1,298 ha were commercially thinned over the eight-year period 1997-2004 compared to a 10-year commercial thinning target of 3,760 ha in the 1997-2006 DFMP. (Note that Athabasca flats partial harvesting is not considered part of the 1997-2006 DFMP commercial thinning targets.)

Company-specific harvest targets were not identified in the 1997-2006 DFMP or the W11 PFMP. The 2007-2016 DFMP addresses this oversight through the creation of a harvesting subgroup. This will provide a process to manage, at an operational level, harvest targets among the operators, to update targets as stands are traded and to address situations where predicted volumes by species and operator do not match predictions.



The 1997-2006 DFMP committed to following the harvest sequence and to harvesting the strata distribution. The variances between DFMP clearcut harvest targets and actual harvest levels from 1997 to 2004 are presented in Table 5. The unknown stratum refers to area that was assigned as non-operable 1997-2006 DFMP landbase creation process.

Table 5. W13 1997-2004 area harvested strata distribution and variance.

1997 DFMP Strata	DFMP target (10 year)		Actual (8 yr) ¹		Variance	
	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
AW	8,742	32%	4,835	22%	3,906	10%
PA	3,373	12%	1,667	8%	1,706	5%
SA	3,474	13%	2,632	12%	842	1%
PL	4,871	18%	8,515	39%	-3,644	-22%
SB	4,118	15%	1,403	7%	2,715	9%
SW	2,568	9%	2,475	11%	94	-2%
Unknown	0	0%	58	0%	-58	0%
Total	27,147	100%	21,585	100%	5,561	0%

1 - includes Virginia Hills fire salvage area

1997-2006 DFMP area harvest targets were the percent distribution of the strata, which was calculated by determining the percentage that each stratum comprised of the total area to be harvested. For example, 8,742 ha of AW (aspen and poplar) divided by the total area to be harvested (27,147 ha) equals 32%. In other words, 32% of all area harvested should be from the AW strata. Actual harvest distribution is included in the next 2 columns and the percent distribution is determined the same way. Continuing our example, the AW stratum comprises 22% of the strata actually harvested.

Variances are calculated by subtracting the actual from the DFMP target. The AW strata's variance is thus 32% minus 22% equals 10%. Percent variance represents the difference in strata distribution harvested. Positive area variances are those yet to be harvested, but more importantly, a positive percentage represents the harvest of an under-represented strata. Of the total AW area harvested, AW is under-represented by 10%. Conversely, negative variance areas are strata areas that have been over harvested and negative percentages represent over-represented strata. Percent variances within +/-5% of the 1997-2006 DFMP targets are within allowances and are not considered variance.

From Table 5, the harvested profile shows that AW and SB strata have been under harvested by 10% and 9%, respectively, while pure pine (PL) has been over harvested by 22%. The remaining strata are within the variance allowance of +/-5% of the 1997-2006 DFMP target. Compared to the strata distribution reported in the 2001 Stewardship Report, the AW under harvest has been reduced from 17% to 10%; the SA over harvest has been reduced from 8% to 1%, which is within the DFMP tolerance; the PL over harvest has increased from 10% to 22%; and the SW over harvest has been reduced from 8% to 2%, again within 1997-2006 DFMP tolerance.



Soil Conservation (3.3.50)

Current Status:

The revised FMA Operating Ground Rules associated with the 2007-2016 DFMP will adhere to the soil conservation guidelines.

Riparian Area Management (3.3.51)

Current Status:

There have been no changes to this commitment since the last stewardship report. FORWARD research watersheds were harvested with and without riparian buffers. Riparian buffer harvesting within a research context has been incorporated into 2007-2016 DFMP (**VOIT 10 – Volume and area harvested in riparian areas under Alberta approved Millar Western Riparian Management Strategy (1.1.1.7)**).

Rare Plants (3.3.52)

Current Status:

Rare plants are integrated into 2007-2016 DFMP development and implementation through **VOIT 6 – Existence of process for maintaining plant communities uncommon in the DFA and/or Province (1.1.1.4)**. Refer to 3.3.25 in the 2001 Stewardship Report for linkages.

Structure Retention (3.3.54)

Current Status:

Millar Western developed and implemented a SOP for the retention, maintenance and monitoring of structure retention and will present the results in the 2006 Stewardship Report. Modifications to these procedures were made in 2007-2016 DFMP development through **VOIT 11 – Percent of FMU AAC residual structure (living and dead), within a harvest area, representative of the status (living/dead), size and species distribution of the overstorey trees by operating compartment (1.1.2.1A)**.

Permanent Sample Plots (PSP) (3.3.67)

Current Status:

The status of the permanent sample plot (PSP) program together with modifications made to meet 2007-2016 DFMP objectives are detailed in *Appendix VIII - Growth and Yield Plan*. In **Company Commitment 10 – Implement growth and yield initiatives**, Millar Western has stated its commitment to implementing items within this plan. The current status is summarized



in reporting item approval condition #1 of the W11 2004 PFMP. A revised Growth and Yield Plan is to be submitted to Alberta by February 1, 2008.

Watercourse Crossing Inventory (3.3.68)

Current Status:

Millar Western has continued with the development of an inventory of active and deactivated watercourse crossings. This item will be reported in the 2006 Stewardship Report. It is partially addressed in 2007-2016 DFMP through **VOIT 14 – Number of non-conformance incidents with Code of Practice for Water Course Crossings, by FMU (1.1.2.3)**.

FORESTCARE Audit (3.3.71)

Current Status:

There are no changes to the 2007-2016 DFMP relating to *FORESTCARE* auditing and certification. The status of *FORESTCARE* registration will be reported in the 2006 Stewardship Report.

Barred Owl (3.3.79)

Current Status:

The stewardship commitment was to inspect the nesting boxes established by Millar Western before the end of 2003 and to re-evaluate the success of the program (refer to 2001 Stewardship Report, page 98). Boxes were set up and monitored for a few years, but no barred owls were spotted, and the project was discontinued. No future activity is planned at this time.

CRICS Heritage Values (3.3.92)

Current Status:

The 2001 Stewardship Report commitment (page 108) was to report the projected vs. actual Cultural Resources Impact Classification System (CRICS) values in the 2006 Stewardship Report. Millar Western has since made changes to its heritage review process to align it with the industry's. As a result, Millar Western does not track projected vs. actual CRICS values and will be unable to report on them. The 2007-2016 DFMP addresses heritage values through **VOIT 40 – Number of non-conformance incidents as per The Heritage Resources Act. (5.1.2.2)**.

This item has linkages to reporting items 3.2.18 and 3.2.19 in the 2001 Stewardship Report.



Volumes from Athabasca Flat Annual Cut (3.3.102)

Current Status:

Separate volume reporting was required for the Athabasca flats in the 1997-2006 DFMP, because the area was excluded from the allowable cut due to uncertainty surrounding the variable partial harvesting and growth trajectories. Updated harvest volumes will be provided in the 2006 Stewardship Report.

In the 2007-2016 DFMP, the Athabasca flats area was incorporated into the timber supply; therefore, separate annual allowable cut reporting will not be required. A volume sampling program was undertaken to obtain volumes from standing growing stock following partial harvesting in the Athabasca flats. This was used to create a unique yield curve for the Athabasca flats area. There are no specific commitments related to this item in the 2007-2016 DFMP.

Landbase Deletions (3.3.104)

Current Status:

In the 1997-2006 DFMP, Millar Western stated that “deletions due to industrial activity not planned in the DFMP will be tracked through Millar Western’s inventory update process ... and were not modelled in the timber supply process”. The 2007-2016 DFMP follows the same process with respect to timber supply in that a new landbase file was created that incorporated unplanned deletions.

This item has linkages to reporting items 3.2.11 (Disposition activity) in the 2001 Stewardship Report.

Virginia Hills Fire Non-salvage Areas (3.3.107)

Current Status:

A modified regeneration survey program was undertaken in the non-salvaged areas within the Virginia Hills burn (Virginia Hills and Roche Lake Fire Survey Results 2005 – within *Appendix VII – Yield Curve Development*). The purpose of this survey was to determine the regenerated condition of these areas for yield curve assignment. Only the areas with suitable regeneration based on field survey results were assigned regenerated yield strata and contributed to the timber supply determination. Areas that were either not stocked or not surveyed were not part of the managed landbase (refer to *Appendix VI – Development of the Landbase*).



Annual Silviculture Targets (3.3.109)

Current Status:

Silviculture targets were included in the 2001 Stewardship Report, where several strata balancing variances from 1997-2006 DFMP targets were identified:

- more aspen, white and black spruce normal-intensity regeneration was required;
- more white and black spruce crop plan establishment was required; and
- an excess of pine strata, both normal intensity and crop plans, had been established.

Millar Western adjusted the established stratum to address these variances and clarified the reporting procedures. Results after three additional years show an improvement in the regenerated strata distribution and a reduction in the variance. Final 1997-2006 DFMP variances will be reported in the 2006 Stewardship Report.

Forecasting for the 2007-2016 DFMP (*Chapter 5 – Forecasting and the Preferred Management Scenario*) contains detailed regenerated strata balancing transitions from the modeling exercise that could, in theory, become implementation targets. However, these modeling targets can only serve as a guideline and are not the actual implementation targets. The reason for not applying the modeling transition is that the profile actually harvested has an impact on the regeneration targets. As an example, if pine-aspen (PA) strata formed 10% of a DFMP's overall harvest distribution and regeneration targets, but no PA strata were actually harvested, then the PA strata regenerated should reflect the change in harvest profile. Regeneration can only deal with the profile that is actually harvested, and, in this case, the harvest variance would be responsible for the regeneration variance. The actual DFMP regeneration targets must be adjusted to reflect the actual harvest profile. Under a scenario where there is no strata conversion, such as in W11, this is a simple process. However, under conditions that include strata conversion and different timber rights for each operator, as is the case for W13, the process is more complicated.

Millar Western developed a process to accomplish this adjustment during the development of the 2007-2016 DFMP and used it to adjust the 1997-2006 DFMP regeneration targets to reflect the profile actually harvested. The process requires the assignment of the stands in the SHS to an operator. A full SHS assignment was not available for the tables presented in this section, but the numbers presented here are a better representation of the current status than the 2001 Stewardship Report. Updated tables will be presented in the 2006 Stewardship Report.

Two tables are provided for each of the W13 reporting operators: Mostowich Lumber, Millar Western and Weyerhaeuser. There was no regenerated strata information available from the Miscellaneous Timber Use (MTU) program, thus it is not reported in this update. The first table determines the operator-specific regeneration targets that are based on the strata distribution actually harvested by the operator and the appropriate strata conversion rules for each operator. For this reporting update, the appropriate strata conversion rules were the same for Mostowich and Millar Western but different for Weyerhaeuser's regeneration targets. Different strata conversion rules will be required to account for the MTU program, which does not share in the



Enhanced Forest Management (EFM) gain but still must maintain the appropriate strata conversion to achieve the 2007-2016 DFMP targets. The second table reports the operator specific regeneration variance. This is determined by comparing the 1997-2006 DFMP strata actual regenerated (achieved) with the operator specific targets. Variance is determined by subtracting the achieved from the target. The 1997-2006 DFMP target is a percent variance of no more than +/- 5% for each stratum.

Adjusted regeneration target tables are presented for Mostowich Lumber (Table 6, Table 7), Millar Western (Table 8, Table 9), Weyerhaeuser (Table 10, Table 11) as well as all of W13 (Table 12, Table 13). Note that these numbers require refinement to account for the MTU program, which will change the results. The adjusted DFMP targets are highlighted in yellow, the values actually achieved are highlighted in tan and the variance is highlighted in blue. Variances greater than +/-5% are in red font. Note that only the percentage values are highlighted for targets, achieved and variance, and not for the actual area values. The 1997-2006 DFMP clearly stated that targets were percent distribution, not area targets. These tables were presented at TSA IAG meetings for review.

Table 6. Mostowich regeneration target adjusted for actual 8-year area harvested.

Mostowich Actual 8-year Area Harvested by TSA Species Group								
Actual Harvest Area		AW	PA	PL	SA	SB	SW	All
		38	80	290	249	130	141	928
AW	Normal	23	-	-	-	-	-	23
PA	Normal	-	42	-	-	-	-	42
SA	Normal	-	-	-	151	-	-	151
PL	Normal	-	-	168	-	-	-	168
	Crop Plan	8	38	122	-	-	-	167
SB	Normal	-	-	-	-	118	-	118
	Crop Plan	-	-	-	-	12	-	12
SW	Normal	-	-	-	-	-	88	88
	Crop Plan	7	-	-	98	-	52	158
TOTAL		38	80	290	249	130	141	928
Proportion of Actual Adjusted 8-yr TSA Speceis Group Area Regenerated 8-yr Target by Yield Class								
AW	Normal	61%	-	-	-	-	-	3%
PA	Normal	-	53%	-	-	-	-	5%
SA	Normal	-	-	-	61%	-	-	16%
PL	Normal	-	-	58%	-	-	-	18%
	Crop Plan	21%	47%	42%	-	-	-	18%
SB	Normal	-	-	-	-	91%	-	13%
	Crop Plan	-	-	-	-	9%	-	1%
SW	Normal	-	-	-	-	-	63%	10%
	Crop Plan	18%	-	-	39%	-	37%	17%
Strata Total		100%	100%	100%	100%	100%	100%	100%

Mostowich harvested all 1997-2006 DFMP strata (top row of the table), but as a conifer operator favored the conifer landbase. Mostowich was responsible for establishing crop plans but had not yet reported crop plan establishment to Millar Western; as a result, their crop plan variance is high. Mostowich has over-established pine-aspen and under-established the spruce-aspen strata.

**Table 7. Mostowich Lumber 8 year regeneration results.**

Mostowich 8-year Regeneration Distribution Metrics							
		Target		Achieved		Variance	
		(%)	Area (ha)	(%)	Area (ha)	(%)	Area (ha)
AW	Normal	3%	23	2%	18	-1%	-6
PA	Normal	5%	42	18%	164	13%	121
SA	Normal	16%	151	2%	15	-15%	-136
PL	Normal	18%	168	71%	656	52%	487
	Crop Plan	18%	167	0%	0	-18%	-167
SB	Normal	13%	118	0%	0	-13%	-118
	Crop Plan	1%	12	0%	0	-1%	-12
SW	Normal	10%	88	8%	76	-1%	-12
	Crop Plan	17%	158	0%	0	-17%	-158
Strata Total		100%	928	100%	928	0%	0

Millar Western's regenerated strata distribution targets are similar to Mostowich's but reflect a larger proportion of harvested aspen and spruce.

Table 8. Millar Western regeneration target adjusted for actual 8-year area harvested

Millar Western Actual 8-year Area Harvested by Strata								
Actual Harvest Area →		AW	PA	PL	SA	SB	SW	All
		2,767	1,551	8,005	1,649	1,196	2,143	17,311
AW	Normal	1,688	-	-	-	-	-	1,688
PA	Normal	-	820	-	-	-	-	820
SA	Normal	-	-	-	999	-	-	999
PL	Normal	-	-	4,648	-	-	-	4,648
	Crop Plan	576	731	3,357	-	-	-	4,664
SB	Normal	-	-	-	-	1,083	-	1,083
	Crop Plan	-	-	-	-	113	-	113
SW	Normal	-	-	-	-	-	1,345	1,345
	Crop Plan	504	-	-	650	-	798	1,951
TOTAL		2,767	1,551	8,005	1,649	1,196	2,143	17,311
Proportion of Actual Adjusted 8-year TSA Species Group Area Regenerated 8-year Target by Yield Class								
AW	Normal	61%	-	-	-	-	-	10%
PA	Normal	-	53%	-	-	-	-	5%
SA	Normal	-	-	-	61%	-	-	6%
PL	Normal	-	-	58%	-	-	-	27%
	Crop Plan	21%	47%	42%	-	-	-	27%
SB	Normal	-	-	-	-	91%	-	6%
	Crop Plan	-	-	-	-	9%	-	1%
SW	Normal	-	-	-	-	-	63%	8%
	Crop Plan	18%	-	-	39%	-	37%	11%
Strata Total		100%	100%	100%	100%	100%	100%	100%



Table 9. Millar Western 8-year regeneration results.

Millar Western 8-year Regeneration Distribution Metrics							
		Target		Achieved		Variance	
		(%)	Area (ha)	(%)	Area (ha)	(%)	Area (ha)
AW	Normal	10%	1,688	6%	1,262	-4%	-425
PA	Normal	5%	820	8%	1,920	4%	1,100
SA	Normal	6%	999	8%	1,950	3%	952
PL	Normal	27%	4,648	50%	11,438	23%	6,790
	Crop Plan	27%	4,664	19%	4,320	-8%	-344
SB	Normal	6%	1,083	0%	29	-6%	-1,054
	Crop Plan	1%	113	0%	0	-1%	-113
SW	Normal	8%	1,345	4%	1,005	-3%	-340
	Crop Plan	11%	1,951	4%	1,028	-7%	-923
Strata Total		100%	17,311	100%	22,953	0%	5,643

Millar Western has over-established normal intensity pine and under-established pine and white spruce crop plans and normal-intensity black spruce area.

Weyerhaeuser’s regeneration targets reflect the deciduous harvest profile. Weyerhaeuser has achieved its regeneration distribution (Table 10, Table 11).

Table 10. Weyerhaeuser regeneration target adjusted for actual 8-year area harvested.

Weyerhaeuser Actual 8-year Area Harvested by Strata								
Actual Harvest Area →		AW	PA	PL	SA	SB	SW	All
		1,962	0	0	0	0	0	1,962
AW	Normal	1,962	-	-	-	-	-	1,962
PA	Normal	-	0	-	-	-	-	0
SA	Normal	-	-	-	0	-	-	0
PL	Normal	-	-	0	-	-	-	0
	Crop Plan	0	0	0	-	-	-	0
SB	Normal	-	-	-	-	0	-	0
	Crop Plan	-	-	-	-	0	-	0
SW	Normal	-	-	-	-	-	0	0
	Crop Plan	0	-	-	0	-	0	0
TOTAL		1,962	0	0	0	0	0	1,962
Proportion of Actual Adjusted 8-year TSA Speceis Group Area Regenerated 8-year Target by Yield Class								
AW	Normal	100%	-	-	-	-	-	100%
PA	Normal	-	-	-	-	-	-	0%
SA	Normal	-	-	-	-	-	-	0%
PL	Normal	-	-	-	-	-	-	0%
	Crop Plan	0%	-	-	-	-	-	0%
SB	Normal	-	-	-	-	-	-	0%
	Crop Plan	-	-	-	-	-	-	0%
SW	Normal	-	-	-	-	-	-	0%
	Crop Plan	0%	-	-	-	-	-	0%
Strata Total		100%	0%	0%	0%	0%	0%	100%

**Table 11. Weyerhaeuser 8-year regeneration results.**

Weyerhaeuser 8-year Regeneration Distribution Metrics							
		Target		Achieved		Variance	
		(%)	Area (ha)	(%)	Area (ha)	(%)	Area (ha)
AW	Normal	100%	1,962	99%	1,485	-1%	-476
PA	Normal	0%	0	0%	0	0%	0
SA	Normal	0%	0	1%	16	1%	16
PL	Normal	0%	0	0%	0	0%	0
	Crop Plan	0%	0	0%	0	0%	0
SB	Normal	0%	0	0%	0	0%	0
	Crop Plan	0%	0	0%	0	0%	0
SW	Normal	0%	0	0%	0	0%	0
	Crop Plan	0%	0	0%	0	0%	0
Strata Total		100%	1,962	100%	1,502	0%	-460

FMA regeneration targets were determined by combining the three reporting companies' results (Table 12, Table 13). All strata, with the exception of pine normal-intensity and crop plans, black spruce normal and white spruce crop plans, meet the 1997-2006 DFMP regeneration targets.

Table 12. W13 FMA regeneration targets adjusted for actual 8-year area harvested.

All Operator Actual 8-year Area Harvested by Strata								
Actual Harvest Area →		AW	PA	PL	SA	SB	SW	All
		4,835	1,667	8,515	2,632	1,403	2,475	21,527
AW	Normal	3,392	-	-	-	-	-	3,392
PA	Normal	-	881	-	-	-	-	881
SA	Normal	-	-	-	1,594	-	-	1,594
PL	Normal	-	-	4,944	-	-	-	4,944
	Crop Plan	770	786	3,571	-	-	-	5,127
SB	Normal	-	-	-	-	1,271	-	1,271
	Crop Plan	-	-	-	-	133	-	133
SW	Normal	-	-	-	-	-	1,554	1,554
	Crop Plan	673	-	-	1,037	-	921	2,632
TOTAL		4,835	1,667	8,515	2,632	1,403	2,475	21,527
Proportion of Actual Adjusted 8-year TSA Speceis Group Area Regenerated 8-year Target by Yield Class								
AW	Normal	70%	-	-	-	-	-	16%
PA	Normal	-	53%	-	-	-	-	4%
SA	Normal	-	-	-	61%	-	-	7%
PL	Normal	-	-	58%	-	-	-	23%
	Crop Plan	16%	47%	42%	-	-	-	24%
SB	Normal	-	-	-	-	91%	-	6%
	Crop Plan	-	-	-	-	9%	-	1%
SW	Normal	-	-	-	-	-	63%	7%
	Crop Plan	14%	-	-	39%	-	37%	12%
Strata Total		100%	100%	100%	100%	100%	100%	100%



Table 13. W13 FMA 8-year regeneration results.

All Operator 8-year Regeneration Distribution Metrics							
		Target		Achieved		Variance	
		(%)	Area (ha)	(%)	Area (ha)	(%)	Area (ha)
AW	Normal	16%	3,392	11%	2,766	-5%	-626
PA	Normal	4%	881	8%	2,083	4%	1,202
SA	Normal	7%	1,594	8%	1,982	0%	388
PL	Normal	23%	4,944	48%	12,094	25%	7,149
	Crop Plan	24%	5,127	17%	4,320	-7%	-807
SB	Normal	6%	1,271	0%	29	-6%	-1,241
	Crop Plan	1%	133	0%	0	-1%	-133
SW	Normal	7%	1,554	4%	1,081	-3%	-472
	Crop Plan	12%	2,632	4%	1,028	-8%	-1,604
Strata Total		100%	21,527	100%	25,384	0%	3,856

The lack of a process to determine and clarify company-specific regeneration targets that meet DFMP objectives was identified as a weakness of the 1997-2006 DFMP implementation and the leading cause for strata balancing variances. The 2007-2016 DFMP addresses this with the creation of an ongoing multi-stakeholder DFA Silviculture Committee to identify regeneration targets and quantify success for each operator. This committee will also clarify how reporting issues are to be addressed and will enable timely implementation of corrective action to identified concerns. The DFA Silviculture Committee membership consists of all timber disposition holders, the Alberta government and a FRIAA representative. Refer to *Appendix XVII - Terms of Reference – DFA Silviculture Committee*.

In addition to the creation of the DFA Silviculture Committee, the 2007-2016 DFMP regenerated strata balancing is addressed and monitored through **VOIT 21 – Forestry Operator specific regenerated strata distribution percentage by subunit (2.1.1.1C)**.

Disposition Activity (3.3.111)

Current Status:

Dispositions to the end of the 2004 timber year were included in the landbase classification process (refer to *Appendix VI – Development of the Landbase*).

The original government monitoring request was that Millar Western monitor and report on unplanned deletions and redo the AAC when unplanned deletions exceed 3%. Millar Western initiated a comprehensive process to identify and spatially capture industrial dispositions and other land losses. Landbase losses from the last DFMP up to the creation of the 2007-2016 DFMP landbase were under 3%. Millar Western’s landbase tracking process was used to provide the detail surrounding landbase losses required by the 2007-2016 DFMP landbase. The new



planning standard has replaced the 3% limit by 2.5% and provided more direction around AAC revision.

New government policy requires that predicted volumes lost through other industrial activity on the landbase are charged to the AAC drain, regardless of whether the volume is actually recovered. Millar Western has proposed a new process to address AAC drain and AAC losses from dispositions. This process is outlined in *Chapter 5 – Forecasting and the Preferred Forest Management Scenario*; the commitment to develop a new process is located in **Company Commitment 4 – Develop and implement industrial salvage tracking process** of *Appendix XXIII – Commitments*.

This item has linkages to reporting item 3.3.104 in the 2001 Stewardship Report.

Other Silviculture Treatments (3.3.114)

Current Status:

2007-2016 DFMP has no crop plans and no partial harvesting other than the Athabasca flats. Updated reporting on other silviculture systems will be provided in 2006 Stewardship Report.

Strata Conversion (3.3.115)

Current Status:

This issue is addressed in the 2007-2016 DFMP through **VOIT 21 – Forestry-operator specific regenerated strata distribution percentage by subunit (2.1.1.1C)** and through **VOIT 1 – Area of opening, mature + old, old and oldgrowthness forest by species strata for the gross and managed landbase for each FMU (1.1.1.1)**.

Refer to item 3.3.109 (Annual Silviculture Targets) in the 2001 Stewardship Report.



4. Significant Events Since the Last FMP

This section identifies significant physical and administrative events that have impacted Millar Western since the approval of its 1997-2016 DFMP.

4.1 Amendment of FMA to include W11

On July 25, 2002, Millar Western's Forest Management Agreement (FMA9700034) was amended through an Order in Council (O.C. 280/2002) to include the W11 Forest Management Unit (FMU). The addition of W11 increased the company's gross FMA area by 162,000 ha, to 439,000 ha.

As required under the Alberta's Interim Forest Management Planning Manual (Alberta, 1998), Millar Western completed a Preliminary Forest Management Plan (PFMP) for the W11 area. This PFMP was submitted to the Alberta government on August 19, 2004, and approved, with conditions, on November 1, 2004. The plan included the following components for W11:

- Landbase development;
- Yield curve development;
- Forest management values (aligned with 1997 DFMP for W13); and
- Timber Supply Analysis.

Prior to the incorporation of W11 into MWFP's FMA, the company had a Deciduous Timber Allocation (DTAW110001), giving it the right to harvest 70,000 m³ from the FMU. Following



the revision of the FMA, Millar Western’s DTA was cancelled and replaced with FMA harvest authority. Coniferous Timber Quotas (CTQ) were also revised, but the annual allowable cuts remained unchanged until the approval of the PFMP. Upon approval of the PFMP (“conifer surge cut’ scenario) on May 1, 2004, the new AAC volumes, as defined in Table 14 from the W11 approval letter, came into effect.

Table 14. W11 PFMP AAC by company and disposition.

Company Name	Disposition ID	AAC Volume	AAC Volume	Utilization Standard (cm)	Annual	Quadrant ¹ Volume (m ³)
		Allocation (m ³)	Allocation (m ³)		Reconciliation Volume (m ³)	
Conifer Allocations						
Spruceland Millworks Inc.	CTQW110001	9.54	9,063	15/10	N/A	35,076
	CTQW110002	0.63	598	15/10	N/A	2,244
	CTQW110003	62.52	59,394	15/10	N/A	155,864
Ft. Assiniboine Lumber Ltd.	CTQW110004	6.26	5,947	15/10	N/A	15,606
O.K. Lumber Ltd.	CTQW110005	21.05	19,998	15/10	N/A	39,996
Total Coniferous		100.00	95,000	15/10	N/A	248,786
Deciduous Allocations						
Millar Western Forest Products Ltd.	FMA9700034	N/A	109,863	15/10	51,981 *	563,701
Total Deciduous			109,863	15/10	51,981 *	563,701

¹ Quadrant period: May 1, 2001 - April 30, 2006.

* Reconciliation volume of 675,747 m³ harvested over 13 years.

As defined in the FMA, Millar Western is entitled to the deciduous volume within the FMA portion of W11, while the coniferous quota holders are entitled to the coniferous volume. As directed under Section 6 of the FMA, Millar Western entered into an agreement with the Fort Assiniboine Local Deciduous Timber Committee (FALDTC) to provide committee members harvest opportunities for Millar Western’s deciduous volume in W11.

With the incorporation of W11 into Millar Western’s FMA, the company now is responsible for initiating and coordinating the strategic initiatives for the area, which will be incorporated into the DFMP. The PFMP was developed with heavy involvement from other forestry operators. All disposition holders agreed to a combined landbase approach and to coordinate annual harvesting to manage primary and incidental volume flows so that annual harvest targets and mill demands could be satisfied. This approach was carried over into the new DFMP.

4.2 Mountain Pine Beetle

Although mountain pine beetle had long been known to exist in an endemic state within the pine forests of British Columbia, the population evolved to an epidemic level beginning in the early 1990’s, consuming vast tracts of pine forest at a rapid rate. This infestation has expanded into Alberta.

In 2002, mountain pine beetle was discovered in the Canmore-Banff area and, in 2005, in the Wilmore Wilderness Area. By the early summer of 2006, the insect had established itself, albeit in relatively minor way, along the western edge of Alberta. In mid summer of 2006, unprecedented wind events established the mountain pine beetle in west-central Alberta. In



October 2006, the beetle's presence was confirmed within the western portion of W13 within Millar Western's FMA.

The arrival of the mountain pine beetle is the most significant development facing the company since its last DFMP, one that emerged at the mid-way point of the development of the 2007-2016 DFMP and which forced the company to extensively rework the plan. Approximately one-third of Millar Western's managed landbase is composed of either pure or mixedwood pine stands and is potentially susceptible to mountain pine beetle attack. Within the 2007-2016 DFMP, the company is proposing to alter the age-class distribution of the pine and mixedwood pine stands to reduce the impact of a significant mountain pine beetle infestation (refer to *Chapter 5 – Forecasting and the Preferred Management Scenario*).

4.3 New Planning Standard

The 1997-2006 DFMP for W13 and the 2004 PFMP for W11 were both developed under the Alberta Interim Forest Management Planning Manual (1998). The development of the company's 2007-2016 DFMP coincided with the introduction of the province's new manual, The Alberta Forest Management Planning Standard (Version 4.1 – April 2006) (Alberta, 2006) (Planning Standard).

Because the standard was new and, in effect, still evolving during the initial stages of plan development, both company and government staff on the Plan Development Team (PDT) struggled to come to terms with the new requirements; however, in the end, the company did succeed in meeting its obligations, as detailed in *Appendix I - Regulated Forestry Professional Checklist*. It is worth noting, however, that the company incurred significant additional costs in the process of trying to adhere to standards that were in a constant state of flux. Not only did this result in multiple adjustments to the DFMP terms of reference, which had previously been approved by the Alberta government, but it also required the company to rework already-completed sections of the plan.

4.4 New Sawmill

In June 2001, Millar Western began production of dimensional softwood lumber at its newly constructed high-efficiency sawmill in Whitecourt. The new sawmill consumes a higher volume of sawlogs than its predecessor (Table 15) and also utilizes some smaller logs.

**Table 15. Consumption and production of the sawmills at the Whitecourt site.**

Year	Sawmill	Log Consumption (m3)	Production (Mfbm)	Chip production (bdt)
2000	Old	908,832	186,577	115,549
2002	Old	13,438	3,710	2,912
	New	847,980 ¹	190,485	140,267
2006	Old	0	0	0
	New	1,037,897 ²	244,968	154,845

1 - Includes 105,350 m3 of pulplogs.

2 - Includes 44,041 m3 of pulplogs.

4.5 Purchase of Mostowich

On August 1, 2007, Millar Western assumed ownership of the manufacturing and forest assets formerly belonging to Mostowich Lumber Ltd. (Mostowich), a privately owned lumber company based in Fox Creek, Alberta, that has historically conducted forestry operations in the same geographic area as Millar Western.

Mostowich's timber assets included Coniferous Timber Quotas (CTQ) in W1, W13 and W14, with a combined annual allowable cut of 140,000 m³. In addition, Mostowich received 65,000 m³ of logs through a chip/log transfer agreement with one other local forest products company. These fibre sources are used to furnish the operation's sawmill in Fox Creek, Alberta, which has an annual production capacity of 45 million board feet.

4.6 Certification

Since the 1997-2007 DFMP was approved, Millar Western has made significant strides in achieving independent verification of the sustainability of its forest management practices. As well as maintaining certification under the regional scheme *FORESTCARE*, to which the company has been certified since 1995, Millar Western achieved ISO 14001 2002 standard in March 2005. ISO 14001 certification provides third-party verification that an organization is demonstrating sound environmental performance by controlling the impact of its activities, products or services on the environment.

Having achieved ISO certification, the company's Whitecourt woodlands operation next pursued certification to the Canadian Standards Association's (CSA) Z-809-02 Sustainable Forest Management Standard for its Forest Management Agreement (FMA) area, which it achieved in December 2006. Certification to the CSA standard assures stakeholders, including customers and communities, that Millar Western's forest products are derived from forested lands managed to a consistently high level of sustainability. Canada's national standard for sustainable forest management, CSA Z-809, was first published in 1996 following years of discussion and work by a committee of timber producers, scientists, academics, and representatives of the provincial and



federal governments, as well as environmental, consumer, union, and aboriginal representatives. The standard is recognized by the Programme for the Endorsement of Forest Certification (PEFC), a global, independent, non-profit, non-governmental organization that assesses and endorses national forest certification programs.

Millar Western is currently seeking to become Chain of Custody (CoC) certified under the PEFC program, a process that is scheduled for completion in November 2007. CoC certification serves two main purposes: it tracks wood fibre through the supply chain, ensuring that it was legally obtained, and it verifies the amount of SFM certified wood fibre in an end product. Once CoC certification has been achieved, Millar Western will pursue SFI sustainable forest management certification for its quota areas, which will serve to significantly increase the amount of certified wood fibre in its products and further improve their desirability in the international marketplace.

4.7 Land Withdrawals

Over the last several years, industrial development has increased at unprecedented rates both in the green and white zones of Alberta. Oil and gas and, to a lesser extent, aggregate exploration and production compete with the forest industry for use of Crown lands. During the years 1997 to 2004, approximately 3,086 ha were withdrawn from the FMA area in W13. This represents a significant amount of forest that is unavailable for production for an indefinite period of time. A small amount of dispositions on the DFA have been reforested but currently there is no process to reclaim this land for long term forestry purposes outside the completion of a new forest inventory.



5. References

Alberta Environmental Protection, Land and Forest Service. 1998. Interim Forest Management Planning Manual – Guidelines to Plan Development, Version: April 1998. Edmonton, AB.

Alberta Sustainable Resource Development, Public Lands and Forests Division. 2006. Alberta Forest Management Planning Standard, Version 4.1 – April 2006. Edmonton, AB.



6. Annex 1

6.1 W11 2004 PFMP Approval Letter

November 1, 2004 from Alberta to Millar Western.



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06301 – 10

November 1, 2004

Mr. Jonathan Russell, RPF
Chief Forester
Millar Western Forests Products Ltd.
16640 – 111 Avenue
Edmonton, Alberta
T5M 2S5

Dear Mr. Russell:

**Subject: PRELIMINARY FOREST MANAGEMENT PLAN APPROVAL –
MILLAR WESTERN FOREST PRODUCTS LTD. FOREST MANAGEMENT
AGREEMENT – FOREST MANAGEMENT UNIT W11**

The department hereby approves the Preliminary Forest Management Plan for FMU W11 dated August 19, 2004, submitted by Millar Western Forest Products Ltd. (MWFP).

The approval is subject to the following conditions:

Growth and Yield

The department requires acceptable growth and yield plans, as discussed in the new forest management planning standard. In this regard, the following condition applies:

Condition 1:

Millar Western shall develop a growth and yield plan acceptable to the department by January 30, 2005, for inclusion in the Millar Western Detailed Forest Management Plan (DFMP) to be submitted in 2006.

Harvest Sequence

Implementing the spatial harvest sequence is essential. Approximately one-third of the coniferous AAC and one-quarter of the deciduous AAC are incidental volumes (see table 6-2, page 22 of the PFMP TSA Documentation). Adhering to the strata proportions presented in table 10-6 of the PFMP submission will ensure that primary and secondary volume harvesting is implemented in accordance with the plan.

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**Condition 2:**

The following applies:

- i. MWFP and the embedded operators must follow the mapped harvest sequence as presented in the PFMP.
- ii. To address operational planning concerns, MWFP and the embedded timber disposition holders are authorized to modify the spatial harvest sequence (SHS) by no more than +/- 10% of the area within each strata presented in Table 10-6 of the PFMP, in each compartment, within each decade, while harvesting no more than 110% of the total area within the SHS by compartment, by decade.
- iii. Replacement of deleted stands (from (ii) above) may be made from any other stand identified in the approved net land base of the PFMP.
- iv. Where Millar Western or the embedded operators exceed the variance described in (ii), the Forest Area Manager 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 variances.
- v. The department requires that an analysis of variance from the SHS be submitted annually.
- vi. The department will generally not request a modification of the harvest sequence for the first three years of the planning period unless it is required by a change in legislation or a policy approved by the Minister.

Coniferous Volume Replacement

Sustainability of the AAC requires that coniferous volume harvested from pure deciduous stands be monitored, reported, and replaced. MWFP and the embedded operators are encouraged to develop a coniferous volume replacement strategy that addresses this concern. Until such a strategy is developed and approved by the Executive Director, Forest Management Branch, the following conditions apply:

Condition 3:

Millar Western shall monitor and report area of pure deciduous stands harvested annually. Coniferous volumes from pure deciduous stands will be replaced by converting pure deciduous stands to pure coniferous stands according to the following formula:

- i.
$$\frac{[\text{Yield curve estimate of incidental coniferous volume per ha in pure deciduous stands at 80 years}]}{[\text{Yield curve estimate of coniferous volume per ha in pure coniferous stands at 80 years}]}$$
 = [ha of pure deciduous stands to be converted per ha cut] or, 1 ha reforested to pure coniferous for every 2.2 ha of pure deciduous strata harvested.

.../3



- ii. Millar Western and the embedded operators shall replace the default formula (3.i) above by developing an optimal incidental replacement strategy for coniferous and deciduous volumes acceptable to the Executive Director, Forest Management Branch, for inclusion in the DFMP due in 2006.

Industrial Salvage Timber

Timber volume drain resulting from non-forestry industrial operations must be accounted for to ensure sustainability. Other industrial activities that result in the harvest of timber must be tracked and the harvested timber volume accounted as production against the sustainable harvest level. Therefore, the following is required:

Condition 4:

Millar Western shall track the merchantable coniferous and deciduous timber volumes generated from industrial operations (salvaged and non-salvaged) on the FMA area and annually submit this information to the Senior Manager, Timber Production, Auditing and Revenue Section. Where these volumes have not been charged to a timber disposition within the FMA area, SRD shall charge these volumes to the operators' periodic or quadrant cuts within the originating FMU. These volumes shall be applied proportionally based on the embedded operator's share of the FMU AAC. Millar Western's regional volume tables may be used to determine volumes chargeable in place of provincial TDA tables for salvaged and non-salvaged merchantable timber volumes.

Approved Annual Allowable Cuts (AAC)

The following AACs are approved as per the "conifer surge cut" scenario submitted and are effective as of May 1, 2004.

W11 Coniferous Allocations

Company Name	Disposition #	Percentage Allocation	AAC Volume (m ³)	Utilization Standard (cm)	Quadrant May 1, 2001-April 30, 2006	Comment Re: QAAC
Spruceland Millworks Inc.	CTQW110001	9.54	9,063	15/10	35,076	18 m ³ overcut 1996 - 2001
Spruceland Millworks Inc.	CTQW110002	0.63	598	15/10	2,244	74 m ³ overcut 1996 - 2001
Spruceland Millworks Inc.	CTQW110003	62.52	59,394	15/10	155,864	37,076 m ³ + (59,394 x 2)
Ft. Assiniboine Lumber Ltd.	CTQW110004	6.26	5,947	15/10	15,606	3,712 m ³ + (5,947 x 2)
OK Lumber Ltd.	CTQW110005	21.05	19,998	15/10	39,996	CTQ is pending 19,998 m ³ x 2
Total		100	95,000		252,764	

.../4



W11 Deciduous Allocations

Company Name	Disposition #	Percent Allocation	AAC Volume (m ³)	Utilization Standard (cm)	Annual Reconciliation Volume (m ³)	Quadrant May 1, 2001-April 30, 2006	Comment Re: QAAC
Millar Western Forest Products Ltd.	FMA9700034	N/A	109,863	15/10	51,981*	563,701	QAAC = [104,638 m ³ + 135,375 m ³ + (2 x 109,863 m ³) + (2 x 51,981 m ³)]
Total			109,863		51,981	563,701	

* Reconciliation volume of 675,747 m³ (see SRD letter of May 28,2004) harvested over 13 years

In closing, the department requests that Millar Western assess the NSR areas in W11 during the development of the DFMP. A significant area of the FMA landbase is not satisfactorily restocked at this point in time. Commitments (timelines and detailed silviculture plan) by timber disposition holders to bring these areas to a fully stocked condition would affect the AAC in a positive way. Strategies to address this issue should be pursued in the DFMP.

If you have any questions regarding this approval, please contact Robert Stokes, Senior Manager, Forest Planning Section at (780) 422-2690.

Sincerely,

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



- cc: George Robertson, Area Manager, Woodlands Forest Area
- Robert W. Stokes, Senior Manager, Forest Planning Section, FMB
- Daryl Price, Senior Manager, Resource Analysis Section, FMB
- Doug Schultz, Senior Manager, Forest Tenure Section, FMB
- Jan Schilf, Forester, Forest Tenure Section, FMB
- Jerry Sunderland, Strategic Forestry Initiatives



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