



Millar Western Forest Products Ltd.

Chapter 6 – Sustainable Forest Management Strategy

2007-2016 Detailed Forest Management Plan

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1. Introduction

The W11 and W13 Preferred Forest Management Scenarios (PFMS) described in *Chapter 5 – Forecasting and the Preferred Forest Management Scenario* provided current and forecasted levels for selected indicators associated with the values, objectives, indicators and targets (VOITs) that are features of the desired future forest condition. This chapter describes the strategies that will be employed by Millar Western to meet those targets.

Millar Western's performance in delivering the strategy will be measured against the indicators and targets that are described in this chapter and described in detail in *Appendix XXIII – Commitments*. The other chapters provide context but should not be used in performance evaluations, only *Appendix XXIII – Commitments* should be used for this purpose.

The chapter is organized to follow the criteria and indicators of sustainable forest management endorsed by the Canadian Council of Forest Ministers (CCFM). A summary table that cross references the VOITs with the strategies described here is found at the end of section 2 (Table 1). A summary table of the company's other non-VOIT commitments (referred to as simply Company Commitments) is found in Table 2 at the end of section 3. A detailed account of each VOIT and Company Commitment is found in *Appendix XXIII – Commitments*.



2. CCFM Criteria

2.1 CCFM Criterion 1: Ecosystem Diversity

2.1.1 Access

Forest access roads are essential for managing the forest and provide opportunities for an array of other forest users. Road densities will be managed to reduce environmental impacts to the degree practical on both forest management units. Road locations will be designed to reduce road density, and the use of temporary or seasonal roads will be encouraged among Millar Western operations staff and the other forestry operators.

Open all-weather forestry road density targets of a maximum of 0.24 km/km² in W13 and 0.334 km/km² in W11 were set for the plan period. Open seasonal/temporary road target maximums, expressed in terms of total length, are 50 km in W11 and 220 km in W13 for the ten-year planning period (VOITs 4, 5).

2.1.2 Harvesting

The principle means of meeting the targets associated with conserving ecosystem diversity will be to harvest stands identified in the Spatial Harvest Sequence (SHS). In this way, the desired forest composition, structure and pattern will be attained in the future, thus conserving biodiversity values. A key driver in the development of the SHS in W13 was the preferential selection of stands susceptible to mountain pine beetle for harvest in this plan period. W11's SHS was developed to follow an oldest-first strategy and to balance harvesting operations across the FMU, which will contribute to greater operator integration.

Since the PFMS is an outcome of computer simulation, some variances between planned and actual harvest schedules are bound to occur due to errors in forest inventory and operational constraints (VOITs 1, 2, 3, 15, 32, 33). The acceptable variances to the future forest structure for



the term of this plan, as determined through modeling based on successful implementation of the SHS, are as follows:

Salvage harvesting following fire or blowdown is an important strategy for achieving targets under CCFM Criterion 5; Multiple Benefits to Society. However, these natural disturbances also play critical roles in maintaining ecosystem diversity (VOITs 7, 8). For this reason, up to 10% of burnt trees will be left in undisturbed patches within fire-salvage blocks, to maintain fire legacies.

Stand structure retention of live trees, snags and down woody debris is another important biodiversity conservation practice. Both single trees and small tree patches will be left, in harvest areas representing 1% of the total AAC (VOIT 11).

Riparian areas, which are sensitive to disturbances, are important places of connectivity between forest cover patches on the landscape and therefore deserve careful consideration when laying out harvest blocks and in subsequent operations. Millar Western is committed to zero incidences of non-conformance with Operating Ground Rules that relate to riparian area management (VOITs 9, 10, 13, 14). These same measures will be applied to water crossings and other sensitive sites, to maintain aquatic ecosystem integrity and to protect rare ecosystems. Some riparian areas will be harvested as exceptions to this strategy as part of the FORWARD studies on water quality.

Most rare-plant communities are found in rare ecosites and wetlands that are not part of the SHS; however, rare-plant communities can occur in unmapped inclusions within stands selected for harvest. Millar Western operations are currently guided by a rare-plant listing associated with mapped ecosites, but, to enhance the protection measures for uncommon plant communities, the company will develop and implement a more refined process for identifying and protecting uncommon plant communities (VOIT 6).

A network of protected areas also helps conserve biodiversity. There are no access or harvest areas proposed in protected areas. No new protected areas have been identified during this plan period. A new forest management plan will be required if higher level plans or government direction identifies the need to expand the network of protected areas above current levels (VOIT 18).

2.1.3 Renewal and Maintenance

Millar Western will pursue an aggressive regeneration strategy with the aim of increasing the long term growth potential from the forest. The company's forest renewal strategy focuses on efficient and prompt regeneration of harvested areas and will continue to encourage natural regeneration, supplemented by natural seeding, planting and tending as required to create the desired future forest condition. The target is to meet the species composition distribution and silviculture intensities of the PFMSs within 10% (VOIT 25) by area for each forest species strata being harvested during the planning term. The specific treatments are described in *Appendix IX – Silviculture Generic Establishment Regimes*.



The W13 PFMS was developed to recognize the threat of the mountain pine beetle. Millar Western will incorporate the following elements into its forest renewal program over the term of the plan to address the additional regeneration requirements of the W13 MPB PFMS (applies to green tree harvesting, not salvage operations) (Company Commitment 8):

- Ensure that additional pine seed is collected in the short term, to build up seed inventories;
- Move to white spruce bias for future planting;
- Endeavour to leave pine stands for natural regeneration by:
 - Evenly distributing sufficient quantity of pine cones across the cutover,
 - Planting white spruce, if insufficient pine cones exist, and
 - Considering pine-only plantings on drier southern exposures.
- Assess naturally regenerated stands for regeneration success and fill plant with white spruce wherever necessary;
- Achieve planting densities for maximum growth potential (1,500 – 2,000 stems/ha);
- Consider larger seedlings;
- Ensure appropriate site preparation and stand tending;
- Ensure juvenile spacing of naturally regenerated stands where necessary;
- Fill-plant not satisfactorily restocked (NSR) deciduous stands with white spruce seedlings;
- Use black spruce seedlings sparingly, only in conditions where white spruce would not survive; and
- Ensure that a regeneration monitoring program is implemented, so that sufficient data is available to validate our future growth projections for use in the 2017-2026 DFMP; (see also Company Commitment 9 and section 2.2).

Millar Western will also employ site preparation for planting and seeding, to enhance the growing environment for conifer seedlings. Since site-preparation methods such as brush-raking and prescribed fires can reduce the amount of downed woody debris, which is important for conserving biodiversity, Millar Western will instead use alternative treatments such as direct planting, trenching, mounding or intermittent patch methods of site preparation on the vast majority of sites, to help retain the downed woody debris content on harvested sites (VOIT 12). As they grow, some stands will require tending with herbicides, to ensure seedling survival and maximize seedling growth, maintain conifer dominance and ensure that the desired future forest conditions described in the PFMS are achieved.

Conservation of biological diversity includes the preservation of genetic resources. Maintaining networks of protected areas and special management zones like riparian zones and relying on natural regeneration will contribute to maintaining genetic diversity. To further manage for this criterion, planted seedlings will be grown from local seed sources, and Millar Western will continue to participate in tree improvement programs designed to maintain or increase genetic diversity and local adaptive characteristics (VOIT 16, 17).



2.2 CCFM Criterion 2: Ecosystem Productivity (VOITs 19 - 28)

In order to ensure that forest operations maintain and enhance forest ecosystem condition and productivity, Millar Western will pursue a number of monitoring strategies. The goal is to maintain the health, vitality, and rates of biological production, that, in forest management, generally relate to the successful regeneration of harvested areas (VOITs 19, 20, 21), as well as to maintaining the landbase in a productive state (i.e. limiting the conversion of forested area to non-forest types; such as roads and landings; VOIT 29), protecting forest ecosystems from insect infestations or other calamities and mitigating the impacts of these events (VOITs 23 - 26), protecting the forest from invasive species (VOIT 27), and monitoring overall ecosystem health (VOIT 28).

In order to assess the prompt and successful regeneration of harvested areas, Millar Western will review the annual percent of regeneration surveys that is considered successful (VOIT 19), as well as the cumulative percentage of successes over the course of the plan (VOIT 20). Success achieved by specific operators will also be assessed (VOIT 21). Millar Western will complete regeneration surveys in accordance with the Alberta Regeneration Survey Manual. The target is to achieve 100% success as reported in regeneration surveys, and 100% of stands reported as “free to grow” in performance surveys. The company’s silviculture program will be the tool used to achieve these targets. Achievements will be reported annually.

Maintaining the productive landbase, as noted above, relates to minimizing the amount of productive forest land lost to roads and landings, as well as to oil and gas exploration, pipeline construction, well-site development, and coal-bed methane development (VOIT 22). In addition to limiting road densities as described above (VOITs 4, 5), Millar Western will continue to form and burn slash piles, to recover productive land but also to reduce fire hazards and improve aesthetics.

The government of Alberta has the authority to approve withdrawals from the landbase, which often results in long-term or permanent forest loss (VOIT 22). Therefore, Millar Western has a limited ability to influence the loss of productive forest; however, the company will apply the following strategies to address this VOIT of sustainability:

- Participate in government consultation regarding “Integrated Land Management” initiatives;
- Work with other users to develop common road access options; and
- Investigate initiatives that will re-introduce forestland into the DFA.

In addition, Millar Western will continue to monitor the amount of productive forest land over time, through regular inventory updates.

Ecosystem productivity can also be damaged by insect infestations or other natural calamities. Alberta government monitoring and data collection efforts regarding insects, disease, and natural disturbances (e.g., fire, blow-down) can help to detect these potentially-devastating events at an



early stage, thus enabling forest managers to mitigate negative impacts through strategic or operational planning. Examples of such defensive planning are upcoming harvest operations to address mountain pine beetle (MPB) (see VOIT 24 and 26), and the timber recovery efforts in areas that have already seen MPB damage (VOIT 25). Currently, the presence of the MPB appears to be minor within the DFA; however, the infestation may increase significantly in the coming years. Therefore, in addition to the planned actions mentioned above, Millar Western has set a target (for VOIT 23) to report all areas where insects, disease or other factors are affecting an area of 10 ha or greater. In addition, the company has developed a standard operating procedure and implemented a training program for identifying and reporting MPB. The company's monitoring efforts will be closely coordinated with the local Alberta government office.

In Alberta, the control of invasive species is frequently related to the reduction of noxious weeds, which may negatively impact nearby agricultural areas. Therefore, FMA holders are required to implement and adhere to a noxious weed program. Millar Western will maintain its existing Noxious Weed Program and revise it where necessary, following annual reviews (VOIT 27).

The maintenance of overall forest health is a key component of ecosystem productivity; however, it is often difficult to make an accurate assessment of the well-being of an ecosystem. For this reason, scientists have identified 17 indicator wildlife species that are more sensitive to environmental change than others and Millar Western will monitor their habitat as a way of assessing overall forest health over time (VOIT 15). Millar Western is also engaged in several related research projects, such as the Study of Forestry and Amphibians (SOFA) project, which will help to assess the impacts of forest harvesting on amphibians, which are key VOIT species for ecosystem health (VOIT 28). Another initiative is the FORWARD project, which is continuing its work in finding practical solutions to watershed management in the boreal forest. The FORWARD team is collecting information on weather, soils, soil microbial communities, groundwater, wetlands, vegetation, riparian and aquatic bio-indicators, stream flow and water quality, which will be incorporated into future long-term modeling for operations planning..

2.3 CCFM Criterion 3: Soil and Water Quality (VOITs 29 - 35)

The conservation of soil and water resources is a key component of forest sustainability. In order to protect soil resources, Millar Western will adhere to the Operating Ground Rules and Forest Soils Conservation Task Force Report (AFPA/ALFD 1996), and aim to achieve a target of zero instances of non-conformance with the Operating Ground Rules relating to bared harvest area, minimizing erosion, soil slumping, and rutting (VOITs 29, 30, 31).

To protect water quality, Millar Western will seek to maintain water quantity levels within acceptable ranges, as determined by forecasting models (VOITs 32, 33). In addition, Millar Western will continue to support the FORWARD II project. By assessing links between forest operations and water quality and quantity, this research initiative is expected to provide Millar



Western with information that will allow it to operate in a manner that will maintain or improve water quality within and downstream of the DFA (VOIT 34).

Millar Western will also maintain riparian buffers along waterways in the DFA, in accordance with the Operating Ground Rules or other Alberta government-approved riparian management strategies. The company has a target of zero instances of non-conformances with the requirement to maintain these buffers (VOIT 35).

2.4 CCFM Criterion 4: Global Ecological Cycles (VOITs 36 - 37)

Forest ecosystems contribute to global ecological cycles, including the water and carbon cycles. Therefore, healthy forest ecosystems should contribute to the health of global ecological cycles. Today, the carbon cycle is of particular interest, due to the current rate of global warming as a result of climate change, which is driven to a large extent by excess carbon in the atmosphere. Forest ecosystems can act as either a sink (absorbing and storing carbon through plant growth) or a source of carbon (releasing carbon through fire or decomposition). To determine the DFA's contribution to global ecological cycles, Millar Western completed a carbon budget analysis as part of the forecasting for the 2007-2016 DFMP (VOIT 36). This work is contained within *Appendix XV – Carbon Accounting on the DFA*. The percent change in the managed (and forested) landbase can also play a role in carbon cycles (VOIT 37).

2.5 CCFM Criterion 5: Multiple Benefits to Society (VOITs 38 - 45)

The forest industry and the landbase it manages provide multiple benefits to society, including economic (employment, tax revenues, etc.) and social (contributions to local communities, recreation, etc.). One of Millar Western's primary objectives is to sustain these multiple forest benefits for current and future generations.

The establishment, approval and implementation of an appropriate Annual Allowable Cut (AAC) will ensure that the forest resource is being managed in a sustainable manner (VOIT 38). To this end, Millar Western will seek the Alberta government's approval of both the AAC and the process used to determine the AAC.

As a means of achieving sustainable forest management, non-timber values such as other commercial, recreational and spiritual activities must also be considered. To ensure that many perspectives were taken into account in the development of the DFMP, Millar Western prepared a DFMP Development Communication Plan (Appendix II), which set out a strategy for involving stakeholders over the planning period, including open houses and the formation of Public Participation Group (VOIT 39). A summary of communication efforts and results is included in



the 2007-2016 Stakeholder Communications Summary (Appendix III). To ensure that the same level of stakeholder engagement is maintained throughout the DFMP implementation period, the company has also developed the 2007-2016 DFMP Implementation Communication Plan (Appendix V) (VOIT 44). Building on existing strategies, this plan calls for the creation of new consultation and communications tools, such as the development of a new public advisory group and virtual open house on its external website, to allow more stakeholders to view and provide input into its operational plans.

Another non-timber value present on many forest management areas is cultural heritage values or artifacts, which can be highly significant to individuals or groups in the area. Given the sensitivity of these values, Millar Western has set a target of zero instances of non-conformance with the Heritage Resources Act, to ensure they are protected during company operations (VOIT 40).

Aesthetics can also be of great importance, not only to residents but also to recreationalists and tourists. Millar Western recognizes that recreational users of the DFA, as well as those who simply travel through the area, generally appreciate established forests as opposed to areas that have been recently harvested. This is particularly true of viewpoints along high-use travel and recreation areas (e.g. highway corridors). Therefore, Millar Western plans to complete an assessment and identification of areas with high aesthetic value within the DFA by November 30, 2008 (VOIT 41). This will be achieved through analysis of visual models and consultation with other DFA forestry operators and the public.

Millar Western will also contribute to enhancing public safety in the Whitecourt community by minimizing over the long term the area in the 'extreme' and 'high' fire-behaviour-potential classes in the Whitecourt FireSmart Community Zone (VOIT 42). This is intended to reduce the risk and severity of wildfire impacts on the town. Similar efforts will be made for the entire DFA (VOIT 43), in order to protect timber resources and other non-timber values.

In order to provide the desired benefits from the forest, timber productivity needs to be maintained or increased over the long term. To this end, Millar Western has committed to a target of no net decrease in stand yields as natural stands are transitioned into managed stands (VOIT 45).

2.6 CCFM Criterion 6: Accepting Society's Responsibility for Sustainable Development (VOITs 46 - 53)

Society's responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made. This requires the involvement of key stakeholders, including aboriginal communities, in the decision-making process. Toward this end, Millar Western has worked diligently to build a productive relationship with the Alexis Nakota Sioux Nation, with whom it signed a Forestry and Economic Development Agreement in 2004 (for related commitments, see VOITs 47, 48). Working with the Alberta government, the company has identified other aboriginal communities whose traditional lands may also overlap



with the DFA and has initiated contact with them. These communities include the Lesser Slave Lake Regional Indian Council, the Sturgeon Lake Cree Nation and the Alexander First Nation. Millar Western recognizes and respects the traditional land-use areas of Alberta's aboriginal communities and values their input into its forest management activities. The company will continue to consult, at the community level, with designated representatives of aboriginal communities defined by the Alberta government (VOIT 46).

Among the actions Millar Western has taken to solidify relations the Alexis Nakota Sioux Nation was the creation of the Environmental Co-Stewardship Committee (ECSC) in 2004. The ECSC is one of several initiatives that have flowed from the Forestry and Economic Development Agreement (FEDA), which formalized the ongoing efforts of Millar Western and the Alexis Nakota Sioux Nation to work together to ensure the responsible development of forest resources in areas where the two parties have usage rights and traditional ties. Since its formation, the ECSC has proven an effective forum in which to raise and discuss land-use issues, as well as to pursue economic development opportunities. Regular and frequent ECSC meetings will ensure that a constructive dialogue is maintained, and that issues and opportunities are addressed on a regular basis, which will be key to meeting the objective of sustaining a positive and productive working relationship. Millar Western has a target to hold four meetings with the ECSC each year (VOIT 48).

General public participation is another component of sustainable development. Millar Western recognizes that it has an obligation to involve the public in its Sustainable Forest Management activities and, toward that end, has developed a comprehensive public participation plan (refer to *Appendix V – DFMP/SFMP Implementation Communication Plan*) which it will adhere to (VOIT 49). In addition, Millar Western will create a virtual open house on its external website by July 31, 2008 (VOIT 51). Millar Western will also create, by December 31, 2007, a permanent Public Advisory Committee (PAC), to which it will recruit representatives of major stakeholder groups and hold a minimum of four (4) meetings annually, starting from the date that the group is established (VOIT 52). The PAC will monitor VOITs, review operating plans, discuss issues relevant to sustainable forest management, and advise the company on communications with the broader public. Another target with respect to enhancing communications with the public is the establishment of a toll-free, 24-hour telephone hotline (VOIT 53). This tool will enable the public to voice comments, questions and concerns about sustainable forest management at a time convenient to them and without cost. The company will commit to providing an initial response within two business days and will promote the hotline through media advertisements and on signage in areas where the company is active.

In addition to providing access to information about forest management plans, Millar Western is committed to promoting a greater understanding of forest characteristics and issues facing the forest industry as a whole, by providing the public with an opportunity to visit a working forest. The Huestis Forest serves as a valuable venue for public education, where people can see, first-hand, native forest characteristics and the impacts and opportunities associated with managing forests for commercial uses, including forestry and energy development, and non-commercial values. To maintain the value of the Huestis Forest, Millar Western will work with the Alberta government and other stakeholders to form a multi-stakeholder steering committee and, to develop and implement, by December 31, 2008, a management plan to enhance the demonstration and educational value of Huestis Forest (VOIT 50).



Table 1. VOIT summary table.

ID	CSA SFM Element	Value	Objective	Indicator	DFMP Target	Reporting	Acceptable Variance	Response
CCFM Criterion: I. Biological Diversity								
1	1.1. Ecosystem Diversity.	1.1.1. Landscape Scale Biodiversity.	1.1.1.1. Maintain biodiversity by retaining the full range of cover types and seral stages.	Area of opening, mature + old, old and oldgrowth forest by species strata for the gross and managed landbase for each FMU (1.1.1.1).	At the start of the 2017 Timber Year, achieve the seral stage class species strata proportions as defined in the target tables.	Stewardship Report: - Actual area and proportion within each seral stage class and species strata; - Variance between actual and target values. DFMP: - Forecasted area and proportion within each seral stage class and species strata at years 0, 10, 50, 100 and 200 for FMUs' gross and managed landbases; - DFA maps of seral stage classes at years 0, 10 and 50 for FMUs' gross and managed landbases.	Opening seral stage class: - Less than 110% of target. Mature + old, old or oldgrowthness seral stage class: - Between 90 - 110% of target.	Adjust strategies in subsequent FMPs.
2			1.1.1.2. Maintain biodiversity by avoiding landscape fragmentation.	Opening patch size distribution on the gross landbase for each FMU (1.1.1.2a).	At the start of the 2017 Timber Year, achieve the opening patch size distribution targets defined in target table.	Annual Report: - Actual harvest size statistics. Stewardship Report: - Actual opening patch area and proportion by size class; - Variance between actual and target values. DFMP: - Forecasted opening patch area and proportion by size class at years 0, 10 and 50 for FMUs' gross landbases; - DFA maps showing the distribution of opening patch polygons by size class at years 0, 10 and 50 for FMUs' gross landbases.	+/- 10% opening patch area, or progress to achieving the 200-year planning horizon target is demonstrated.	Adjust strategies in subsequent FMPs.
3				Percent of overall oldgrowthness forest area that is interior oldgrowthness forest by FMU for the gross landbase (1.1.1.2Bi).	At the start of the 2017 Timber Year, achieve the target proportions of oldgrowthness forest that is interior oldgrowthness forest within the gross landbase for each FMU as defined in target tables.	Stewardship Report: - Actual proportion of interior oldgrowthness for FMUs' gross landbases; - Variance between actual and target values. DFMP: - Forecasted proportion interior oldgrowthness at years 0, 10 and 50; - DFA maps showing distribution of interior oldgrowthness polygons at years 0, 10 and 50.	Not < 80% of the target values for each FMU.	Adjust strategies in subsequent FMPs.
4			1.1.1.3. Maintain biodiversity by minimizing access.	Open all-weather forestry road density by FMU (1.1.1.3A).	At the start of the 2017 Timber Year, the target open all-weather forestry road densities within the DFA, by FMU, are: - W11 - < 0.240 km/km ² - W13 - < 0.334 km/km ²	Stewardship Report: - Actual density of open all-weather forestry roads by FMU; - Variance between actual and target forestry road values; - Actual density of other users' open all-weather roads by FMU (SRD to supply data).	< 20% in excess of the target within each FMU.	Adjust strategies in subsequent FMPs.
5				Open seasonal / temporary forestry road length by FMU (1.1.1.3B).	At the end of each Timber Year (beginning 2007), the target open seasonal/temporary road lengths within the DFA, by FMU, are: - W11 - < 50.0 km - W13 - < 220.0 km	Annual Operating Plan: - Schedule of seasonal/temporary roads for use in upcoming Timber Year. Stewardship Report: - Length of seasonal/temporary roads opened and used by forestry operators on the DFA, by FMU.	< 20% in excess of the target within each FMU.	Adjust strategies in subsequent AOPs.
6			1.1.1.4. Maintain plant communities uncommon in DFA or Province.	Existence of process for maintaining plant communities uncommon in the DFA and/or Province (1.1.1.4).	By December 31, 2008, develop and implement a process for identifying uncommon plant communities, training field staff in their identification, tracking their location and protecting.	Annual Report: - Summary of progress on developing and implementing process for maintaining identified uncommon plant communities in the DFA and/or in the province. Stewardship Report: - To be determined.	Six (6) months (June 30, 2009).	Provide rationale and action plan with timeline for development and implementation.



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ID	CSA SFM Element	Value	Objective	Indicator	DFMP Target	Reporting	Acceptable Variance	Response
7			1.1.1.5. Maintain unique habitats provided by wildfire and blowdown events.	Area of unsalvaged burned forest (1.1.1.5A).	Adhere to Alberta gov't's Fire Salvage Directive and FireSmart objectives.	Annual Report: - Number of fires that occurred on the DFA, and their associated areas. Stewardship Report: - Number of fires that occurred on the DFA, and their associated areas; - Number of fires and the area of those fires in which salvage operations were conducted.	0 % at the end of the 10-year DFMP period.	Adjust strategies in AOPs.
8				Area of unsalvaged blowdown forest (1.1.1.5B).	Adhere to the following merchantable blowdown retention values: Blowdown patch >= 100 ha: - > 10% in patches 10-100 ha - > 5% in small patches or single trees. Blowdown patches < 100 ha - > 10% in small patches or single trees.	Annual Report: - Progress on development and implementation of blowdown salvage strategy consistent with targets. Stewardship Report: - Reporting aspects defined in blowdown salvage strategy.	0 % at the end of the 10-year DFMP period.	Adjust strategies in AOPs.
9			1.1.1.5. Retain ecological values and functions associated with riparian zones.	Number of non-conformance incidents with FMA Operating Ground Rules or Alberta gov't. approved Millar Western riparian management strategy (1.1.1.6).	Zero (0) annual incidents of non-conformance.	Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	0 non-conformance incidents.	Corrective actions and review of existing policies and procedures.
10			1.1.1.6. Investigate alternative management regimes of forest stands adjacent to water bodies in a research context.	Volume and area harvested in riparian areas under Alberta gov't. approved Millar Western Riparian Management Strategy (1.1.1.7).	Harvest <= 25% volume/area annually in riparian areas adjacent to harvest areas.	To be defined upon completion of riparian management strategy.	To be defined upon completion of riparian management strategy.	To be defined upon completion of riparian management strategy.
11	1.1.2. Local / stand scale biodiversity.		1.1.2.1. Retain stand level structure.	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).	Retain 1% of total AAC volume as residual structure annually, by FMU, distributed over selected operating compartments.	Annual Report: - Volume and percentage of AAC of live merchantable structure retention left on the DFA, by compartment and FMU. Stewardship Report: - Volume and percentage of AAC of live merchantable structure retention left on the DFA, by compartment and FMU by year.	+ / - 10 % of the target, at the end of the 10-year DFMP period	Adjust strategies in subsequent FMPs.
12				Percent of harvested area by FMU, with downed woody debris volume equivalent to pre-harvest conditions (1.1.2.1B).	>= 75% of annual harvest area with DWD equivalent to pre-harvest conditions, by FMU.	Stewardship Report: - Actual percent of harvested area in DFA in which DWD levels are equivalent to, or greater than, pre-harvest levels	+/- 20% of the target, at the end of the 10-year DFMP period.	Adjust strategies in subsequent AOPs and FMPs.
13			1.1.2.2. Maintain integrity of sensitive sites.	Number of non-conformances incidents with FMA OGRs in relation to identified sensitive sites located on the DFA (1.1.2.2).	Zero (0) annual incidents of non-conformance.	Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	zero (0) non-conformance incidents.	Corrective actions and review of existing policies and procedures.
14			1.1.2.3. Maintain aquatic biodiversity by minimizing impacts of water crossings.	Number of non-conformance incidents with Millar Western's OGRs or Code of Practice for Water Course Crossings, by FMU (1.1.2.3).	Zero (0) annual incidents of non-conformance.	Annual Operating Plan: - Number and type of watercourse crossings installed on all roads by conformance status. Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	zero (0) non-conformance incidents.	Corrective actions and review of existing policies and procedures.



ID	CSA SFM Element	Value	Objective	Indicator	DFMP Target	Reporting	Acceptable Variance	Response
15	1.2. Species diversity.	1.2.1. Viable populations of identified plant and animal.	1.2.1.1. Maintain habitat for identified indicator species.	Area of suitable habitat within each FMU for each biodiversity assessment species (1.2.1.1).	At the start of the 2017 Timber Year, achieve the area, and proportion of area, of suitable habitat for the biodiversity assessment species defined in target tables.	Stewardship Report: - Summary of adherence to SHS. 2017 DFMP: - Actual proportion of suitable area for each BAP species. - Variance between target and actual area of suitable habitat for each BAP species. 2007 DFMP: - Tabular summary of projected area of suitable habitat for each BAP species at years 0, 10, 50, 100 and 200 - Maps showing projected distribution of suitable habitat for each BAP species at years 0, 10 and 50.	< 10% below target area for each species.	Adjust strategies in subsequent FMPs.
16	1.3. Genetic diversity.	1.3.1. Genetic integrity of natural tree populations.	1.3.1.1. Retain wild forests populations for each tree species in each seed zone through establishment of in-situ reserves by the organizations or in cooperation with Alberta gov't.	Number and area (ha) of in-situ genetic conservation areas (1.3.1.1).	Establish zero (0) genetic conservation areas for each seed zone conforming with Section 20 of STIA.	Stewardship Report: - Number of in-situ conservation areas required in each seed zone and number established on DFA. - Map of established in-situ conservation areas.	N/A	N/A
17			1.3.1.2. Retain wild forests genetic resources through ex-situ conservation.	Number of provenances and genetic lines in ex-situ gene banks and trials (1.3.1.2).	Active ex-situ conservation program for all Controlled Parentage Program plan species in cooperation with Alberta gov't.	Stewardship Report: - Number of ex-situ conservation areas required in each seed zone and the number and spatial location of existing areas in cooperation with Alberta gov't.	N/A	N/A
18	1.4. Protected areas.	1.4.1. Areas with minimal human disturbance within managed landscape.	1.4.1.1. Integrate transboundary values and objectives into forest management.	Stakeholder consultation regarding protected areas as identified through government processes (1.4.1.1).	Maintain ongoing consultation with relevant protected areas agencies.	Annual Report: - Whether new parks or protected areas are proposed within or adjacent to DFA, as confirmed by Alberta gov't.; - Summary of consultation and outcomes related to proposed or existing parks or protected areas.	None.	Adjust strategies in subsequent FMPs.
CCFM Criterion: 2. Ecosystem Productivity								
19	2.1. Ecosystem resilience.	2.1.1. Reforested harvest areas.	2.1.1.1. Meet reforestation targets on all harvest areas.	Annual percent of satisfactory regenerated surveys (establishment surveys and performance surveys) by company and FMU (2.1.1.1A).	100 % of establishment surveys achieve Satisfactorily Regenerated (SR) status and 100 % of performance surveys achieve Free-to-grow (FTG) status.	ARIS: - As defined by Alberta gov't. Annual Report: - Summary, by FMU and forestry operator, the amount of area surveyed and the results of the surveys.	< 10%.	Assess NSR areas and develop and implement action plans.
20				Cumulative percent of satisfactory regenerated surveys (establishment surveys and performance surveys) by company and FMU (2.1.1.1B).	100 % of establishment surveys achieve Satisfactorily Regenerated (SR) status and 100 % of performance surveys achieve Free-to-grow (FTG) status.	Stewardship Report: - Cumulative number of harvests blocks and areas in which regeneration surveys were conducted, by regeneration success, forestry operator and FMU.	< 10%.	Assess NSR areas and develop and implement action plans.
21				Forestry Operator specific regenerated strata distribution percentage by subunit (2.1.1.1C).	At the start of the 2017 Timber Year, each operator to achieve their harvest area adjusted regenerated strata percent distribution.	Annual Report: - Regenerated area and percent by strata, forestry operator and FMU. Stewardship Report: - Overall regenerated area and percent by strata, forestry operator and FMU. 2017 DFMP: - Overall regenerated area and percent by strata, forestry operator and FMU; - Variance between target and actual area and percent regenerated by strata, forestry operator and FMU.	+/- 5% by strata.	Annual adjustments to planned treatments and strata declarations.
22		2.1.2. Maintenance of forest landbase.	2.1.2.1. Limit conversion of forest landbase to other uses.	Percent of change in managed landbase area (2.1.2.1).	At the start of the 2017 Timber Year, < = 2.5% of managed landbase converted to non-timber production uses.	Annual Report: - Number of dispositions and area of dispositions withdrawn from the managed landbase; - Number of dispositions are area of dispositions returned to the managed landbase; - Cumulative net managed landbase area withdrawn. Stewardship Report: - Same as annual report.	N/A	Complete landbase classification for next DFMP.



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ID	CSA SFM Element	Value	Objective	Indicator	DFMP Target	Reporting	Acceptable Variance	Response
23			2.1.2.2. Recognize lands affected by insects, disease or natural calamities.	Area affected by insects, disease or natural calamities as reported by Alberta gov't. and Millar Western (2.1.2.2).	Report all identified areas where insect, disease or natural calamity affect an area >= 10 ha on the DFA.	Annual Report: - Summary of total area known to be affected by insect, disease and natural calamities, where individual occurrences >= 10 ha.	Report actuals.	N/A
24			2.1.2.3. Reduce the susceptibility of forest stands to mountain pine beetle.	Percent of Rank 1 and Rank 2 mountain pine beetle susceptible stand area harvested (2.1.2.3A).	By the start of the 2017 Timber Year, harvest Rank 1 and Rank 2 MPB stand area: - W11 - 2,504 ha (12%) - W13 - 15,477 ha (18%)	Annual Report: - Annual and cumulative area harvested and the percent of harvest area in Rank 1 and Rank 2 stands on the managed landbase; - Variance between actual percent of harvest area within Rank 1 and Rank 2 stands and the target. Stewardship Report: - Same as Annual Report.	+/- 10% at the end of the 2017 timber year.	Based on annual assessments, consider revising harvest sequence where feasible.
25				Percent of identified MPB infested stand area harvested (2.1.2.3B).	Harvest 100% of the area identified as having "green" or "red-fall" MPB attacked trees, where economically feasible, on the managed landbase, or where authorized by Alberta gov't.	Annual Report: - Annual and cumulative area of the managed and gross landbase that have been identified as being infested with MPB, and the total area and % area that have been harvested. Stewardship Report: - Same as Annual Report.	< 50 % of the area in the Managed Landbase at the end of the 2017 timber year.	Based on annual assessments, consider revising harvest sequence where feasible.
26			2.1.2.4. Alter the current pine age structure of the forest to reduce long-term MPB susceptibility.	Area of pure pine and mixedwood pine stands by 'mature' and 'old' seral stage (2.1.2.4).	At the start of the 2017 Timber Year, achieve the area of pure pine and mixedwood pine stands in the mature and old seral stages as summarized in target tables.	Stewardship Report: - Summary of the amount of pure pine and mixedwood pine stand area in the mature and old seral stages.	+/- 20%.	Adjust strategies in subsequent FMPs.
27	2.1.3. Control invasive species.	2.1.3.1. Control non-native plant species (weeds).	2.1.3.1. Control non-native plant species (weeds).	Existence and implementation of a noxious weed program (2.1.3.1).	Continue to maintain existing Noxious Weed Program, and revise where necessary following annual review.	Stewardship Report: - Summary of the results of all noxious weed inspections conducted; - Summary of any significant changes to noxious weed program.	None.	Adjust noxious weed program if deficiencies are encountered.
28	2.2.1. Forest health.	2.2.1.1. Maintain forest health.	2.2.1.1. Maintain forest health.	Existence of programs to select and monitor amphibian and soil micro organism indicator species (2.2.1.1).	Continue Company support and participation in the SOFA and Soil Micro-organism Study, and incorporate findings where applicable.	Stewardship Report: - Summary of progress and findings, and where findings have been incorporated in to operational and/or strategic planning.	None.	Re-define targets and timelines.
CCFM Criterion: 3. Soil and Water								
29	3.1. Soil quantity and quality.	3.1.1. Soil productivity.	3.1.1.1. Minimize impact of roading and bared areas in forest operations.	Number of incidents of non-conformance with respect to bared area (roads and landings) within harvest areas (3.1.1.1).	Zero (0) annual incidents of non-conformance.	Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	0 non-conformance incidents.	Corrective actions and review of existing policies and procedures.
30			3.1.1.2. Minimize Incidence of soil erosion and slumping.	Number of incidents of non-conformance with respect to reportable soil erosion and slumping (3.1.1.2).	Zero (0) annual incidents of non-conformance.	Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	0 non-conformance incidents.	Corrective actions and review of existing policies and procedures.
31			3.1.1.3. Reduce compaction of soils within harvest areas.	Number of incidents of non-conformance with respect to rutting in harvest areas (3.1.1.3).	Zero (0) annual incidents of non-conformance.	Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	0 non-conformance incidents.	Corrective actions and review of existing policies and procedures.
32	3.2. Water quantity and quality.	3.2.1. Water quantity.	3.2.1.1. Limit impact of timber harvesting on water yield.	Percent of eligible third order watersheds in which the annual average runoff coefficient value is > 15% of the baseline condition (3.2.1.1A).	Zero (0) percent of the eligible third order watersheds exceed the baseline annual average runoff coefficient value by > 15 % in any period over the 200-year planning horizon.	Stewardship Report: - Modeled average RC value for third order watersheds and identify of those that exceed baseline RC value by >15% - Percent of eligible watersheds that exceed baseline RC value by > 15%.	0%.	Consider altering harvest location and timing to mitigate effects.



ID	CSA SFM Element	Value	Objective	Indicator	DFMP Target	Reporting	Acceptable Variance	Response
33				Percent of eligible first order watersheds in which the annual average runoff coefficient value is > 50 % of the baseline condition (3.2.1.1B).	Maximum 5% of the eligible first order watersheds exceed the baseline annual average runoff coefficient value by > 50% and none exceed the baseline condition by 100%.	Stewardship Report: - Modeled average RC value for first order watersheds and identify of those that exceed baseline RC value by >50% - Percent of eligible watersheds that exceed baseline RC value by > 50%.	+ 5%.	Consider altering harvest location and timing to mitigate effects.
34			3.2.1.2. Maintain water quality.	Existence of research initiative to develop relationship between operations and water quality, and implementation of recommendations to mitigate negative impact on water quality (3.2.1.2).	Continue research initiative until 2012, and incorporate relevant findings into strategic and/or operational planning.	Stewardship Report: - Status of the water quality research initiative; - Summary of recommendations that the company has implemented for purposes of mitigating impact of water quality due to forestry operations.	N/A	N/A
35		3.2.2. Effective riparian areas.	3.2.2.1. Minimize impact of operations on riparian areas.	Riparian buffers maintained as outlined in FMA operational ground rules or Alberta gov't. approved riparian management strategy (3.2.2.1).	Zero (0) annual incidents of non-conformance.	Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	0 non-conformance incidents.	Corrective actions and review of existing policies and procedures.
CCFM Criterion: 4. Global Ecological Cycles								
36	4.1. Carbon uptake and storage.	4.1.1. Understanding of carbon balance on DFA.	4.1.1.1. Produce a carbon budget for DFA.	Existence of carbon budget analysis on the Preferred Forest Management Strategy of the 2007 DFMP (4.1.1.1).	Complete a carbon budget of the DFA as part of the 2007 DFMP.	Annual Report: - Summary of any additional carbon budget analysis completed on the DFA. Stewardship Report: - Same as Annual Report. DFMP: - Modeled carbon levels on the DFA from 2007 to 2017.	N/A	N/A
37	4.2. Forest land conversation.	This VOIT is addressed under VOIT 22 (2.1.2.1).						
CCFM Criterion: 5. Multiple Benefits to Society								
38	5.1. Timber and non-timber benefits.	5.1.1. Sustainable timber supplies.	5.1.1.1. Establish appropriate AACs.	Compliance with Annex 1 of the Alberta Forest Management Planning Standard (April 2006), regarding the process for establishing appropriate AACs (5.1.1.1).	Receive Alberta gov't's approval of the AAC, and the AAC determination process for the DFA.	2007 DFMP: - Process used is documented in Chapter 5 - Forecasting. Annual Report: - Alberta gov't's response to AAC determination process: - Any re-calculation of AAC prior to the 2017 DFMP. Stewardship Report: - Same as Annual Report.	Variations are permitted with Alberta gov't's approval.	Provide Alberta gov't. with justification or information regarding variances.
39		5.1.2. Maintain non-timber supplies.	5.1.2.1. Maintain communication with non-timber commercial right holders.	Adherence to communication initiatives related to non-timber commercial rights holders, as defined in the external communications section of the DFMP Communication Implementation Plan. (5.1.2.1).	Adhere to relevant external communication initiatives related to non-timber commercial rights holders.	Annual Report: - Summary of external consultation and communication initiatives, and the qualitative assessment of their success; - Summary of the stakeholder registry (the number of members by stakeholder class).	None.	Review and undertake actions where required.
40			5.1.2.2. Protect heritage values.	Number of non-conformance incidents as per The Heritage Resources Act. (5.1.2.2).	Zero (0) annual incidents of non-conformance.	Annual Report: - Number of non-conformance incidents and summary of each. Stewardship Report: - Same as Annual Report.	0 non-conformance incidents.	Corrective actions and review of existing policies and procedures.



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ID	CSA SFM Element	Value	Objective	Indicator	DFMP Target	Reporting	Acceptable Variance	Response
41			5.1.2.3. Minimize visual impact of harvesting activities along defined corridors.	Development and implementation of process for identifying areas of high aesthetic value and mitigating visual impacts of harvest operations (5.1.2.3).	By November 30, 2008, develop and implement process for identifying areas of high aesthetic value and for mitigating visual impacts resulting from forestry operations.	Annual Report: - Progress on development and implementation of process for identifying areas of high aesthetic value and mitigating visual impacts of harvest operations. Stewardship Report: - Same as Annual Report.	Six (6) months (May 31, 2009).	Provide rationale and action plan with timeline for development and implementation.
42	5.2. Communities and sustainability.	5.2.1. Risk to communities and landscapes values from wildfire is low.	5.2.1.1. To reduce wildfire threat potential by reducing fire behavior, fire occurrence, threats to values at risk and enhancing fire suppression capability.	Percent of Whitecourt FireSmart Community Zone area in the 'extreme' and 'high' Fire Behaviour Potential rating categories (5.2.1.1A).	At the start of the 2017 Timber Year, limit the combined area in the 'extreme' and 'high' FPB rating category to 28% (31,496 ha of the 110,901 ha) of the WFCZ.	Stewardship Report: - Actual area and percent change in the "high" and "extreme" FBP ratings. DFMP: - Tabular projections of areas in "high" and "extreme" FBP rankings at years 0, 10, 20 and 50; - Maps showing projection of areas in "high" and "extreme" FBP rankings at years 0, 10, 20 and 50.	None.	Consider altering harvest location and timing to mitigate effects.
43				Percent of DFA area in the 'extreme' and 'high' Fire Behaviour Potential rating categories (5.2.1.1B).	At the start of the 2017 Timber Year, limit the combined area in the 'extreme' and 'high' FPB rating category to 37% (169,209 ha of the 452,471 ha) of the DFA.	Stewardship Report: - Actual area and percent change in the "high" and "extreme" FBP ratings. DFMP: - Tabular projections of areas in "high" and "extreme" FBP rankings at years 0, 10, 20 and 50; - Maps showing projection of areas in "high" and "extreme" FBP rankings at years 0, 10, 20 and 50.	None.	Consider altering harvest location and timing to mitigate effects.
44		5.2.2. Provide opportunities to derive benefits and participate in use and management.	5.2.2.1. Integrate other uses and timber management activities.	Adherence to communication initiatives related integrating other uses and timber management activities, as defined in the external communications section of the DFMP Communication Implementation Plan (5.2.2.1).	Adhere to communication initiatives related to the integration of other uses and timber management activities.	Annual Report: - Summary of external stakeholder consultation and communication initiatives, and the Company's qualitative assessment of their success; - Summary of the stakeholder registry (the number of members by stakeholder class). Stewardship Report: - Same as Annual Report.	None.	Provide rationale and action plan with timeline for development and implementation.
45		5.2.3. Forest productivity.	5.2.3.1. Maintain Long Run Sustained Yield Average.	Difference between managed and natural stand yield (5.2.3.1).	No net decrease in stand yield from natural to managed stands.	Stewardship Report: - Progress on development and implementation of Alternative Regeneration Standards; - Summary reports as defined as part of these new standard, when implemented.	N/A	Yield curves will be re-developed as part of the 2017 DFMP.
CCFM Criterion: 6. Accepting Society's Responsibility for Sustainable Development.								
46	6.1. Respect for Aboriginal forest values knowledge and uses.	6.1.1. Compliance with government regulations and policies.	6.1.1.1. Implement Public involvement program.	Meet Alberta gov't's current expectations for aboriginal consultation (6.1.1.1).	Consult, at the community level, with designated representatives of aboriginal communities defined by Alberta gov't.	Annual Report: - Identify aboriginal communities that participate in planning processes; - Summary of all initiatives directly focussed at contacting and consulting with aboriginal communities and summary of deliberations and achievements. Stewardship Report: - Same as Annual Report.	None.	Review shortcomings and determine means to resolve.
47		6.1.2. Provide economic opportunities to Aleis Nakota Sioux Nation.	6.1.2.1. Provide forest contract opportunities to the Alexis Nakota Sioux Nation on an annual basis as per FEDA.	Contract opportunities provided to the Alexis Nakota Sioux Nation (i.e. logging and silviculture) (6.1.2.1).	Provide contract opportunities to Alexis annually.	Annual Report: - Summary of contract opportunities offered to the Alexis, those undertaken and the status of each. Stewardship Report: - Same as Annual Report.	None.	N/A



ID	CSA SFM Element	Value	Objective	Indicator	DFMP Target	Reporting	Acceptable Variance	Response
48		6.1.3. Sustain positive and productive working relationship with the Alexis Nakota Sioux Nation.	6.1.3.1. Maintain existing consultations with Alexis Nakota Sioux Nation on forest management and economic development as per FEDA.	Number of Environmental Co-Stewardship Committee (ECSC) meetings (6.1.3.1).	Hold four (4) ECSC meetings annually.	Annual Report: - Updates to ECS membership; - Summary of meetings. Stewardship Report: - Same as Annual Report.	One (1) meeting annually.	Provide a rationale in the Annual Report and Stewardship Report.
49	6.2. Public participation and information for decision-making.	6.2.1. Meaningful public involvement achieved.	6.2.1.1. Implement public involvement program.	Meet expectations of Section 5 of CSA Z809-2002 - Public Participation Requirements (6.2.1.1)	Adhere to the communication initiatives that satisfy the expectations of Section 5 of CSA Z809-2002.	Annual Report: - Summary of status of implementation of DFMP Implementation Communication Plan and rationale for any deviation; - Summary of all consultation and communication activities. Stewardship Report: - Same as Annual Report.	None.	Review shortcomings and determine means to resolve.
50		6.2.2. Increase knowledge of forest management operations.	6.2.2.1. Work with various stakeholders to enhance the demonstration/educational value of the Huestis Forest.	Contribution to, and implementation of, a management plan for Huestis Forest (6.2.2.1).	Work with Alberta gov't. and other stakeholders, as a of Board of Directors, to develop and implement a management plan to enhance the demonstration and educational value of Huestis Forest, by December 31, 2008.	Annual Report: - Status of the creation of the committee and development and implementation of management plan; - Summary of initiatives that Millar Western has undertaken in support of Huestis Demonstration Forest. Stewardship Report: - Same as Annual Report.	Six months (June 30, 2009)	Review shortcomings and determine means to resolve.
51	6.3. Information for decision-making.	6.3.1. Provide measures to reach boarder public in regards to forest management information.	6.3.1.1. Incorporate a virtual open house that will be available on the Millar Western Forest Products Ltd. Internet site.	Development and incorporation of Virtual Open House into corporate website (6.3.1.1).	Develop and incorporate virtual open house into existing Millar Western Internet website by July 31, 2008.	Annual Report: - Status of the implementation of the virtual open house; - Following implementation, the number of hits to this component of the website. Stewardship Report: - Same as Annual Report.	Six months: January 31, 2008)	Review shortcomings and determine means to resolve.
52		6.3.2. Maintain effective communication with a variety of stakeholders.	6.3.2.1. Maintain a public advisory committee reflective of stakeholder concerns on the DFA.	Establishment of permanent Public Advisory Committee (PAC) and number of group meetings (6.3.2.1).	Establish Public Advisory Committee by December 31, 2007, and hold a minimum of four (4) meeting annually, starting from the date that the group is established	Annual Report: - Status of the establishment of the PAC; - Summary of membership, meeting dates and topics covered at each meeting. Stewardship Report: - Same as Annual Report.	None.	Review shortcomings and determine means to resolve.
53		6.3.3. Provide measures to reach broader public in regards to forest management information.	6.3.3.1. Develop 24-hour hotline for public comments regarding forestry issues.	Implementation of a 24-hour toll-free telephone hotline (6.3.3.1)	Launch 24-hour toll-free hotline by February 29, 2008.	Annual Report: - Status of the implementation of the 24-hour hotline. Stewardship Report: - Same as Annual Report.	Six months (August 31, 2008)	Review shortcomings and determine means to resolve.



3. Forest Management Program Commitments

In addition to VOITs, the company has identified other commitments that it aims to fulfill during the 10-year period of the 2007-2016 DFMP. These commitments were developed independently by the company: they are not related to the VOITs and fall outside of the scope of the Alberta Forest Management Planning Standard and the CSA Z809-02 standard.



Table 2. Company Commitment summary table.

ID	Commitment	Timeline	Reporting
Forest Management Planning			
1	Reconcile SHS, following DFMP approval.	Complete reconciliation by December 31, 2007.	Stewardship Report: - Summary of the process used and the resulting changes.
2	Re-run BAP analysis on SHS submitted with 2007 DFMP.	Submit to Alberta gov't. by November 30, 2008	2007 DFMP Addendum to Alberta gov't.: - Summary of results and interpretation. Annual Report: - Condensed version of report to Alberta gov't.; - Summary of any additional analysis. Stewardship Report: - Same as Annual Report.
3	Maintain DFA Harvest Planning Committee	Ongoing	Annual Report: - Summary of committee's composition, structure and key accomplishments. Stewardship Report: - Same as Annual Report.
4	Develop and implement Industrial Salvage tracking process.	Submit to Alberta gov't. by October 31, 2008.	Annual Report: - Summary of progress in developing, Alberta gov't's review and approval, and implementation of process. Stewardship Report: - Same as Annual Report.
Forest Operations			
5	Revise FMA Operating Ground Rules.	Implement revised OGRs by April 30, 2008	Annual Report: - Summary of progress of OGR revisions and implementation. Stewardship Report: - Same as Annual Report.
Silviculture			
6	Maintain DFA Silviculture Committee.	Ongoing.	Annual Report: - Summary of committee's composition, structure and key accomplishments. Stewardship Report: - Same as Annual Report.
7	Develop Alternative Regeneration Standards (ARS).	Begin development of ARS by November 30, 2008	Annual Report: - Summary of progress on development, approval and implementation of ARS. Stewardship Report: - Same as Annual Report.
8	Develop specific regeneration strategies to mitigate insect and disease infestations.	Initiate development by December 31, 2008.	Annual Report: - Summary of progress on development and implementation of strategies. Stewardship Report: - Same as Annual Report.
Growth and Yield			
9	Develop and secure Alberta gov't. approval of a wider suite of managed stand yield curves.	Secure approval of data collection program acceptable to Alberta gov't. by February 29, 2008.	Annual Report: - Summary of the progress in development, approval and incorporation of curves into forest management planning initiatives. Stewardship Report: - Same as Annual Report.
10	Implement growth and yield initiatives.	As defined in Growth and Yield Plan (Appendix VIII).	Annual Report: - Summary of implementation of each of the programs under the G & Y Plan; - Status of the submission / review / approval of the revised G & Y Plan; - Summary of any changes to the G & Y Plan from annual internal review. Stewardship Report: - Same as Annual Report.



ID	Commitment	Timeline	Reporting
Research			
11	Investigate new technologies for developing forest and vegetation inventory for DFA.	Ongoing with further investigations completed before the end of 2011.	Stewardship Report: - Summary of any planned inventory investigations; - Summary of the results of any completed inventory investigations.
12	Develop and implement operational risk rating system to provide guidance in determining environmental conditions in which forest operations can be conducted in an environmentally sound manner.	Implement by October 31, 2008.	Annual Report: - Summary of the progress in development and implementation of operational assessment tools and techniques. Stewardship Report: - Same as Annual Report.
13	Investigate the need for BAP SHEs and HSMS validation and refinement.	Implement investigation and refinements by November 30, 2008.	Stewardship Report: - Summary of investigative and refinement initiatives planned or undertaken and the progress of each; - Summary of the findings and any recommendations for future refinement or incorporation into planning or operational activities.



4. References

Alberta Forest Products Association/Alberta Land and Forest Service, 1996. Forest Soils Conservation – Task Force Report.



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