

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.1</b>	<b>Ecosystem Diversity</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally in the DFA
<b>FML Area No. 2 DFA Value 1.1.1</b>	A resilient forest ecosystem that emulates natural disturbances and landscape patterns
<b>Objective 1.1.1.1</b>	Monitoring of forest composition in terms of forest ages and types that occur on the DFA

<b>Indicator 1.1.1.1.1</b>	<b>Target 1.1.1.1.1 (A)</b>
Composition of the forest as a percentage of area by forest type and age class	Monitor and report on forest composition for the DFA <b>Acceptable Variance:</b> No variance in undertaking the measurement and reporting program is acceptable. No targets are set for forest composition for the DFA at this time and as such, no variances for forest composition are applicable at this time.

### Management Strategy

The 1997 – 2009 FMP included a sustainability analysis which provided an analysis of the forest composition at that time and a forecast of expected forest composition for FML Area No. 2 as it was configured at that time. The forecast of forest composition (in terms of both MC forest types and Manitoba FEC V-types) was conducted for the two management alternatives examined over a 100 year time frame. This is a monitoring indicator put in place to provide information on the forest composition of the DFA for use in setting future forest management plan objectives until such time as an associated research program can be conducted to determine the Natural Range of Variability (NRV) for forest composition for the DFA. The research program will be initiated during 2005 with the intent of establishing the NRV for forest composition for the DFA in terms of forest cover types and age class distribution. The research program will initially focus on the potential application of data from unmanaged areas of the DFA and/or from the Hayes River Forest Section (a relatively unmanaged expanse of forested area adjacent to the Nelson River Forest Section of the DFA).

### Forecast, Expected Response or Outcome

During development of the FMP the Harvest Schedule Generator (HSG) model was utilized to forecast forest composition of the FML Area in place at the time. Assessment of the model results reviewed changes forecasted as compared to the present composition at the time of FMP development (1996).

### Implementation

This indicator is in place to begin the analysis and tracking of forest composition for the current DFA to assist in developing an understanding of the Natural Range of Variability (NRV) for the DFA and for use in setting future management objectives for future FMP development. The process will include:

- Review and document forest composition for the current DFA area as described in the FMP; and,
- Undertake re-assessment of the DFA, in conjunction with the preparation of each new FMP.

In conjunction with monitoring and reporting of the composition of the DFA, a research program will be conducted to determine the NRV in terms of forest composition that is applicable to the DFA. Once results from the research program become available, it is anticipated that in the longer-term a new indicator and target would be established to set targets for forest composition relative to the NRV for the DFA with monitoring and reporting to assess progress made towards that new target. The research program for establishing the NRV for the DFA will be initiated in 2005:

- Examine the potential to utilize a set of portions of area from within each forest section of the DFA that are in a relatively “unmanaged” condition (contiguous areas within which no forest management activities have occurred) for use as study areas to establish baseline forest composition conditions;
- Also examine the potential to utilize a review of the Hayes River Forest Section for use to establish baseline unmanaged forest composition conditions.
- On-going work will involve identifying an appropriate approach to determining NRV based upon the data available for the DFA and any other study areas to be assessed; and,
- Undertake analysis of data and determination of the NRV for the DFA at a future point in time once appropriate data becomes available and the means for determining NRV is identified.

The implementation schedule will be:

- Initial evaluation of forest composition for the original FML Area No. 2 took place in conjunction with the preparation of the FMP;
- Review of the forest conditions for the current DFA area based upon the FMP data will be conducted by 2005;
- Initial work on the establishment of the NRV research program will commence in 2005 to include examination of the potential for representative areas of the DFA and for the Hayes River Forest Section to be utilized as baselines for comparison purposes and for establishment of NRV;
- Comparison analysis of the forest composition of the DFA as compared to the resulting NRV as determined from the representative area(s) will be undertaken once data becomes available (with the intent to determine the NRV for the DFA in terms of forest composition by 2008, in order to utilize the data for the preparation of the next FMP for the DFA): and,
- It is anticipated that the determination of the NRV for forest composition for the DFA may then lead to the development of a refined indicator and target for future monitoring of forest composition. This would then lead to an ongoing analysis of forest composition of the DFA to be conducted in association with the preparation of the 2010 – 2019 FMP and every 10 years thereafter with each successive FMP preparation.

The resulting data captured from the current FMP analysis and from each successive FMP starting with the 2010 – 2019 FMP will form the basis for a trend analysis of forest composition for the DFA.

Reporting on this indicator will commence in 2005.

### **Monitoring and Reporting**

The results of the review of the current FMP for the DFA will be provided in the SFM Annual Report. Progress made on the research program to determine the NRV applicable to the DFA in terms of forest cover composition will be described each year in the SFM Annual Report, including the findings of the suitability of utilizing representative unmanaged areas from within the DFA and/or from the Hayes River Forest Section.

Future analysis of the forest composition conducted in association with the preparation of each new FMP will be reported in the FMP. The trend analysis to that point in time from the composition summarized from the 1997 – 2009 FMP will also be reported in each FMP.

Monitoring and reporting on this indicator is conducted based upon the forest inventory as provided by Manitoba Conservation (MC) who is responsible for producing and providing the forest inventory for the DFA. Monitoring and reporting will continue to be conducted with reference to the maturity classes defined in the MC Forest Inventory with movement towards actual age classes as this information becomes available in new updated forest inventory.

In addition to conducting the research program to define the NRV for the forest composition of the DFA, full implementation of this indicator, and of any potential future indicator and target related to assessing forest cover compared to NRV will also require upgrading of the forest inventory for the entire DFA in order to obtain the necessary year of origin (age) data necessary.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.1</b>	<b>Ecosystem Diversity</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally in the DFA
<b>FML Area No. 2 DFA Value 1.1.1</b>	A resilient forest ecosystem that emulates natural disturbances and landscape patterns
<b>Objective 1.1.1.2</b>	Create a range of harvest disturbance patches across the landscape that is consistent with the size, frequency, distribution and shape of disturbance patches created under a natural fire regime

<b>Indicator 1.1.1.2.1</b>	<b>Target 1.1.1.2.1 (A)</b>
Area (ha.) and frequency distribution of harvest and natural disturbance areas (by size class)	Monitor and report on patch size and distribution resulting from natural and timber harvest disturbances for the DFA <b>Acceptable Variance:</b> No variance in undertaking the measurement and reporting program is acceptable. No targets are set for patch size and distribution for the DFA at this time and as such, no variances for patch size or distribution are applicable at this time.

### Management Strategy

The current strategy for management of cutblock patch size and distribution is primarily dictated by a cut and leave system applied in areas of contiguous large forest stands. In other areas such as the Canadian Shield of the Highrock Forest Section, the landscape pattern of productive and non-productive areas takes precedent, while the cut/leave strategy is also in place wherever larger stands exist. Leave blocks are not harvested until adjacency rules for minimum height are satisfied based on MC requirements. The application of the *MC Cutblock Size Guideline* limits the maximum size of individual cutblocks unless specific exemption is requested for the block. This strategy is resulting in a “checkerboard” pattern across the landscape inconsistent with the overall intent of the Company to manage to a more natural landscape pattern.

This indicator and associated target and research program have been put in place to provide information on the size and distribution of disturbance patches across the DFA and to make progress towards a more “natural” landscape pattern for patch disturbance. At the present time target 1.1.1.2.1 (A) is a monitoring target to measure and report on the patch size and distribution resulting from harvesting and fire for the DFA for use in setting future forest management plan objectives until such time as an associated research program can be conducted to determine the Natural Range of Variability (NRV) for disturbance patch size and distribution for the DFA. The research program will be initiated during 2005 with the intent of establishing the NRV for patch size and distribution for the DFA. The research program will initially focus on the potential application of data from unmanaged areas of the DFA and/or from the Hayes River Forest Section (a relatively unmanaged expanse of forested area adjacent to the Nelson River Forest Section of the DFA).

## **Forecast, Expected Response or Outcome**

It is currently viewed that the harvesting size and adjacency requirements are resulting in a fragmented “checkerboard” pattern as compared to that which would occur under a natural disturbance regime. This fragmentation is most pronounced in areas of the DFA dominated by jack pine stands. It is anticipated that the development and implementation of a patch size and distribution target that more closely reflects the NRV across the landscape would assist in reducing the fragmentation of the forest landscape, while it is also recognizing that other values and objectives of society and the government requirements in place for the DFA must also be incorporated in any established future targets.

## **Implementation**

This indicator is in place to begin the analysis and tracking of patch size and distribution patterns for the DFA to assist in developing an understanding of the Natural Range of Variability (NRV) for the DFA and for use in setting future management objectives for future FMP and AOP development and the implementation of harvesting operations. To accomplish this, the patches resulting from harvesting and from natural disturbance (fire) for the DFA will be compared to the patches resulting from fire in areas deemed to be in an “unmanaged” condition over time. The process will include:

- Undertake assessment of the size and distribution of harvest and natural fire origin patches on the DFA as of the present time; and,
- Undertake re-assessment of the DFA, in conjunction with the preparation of each new FMP.

In conjunction with monitoring and reporting of the patch size and distribution of the DFA, a research program will be conducted to determine the NRV in terms of patch size and distribution that is applicable to the DFA. Once results from the research program become available, it is anticipated that in the longer-term a new indicator and target would be established to set targets for patch size and distribution relative to the NRV for the DFA with monitoring and reporting to assess progress made towards that new target. The research program for establishing the NRV for the DFA will be initiated in 2005:

- Examine the potential to utilize a set of portions of area from within each forest section of the DFA that are in a relatively “unmanaged” condition (contiguous areas within which no forest management activities have occurred) for use as study areas to establish baseline patch disturbance size and distribution information;
- Also examine the potential to utilize a review of the Hayes River Forest Section for use to establish baseline unmanaged fire origin disturbance patch size and frequency distribution information;
- On-going work will involve identifying an appropriate approach to determining NRV for patch size and distribution based upon the data available for the DFA and any other study areas to be assessed; and,
- Undertake analysis of data and determination of the NRV for the DFA at a future point in time once appropriate data becomes available and the means for determining NRV is identified.

The implementation schedule will be:

- Initial evaluation of patch size and distribution for the DFA to be undertaken in by 2005;
- Initial work on the establishment of the NRV research program will commence in 2005 to include examination of the potential for representative areas of the DFA and for the Hayes River Forest Section to be utilized as baselines for comparison purposes and for establishment of NRV;
- Comparison analysis of the patch size and distribution of the DFA as compared to the resulting NRV as determined from the representative area(s) will be undertaken once data becomes available (with the intent to determine the NRV for the DFA in terms of patch size and distribution by 2008, in order to utilize the data for the preparation of the next FMP for the DFA); and,
- It is anticipated that the determination of the NRV for patch size and distribution for the DFA may then lead to the development of a refined indicator and target for future monitoring of patch size and distribution (while also recognizing government requirements and society accepted limits). This would then lead to an ongoing analysis of patch size and distribution of the DFA to be conducted in association with the preparation of the 2010 – 2019 FMP and every 10 years thereafter with each successive FMP preparation.

The resulting data captured from the current DFA analysis and from each successive FMP starting with the 2010 – 2019 FMP will form the basis for a trend analysis of patch size and distribution for the DFA.

Reporting on this indicator will commence in 2005.

## **Monitoring and Reporting**

The results of the analysis of the DFA for patch size and distribution and of the representative areas analysis to form the baseline for comparison to the NRV will be provided in the SFM Annual Report subsequent to the analysis being completed. Progress made on the research program to determine the NRV applicable to the DFA in terms of patch size and distribution will be described each year in the SFM Annual Report, including the findings of the suitability of utilizing representative unmanaged areas from within the DFA and/or from the Hayes River Forest Section.

Future analysis of the patch size and distribution conducted in association with the preparation of each new FMP will be reported in the FMP. The trend analysis to that point in time from the patch size and distribution as determined at the present time will also be reported in each FMP.

Annual reporting in the SFM Report will include progress made on the review and analysis of the potential baseline areas and resulting comparison analysis.

Monitoring and reporting on this indicator is conducted based upon the forest inventory as provided by Manitoba Conservation (MC) who is responsible for producing and providing the forest inventory for the DFA. Satellite imagery analysis will also be considered as a potential option for use in conducting analysis to meet these targets. The actual data format utilized and techniques used will be reported in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.1</b>	<b>Ecosystem Diversity</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally in the DFA
<b>FML Area No. 2 DFA Value 1.1.1</b>	A resilient forest ecosystem that emulates natural disturbances and landscape patterns
<b>Objective 1.1.1.3</b>	Reforest all harvested areas to the previous forest covertype

<b>Indicator 1.1.1.3.1</b>	<b>Target 1.1.1.3.1 (A)</b>
Forest cover composition of reforested cutover areas	100% of all harvested areas to be reforested to the standards set in the MC Regeneration and Free-to-Grow requirements <b>Acceptable Variance:</b> No variance in meeting MC renewal standards for all areas harvested to meet the Company's requirements within government approved timeframes

### Management Strategy

Renewal of all areas harvested to supply the Company's mill facilities is a commitment that the Company has made through its FML Agreement with the Province of Manitoba. As described in the FMPOPs, the Company undertakes to ensure that all such areas are reforested to meet government regeneration and FTG standards. Reforestation strategies for each harvested area are developed based on previous forest covertypes to assist in maintaining the forest communities, ecosystem processes and conditions that occur across the DFA and to maintain the productivity of harvested sites. The tree species utilized in the planting program and promoted through natural regeneration of areas reflect the intent to achieve renewed stands that will be similar to those expected from natural disturbance of such areas. The continued implementation of the forest renewal program will assist to maintain a sustainable supply of timber from the DFA in conjunction with the application of sustainable harvest levels.

### Forecast, Expected Response or Outcome

The current level of harvest on the DFA is approximately 6,500 hectares per year. Each year as part of the preparation of the AOP the Company forecasts the expected harvest levels by forest type and reviews the status of areas that have received initial renewal treatments such as site preparation and scarification to determine further additional requirements for treatments including tree planting.

Review of these requirements leads to development of the renewal component of the AOP which provides the plan for renewal treatments for the coming year including levels of various treatments and the requirements for tree seedling stock. The renewal component of the AOP is developed with the overall requirement that all areas harvested must meet government regeneration requirements within 7 years of harvest.

Based upon the Company's ongoing regeneration survey program and subsequent submission of results for certification by MC, the renewal of all harvested areas is forecasted to result in a success rate of 100%.

## **Implementation**

The forest renewal program is an ongoing and principle component of the forest management practices of the Company. Achieving the target of 100% reforestation of all harvested areas includes a number of planning and operation programs and practices including:

- Pre-harvest Forest Investigation (PHFI) of all proposed cutblocks prior to inclusion in the AOP includes pre-harvest forest cover composition, soil and other characteristics required for developing the pre-harvest renewal prescription for each block in the AOP;
- The data from the PHFI and government regeneration requirements are utilized to develop the pre-harvest renewal objective for each cutblock and strategies to meet the target;
- The forest renewal component of the AOP is developed to meet the renewal commitment of the Company set out in the FML Agreement, including planning with MC to meet forecasted tree seedling stock requirements;
- Renewal operations are implemented as per the FMPOPs;
- Assessment of the success of the renewal program is undertaken through government approved regeneration and FTG survey programs;
- Results of the 7 year regeneration surveys are reviewed and certified by MC indicating that areas have received certification and that the reforestation commitment has been achieved for subject areas;
- Any areas requiring additional follow-up treatment from the regeneration survey results will be treated within the additional 3 year period as per the FML Agreement;
- Results of the 14 year Free-to-Grow surveys are reviewed and certified by MC indicating that areas have received certification and that the reforestation commitment has been achieved for subject areas; and,
- Any areas requiring additional follow-up treatment from the Free-to-Grow survey will be treated and re-surveyed for submission to MC.

All of the above aspects of the forest renewal program are currently in place as the Company has been active in forest renewal on the DFA since 1989.

Reporting on this indicator will commence in 2005.

## **Monitoring and Reporting**

The monitoring of forest renewal on the DFA is undertaken through government certified regeneration surveys conducted 7 years following harvest for all cutblocks and through subsequent FTG surveys conducted 14 years after harvest. The status of all cutblocks from the time of harvest through renewal treatment to regeneration survey and FTG survey is tracked on the Company's Cutblock Status Report which is updated annually as a result of inputs from harvest, renewal and regeneration and FTG records. The Cutblock Status Report will undergo re-development and enhancement for application to SFM reporting starting in 2005. A summary of the renewal status of cutblocks harvested 7 (regeneration survey) and 14 (FTG survey) years earlier for which the renewal

commitment has come due is provided in the Company's Forest Management Annual Report to MC annually.

The status of for this indicator will be summarized annually in the SFM Report starting in 2005.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.1</b>	<b>Ecosystem Diversity</b> Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally in the DFA
<b>FML Area No. 2 DFA Value 1.1.1</b>	A resilient forest ecosystem that emulates natural disturbances and landscape patterns
<b>Objective 1.1.1.4</b>	Harvest within sustainable levels and harvest operating guidelines to promote the presence of a range of age classes on the DFA

<b>Indicator 1.1.1.4.1</b>	<b>Target 1.1.1.4.1 (A)</b>
Harvest levels in cubic metres as compared to the AAC	Harvest levels to remain within Government approved AAC <b>Acceptable Variance:</b> No variance in harvest levels outside of MC approved AAC levels based upon 5-year cut control periods is acceptable. Variation in any given year may occur. MC approved AAC levels may include accommodation of underutilized AAC from the previous period.

### Management Strategy

Harvesting within the provincial AAC levels as determined by the MC Forestry Branch is a long-standing requirement that the Company has operated under in meeting requirements of the *Forest Act*. As described in the FMPOPs, the Company undertakes to ensure that all planning and operations for harvesting on the DFA remain within the established AAC levels determined by MC.

### Forecast, Expected Response or Outcome

Sustainability analysis conducted in the preparation of the FMP tested and verified the AAC levels as sustainable through assessment using the HSG model run on the MC Forest Inventory. The harvest levels proposed at the time of FMP development for FML Area No. 2 were also assessed and indicated to be sustainable. The levels of harvest being utilized and proposed in AOPs for the DFA are within the levels proposed for the forest sections of the original FML Area No. 2 that now comprise the DFA.

The utilization of the AOP planning process, tracking and reporting of harvest and delivery volumes as part of the Forest Management Annual Report preparation process, use of the 5 year cut control and other processes described within the FMPOPs ensure that harvest volumes will remain within the government determined AAC for the DFA.

### Implementation

Planning and management of harvest levels within the AAC levels is an ongoing and principle component of the forest management practices of the Company. Achieving the target of remaining within the AAC includes a number of planning and operation programs and practices including:

- FMP sustainability analysis of AAC levels and proposed harvest levels to verify sustainability for a long-term time horizon (100 year forecast);

- AOP planning to track planned cutblock proposals to ensure that the AOP submission will result in harvest levels that remain within the AAC;
- Annual tracking of actual harvest volume levels and reporting within the 5 year cut control procedure prescribed by MC;
- Annual reporting to MC of harvest levels and status within the applicable AAC.

All of the above aspects of forest planning, operations and reporting for management of harvest levels with respect to the AAC are currently in place as part of the Company's forest management responsibilities under the *Forest Act* for the DFA.

Since the development and approval of the 1997 – 2009 FMP, the Province of Manitoba has moved to the use of wood supply modeling to determine future sustainable harvest levels in the province as new forest inventory data becomes available with supporting age information. The Company is supportive of this move and looks forward to the implementation of wood supply modeling in conjunction with MC for determination of sustainable harvest levels for the DFA as new inventory data becomes available. In support of this work, the Company has been proceeding with a research program to establish and implement Permanent Sample Plots (PSPs) across the various forest types of the DFA. The data from these PSPs will provide improved indication of the forest productivity and growth and yield for input to sustainability analysis for the DFA as the new inventory is implemented.

Reporting on this indicator will commence in 2004.

## **Monitoring and Reporting**

The monitoring of harvest levels as compared to AAC levels on the DFA is undertaken through tracking of volumes harvested and delivered (scaled deliveries to the mill) from harvested cutblocks, the addition of estimated undelivered in-bush volumes, and from the compilation of volumes reported by third party operators on the DFA in conjunction with declarations for Crown dues submission.

A summary of the harvest levels as compared to the AAC by 5 year cut control period is provided in the Company's Forest Management Annual Report to MC annually.

The progress made on the research program for establishment and re-measurement of PSPs across the DFA will be summarized each year in the SFM Report.

The status of this indicator will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.2</b>	<b>Species Diversity</b> Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time
<b>FML Area No. 2 DFA Value 1.2.1</b>	Continued existence of all animal and plant species native to the DFA within the historical natural range of variability
<b>Objective 1.2.1.1</b>	To maintain wildlife habitat for woodland caribou

<b>Indicator 1.2.1.1.1</b>	<b>Target 1.2.1.1.1 (A)</b>
Woodland caribou habitat for the Kississing-Naosap Lakes Herd	Implement forest management strategy for the Kississing-Naosap Lakes woodland caribou range <b>Acceptable Variance:</b> No variance from agreed-to critical habitat area restrictions is acceptable

### Management Strategy

Woodland caribou is recognized as a threatened species (COSEWIC) in Manitoba with representation of a number of the herds thought to occur in the province. COSEWIC (Committee on the Status of Endangered Wildlife in Canada) is a national level reporting system that designates the status of species. COSEWIC has listed woodland caribou as threatened in western Canada. The Manitoba Endangered Species Act (MESA) lists Manitoba species that are at risk. Woodland caribou are also listed under MESA.

Through on-going discussions with provincial government representatives on the IRMT a joint committee was formed by MC to include the Company with the mandate to develop a forest management strategy for the woodland caribou within the Kississing-Naosap Lakes range, considered by the IRMT to be of principle concern in the DFA. The goal of the committee is to develop and implement a plan for harvesting at a landscape level to ensure that sufficient critical habitat for the caribou is maintained.

### Forecast, Expected Response or Outcome

The Company is currently working with the other members of the committee to develop a harvesting plan for the area of the Kississing-Naosap Lakes range that will facilitate harvesting while also maintaining critical caribou habitat. It is expected that the jointly developed plan will define and identify the areas deemed to be critical habitat and that the guidelines and restrictions for harvesting and other forest management activities in the area will be clearly outlined.

Once implemented it is anticipated that a monitoring program will be put in place to assess the success of the plan and its implementation.

### Implementation

Discussions with the committee and work on the joint plan are on-going. Once the forest management strategy plan for the Kississing-Naosap Lakes range is finalized and approved (expected in 2005), the plan will be incorporated within the 2006 AOP for the associated area. Following approval of the AOP and the submission and approval of

work permits for the area, forestry operations for the area will commence. Monitoring and follow-up on the success of the plan will be implemented. It is expected that work permits issued for operations in the area will clearly indicate reference to the areas identified as critical habitat and will outline requirements and conditions for operations. The Company will utilize the procedures in the EMS to ensure that all operations occur as outlined in the plan. Based upon the results of the success monitoring of the use of the area by caribou post-harvest, the findings of this project may then be applied to other woodland caribou ranges in the DFA and Manitoba.

Reporting on this indicator will commence in 2004.

### **Monitoring and Reporting**

In conjunction with the preparation of cutover records for the DFA, the actual harvest areas for the Kississing-Naosap Lakes range area will be compared to the jointly developed caribou strategy and defined critical habitat areas.

The monitoring of the actual harvest as compared to the defined strategy and the AOP will be reported in the SFM Report annually. Findings of the success of the forest management strategy will also be reported annually as applicable and as information is made available by MC.

The status of this indicator will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.2</b>	<b>Species Diversity</b> Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time
<b>FML Area No. 2 DFA Value 1.2.1</b>	Continued existence of all animal and plant species native to the DFA within the historical natural range of variability
<b>Objective 1.2.1.2</b>	Ensure species at risk are considered in planning and operations

<b>Indicator 1.2.1.2.1</b>	<b>Target 1.2.1.2.1 (A)</b>
Staff awareness of current COSEWIC and MESA lists for DFA	100% of Tolko Woodlands staff to undertake review of COSEWIC and MESA lists annually <b>Acceptable Variance:</b> No variance from 100% complete review by all staff is acceptable

### Management Strategy

As documented in the 1997 – 2009 FMP, the Company recognizes the importance of considering plant and animal species on the DFA falling within The Manitoba Endangered Species Act (MESA) and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in terms of planning and implementation of operations. To assist in ensuring that the species that are given such recognized status on the DFA are considered, the Company will ensure that processes are in place to keep Woodlands Staff aware of the plant and animal species included on the COSEWIC and MESA lists.

### Forecast, Expected Response or Outcome

By maintaining Woodlands staff aware of the species listed by COSEWIC and MESA the Company is able to put into place the mechanism to consider these species in terms of planning and operations. The Woodlands staff of the Company include the people who, in turn, have responsibility for the Company's programs for gathering information on the DFA such as the Pre-harvest Forest Investigation (PHFI) program and for forest inventory programs and related data collection (PSP). Awareness of the COSEWIC and MESA listed species enables staff to put into place the procedures for data collection include identification of these species and that the contractors conducting this work follow-up with needed training. The Woodlands planning and supervisory staff are also then in position to utilize awareness in conducting their work.

### Implementation

To achieve the target associated with this indicator, the following mechanisms will be utilized to make Woodlands staff aware of COSEWIC and MESA listed species for the DFA:

- Obtain and update the COSEWIC and MESA lists for applicability to the DFA annually prior to the start of the summer field data collection season;

- The updated COSEWIC and MESA lists applicable to the DFA will be circulated annually to all Woodlands staff; and,
- The importance of awareness of the species listed on the COSEWIC and MESA lists will be brought forward as an agenda item at the Annual Woodlands Meeting each year.

Circulation of the updated COSEWIC and MESA lists for the DFA will be conducted to include a sign-off process by all staff to indicate that they have reviewed the listings.

Reporting on this indicator will commence in 2004.

### **Monitoring and Reporting**

Monitoring for this indicator and target will entail a review of the staff sign-off to ensure that all Woodlands staff have reviewed the listings. Comparison with the current Woodlands staff complement at the Company will enable monitoring and reporting.

The status of this indicator will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.2</b>	<b>Species Diversity</b> Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time
<b>FML Area No. 2 DFA Value 1.2.1</b>	Continued existence of all animal and plant species native to the DFA within the historical natural range of variability
<b>Objective 1.2.1.3</b>	Plan and implement forest operations incorporating general wildlife habitat considerations

<b>Indicator 1.2.1.3.1</b>	<b>Target 1.2.1.3.1 (A)</b>
Abundance of residual stand structure	At least 5 standing trees (alive and dead) per hectare retained across harvested areas on a forest section basis <b>Acceptable Variance:</b> The measurement of the indicator will be on a forest section basis weighted by block size estimates with some variance expected at the cutblock and operating area level dependent upon considerations such as insect or disease management requirements

### Management Strategy

As documented in the FMPOPs, the Company recognizes the importance of maintaining residual stand structure as a mechanism to assist in mitigation for general wildlife habitat requirements. Through the application of the FMPOPs and ongoing awareness and training of contractors the Company will take steps to retain at least 5 standing trees (including live and dead trees) per hectare on harvested areas.

Retention of stand structure in terms of standing trees will include both hardwood and softwood species, retained both as single stems and in patches across cutblocks. The target of 5 standing trees per hectare will be applied broadly across all cutblocks with exceptions being made to meet specific management objectives such as control of dwarf mistletoe infestations or other insect/disease/wildlife or other mitigation requirements.

### Forecast, Expected Response or Outcome

By applying this strategy broadly across all cutblocks and operations with on-going communication with contractors it is expected that retention of standing tree structure will continue to be a component of the overall mitigation strategy of the Company for wildlife and other non-timber values in operating areas.

### Implementation

As described in the FMPOPs, the retention of standing tree structure in cutblocks is an ongoing mitigation practice of the Company. As a regular practice of the Company to mitigate wildlife and other values in operating areas, standing tree structure retention targets will be discussed with the contractor at the commencement of operation for each cutblock at the Project Tailgate Meeting (EMS). This review will include any modification to regular practices to accommodate insect and/or disease control or to meet

any other specified objectives for the cutblock. Follow-up review with the contractor will occur in conjunction with Operations Inspections in terms of progress being made for the block.

Implementation of this indicator and target will commence in 2004.

## **Monitoring and Reporting**

Monitoring of progress for this indicator will occur in two stages:

- In conjunction with Operations Inspections of contractor cutblocks with documentation on the Operations Inspections Form (EMS). The supervisor will document the estimated number of standing trees per hectare and the number of leave patches retained in the cutblock; and,
- In preparing the cutover records each year the cutover photography will be utilized to verify the patches and relative level of tree retention based upon the supervisor's earlier field estimates.

Reporting of the indicator will then occur in conjunction with the production of the cutover records annually.

The status of this indicator will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.3</b>	<b>Genetic Diversity</b> Conserve genetic diversity by maintaining the variation of genes within species
<b>FML Area No. 2 DFA Value 1.3.1</b>	Maintain native tree species
<b>Objective 1.3.1.1</b>	Sustain genetic diversity through naturally occurring species which are well adapted to local conditions

<b>Indicator 1.3.1.1.1</b>	<b>Target 1.3.1.1.1 (A)</b>
Compliance with government seed transfer guidelines	Ensure all seed used in artificial renewal program is selected in accordance with government seed zones and guidelines <b>Acceptable Variance:</b> No areas planted shall be from stock not collected from the same seed zone or pre-approved by MC

### Management Strategy

The DFA includes 3 seed zones established in recognition of ecological conditions and Manitoba Conservation administrative boundaries to assist and promote the maintenance of genetic diversity resulting from planting programs across the province. Transfers of seed and/or resulting growing stock outside of the zone of origin are only permitted as authorized by the Provincial Silvicultural Forester. Two federal seed zone boundaries exist for jack pine seed collected from seed orchards on the DFA. Spruce seed and general collection pine seed will be managed and planted within the provincial boundaries. Seed orchard jack pine seed will be managed and planted within the federal seed zone boundaries.

The forest industry and government tree planting programs are required to utilize stock originating from within the same or otherwise approved seed zone. As documented in the FMPOPs, the Company recognizes the importance of ensuring that seed used in artificial tree planting programs is selected in accordance with these requirements.

### Forecast, Expected Response or Outcome

By maintaining seed tracking records from seed collection through to seedling production and on to delivery to cutblock locations for planting, the use of seed for growing of seedlings and subsequent planting will be controlled within seed zones or as otherwise approved by MC.

### Implementation

Compliance with the application of provincial seed zones for the collection of seed, growing of stock and subsequent location of planting stock is an ongoing component of the forest renewal program for the DFA. The Company will continue to work closely with MC in seed collection, tracking and ordering and delivery of stock for planting of harvested areas.

Reporting for this indicator will commence in 2004.

### **Monitoring and Reporting**

Sources of seed are documented at the collection stage and tracked through to the planting of that stock to a harvested area. Monitoring of this indicator will include comparison and reporting of the source of seed for stock planted to each cutblock based upon the seed zone of collection and the seed zone of planting.

The Company will request stock by seed zone from the nursery and the nursery will indicate the seed zone that the stock originated from and the destination zone on all shipping records. These records will be compiled and summarized annually in conjunction with production of the Tree Planting Report.

Any variation from original seed zone to planted zone that is not supported by approval received from MC will be reported as a variation from the target for this indicator.

The status of this indicator will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.4</b>	<b>Protected Areas and Sites of Special Biological Significance</b> Respect protected areas identified through government processes. Identify sites of special biological significance within the DFA and implement management strategies appropriate to their long-term maintenance.
<b>FML Area No. 2 DFA Value 1.4.1</b>	Protect unique and important (for biological diversity) features
<b>Objective 1.4.1.1</b>	Plan and implement forestry operations to ensure the protection of unique and important (for biological diversity) features

<b>Indicator 1.4.1.1.1</b>	<b>Target 1.4.1.1.1 (A)</b>
Percentage of proposed harvest blocks subject to Pre-harvest Forest Investigation (PHFI) surveys	100% of all proposed first year blocks in the AOP will be subject to a PHFI survey <b>Acceptable Variance:</b> No variance in ensuring that all submitted first year AOP cutblocks receive a PHFI survey. In some cases of contingency requirements that occur subsequent to the AOP approval, the PHFI survey for such blocks may need to be undertaken in conjunction with the submission of the work permit application.

### Management Strategy

As described in the FMPOPs the Company undertakes Pre-harvest Forest Investigation (PHFI) surveys for all blocks to be included as first year plan blocks in the AOP each year. This is an ongoing activity that the Company put into place to formalize and document the pre-harvest field data collection that was in place earlier by planning staff. The PHFI conducted for each planned first year cutblock includes the investigation and documentation of information pertaining to unique and important features (including VTE and rare species presence documentation), as well as a number of other characteristics of the block including wildlife habitat, non-timber forest uses and timber values.

The information obtained through the PHFI is utilized by Company planning staff, in conjunction with information obtained from public consultation processes and other sources, to make decisions related to the suitability of including areas for the harvest plan, and for associated mitigation requirements to meet non-timber values.

The continued implementation of the PHFI survey will assist to ensure the protection of unique and important features in operating areas. The PHFI survey undergoes an annual review with planning staff to identify any ongoing need to make modifications or additions to the program.

### Forecast, Expected Response or Outcome

The continuation of the PHFI survey program for all planned blocks to be submitted for the first year of each AOP is expected to provide the process needed to document the presence of unique and important features in areas being considered for harvesting operations. The ongoing commitment of the Company to remain abreast of the

COSEWIC and MESA listed species applicable to the DFA and transfer of this information to the contractor and/or staff conducting the PHFI, along with appropriate training of PHFI crews will enable the PHFI process to contribute to identification and subsequent protection of these features in the DFA.

Once unique or otherwise important features are identified by the PHFI survey, they are documented on the AOP cutblock information sheet submitted with the AOP along with an explanation of how the information was utilized in the preparation of the plan and resulting mitigation. Guidance for treatment of such areas is obtained from both government guidelines, the IRMT and the FMPOPs.

## **Implementation**

The PHFI survey program is an ongoing and principle component of the forest management practices of the Company. Achieving the target of 100% of all first year blocks being surveyed and documented prior to inclusion as proposals for first year blocks in the AOP includes a number of planning and operation programs and practices including:

- Preliminary development of AOP proposals from the previous years AOP, in which the upcoming first year blocks would generally have been indicated as forecasted year 2 or 3 blocks;
- Pre-harvest Forest Investigation (PHFI) of all proposed cutblocks prior to inclusion in the AOP as first year proposals by either a contractor or staff crew(s) trained in the requirements of the PHFI which includes awareness and identification of unique and important features such as COSEWIC and MESA listed species;
- The PHFI conducted for each block includes identification and documentation of unique and important features for biological diversity as well as other planning information such as presence of non-timber resource use features, pre-harvest forest cover composition, soil and other characteristics required for developing the harvest and access plan and the pre-harvest renewal prescription for each block in the AOP;
- The data from the PHFI is utilized in conjunction with information received through the public consultation processes of the Company as well as government requirements to develop the harvest plan and associated mitigation for identified features to meet the target for this indicator; and,
- Mitigation for unique and important features is developed and implemented as per the FMPOPs, government requirements and as outlined in subsequent work permits conditions of approval for operation of the cutblock.

All of the above aspects of the PHFI program are currently in place as the Company has been active in conducting the survey as part of the AOP preparation process on the DFA since 1998.

Reporting on this indicator will commence in 2004.

## **Monitoring and Reporting**

The monitoring of this indicator to ensure that all proposed cutblocks for the first year of each AOP receive a PHFI prior to their inclusion in the AOP will be undertaken as part of the AOP preparation and finalization process. The AOP plan author will work in conjunction with the Planners to ensure that all first year blocks have been surveyed. The check-off to ensure this will include a review of the compiled Cutblock Information Sheets being submitted in the AOP to ensure that a completed sheet resulting from the PHFI has been included in the AOP for all first year block submissions. This process will occur annually in conjunction with the preparation of the AOP.

The status of this indicator will be summarized in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 1.0</b>	<b>Conservation of Biological Diversity</b>
<b>CSA SFM Element 1.4</b>	<b>Protected Areas and Sites of Special Biological Significance</b> Respect protected areas identified through government processes. Identify sites of special biological significance within the DFA and implement management strategies appropriate to their long-term maintenance.
<b>FML Area No. 2 DFA Value 1.4.2</b>	Large areas of forest minimally impacted by humans
<b>Objective 1.4.2.1</b>	Company to participate in the Manitoba Protected Areas Initiative led by the Government and respect identified Protected Areas in the DFA confirmed through the program

<b>Indicator 1.4.2.1.1</b>	<b>Target 1.4.2.1.1 (A)</b>
Protected Areas recognized in forest management plans (FMP and AOP)	No harvesting proposed in recognized Protected Areas <b>Acceptable Variance:</b> No variance in ensuring that harvesting plans are excluded from within recognized Protected Areas is acceptable

### Management Strategy

The Province of Manitoba is continuing to move towards the establishment of a series of Protected Areas across the province to contribute towards the goal of conserving biological diversity by protecting representative samples of natural regions represented in the province. At the present time actual Protected Areas have not yet been established under the program for the DFA, however, a series of Areas of Special Interest (ASI) have been established with associated geographical boundaries as interim units for continuing review.

With the preparation of the FMP and the associated Environmental Impact Statement, the Company has acknowledged and continued to participate in this review led by the Government of Manitoba. The boundaries of the ASIs established for the review process by the Province have been identified on AOP maps in recognition of the continuing program and the status of these areas as being under review. No harvesting has been proposed within the ASI areas.

### Forecast, Expected Response or Outcome

The ASI areas currently in place for the DFA will continue to be indicated on AOP harvest plan maps as areas excluded from consideration for harvest while the Province continues to move forward in the finalization of the status of these areas.

Once any area on the DFA has been confirmed and finalized as being changed from FML Area status and Open Provincial Crown Land ownership to a Protected Area status, such areas would be excluded from harvesting proposals. In the interim, the currently set out ASI areas will continue to be shown on AOP harvest plan maps as areas excluded from harvest.

The recognition of Protected Areas confirmed through the Manitoba Protected Areas initiative will contribute to maintenance of ecosystem values for the DFA by retaining

areas within which natural disturbance processes would be the driving force in shaping landscape patterns. Continued respect of the current ASIs in the harvest planning process will contribute towards this eventual target.

### **Implementation**

The implementation of this indicator for respect of recognized Protected Areas is already in place in terms of the Company's commitment to not harvest within such areas once finalized as Protected Areas. In the interim the Company will continue to include the current ASIs on AOP and any future FMP harvest plan maps and exclude harvest proposals from these areas.

Processes for this indicator and target are ongoing at this time.

Reporting for this indicator will commence in 2004.

### **Monitoring and Reporting**

The monitoring of respect of recognized Protected Areas will be undertaken within the harvest cutover record production process. Annual review of cutover records produced from aerial photographs and/or satellite imagery of operating areas on the DFA will enable monitoring and reporting on the status of this indicator.

The status of this indicator will be summarized in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 2.0</b>	<b>Maintenance and Enhancement of Forest Ecosystem Condition and Productivity</b>
<b>CSA SFM Element 2.2</b>	<b>Forest Ecosystem Productivity</b> Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species
<b>FML Area No. 2 DFA Value 2.2.1</b>	Maintain forest ecosystem productivity and productive capacity
<b>Objective 2.2.1.1</b>	Monitor how the characteristics of the forest change over time

<b>Indicator 2.2.1.1.1</b>	<b>Target 2.2.1.1.1 (A)</b>
Provision of information on insects and disease to MC for the DFA	Provide information annually to MC on insects and disease compiled from PHFI, Regeneration surveys and Free-to-Grow surveys <b>Acceptable Variance:</b> No variance from undertaking the insect/disease information compilation and communication to MC annually

### Management Strategy

As described in the FML Agreement, MC has responsibility for forest protection on the DFA in terms of insect and disease monitoring and control. As further outlined in the FML Agreement the Company does work closely with MC in the identification of insect and disease infestations and other conditions affecting forest health observed in conducting forest management activities on the DFA. Cooperative communication between the Company and MC in terms of forest health and forest protection issues is a process that has been in place over the term of operations on the FML Area. It has long been recognized that all parties have a stake in maintaining forest ecosystem productivity and productive capacity through monitoring forest health to assist in decision-making for protection activities.

### Forecast, Expected Response or Outcome

Through the various field activities of the Company and its contractors, the Company is in a good position to provide information and advice to MC on insect and disease and other conditions affecting forest health and productivity on the DFA. With various forest survey programs in place annually across the DFA, Company staff and contractors utilize the opportunity presented to observe and report on the incidence of insect and disease conditions encountered on the DFA.

Through the PHFI, Regeneration surveys and Free-to-Grow survey programs it is expected that the Company will compile and report to MC any observed insect and disease conditions considered to have a potential to affect forest health and thereby reduce forest ecosystem productivity and productive capacity. It is anticipated that this reporting process to MC provides the government with the opportunity to further investigate any potential insect or disease situations and thereby improve the ability of MC to respond to forest health issues on the DFA in terms of follow-up treatment response.

## **Implementation**

The cooperative arrangement for reporting all observed insect and disease concerns on the DFA encountered in conducting PHFI, Regeneration and Free-to-Grow surveys is an ongoing component of the forest management practices of the Company. Achieving the target of providing insect and disease infestation occurrence information to MC observed in conducting these surveys includes:

- Forms utilized for PHFI, Regeneration survey and Free-to-Grow survey have been developed to include opportunity for surveyors to note any encountered insect or disease conditions and corresponding locations;
- Training of contractors and crews conducting these surveys includes awareness of the requirement to observe and note insect and disease conditions in the survey;
- Implementation of PHFI, Regeneration survey and Free-to-Grow survey includes noting of all insect and disease conditions considered to be of concern to productivity and forest health;
- The data from the PHFI, Regeneration survey and Free-to-Grow survey is compiled and summarized annually to include production of reporting of observed insect and disease concerns; and,
- Findings related to insect and disease concerns observed on the DFA are reported annually following the conclusion of the field season to MC.

Once the field survey programs have been implemented the insect and disease concerns identified are reported annually to MC.

Implementation of full reporting of this indicator and target will commence in 2005.

## **Monitoring and Reporting**

The PHFI report on insect and disease findings and the Regeneration survey and FTG survey data (including the insect and disease data) is provided to MC annually under documented correspondence and summarized in the Forest Management Annual Report.

The status of for this indicator will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 2.0</b>	<b>Maintenance and Enhancement of Forest Ecosystem Condition and Productivity</b>
<b>CSA SFM Element 2.2</b>	<b>Forest Ecosystem Productivity</b> Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species
<b>FML Area No. 2 DFA Value 2.2.2</b>	Protect current ecosystem conditions
<b>Objective 2.2.2.1</b>	Reduce forest productivity losses due to forest fires

<b>Indicator 2.2.2.1.1</b>	<b>Target 2.2.2.1.1 (A)</b>
Company caused forest fires	Limit individual accidental fire incidences to less than 2 hectares in size (productive forest land) <b>Acceptable Variance:</b> Some variance in individual fires may occur with no more than 50 hectares of productive forest land burned over a 5 year period (measured on a rolling 5-year basis)

### Management Strategy

As described in the FML Agreement, MC has responsibility for forest protection on the DFA in terms of forest fire protection and suppression. As also described in the FML Agreement, the Company also has roles and responsibilities for fire protection on the DFA. It is the practice of the Company to work closely with MC in the prevention and suppression of fires on the DFA. The development and ongoing implementation of an EMS SOP, development of a Forest Operation Modification Guideline, annual update of the Company's Fire Protection and Suppression Plan, provision of a Company initial attack system, annual meeting with MC Regional Fire staff, and continuing training of staff and contractors in forest fire prevention and suppression are mechanisms by which the Company fulfils its role in fire protection on the DFA.

### Forecast, Expected Response or Outcome

Through the implementation of the Company's programs for forest fire prevention and protection and in particular, through communication with contractors, other field staff and MC, the Company conducts the needed programs to control its activities in terms of the potential to cause forest fires on its operations. The Company utilizes MC forest fire weather and hazard information along with local conditions to ensure that the Forest Operation Modification Guideline is implemented for the DFA. Control of operations to reflect the potential fire risk presented by weather, timber, ground and other operating conditions, in addition to the placement of fire cache's in operating areas and the training of contractors to provide for response to any ignition situations is anticipated to result in minimal actual fire starts and control of situations to ensure that any accidental fires result in only small areas burned within the established target.

## **Implementation**

The Company's program to control the incidence and extent of forest fires caused by operational activities includes a variety of tactics including planning, awareness and training, operational control and communications and coordination:

- EMS processes in place to address potential impacts of forest fire (SOP WL001, COR, Tailgate Checklist);
- Preparation of the Annual Fire Protection and Suppression Plan for submission to MC to communicate the information on plans for fire protection and suppression activities, protection priorities and equipment resources;
- Annual fire meeting with MC Regional Fire staff to review requirements and plans for the coming fire season;
- Development and ongoing implementation of the Forest Operation Modification Guideline for Company and contract operations during the fire season; and,
- Ongoing training of Company staff and contractors for fire prevention and initial attack suppression activities.

All of the above mechanisms support the implementation of the target to limit individual incidences of accidental fire to less than 2 hectares in extent. These programs for forest fire protection and suppression are currently in place.

This indicator and target will commence in 2004, with the first applicable 5-year reporting period in terms of measurement of variance being 2004 – 2008.

## **Monitoring and Reporting**

The monitoring of incidences of accidental fires caused by Company or contractor operations on the DFA will be undertaken through the mechanisms of the EMS and the Environmental Incident Report. An Environmental Incident Report is required to be prepared and logged within the EMS for any accidental fire incidence on a Company or contractor operation. The report will specify the amount of area impacted by the fire and the causes and action taken.

The results of any Environmental Incidence Reports related to Company caused fire starts will be summarized and presented in the Forest Management Annual Report and reported annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 2.0</b>	<b>Maintenance and Enhancement of Forest Ecosystem Condition and Productivity</b>
<b>CSA SFM Element 2.2</b>	<b>Forest Ecosystem Productivity</b> Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species
<b>FML Area No. 2 DFA Value 2.2.2</b>	Protect current ecosystem conditions
<b>Objective 2.2.2.2</b>	Reduce forest productivity losses due to dwarf mistletoe infestations

<b>Indicator 2.2.2.2.1</b>	<b>Target 2.2.2.2.1 (A)</b>
Re-curing mistletoe infections in regenerating stands	Prevent re-infection of regenerating jack pine stands to achieve Free-to-Grow certification status <b>Acceptable Variance:</b> No variance from all regenerating jack pine stands achieving Free-to-Grow certification status

### Management Strategy

As described in the FML Agreement, MC has responsibility for forest protection on the DFA in terms of insect and disease monitoring and control. It is the practice of the Company, however, to work closely with MC in the identification of mistletoe infections in jack pine stands within operating areas (PHFI) and to take mitigating control measures to prevent re-infection of regenerating jack pine stands in conjunction with harvesting and renewal operations for the area. It is recognized that all parties have a stake in maintaining forest ecosystem productivity and productive capacity by taking steps to reduce the effects of disease on the DFA and to protect the investment made in the regenerating stand. To obtain Free-to-Grow status the regenerating stand must be free of mistletoe infection at the time of survey.

In situations where jack pine mistletoe infections are identified, sanitation and/or planting of resistant tree species will be utilized to control the infestation and to ensure that Free-to-Grow certification status will be achieved.

### Forecast, Expected Response or Outcome

Through the implementation of the PHFI to identify areas containing high infection levels of dwarf mistletoe the Company is able to follow-through with a mitigation plan for harvesting, follow-up sanitation work as required and appropriate renewal processes to minimize the risk of re-infection of the regenerating stand. Through these mechanisms it is anticipated that the Company will successfully regenerate the new stand while preventing re-infection by dwarf mistletoe during the establishment period up to the Free-to-Grow survey certification.

## **Implementation**

As per the FMPOPs, the Company's program to control the re-infection of dwarf mistletoe into new regenerating stands following harvest includes a variety of tactics including surveying and planning, harvest operations, forest renewal mitigation, sanitation and monitoring:

- PHFI process and results utilized to identify the occurrence of areas of dwarf mistletoe infection;
- Planning based upon PHFI results utilized to mitigate/schedule infected stands and prescribe harvesting and renewal mitigation;
- Modified harvesting to include dwarf mistletoe sanitation by utilizing merchantable and knock-down of non-merchantable infected trees;
- Post-harvest sanitation to knock down any infected trees not taken during the harvest of the stand;
- Forest renewal treatment to eradicate the infection, such as the planting of disease resistant species; and,
- Follow-up monitoring in conjunction with the Regeneration survey and Free-to-Grow surveys for the area will result in action plans as required to eliminate the infection and to achieve Free-to-Grow certification.

All of the above mechanisms support the implementation of the target to prevent re-infection of regenerating jack pine stands. These programs for mitigation of dwarf mistletoe are currently in place.

This indicator and target will commence in 2004.

## **Monitoring and Reporting**

The monitoring of success in prevention of re-infection of regenerating jack pine stands with dwarf mistletoe occurs in conjunction with the regeneration and Free-to-Grow surveys for the area. Results of the status of dwarf mistletoe prevention in regenerating stands will be reported annually as applicable in the Forest Management Annual Report.

The status of this indicator will be presented annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 3.0</b>	<b>Conservation of Soil and Water Resources</b>
<b>CSA SFM Element 3.1</b>	<b>Soil Quality and Quantity</b> Conserve soil resources by maintaining soil quality and quantity
<b>FML Area No. 2 DFA Value 3.1.1</b>	Healthy soils that will sustain forest-related ecosystems
<b>Objective 3.1.1.1</b>	Maintain soil productive ability, extent and variety

<b>Indicator 3.1.1.1.1</b>	<b>Target 3.1.1.1.1 (A)</b>
Extent and duration of in-block seasonal roads and landings	Limit extent of in-block roads and bulldozed landings and campsites to less than 10% of total harvested area each year <b>Acceptable Variance:</b> No variance from the target of less than 10% of total harvested area to be occupied by in-block roads and bulldozed landings and campsites on a forest section and DFA basis. Variation on an individual cutblock basis is expected to occur, particularly related to the placement of any campsites within a given cutblock area.
	<b>Target 3.1.1.1.1 (B)</b>
	Reduce duration of in-block roads and bulldozed landings and campsites by addressing these areas within the renewal implementation program for each cutblock <b>Acceptable Variance:</b> No variance from inclusion of landings and seasonal in-block roads for renewal activities and regeneration success assessment within cutblock. Regeneration of any given in-block road may vary, however all such areas will be included within applicable cutblocks for determination of block renewal success.

### Management Strategy

To maintain soil productive ability, extent and variety, particularly within cutblock areas where harvesting, associated road and landing development and renewal operations occur, the Company will limit the extent of bulldozing in terms of in-block roads, landings and campsites to reduce mineral soil exposure, removal of organic material and resulting compaction and potential for erosion. Through awareness and training of contractors (including application of the FMPOP Operators Guide), and follow-up direction and monitoring, contractors working for the Company will be directed to limit the extent of in-block road and bulldozed landing and campsite development.

As described in the 1997 – 2009 FMP, seasonal in-block roads and associated landings are addressed within the reforestation program as an ongoing practice of the Company. The renewal of all areas harvested to supply the Company's mill facilities is a commitment that the Company has made through its FML Agreement with the Province of Manitoba. As described in the FMPOPs, the Company undertakes to ensure that all such areas are reforested to meet government regeneration and FTG standards.

To meet the two targets associated with this indicator the Company will ensure that harvesting contractors will limit development of in-block roads, landings and campsites and that all seasonal in-block roads and landings in cutblocks will be fully incorporated

within the associated cutblock area for the purposes of forest renewal planning, implementation, monitoring and assessment. This will include the determination of renewal success for the overall cutblock. Reforestation strategies for each cutblock area, including the associated in-block roads and landings, are developed based on previous forest cover types and soil types with the intent of maintaining the productivity of harvested areas.

### **Forecast, Expected Response or Outcome**

It is expected that through the processes of the EMS including the application of the Project Tailgate Checklist and meeting with contractors, and follow-up via the Operations Inspections and documentation on Operations Inspections Forms, contractor operations in cutblocks will limit bulldozing of in-block roads, landings and campsite areas to less than 10%. Some local variation may occur, particularly as pertains to the location of campsites, however across forest sections and the DFA it is expected that the target will be achieved.

In conducting forest renewal operations and the follow-up assessment through Regeneration surveys and Free-to-Grow surveys, the areas formerly occupied by seasonal in-block roads and landings within the cutblock will be considered as part of the overall cutblock and will thus be subject to the assessment of renewal success.

Based upon the Company's ongoing Regeneration survey program and subsequent submission of results for certification by MC, the renewal of all harvested areas, including all landings and in-block roads is forecasted to result in a success rate of XX%. (Paul – same percentage here as in the general forest renewal indicator).

### **Implementation**

Limiting the extent of in-block roads, and bulldozed landings and campsites will be achieved through awareness and training of contractors and through the operational control provided for in the EMS:

- All contractors are provided with the FMPOP Operators Guide including awareness and training information pertaining to limiting the extent of roads and landings and bulldozer work;
- The expectations for limiting of bulldozer work in the cutblock will be reviewed with the contractor at the Project Tailgate Meeting prior to commencement of work in the block; and,
- Ongoing Operations Inspections and documentation in the Operations Inspection Form to monitor progress by contractors in meeting targets.

The inclusion of all seasonal in-block roads and landings is an ongoing component of the forest management practices of the Company. Achieving the target of addressing all seasonal in-block roads and landings within the renewal program includes a number of planning and operation programs and practices including:

- Pre-harvest Forest Investigation (PHFI) of all proposed cutblocks prior to inclusion in the AOP includes pre-harvest forest cover composition, soil and other

characteristics required for developing the pre-harvest renewal prescription for each block in the AOP;

- The data from the PHFI and government Regeneration requirements are utilized to develop the pre-harvest renewal objective for each cutblock and strategies to meet the target;
- Renewal operations are implemented as per the FMPOPs for all cutblock areas;
- Assessment of the success of the renewal program is undertaken through government approved Regeneration and FTG survey programs to include all areas formerly occupied by in-block roads and landings;
- Results of the 7 year Regeneration surveys are reviewed and certified by MC indicating that areas have received certification and that the reforestation commitment has been achieved for subject areas; and,
- Any areas within the cutblock (landings, in-block roads or other areas) requiring additional follow-up treatment will be treated within the additional 3 year period as per the FML Agreement.

All of the above aspects of the forest renewal program are currently in place.

This indicator and target will commence in 2004.

## **Monitoring and Reporting**

Monitoring of the percentage of area of the cutblock on which bulldozing occurs in the development of in-block roads, landings and campsites will take place in conjunction with the cutover record assessment annually. The amount of area on which bulldozing occurs will be determined for each cutblock and reported. The totals will be summarized and reported by forest section and for the DFA to report on the target.

The monitoring of forest renewal on the DFA is undertaken through government certified Regeneration surveys conducted 7 years following harvest for all cutblocks and through subsequent FTG surveys. The status of all cutblocks from the time of harvest through renewal treatment to regeneration survey and FTG survey is tracked on the Company's Cutblock Status Report which is updated annually as a result of inputs from harvest, renewal and regeneration and FTG records. A summary of the renewal status of cutblocks harvested 7 years earlier for which the renewal commitment has come due is provided in the Company's Forest Management Annual Report to MC annually.

Within these monitoring processes and reports the renewal of all landings and all in-block roads will be considered to be a requirement within the overall renewal of the associated cutblock.

The status of for this indicator and the two targets will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 3.0</b>	<b>Conservation of Soil and Water Resources</b>
<b>CSA SFM Element 3.1</b>	<b>Soil Quality and Quantity</b> Conserve soil resources by maintaining soil quality and quantity
<b>FML Area No. 2 DFA Value 3.1.1</b>	Healthy soils that will sustain forest-related ecosystems
<b>Objective 3.1.1.1</b>	Maintain soil productive ability, extent and variety

<b>Indicator 3.1.1.1.2</b>	<b>Target 3.1.1.1.2 (A)</b>
Adherence to work permit conditions and Tolko SOPs guiding Tolko and contractor forestry operations on the DFA including those pertaining to rutting, protection of non-timber values, and for operations adjacent to watercourses including buffers and the handling and storage of fuels, lubricants and herbicides	No major non-compliances with government work permit conditions for Tolko and contractor operations (major non-compliances are those that result in issuing of a “Summary Procedure” or an “Indictment Notification” by MC) <b>Acceptable Variance:</b> No variance from the target of no major non-compliances related to work permit conditions is acceptable. There may be some instances where minor non-compliances may occur and be documented for follow-up action within the EMS or through communication of from MC via the MC Timber Harvest Inspection Report.

### Management Strategy

The planning process, including public consultation processes and input on non-timber values, provides the direction for recognition of various non-timber ecosystem values and resource uses. Development of the AOP includes incorporation of the various MC and other government legislation, regulations and guidelines in place to address these values. Public community and resource user consultation within the plan development process assists in providing input on locally important values that may require mitigation and recognition within the follow-up work permit application and approval process. As part of the planning process leading directly to the implementation of operations the AOP and work permit conditions of approval provide the guidance required to address the various non-timber values in place on the DFA.

Through the ongoing implementation of the EMS, the Company will ensure adherence to all work permit conditions and Tolko SOPs in conducting forestry activities on the DFA. Operator awareness and training and direction of all contractor operations by Tolko through the mechanisms provided by the EMS in place for the DFA will ensure that the Company is in control of its activities.

Ongoing liaison with MC and other government departments also assists in meeting targets related to the management of operations to ensure that work permit conditions and Tolko SOPs are met. Copies of the MC Timber Harvest Inspections are provided to the Company on an ongoing basis to assist in follow-up of operations.

## **Forecast, Expected Response or Outcome**

It is expected that through contractor and operator training and the processes of the EMS including the application of the COR, Project Tailgate Checklist and meeting with contractors, and follow-up via the Operations Inspections with documentation on Operations Inspections Forms, that all operations will conform to the Tolko SOPs and to all work permit conditions set out for each operation.

## **Implementation**

Ensuring that all Tolko and contractor operations on the DFA conform to the Tolko SOPs and to all work permit conditions of approval for operations will occur through the mechanisms of the EMS:

- Contractor and operator awareness and training including the Annual Woodlands Contractors Meeting and the FMPOP Operators Guide provided to all contractors;
- During the COR all contractors are appraised of the Company's expectations of the contractor to adhere to all SOPs and to work permit conditions;
- The specific project, road and cutblock operating expectations related to the SOPs and work permit conditions for the respective operation will be reviewed with the contractor at the Project Tailgate Meeting prior to commencement of work in the block;
- Ongoing Operations Inspections and documentation in the Operations Inspection Form to monitor progress by contractors in meeting targets;
- MC Timber Harvest Inspection Reports are copied to the Company to document the findings of government inspections of operations with respect to all legislation and regulations and specifically relating to work permit conditions set out for the operation; and,
- Modifications to operations are made as required as operations proceed related to meeting the requirements of work permit conditions and SOPs in response to any anticipated concerns such as rutting or potential concerns for non-timber values (including re-scheduling or shutdown as required).

All of the above processes of the EMS and MC Timber Harvest Inspection process are currently in place.

This indicator and target will commence in 2004.

## **Monitoring and Reporting**

Monitoring of the compliance of Tolko and contractor operations to MC Work Permit conditions and to Tolko SOPs will take place through the EMS Environmental Incidence Reporting process which is in place to address any non-compliances that occur on the DFA.

Should any major non-compliances regarding MC Work Permit conditions occur (those resulting in the issue of a "Summary Procedure" or an "Indictment Notification" from MC to the Company), such incidences will be reported and addressed within the EMS Environmental Incidence Reporting (EIR) process as a major non-compliance.

Any MC or Company inspection or operational issues with the potential to become or lead to a non-compliance will also be reported and dealt with through the EMS Process Improvement Form (PIF) process with follow-up action to address the concern.

Any major non-compliances, as well as all EMS Process Improvement Form actions that occur on the DFA will be summarized annually in the SFM Report including documentation of any follow-up action taken.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 3.0</b>	<b>Conservation of Soil and Water Resources</b>
<b>CSA SFM Element 3.1</b>	<b>Soil Quality and Quantity</b> Conserve soil resources by maintaining soil quality and quantity
<b>FML Area No. 2 DFA Value 3.1.1</b>	Healthy soils that will sustain forest-related ecosystems
<b>Objective 3.1.1.1</b>	Maintain soil productive ability, extent and variety

<b>Indicator 3.1.1.1.3</b>	<b>Target 3.1.1.1.3 (A)</b>
Amount of area in all-weather roads (Categories 1 & 2) in place at any given time	Total amount of Company Category 1 and 2 all-weather roadbed across the DFA not to exceed half of one percent (0.5%) of the total productive forest landbase <b>Acceptable Variance:</b> No variance is acceptable in limiting Company all-weather roadbed to not exceed half of one percent (0.5%)

### Management Strategy

To maintain soil productive ability, extent and variety on the DFA, the Company will limit the extent of Company Category 1 and 2 all-weather roads to not exceed half of one percent (0.5%) of the total productive forest landbase at any given time. Through strategic long-term planning at the FMP level in terms of available timber supply, current access infrastructure and lifespan, and review and implementation at the AOP level, new all-weather road development will be coordinated against the decommissioning of all-weather roads no longer required to meet this target.

As described in Element 4.1, a target has been established within this performance framework to track and report on initial work on decommissioning of earlier constructed all-weather roads no longer required. Such work will continue as appropriate to decommission all-weather roads no longer required to balance against new road development in meeting this target.

### Forecast, Expected Response or Outcome

It is expected that the forecasted wood supply requirements and access availability and proposed development to address these requirements within the FMP will provide the long-term projection of access requirements for the DFA. The current measurement of all-weather roads in the DFA has been undertaken and documented within the Road Ledger to provide a mechanism for measurement and reporting on this indicator. The current measurement of active all-weather roads indicates a level of 0.02 % of the total productive forest landbase of the DFA.

Continued annual review of the status of current all-weather roads in conjunction with proposed new road development and decommissioning of all-weather roads no longer required is expected to maintain the level of active all-weather roads at or below the target level.

## **Implementation**

Limiting the amount of all-weather Company roadbed in the DFA will be achieved through long-term strategic planning, decommissioning of roads no longer required and tracking of active roads through the Road Ledger:

- The current 1997 – 2009 FMP provided foreseen Company all-weather road requirements at the time of plan preparation based upon projected wood requirements and the existing road network at the time;
- On-going AOP planning occurs within the framework offered by the FMP with continuing assessment to identify opportunities to maximize the utilization of existing road infrastructure and minimize the development of new all-weather roads;
- Any new all-weather roads developed will be added to the Roads Ledger under active status which will be updated annually in conjunction with preparation of the Cutover Records;
- The existing all-weather road infrastructure of the DFA has been measured and reported in the Road Ledger to provide a baseline for continuing assessment and reporting of this indicator (the current amount of active all-weather Company roads as related to the total productive forested landbase is 0.02 %);
- In conjunction with the development of the Road Ledger and in support of work to meet performance criteria within CSA SFM Element 4.1, the Company is undertaking an inventory of backlog all-weather roads that are no longer in use as part of a decommissioning plan for these roads;
- Once decommissioning of any future roads is completed the Company will forward a letter to MC notifying that the conditions have been met and the road has been moved to an Interim Decommissioned status and inviting MC to participate in an inspection of the road;
- Following further monitoring for a 2 year term, the Company will submit a second letter notifying MC that final decommissioning has been achieved provided that the conditions for decommissioning have been maintained. At this time the road will be reclassified to final decommissioned status; and,
- Ongoing annual update of the Road Ledger and comparison to the total productive forest landbase will provide for measurement and reporting on this indicator and target.

This indicator and target will commence in 2004.

## **Monitoring and Reporting**

Monitoring of the amount of Company all-weather road in place at any given time will occur in conjunction with the preparation of the Cutover Records annually. At that time the cutover photography will be utilized to document any newly constructed all-weather road for input to the GIS for tracking. Such roads will also be added into the Road Ledger as active status at this time.

As backlog and other all-weather roads deemed to no longer be required are decommissioned and reported to MC, the letters to MC will be placed on file as backup

to re-classify these roads as decommissioned in the Road Ledger. This will also take place annually in conjunction with the Cutover Record preparation.

The resulting Road Ledger update for each year will then be utilized in conjunction with the forest inventory data on the GIS to assess the percentage of the total productive forest landbase occupied by Company all-weather roads. The total will be summarized and reported for the DFA to report on the target.

The status of for this indicator and target will be summarized annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 3.0</b>	<b>Conservation of Soil and Water Resources</b>
<b>CSA SFM Element 3.1</b>	<b>Soil Quality and Quantity</b> Conserve soil resources by maintaining soil quality and quantity
<b>FML Area No. 2 DFA Value 3.1.1</b>	Healthy soils that will sustain forest-related ecosystems
<b>Objective 3.1.1.1</b>	Maintain soil productive ability, extent and variety

<b>Indicator 3.1.1.1.5</b>	<b>Target 3.1.1.1.5 (A)</b>
Amount and distribution of coarse woody debris	Implement a research project to assess and document levels of coarse woody debris retention for various covertypes and logging systems on the DFA <b>Acceptable Variance:</b> No variance in conducting the research project for the DFA. No targets are set for woody debris levels for the DFA at this time, and as such no variances for coarse woody debris levels are applicable at this time.

### Management Strategy

The Company conducts harvesting operations in accordance with the MC Forestry Branch Brush Disposal Policy and the Letter of Record for Variance to MC Forestry Branch Brush Disposal Policy. In recognition of the potential benefits to soil productivity that may be associated with the retention of coarse woody debris across cutover areas the Company will conduct a research project to assess the current state of these practices in compatible forest conditions across Canada and to assess the current levels of coarse woody debris retention in various covertypes under the logging systems employed on the DFA. The findings of this research will be brought forward to the SFM Committee to assess the value of developing a specific indicator and target for woody debris retention in the DFA.

### Forecast, Expected Response or Outcome

It is expected that a review of coarse woody debris retention practices across Canada and assessment of levels of debris currently being retained in various covertypes under DFA logging systems will lead to the development of a specific indicator and target for woody debris retention for the DFA should the findings support such action.

At the present time current operating practices will continue to be applied in this regard on the DFA in fulfillment of all work permit conditions as approved by MC.

### Implementation

The development and implementation of a research project related to coarse woody debris retention on the DFA will include:

- Review of literature on related research into coarse woody debris retention and results on soil productivity for covertypes, logging systems and other conditions compatible to those of the DFA;

- Review of other CSA SFM performance frameworks in place or being developed across Canada for potential sources of “seed ideas” for consideration by the SFM Committee in this regard;
- Develop and apply a coarse woody debris survey (including preparation of a Woody Debris Survey Manual) on the DFA in a variety of covertypes and logging systems in place on the DFA to assess current levels of retention;
- Review findings of literature review in conjunction with DFA survey findings to compare retention in other areas to that happening on the DFA and to come to conclusions as to the implications for soil productivity on the DFA; and,
- Bring forward the research project findings to the SFM Committee for subsequent deliberations regarding the potential suggestion for a specific indicator and target for coarse woody debris for future application to the DFA.

It is expected that the research project will be concluded and a new indicator and target identified, if appropriate, by 2008.

### **Monitoring and Reporting**

A Summary Report on the status of the research project into coarse woody debris retention for the DFA will be prepared annually.

Progress towards the identification of a specific indicator and target for coarse woody debris for the DFA will be summarized in the SFM Report annually.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 3.0</b>	<b>Conservation of Soil and Water Resources</b>
<b>CSA SFM Element 3.2</b>	<b>Water Quality and Quantity</b> Conserve water resources by maintaining soil quality and quantity
<b>FML Area No. 2 DFA Value 3.2.1</b>	Healthy watersheds
<b>Objective 3.2.1.1</b>	Maintain water quality and quantity as a result of woodlands operations

<b>Indicator 3.2.1.1.2</b>	<b>Target 3.2.1.1.2 (A)</b>
Condition of stream crossings and roadways in terms of erosion control	Maintain stream crossings and roadways in a condition that prevents siltation and blockage that results in serious impacts to water quality of rivers, streams and headwaters <b>Acceptable Variance:</b> No variance in maintenance of crossings or roadways to prevent siltation and blockage that results in serious impacts to commercial or recreational fish-bearing watercourses

### Management Strategy

Stream crossings and road development adjacent to watercourses are implemented according to the FMPOPs and in recognition of all conditions of associated work permits from MC and HADD authorization or Letter of Advice from DFO under the Navigable Waters Protection Act and the Fisheries Act. Construction includes application of mitigation practices to minimize potential for impact to adjacent watercourses including retention of vegetation, timing of construction and placement of materials and structures to control water run-off and drainage.

Follow-up monitoring will be implemented for all stream crossings and roads adjacent to watercourses to ensure that the condition of the crossings and roads are maintained in terms of erosion control and other measures necessary to prevent siltation into watercourses. Regular monitoring will enable follow-up action to take place in a timely fashion to minimize potential for road or crossing deterioration that could lead to impacts on adjacent watercourses.

Development, construction and monitoring of water crossings and roads adjacent to watercourses is managed according to the SOPs (WL032, WL050, WL051 and WL033) within the EMS.

### Forecast, Expected Response or Outcome

It is expected that through construction practices to fulfill work permit and other crossing permit conditions and the application of the road and crossing monitoring program, that mitigation processes can be put in place and maintained as required to minimize impacts to watercourses.

The development of a Road and Crossing Inspection Guideline to provide direction for annual inspection monitoring of roads and crossings is expected to result in an ongoing program of monitoring leading to maintenance actions as required to mitigate impacts on watercourses.

## Implementation

Ensuring that construction of all stream crossings and road construction adjacent to watercourses will conform to the Tolko SOPs and to all work permit conditions of approval for construction will occur through the mechanisms of the EMS and the Road and Crossing Inspection Guideline:

- Contractor and operator awareness and training including the Annual Woodlands Contractors Meeting and the FMPOP Operators Guide provided to all contractors;
- During the COR all contractors are appraised of the expectations of the Company to adhere to all SOPs and to work permit conditions in construction of roads and stream crossings;
- The specific road and crossing construction expectations related to SOPs and work permit conditions for the respective operation will be reviewed with the contractor at the Project Tailgate Meeting prior to commencement of work on the road and/or crossing; and,
- Ongoing direction and inspection of construction activities to monitor progress of construction contractors in meeting requirements.

The inspection monitoring program for all stream crossings and roads adjacent to watercourses will be developed as a guideline (Road and Crossing Inspection Guideline) within the FMPOPs to provide a proactive approach to monitor and address potential problem areas and to prevent potential non-compliance events from occurring:

- Develop a new guideline by the end of 2004, to subsequently be incorporated within a future revision of the FMPOPs, to outline the requirements and scheduling for road and crossing structures inspection (including an inspection checklist to be completed each year for every Company all-weather Category 1 and 2 Road, and the requirement for an action plan to deal with any identified concerns); and,
- Implement the new Road and Crossing Inspection Guideline within the FMPOPs for Company All-weather Road and Crossings Annual Inspections starting in 2005 with all all-weather Company roads and crossings inspected annually.

The EMS SOPs and application of FMPOPs for road and crossing construction are currently in place. The annual inspection and follow-up action plan procedure for all-weather roads and crossings will be developed in 2004 for implementation in 2005.

Reporting on progress on this indicator will commence in 2004.

## Monitoring and Reporting

As described for indicator 3.2.1.1.1, the status for compliance of Tolko and contractor operations to MC Work Permit conditions and to Tolko SOPs during the construction of Company all-weather roads and crossings will take place through the EMS Environmental Incidence Reporting and the Process Improvement Form processes which are in place to address any non-compliances that occur on the DFA. Should any major non-compliances regarding MC Work Permit conditions occur (those resulting in the issue of an Summary Procedure or Indictment Notification from MC to the Company), such incidences will be reported and addressed within the EMS Environmental Incidence Reporting process as a major non-compliance.

Monitoring and reporting for this indicator and target will occur through the procedures to be outlined in the new FMPOP Guideline to be developed specifically to address Company all-weather road and crossing inspections. As indicated earlier, the guideline will include the use of a formal checklist that must be filled out and signed off annually for each Company all-weather Category 1 and 2 road and crossing. These checklists will then be maintained within the Road Filing System along with the Road Ledger and the associated action plan and resulting follow-up post-inspection to address any identified concerns.

The checklists, follow-up action plans, and resulting post-inspections for all Company all-weather Category 1 and 2 roads and crossings will be reviewed and summarized for reporting annually in the SFM Report.

## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 4.0</b>	<b>Forest Ecosystems Contributions to Global Ecological Cycles</b>
<b>CSA SFM Element 4.1</b>	<b>Carbon Uptake and Storage</b> Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems
<b>FML Area No. 2 DFA Value 4.1.2</b>	Reduce the use of fossil fuels
<b>Objective 4.1.2.1</b>	Minimize the amount of greenhouse gases produced to transport wood to the mills

<b>Indicator 4.1.2.1.2</b>	<b>Target 4.1.2.1.2 (A)</b>
Level of awareness of Woodlands staff of effects of unnecessary vehicle idling	Increase level of awareness of Woodlands staff of the importance of reducing unnecessary vehicle idling <b>Acceptable Variance:</b> No variance in undertaking steps to increase the level of awareness of Woodlands staff of the importance of reducing unnecessary vehicle idling

### Management Strategy

In recognition of the effects of unnecessary vehicle idling in terms of the value of reducing the use of fossil fuels on the DFA, the Company will take steps to increase the level of awareness of Woodlands staff in this regard. Communication on this subject will be conducted to remind staff of the importance of reducing vehicle idling time.

### Forecast, Expected Response or Outcome

Through the distribution of an annual reminder memo to each individual Woodlands staff member at the start of the winter season and discussion of this topic at the Annual Woodlands Meeting each year it is expected that the general level of awareness of the importance of reducing unnecessary vehicle idling will improve.

### Implementation

The level of awareness of Woodlands staff in terms of reducing unnecessary vehicle idling will occur through two documented processes:

- Distribution of a reminder memo to each individual Woodlands staff member to minimize vehicle idling times; and,
- A discussion of this topic with documentation in the minutes of the Annual Woodlands Meeting each year.

This indicator and target will be implemented in 2004.

### Monitoring and Reporting

The memo to be distributed to all Woodlands staff will be retained on file each year. Discussion of this topic and its relationship to the SFM system will be documented in the minutes of the Annual Woodlands Meeting.

The status of for this indicator will be summarized annually in the SFM Report starting in 2004.



## SFM Performance Requirements for the FML Area No. 2 DFA

<b>CCFM Criterion 5.0</b>	<b>Multiple Benefits to Society</b>
<b>CSA SFM Element 5.1</b>	<b>Timber and Non-timber Benefits</b> Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits
<b>FML Area No. 2 DFA Value 5.1.3</b>	Multiple use of the forest, including the consideration of cultural values, recreational uses, tourism, and other non-timber resources
<b>Objective 5.1.3.1</b>	Forestry operations will be planned and implemented in a manner that considers the diversity of social, economic, cultural and environmental values on the forest and use of localized knowledge of local species

<b>Indicator 5.1.3.1.1</b>	<b>Target 5.1.3.1.1 (A)</b>
Documentation of public consultation process followed, communities consulted, strategies/mitigation developed to address concerns of local Aboriginal and other communities and non-timber resource users within forest management plans for the DFA (FMP, AOP, Road Management Plans)	Forest management planning will take into account Aboriginal and other Community and stakeholder interests and concerns for development of SFM Plans, FMPs, AOPs and Road Management Plans <b>Acceptable Variance:</b> No variance is acceptable in making reasonable efforts to incorporate the interests and concerns of communities and stakeholders in the planning process. Although differences in view may occur, all concerns brought forward and the response of the Company will be documented.

### Management Strategy

The Company has developed and maintained a public consultation program in conjunction with its planning processes with increased focus on this area since development of the 1997 – 2009 FMP. In the preparation of the FMP, a number of mechanisms were developed, in addition to already existing processes, to promote and undertake public consultation for planning on the DFA:

- Formalization of public information meetings for the FMP and AOPs to provide the opportunity to provide information about the plan to the public and to offer the opportunity for feedback;
- Resource user consultations through user group meetings and in one-on-one informal meetings, including field visits;
- Development of the FML Area Forest Resource Advisory Committee (FRAC) to provide a forum for broad exchange of views and interests for the DFA and as an input mechanism to the plans of the Company;
- Participation in public awareness programs to promote public awareness of forestry and forest management on the DFA, including support for the Manitoba Forestry Association.

The Company has since built upon these programs to continue to make progress in encouraging public involvement in forest management planning on the DFA. A second FRAC has been developed based out of the Town of Snow Lake (Snow Lake FRAC) to

provide a consultation mechanism for the people from the area who indicated an interest in participating. Members of the FML Area FRAC and the Snow Lake FRAC, as well as a number of other members of the public who have demonstrated a keen interest in forest management on the DFA have come together in the formation of the CSA SFM Advisory Committee to assist the Company in the development of this SFM Plan. The public information meetings for AOP development and for the preparation of Road Management Plans have been extended out to additional communities to increase the opportunities for people in these communities to participate in the planning process.

### **Forecast, Expected Response or Outcome**

Through the continuing implementation of the public consultation program that has been built for the DFA and the formalization of the process to log concerns and the Company's response to such concerns it is expected that the interests and concerns of Aboriginal and other communities and stakeholders across the DFA will be incorporated in the development of FMPs, AOPs and Road Management Plans for the DFA. Documentation of the concerns expressed by communities and stakeholders along with the Company's response and follow-up action plan to address such concerns is expected to allow the Company to address community and stakeholder interests in forest management planning for the DFA.

### **Implementation**

The public consultation processes applied to the DFA include a number of mechanisms to achieve the target to take into account the interests and concerns of communities and stakeholders across the DFA in planning and implementing forest management activities on the DFA:

- Conduct public meetings with aboriginal and other communities across the DFA to review draft plans (FMP, AOP and Road Management Plans);
- Ensure a concerted and documented effort is undertaken to meet with all First Nation communities to review plans within the overall public consultation program;
- Public meeting agenda items will include:
  - Presentation of the developing plan under consideration;
  - Question and answer period with recorded minutes;
  - Opportunity for open-house detailed review of planning materials (maps, etc.) and documented input from participants;
  - Discussion of any local plant and animal species of interest to the community;
  - Other non-timber values;
  - Heritage values; and,
  - Opportunity for sharing of Aboriginal forest values including traditional ecological knowledge from participants.
- Documentation of agenda and other items raised by participants will occur through recorded meeting minutes;

- Open-house portion of meetings will include documentation by Company staff of any enquiries raised by participants in one-on-one discussions to log interests and concerns for use in plan review;
- Documented input (meeting minutes, one-on-one enquiries, letters, emails and phone calls) received from the public consultation processes will be applied to the review and finalization of the respective FMP, AOP or Road Management Plan through the utilization of logged meeting minutes, one-on-one interests and concerns expressed in any follow-up letters, emails or phone calls;
- Raised issues and concerns will be addressed by the Company Area Planner within the mitigation proposed as applicable for cutblocks in the AOP or in the Road Management Plan as applicable;
- The process followed for public consultation in the preparation of each FMP, AOP and Road Management Plan will be documented in the plan including the communities and stakeholders consulted, number of contacts made, other meeting advertising undertaken, and the opportunities provided for consultation;
- Each FMP and AOP will include a Public Concerns Table to document the concerns identified during the public consultation process and the identification of the party concerned, as available;
- The Company's response and action plan for each concern will be documented including situations where a difference in view may prevail;
- Concerns brought forward throughout the year will also be documented in the respective AOP Public Concerns Table to bring together all concerns raised and how they were addressed for summarizing annually in the SFM Report; and,
- Preparation of an FMPOP Guideline to provide a structured approach to public consultation meetings and processes to achieve this target will be prepared in 2004.

Processes for this indicator and target will be phased in over 2004 to further the processes already in place.

Reporting for this indicator will commence in 2005.

## **Monitoring and Reporting**

Monitoring and reporting on the public consultation processes for the DFA are ongoing in conjunction with the planning processes with which they are associated. The public consultation activities conducted for the preparation of each FMP, AOP and Road Management Plan are documented and summarized in the respective plan document. Documentation includes a description of the efforts made to advise communities and stakeholders of the scheduling of community meetings in the public consultation program and the attendance and level of response at these meetings.

Documentation of concerns brought forward by participants at the meetings, as well as through subsequent follow-up emails, letters and phone calls, will occur in a Public Concerns Table to be included in the relevant FMP, AOP and/or Road Management Plan. These tables will include the concerns raised, identify the party concerned where available, and describe the response and action plan for follow-up by the Company, including how the concern was addressed in the respective plan as applicable.

All public consultation programs conducted each year for FMP, AOP and Road Management Plans as applicable will be summarized in the SFM Report. This summary will include a compilation of the concerns brought forward to the Company and the respective response of the Company to each concern (Public Concerns Table). In addition, this summary will indicate and reference the number of instances where plans were modified or jointly developed with other stakeholders or communities in response to public consultation findings.

The status of this indicator will be summarized in the SFM Report.