



**2006**

**ANNUAL PERFORMANCE  
MONITORING REPORT**

**Grande Prairie Division**

**REPORTING PERIOD:**

**January 1st, 2006 - December 31st, 2006**

**February 28, 2007**





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A handwritten signature in black ink, appearing to read "S. Blue".

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## **Executive Summary**

This Annual Performance Monitoring Report has been prepared in accordance with the CSA-Z809-02 standard. The report summarizes the progress and performance that Canfor Grande Prairie Division has achieved in meeting and maintaining the Sustainable Forest Management (SFM) standard requirements.

The 2005 Sustainable Forest Management Plan (SFMP) for the Canfor Grande Prairie Defined Forest Area is a compilation of CSA standard requirements, corporate commitments and local level values, objectives, indicators and targets. Canfor Grande Prairie's Forest Management Advisory Committee (FMAC) assisted Canfor in identifying the local level values, objectives, indicators and targets that are contained within the SFMP and in this report.

As a means of solidifying Canfor's commitment to SFM, the 2001 SFMP was incorporated in the Detailed Forest Management Plan (DFMP) required under the terms of Forest Management Agreement (FMA) (Canfor 1999) 9900037 (Province of Alberta Order in Council 198/99). The DFMP was reviewed and endorsed by the FMAC, then submitted to and approved by the Alberta government on November 3<sup>rd</sup>, 2003. In October 2006, the 2005 SFMP (prepared in conformance with the CSA-Z809-02 standard (CSAI, 2002)) was incorporated into the 2003 DFMP and submitted to the Alberta government with a request that the government approve the replacement of the 2001 SFMP with the 2005 SFMP.

Canfor Grande Prairie Division was successfully recertified to both the CSA-Z809-02 and ISO 14001:2004 standards on November 7<sup>th</sup>, 2005. This is the first year Canfor has reported performance to the 2005 SFMP targets certified to the CAN/CSA Z809-02 standard.

In summary, Canfor Grande Prairie maintained overall conformance to the SFM requirements of the CAN/CSA Z809-02 standard, the ISO 14001:2004 standard and Canfor commitments in 2006.

In 2006, public concern continued regarding the management of caribou and caribou habitat within the Little Smoky and A La Peche caribou herd range, 15% of which lies within the Canfor FMA area. Canfor Grande Prairie division responded on February 11<sup>th</sup>, 2005 by committing to defer timber harvesting and road building activities in the caribou area for 2 years, as well as ceasing all forestry activity during May and June, the calving season. The primary intent of the deferral is to provide sufficient time for the Alberta government to approve and implement the Alberta Woodland Caribou Recovery Plan (AWCRT, 2005). Canfor Grande Prairie continues to be actively engaged in the caribou recovery plan process through its membership in the Caribou Landscape Management Association.

During the summer of 2006, an unprecedented flight of mountain pine beetle (MPB) occurred from central British Columbia into Alberta. The flight deposited MPB over a large area extending from north of the Peace River to Whitecourt and from the central portion of the Main Block of the FMA area to the Peace Block of the FMA area. The infestation attracted the immediate attention of the Alberta government, the forest industry and the general public. Canfor Grande Prairie responded to the infestation by significantly altering its 2006-07 harvesting plans and accelerated work on evaluating the short and long term impacts of an aggressive pine management strategy. This work will continue in 2007.

Progress toward achievement of individual SFM objectives is described fully within the Annual Performance Monitoring Report. The following is a summary of results:

**Table 1. Results of Targets**

<b>Classification</b>	<b>Number</b>
Number of targets completed	0
Number of targets met	36
Number of targets not met	13
Number of targets in progress	3
Number of targets not due for reporting	8
<b>Total number of CAN/CSA Z809-02 targets</b>	<b>60</b>

## Table of Contents

<b>1. Introduction &amp; Overview .....</b>	<b>1</b>
1.1. Certification .....	1
1.2. The CSA Standard .....	1
1.3. Sustainable Forest Management (SFM) Policy .....	2
1.4. The Defined Forest Area (DFA).....	3
1.5. Landbase & Resource Information .....	4
1.6. Annual Report .....	5
<b>2. Progress in Meeting and Maintaining SFM Requirements.....</b>	<b>6</b>
<b>3. Criterion 1: Conservation of Biological Diversity .....</b>	<b>7</b>
Critical Element (1.1): Ecosystem Diversity.....	7
Critical Element (1.2): Species Diversity.....	7
Critical Element (1.3): Genetic Diversity.....	13
Critical Element (1.4): Protected Areas & Sites of Special Biological Significance .....	16
<b>4. Criterion 2: Maintenance and Enhancement of Forest Ecosystem Condition and Productivity.....</b>	<b>19</b>
Critical Element (2.1): Forest Ecosystem Resilience .....	19
Critical Element (2.2): Forest Ecosystem Productivity.....	23
<b>5. Criterion 3: Conservation of Soil and Water Resources .....</b>	<b>25</b>
Critical Element (3.1): Soil Quality and Quantity.....	25
Critical Element (3.2): Water Quality and Quantity .....	30
<b>6. Criterion 4: Forest Ecosystem Contributions to Global and Ecological Cycles.....</b>	<b>36</b>
Critical Element (4.1): Carbon Uptake and Storage.....	36
Critical Element (4.2): Forest Land Conversion .....	37
<b>7. Criterion 5: Multiple Benefits to Society.....</b>	<b>42</b>
Critical Element (5.1) Timber and Non-Timber Benefits .....	42
Critical Element (5.2): Communities and Sustainability.....	46
Critical Element (5.3): Fair Distribution of Benefits and Costs.....	47
<b>8. Criterion 6: Accepting Society’s Responsibility for Sustainable Development .....</b>	<b>50</b>
Critical Element (6.1): Aboriginal and Treaty Rights.....	50
Critical Element (6.2): Respect for Aboriginal Forest Values, Knowledge, and Uses .....	51
Critical Element (6.3): Public Participation .....	53
Critical Element (6.4): Information for Decision-Making .....	54
<b>9. Summary.....</b>	<b>57</b>
<b>10. Literature Cited.....</b>	<b>58</b>

## **Figures**

Figure 1. Canfor's Environment Policy.....	2
Figure 2. Canfor's Forestry Principles.....	3
Figure 3. Defined Forest Area (DFA).....	4
Figure 4. Natural Mineral Lick Buffered in 2006.....	17
Figure 5. Mountain Pine Beetle Reported Sites.....	20
Figure 6. Stream Crossing Quality Index Procedural Guidebook.....	32
Figure 7. Erosion and Sediment Control.....	32
Figure 8. Merchantable Coniferous Waste Survey Results (1994 to Present).....	39
Figure 9. Location of Recreation Areas Managed by Canfor.....	44



## Tables

Table 1. Results of Targets.....	6
Table 2. Watersheds Above the ECA of 35% .....	8
Table 3. Staff Trained in Rare Plant Identification and Reporting (2006) .....	10
Table 4. Coarse Woody Debris Survey Results.....	11
Table 5. DFMP Buffer Area Versus AOP Buffer Area.....	12
Table 6. Area (ha) and Percentage of Structure Retention Across the FMA area .....	13
Table 7. Use of Genetically Improved Stock by Year .....	15
Table 8. Natural Mineral Licks Buffered.....	16
Table 9. Protected Areas and Sites of Special Biological Significance.....	18
Table 10. Establishment Survey Results .....	21
Table 11. Performance Survey Results .....	22
Table 12. Percentage of “in-block” roads planted within 18 months .....	23
Table 13. Minor Slumps Identified or Monitored in 2006 .....	26
Table 14. Planned Harvest Areas that Exceed 5% Disturbance.....	28
Table 15. Soil Disturbance (Actual versus Planned).....	29
Table 16. Harvest Areas Exceeding Soil Disturbance Prescriptions .....	30
Table 17. Summary of 2003-2005 WQCR Results in the FMA Area .....	31
Table 18. Action Plan Progress .....	33
Table 19. Road Remedial Actions Planned and Completed in 2006 .....	34
Table 20. Average Water Yield Increase (%) for 10 Sampled Watersheds .....	35
Table 21. Harvested Areas Reforested Within 18 Months.....	36
Table 22. Fires on the FMA Greater than 4 Hectares in Area .....	37
Table 23. Reforestation Status of FMA Burned Areas Greater than 4 Hectares in Area .....	37
Table 24. Balancing Yield Groups within FMA Area .....	38
Table 25. Coniferous Merchantable Industrial Salvage Wood.....	39
Table 26. Road Densities within the FMA Area .....	40
Table 27. Planting of Previously Withdrawn Areas .....	41
Table 28. Coniferous Harvest Levels.....	42
Table 29. Deciduous Harvest Levels .....	43
Table 30. Local Versus Non-local Contract Services Expenditures.....	46
Table 31. Social and Cultural Benefits Identified in the FMA Area .....	47
Table 32. Contributions to Local Communities .....	48
Table 33. Number of Permits issued within the FMA Area .....	48
Table 34. Local Use Timber Volume Allocation by Timber Year .....	49
Table 35. Response to Public Inquiries .....	54
Table 36. Research Projects.....	56



# 1. Introduction & Overview

## 1.1. Certification

Certification of sustainable forestry practices is key to meeting public demands and maintaining market shares. Canadian Forest Products Ltd. (Canfor) Grande Prairie has sought and achieved certification under a variety of respected standards including International Organization for Standardization (ISO) 14001, Canadian Standards Association (CSA) Z809 and *Forest Care*. See Quick Facts box for details.

As a preparatory step, Canfor corporately developed an Environmental Management System (EMS) to the ISO 14001 standard. The company's EMS provided the platform on which to build the Sustainable Forest Management System (SFMS) to the CSA standard. Canfor subsequently amalgamated the EMS and SFMS in the Canfor Forest Management System (FMS), under which it operated in 2006.

## 1.2. The CSA Standard

In 1996, 6 criteria were developed by the Canadian Council of Forest Ministers (CCFM) to address sustainable forest management. The criteria address the key aspects of forest management. The criteria are identified below:

- Criterion 1: Conservation of Biological Diversity;*
- Criterion 2: Maintenance and Enhancement of Forest Ecosystem Condition and Productivity;*
- Criterion 3: Conservation of Soil and Water Resources;*
- Criterion 4: Forest Ecosystem Contributions to Global Ecological Cycles;*
- Criterion 5: Multiple Benefits to Society; and*
- Criterion 6: Accepting Society's Responsibility for Sustainable Development.*

The CSA process led to the development of a set of critical elements for each of the criteria. Under the CSA standard, adoption of the CCFM criteria and elements as a framework for value identification provides vital links between local sustainable forest management and national and provincial-scale forest policy, as well as a strong measure of consistency in identification of local forest values across Canada. This standard, which utilizes a continual improvement approach, requires public participation, practical demonstration of sustainable forest management practices, and management commitment. Through a process of public participation, the CSA performance framework attains local relevance to the critical elements in the form of locally determined values<sup>1</sup>, objectives<sup>2</sup>, indicators<sup>3</sup> and targets<sup>4</sup>. Canfor's public advisory group, the Forest Management Advisory Committee (FMAC), assisted Canfor in the development of its Sustainable Forest Management Plan (SFMP) by identifying quantifiable local level values, objectives, indicators and targets appropriate to sustainable forest management.

<sup>1</sup> Values: an FMA area characteristic, component or quality considered by an interested party to be important in relation to a CSA SFM element or other locally identified element;

<sup>2</sup> Objectives: a broad statement describing a desired future state or condition for a value;

<sup>3</sup> Indicators: a variable that measures or describes the state or condition of a value; and

<sup>4</sup> Targets: a specified statement describing a desired future state or condition of an indicator. Targets should be clearly defined, time limited, and quantified if possible.

### Quick Facts

**1997** – Canfor Alberta Operations *Forest Care* certified

**1999** - (November) Canfor Grande Prairie's Environmental Management System (EMS) certified to ISO 14001:1996 standard

**2000** - (June) FMA Sustainable Forest Management Plan (SFMP) certified to National CSA standard (CSA-Z809-02)

**2002** - (November) Successful re-certification audit to ISO 14001:1996 and CSA-Z809-02 standards

**2003** - (August) Successful re-certification audit to the *ForestCare* standard

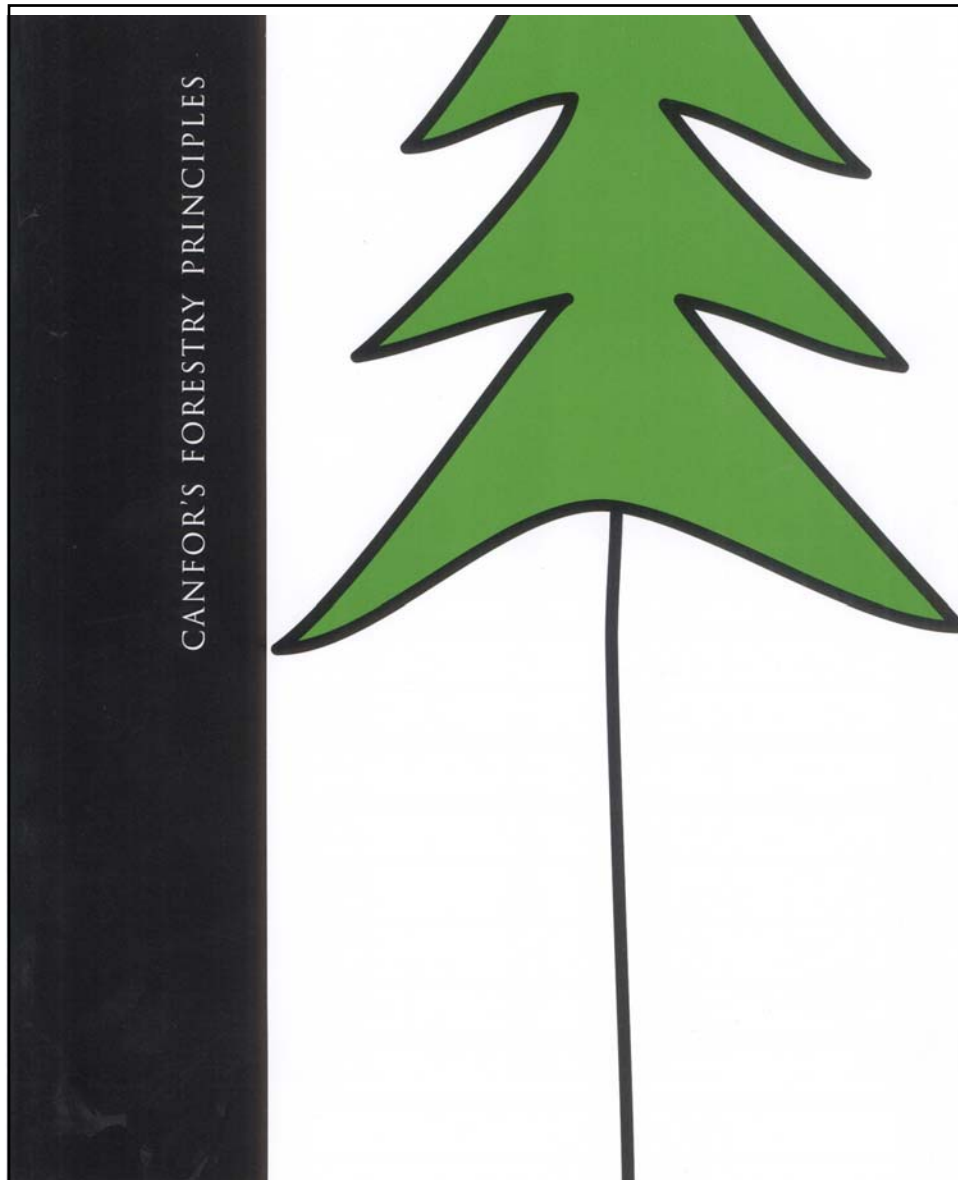
**2005** - (November) Successful re-certification of FMS to ISO 14001:2004, and SFMP to CSA-Z809-02 standards

### 1.3. Sustainable Forest Management (SFM) Policy

Senior Canfor management has endorsed the *Environment Policy* (Figure 1) and *Canfor's Forestry Principles* (Figure 2) that apply to all of the Canfor forestry operations including Grande Prairie.



Figure 1. Canfor's Environment Policy



**Figure 2. Canfor's Forestry Principles**

#### **1.4. The Defined Forest Area (DFA)**

The CSA standard states that organizations “*shall designate a clearly defined forest area to which the standard applies.*” The Defined Forest Area (DFA) for Canfor Grande Prairie is the Forest Management Agreement (FMA) area indicated in green in Figure 3.

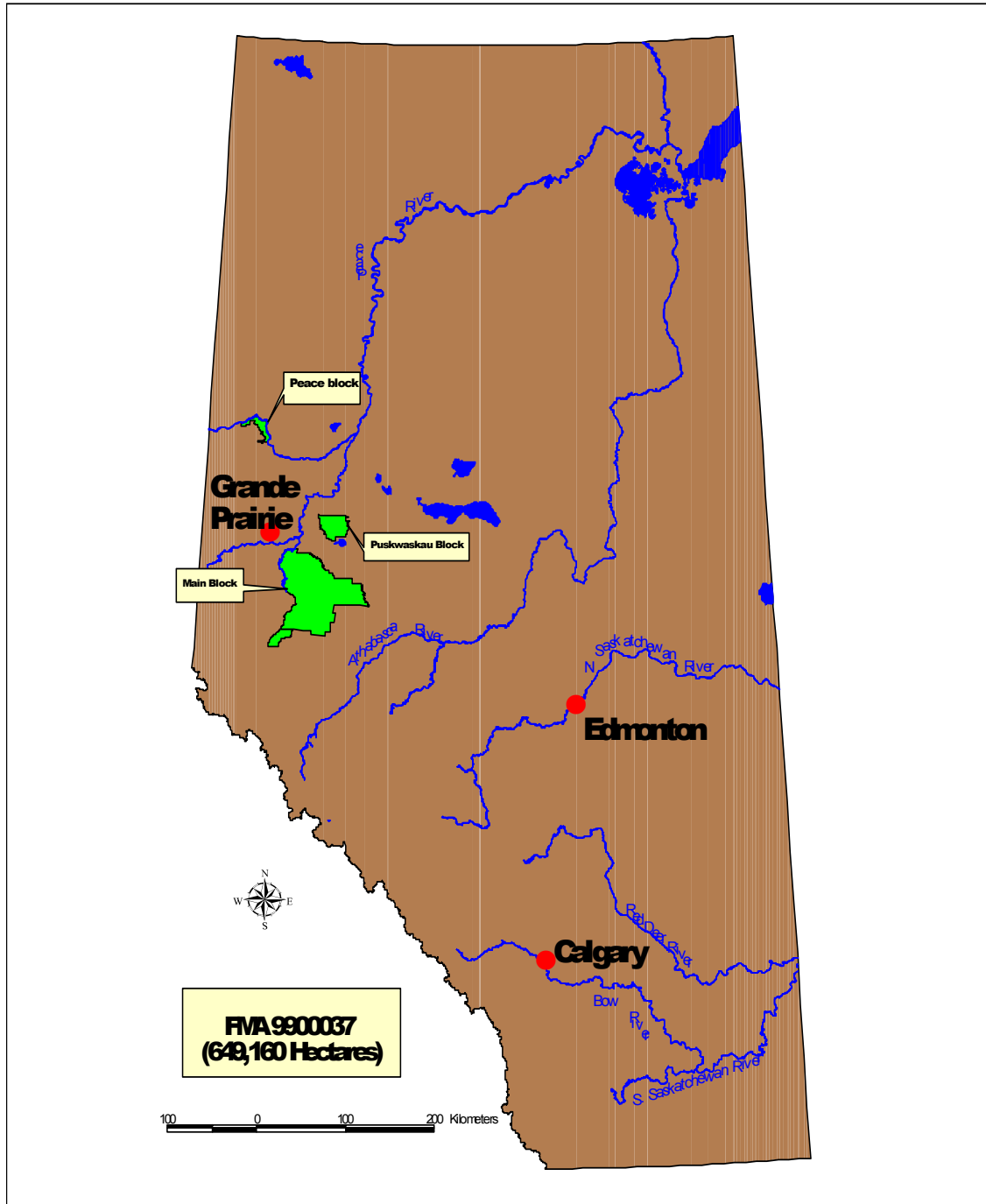


Figure 3. Defined Forest Area (DFA)

### 1.5. Landbase & Resource Information

Total Landbase: 649,160 ha  
 Productive Landbase (Coniferous and Deciduous): 474,193 ha  
 Coniferous AAC: 640,000 m<sup>3</sup>/yr  
 Deciduous AAC: 456,712 m<sup>3</sup>/yr



## 1.6. Annual Report

In accordance with the CSA standard (CSAI, 2002), Canfor prepares an Annual Performance Monitoring Report to report its progress in meeting commitments identified in the SFMP. The report contains information about the progress regarding the achievement and maintenance of Sustainable Forest Management (SFM) requirements in general (Section 2) and also indicates the status of each of the 60 targets (Sections 3-9). Five classifications for each objective are used for reporting the status:

1. Completed;
2. Meets;
3. Does not meet;
4. In progress; or
5. Not a scheduled reporting time.



## 2. Progress in Meeting and Maintaining SFM Requirements

Canfor Grande Prairie maintained overall conformance to the SFM requirements of the Canadian Standards Association (CSA) Z809-02 standard and Canfor corporate commitments in 2006. Results of audits can be found in Section 9.

In 2005, the Canfor FMAC developed quantifiable local level values, objectives, indicators and targets of sustainable forest management, as defined in the new CAN/CSA Z809-02 standard. These were then used to develop the 2005 Sustainable Forest Management Plan (SFMP). The SFMP was audited by an independent third party (KPMG Performance Registrar) and approved on November 7<sup>th</sup>, 2005. This is the first Annual Performance Monitoring Report that reports on the 2005 SFMP and status regarding achievement of targets.

Progress towards achievement of individual targets is found in Sections 3 - 8.



### 3. Criterion 1: Conservation of Biological Diversity

Conserve biological diversity by maintaining integrity, function and diversity of living organisms and the complexes of which they are part.

#### Critical Element (1.1): Ecosystem Diversity

Conserve ecosystems diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur on the DFA.

**Value (1.1) 1:** All natural ecosystems are important on the landscape

**Objective (1.1) 1a:** All current ecosystems are represented on the landscape at natural levels

<p><b>Target (1.1) 1a.1.1:</b> 100% of the seral stages will meet the 2009 projections; rare physical environments will not be harvested.</p>	<p><b>Acceptable variance:</b> +/- 20% of the 2009 projections</p>
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**Status:** Not a scheduled reporting time

Seral stage baselines are reported in the 2005 Sustainable Forest Management Plan. Seral stage comparisons will be compared to the 2009 forecasts in the 2009 Annual Performance Monitoring Report.

#### Critical Element (1.2): Species Diversity

Conserve species diversity by ensuring that habitats for the native species found on the DFA are maintained through time.

**Value (1.2) 1.:** Through time all current habitats are represented.

**Objective (1.2) 1a:** Current species diversity is maintained on the landscape.

**Indicator (1.2) 1a.1:** Habitat suitability rating.

<p><b>Target (1.2) 1a.1.1:</b> To maintain the habitat suitability rating for each ecosection group for the period 1997 to 2017 at the 1997 level.</p>	<p><b>Acceptable variance:</b> To maintain, within <math>\pm 20\%</math>, the proportions (area) of general habitat, critical habitat and landscape metrics that contribute to each wildlife guild habitat suitability rating.</p>
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**Status:** Not a scheduled reporting time

Baseline wildlife guild habitat suitability ratings (1997) will be compared to actual (2007) and the results will be reported in the 2008 Annual Performance Monitoring /Five Year Forest Stewardship Report.

**Indicator (1.2) 1a.2:** Number of bull trout watersheds with  $\geq 35\%$  Equivalent Clearcut Area (ECA) above the H60 elevation.

<p><b>Target (1.2) 1a.2.1:</b> Annually, zero bull trout watersheds with <math>\geq</math> 35% equivalent clear-cut area (ECA) above the H60 elevation.</p>	<p><b>Acceptable variance:</b> The acceptable variance is for no more than 5 (3%) of the watersheds in the bull trout area to exceed 35% ECA above the H60 elevation</p>
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**Status:** Meets

Bull trout targets are checked annually through the Detailed Forest Management Plan/Annual Operating Plan validation process developed by Timberline Natural Resource Group Ltd.

Bull trout habitat is monitored by calculating the Equivalent Clearcut Area (ECA) in the bull trout watersheds above the H60 line (i.e the elevation, above which, more than 60% of the source water for the watershed is derived). Each year Canfor utilizes the Detailed Forest Management Plan (DFMP) /Annual Operating Plan (AOP) validation process to verify whether watersheds exceed the target. The 2005 SFMP indicated only 1 watershed (#2057) exceeded the 35% threshold. The ECA% for watershed #2057 was calculated in 1999, prior to CSA certification, and the ECA value was 48% at that time. Since then, the ECA for this watershed has recovered to 38%, which is shown in Table 2. All other watersheds that were above the ECA target when the DFMP was prepared have recovered to below target levels by the end of 2006.

**Table 2. Watersheds Above the ECA of 35%**

Watershed ID	1999 ECA%	2005 ECA %	2006 ECA %
2057	48	40	38

**Indicator (1.2) 1a.3:** Percentage of habitat for endangered<sup>5</sup> or threatened<sup>6</sup> vertebrate species over time.

<p><b>Target (1.2) 1a.3.1:</b> Woodland Caribou: no more than 20% of the area in pioneer or young seral condition and at least 20% of the area in old seral condition at key points in time. Trumpeter Swan: to buffer 100% of identified trumpeter swan lakes with a 200m no harvest buffer (reported annually).</p>	<p><b>Acceptable variance:</b> Woodland Caribou: in 2009 for pioneer/ young seral condition will be <math>\leq</math> 18% of the area and for old seral condition will be <math>\geq</math> 11% of the area. Trumpeter Swan: zero</p>
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**Status:** In Progress (Woodland caribou: not a scheduled reporting time and trumpeter swan: meets)

Woodland Caribou

A decision was made by Canfor in 2005 to defer timber harvesting within the range of the Little Smoky caribou herd for 2 years. Harvesting did not occur in the 2005 timber year<sup>7</sup>, and is not planned for the 2006 timber year. The primary purpose of the deferral was to allow time for development of habitat and other management targets through the Alberta Caribou Recovery Plan (AWCRT, 2005) process. In 2005, the Caribou Landscape Management Association (CLMA) was established by a consortium of energy, utility and forestry companies, and a First Nation for the purpose of collaborating on caribou management issues.

<sup>5</sup>Endangered: Any species facing imminent extirpation or extinction.

<sup>6</sup>Threatened: Any species likely to become endangered if limiting factors are not reversed.

<sup>7</sup>Timber year: Is based in a logging season from May 1 to April 30



The CLMA has been very active since its inception, and has successfully undertaken several significant projects including those involving habitat restoration, caribou calf recruitment, long term access plan development and creation of an adaptive management program. In addition, the CLMA has developed a close relationship with the Alberta Caribou Committee and the West Central Caribou Landscape Planning Team, which have been formed by the Alberta government to assist with the development and implementation of caribou recovery strategies.

Trumpeter Swan

Water bodies supporting trumpeter swan habitat are identified by Alberta Sustainable Resource Department (ASRD) and provided to Canfor Grande Prairie, where it is uses this information to update the database on an annual basis. The 2005 harvested areas were superimposed onto the buffered water bodies; the results indicate that no harvesting occurred in trumpeter swan water bodies.

**Indicator (1.2) 1a.4: Percentage of Canfor forestry staff trained to identify rare plants.**

<p><b>Target (1.2) 1a.4.1:</b> 100% of the Canfor forestry staff receives training to identify and report rare plants (reported annually).</p>	<p><b>Acceptable variance:</b> 90% of the forestry staff receives training to identify and report rare plants.</p>
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**Status:** Meets

All staff requiring rare plant identification training were trained in 2006. A total of 10 staff members were trained in 2006 (Table 3).

**Table 3. Staff Trained in Rare Plant Identification and Reporting (2006)**

Forestry Employee	Date Trained
<b>Full Time Forestry Employees</b>	
Woodlands Manager	16-Dec-2005
Woodlands Superintendent	12-Jun-2001
Strategic Planning Superintendent	16-Dec-2005
Planning Superintendent	16-Dec-2005
Silviculture Forester	16-Dec-2005
Forestry Supervisor #1	12-Jun-2001
Forestry Supervisor #2	8-Jun-2005
Operations Supervisor (Harvesting #1)	12-Jun-2001
Operations Supervisor (Harvesting #2)	20-Jan-2006
Operations Supervisor (Harvesting #3)	12-Jun-2001
Operations Supervisor (Planning)	12-Jun-2001
Operations Supervisor (Plan/harv)	16-Dec-2005
Operations Supervisor (Log Haul)	16-Dec-2005
Operations Supervisor (Roads)	16-Dec-2005
Operations Supervisor (Silviculture #1)	16-Dec-2005
Operations Supervisor (Silviculture #2)	16-Dec-2005
Landuse Coordinator	16-Dec-2005
<b>Temporary Forestry Employees</b>	
Temp. Forestry Supervisor #1	16-Dec-2005
Temp. Forestry Supervisor #2	1-Feb-2006
Temp. Forestry Supervisor #3	4-May-2006
<b>Summer Student Employees</b>	
GPS Student #1	4-May-2006
Layout Student #1	4-May-2006
Layout Student #2	4-May-2006
Silviculture Student #1	4-May-2006
Silviculture Student #2	4-May-2006
Silviculture Student #3	4-May-2006
Strategic Student	4-May-2006
<b>Total Forestry Personnel Trained</b>	<b>100%</b>

**Indicator (1.2) 1a.5:** Number of biodiversity monitoring programs in which Canfor actively participates.

<b>Target (1.2) 1a.5.1:</b> Participates in one or more biodiversity monitoring program(s) annually.	<b>Acceptable variance:</b> Zero
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**Status:** Meets

Canfor continued its financial support of the Alberta Biodiversity Monitoring Program (ABMP) pilot project in 2006.

The goal of the ABMP is to establish and maintain a system to monitor the status of biodiversity across

the entire province of Alberta. Under the program, biodiversity will be sampled in terrestrial upland, standing water, and stream habitats. Overarching protocols have been established and subdivided into 6 suites of field protocols to aid implementation of the sampling program. The field protocols are; fall site preparation, spring terrestrial, summer terrestrial, standing water, winter terrestrial, and flowing water. Both biotic and selected habitat components will be quantified through the data collection process. In 2004, the ABMP initiated a 3-year pilot project (2004 – 2006) to test sampling protocols and make revisions to in order to improve efficiency and functionality. During that time, 85 sites were sampled. The next phase in the evolution of ABMP is to establish a fully functional program.

**Indicator (1.2) 1a.6: Percentage (volume/ha) of Coarse Woody Debris (CWD) on harvested areas.**

<p><b>Target (1.2) 1a.6.1:</b> 100% of the pre-harvest volume per hectare CWD will be retained on harvest areas annually.</p>	<p><b>Acceptable variance:</b> &gt;90% of the pre-harvest CWD volume per hectare.</p>
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**Status:** Meets

Pre-harvest coarse woody debris volumes were determined from operational cruise plot data collected between 1995 and 2000, and compiled by yield group. Post harvest coarse woody debris data is collected in conjunction with the waste and residue surveys, conducted out every 2 years. Data used in establishing target volumes and collected during post harvest surveys is weighted by yield group to determine average coarse woody debris volumes by hectare for areas harvested during the particular year.

Methodology used in the 2006 coarse woody debris survey was revised to be more consistent with that used in establishing yield group pre-harvest volumes. Specifically, stump volume was not tallied, as it had not been included in pre-harvest data. The results of the 2006 coarse woody debris survey were compiled by Timberline Natural Resource Group Ltd. and are summarized below:

**Table 4. Coarse Woody Debris Survey Results**

Description	Pre-Harvest Result	Minimum Acceptable Variance	Post Harvest Result
Coarse Woody Debris Results - Vol/Ha	105.4	94.8	103.1
Coarse Woody Debris Results - %	100%	90%	98%

**Indicator (1.2) 1a.7: Percentage of area (ha) in watercourse buffers.**

<p><b>Target (1.2) 1a.7.1:</b> The actual area in watercourse buffers is a minimum of 100% of the planned (DFMP) area (ha) annually.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Meets

A total of 37,716 hectares of the timber harvesting land base have been designated in the DFMP for watercourse buffering (planned). Utilizing geographic information system (GIS) spatial overlay of the harvest areas proposed in the 2006 annual operating plan (AOP) were overlaid onto the areas deleted from the timber harvesting land base for purposes of watercourse buffering in the DFMP was

conducted, and the results indicate there was an additional 1,649 hectares identified over and above what the DFMP designated.

As indicated in Table 5, the net addition of landbase into buffers was not calculated in 2004 and 2005. The process was revised for this year. The net addition of landbase into buffers indicated for 2006 reflects a summation of all data from the date of DFMP development (1999), up to and including those areas proposed for harvest in the 2006 AOP.

**Table 5. DFMP Buffer Area Versus AOP Buffer Area**

Year	DFMP Buffer Area (ha)	Additional Area Buffered (deleted) in the AOP (ha)	DFMP buffer area not used (added back to DFMP landbase)	Net addition of landbase into buffers	Net Total Area in Buffers (ha)	% of DFMP planned buffers
2004	37,716.00	4,289	unknown	unknown	42,005	111%
2005	37,716.00	4,328	unknown	unknown	42,044	111%
2006	37,716.00	4,415	2,766	1,649	39,365	104%

**Indicator (1.2) 1a.8:** Percent of the area harvested across the FMA area with structure retention.

<p><b>Target (1.2) 1a.8.1:</b> A minimum of 25% of the area harvested across the FMA area will contain structure retention accumulated annually beginning in 2002.</p>	<p><b>Acceptable variance:</b> Minimum of 20% of the area harvested across the FMA area will contain structure retention accumulated annually.</p>
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**Status:** In progress

Table 6 shows the results from 2002 to 2004. The results from 2005 and 2006 will be reported in the next Annual Performance Monitoring Report. The interpretation of post harvest aerial photography for 2005 and 2006 harvest areas was not completed in time to be incorporated into this report.

The following forms of structure retention have historically been retained on harvested areas across the FMA area:

- Incidental merchantable deciduous timber that was not required by the deciduous operators at the time of harvest – left in patches or as single trees;
- No harvest zones (NHZ) designed to protect wildlife features, sensitive sites or immature timber;
- Understory protection;
- Riparian buffers;
- Snags; and
- Machine free zones (MFZ).

Riparian buffers, machine free zones and no harvest zones are typically delineated from the harvest area with flagging. Decisions regarding the quantity and location of incidental merchantable deciduous retention and coniferous understory protection are made by Canfor operations supervisors and equipment operators.

Canfor Grande Prairie has developed a Structure Retention Strategy for the FMA area. The strategy includes principles and process used to determine structure retention targets within harvest areas. Data is being collected that will eventually be used to set landscape level targets for structure retention.

**Table 6. Area (ha) and Percentage of Structure Retention Across the FMA area**

Timber Year	Clearcut	Disturbance Class				No Harvest	Snags	Total Retention	Total
		76 - 94%	51 - 75%	26 - 50%	1 - 25%		>6/ha		
2002	2,215	50	51	84	28	34	494	741	2,956
2003	2,028	130	100	18	23	77	482	830	2,858
2004	3,263	13	15	22	35	102	234	421	3,684
<b>Total</b>	7,506	193	166	124	86	213	1210	1,992	9,498
<b>Percent Retention</b>	<b>79%</b>							<b>21%</b>	<b>100%</b>

**Critical Element (1.3): Genetic Diversity**

Conserve genetic diversity by maintaining the variation of genes within species.

**Value (1.3) 1:** Respect the natural genetic diversity.

**Objective (1.3) 1a:** Genetic diversity will be maintained on the landscape.

**Indicator (1.3) 1a.1:** Mean Patch Size (MPS) (ha).

**Target (1.3) 1a.1.1:**

The MPS (ha) for 2009 will not fall below the MPS forecasts for each reporting unit.

**Acceptable variance:**

MPS will not fall below 15% of the area of the 2009 MPS forecast for the FMA area and the Peace, Puskwaskau and Main parcels

**Status:** Not a scheduled reporting time

Mean patch size (MPS) will be monitored against the 2009 projections as provided in the approved DFMP.

MPS, together with patch size distribution in various seral stage classes, provides an insight into the level of fragmentation of the forest land. Forest patches are created by natural disturbance (wind, fire, pests etc.) and through harvesting activities. Over an entire rotation, forest management activities can alter the distribution and size of patches by fragmenting the landscape beyond the limits of natural variability. Many of the landscape level bird studies report mean patch size to be an effective indicator of incidence and reproductive output (Edenius and Sjoberg 1997; Roberts and Norment 1999).

**Indicator (1.3) 1a.2:** Mean Nearest Neighbour Distance (MNND) (m).

**Target (1.3) 1a.2.1:**

The MNND for 2009 will not exceed the MNND forecasts.

**Acceptable variance:**

MNND will not exceed +15% of the 2009 forecast for the FMA area and the Peace, Puskwaskau and Main parcels.

**Status:** Not a scheduled reporting time

Mean nearest neighbour distance (MNND) will be calculated annually using forest cover updates and reported in the 2009 *Annual Performance Monitoring Report*.

Mean Nearest Neighbour Distance (MNND) describes the proximity of forest patches, thus providing a quantitative measure of connectivity (Schumaker 1996; With 1999). Connectivity is a complementary measure of the degree to which forest patches can be considered joined together on the basis of a minimum acceptable separation distance. The connectivity (distance) of habitat patches is extremely important for large animals such as moose and caribou, 2 of the indicator species in the FMA area.

**Indicator (1.3) 1a.3: Area Weighted Mean Shape Index (AWMSI).**

<p><b>Target (1.3) 1a.3.1:</b> The AWMSI for 2009 will not fall below the AWMSI forecast.</p>	<p><b>Acceptable variance:</b> AWMSI will not decrease by –15% of the 2009 forecast for the FMA area and the Peace, Puskwaskau and Main parcels.</p>
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**Status:** Not a scheduled reporting time

The area-weighted mean shape index (AWMSI) will be calculated annually using forest cover updates and reported in the 2009 *Annual Performance Monitoring Report*.

Area-Weighted Mean Shape Index (AWMSI) provides a measure of patch shape complexity based on the perimeter-to-area ratio. The complexity of patch shapes in combination with the area of the shapes can influence many ecological processes. Small mammal migration, woody plant colonization and animal foraging strategies are influenced by patch shape. Many ecological effects attributed to the complexity of shape are actually related to “edge effects. In addition, shape influences the operability and economics of forest harvesting. For example, elongated harvest areas require more road construction than compact harvest areas and thus are more costly. Planned cutblocks are generally simple in shape and are usually somewhat rectangular. Where this is the case, the lack of measured complexity can be compensated operationally by retaining single trees or patches near block boundaries and by establishing minor boundary changes in the field to create more edges relative to area.

**Indicator (1.3) 1a.4: Percentage of total area by patch size class.**

<p><b>Target (1.3) 1a.4.1:</b> 100% of the total area by patch size class will meet the 2009 projections.</p>	<p><b>Acceptable variance:</b> ±10% of the 2009 forecast/</p>
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**Status:** Not a scheduled reporting time

The distribution of patch sizes will be calculated annually using forest cover updates and reported in the 2009 *Annual Performance Monitoring Report*.

Patch size distributions were derived for the Boreal Forest and Foothills Natural regions based on theoretical fire-return intervals (ORM, 2000). Targets for the Boreal Forest Natural region were derived from measured patch size classes of four 20-year periods of unmanaged forests (Delong and Tanner, 1996); while targets for the Foothills Natural region were based on the distribution of patch sizes in historical pre-suppression air photos of the Foothills Model Forest in Hinton, Alberta (Andison, 1997).

**Indicator (1.3) 1a.5: Percentage of area planted with genetically improved stock.**



**Target (1.3) 1a.5.1:**  
A maximum of 70% of area is planted with genetically improved stock accumulated annually.

**Acceptable variance:**  
Zero.

**Status:** Meets

The first year Canfor began reporting on genetically improved stock planting was 2002. Lodgepole pine was the only genetically improved seed available at that time. The year of 2004, was when genetically improved white spruce first was planted on the FMA area. Seed crops produced at the Huallen Seed Orchard have been consistent in terms of production during the past 2 years, however pine production has been less than expected. Steps are being taken to increase pine production through girdling trials and top pruning management. Table 7 indicates a gradual increase in the use of genetically improved stock since 2002, a trend that is expected to continue as the Huallen Seed Orchard reaches full production capacity.

**Table 7. Use of Genetically Improved Stock by Year**

Stock Origin	% Useage By Year				
	2002	2003	2004	2005	2006
Genetically Improved Lodgepole Pine Seed Orchard Stock	24	23	16	4	41
Genetically Improved White Spruce Seed Orchard Stock	0	0	44	78	75
Genetically improved stock overall (all species)	24	23	29	45	<b>53</b>

**Indicator (1.3) 1a.6:** Percentage of grass seed mix that contains restricted and noxious weeds.

**Target (1.3) 1a.6.1:**  
100% of utilized grass seed mix will not contain restricted or noxious weeds as identified in the Weed Control Act annually.

**Acceptable variance:**  
Zero

**Status:** Meets

Grass seed purity is confirmed prior to seeding by reviewing the “Certificate of Seed Analysis” provided by the seed seller. All seed used in reclamation, deactivation, erosion control and new road construction in 2006 was free of restricted or noxious weed seeds.

**Objective (1.3) 1b:** Conditions that support genetic diversity of species will be maintained.

**Indicator (1.3) 1b.1:** Percentage of seeds collected and seedlings planted in accordance with the “Standards for Tree Improvement in Alberta” (ASRD, 2005).

<p><b>Target (1.3) 1b1.1:</b> 100% of seeds collected and seedlings planted annually will be in accordance with “Standards for Tree Improvement in Alberta”.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Does not meet

Black spruce seed was collected in 2006 in accordance with the new seed zones established by the Alberta government. 2006 was the first year that the location of the seed zones was available digitally and an analysis of seedlings planted in accordance with approved seed zones was calculated. Three types of planting findings were discovered and reported to the government. Trees planted within 13 blocks exceeded the 100-meter elevation allowance. Approved seedlot variance by the Alberta Tree Improvement and Seed Center was not obtained for 2 blocks. Four blocks were planted with seed from an ineligible seedlot.

### Critical Element (1.4): Protected Areas & Sites of Special Biological Significance

Respect protected areas identified through government processes. Identify sites of biological significance within the DFA and implement management strategies appropriate to their long-term maintenance.

**Value (1.4) 1:** Identified protected areas and sites that have special biological significance.

**Objective (1.4) 1a:** The natural states and processes to maintain protected areas and sites that have special biological significances will be conserved.

**Indicator (1.4) 1a.1:** Percentage of significant wildlife mineral licks conserved.

<p><b>Target (1.4) 1a.1.1:</b> 100% of significant wildlife mineral licks will be conserved annually.</p>	<p><b>Acceptable variance:</b> Zero.</p>
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**Status:** Meets

Canfor establishes 100-meter buffers on identified, significant “natural” mineral licks. ASRD does not require buffers on “man-made” licks (usually a result of seismic activity, in which case the seismic company is responsible for capping holes).

In 2006, 8 significant “natural” mineral licks were identified (Table 8). These sites were buffered in the field and mapped to ensure harvesting did not occur within them. Buffers adjacent to harvest areas comply with operating ground rules.

**Table 8. Natural Mineral Licks Buffered**

	Natural Mineral Licks (Buffered)
2003 and previous years	60
2004	16
2005	15
2006	8
<b>Total</b>	<b>99</b>



**Figure 4. Natural Mineral Lick Buffered in 2006**

**Indicator (1.4) 1a.2:** Percentage of identified protected area and special biological significant sites that are conserved.

**Target (1.4) 1a.2.1:**  
100% of identified protected areas and special biological significant sites will be conserved annually.

**Acceptable variance:**  
Zero.

**Status:** Meets

Spatial analysis of all biologically significant sites, including the Dunvegan West Wildlands, parabolic sand dunes, mineral licks, swan buffers and watercourse buffers was conducted and none of these sites were harvested or partially harvested.

**Table 9. Protected Areas and Sites of Special Biological Significance**

Classification	Identifier	2005 Area (ha)	2006 Area (ha)	% FMA area <sup>1</sup>
Protected areas	Dunvegan West Wildland Park	4,471	4,471	1%
Areas of Special Biological Significance	Parabolic sand dunes	6,141	6,141	1%
	Watercourse buffers <sup>2</sup>	42,005	39,365	6%
	Wildlife mineral licks	240	295	0%
	Trumpeter swan buffers <sup>3</sup>	3,200	3,200	0%
	Historical resources <sup>4</sup>	0	0	0%
	subtotal	51,586	49,001	8%
	<b>Total</b>	<b>56,057</b>	<b>53,472</b>	<b>8%</b>
<b>Notes:</b>				
1. FMA area is 649,160 ha				
2. Watercourse Buffers were incorrectly calculated in the 2005 SFMP - see indicator (1.2) 1a.7.1 for explanation.				
3. Swan Buffers were revised from those indicated in the SFMP (2005).				
4. All sites will be mapped and 'protected' as prescribed by a certified archaeologist. To date, less than 1 ha has been prescribed into "buffers" (15m X 100m buffer on one site on an edge of a harvest opening). The majority of 'protection' of identified sites has been via other methods e.g. winter logging.				

## 4. Criterion 2: Maintenance and Enhancement of Forest Ecosystem Condition and Productivity

Conserve forest ecosystem condition and productivity by maintaining the health, vitality, and rates of biological production.

### Critical Element (2.1): Forest Ecosystem Resilience

Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.

**Value (2.1) 1:** Healthy forest ecosystem.

**Objective (2.1) 1a:** Factors that lead to forest ecosystem health will be identified and maintained.

**Indicator (2.1) 1a.1:** Percentage of identified insect and disease areas scheduled for treatment.

<p><b>Target (2.1) 1a.1.1:</b> 100% of the identified insect and disease treatments will be scheduled for treatment annually.</p>	<p><b>Acceptable variance:</b> Zero</p>
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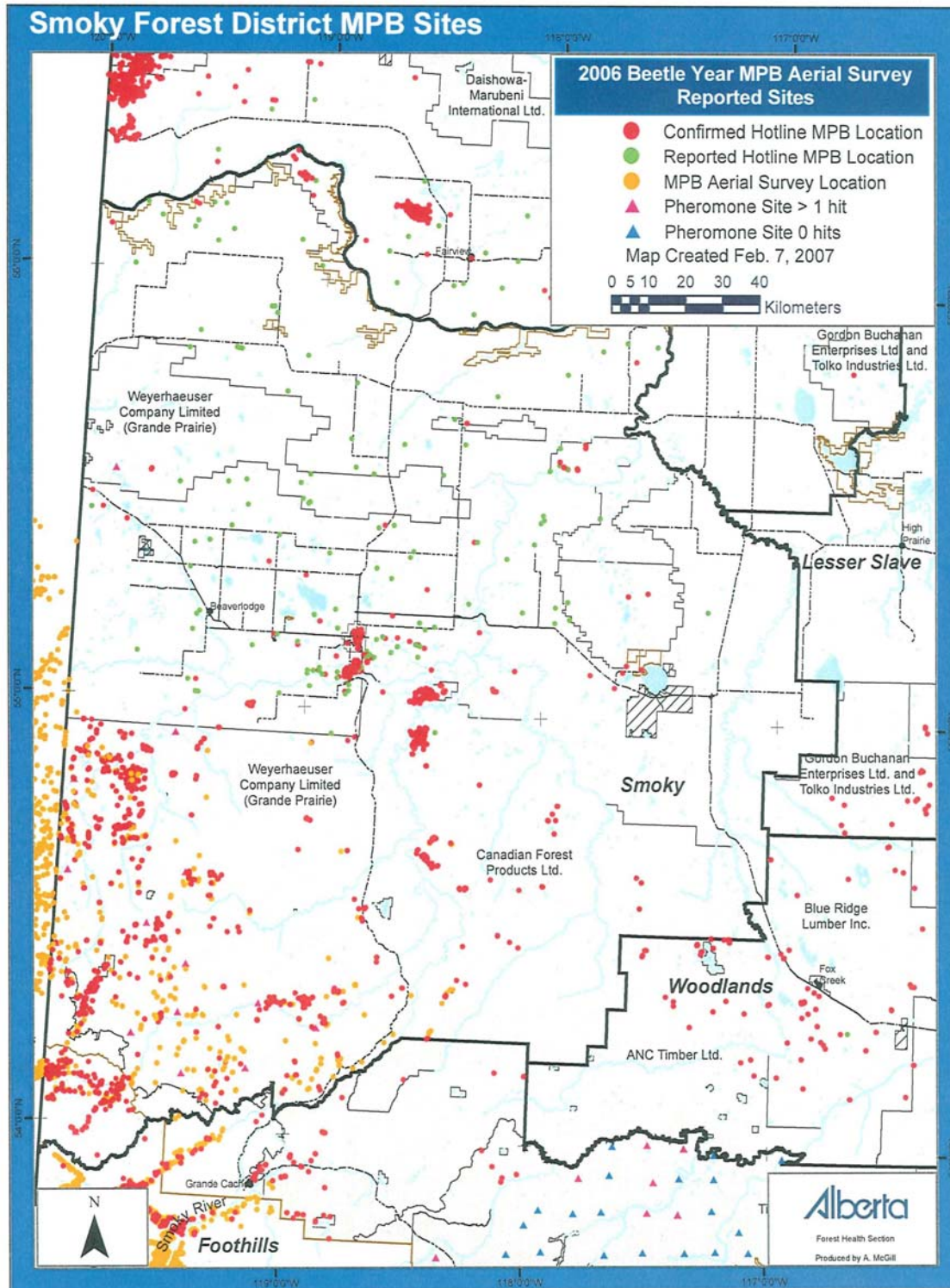
**Status:** Meets

For the 2005 timber year, there were no scheduled insect or disease treatments.

During late summer, 2006 an infestation of mountain pine beetle (*Dendroctonus ponderosae*) occurred within a significant portion of the FMA area. The map below shows the status of mountain pine beetle (MPB) attacks as of Dec. 20, 2006. The level of infestation within stands is considered low at this time, with 1 to 2 percent of the stems within infected stands having been successfully inhabited by beetles.

In response to this situation, Canfor has, with ASRD approval, varied from the approved harvest sequence in the Detailed Forest Management Plan to address stands that have been infested with MPB. Approximately 56% of the new FMA area harvest for the 2006 timber year will be in stands that are infested with MPB.

Canfor is preparing a strategic plan to address the MPB situation in the FMA area. The strategic plan will be developed in conformance with the government's *Mountain Pine Beetle Action Plan for Alberta*. <http://www.srd.gov.ab.ca/forests/health/pdf/MPB%20Action%20Plan.pdf> The strategic plan will include an evaluation of potential impacts resulting from an accelerated harvest of lodgepole pine that is most susceptible to mountain pine beetle attack, and selection of a scenario that best balances Canfor's commitment to protect non timber values with the need to actively control a potential epidemic.



**Figure 5. Mountain Pine Beetle Reported Sites**

**Value (2.1) 2:** Ecosystem resilience.

**Objective (2.1) 2a:** Processes that promote ecosystem resilience will be identified and maintained.

**Indicator (2.1) 2a.1:** Percentage of harvest areas meeting the regeneration standards as confirmed by the completion of an establishment survey.

<p><b>Target (2.1) 2a.1.1:</b> 100% of harvest areas meet the required regeneration standards as confirmed by completion of establishment surveys, measured on a 5-yr. rolling average.</p>	<p><b>Acceptable variance:</b> Minimum of 90% of the harvested areas will meet the regeneration standards on a 5-year rolling average.</p>
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**Status:** Does not meet

Although the target for this objective was not met, most areas that did not meet the required regeneration standards during the first establishment survey have been subject to retreatment and/or resurveying. Results indicate that 93% of the total FMA blocks harvested between the 1994 and 1998 timber years are now satisfactorily restocked to the establishment survey standards set out in the 2006 *Alberta Regeneration Survey Manual* (ASRD,2006).

**Table 10. Establishment Survey Results**

Establishment Surveys <sup>1</sup>		
Stocking Status	Area of Surveys (ha)	% SR
NSR <sup>2</sup>	1,762	
SR <sup>3</sup> and CSR <sup>4</sup>	11,592	87%
Grand Total	13,353	
<p><sup>1</sup> <b>Establishment surveys</b> -for the purpose of this report, data is combined for all establishment surveys completed on the FMA area from the blocks harvested in the 1994-1998 timber years to obtain a five year rolling average (coniferous, mixedwood and deciduous).</p>		
<p><sup>2</sup> <b>NSR</b> - not satisfactorily restocked - harvested area surveyed did not meet the requirements of the establishment survey. Only coniferous surveys completed between years 4-8 and deciduous surveys completed between years 3-5 were considered to determine achievement of the target. For example if a conifer block was surveyed as NSR in year 6, was retreated in year 7, and then resurveyed in year 10 as SR, the hectares were still attributed to this NSR category even though the survey is valid at year 10. The purpose of the target is try to achieve SR status on all hectares harvested by year 8 for conifer and year 5 for deciduous.</p>		
<p><sup>3</sup> <b>SR</b> - Satisfactorily Restocked - meets all requirements of the establishment survey.</p>		
<p><sup>4</sup> <b>CSR</b> - conditionally satisfactorily restocked - applies only to deciduous establishment surveys. The survey is deemed CSR if it meets one of three conditions as outlined in Section 2.2.1 Alberta regeneration manual (May 1, 2006). If CSR, a deciduous performance survey is required (see Target (2.1) 2a.2.1).</p>		

**Indicator (2.1) 2a.2:** Percentage of harvest areas meeting the regeneration standards as confirmed by completion of a performance survey.

<p><b>Target (2.1) 2a.2.1:</b> 100% of harvest areas meet the required regeneration standards as confirmed by completion of performance surveys, measured on a 5-year rolling average.</p>	<p><b>Acceptable variance:</b> Harvest areas obtaining skid clearance between March 1, 1991 and April 30, 2001, for harvest areas passing performance surveys is a minimum of 85%; Harvest areas obtaining skid clearance after April 30, 2001 for harvest areas passing performance surveys is a minimum of 95%.</p>
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**Status:** Does not meet

For this reporting period, results are only available for the first 2 years of the 5-year target. Complete results for the first 5-year period will be available following completion of performance surveys for the 1995 timber year, due in 2010.

Failure to meet the regeneration target is the result of a number of biological and management factors.

- Insufficient stocking;
- Inadequate vegetation management;
- Failure of aerial seeding applications; and
- Retroactive application of new regeneration standards in 2000 to blocks harvested post-1990, despite the fact that silviculture prescriptions and practices for those blocks were designed to meet 1991-2000 standards.

Current silviculture practices have evolved to address the factors that led to plantation failures in blocks harvested in the early 1990's. In addition, Canfor is currently engaged in development of alternate regeneration standards under the direction of the Alberta government that will provide a direct linkage between actual regeneration performance and growth and yield projection models used in the determination of annual allowable cut.

**Table 11. Performance Survey Results**

Performance Surveys <sup>1</sup>		
Stocking Status	Area of Surveys (ha)	%SR
SR <sup>2</sup>	4,456	76%
NSR <sup>3</sup>	1397	
Grand Total	5,854	
<sup>1</sup> <b>Performance Surveys</b> - This report is based on a 2-year rolling average, as only 2 years of harvest areas were eligible for survey (1991 and 1992 timber years).		
<sup>2</sup> <b>SR</b> - Satisfactorily restocked - has met all performance requirements as defined in the <i>Alberta Regeneration Survey Manual</i>		
<sup>3</sup> <b>NSR</b> - not satisfactorily restocked – has not met minimum performance requirements as defined in the <i>Alberta Regeneration Survey Manual</i>		



**Critical Element (2.2): Forest Ecosystem Productivity**

Conserve ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.

**Value (2.2) 1:** Sustained forest ecosystem productivity.

**Objective (2.2) 1a:** Ecosystem conditions that sustain productivity will be identified and maintained.

**Indicator (2.2) 1a.1:** Percentage of productive areas, adjacent to proposed harvest boundaries, impacted by windfall that receives a silviculture prescription annually.

<p><b>Target (2.2) 1a.1.1:</b> 100% of the productive areas, adjacent to proposed harvest area boundaries, impacted by windfall receive a silviculture prescription annually.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Meets

During the 2005 timber year, there were no reported instances of measurable windfall within productive areas. A *Windfall / Non Forest Land Strategy* (Canfor, 2004) was developed in April 2004 and revised in July 2004. The strategy continues to be used to address windfall salvage opportunities.

**Indicator (2.2) 1a.2:** Percentage of reforestation of temporary “in block” roads used for extraction of timber.

<p><b>Target (2.2) 1a.2.1:</b> 100% of temporary “in block” roads used for extraction of timber will be reforested within 18 months after the end of the timber year of harvest.</p>	<p><b>Acceptable variance:</b> Zero for the percentage of roads reforested. Timing of reforestation is +6 months.</p>
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**Status:** Does not meet

For areas harvested during the 2004 timber year, roads and debris pile locations were planted within 18 months on 57.7% of the area. Planting occurred on 47.9% of the remaining area within 28 months. Planting of roads and pile locations on 1 block, accounting for 1.4% of the total area, was not completed within 28 months. The operation determined that in order to effectively dispose of debris piles while controlling the risk of holdover fires, the acceptable variance should be revised to 10 months. Canfor will request that FMAC review this issue and consider the implications of revising the acceptable variance.

**Table 12. Percentage of “in-block” roads planted within 18 months**

Timber year	# Harvest areas	Harvest areas within 18 months (%)	Harvest areas within 28 months (%)	Harvest areas greater than 28 months (%)
2004	71	57.7%	47.9%	1.4%

**Indicator (2.2) 1a.3:** Percentage of tasks outlined in the approved Growth and Yield Monitoring Plan (GYMP) completed on schedule.

**Target (2.2) 1a.3.1:**

100% of tasks outlined in the approved Growth and Yield Monitoring Plan are completed on schedule.

**Acceptable variance:**

A variance of + 6 months is acceptable on the implementation of the schedule of tasks outlined in the approved growth and yield monitoring plan (GYMP).

**Status:** In progress

The purpose of the Growth and Yield Monitoring Plan is to utilize the data derived from field measurements of established plots and other sample to establish future annual allowable cut calculations and validation of present yield predictions and reforestation performance. The growth and yield programs are critical to the development of the next Detailed Forest Management Plan (DFMP).

The proposed temporary sample plot (TSP) program in black spruce leading fire-origin stands and the recording of crop tree origin during the regeneration surveys were cancelled in 2006 with the approval of ASRD. The establishment of 5 permanent sample plots (PSP's) in pine-black spruce leading stands is in progress. It is scheduled for completion prior to June 30, 2007.

In 2006 the following was completed:

- Re-measurement of 153 Permanent Sample plots;
- Establishment of 46 Post Harvest Regenerated Stand plots;
- Establishment of a Regenerated Stand Site Productivity Project;
- Data compilation of stem analysis data;
- Active membership in the Foothills Growth and Yield Association, Western Boreal Growth and Yield Association and Mixedwood Management Association; and
- Participation in the establishment of a provincial Growth and Yield Projection System (GYPSY).

## 5. Criterion 3: Conservation of Soil and Water Resources

Conserve soil and water resources by maintaining their quantity and quality in forest ecosystems.

### Critical Element (3.1): Soil Quality and Quantity

Conserve soil resources by maintaining soil quality and quantity.

**Value (3.1) 1a:** Soil productivity.

**Objective (3.1) 1a:** Soil productivity will be maintained or enhanced.

**Indicator (3.1) 1a.1:** Site Index<sup>8</sup>

<p><b>Target (3.1) 1a.1.1:</b> Average accumulated post harvest site index will not be less than average pre harvest site index (with reporting commencing in 2008).</p>	<p><b>Acceptable variance:</b> 90% confidence interval on the average difference between pre and post-harvest site indices must include zero or indicate that the post-harvest site indices are significantly greater than the pre-harvest site indices.</p>
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**Status:** Not a scheduled reporting period.

**Value (3.1) 2:** Soil quantity

**Objective (3.1) 2a:** Soil erosion will be minimized.

**Indicator (3.1) 2a.1:** Number of slumping events caused by road construction.

<p><b>Target (3.1) 2a.1.1:</b> Zero major slumping events annually caused by road construction.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Meets

Inspections indicate there were no new major slumps caused by road construction in 2006. Mass wasting within the FMA area is classified according to the quantity of soil impacted. The 3 categories are:

- Road grade cut failures  $\leq 100 \text{ m}^2$ ;
- Minor slumps affecting  $\leq 2500 \text{ m}^2$ ; and
- Major slumps affecting  $>2500 \text{ m}^2$ .

<sup>8</sup>Site index: A measure of forest site productivity expressed as the average height of the tallest trees in the stand at a defined index age. Common Index ages are 40, 50, 70, 75, and 100 years. This is usually expressed as the predicted height for a specific tree species at a given breast height age.

The following minor slumps were identified or monitored in 2006:

**Table 13. Minor Slumps Identified or Monitored in 2006**

Road	Legal Description	GENUS Station	Date of Original Slump	Size (m <sup>2</sup> )	Comments from 2006 Inspection
Ridge Road (LOC 030770)	TWP 60 RGE 4 W6M	7+659	2004	300	Seed beginning to catch in many places. Additional ditch cleaning completed.
Norris Road (LOC 971399)	TWP 59 RGE 5 W6M	14+444	2000	250	Minor creeping continuing, some vegetation established.
Norris Road (LOC 971399)	TWP 59 RGE 5 W6M	15+430	2001	200	No additional movement noted.
Waskahigan Mainline (LOC 1292)	TWP 64 RGE 1 W6M	0+506	2004 +2005	200	Site began slumping in similar manner during the fall of 2005. Remediation planned for 2006 did not occur but was rescheduled for 2007.
Big Mountain One-Way (LOC 1206)	TWP 70 RGE 5 W6M	17+100	1999	200	Continues to be stable, will be monitored yearly.
Bolton Main (LOC 033475)	TWP 59 RGE 4 W6M	0+100 to 1+100	2005	100	Slumping on high side of road. Area has been hydroseeded.
Bolton Main (LOC 033475)	TWP 59 RGE 4 W6M	2+000	2005	250	Slumping on high side of road. Area has been hydroseeded.

**Indicator (3.1) 2a.2:** Number of slumping events due to harvesting activities.

<p><b>Target (3.1) 2a.2.1:</b> Zero slumping events annually due to harvesting activities.</p>	<p><b>Acceptable variance:</b> 1 slump ≤ 100 m<sup>2</sup> annually.</p>
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**Status:** Meets

Aerial and ground surveys conducted in the 2005 timber year, indicate there are zero reported slumps caused by harvesting on steep or sensitive sites.

**Indicator (3.1) 2a.3:** Number of significant erosion events related to silviculture, harvesting, and road activities.

<p><b>Target (3.1) 2a.3.1:</b> Zero significant erosion events related to silviculture, harvesting, and road activities annually.</p>	<p><b>Acceptable variance:</b> Less than 5 events per year.</p>
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**Status:** Meets

No significant erosion events related to silviculture, harvesting or road activities were reported in 2006. Canfor conducts annual inspections on License of Occupation roads. Other roads are inspected during the course of the summer, fall and winter utilizing a risk-based approach. Helicopter overview flights

are conducted on blocks to determine the presence of surface erosion or mass wasting and to evaluate the status of debris disposal and reforestation activities. Harvesting, road construction, road maintenance and silviculture operations are monitored and inspected in accordance with the procedures set out in Canfor's Forest Management System.

**Indicator (3.1) 2a.4:** Prompt road deactivation.

<p><b>Target (3.1) 2a.4.1:</b> 100% of temporary roads will be permanently deactivated within 6 months after usage is complete.</p>	<p><b>Acceptable variance:</b> Zero.</p>
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**Status:** Does not meet

While generating the data for this section, it was determined inconsistencies regarding the deactivation of temporary roads, and record keeping associated with those activities, has occurred. As a result, it is not currently possible to confirm whether the required road deactivation referred to in this target has been completed within the specified time period. A review of process regarding the prescription of road construction standards, scheduled terms of use, deactivation schedules, deactivation standards and record keeping will be conducted by the operation in 2007. This may lead to the recommendation of 1 or more new targets, which will be brought forward to FMAC for review and advice.

To partially address the above noted inconsistencies, Canfor has completed a draft "Erosion Control Booklet", which is currently undergoing review. The goal of the Erosion Control Booklet is to minimize erosion and prevent siltation of watercourses. Pending final editing, this tool will be used to train Canfor and contractor supervisors as well as equipment operators in proper deactivation procedures.

**Objective (3.1) 2b:** Soil will be conserved on site.

**Indicator (3.1) 2b.1:** Percentage of soil disturbance prescriptions that conform to Section 9.0.3 of the *Operating Ground Rules*.

<p><b>Target (3.1) 2b.1.1:</b> 100% of prescriptions created throughout the year conform to Section 9.0.3 of the <i>Operating Ground Rules</i>.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Meets

Canfor's new *Operating Ground Rules* (ASRD, 2005) specify that:

**9.03** *Non-productive landbase created by timber harvesting operations shall not exceed 5 percent of each harvest area without prior approval of Alberta. Non-productive landbase is created by temporary roads, rutting, bared landing areas, displaced soil, and debris piles.*

**9.06** *Not more than 2 percent of the harvest area shall be disturbed by ruts as measured by a linear transect system as defined in the Forest Soils Conservation Guidelines."*

According to the *Forest Soils Conservation Guidelines*, (AFPA, 1999) on a block-by-block basis, the 5% in-block road guideline can be exceeded if:

- The cutblock is small (generally <10 ha);
- The cutblock is narrow in width;
- The terrain is quite steep (>20% slopes); or
- Additional decking room and truck turnarounds are needed.

Table 14 identifies planned harvest units for the 2005/2006 season with internal roads exceeding the 5% maximum site disturbance allowance as stated in *Canfor's Operating Ground Rules*. These roads were approved by ASRD as a component of the Final Harvest Plan.

**Table 14. Planned Harvest Areas that Exceed 5% Disturbance**

Blk_ID	Blk_Area	Rd_Length	Rd_area	Road_%	Comment
G230253	7.1	775.5	0.36	5.1	Small block <10ha
G230309	2.6	351.6	0.18	6.8	Small block <10ha
G230395	5.3	666	0.33	6.3	Small narrow block <10ha
G231091	23.3	2,533.20	1.2	5.2	Narrow block restricted by pipelines
P372608	2.9	761.9	0.38	13.1	Narrow block <10ha
P372686	4.4	470.7	0.24	5.3	Narrow block <10ha road required to access wood in separate pieces of block.
P380795	5.5	888.7	0.44	8.1	Narrow block <10ha road required to access wood in separate pieces of block.
P392458	3.6	524.5	0.26	7.3	Small block <10ha
S040361	4.4	504.1	0.23	5.1	Small block <10ha
S090539	7.4	765.9	0.38	5.2	Small block <10ha, road restricted by topography
S102591	12.4	1,425.60	0.71	5.7	Road restricted by topography.
S112029	2.5	373.9	0.19	7.5	Small block < 10ha
S112422	22.1	2,477.10	1.24	5.6	Road restricted by topography.
S113013	2.2	239.8	0.12	5.5	Small block <10ha
S113016	31	3,910.60	1.79	5.7	Road restricted by topography.
S113477	4.8	626.5	0.31	6.5	Small block <10ha
S113494	6.2	672.4	0.34	5.4	Small block <10ha
S113581	6.4	675.8	0.34	5.3	Small block <10ha
S123089	2	221	0.11	5.5	Small block <10ha
S181330	41.7	5,446.90	2.61	6.3	Block narrow, branching in many locations.
S181382	7.2	1,061.20	0.53	7.4	Block narrow, branching in many locations.
S181472	23.9	3,207.90	1.6	6.7	Block narrow, branching in many locations.
S182372	4.1	491.1	0.25	6	Small block <10ha

**Indicator (3.1) 2b.2:** Percentage of harvest areas that do not exceed the soil disturbance prescriptions.

<p><b>Target (3.1) 2b.2.1:</b> 100% of harvest areas do not exceed the soil disturbance prescriptions annually.</p>	<p><b>Acceptable variance:</b> ≥90% of the harvest areas do not exceed the soil disturbance prescriptions.</p>
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**Status:** Does not meet

In Table 15, the 2005 timber year results are indicated in two ways:

- The first method (shown in yellow) compares the number of blocks that exceeded the soil disturbance prescription;
- The second method (shown in brown) indicates the area that exceeded the soil disturbance prescription.



While Table 15 indicates 29% of the harvest areas and 25% of the area harvested exceeded the soil disturbance prescriptions, 58% of the harvest areas representing 59% of the area harvested, required less road than prescribed. Over the total area harvested, soil disturbance, due to roads, was reduced by 7.2 hectares from the prescribed amount.

**Table 15. Soil Disturbance (Actual versus Planned)**

	Total Harvest Areas	Harvest Areas that Meet Prescription	Harvest Areas with Less Soil Disturbance than Prescription	Harvest Areas with More Soil Disturbance than Prescription
<b>Number of Harvest Areas</b>	103	13	60	30
<b>Percent</b>	100%	13%	58%	<b>29%</b>
<b>Actual Area Harvested (ha.)</b>	2934	481	1733	720
<b>Percent</b>	100%	16%	59%	<b>25%</b>
<b>Planned Road Area (ha.)</b>	96	15	55	26
<b>Actual Road Area (ha.)</b>	88	15	45	28

Table 16 shows 30 harvest areas that exceeded the prescriptions, 22 were within 0.5% or 1.41 ha. These harvest areas were not deemed significant in terms of any future actions. Of the remaining 8 harvest areas, harvesting supervisors will review the actual results with the planning team to determine how we can improve.

**Table 16. Harvest Areas Exceeding Soil Disturbance Prescriptions**

Block ID	Road Area			Road Allowance		
	Planned (ha)	Actual (ha)	Variance (ha)	Planned (%)	Actual (%)	Variance (%)
P393622	0.20	0.21	0.01	2.0	2.1	0.1
S112528	1.21	1.24	0.03	4.3	4.3	0.1
G340224	0.50	0.51	0.01	4.8	4.9	0.1
P372550	0.28	0.29	0.01	4.7	4.8	0.1
S123227	0.64	0.67	0.03	3.2	3.4	0.1
S113522	2.15	2.25	0.10	3.5	3.7	0.2
G231091	1.20	1.24	0.04	5.2	5.3	0.2
S112106	2.03	2.12	0.10	3.8	4.0	0.2
S112422	1.24	1.28	0.04	5.6	5.8	0.2
W701235	0.82	0.88	0.06	2.6	2.8	0.2
S123014	1.11	1.16	0.05	4.6	4.8	0.2
S193226	0.25	0.26	0.01	4.5	4.7	0.2
S191213	0.33	0.35	0.02	4.5	4.7	0.2
G230253	0.36	0.38	0.02	5.1	5.3	0.2
S191206	0.37	0.40	0.02	3.7	4.0	0.2
S232502	5.50	5.88	0.38	3.5	3.7	0.2
S112416	0.16	0.17	0.01	4.2	4.5	0.3
P393494	0.04	0.04	0.01	1.9	2.2	0.3
P403005	0.16	0.18	0.02	2.2	2.5	0.3
S112299	2.00	2.14	0.14	4.4	4.7	0.3
S222928	1.33	1.50	0.17	3.4	3.8	0.4
P380791	0.95	1.09	0.14	3.1	3.5	0.4
W701464	0.79	1.04	0.26	1.6	2.1	0.5
S090660	0.69	0.80	0.11	4.6	5.4	0.8
S112066	0.27	0.32	0.05	4.9	5.7	0.8
S193187	0.60	0.71	0.10	4.8	5.6	0.8
G230395	0.33	0.38	0.05	6.3	7.2	1.0
G230233	0.11	0.16	0.05	2.4	3.5	1.1
P392278	0.30	0.44	0.14	3.1	4.5	1.5
S232540	0.04	0.30	0.26	0.3	2.6	2.2

**Critical Element (3.2): Water Quality and Quantity**

Conserve water resources by maintaining water quality and quantity.

**Value (3.2) 1:** Water Quality.

**Objective (3.2) 1a:** Water quality will be conserved.

**Indicator (3.2) 1a.1:** The percentage of surveyed stream crossings identified with “High” and “Very High” WQCR<sup>9</sup> (water quality concern rating) on forestry roads to which the participants are responsible.

<p><b>Target (3.2) 1a.1.1:</b> Less than 10% of surveyed stream crossings on forestry roads will have a “High” and “Very High” WQCR annually.</p>	<p><b>Acceptable variance:</b> For 2007 &lt;20% in the ‘High’ or ‘Very High’ category;</p>
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**Status:** Not a scheduled reporting time



First scheduled reporting for this target is in 2007.

The timeline below indicates the interim annual WQCR targets that have been established for the period of time to 2015 when the overall target will be achieved:

- 2007 <20% in the 'High' or 'Very High' category;
- 2009 <17.5% in the 'High' or 'Very High' category;
- 2011 <15% in the 'High' or 'Very High' category;
- 2013 <12.5% in the 'High' or 'Very High' category; and
- 2015 <10% in the 'High' or 'Very High' category;

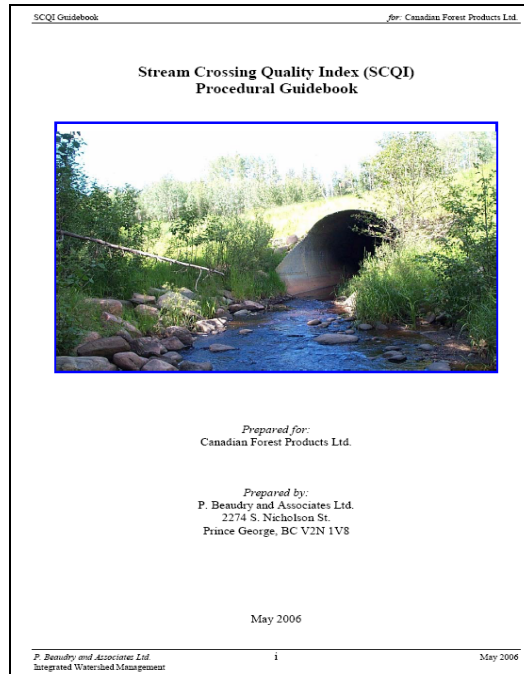
Table 17 indicates the number and percentage of stream crossings in each water quality concern rating category.

**Table 17. Summary of 2003-2005 WQCR Results in the FMA Area**

Operational Unit	# of Crossings Surveyed	None		Low		Moderate		High		Very High		Combined High and Very High %
		#	%	#	%	#	%	#	%	#	%	
Deep North	180	46	26%	99	55%	15	8%	15	8%	5	3%	11%
Deep South	45	9	20%	22	49%	5	11%	7	16%	2	4%	20%
E8	92	20	22%	34	37%	11	12%	10	11%	17	18%	29%
Economy North	24	5	21%	0	0%	0	0%	7	29%	12	50%	79%
Economy South	39	1	3%	7	18%	8	21%	9	23%	14	36%	59%
Latornell	64	6	9%	18	28%	14	22%	14	22%	12	19%	41%
Puskwaskau	8	1	13%	0	0%	1	13%	2	25%	4	50%	75%
Simonette	45	17	38%	19	42%	5	11%	2	4%	2	4%	9%
Smoky	183	49	27%	72	39%	25	14%	16	9%	21	11%	20%
<b>TOTALS</b>	<b>680</b>	<b>154</b>		<b>271</b>		<b>84</b>		<b>82</b>		<b>89</b>		<b>171</b>

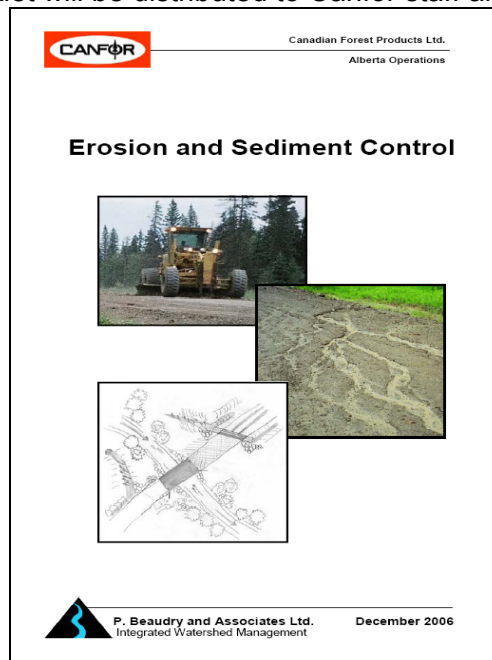
<sup>9</sup>WQCR (water quality concern rating): The WQCR is a 5-class hazard rating which indicates the level of concern for negative impacts on water quality arising from increased sediment delivery to the stream. The ratings are “none”, “low”, “medium”, “high” and “very high”. The ratings are converted from individual SCQI crossing scores. The WQCR identifies areas where crossing elements have the potential to cause sedimentation and also documents areas where effective erosion and sediment control is practiced. (P.Beaudry).

A training session for the Stream Crossing Quality Index (SCQI) was held in May with 21 participants. Pierre Beaudry and Associates led the course through classroom and field components. Participants included Canfor staff from Grande Prairie and other divisions, staff from other forestry companies, road maintenance contractors, and energy sector representatives and consultants.



**Figure 6. Stream Crossing Quality Index Procedural Guidebook**

With the assistance of Pierre Beaudry and Associates, the Canfor Erosion and Sediment Control Booklet was updated. The booklet will be distributed to Canfor staff and contractors.



**Figure 7. Erosion and Sediment Control**

An initiative to prioritize stream crossing remediation was initiated in late 2006 in consultation with Pierre Beaudry and Associates Ltd. The project will involve risk assessment of fish habitat caused by increases in the delivery of fine sediment. This will be explored in 2 components:

1. Refinement and implementation of a risk assessment procedure to classify stream crossings in the FMA area relative to the potential to negatively impact fish habitat caused by increases in fine sediments.
2. Prioritization of stream crossing remediation works based on the risk assessment and the complexity of potential remedial solutions.

The project will bring together several sources and years of data collection ranging from fish habitat and fish presence surveys, fish habitat modeling, SCQI surveys, and historical fish information. Subsequent planning of remedial actions will be based upon the results of this risk assessment project.

**Table 18. Action Plan Progress**

Action	Completion Date	Comment
By September 30, 2005, inspect the deactivation work that was completed in E8 in 2004. Sample the crossings that were removed using the SCQI methodology to determine the impact on the WQCR for this area.	September 2005	Crossings sampled and improvements were apparent.
By September 30, 2005 prepare a 10 year program to achieve the target and include Year 1 in the Business Plan.	October 2005	The 10 Year Program will be revised based on the results of the Risk Analysis Project which will be completed in Spring 2007.
By December 31, 2006, in conjunction with the Forest Engineering Institute of Canada, update the erosion control procedures booklet for new crossing construction and deactivation standards.	Scheduled for March 2007	FERIC booklet is still under development, publishing date expected in 2007. Canfor / PBA Erosion Control Booklet completed in Dec 2006 with final edits due in March 2007(See Figure 7.)
By October 31, 2005, complete the SCQI improvement projects identified in the Road Maintenance Plan.	Not Complete; Ongoing	Risk analysis project will be completed in Spring 2007. SCQI identified crossings will be ranked for remediation efforts and the 10 year program revised accordingly.
By December 31, 2005, complete the 2005 SCQI Monitoring and Surveying program.	October 2005	Final Report received February 2006.
By May 01, 2006, in conjunction with PBA, develop a training plan for Canfor employees or contractors so they can conduct SCQI surveys at sites that receive remedial work.	May 25, 2006	Training Manual and Field Guide developed. Two training sessions held in May 2006 for Canfor employees, contractors, oil/gas, environmental, and other forestry workers (See Figure 6).
By May 01, 2006, develop a method to monitor the results of the work in the field compared to the SCQI baseline.	Scheduled for May 2007	Results will be monitored in Excel database.

**Indicator (3.2) 1a.2:** The percentage of crossings that receive the required remedial action.

<p><b>Target (3.2) 1a.2.1:</b> 100% of crossings receive remedial action as identified in the Road Management Plan annually.</p>	<p><b>Acceptable variance:</b> Minimum of 90% of crossings receive remedial action.</p>
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**Status:** Does not meet

**Table 19. Road Remedial Actions Planned and Completed in 2006**

Maintenance Activities Planned	Activities Completed	Percentage	Comment
77	7	9%	Of the 77 planned maintenance activities on culverts and bridges, 29 were for WQCR erosion and sediment control. Budget constraints as well as awaiting the results from the WQCR Risk Analysis Project limited the number of crossings that received remedial actions.

The 2007 Road Management Plan includes a schedule of planned maintenance activities based on the results from the WQCR Risk Analysis Project. Sufficient remediation activities are scheduled to achieve the 2007 interim remediation target noted for Indicator (3.2) 1a.1.

**Indicator (3.2) 1a.3:** The number of non-compliance incidents related to riparian zone standards.

<p><b>Target (3.2) 1a.3.1:</b> Zero non-compliance incidents related to riparian zone standards annually.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Does not meet

There was 1 non-compliance incident relating to riparian zone standards in 2006 in which a stream crossing structure was not constructed to required standards. Canfor reconstructed the crossing to the satisfaction of Alberta Sustainable Resource Development (ASRD) and A Notice of Penalty Waiver was issued to the company.

**Value (3.2) 2:** Water Quantity.

**Objective (3.2) 2a:** Water quantity will be maintained.

**Indicator (3.2) 2a.1:** Percentage of sampled watersheds that are in conformance with the average water yield increase limit indicated in Canfor's *Operating Ground Rules* (ASRD, 2005).

<p><b>Target (3.2) 2a.1.1:</b> 100% of sampled watersheds are in conformance with the annual average water yield increase limit of 15% as indicated in the Operating Ground Rules.</p>	<p><b>Acceptable variance:</b> Total forest cover removal within a defined watershed will not cause an increase in annual average water yield of greater than 20% for a minimum of 10 of the highest Equivalent Clearcut Area (ECA) watersheds in the FMA area.</p>
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**Status:** Meets



Water yield percentages were calculated using planned harvest areas reported in the June 1, 2006 Annual Operating Plan. Results shown in Table 20 indicate there was no water yield increases above the target range.

**Table 20. Average Water Yield Increase (%) for 10 Sampled Watersheds**

Sampled Watershed	Alberta-ECA Method	
	2006 10 Highest ECA(%)	Average Water Yield Increase (%)
2057	38.1%	9.2%
10003	30.9%	14.7%
5642	30.8%	4.4%
4826	29.5%	4.2%
1846	28.8%	9.2%
5123	28.4%	6.0%
4846	26.5%	4.8%
1692	25.7%	10.0%
6397	25.2%	6.0%
6632	24.2%	4.5%

## 6. Criterion 4: Forest Ecosystem Contributions to Global and Ecological Cycles

Maintain forest conditions and management activities that contribute to the health of global ecological cycles.

### Critical Element (4.1): Carbon Uptake and Storage

Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems.

**Value (4.1) 1:** Local contribution of carbon uptake and storage.

**Objective (4.1) 1a:** Carbon uptake and storage (i.e. carbon balance) will be maintained.

**Indicator (4.1) 1a.1:** Percentage of harvested areas reforested.

<p><b>Target (4.1) 1a.1.1:</b> 100% of harvest areas are reforested within 18 months after the end of the timber year in which it was harvested.</p>	<p><b>Acceptable variance:</b> +3 months.</p>
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**Status:** Does Not Meet

Seven areas harvested during the 2004 timber year were not harvested within the specified 18-month timeframe, which represented 8% of all blocks harvested. Planting delay was caused by a shortage of tree seedlings from required seedlots (4 blocks) and the failure to complete log hauling from 3 blocks. All 7 blocks are scheduled for planting in 2007.

**Table 21. Harvested Areas Reforested Within 18 Months**

Timber Year	# of Harvest Areas	# of Harvest Areas Planted Within 18 Months	Percentage Reforested Within 18 Months
2000	130	130	100
2001	136	136	100
2002	127	127	100
2003	126	126	100
2004	83	76	92

**Indicator (4.1) 1a.2:** Percentage of productive areas > 4 hectares impacted by fire within 24 months.

<p><b>Target (4.1) 1a.2.1:</b> Reforest 100% of the productive areas &gt; 4 hectares impacted by fire within 24 months.</p>	<p><b>Acceptable variance:</b> Reforest at least 90% of productive areas &gt; 4 hectares impacted by fire within 24 months.</p>
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**Status:** Meets

Burned areas greater than 4 hectares in area are tracked in Canfor's block tracking database along with associated regeneration information. In 2002, 2 wildfires greater than 4 hectares occurred on the FMA area (Table 22). The impacted areas have been reforested and regeneration surveys to assess seedling establishment are scheduled for 2008. In 2006, a total of 12 wildfires occurred, of which 2 were greater than 4 hectares in size. Fire 136 (10 hectares) burned parts of a previously reforested area and will be replanted in the summer of 2007. Fire 139 (416 hectares) occurred in marginally

merchantable and un-merchantable standing timber and was not salvaged due to the small tree size and high intensity of the burn. Canfor received a *salvage waiver* for this burn (authority from the government to not salvage the timber from the burn). The site will be assessed in June 2007 for natural germinates and again in June 2008. If the site is failing to regenerate naturally, Canfor will plant productive areas that are not sufficiently restocked in 2008.

**Table 22. Fires on the FMA Greater than 4 Hectares in Area**

Fire name	Total Hectares	Planned Hectares for Reforestation	Operational area
GWF-124-2006	0.25		DN-5
GWF-125-2006	0.5		LAT-3
GWF-126-2006	0.01		LAT-3
GWF-127-2006	0.01		DS-3
GWF-128-2006	0.01		LAT-3
GWF-131-2006	0.01		LAT-3
GWF-132-2006	0.01		LAT-3
<b>GWF-136-2006</b>	<b>10.0</b>	<b>4.0</b>	
GWF-138-2006	2.0		DN-2
<b>GWF-139-2006</b>	<b>417.0</b>	<b>144.0</b>	<b>DS-3</b>
GWF-141-2006	1.0		DN-4
GWF-143-2006	0.1		LAT-3
<b>Total 2006</b>	<b>430.9</b>	<b>148.0</b>	

**Table 23. Reforestation Status of FMA Burned Areas Greater than 4 Hectares in Area**

Canfor Fire Name	Area to Reforest (ha)	Year Burned	Reforested	Survey Planned
Fire 20	28.6	June 1, 2002	August 1, 2002	August 1, 2008
Fire 21	14.3	June 1, 2002	July 1, 2003	August 1, 2008
Fire 136	4	July 1, 2006	August 1, 2006	August 1, 2013
Fire 139	144	July 1, 2006	August 1, 2007	August 1, 2013

**Critical Element (4.2): Forest Land Conversion**

Protect forestlands from deforestation or conversion to non-forests.

**Value (4.2) 1:** Sustainable yield of timber.

**Objective (4.2) 1a:** A natural range of tree species will reforest every hectare that is harvested.

**Indicator (4.2) 1a.1:** Percentage of the harvested area sufficiently restocked by yield group.

<p><b>Target (4.2) 1a.1.1:</b> 100% of the harvested area sufficiently restocked by yield group accumulated annually beginning in 2000.</p>	<p><b>Acceptable variance:</b> +/- 10% of harvested areas (accumulated annually) will be sufficiently restocked by yield group.</p>
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**Status:** Does not meet

Canfor made a commitment within the Detailed Forest Management Plan (DFMP) to compare planned versus actual reforestation by yield group accumulated annually, beginning in 2000. Table 24 represents regeneration data for applicable yield groups for the period 2000 to 2006, inclusive. Of the 9 yield groups listed, all except 9,12 and 17 are within the acceptable variance of 10%. As more area is harvested and regenerated in each yield group, the variance percentages are declining. Silviculture staff continue to work on strategies to align yield groups within acceptable variances.

**Table 24. Balancing Yield Groups within FMA Area**

	Coniferous Yield Group (ha)									
	2 AW	3 AWSW	8 PL	9 PLAW/AWPL	11 PLSW/SWPL	12 SB	14 SBPL or SBSW	16 SW	17 SWAW	Total
Regenerated Yield Group (AVI)	1743	1047	4385	352	864	1280	839	5299	2112	17922
Treated Regenerated Yield Group	1702	1017	4806	438	955	1037	901	5623	1445	17922
Percent Difference	-2%	-3%	10%	<b>25%</b>	10%	<b>-19%</b>	7%	6%	<b>-32%</b>	<b>0%</b>

**Objective (4.2) 1b:** The utilization of merchantable wood would be maximized.

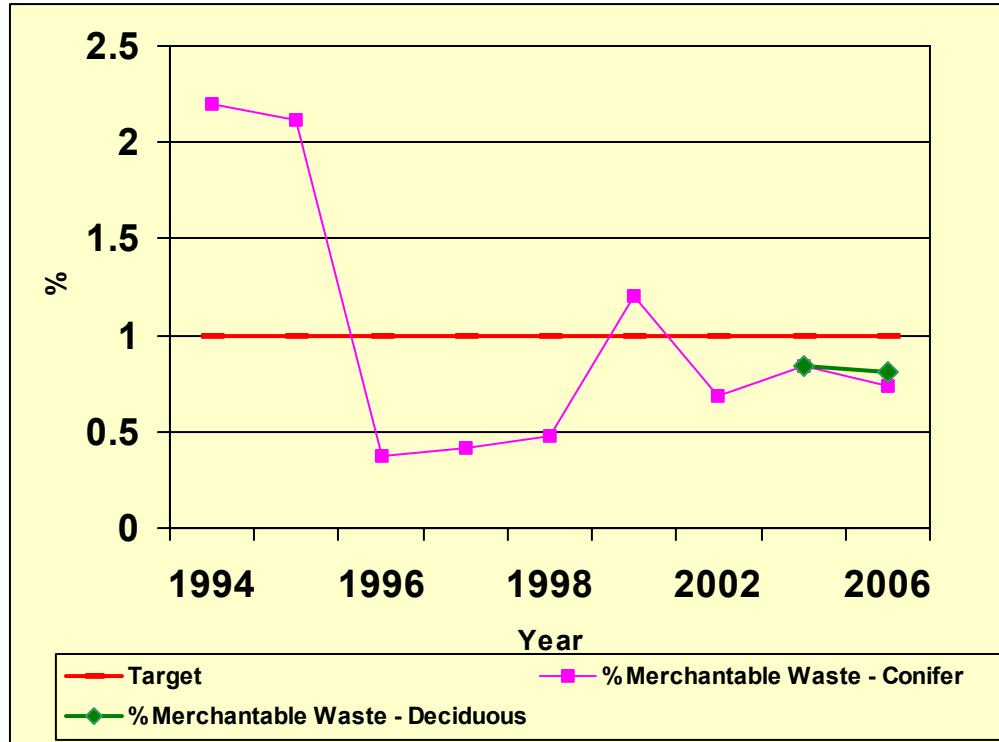
**Indicator (4.2) 1b.1:** Percentage of harvested merchantable wood (conifer and deciduous) left on site.

<b>Target (4.2) 1b.1.1:</b> To leave less than 1% conifer and 1% deciduous harvested merchantable wood on site annually.	<b>Acceptable variance:</b> Zero
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**Status:** Meets

Waste surveys are conducted every second year. The results from the survey in 2006 indicate the average merchantable waste was 0.74% for coniferous and 0.81% for deciduous. The next waste survey is scheduled for 2008. Figure 8 indicates waste levels.





**Figure 8. Merchantable Coniferous Waste Survey Results (1994 to Present)**

**Indicator (4.2) 1b.2:** Percentage of dispositions where merchantable industrial salvage (m<sup>3</sup>) is utilized on an annual basis.

<p><b>Target (4.2) 1b.2.1:</b> 100% of the dispositions where merchantable industrial salvage wood from permanent land withdrawals is utilized on an annual basis.</p>	<p><b>Acceptable variance:</b> At least 90% of dispositions where merchantable volume is harvested as a result of permanent land withdrawals.</p>
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**Status:** Meets

Each request for withdrawal received by Canfor is reviewed and if approved, a coniferous timber salvage commitment form is signed. As per the form, notification must be provided to Canfor as soon as the salvaged timber is ready to haul. A land use database is used to track a number of salvage components to ensure that all available salvage wood is hauled to the mill site. 96% of the merchantable coniferous industrial salvage reported to Canfor in 2005 has hauled into the mill site.

**Table 25. Coniferous Merchantable Industrial Salvage Wood**

Year	Disposition Year of Consent			
	2002	2003	2004	2005
# of Dispositions Coniferous Salvage Available	18	73	59	92
# of Dispositions Coniferous Salvaged	17	68	57	88
Amount of Coniferous Salvage Wood (m <sup>3</sup> )	4,340	11,803	10,764	21,405
<b>Percent of # Dispositions where Salvage Available Delivered to Mill</b>	<b>94%</b>	<b>93%</b>	<b>97%</b>	<b>96%</b>

**Value (4.2) 2:** Forests on the landbase.

**Objective (4.2) 2a:** Forests will be maintained on the landbase.

**Indicator (4.2) 2a.1:** Density (lineal km/km<sup>2</sup>) of open (non-reclaimed) roads.

<p><b>Target (4.2) 2a.1.1:</b> To have no more than 0.6 lineal km/km<sup>2</sup> in open (non-reclaimed) roads over a 5-year period, for each FMA parcel (Peace, Puskwaskau, and Main).</p>	<p><b>Acceptable variance:</b> Maximum of 0.7 km/ km<sup>2</sup> for the Peace, Puskwaskau and Main parcels.</p>
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**Status:** Meets

One way to gauge the wilderness quality of an area is to measure the number of roads. Road density is an indication of the influence of human activity on an area, and the state of resident wildlife populations and natural processes (<http://www.growingtogether.ca/pubs/bcfgs/page20.htm>).

Roads provide access for urban and industrial development and to previously inaccessible forest areas. Their presence can alter local hydrology, fragment habitat, increase road kill, increase legal and illegal fishing and hunting, and create disturbance from both traffic and off-road vehicles.

Regular road maintenance, access management and integrated land management with energy sector companies, including road deactivation and access restriction, can mitigate some of the negative impacts of roads.

A significant amount of roadway on the FMA has been constructed by the oil and gas sector. Work is ongoing to collaborate with individual oil and gas companies on future road development in order to minimize the amount of new road constructed and to rehabilitate abandoned roads that are not required for future access.

**Table 26. Road Densities within the FMA Area**

Parcel	Road (km)	Area (km <sup>2</sup> )	Density (km/ km <sup>2</sup> )
Main	2,411	5,514	0.44
Peace	181	281	0.64
Puskwaskau	210	697	0.3
FMA area	2,802	6,492	0.43

**Objective (4.2) 2b:** Productive lands will be restored to productive status wherever possible.

**Indicator (4.2) 2b.1:** Percentage of withdrawn areas restored to productive forestland.

<p><b>Target (4.2) 2b.1.1:</b> 100% of previously withdrawn areas that are suitable candidates for reforestation are restored to productive forestland within 24 months.</p>	<p><b>Acceptable variance:</b> No less than 90% of suitable candidates reforested within 24 months of when the site is ready for planting.</p>
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**Status:** Does not meet

There were no wellsites planted on the FMA in 2006. Many of the wellsites that were planned to be planted, are not currently in a state that would assure successful survival. Therefore, a low percentage is planted compared to what was reported as 'available'. Canfor is currently working with the energy sector to develop procedures for reclaiming sites in preparation for planting. A component of the procedure would include prescribed timeframes for notifying Canfor when a site is ready for treatment. Table 27 shows withdrawn areas that have been planted.

**Table 27. Planting of Previously Withdrawn Areas**

<b>Year</b>	<b>Number of Withdrawn Areas Available</b>	<b>Number of Withdrawn Areas Planted</b>	<b>Percent of Withdrawn Areas Planted</b>
<b>2001</b>	7	7	100%
<b>2002</b>	27	27	100%
<b>2003</b>	8	1	13%
<b>2004</b>	7	0	0%
<b>2005</b>	9	2	22%
<b>2006</b>	7	0	0%

In addition to planting well sites, Canfor has been involved with the restoration of seismic lines in the range of the Little Smoky caribou herd range. The intent of the caribou restoration project is to apply techniques to speed the recovery of historical man-made linear features in order to reduce the negative effects of these features on caribou, including reducing permeability of caribou habitat to predators. In 2006, Canfor provided 122,925 seedlings for the project that were planted on ~87 km of seismic line (~68 ha).

## 7. Criterion 5: Multiple Benefits to Society

Sustain flows of forest benefits for current and future generations by providing multiple goods and services.

### Critical Element (5.1) Timber and Non-Timber Benefits

Manage the forest to produce an acceptable and feasible mix of both timber and non-timber benefits.

**Value (5.1) 1:** Sustainable yield of timber.

**Objective (5.1) 1a:** Sustainable harvest levels on the FMA area will be maintained.

**Indicator (5.1) 1a.1:** Long-term harvest levels vs. actual extraction (m<sup>3</sup>).

<p><b>Target (5.1) 1a.1.1:</b> Actual extraction rates (m<sup>3</sup>) are less than or equal to the long-term harvest level (m<sup>3</sup>) at the end of the 1999-2000 period.</p>	<p><b>Acceptable variance:</b> Zero.</p>
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**Status:** Meets

Canfor's first 5-year cut control period for the 2003 DFMP began in the 1999 timber year and ended in the 2003 timber year. However, because the DFMP was not approved until November 2003 (the last year of the first 5-year cut control period), ASRD approved balancing to a 10-year cut control period as opposed to 5 years.

The Sept 13<sup>th</sup> 2005 amended, approved long-term harvest level for the FMA area is 640,000 m<sup>3</sup> for coniferous timber and 453,712 m<sup>3</sup> for deciduous timber. The values were amended by ASRD to reinstate salvage drain estimated volume, because salvage drain is variable year-to-year. The harvested volume in Table 28 includes the actual salvage drain numbers.

Tables 28 and 29 indicate the total harvested volumes for coniferous and deciduous timber as well as the long-term harvest levels and variance as reported in the 2006 AOP.

**Table 28. Coniferous Harvest Levels**

Timber Year	Harvested (m <sup>3</sup> )	Long-Term Harvest Level (m <sup>3</sup> )	Variance (m <sup>3</sup> )	Variance (%)
1999	555,338	640,000	-84,662	-13%
2000	644,861	640,000	4,864	1%
2001	579,280	640,000	-60,720	-9%
2002	626,525	640,000	-13,475	-2%
2003	662,790	640,000	22,790	4%
2004*	466,950	640,000	-173,050	-27%
2005	855,822	640,000	215,822	34%
<b>Total</b>	<b>4,391,566</b>	<b>4,480,000</b>	<b>-88,434</b>	<b>-2%</b>
* The harvested volumes were reconciled in 2006 and the 2004/2005 value has changed slightly from the previous report.				

**Table 29. Deciduous Harvest Levels**

Timber Year	Harvested (m <sup>3</sup> )	Long-Term Harvest Level (m <sup>3</sup> )	Variance (m <sup>3</sup> )	Variance (%)
1999	166,387	226,312*	-59,925	-26%
2000	230,148	226,312*	3,836	2%
2001	180,024	226,312*	-46,288	-20%
2002	160,610	226,312*	-65,702	-29%
2003	147,123	226,312*	-79,189	-35%
2004*	228,729	226,312*	2,417	1%
2005	199,372	226,312*	-26,940	-12%
<b>Total</b>	<b>1,312,393</b>	<b>1,584,184</b>	<b>-271,791</b>	<b>-17%</b>

*\*Although the long term harvest level for deciduous approved in the DFMP is 453,712 m<sup>3</sup>, only the ASRD finalized deciduous allocations are reported to date, indicating the deciduous long-term harvest level is 226,312 m<sup>3</sup>.*

**Value (5.1) 2:** Ongoing non-timber benefits.

**Objective (5.1) 2a:** Long-term availability of identified non-timber benefits will be maintained.

**Indicator (5.1) 2a.1:** Number of recreation areas maintained by Canfor.

<p><b>Target (5.1) 2a.1.1:</b> Canfor will maintain a minimum of 5 recreation areas for use by the public annually.</p>	<p><b>Acceptable variance:</b> Zero.</p>
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**Status:** Meets

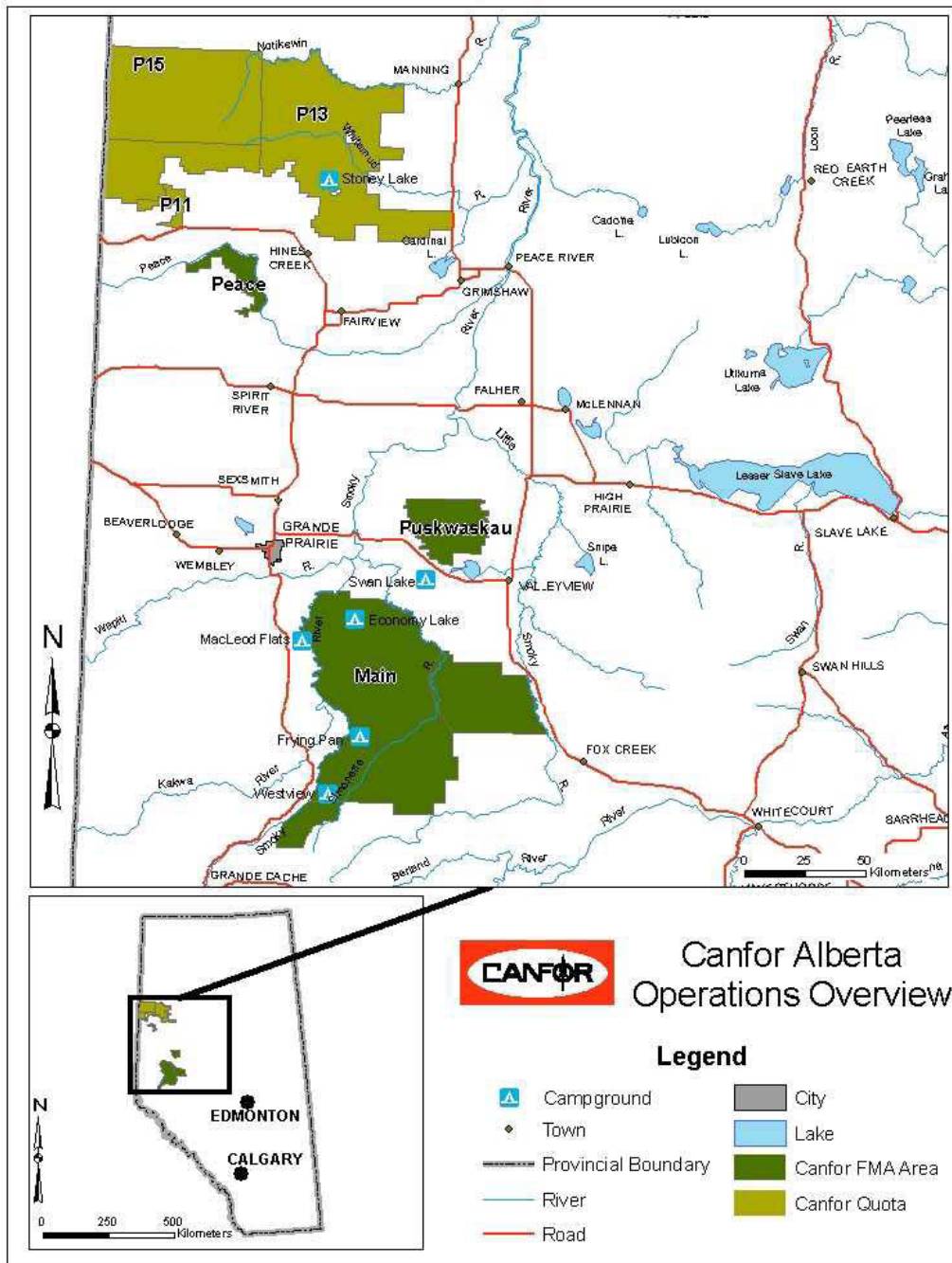
Canfor maintains recreational areas (Figure 9) in both its Grande Prairie and Hines Creek operations. Canfor Grande Prairie maintains 4 public recreational areas within the FMA area, and 1 site outside the FMA area, located approximately 25 km west of Valleyview:

- MacLeod Flats (formerly Smoky Flats);
- Economy Lake;
- Frying Pan Creek;
- Westview; and
- Swan Lake (outside FMA area).

A typical site includes camping stalls, picnic tables, firewood, garbage receptacles and pit toilets. MacLeod Flats and Economy Lake also have well water, which must be boiled before using. All camping sites and firewood are currently provided free of charge. Stoney Lake Campsite is located in Canfor's quota area northeast of Hines Creek. The recreation area has 28 overnight sites, a boat launch area, day use area, toilets, and non-potable water supply. An agreement was signed in 2006 with Alberta Community Development (ACD) whereby Canfor continues its financial contribution and ACD manages the Stoney Lake site to Provincial Recreation Area standards.

Similar discussions have been initiated with ACD regarding Swan Lake. If the discussions are successful, ACD will assume overall management responsibility of the site with financial support from Canfor and other interested stakeholders (industry, public, government). Canfor will continue its commitment to Swan Lake through financial support, thereby assisting with maintenance of the site.

In order to promote public use of its sponsored recreation areas, Canfor Grande Prairie Division publishes a pamphlet titled, *Canfor Public Recreation Areas* that is available through the Grande Prairie Tourism Association, Muskosepeji Park and Canfor's Grande Prairie administration office.



**Figure 9. Location of Recreation Areas Managed by Canfor**

Canfor initiated a 3-year (May 2003 to December 2005) recreation use assessment of the 6 recreation areas it manages. The goal of the study was to define the recreational use in the study area and obtain public input regarding the adequacy of the facilities and recommendations for improvement of the sites. 452 individual surveys were conducted for the period 2003 – 2005 on a total of 270 days. The assessment design and sampling protocols are available for review in the report “*Recreation Assessment of Six Recreational Areas Maintained by Canadian Forest Products Ltd. 2003 - 2005*”.

In 2006, Canfor also supported the maintenance and operation of 9 recreation areas in the greater Hines Creek/Fairview/Worsley area under 3-year agreements with Clear Hills County, Municipal District of Fairview and the Town of Fairview. These are:

1. Ole Lake
2. Many Islands
3. Running Lake
4. Carter’s Camp
5. Clean River
6. George Lake
7. Maples Park
8. Pratt’s Landing
9. Cummings Lake

**Indicator (5.1) 2a.2:** Percentage of registered trappers contacted that are directly impacted by operations (harvesting, silviculture, and reclamation).

<p><b>Target (5.1) 2a.2.1:</b> 100% of registered trappers directly impacted by harvesting, silviculture, and reclamation operations are contacted as specified in the <i>Trappers Consultation and Notification Program</i> annually.</p>	<p><b>Acceptable variance:</b> Zero, provided that Canfor and registered trappers make reasonable provisions that allow effective consultation and/ or notification.</p>
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**Status:** Does not meet

The *Trappers Consultation and Notification Program* (Canfor, 2004) provides direction to Canfor supervisors regarding consultation with aboriginal and non-aboriginal trappers and notification of registered trapline holders. For the 2005 timber year, 100% of known trappers who were potentially impacted by Canfor activities were consulted during the planning stage. During the 2005 timber year, harvesting activities impacted 18 registered trappers and 78% (14) were notified within 1 month of the commencement of harvesting activities as specified in the *Trappers Consultation and Notification Program*. This notification took place in the form of personal consultation or by mail. For silviculture operations in 2006, Canfor notified 100% (69) of the impacted trappers regarding vegetation management activities that were planned to occur in registered trapline areas. All registered trappers were notified by letter, including a map of their trapline areas showing Canfor’s planned activities.

**Indicator (5.1) 2a.3:** Percentage of outfitters potentially affected by operations within the FMA area are informed of the 5-year harvest sequence.

<p><b>Target (5.1) 2a.3.1:</b> 100% of outfitters potentially affected by operations within the FMA area will be supplied a 5-year General Development Plan map annually.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Meets



All outfitters with licensed territories within the FMA area were mailed a 5-year General Development Plan (GDP) map in June of 2006 and again in October 2006 when operational plans were amended in response to mountain pine beetle infestations. Canfor did not receive any requests or negative feedback from those outfitters contacted.

**Critical Element (5.2): Communities and Sustainability**

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

**Value (5.2) 1:** A range of benefits to local communities.

**Objective (5.2) 1a:** Local communities and contractors will have the opportunity to share in benefits such as jobs, contracts and services.

**Indicator (5.2) 1a.1:** Percentage of dollars paid for local vs. non-local contract services.

<b>Target (5.2) 1a.1.1:</b> Over a rolling 5-year period, a minimum of 75% of dollars paid for contract services will be expended locally.	<b>Acceptable variance:</b> Zero.
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**Status:** Meets

Table 30 indicates the local versus non-local contract service dollars expended since 2001. During the 5-year period from 2002 to-2006, 84% of the dollars paid for contract services was expended locally. This is a 2.5% increase from the previous 5-year period.

**Table 30. Local Versus Non-local Contract Services Expenditures**

Expenditures	2001	2002	2003	2004	2005	2006
Local Contract Services (\$ millions)	25.3	29.0	34.6	36.9	38.1	53.7
Non-Local Contract Services (\$ millions)	7.0	7.2	8.6	8.1	7.3	6.6
subtotal	32.3	36.2	43.2	45.0	45.4	60.3
<b>% Local Expenditures (5-year rolling avg.)</b>					<b>81.1%</b>	<b>83.6%</b>

**Objective (5.2) 1b:** The forests will be accessible to the public for social and cultural benefits.

**Indicator (5.2) 1b.1:** Percentage of identified social and cultural benefits that occur in the FMA area.

<b>Target (5.2) 1b.1.1:</b> Maintain 100% of identified social and cultural benefits that occur on the FMA area annually.	<b>Acceptable variance:</b> Zero.
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**Status:** Meets

On January 18<sup>th</sup>, 2006 Canfor’s Forest Management Advisory Committee (FMAC) reviewed a list of identified social and cultural benefits prepared by Canfor and provided additional information to the company. Canfor has confirmed that the social and cultural benefits indicated in Table 31 are available and accessible to the public.



**Table 31. Social and Cultural Benefits Identified in the FMA Area**

Benefit	Availability of Benefit 2006
<b>Recreational</b>	
Hunting/fishing	X
Camping/picnicking/social gathering	X
ATV'ing/snowmobiling	X
Walking/hiking/jogging/mountain biking/skiing	X
Horseback/trail riding	X
Boating/canoeing/kayaking/rafting	X
Sight seeing/wildlife watching/nature watching	X
Nature photography/painting	X
Berry picking/plant and rock collecting	X
Firewood/poles/other wood collecting	X
<b>Non-recreational</b>	
Trapping/outfitting/guiding	X
Working	X
Studying/researching	X
Small business timber harvesting	X
<b>Cultural (includes Aboriginal)</b>	
Traditional hunting/fishing/trapping/gathering	X
Traditional plants	X
Spiritual gatherings/activities	X
Teepee poles	X
<b>Percent Available</b>	<b>100%</b>

Canfor does not restrict public access within the FMA area with the exception of areas where ASRD applies legal restrictions e.g. ASRD restricts public access on some roads by requiring the installation and maintenance of gates as a means of protecting caribou populations.

**Critical Element (5.3): Fair Distribution of Benefits and Costs**

Promote the fair distribution of timber and non-timber benefits and costs.

**Value (5.3) 1:** Fair distribution of benefits and costs will be ensured across communities.

**Objective (5.3) 1a:** A fair distribution of benefits and costs will be ensured across all communities and contractors in the local area.

**Indicator (5.3) 1a.1:** Percentage of economic contributions to local communities.

<b>Target (5.3) 1a.1.1:</b> Annual economic contributions to local communities will be a minimum of 80% of the 5-year rolling average.	<b>Acceptable variance:</b> Zero
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**Status:** Meets

Canfor contributes to the local economy in the form of wages and benefits, property taxes, contract services, purchases of goods and services, and community donations. In 2006, Canfor's total contribution increased by approximately 16.6 million dollars from 2005, mostly due to local contractor

costs. Table 32 indicates, Canfor’s economic contribution to local communities in 2006 was 145% of the 5-year rolling average for the period 2001-2005.

**Table 32. Contributions to Local Communities**

Contribution (millions \$)	2001	2002	2003	2004	2005	2006
Wages and Benefits	12	13.5	14.6	14.7	15	15.8
Property Taxes	0.8	0.8	0.8	0.9	0.9	0.9
Local Contract Services	25.3	29	34.6	36.9	38.1	53.7
Supplies	5.6	4.4	5.5	6	6.4	6.6
Community Donations	0.1	0.1	0.1	0.1	0.1	0.1
Total	43.8	47.8	55.6	58.6	60.5	77.1
Local Contribution (5-Year Rolling Average)					53.3	
<b>% Within the 5-Year Rolling Average</b>						<b>145%</b>

**Indicator (5.3) 1a.2:** Percentage of coniferous timber available for local use.

<p><b>Target (5.3) 1a.2.1:</b> 0.5% of the coniferous AAC is made available for local use and for local residents as per FMA 9900037 annually.</p>	<p><b>Acceptable variance:</b> Not to exceed the annual allocation of 0.5% of the approved coniferous AAC (640,000 m<sup>3</sup>) over a 10-year cut control period (1999 – 2008), which equates to 3,152 m<sup>3</sup>/ year or 31,520 m<sup>3</sup> for the 10 year period.</p>
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**Status:** Meets

In accordance with Section 8(2)(d) of the FMA (Canfor, 1999), 0.5% of the AAC (3,152 m<sup>3</sup>) is made available for “local use in construction and maintenance of public works by any local authority, municipality, county, the Crown in the Right of Alberta or Canada and for local residents.” These programs are administered through ASRD and are subject to government regulations.

Canfor and ASRD worked cooperatively to identify areas for this program. There have been a total of 21 coniferous permits issued since 1999 (Table 33). The year the volume is issued is not necessarily the year it is harvested and hauled; therefore, resulting in variances. The proposed commercial timber dispositions for loggers and mill owners for the 2006 timber year are located in operational subunit Puskwaskau 3. Permit allocations are included in the annual operating plan.

**Table 33. Number of Permits issued within the FMA Area**

Timber Year Issued	# of Permits Issued	Volume (m3)
1999	6	300
2000	0	0
2001	2	80
2002	0	0
2003	6	3,892
2004	5	7,657
2005	2	1,164
2006 (forecast)	4	7,550
<b>Total</b>	<b>25</b>	<b>20,643</b>

**Indicator (5.3) 1a.3:** Volume of coniferous timber made available for local use.

<p><b>Target (5.3) 1a.3.1:</b> 10,000 m<sup>3</sup> of the coniferous AAC is made available annually for Community Timber Use (CTU) program.</p>	<p><b>Acceptable variance:</b> Not to exceed the total annual allocation of 10,000 m<sup>3</sup> in any given timber season.</p>
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**Status:** Meets

In accordance with Section 8(2)(e) of the FMA (Canfor, 1999), Canfor must make up to 10,000 m<sup>3</sup> available for a Community Timber Use (CTU) Program. The 2004 harvest season was the first year that the ASRD requested the 10,000 m<sup>3</sup> volume be made available. The proposed volumes for the commercial timber use program are included in Canfor’s annual operating plan submitted June 1<sup>st</sup>.

In the 2004 timber year, the required volume was made available in the Economy area, however, no local sawmillers or loggers submitted bids. The volume was subsequently re-advertised by ASRD and Canfor was the only bidder. For 2005 timber year, the volume was made available in the Latornell area and Canfor was the sole bidder on the volume. In 2006 a local logger was the successful bidder for volume made available through the ASRD competitive process.

**Table 34. Local Use Timber Volume Allocation by Timber Year**

Operational Unit	2004/2005 (m <sup>3</sup> )		2005/2006 (m <sup>3</sup> )		2006/2007 (m <sup>3</sup> )	
	Coniferous	Deciduous	Coniferous	Deciduous	Coniferous	Deciduous
Economy	9,819	5,414				
Latornell			8,536	215	8,290	813

## 8. Criterion 6: Accepting Society's Responsibility for Sustainable Development

Society's responsibility for sustainable forest management requires that fair, effective forest management decisions are made.

### Critical Element (6.1): Aboriginal and Treaty Rights

Recognize and respect Aboriginal and treaty rights.

**Value (6.1) 1:** Understand and respect Aboriginal and treaty rights.

**Objective (6.1) 1a:** Infringement of Aboriginal and treaty rights will be avoided.

**Indicator (6.1) 1a.1:** Percent conformance to SFM elements pertinent to the protection of aboriginal and treaty rights.

**Target (6.1) 1a.1.1:**

100% conformance to SFMP targets of Element (1.2) Species Diversity and Element (3.2) Water Quality and Quantity annually.

**Acceptable variance:**

80% conformance to the acceptable variances of SFMP targets related to species diversity, and water quality and quantity.

**Status:** Does not meet

Elements (1.2) and (3.2) include 12 targets related to the management of species diversity, water quality and water quantity. Maintenance and protection of those resources provides defacto protection for aboriginal and treaty rights. Three of the 12 related targets are in progress or are not at a scheduled reporting time. Seven out of the 9 reported targets (77%) were met in 2006. Following is a summation of results:

- Critical Element (1.2) Species Diversity:
  - Target (1.2) 1a.1.1
    - Description: Maintenance of habitat suitability rating
    - Results: Not a scheduled reporting time
  - Target (1.2) 1a.1.2
    - Description: Management of ECA in bull trout watersheds
    - Results: Meets
  - Target (1.2) 1a.1.3
    - Description: Management of forest seral condition in the Caribou Area and maintenance of buffers adjacent to trumpeter swan lakes
    - Results: In progress (not a scheduled reporting time for caribou habitat and meets for trumpeter swan buffers)
  - Target (1.2) 1a.1.4
    - Description: Rare plant identification training for Canfor staff
    - Results: Meets

- Target (1.2) 1a.1.5
  - Description: Participation in biodiversity monitoring program(s)
  - Results: Meets
- Target (1.2) 1a.1.6
  - Description: Retention of coarse woody debris
  - Results: Meets
- Target (1.2) 1a.1.7
  - Description: Establishment of planned watercourse buffers
  - Meets
- Target (1.2) 1a.1.8
  - Description: Management of structure retention
  - Results: In progress
- Critical Element (3.2) Water Quality and Quantity
  - Target (3.2) 1a.1.1
    - Description: Management of Water Quality Concern Rating on stream crossings
    - Results: Not a scheduled reporting time
  - Target (3.2) 1a.2.1
    - Description: Remedial action for stream crossings
    - Results: Does not meet
  - Target (3.2) 1a.3.1
    - Description: Compliance with riparian zones standards
    - Results: Does not meet
  - Target (3.2) 2a.1.1
    - Description: Conformance to water yield increase limits
    - Results: Meets

**Critical Element (6.2): Respect for Aboriginal Forest Values, Knowledge, and Uses**

Respect traditional Aboriginal forest values and uses identified through the Aboriginal consultation process.

**Value (6.2) 1:** Understand and respect treaty and Aboriginal special needs.

**Objective (6.2) 1a:** Early and effective consultation with Aboriginal peoples will be provided.

**Indicator (6.2) 1a.1:** Number of opportunities for early and effective consultation with Aboriginal peoples.

<p><b>Target (6.2) 1a.1.1:</b> To annually provide a range of opportunities for early and effective consultation with Aboriginal peoples who have indicated interest in activities on the FMA area.</p>	<p><b>Acceptable variance:</b> Opportunity for meaningful consultation on General Development plans must be provided to members of the Sturgeon Lake Cree Nation, Zone 6 Métis Nation of Alberta and the Aseniwuche Winewak Nation (AWN) of Canada annually.</p>
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**Status:** Meets

Active consultation occurred with the Sturgeon Lake Cree Nation (SLCN), Aseniwuche Winewak Nation of Canada (AWN) and the Metis Nation of Alberta (MNA) through a variety of means.

- SLCN and MNA representatives participated on the Forest Management Advisory Committee;
- Open houses to review FMA GDP and AOP were held at the SLCN community office in November 2005 and January 2007;
- A draft Cooperation Agreement between Canfor and AWN has been developed and continues to be reviewed by both parties;
- A SLCN band member was contracted by Canfor to facilitate consultation with community trappers;
- Meetings were held with the SLCN band council and appointed band representatives to investigate employment and contracting opportunities; and
- A meeting was held with SLCN’s appointed consultation representative and band councilor to provide information about Canfor’s mountain pine beetle management strategy.

**Objective (6.2) 1b:** Special cultural and historic sites will be respected.

**Indicator (6.2) 1b.1:** Percentage of historic resources that are protected.

<p><b>Target (6.2) 1b.1.1:</b> 100% conformance to the prescription for historical resources prepared by a certified archaeologist annually.</p>	<p><b>Acceptable variance:</b> Zero.</p>
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**Status:** Meets

In 2006, there were 10 sites of historical significance identified through field pre-impact assessments conducted by an independent certified archaeologist. All these sites were delineated from the harvest areas and avoided during operations. Two sites of historical significance were identified during field post-impact assessments.

**Indicator (6.2) 1b.2:** Percentage of known local historical resources that are respected.

<p><b>Target (6.2) 1b.2.1:</b> 100% of known local historical resources are respected annually.</p>	<p><b>Acceptable variance:</b> Zero.</p>
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**Status:** Meets

Known local historical resources are identified through use of the *Heritage Potential Model* that received approval from Alberta Community Development in 2002. This model was updated in the fall of 2006. All 2006 planned harvest units were screened against the model to ensure that no harvest operations were planned within the immediate vicinity of known local historical resources.



### Critical Element (6.3): Public Participation

Demonstrate that the public participation process is designed and functioning to the satisfaction of the participants.

**Value (6.3) 1:** Inclusive public process.

**Objective (6.3) 1a:** Affected and locally interested parties will be involved in the development of the decision-making process through an open, transparent and accountable process.

**Indicator (6.3) 1a.1:** Percentage conformance to the Forest Management Advisory Committee’s Terms of Reference (FMAC, 2006).

<b>Target (6.3) 1a.1.1:</b> 100% conformance to the FMAC’s Terms of Reference (TOR) annually.	<b>Acceptable variance:</b> Zero.
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**Status:** Meets

FMAC activities were in accordance with the terms of reference (TOR) in 2006. The TOR was reviewed and ratified at the January 18<sup>th</sup>, 2006 meeting.

**Indicator (6.3) 1a.2:** Number of opportunities for public participation.

<b>Target (6.3) 1a.2.1:</b> To provide a minimum of 4 types of opportunities for public participation annually.	<b>Acceptable variance:</b> Zero
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**Status:** Meets

Canfor offered the following opportunities for public involvement during the reporting period:

- Maintained an active FMAC advisory group;
- Sponsored open houses for review of GDP and AOP December 4<sup>th</sup> in Grande Prairie, December 13<sup>th</sup> in Spirit River;
- Sponsored open houses for review of Vegetation Management Plan in Sturgeon Lake March 16<sup>th</sup>, Grande Prairie March 6<sup>th</sup>, Hines Creek March 7<sup>th</sup>, and Grande Cache March 8<sup>th</sup>, 2006;
- Sponsored open houses for review of proposed Wapiti River Bridge in Grande Prairie County on July 5<sup>th</sup> and Municipal District of Greenview on July 6<sup>th</sup>, 2006;
- Annual trapper consultation and notification regarding harvesting and silviculture plans;
- Annual outfitter notification regarding harvest and silviculture plans;
- Meetings with the County of Grande Prairie, Municipal District of Greenview and City of Grande Prairie to present proposed plans for the Wapiti River Bridge; and
- Responses to letters and telephone calls to Canfor from the public.

In addition, the SFMP, Annual Performance Monitoring Report, 5-year GDP / AOP and DFMP are made available for the public in a variety of locations (at the Grande Prairie Woodlands Office, local libraries, open houses, trade shows, on Canfor.com website etc.).

**Indicator (6.3) 1a.3:** Percentage of public inquiries that receive an initial contact.

<p><b>Target (6.3) 1a.3.1:</b> To make initial contact to 100% of public inquiries within one month of receipt.</p>	<p><b>Acceptable variance:</b> To make initial contact with a minimum of 90% of the public inquiries within one month.</p>
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**Status:** Meets

There were 9 public inquiries in 2006, and 8 were contacted within one month. The inquiry for which contact was not made was an anonymous letter; however, the concern was addressed within one month.

**Table 35. Response to Public Inquiries**

Incident Tracking System ID	Date of Inquiry	Method of Inquiry	Date of Initial Contact	Initial Contact Within 1 Month
ITS-GP2006-OP0002	January 3, 2006	Telephone	January 3, 2006	Yes
ITS-GP2006-OP0005	January 21, 2006	Telephone	January 21, 2006	Yes
ITS-GP2006-OP0069	February 1, 2006	Telephone	February 2, 2006	Yes
ITS-GP2006-OP0073	February 21, 2006	Telephone	February 21, 2006	Yes
ITS-GP2006-OP0078	June 8, 2006	Telephone	June 8, 2006	Yes
ITS-GP2006-OP0079	June 15, 2006	Telephone	June 15, 2006	Yes
ITS-GP2006-OP0080	June 26, 2006	Telephone	June 26, 2006	Yes
ITS-GP-2007-0004	July 5, 2006	Telephone	July 5, 2006	Yes
ITS-GP-2006-0051	August 24, 2006	Letter	N/A anonymous	N/A

**Critical Element (6.4): Information for Decision-Making**

Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

**Value (6.4) 1:** Current scientific, local, and traditional knowledge.

**Objective (6.4) 1a:** Forest management decisions will be based on scientific, local, and traditional knowledge.

**Indicator (6.4) 1a.1:** Number of opportunities to enhance scientific, local, and traditional knowledge.

<p><b>Target (6.4) 1a.1.1:</b> To provide a minimum of 8 different opportunities to enhance knowledge annually.</p>	<p><b>Acceptable variance:</b> Zero.</p>
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**Status:** Meets

1. The 2005 *Annual Performance Monitoring Report* was made available to the FMAC and general public. The report indicates progress toward achievement of sustainable forest management targets;
2. The approved 2005, 5-year General Development Plan / Annual Operating Plan/was made available for the general public to review;



3. The approved DFMP was made available for the public to review;
4. Financial and technical support for the Grande Prairie and Area Forest Educator who makes presentations to classrooms (approximately 140 classes/ year) and conducts Walks Through the Forest to provide opportunities for students to experience hands on learning;
5. Support for the “Envirothon” for high school students who learn about forestry, soil, water, energy sector activities and wildlife;
6. Sponsorship of National Forestry Week “Walk Thru the Forest” where students learn about various forestry topics;
7. Sponsorship of National Forestry Week “Arbour Day” where students learn about the importance of trees;
8. Sponsorship of open houses;
9. Sponsorship of a presentation about the new Grande Prairie based Shock Trauma Air Rescue Society (STARS);
10. Sponsorship of presentations at FMAC meetings by Pierre Beaudry (hydrology and management of watercourse crossings), Gord Stenhouse (grizzly bears), Michael Bradley (carbon dioxide cycling and how it relates to forestry), and Brian Martell (mountain pine beetle);
11. Participation at the Career Fair at Grande Prairie Regional College; and
12. Provision of copies of the DFMP/ SFMP, 5-year AOP / GDP at the public libraries in Grande Prairie, Spirit River, DeBolt, Grande Cache and Valleyview;

**Indicator (6.4) 1a.2:** Number of active research projects.

<p><b>Target (6.4) 1a.2.1:</b> To be involved in a minimum of 10 active research projects annually.</p>	<p><b>Acceptable variance:</b> Zero</p>
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**Status:** Meets

Research plays an essential role in the successful implementation of sustainable forest management. Research also provides important information used in decision making regarding the management of forestry operations (i.e. timber harvesting, road construction and maintenance, silviculture, etc.) and forest products manufacturing.

Canfor is involved in research in a variety of ways. Each year, Canfor allocates significant resources to support forest research, forestry education, and projects that enhance the general public's forestry knowledge. The company also maintains representation on several associations, committees or groups that initiate or support research.



Table 36 indicates that in 2006, Canfor Grande Prairie operations participated in the following research projects. (funding levels indicated are for the duration of the project, up to December 31, 2006)

**Table 36. Research Projects**

<b>Canfor Research Projects</b>		
<b>Project Identifier</b>	<b>Project Name</b>	<b>Funding (\$)</b>
CANFOR-01-19	EMEND	4,298,630.77
CANFOR-01-033	Grizzly Bear Research	\$205,746
CANFOR-01-036	WESBOGY	\$453,236
CANFOR-01-038	Model II Regeneration Standards	\$753,419
CANFOR-01-040	Foothills Growth & Yield Association	\$224,956
CANFOR-01-045	Response Surface Design	\$35,869
CANFOR-01-047	Sustainable Forest Management Network	\$165,063
CANFOR-01-062	Caribou Conservation	\$243,715
CANFOR-01-063	Monitoring & Control Of Mountain Pine Beetle	\$783,490
CANFOR-01-064	Competition Modeling	\$625,362
CANFOR-01-066	EMEND Phases 9 - 13	\$1,050,000
CANFOR-01-070	Grizzly Bear Health Project	\$70,916
CANFOR-01-070	SCQI Risk Assessment	\$17,019
<b>subtotal</b>		<b>\$4,628,790.93</b>
<b>Partner Research Projects</b>		
BOUIBRO 01-04	Boreal Forest Research Centre	\$80,000
OF 01-07	Biodiversity Monitoring Program	\$120,000.00
DMI 01-34	Mixedwood Management Association	\$130,000
FOOMOD 01-04	Caribou Landscape Management Association	\$76,500
HWWOOD 091-129	GYPSY	\$183,000
WEYDV 01-178	Site Index Project	\$345,000
MDFP 01-34	White Spruce Physiology	\$50,000
OF 02-16	Enhanced Management Lodgepole Pine	\$3,600
FOOMOD 01-21	Caribou Adaptive Management Plan	\$70,900
<b>subtotal</b>		<b>\$1,059,000.00</b>
<b>Grand Total</b>		<b>\$5,687,790.93</b>

## 9. Summary

The status of the 60 targets found throughout this Annual Performance Monitoring Report is summarized in Table 1.

**Table 1. Results of Targets**

Classification	Number
Number of targets completed	0
Number of targets met	36
Number of targets not met	13
Number of targets in progress	3
Number of targets not due for reporting	8
<b>Total number of CAN/CSA Z809-02 targets</b>	<b>60</b>

Canfor’s performance is assessed annually through internal and external audits. During audits, 3 types of findings are possible:

**Non-compliance**: A regulatory violation that may, or has resulted in a regulatory determination or violation ticket. Includes all reportable spills.

**Non-conformance**: An incident or process that is contrary to ISO 14001 or CAN/CSA-Z809-02 commitments.

**Opportunities for Improvement**: An incident or process that indicates a weakness in Canfor’s system that could potentially lead to a non-conformance or a non-compliance incident.

In 2006, Grande Prairie operations underwent 2 audits, with the following results:

- August 21 to 24, 2006 - Canfor internal audit of CAN/CSA Z809-02 (GP), ISO 14001:2004 (GP and HC), and PEFC Chain of Custody:
  - 11 good practices;
  - 15 non conformances; and
  - 24 opportunities for improvement.
- December 11 to 13, 2006 - independent third party surveillance audit of CAN/CSA Z809-02 and ISO 14001:2004:
  - Four good practices;
  - One minor non-conformances; and
  - One opportunity for improvement.

*Please note: that the audit results include findings under the ISO14001 standard that may not be related to SFM.*

All independent third party audit non-conformance incidents require a corrective action plan to be submitted and approved by the third party. As well, Canfor develops corrective action plans for all non-conformance incidents and opportunities for improvement and records them in Incident Tracking System (ITS).

In addition to the audit process, any non-compliance and non-conformance incidents detected by Canfor during inspections of operations are addressed through corrective action plans, recorded and in ITS as a means to continually improve performance.

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