

ANNUAL PERFORMANCE MONITORING REPORT



Grande Prairie Alberta Operations
March 5th, 2004
REPORTING PERIOD:
May 1st, 2002 – December 31st, 2003



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Executive Summary

This Annual Performance Monitoring Report has been prepared as a requirement of the CAN/CSA-Z809-96 standard. It summarizes the progress and performance that Canfor Grande Prairie Alberta Operations has made in achieving its objectives in the Sustainable Forest Management Plan (SFMP). The reporting period is May 1st, 2002 – Dec 31st, 2003.

Through the process of public participation, Canfor's Forest Management Advisory Committee (FMAC) assisted Canfor to identify local level values, goals, indicators and objectives that are contained within this report.

Canfor's SFMP has been incorporated into its Detailed Forest Management Plan (DFMP) required under the terms of the Forest Management Agreement (FMA) 990037. The DFMP was approved on November 3rd, 2003.

The following is a summary of the results of the objectives found throughout the Annual Performance Monitoring Report:

Number that are completed	7
Number that meet	53
Number that do not meet	4
Number that are in progress	17
Number that are not at their scheduled reporting time	10
Total number of objectives	91

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1. Introduction & Overview

1.1. Certification

Certification of sustainable forestry practices is key to meeting public demands and maintaining market shares. To that end, Canadian Forest Products Ltd. (Canfor) Grande Prairie sought and achieved certification under a variety of respected standards including ForestCare, International Organization for Standardization (ISO) 14001 and Canadian Standards Association (CSA) Z809-96. See Quick Facts box for details.

As a preparatory step, Canfor Grande Prairie developed an Environmental Management System (EMS) certified to the ISO 14001 standard. The Company's EMS provides the platform on which to build the sustainable forest management system required to meet the CSA standard. Canfor then developed its Sustainable Forest Management Plan (SFMP) based on the CSA (Z809-96) standard and included this in its Detailed Forest Management Plan (DFMP). Canfor is also in the process of clarifying and adding its Sustainable Forest Management System into their business process.

The purpose of the CSA standard is to describe the components and performance objectives of a Sustainable Forest Management System. In 1996, six criteria were developed by the Canadian Council of Forest Ministers (CCFM) to address sustainable forest management. The criteria address many key aspects of forest management. See Criteria 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 developed a set of critical elements for each of the criteria listed above, numbering 22 in total. In the CSA standard, adoption of the CCFM criteria and elements as a framework for value identification provides vital links between local sustainable forest management (SFM) 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 the process of public participation, the CSA performance framework attains local relevance to the critical elements in the form of locally determined values¹, goals², indicators³ and objectives⁴.

¹ Values represent a principle, standard or quality considered worthwhile or desirable

² Goals are a broad, general statement that describes a desired state or condition related to one or more forest values

³ Indicators are a measurable variable used to report progress toward achievement of a goal

⁴ Objectives are clear, specific statements of expected quantifiable results to be achieved within a defined period of time related to one or more goals

Quick Facts

1997 - ForestCare certified

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

2000 - (June) Sustainable Forest Management Plan (SFMP) certified to National CSA standard (CAN/CSA-Z809-96)

2002 - (November) Successful re-certification audit of ISO 14001 and CSA standards

2003 - (August) Successful re-certification audit of ForestCare standard

Canfor’s public advisory group, the Forest Management Advisory Committee (FMAC), assisted Canfor to develop its Sustainable Forest Management Plan (SFMP) by identifying quantifiable local level values, goals, indicators and objectives of sustainable forest management.

1.2. 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 1.

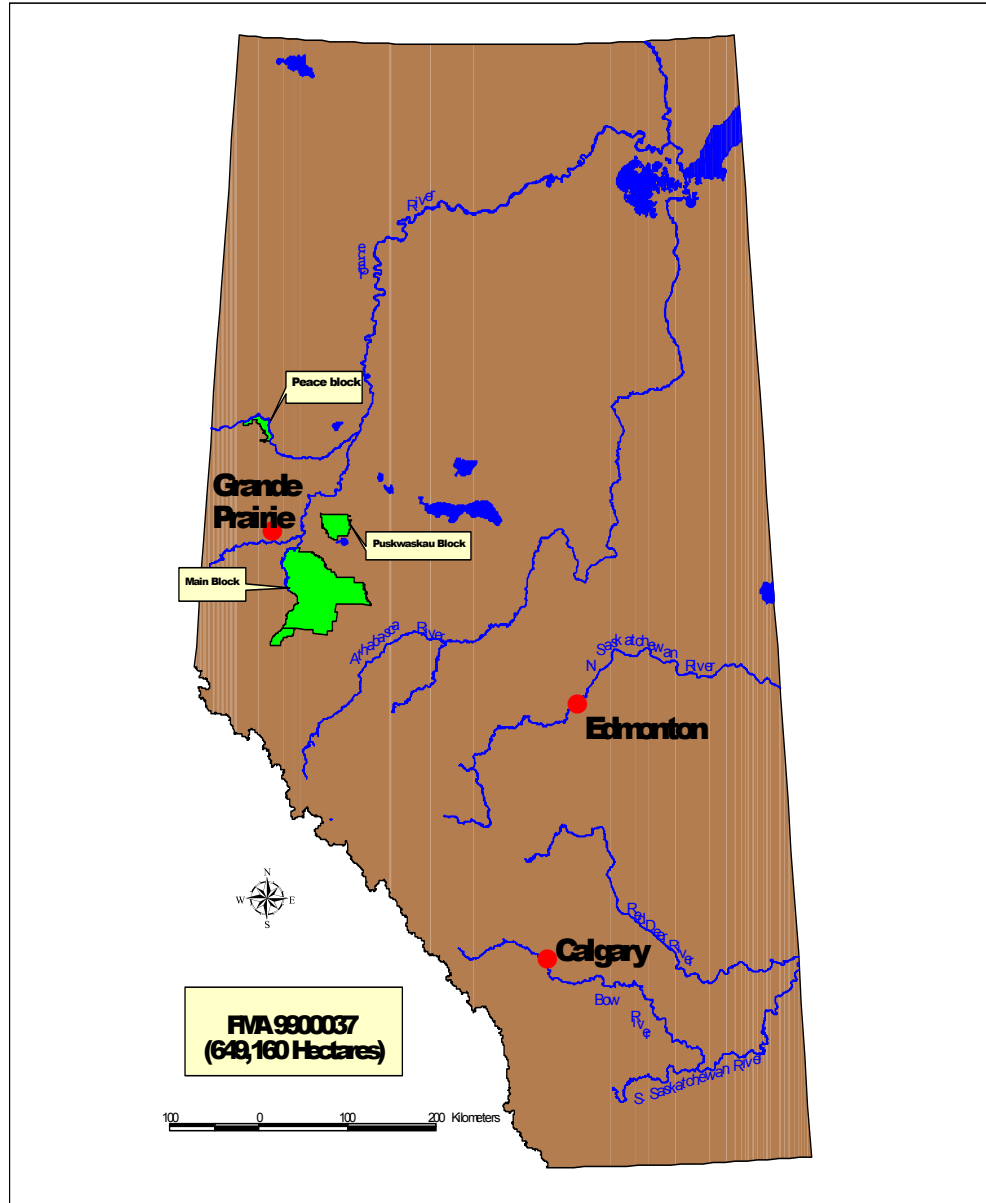


Figure 1. Defined Forest Area (DFA)

1.3. Landbase & Resource Information

Total Landbase: 649,160 ha

Productive Landbase (Coniferous and Deciduous): 474,193 ha

Coniferous AAC: 630,400 m³/yr

Deciduous AAC: 451,726 m³/yr

1.4. Annual Report

The values, goals, indicators and objectives from the Sustainable Forest Management Plan (SFMP) have been incorporated into the Detailed Forest Management Plan (DFMP) that was submitted to Sustainable Resource Development (SRD) and approved November 3rd, 2003. Incorporating the SFMP into the DFMP adds strength to Canfor's SFMP since CSA certification, which is voluntary, is incorporated into a legal document.

In accordance with the CSA standard, Canfor prepares the Annual Performance Monitoring Report to report its progress in meeting commitments in the SFMP. The report, which is organized by objective, provides the status of 91 objectives. Five status classifications are used:

- Completed;
- Meeting;
- Not meeting;
- In progress; or
- Not a scheduled reporting time.

The reporting period for this report is May 1st, 2002 – Dec 31st, 2003.

2. Criterion 1: Conservation of Biological Diversity

Critical Element 1a: Ecosystem Diversity

Value (1a) 1.: Landscape level ecosystem diversity

Goal (1a) 1.1: Provide support to areas of rare physical environments

Indicator (1a) 1.1a: The amount of area of lands excluded from harvest in the DFMP

Objective (1a) 1.1a.1: One hundred percent (100%) of identified and validated rare physical environments will not be harvested	Acceptable variance: Zero
--	-------------------------------------

Status: Meets.

No harvesting occurred in any of the identified rare physical environments during this reporting period. See Table 1 below.

Rare Physical Environment	Area (ha)
Dunvegan West Wildland	
Cactus Hills (TWP 84 RGE 9 W6M)	214.8
Peace Parkland (TWP 81 RGE 7 W6M)	1,172.3
Peace River Dunvegan (TWP 81 to 83 RGE 7 & 8-W6M)	3,084.0
Parabolic Sand Dunes (TWP 69 RGE 3 W6M)	6,114.2
Total	10,585.3

Table 1. Rare Physical Environments in Canfor's FMA Area

Indicator (1a) 1.1b: Cactus Hills (TWP 84 RGE9 W6M) and Peace Parkland (TWP 81 RGE 7 W6M)

Objective (1a) 1.1b.1: Nominate Cactus Hills and Peace Parkland areas as candidate sites for Alberta Special Places Program	Acceptable variance: These have already been nominated
---	--

Status: Complete.

These areas received official designation as a special place⁵ as part of the Dunvegan West Wildland on Dec 20th, 2000.

Goal (1a) 1.2: Maintain a range of seral stages

Indicator (1a) 1.2a: The amount of in old seral stage at present and key points in time

Objective (1a) 1.2a.1: Maintain old seral stages within the natural disturbance regimes at present and at key points in time	Acceptable variance: Not to fall outside the range of natural disturbance regimes for the old seral stage in the FMA area and FMUs.
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⁵ Refers to the Alberta Special Places Program which aims to complete a network of protected areas to preserve the environmental diversity of the Province's 6 Natural regions and 20 subregions

Status: Not scheduled reporting time

Old seral stage baseline (1999) results were previously reported in the May 1st, 2001 – April 30th, 2002 report. The key points in time are identified in Table 2. The next identified key point in time is 2009. The next reporting of this objective will occur at that time.

Key Points in Time	Corresponding Year
0	1999 (Baseline data)
10	2009
20	2019
50	2049
100	2099
200	2199

Table 2. Identified Key Points in Time

Indicator (1a) 1.2b: The amount in each seral stage at present and key points in time

<p>Objective (1a) 1.2b.1: Maintain seral stages within the natural disturbance regimes at present and key points in time</p>	<p>Acceptable variance: To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs</p>
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Status: Not scheduled reporting time

Seral stage baseline (1999) results were previously reported in the May 1st, 2001 – April 30th, 2002 report. The key points in time are identified in Table 2. The next identified key point in time is 2009. The next reporting of this objective will occur at that time.

Critical Element 1b: Species Diversity

Value (1b) 1.: Landscape level species diversity and abundance

Goal (1b) 1.1: Minimize impacts on wildlife species population abundance

Indicator (1b) 1.1a: Amount of LOC access into the caribou area that is gated

<p>Objective (1b) 1.1a.1: 100% of Canfor’s LOC roads into the Caribou Area will be gated or other appropriate control measures, as approved by the government will be implemented</p>	<p>Acceptable variance: Zero variance, as directed by the Province</p>
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Status: Meets

Canfor has three gates on Canfor License of Occupations (LOCs) that lead into the Caribou Area to manage access; one on the 4000 road, one on Norton road and one on the W road (Figure 2). The gates on the 2000 and the Norton roads were locked except during log hauling. The W road gate was not locked during the reporting period. It was determined that the access was already restricted from the north by the gate on the 2000 road.

It was recently recognized that traffic can now enter the Caribou Area from non-Canfor LOCs from the south. Canfor will ensure the gate on the W road remains locked immediately after hauling is complete in March 2004.

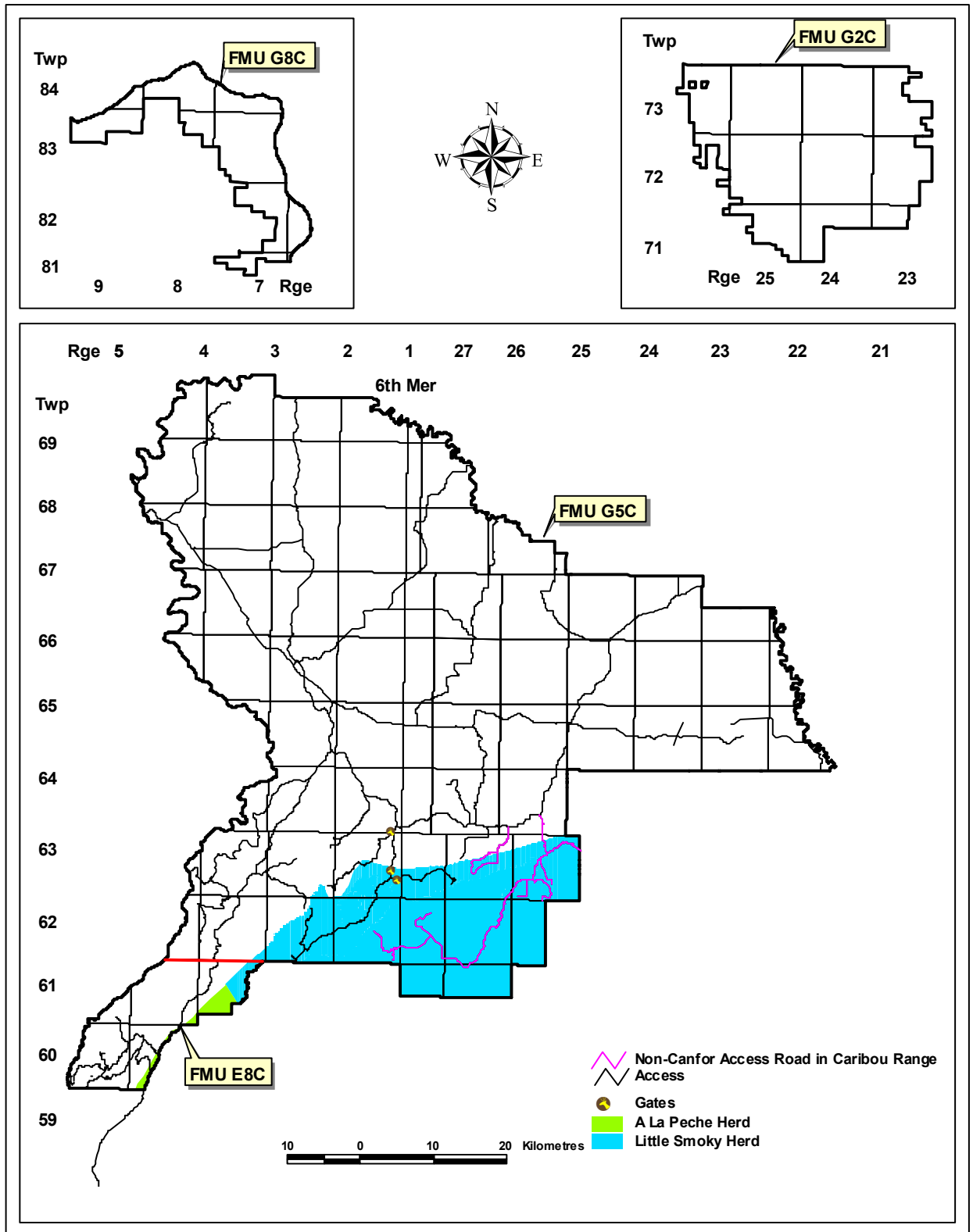


Figure 2. Caribou Area Map with Gate Locations

A new LOC (023022) was constructed in the Deep Valley Area (TWP 61 & 62 RGE 26 W5M) that is located within the Caribou Area. Canfor received approval for this LOC in 2002. To restrict access, Sustainable Resource Development (SRD) requires the bridge over Deep Valley Creek be removed in the spring after each harvest season.

A new SRD policy for Smoky Forest Area, regarding industrial access gates, has been developed for 2004. Canfor is required to make requests to SRD to open the gates during active haul periods. The requests must be very specific and they are enforced by SRD.

Locked gates continue to be the target of vandals. As a result, improvements scheduled for 2004 include: yearly changes to the lock combinations, improvement to lock mechanisms to protect the locks from being destroyed, modifying the gates to allow passage of off highway vehicles and adding more signage. Canfor is also investigating the possibility of reclaiming other temporary roads to further restrict access from the south FMA area boundary within the Caribou Area.

Additionally, there are efforts being expended within the Caribou Area to minimize and mitigate disturbance to the Caribou. These include:

- No roads being constructed to access wood beyond the current 2003/2004 operating season;
- Following the early in/early out philosophy;
 - Operations occurred immediately after freeze up, November 2003;
- Development of an Interim Variable Retention Strategy
 - Completed November 11th, 2003;
- Planting cutblocks and seismic lines contained within the cutblocks, immediately after harvest; and
- Scheduling planting operations to avoid the calving season.

Indicator (1b) 1.1b: Level of suitable habitat for selected indicator species

<p>Objective (1b) 1.1b.1: Maintain habitat conditions required by identified selected indicator species using HSI models</p>	<p>Acceptable variance: For the 4 selected species is to maintain carrying capacity within 10% of current status at key points in time (0, 10, 20, 50, 100 and 200 years)</p>
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Status: Not scheduled reporting time

Baseline (1999) Habitat Suitability Index (HSI) results, for the 4 selected species managed under HSI modeling (Moose, Pine Marten, Pileated Woodpecker and Barred Owl), were previously reported in the May 1st, 2001 – April 30th, 2002 report. At that time, Canfor met all of the carrying capacity targets. The key points in time are identified in Table 2. The next identified key point in time is 2009. The next reporting of this objective will occur at that time.

Objective (1b) 1.1b.2:
 Maintain habitat conditions required by identified selected indicator species, using habitat constraint modeling

Acceptable variance:
Woodland Caribou: no more than 25% of the area in pioneer or young seral condition and no less than 15% in old seral condition
Bull Trout: within a defined watershed, total vegetated cover removal will not exceed 35% ECA above the H60.
Trumpeter Swan: zero with respects to harvesting within “no-harvest” buffers

Status: Meets - Trumpeter Swan, In Progress – Woodland Caribou and Bull Trout

Trumpeter Swan habitat is managed by identifying water bodies supporting Trumpeter Swans and maintaining a 200 m “no-harvest” buffer to protect nesting sites. There were 45 water bodies originally identified by Sustainable Resource Development, Natural Resource Services that required 200 m “no-harvest” buffers. In this reporting period, one additional water body was identified by Canfor, bringing the total number of Trumpeter Swan water bodies within the FMA area to 46.

Canfor is currently in the process of developing a DFMP/AOP Validation Process with Timberline Forest Inventory Consultants, which will enable Canfor to track and annually report on the Woodland Caribou and Bull Trout. The validation process is expected to be implemented for the next Annual Operating Plan (AOP) submission in the spring of 2004. Results will be reported in the 2004 Annual Performance Monitoring Report.

Targets established for Caribou habitat are a maximum of 20% of the area in the pioneer or young seral stage, and a minimum of 20% of the area on old seral stage. The acceptable variance is a maximum of 25% of the area in the pioneer or young seral stage, and a minimum of 15% of the area on old seral stage. Initial baseline (1999) results, previously reported in the May 1st, 2001- April 30th, 2002 report, showed that Canfor had 13% in pioneer/young seral stages and 10% in old seral stage in the FMA area. Model runs predict that the 20% old seral stage target will be achieved by 2021.

Bull Trout habitat is monitored by calculating the Equivalent Clearcut Area⁶ (ECA) in Bull Trout watersheds above the H60⁷ line. Initial baseline (1999) results show there are 3 watersheds above the ECA of 35% that were flagged for concern (Table 3).

Watershed ID	1999 ECA %	2009 ECA %	2019 ECA %
2057 ¹	48	--	--
4257 ¹	36	--	--
5642 ¹	37	--	--
1500 ¹	--	--	41
Combined ECA (ha)	606	0	195
Notes: ¹ Bull trout watershed			

Table 3. Watershed Above the ECA of 35% Flagged for Concern

⁶ ECA refers to an area that has been harvested, cleared or burned. The ECA index, expressed as a percentage, describes an area of regenerated growth in terms of its hydrological equivalence to a clearcut. As the area regenerates and growth develops, the hydrological impact is reduced
⁷ H60 is the elevation above which 60% of the watershed lies (the watershed area above the H60 is considered as the source area for major snowmelt peak flows)

Indicator (1b) 1.1c: Amount of significant wildlife mineral licks

<p>Objective (1b) 1.1c.1: Protect 100% of identified significant wildlife mineral licks</p>	<p>Acceptable variance: Zero</p>
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Status: Does not meet

Canfor implements a 100 m buffer on natural mineral licks.

For this reporting period Canfor had one non-compliance regarding mineral licks. A mineral lick was improperly buffered and was harvested in the 2002/2003 season. The block was subsequently planted in 2003. This block was laid out in 1998 by an inexperienced summer student and was one of the last remaining old blocks that Canfor has laid out. Today’s layout crews are trained to identify mineral licks. There is now a regional operating procedure “Wildlife Zone Identification”, which was not available in 1998, that describes how to identify a mineral lick. This non-compliance was entered into Canfor’s Incident Tracking System (ITS), was investigated and an action plan created to prevent recurrence in the future. Additional to the layout crews, pre-harvest assessment crews will also be trained to identify wildlife zones (including mineral licks) commencing in 2004.

The number of wildlife mineral licks reported in the DFMP (159) is incorrect. That number represented all wildlife zones, which encompass more than just mineral licks. The number of natural mineral licks identified and buffered in Canfor’s FMA area is 60. An additional 12 man-made licks, created from seismic shot holes are also identified. Sustainable Resource Development (SRD) does not require buffers on these man-made licks as the seismic company is responsible for capping these holes.

Goal (1b) 1.2: Maintain flora and fauna on the landscape

Indicator (1b) 1.2a: The amount of area in each seral stage a present and key points in time

<p>Objective (1b) 1.2a.1: Maintain seral stages within the natural disturbance regimes at present and key points in time</p>	<p>Acceptable variance: To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs.</p>
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Status: Not scheduled reporting time

Refer to objective (1a) 1.2b.1 on page 5.

Indicator (1b) 1.2b: Presence of rare plants on the FMA area

<p>Objective (1b) 1.2b.1: Develop a predictive tool to determine the probability of the occurrence of rare plant species on the FMA area</p>	<p>Acceptable variance: Not appropriate for this objective</p>
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Status: Complete

A model for predicting occurrence(s) of rare plants within the FMA area was developed during the reporting period.

During the 2004 summer/fall season, the staff will utilize the model to identify potential sites that may contain rare plants.

Indicator (1b) 1.2c: Presence of endangered or threatened wildlife species ('At Risk' and 'May Be At Risk' listings) on the FMA area

<p>Objective (1b) 1.2c.1: To develop management strategies to address the Identified endangered or threatened wildlife species on the FMA area</p>	<p>Acceptable variance: Zero</p>
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Status: Meets - Trumpeter Swans, In Progress – Woodland Caribou and Bull Trout

This objective is being met by using habitat constraint modeling to monitor habitat availability. This process is identified in objective (1b) 1.1b.2 on page 8. Please refer to that objective for progress details.

Canfor's list of provincial and national endangered and threatened wildlife species has been updated. The list is reconciled with Schedule 1 of the Species At Risk Act (SARA) and the species lists prepared by the Committee on the Status Of Endangered Wildlife In Canada (COSEWIC). In 2004, Canfor's list will be reviewed to determine which species require a strategy to be developed.

Indicator (1b) 1.2d: Type, amount and location of habitat required for selected indicator species

<p>Objective (1b) 1.2d.1: Compile a list of habitat requirements for selected indicator species within Canfor's FMA area</p>	<p>Acceptable variance: To maintain a carrying capacity within –10% of the current status at key points in time (0, 10, 20, 50, 100 and 200 years)</p>
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Status: Not scheduled reporting time

Baseline (1999) Habitat Suitability Index (HSI) results, for the 4 selected species managed under HSI modeling (Moose, Pine Marten, Pileated Woodpecker and Barred Owl), were previously reported in the May 1st, 2001 – April 30th, 2002 report. At that time, Canfor met all of the carrying capacity targets. The key points in time are identified in Table 2. The next identified key point in time is 2009. The next reporting of this objective will occur at that time.

During the Detailed Forest Management Plan review, SRD and Canfor recognized the importance of habitat for selected species. The DFMP contains Canfor’s commitment to work jointly with SRD to review the habitat suitability indices. In 2004, Canfor with Sustainable Resource Development (SRD), will develop a work plan for the HSI validation process.

Objective (1b) 1.2d.2:	Acceptable variance:
Review the list of selected indicator species regarding potential addition of an amphibian species	Zero

Status: In progress

To meet this objective, it was recognized that due to their distribution, it is best to collect amphibian data at a provincial scale rather than at an FMA area scale. Therefore, in 2001 Canfor made contributions to participate in the Alberta Biodiversity Monitoring Program (ABMP). Canfor’s Forest Management Advisory Committee (FMAC) supported this approach.

During Phase I of the ABMP, resource managers from government and non-government organizations directed the development of a large scale biodiversity monitoring program. As part of this process, a large group of scientific experts were contracted to develop feasible, cost effective, scientific methodologies for monitoring biodiversity over broad scales and long time periods. Protocols for sampling amphibians were included as part of that initiative.

During Phase II (2004-2006), a small scale pilot of the ABMP will be implemented as a cautious roll-out of the program to test its effectiveness. If the pilot succeeds, preliminary amphibian data should be available in 2005 and more comprehensive data in 2007.

Critical Element 1c: Genetic Diversity

Value (1c) 1.: Genetic diversity

Goal (1c) 1.1: Conserve genetic diversity of tree species

Indicator (1c) 1.1a: The effective number of unrelated genotypes (trees) in the breeding program

Objective (1c) 1.1a.1:	Acceptable variance:
To maintain between 300-600 genotypes in breeding programs to safeguard long-term diversity	The number of genotypes for each tree species in the breeding program will be between 300-600

Status: Meets

A genotype is the genetic makeup of an organism. The higher the number of genotypes, the more diverse the gene pool. The number of genetically unique individual trees found in Canfor's breeding program are:

White Spruce breeding program: 345 genotypes

Lodgepole Pine breeding program: 610 genotypes

The number of genotypes in the Lodgepole Pine breeding program is 610, which is marginally above the target of 300–600. This orchard is currently going through the rouging process (removing poor performing genotypes), so the number of genotypes will be reduced over the next few years and eventually will fall within the target.

Indicator (1c) 1.1b: The effective number of unrelated genotypes (trees) in the seed orchard



Status: Meets

Within the breeding programs, the individually unique genotypes are either interbred (creating families with similar genetic makeup) or cloned (exact replicate of the genetic makeup of the parent) depending on the program. The White Spruce program is a “clonal” orchard, and the Lodgepole Pine program is a “selection” orchard. The number of unrelated genotypes are found below:

White Spruce breeding program: 152 clones

Lodgepole Pine breeding program: 148 families

The numbers of clones and families are currently above the target, but within the acceptable variance. The higher number of clones and families indicate a more diverse gene pool. Over time, as the orchards go through the rouging process, the numbers will be reduced.

Indicator (1c) 1.1c: The amount of area planted with non-seed orchard stock

Objective (1c) 1.1c.1:

To plant 30% of the FMA area cut units with the bulk seed collection and 70% with seed orchard stock within the following Natural subregions: Central Mixedwood, Dry Mixedwood and Lower Foothills

Acceptable variance:

To plant not more than 70% of the harvested area with seed orchard seed on a 5 year average

Status: Meets

Production of genetically improved stock is low (Table 4) as the seed orchard is in the early stages of development. The goal is to eventually use 70% orchard stock and 30% bulk seed stock for Canfor’s planting program in the Central Mixedwood, Dry Mixedwood and Lower Foothills subregions. Pine is the only species currently available as orchard stock

Pine Stock Origin	2003 (%)	2002 (%)
Bulk Pine Seed Collection Stock	77.3	76.4
Genetically Improved Pine Seed Orchard Stock	22.7	23.6

Table 4. % of Pine Bulk Seed Collection and Genetically Improved Stock Planted

Indicator (1c) 1.1d: The number of mother trees represented in the bulk seed collections over a ten-year period

<p>Objective (1c) 1.1d.1: To include cones of at least 400-750 mother trees for the bulk seed collections for lodgepole pine and white spruce and 50-150 mother trees for black spruce over a ten year period</p>	<p>Acceptable variance: Zero for maintaining a minimum of 400 mother trees for lodgepole pine and white spruce and a minimum of 50 mother trees for black spruce</p>
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Status: Meets.

In the reporting period, bulk seed was collected for Black Spruce only. The seed was collected from 1049 mother trees.

Although the number of mother trees exceeds the target range specified for Black Spruce (50-150), it is within the acceptable variance. The cones were collected with a helicopter cone rake, which enables quick cone collection from many trees (Figure 3). This higher number of mother trees reflects a higher genetic diversity within the seed.



Figure 3. Helicopter Cone Rake

Goal (1c) 1.2: Maintain conditions that do not negatively impact on genetic diversity of wildlife species

Indicator (1c) 1.2a: Landscape structure

<p>Objective (1c) 1.1a.1: To compare current landscape structure to future landscape structure at key points in time and develop management strategies</p>	<p>Acceptable variance: Distribution of Seral Stages: Not to fall outside the range of natural disturbance regimes for the seral stages in the FMA area and FMUs Distribution of Patch Sizes: to be within the range of natural disturbance types in the FMA area and FMUs Fragmentation: Mean patch size (MPS) will not fall below 25% of the current MPS for the FMA area and each FMU at the key points in time (0, 10, 20, 50, 100 and 200 years) Connectivity: Mean nearest neighbour distance (MNND) will not exceed the maximum MNND (as calculated from the current status plus 25%) for the FMA area and each FMU at key points in time Patch Shape: Area weighted mean shape index (AWMSI) will not fall below 2 times the current AWMSI of the pioneer seral stage for the FMA area and FMU area at key points in time</p>
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Status: Not scheduled reporting time

Baseline (1999) old seral stage results were previously reported in the May 1st, 2001 – April 30th, 2002 report. Canfor has selected 5 indices to monitor landscape structure: distribution of seral stages, distribution of patch sizes, mean patch size, mean nearest neighbour distance and area weighted mean shape index. The targets for all indices are generally being met over the planning horizon. The indices will continue to be monitored and reported at key points in time. The key points in time are identified in Table 2. The next identified key point in time is 2009. The next reporting of this objective will occur at that time.

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

Critical Element 2a: Forest Health

Value (2a) 1.: Healthy forest stands

Goal (2a) 1.1: Conserve forest health

Indicator (2a) 1.1a: number of occurrences and amount of area impacted by fire and catastrophic events of insects, disease, windfall etc.

<p>Objective (2a) 1.1a.1: Limit the number of occurrences and amount of area impacted by fire and catastrophic events of insects, disease, windfall etc.</p>	<p>Acceptable variance: For company caused fires: zero For catastrophic events of insects, disease, windfall within the FMA area: zero</p>
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Status: Meets

All harvested cutblocks containing burned piles are infrared scanned the following spring after burning. Results from spring 2002 and 2003 indicate no hot spots. There also were no company caused fires from all other activities in the FMA area for this reporting period.

Canfor did however have a company caused fire in a Canfor log deck on July 20th 2003. This fire was caused by a spark from the incinerator (Figures 4, 5, 6 and 7). This occurred under the Mill's responsibility and was not under the control of Woodlands operations.



Figure 4. Deck Fire, The Day it Started



Figure 5. Deck Fire, Spraying Retardant

The assistance of many businesses and groups from Grande Prairie and surrounding area helped minimized the loss of inventory for Canfor. These include: City of Grande Prairie, County of Grande Prairie, Village of Hythe, Town of Beaverlodge, Town of Wembley, Town of Sexsmith, Town of Valleyview, Debolt Fire Department, Grovedale Fire Department, Municipal District of Greenview, Bezanson Fire Department, La Glace Fire Department, County of Saddle Hills, Weyerhaeuser Canada Ltd., Alberta Environment, Alberta Sustainable Resource Development, Grande Prairie Fire Department, Peace Country Health Authority, GPREMS, Royal Canadian Mounted Police, Citizens on Patrol, Aquatera, Technical Search and Rescue, Salvation Army, United Farmers of Alberta, McDonald's Restaurant, Canada Safeway, Southview I.G.A., The Pita Pit, Bear Creek Café, Blackman's Butcher Shop, Subway, Domino's Pizza, Key Safety Services Inc., Fire Master Oilfield Service, Safety Boss Inc., Precision

Helicopters Inc., Highland Helicopters Ltd., Spilchen's Tank Truck Service Ltd., Larry's Water Hauling, Dan Morrison Trucking Ltd., Tim Horton's, Hillbilly Haulin' Ltd., Craig's Water Service, Amigo Trucking Ltd., Dillabough Bros, Paul Morrison Trucking Ltd., Earthwood, Top Gun Oilfield Services, Big Eagle Hydro-Vac Services, Rentco Equipment Ltd., 3S Contracting Ltd., Cat, The Rental Store, Dwayne Larson Enterprises Ltd., D & J Isley & Sons Contracting Ltd.

There were 17 minor fires in the FMA area, none of which were caused by Canfor. In 2002, there was a total of 61.9 ha that was burned. Table 5 details a complete list of the fires on the FMA area for 2003, totaling 6.31 ha. Figures 6 and 7 depict one of the pipeline explosions.

FIRE NUMBER	LOCATION	CAUSE	SIZE
GWF-017-2003	SW-8-62-3-W6M	Flaring gas	1.00 ha
GWF-018-2003	SW-8-62-3-W6M	Flaring gas	1.00 ha
GWF-019-2003	SE-26-64-1-W6M	Flaring gas	0.15 ha
GWF-024-2003	NW-29-67-4-W6M	Campfire	0.01 ha
GWF-026-2003	NW-18-65-23-W5M	Lightning	0.01 ha
GWF-027-2003	NE-27-68-25-W5M	Lightning	0.01 ha
GWF-033-2003	SW-7-66-25-W5M	Lightning	0.01 ha
GWF-036-2003	SE-28-64-23-W5M	Lightning	0.01 ha
GWF-041-2003	SE-17-64-24-W5M	Lightning	0.01 ha
GWF-065-2003	NE-35-66-22-W5M	Lightning	0.01 ha
GWF-066-2003	SW-33-66-21-W5M	Lightning	0.05 ha
GWF-079-2003	SE-33-62-26-W5M	Lightning	0.01 ha
GWF-080-2003	NW-25-63-25-W5M	Lightning	0.01 ha
GWF-099-2003	NW-16-68-2-W6M	Campfire	0.01 ha
GWF-100-2003	SW-29-67-4-W6M	Campfire	0.01 ha
GWF-106-2003	SW-7-64-23-W5M	Pipeline explosion	2.00 ha
GWF-107-2003	NW-23-66-25-W5M	Pipeline explosion	2.00 ha
Total			6.31 ha

Table 5. Fires on Canfor’s FMA area in 2003 Supplied by SRD



Figure 6. Pipeline Explosion



Figure 7. Pipeline Explosion

Windfall is monitored on all types of flights (recon, aerial spray, final clearances). During a recon flight some non-catastrophic windfall was observed in block S143242 and it was incorporated into the 2003/2004 harvest plan. In addition, during the summer aerial spray program, all cutblocks were evaluated and no windfall was noted.

There were no catastrophic events of insects and disease reported in the FMA area for this reporting period. Canfor is currently a member of the Northwest Boreal Region Pest Management Working Group who implemented an Insect and Disease Monitoring System for 2003. The monitoring system was specifically designed to capture more accurate and detailed

information regarding pest impacts by sampling Permanent Sample Plots (PSPs). Aerial survey results revealed some mortality of Balsam Poplar and Balsam Fir, and to a lesser extent White Spruce. Warren’s Root Collar Weevil was recorded in some pine stands during ground inspections. None of these occurrences were considered catastrophic.

Critical Element 2b: Ecosystem Resilience

Value (2b) 1.: Ecosystem resilience

Goal (2b) 1.1: Sustain capability of ecosystem to recover from both natural and human-caused disturbances

Indicator (2b) 1.1a: The amount of area in the regenerated yield group

<p>Objective (2b) 1.1a.1: To regenerate 100% of the harvested area as per the regenerated yield group as defined in the DFMP</p>	<p>Acceptable variance: +/- 10% of the area of regenerated yield groups; and +/- 5% of the AAC for C, CD, DC & D, provided that the AAC for both coniferous and deciduous are sustained (within -5%)</p>
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Status: In progress

Canfor made a commitment within the DFMP to compare planned versus actual reforestation by yield group over a 5 year period. Table 6 presents the first 3 years of preliminary data for 2000 to 2002. Of the 8 yield groups listed, all except 11, 12 and 17 are within the acceptable variance. Over the next 2 years silviculture staff will work towards meeting the target.

	Yield Group (ha)									Total
	2	3	8	9	11	12	14	16	17	
Pre Regeneration Yield Group (AVI)	935.7	543.3	2,162.0	137.0	449.0	429.7	388.9	2,290.9	1,102.8	8,439.3
Treated Regeneration Yield Group	1,001.0	537.8	2,243.8	129.5	511.8	370.8	370.1	2,374.8	899.7	8,439.3
Percent Difference	7.0%	-1.0%	3.8%	-5.5%	14.0%	-13.7%	-4.8%	3.7%	-18.4%	

Table 6. Planned Versus Actual Reforestation by Yield Group

The Company also monitors the objective by comparing the original declarations versus current declarations (C-coniferous, CD-coniferous/deciduous, DC-deciduous/coniferous and D-deciduous). For blocks logged from May 1991 to present, 99.96% of the blocks have maintained their original declaration and 0.04% of the blocks have changed from their original declaration.

Indicator (2b) 1.1b: The amount of area in each seral stage at present and key points in time

<p>Objective (2b) 1.1b.1: Maintain seral stages within the natural disturbance regimes at present and key points in time</p>	<p>Acceptable variance: To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs</p>
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Status: Not scheduled reporting time

Repeat objective. Refer to objective (1a) 1.2b.1 on page 5.

Indicator (2b) 1.1c: Timeframe for treating harvested areas

<p>Objective (2b) 1.1c.1: All harvested sites are treated within 18 months after the end of the timber year</p>	<p>Acceptable variance: A variance of +3 months is acceptable in order to accommodate the occurrence of fire and periods of extreme weather conditions including flood and drought</p>
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Status: Meets

The information for this objective is reported by timber year not fiscal year.

A report of the cutblocks harvested in the 2000/2001 and 2001/2002 harvest seasons was generated from Canfor’s block tracking database (Genus). It indicated that all cutblocks were planted within 18 months after the end of the timber year (Table 7).

Timber Year	# of Cutblocks Harvested	# of Cutblocks Planted Within 18 Months
2000/2001	130	130
2001/2002	136	136

Table 7. Number of Blocks Harvested that Were Planted Within 18 Months

During an audit of blocks planted prior to 2000, a non-compliance resulted from some blocks being planted >2 years after the skid date (required by SRD). All of these blocks were harvested prior to Canfor becoming CSA certified (harvest years 1993/1994, 1994/1995 and 1995/1996).

Indicator (2b) 1.1d: Soil productivity

Refer to (3b) Goal 1.1 indicators and objectives.

As stated in the CSA Matrix (Appendix 7 of DFMP), soil productivity is covered in “Critical Element 3b, Goal 1.1” with 3 indicators and 3 objectives. Soil Productivity is a value in 3b, but the Forest Management Advisory Committee (FMAC) also viewed soil productivity as an indicator for “Critical Element 2b, Goal 1.1”. Therefore, the text for “Critical Element 3b, Goal 1.1” applies to this section as well.

Critical Element 2c: Ecosystem Productivity

Value (2c) 1.: Ecosystem productivity

Goal (2c) 1.1: Maintain ecosystem productivity

Indicator (2c) 1.1a: Level of suitable habitat for selected key indicator species

<p>Objective (2c) 1.1a.1: Maintain habitat conditions required by identified key indicator species using HSI models</p>	<p>Acceptable variance: For the 4 selected species is to maintain carrying capacity within 10% of current status at key points in time (0, 10, 20, 50, 100, 200)</p>
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Status: Not scheduled reporting time

Repeat objective. Refer to objective (1b)1.1b.1 on page 7.

<p>Objective (2c) 1.1a.2: Maintain habitat conditions required by identified selected indicator species, using habitat constraint modeling</p>	<p>Acceptable variance: Woodland Caribou: no more than 25% of the area in pioneer or young seral condition and no less than 15% in old seral condition Bull Trout: within a defined watershed, total vegetated cover removal will not exceed 35% ECA above the H60. Trumpeter Swan: zero with respects to harvesting within “no-harvest” buffers</p>
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Status: Not scheduled reporting time

Repeat objective. Refer to objective (1b)1.1b.2 on page 8.

Indicator (2c) 1.1b: Number of ecosite phases distributed across the FMA

<p>Objective (2c) 1.1b.1: Identify ecosite phase distribution objectives for application in the next DFMP</p>	<p>Acceptable variance: Not applicable until the research program is completed</p>
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Status: In progress

Ecosite phases⁸ on the FMA area are defined in, “Refinement of Northern and West-Central Alberta Field Guides” (Canfor, 1999). All ecosite block level data for the previous field seasons is being entered into Canfor’s block tracking database (Genus). In the future, all data will be entered immediately following the field season.

Indicator (2c) 1.1c: Measurement of tree growth (site index) based on yield curves (moisture and nutrient regime)

⁸ An ecosite phase is an ecological unit, a subdivision of an ecosite that is based on the dominant canopy structure and composition. The level of resolution of the data is at the stand level.

Objective (2c) 1.1c.1:

Maintain growth and yield projections for tree species, as stated in the DFMP

Acceptable variance:

A decrease of no more than 5% from the growth and yield projections, as outlined in the DFMP. Measured growth or yield above the projected value is acceptable

Status: In progress

Canfor has established Permanent Sample Plots (PSP) to obtain data for monitoring growth and yield. The Company actively participates in growth and yield associations such as Foothills Growth and Yield Association (FGYA) and Western Boreal Growth and Yield Association (WESBOGY).

Canfor must develop a growth and yield monitoring program as part of a condition of approval for the Detailed Forest Management Plan (DFMP), and must receive SRD approval by April 30th, 2004.

4. Criterion 3: Conservation of Soil and Water Resources

Critical Element 3a: Physical Environments

Value (3a) 1.: Gross landbase

Goal (3a) 1.1: Minimize loss of landbase

Indicator (3a) 1.1a: The amount of productive area Canfor utilizes for future permanent roads (LOC)

Objective (3a) 1.1a.1: To have less than 2% of productive area in Canfor's future permanent roads (LOC)	Acceptable variance: Zero
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Status: Meets

A 2% withdrawal of productive forest landbase equals 12,983 ha or approximately 5,000 km of roads. Since 1999, Canfor has added approximately 78 ha (46 km) of LOC roads (Table 8).

Canfor limits the amount of permanent LOC road it constructs by actively working with the energy sector to promote shared access through road use agreements and joint development of new access.

Year	LOC #	Name	Length (km)	Area New (ha)
1999	-	-	0.00	0.00
2000	LOC 920512	W -road	12.00	24.00
2001	LOC 012326	4145 access to SML010050	1.84	2.76
2002	LOC 023022	Camp 1 W77	8.28	11.81
	LOC 020871	E8 S-road	9.94	14.98
	LOC 020870	E8 E road	4.86	8.11
2003	LOC 030770	E8 Ridge road	8.23	14.89
	LOC 031510	Camp 5 K-road	1.15	1.73
Total			46.30	78.28

Table 8. Canfor LOC Roads Constructed Within the FMA Area

Indicator (3a) 1.1b: The amount of area permanently lost to other industry activities

Objective (3a) 1.1b.1: To minimize loss of area by working with other parties	Acceptable variance: Canfor has no direct control over the amount of other industry activity that occurs in the FMA area; the Company can only monitor trends and communicate with other companies on an informal basis
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Status: Meets

Canfor actively works with the energy sector to share access through road use agreements and utilizing existing seismic lines as much as possible for new road construction. Examples are:

- CANFOR/CNRL - Canadian Natural Resources Ltd. used numerous Canfor in-block roads located in sections 18, 19, 30, 33 and 34 in TWP 61 RGE1 W6M for access to construct its pipeline (PLA 034260), some of which fell within the Caribou Area; and
- CANFOR/TALISMAN - Talisman Energy Ltd. will be using an in-block road that Canfor has constructed in Block E632752 in Section 27 TWP 59 RGE 5 W6M for access to its wellsite (MSL 035237).

In addition to sharing access, Canfor also reviews all applications for dispositions within the FMA area. During the review, Canfor ensures that existing roads, seismic lines and clearings are utilized whenever possible before a new one is constructed.

The area withdrawn as a result of the energy sector since 1994 is reflected in Table 9.

Period Ending Dec. 31	Wellsites, Pipelines, Powerlines and Roads	
	Number of Dispositions	Area Withdrawn (ha)
1994	176	545
1995	123	415
1996	154	392
1997	203	632
1998	168	648
1999	147	310
2000	194	780
2001	138	375
2002	111	305
2003	237	388
Total		4,790

Table 9. Area Loss From Energy Sector Withdrawals

Value (3a) 2.: Rare physical environments (presence of)

Goal (3a) 2.1: Protect the natural states and processes of the rare physical environments

Indicator (3a) 2.1a: The amount of area of lands excluded from harvest, in the DFMP

<p>Objective (3a) 2.1a.1: One hundred percent (100%) of identified and validated rare physical environments will not be harvested</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

Repeat objective. Refer to Objective (1a) 1.1a.1 on page 4.

<p>Objective (3a) 2.1a.2: No active reforestation of grasslands</p>	<p>Acceptable variance: Less than 0.5 ha of grassland adjacent to a harvested area being reforested (based on the database query) will be considered acceptable</p>
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Status: Meets

The information for this objective is reported by timber year not fiscal year.

A grassland is defined in the Alberta Vegetation Inventory (AVI) standards version 2.1 as areas that have less than 6% canopy cover and are non-forested vegetated land = "HG", and are greater than 4 ha in size.

The 2002/2003 harvest cuts were superimposed onto the AVI. Results indicated one area where the cutblock boundary overlapped into a grassland (Figure 8). The total area of the overlap was 0.004 ha of a total block area of 24.910 ha (Table 10).

Cut Block #	Area of Grassland (Ha)	Area of Cutblock (Ha)	Percent Overlap (%)
S270699	0.004	24.910	0.017
Total Harvest		2774.03	N/A

Table 10. Percentage of Grasslands Reforested in Harvested Blocks

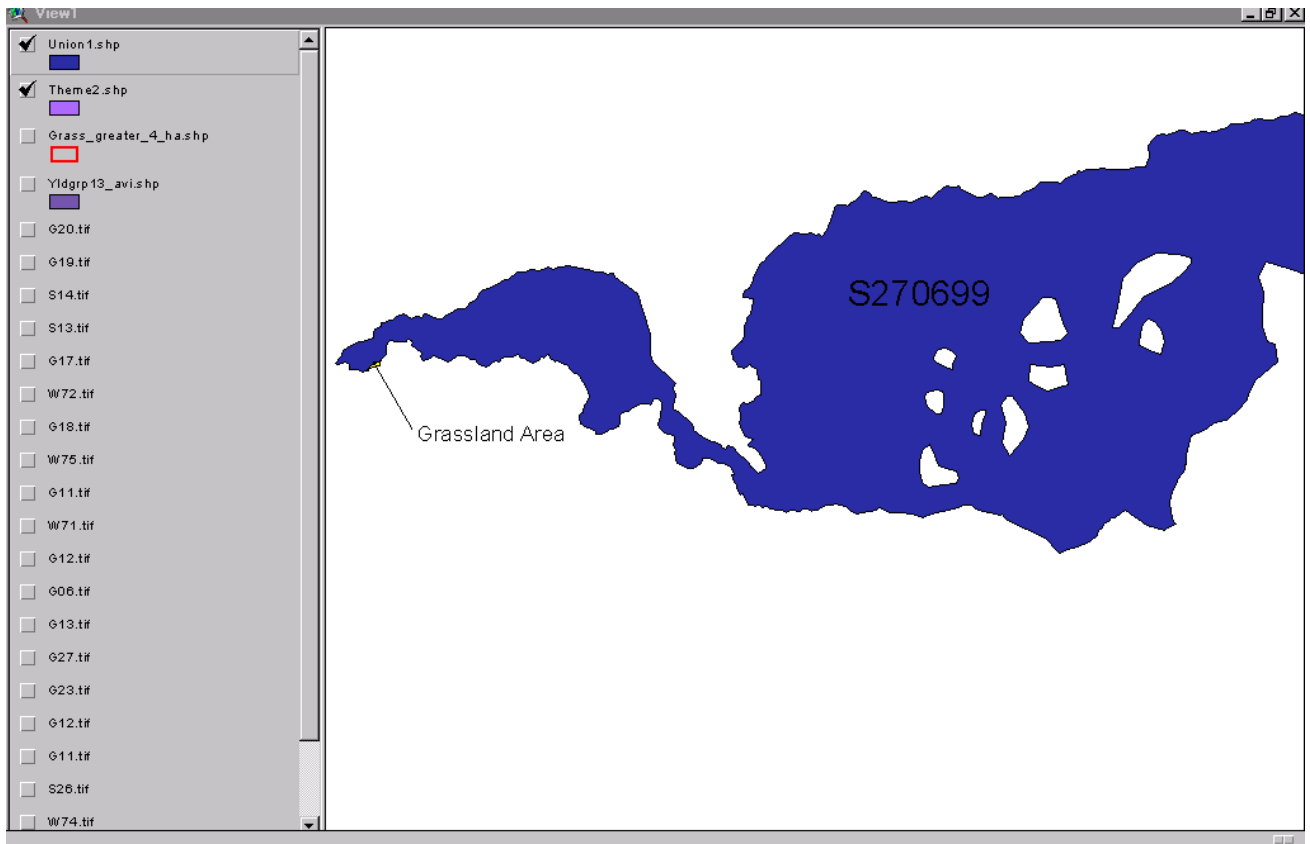


Figure 8. Overlapping Grassland and Harvested (and Reforested) Area

<p>Objective (3a) 2.1a.3: Protect 100% of identified significant wildlife Mineral licks</p>	<p>Acceptable variance: Zero</p>
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Status: Does not meet

Repeat objective. Refer to Objective (1b) 1.1c.1 on page 9.

Goal (3a) 2.2: Provide support to areas of rare physical environments

Indicator (3a) 2.2a: The amount of area of lands excluded from harvest in the DFMP

<p>Objective (3a) 2.2a.1: Nominate Cactus Hills and Peace Parkland areas as candidate sites for Alberta Special Places Program</p>	<p>Acceptable variance: These have already been nominated</p>
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Status: Complete.

Repeat objective. Refer to Objective (1a) 1.1b.1 on page 4.

Goal (3a) 2.3: Maintain a combination of managed and rare physical environments on the forest landbase

Indicator (3a) 2.1a: The amount of area in managed forests and rare physical environments

<p>Objective (3a) 2.1a.1: A combination of managed and rare physical environments will always be managed on the landbase</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

This objective is very similar to objective (1a) 1.1a.1 on page 4. No harvesting occurred in any of the rare physical environments listed in Table 1.

Critical Element 3b: Soil Resources

Value (3b) 1.: Soil Productivity

Goal (3b) 1.1: Minimize impacts on soil productivity

Indicator (3b) 1.1a: Measurement of site quality (site index) based on ecological type (moisture and nutrient regime)

<p>Objective (3b) 1.1a.1: To develop a predictive model of site quality (includes soil productivity) to aid in the formulation of site specific forest management</p>	<p>Acceptable variance: As in the Forest Productivity Evaluation report by GDC (Canfor 2001)</p>
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Status: In Progress

Canfor is in the process of evaluating, testing and verifying its site quality model to determine its use in strategic and operational planning. Additional evaluation is required to determine its usefulness in future plan development. This is scheduled to be completed in 2005.

Indicator (3b) 1.1b: The amount of coarse and fine woody debris on site, post harvesting

<p>Objective (3b) 1.1b.1: To develop a methodology to measure coarse and fine woody debris on site, post harvesting</p>	<p>Acceptable variance: On average, no less than 90% of the pre-harvest CWD (coarse woody debris) left on site</p>
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Status: In Progress

A method to measure coarse woody debris (CWD) was first implemented in the summer of 2001 (for the 2000/2001 timber year). The data was collected during the merchantable waste survey. It was later determined that surveyors incorrectly used CWD classes that did not correlate with the pre-harvest data collected. The CWD survey was conducted again in the summer of 2002 for the 2001/2002 timber year, using the correct protocols. Because this survey occurs in conjunction with the merchantable waste survey, data collection will now occur every second year commencing in 2002. The next data collection is therefore, scheduled for the summer of 2004 (for the 2003/2004 timber year). Once the 2004 data is collected there will be sufficient data to conduct the first analysis. Results will be reported in the 2004 Annual Performance Monitoring Report.

Fine Woody Debris (FWD) includes such things as needles and twigs etc. No pre-harvest FWD targets have been developed. Monitoring post harvest levels is problematic as FWD remains on the site for a short period of time after harvest. As a result, Canfor and FMAC will redefine the current objective during development of the indicators and objectives for the new CSA standard (CSA Z809-02) that is currently is underway.

Indicator (3b) 1.1c: Measure of site disturbance (i.e. ruts and roads)

<p>Objective (3b) 1.1c.1: To meet the Forest Soil Conservation Report Guidelines</p>	<p>Acceptable variance: Temporary roads, bared landing areas and displaced soil: if justified in the AOP process (eg. small block size, topography or in-block chipping operations) Rutting: Zero</p>
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Status: Meets

The target for temporary roads, bared landing areas and displaced soil is to not exceed 5% of the total cutblock area, and the target for rutting is less than 2% of the cutblock area. According to the guidelines, 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.

The information for this objective is reported by timber year not fiscal year.

Rutting is assessed occularly during harvest and silviculture inspections. Results for the 2002/2003 timber year show there was no rutting greater than 2%.

Of the 135 blocks harvested in 2002/2003, no blocks exceeded 5% with the exception of 10 blocks <10 ha which were removed from the calculations in accordance with the guidelines.

Value (3b) 2.: Soil Quality

Goal (3b) 2.1: Minimize soil erosion

Indicator (3b) 2.1a: Occurrence of slumping caused by road construction

<p>Objective (3b) 2.1a.1: To have zero slumping events from road construction activities in a given operating season</p>	<p>Acceptable variance: 2 slumps in an operating season</p>
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Status: Meets

The information for this objective is reported by timber year not fiscal year.

Mass wasting within the FMA area is classified into 3 categories; road grade cut failures, minor slumps and major slumps. The following classification applies for the purposes of measuring and recording the areas affected by mass wasting:

- Road grade cut failures <= 100 m²;
- Minor slumps affect <= 2500 m²; and
- Major slumps affect >2500 m².

Annual road inspections were conducted in the summer of 2003 for the 2002/2003 harvest season. The results indicate there were no minor or major slumps caused by road construction. The road grade cut failures that were noted (Table 11) are tracked in Canfor's Forest Roads Management System (FRMS-in Genus).

Road ID	Approximate Station	Area (m ²)
2000 Rd	83+373	80 m ²
2000 Rd	43+150	70 m ²
Lower Smoky Rd	3+251	25 m ²
Lower Smoky Rd	8+152	30 m ²
Lower Smoky Rd	12+354	35 m ²
Lower Smoky Rd	32+755	80 m ²
Lower Smoky Rd	36+516	90 m ²
7000 Rd	0+452	20 m ²
7000 Rd	0+907	25 m ²
7000 Rd	5+044	50 m ²
7000 Rd	5+270	50 m ²
Norris Rd	6+403	10 m ²
Norris Rd	15+500	90 m ²
Bolton Mainline	3+815	20 m ²

Table 11. Annual Road Inspection 2002/2003 Harvest Season Results of Road Cut Failures

In addition, two minor slumps were previously reported in the May 1st, 2001 to April 30th, 2002 Annual Performance Monitoring Report:

- On the Wapiti Haul road (5 or 6 years old) on the south bank of the Wapiti River in TWP 70 RGE 5 W6M is presently stable and being monitored; and
- Adjacent to a class 2 road in TWP 59 RGE 5 W6M (4 years old) is being monitored. A qualified professional visited the site in September 2001 and provided advice on how to mitigate the effects of the slump. An action plan has been developed and is being followed.
 - March 2002: the site was visited to ensure that the culvert was thawing properly. It was thawing properly;
 - Fall 2002: No problems noted; and
 - June 2003: Situation stable, no new slumping. Site to be re-inspected in 2004.

Indicator (3b) 2.1b: Number of locations that have slumped on sensitive or steep slopes due to harvesting

Objective (3b) 2.1b.1: To have zero (major) slumping events due to harvesting activities on steep or sensitive slopes	Acceptable variance: 1 slump in an operating season
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Status: Meets

The information for this objective is reported by timber year not fiscal year.

Aerial and ground surveys conducted in the 2002/2003 harvest season, indicate there are zero reported slumps caused by harvesting on steep or sensitive sites.

Currently there is one minor slump in block W73067 (TWP 62 RGE 27 W5M) that was previously reported in the May 1st, 2001 to April 30th, 2002 Annual Performance Monitoring Report (Figure 9).

- A qualified professional evaluated the site (Sept 2001). Mitigative plans were recommended including grass seeding and monitoring.
 - Spring 2002: area had grassed in naturally, but additional grass seed was added to help stabilize the area.
 - Aug 21st 2003: the grass seeding was doing very well, and the site was stable. No additional grass seeding was necessary. Site will be re-inspected in 2004.



Figure 9. Minor Slump in Block W73067

Critical Element 3c: Water Resources

Value (3c) 1.: Water quality and quantity

Goal (3c) 1.1: Conserve water quality and quantity

Indicator (3c) 1.1a: The amount of siltation caused by road construction in forestry operations

<p>Objective (3c) 1.1a.1: To assess current methodologies and practices to measure siltation caused by forest road construction</p>	<p>Acceptable variance: Zero in assessment of methodologies. The amount of acceptable variance will be determined once baseline data is collected and analyzed</p>
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Status: Meets

A Stream Crossing Quality Index (SCQI) Pilot Project was implemented in the FMA area in the summer of 2003 to measure, evaluate and monitor stream sedimentation caused by forest road construction. The following are findings of the pilot project:

The SCQI method is based on the concept that the potential impact that stream crossings may have on water quality can be reduced through effective erosion and sediment control practices, and that these practices can be evaluated and scored. As with other indicators of surface erosion caused by forest road construction, each crossing within a watershed is, at priori, assumed to be having a negative impact on water quality. However, the theoretical negative impact of this stream crossing can be reduced if the crossing is evaluated in the field and does not show any signs of erosion and sediment transport to the stream. Using this method of

evaluation, a crossing that shows substantial problems receives an individual crossing score of one (1) or larger. Scores greater than one (>1) indicate the size of a problem and are useful operationally, but for calculation purposes, they retain their value of one (1). As the quality of a crossing improves, the score is reduced, eventually reaching zero (0). A score of zero can effectively eliminate the crossing from the “erosion and sediment producing” inventory. As the scores for the individual crossings are reduced, so is the SCQI for that watershed. The ability to improve scores provides an incentive to implement good erosion and sediment control measures and fits well within the Sustainable Forest Management (SFM) framework.

Individual crossing scores created by the SCQI survey are used to identify site specific problems. Each crossing score relates to a Water Quality Concern Rating (WQCR) of none, low, medium or high (Table 12). The crossings are then placed on a map with their associated hazard rating, individual crossing score and the stream width class the crossing occurs on. This enables forest managers to identify sites of specific concern and prioritize management and potential remedial actions that may be necessary. The percentage of crossings receiving each class of WQCR can also be calculated to provide a set of baseline data that can be used to monitor forest practices.

Score	Water Quality Concern Rating
0	No Hazard
0 - 0.4	Low
0.4 - 0.8	Medium
0.8 - 1.0+	High

Table 12. Individual Crossing Scores and Corresponding Water Quality Concern Ratings

Three general landscape areas identified as priority area 1, 2 & 3 were identified by Canfor as the study area for the 2003 Pilot Project. One hundred percent of the crossings in the priority areas 1 and 2 and nearly 25% of the crossings in the Priority 3 area with roads that were passable by ATV were surveyed in the Summer/Fall of 2003. A portion of the roads in priority areas 1 and 2 that were not navigable by ATV were walked to gain a representative sample of the crossings that exist on re-habilitated and deactivated roads. The findings of the 2003 SCQI surveys are summarized in Table 13.

Area	# of crossings Surveyed	Water Quality Concern Ratings			
		% None	% Low	% Medium	% High
Priority 1	92	21.7	38.1	10.9	29.3
Priority 2	179	25.1	55.3	9.0	10.6
Priority 3	35	28.6	48.6	14.3	8.6

Table 13. Summary of 2003 SCQI Survey results in FMA 9900037

The results of the pilot project will be integrated with the 2004 Annual Road Maintenance Plan.

Indicator (3c) 1.1b: The level of response to identified problems regarding siltation

<p>Objective (3c) 1.1b.1: To track mitigative efforts made in response to siltation events found during annual road maintenance inspections</p>	<p>Acceptable variance: Zero</p>
--	---

Status: Meets

Prior to the SCQI method of rating sedimentation, siltation events were noted during the annual road maintenance inspection and mitigative efforts were scheduled in the Annual Road Maintenance Plan. Examples include:

- On LOC 3735 (TWP 62 RGE 6 W6M) geotextile matting, silt fence and grass seed were used for bank stabilization during bridge installation.
- At Km 3126 (TWP 62 RGE 1 W6M) a cattle guard was used to divert water off of the running surface into the ditch where settling ponds were located to catch sediment.



Figure 10. LOC 3735 e.g. of Geotextile



Figure 11. LOC 3735 e.g. of Geotextile

Future siltation events observed during either the SCQI inspection or any other inspections that result in mitigative action, will be tracked in Canfor's Forestry Road Maintenance System (FRMS-in Genus), as well as entered into the Annual Road Maintenance Plan.

Indicator (3c) 1.1c: Amount of forest cover (i.e. buffer zones) along watercourses (in the watershed)

<p>Objective (3c) 1.1c.1: To manage forest cover along watercourses to meet objectives defined in DFMP</p>	<p>Acceptable variance: Zero within regards to harvesting within buffered watercourses, as identified within approved operational plans</p>
---	--

Status: Meets

There were no non-compliances of harvesting within approved buffer zones. Any deviations to the ground rules were noted in the Annual Operating Plan and approved by SRD.

Indicator (3c) 1.1d: Number of incidents of excursions of herbicide

<p>Objective (3c) 1.1d.1: To have zero excursions of herbicide in water</p>	<p>Acceptable variance: Zero</p>
--	---

Status: Meets

There were no excursions of herbicide in water.

In 2003, a review of 25% of the cutblocks treated in the 2002 herbicide program revealed 8 herbicide excursions in 5 cutblocks. None of the excursions were in water or riparian areas. All excursions were recorded as a non-compliance in Canfor's Incident Tracking System (ITS) and reported to SRD. The total area affected was less than 1.25 ha.

The following actions were completed to improve the 2003 herbicide program (that will be reviewed in 2004):

- Since late boom off was the single greatest cause of excursions, the company that applies the herbicide has modified the boom valve on its spray systems to provide sharper on/off's. The boom modification should help reduce lag in boom off;
- Canfor held a monitor refresher course prior to the 2003 spray season, where Canfor emphasized working with the pilot to jointly assess and manage risk; and
- Canfor requests the attendance of a representative of the helicopter company on future annual aerial reviews, to provide the feedback necessary to constantly improve their level of performance.

Value (3c) 2.: Water cycle

Goal (3c) 2.1: Minimize the effect of the removal of forest cover on the water cycle

Indicator (3c).1a: Amount of forest cover removed and its spatial distribution within the watershed

Objective (3c) 2.1a.1:	Acceptable variance:
To not exceed a range of 20-40% of forest cover removal, above the "H60" line, in relationship to the total vegetated area within a defined watershed as per the DFMP	Not to exceed 35% Equivalent Clearcut Area (ECA) in the Bull Trout area, and 40% in the remaining area

Status: In Progress

Canfor is currently in the process of developing a DFMP/AOP Validation Process with Timberline Forest Inventory Consultants, which will enable Canfor to track and report the amount of forest cover removed above the H60 line. The validation process is expected to be implemented for the 2004 Annual Operating Plan (AOP) submission. Results will be reported in the 2004 Annual Performance Monitoring Report.

5. Criterion 4: Forest Ecosystem Contributions to Global Ecological Cycles

Critical Element 4a: Global Ecological Cycles

Value (4a) 1.: Local contribution to global ecological cycles

Goal (4a) 1.1: Minimize disturbances that negatively impact carbon cycles

Indicator (4a) 1.1a: Amount of area under forest cover

Objective (4a) 1.1a.1:

All harvested sites are treated within 18 months after the end of the timber year

Acceptable variance:

A variance of +3 months is acceptable in order to accommodate the occurrence of fire and periods of extreme weather conditions including floods and drought

Status: Meets

Repeat objective. Refer to Objective (2b) 1.1c.1 on page 18.

Indicator (4a) 1.1b: Number of occurrences and amount of area impacted by fire and catastrophic events of insects, disease, windfall, etc.

Objective (4a) 1.1a.1:

Limit the number of occurrences and amount of area impacted by fire and catastrophic events of insects, disease, windfall, etc.

Acceptable variance:

For Company caused fires: zero
For catastrophic events of insects, disease, windfall within the FMA area: zero

Status: Meets

Repeat objective. Refer to Objective (2a) 1.1a.1 on page 15.

Indicator (4a) 1.1c: The numbers of equipment in use and amount of technology with low carbon dioxide (CO₂) and nitrogen oxides (NO_x) emissions

Objective (4a) 1.1c.1:

To promote use of equipment and technology that minimizes CO₂ and NO_x emissions

Acceptable variance:

Not know to date

Status: Meets

Canfor commissioned a report “Investigative Report Addressing Carbon Dioxide (CO₂) and Nitrogen Oxides (NO_x) Emissions” that addresses alternate equipment and technology to help reduce carbon emissions in the last reporting period. This information was shared with all of Canfor’s contractors to encourage them to utilize low CO₂ emission technology.

During the process to select a contractor for Camp 4 (south near Grande Cache), Canfor selected the contractor that used equipment with lower emissions.

Goal (4a) 1.2: Minimize disturbances that negatively impact water cycles

Indicator (4a) 1.2a: Amount of forest cover removed and it's spatial distribution within a defined watershed

<p>Objective (4a) 1.2a.1: To not exceed a range of 20-40% of forest cover removal, above the "H60" line, in relationship to the total vegetated area within a defined watershed as per the DFMP</p>	<p>Acceptable variance: Not to exceed 35% Equivalent Clearcut Area (ECA) in the Bull Trout area, and 40% in the remaining area</p>
--	---

Status: In Progress

Repeat objective. Refer to objective (3c) 2.1a.1 on page 31.

Goal (4a) 1.3: Minimize disturbances that negatively impact nitrogen cycles

Indicator (4a) 1.3a: Amount of forest coarse and fine woody debris on site, post harvesting

<p>Objective (4a) 1.3a.1: To develop a methodology to measure coarse and fine woody debris on site, post harvesting</p>	<p>Acceptable variance: On average, no less than 90% of the pre-harvest CWD (coarse woody debris) left on site</p>
--	---

Status: In Progress

Repeat objective. Refer to objective (3b) 1.1b.1 on page 25.

Indicator (4a) 1.3b: Presence of vascular plant species that can be used to indicate potential nitrogen levels

<p>Objective (4a) 1.3b.1: To understand, through modeling, the role of vascular plants as indicators of potential nitrogen levels</p>	<p>Acceptable variance: Not applicable</p>
--	---

Status: Complete

A report, "Role of Vascular Plants as Indicators of Potential Nitrogen Levels in Canfor Grande Prairie's FMA Area", was prepared by Geographic Dynamics Corp in 2001 and noted in the May 1st, 2001-April 30th, 2002 report. In that reporting period it was stated that a further literature review was required.

Canfor retained Incremental Forest Technologies Ltd. to evaluate the need for an additional nutrient monitoring project. After meetings at the U of A with Dr. Pluth and Dr. Takyi, it was decided that further research was impractical. A literature search was also conducted by Incremental Forest Technologies Ltd. that concluded there are sufficient manuscripts regarding this topic and no additional nutrient monitoring is necessary. Therefore, this objective is complete.

Critical Element 4b: Utilization and rejuvenation are balanced and sustained

Value (4b) 1.: Sustained yield of timber

Goal (4b) 1.1: Maintain harvest level related to AAC as defined in the DFMP

Indicator (4b) 1.1a: The amount harvested versus the approved AAC

<p>Objective (4b) 1.1a.1: Operational practices meet the DFMP management strategies that make up the AAC</p>	<p>Acceptable variance: Any variances identified operationally will be evaluated to ensure that the management strategies are still being met.</p>
---	---

Status: Meets

The DFMP was approved November 3rd, 2003 and it indicates all operational practices will follow the DFMP management strategies that make up the Annual Allowable Cut (AAC).

Prior to the approval, the 2003/2004 AOP followed the spirit and intent of the DFMP. An example of this is the preliminary AOP validation that compares the original DFMP harvest sequence to the preliminary plan. This comparison and the preliminary plan are submitted concurrently for SRD approval. Preliminary plans submitted during the reporting period for Canfor areas⁹ were approved by SRD based on the harvest sequence.

Goal (4b) 1.2: To reforest every hectare harvested

Indicator (4b) 1.2a: The amount of harvested area in the regenerated yield group

<p>Objective (4b) 1.2a.1: To regenerate 100% of the harvested area as per the regenerated yield group as defined in the DFMP</p>	<p>Acceptable variance: +/-10% of the area of regenerated yield groups and +/-5%of the AAC for C, CD, DC & D provided that the overall AAC for both coniferous and deciduous are sustained (within -5%)</p>
---	--

Status: Meets

Repeat objective. Refer to objective (2b) 1.1a.1 on page 17.

⁹ Canfor areas: Camp 2, Camp 4, Camp 5, Camp 9 and Camp 11

Indicator (4b) 1.2b: Total area harvested annually compared to total area reforested (planting or seeding)

<p>Objective (4b) 1.2b.1: All harvested sites are treated within 18 months after the end of the timber year</p>	<p>Acceptable variance: A variance of +3 months is acceptable in order to accommodate the occurrence of fire and periods of extreme weather conditions including floods and drought</p>
--	--

Status: Meets

Repeat objective. Refer to objective (2b) 1.1c.1 on page 18.

Goal (4b) 1.2: Maximize utilization of merchantable wood

Indicator (4b) 1.3a: Amount of merchantable wood (m³) left on site

<p>Objective (4b) 1.3a.1: To leave less than 1% of merchantable wood on site</p>	<p>Acceptable variance: Will not exceed 1%</p>
---	---

Status: Meets

As reported in the May 1st, 2001 – April 30th, 2002 Annual Performance Monitoring Report, Canfor did not meet the merchantable waste target (1%). Normally, waste surveys are conducted every second year, but since the target was not achieved, Canfor conducted an additional waste survey in 2002. The results indicated the merchantable waste was 0.68%. Figure 12 displays the trends since 1994. The next waste survey is scheduled for 2004.

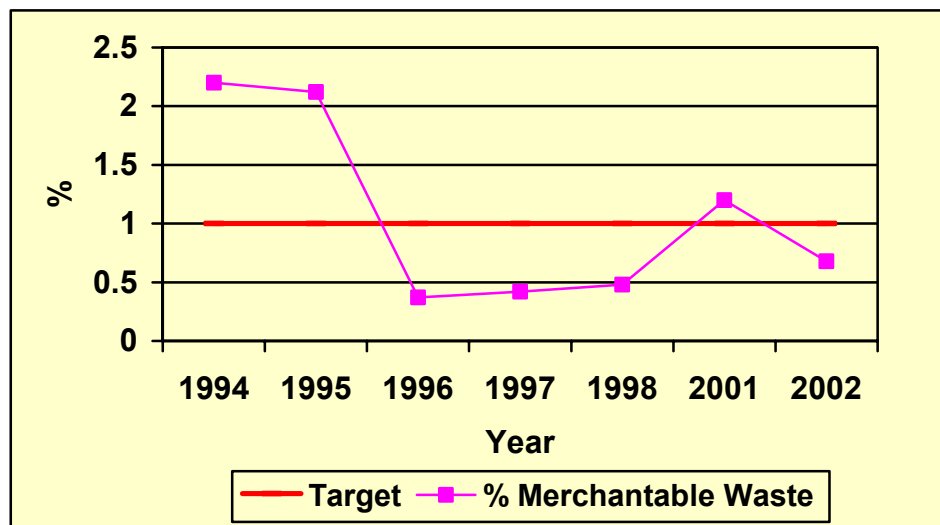


Figure 12. Merchantable Waste Survey Results (1994 to Present)

Indicator (4b) 1.3b: Amount of accessible merchantable industrial salvaged wood brought in on an annual basis

<p>Objective (4b) 1.3b.1: To utilize 100% of accessible merchantable industrial salvaged wood from permanent land withdrawals</p>	<p>Acceptable variance: Inherent level of variability</p>
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Status: Meets

The information for this objective is reported by timber year not fiscal year.

Each request for withdrawal received by Canfor is reviewed and if approved, a coniferous salvage commitment form is signed. As per the form, notification must be provided to Canfor as soon as the salvage 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.

100% of the merchantable coniferous industrial salvage reported to Canfor, has been tracked and hauled into the mill site for the reporting period (Table 14).

Timber Year (May 1 – April 30)	2002/ 2003	2001/ 2002	2000/ 2001	1999/ 2000	1998/ 1999	1997/ 1998	1996/ 1997
Volume of Salvage Wood (m ³)	4,418	8,440	14,480	25,166*	10,277	11,494	8,044
* Volume indicated is higher than average due to the removal of forest cover for the Alliance Pipeline project in the FMA area							

Table 14. Coniferous Salvage Wood Volume

Critical Element 4c: Protection of Forest Lands

Value (4c) 1.: Forests on the landbase

Goal (4c) 1.1: Maintain forests on the landbase

Indicator (4c) 1.1a: The amount of productive area Canfor utilizes for future permanent roads (LOC)

<p>Objective (4c) 1.1a.1: To have less than 2% of productive area in Canfor's future permanent roads (LOC)</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

Repeat objective. Refer to objective (3a) 1.1a.1 on page 21.

Indicator (4c) 1.1b: The amount in each seral stage at present and key points in time

<p>Objective (4c) 1.1b.1: Maintain seral stages within the natural disturbance regimes at present and key points in time</p>	<p>Acceptable variance: To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs</p>
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Status: Not scheduled reporting time.

Repeat objective. Refer to objective (1a) 1.2b.1 on page 5.

Indicator (4c) 1.1c: The amount of area identified as low productive sites

<p>Objective (4c) 1.1c.1: Designate all low productive yield groups as no harvest zones, subject to operational verification</p>	<p>Acceptable variance: No low productive sites (yield group 13) will be scheduled for harvesting after operational verification</p>
---	---

Status: Meets

The information for this objective is reported by timber year not fiscal year.

All harvested cutblocks for the 2002/2003 timber year were superimposed onto the Alberta Vegetation Inventory (AVI). As a result, the boundaries of 22 of the 130 blocks harvested showed overlap with yield group 13 (Table 15). All of these areas were polygon slivers or forest cover types misclassified as yield group 13.

CUTBLOCK #	Original AVI Forest Cover Yield Group 13 (ha)
G231047	0.003
G150519	0.005
P33076	0.008
G233287	0.016
G150441	0.018
S261184	0.018
S270699	0.029
S261281	0.033
P332543	0.041
G231561	0.064
S130555	0.070
G231118	0.081
G233084	0.099
S261239	0.110
P33090	0.126
S261166	0.149
S131067	0.199
W752931	0.389
S260158	0.528
S260142	0.528
G141292	0.532
W772118	4.461
Total	7.508

Table 15. Cutblocks Overlapping Yield Group 13

W772118 was the only block having an appreciable amount of the original yield group 13 and after field verification, was reclassified as yield group 12.

<p>Objective (4c) 1.1c.2: Delineate all low productive sites (>1 ha) within harvest areas as “no harvest zones”</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

The information for this objective is reported by timber year not fiscal year.

Canfor delineates all low productive sites (yield group 13) >1 ha from the cutblocks as “no harvest zones”.

Of the 135 cutblocks harvested in the 2002/2003 timber year, 13 contained low productive areas ranging from 0.12 to 3.62 ha in size. Of the 13 cutblocks, only 2 contained sites >1 ha (S130555 and S260142) and both had the appropriate “no harvest zone” applied.

Goal (4c) 1.2: Productive lands are restored to productive status

Indicator (4c) 1.2a: The amount of productive area regenerated (excluding cut units)

<p>Objective (4c) 1.2a.1: Track amount of previously withdrawn areas brought back into productive status</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

In 2002, Canfor replanted 121 ha of wellsites, roads and seismic lines (Table 16). Of this, 47 ha was replanted in the Caribou Area and 74 ha was planted throughout the balance of the FMA area. In 2003 there were no extra seedlings available to plant wellsites, roads and seismic lines.

Year	Hectares of Wellsites/Roads/Seismic Lines Planted (ha)
1999	13
2000	0
2001	22
2002	121
2003	0

Table 16. Previously Withdrawn Areas Reforested

<p>Objective (4c) 1.2a.1: Track burned areas to ensure that they have been regenerated (with preference to natural regeneration)</p>	<p>Acceptable variance: To track regeneration success on fires >4 ha</p>
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Status: Meets

Since 2002, burned areas greater than >4 ha have been tracked in Canfor’s block tracking database (Genus) along with the associated regeneration information.

- In 2002, 61.9 ha was burned in the FMA area of which 19.9 ha was planted in 2002 and 36.2 ha planted in 2003. Approximately 10 ha remain to be planted in 2004; and
- In 2003 a total of 6.31 ha were burned (Table 5), of this, 4 ha is scheduled for planting in 2004 and the remainder will be left for natural regeneration.

Regeneration success will be reported as the surveys are completed over the next few years.

Goal (4c) 1.3: Minimize the loss of forest on the landbase due to access

Indicator (4c) 1.3a: Degree of access integration

<p>Objective (4c) 1.3a.1: To maximize and promote shared access by all resource users</p>	<p>Acceptable variance: Not applicable</p>
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Status: Meets

Canfor actively works with the energy sector to share access through road agreements and utilizing existing seismic lines as much as possible for new road construction. Examples are:

- CANFOR/CNRL - Canadian Natural Resources Ltd. used numerous Canfor in-block roads located in sections 18, 19, 30, 33 and 34 in TWP 61 RGE1 W6M for access to construct its pipeline (PLA 034260), some of which fell within the Caribou Area; and
- CANFOR/TALISMAN - Talisman Energy Ltd. will be using an in-block road that Canfor has constructed in Block E632752 in Section 27 TWP 59 RGE 5 W6M for access to its wellsite (MSL 035237).

The West Central Oil & Gas Committee, comprised of representatives from Canfor, Weyerhaeuser, ANC and oil and gas industry companies has been developed. This Committee met in 2002 to discuss shared access and road use.

Canfor has also been working with Tolko to integrate operational planning. In the 2002\2003 operating season Canfor and Tolko operated simultaneously in P33 (TWP 73 RGE 24 W5) and P34 (TWP 73 RGE 23 W5) sharing access to, and within, these areas.

6. Criterion 5: Multiple Benefits to Society

Critical Element 5a: Extraction rates are within the long-term productive capacity of the resource base

Value (5a) 1.: Sustainable yield of timber

Goal (5a) 1.1: Maintain sustainable harvest levels on the FMA

Indicator (5a) 1.1a: Long-term harvest levels vs actual extraction rates as per the DFMP

<p>Objective (5a) 1.1a.1: To harvest at levels less than or equal to the long-term level</p>	<p>Acceptable variance: In any year, the harvest level can vary as long as the total amount harvested in established 5-year periods (cut control) does not exceed 5% of the total approved AAC</p>
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Status: Meets

Currently, Canfor is in the final year of the 5 year cut control quadrant, and is in a undercut situation (Table 17).

Quadrant by Timber Year	Harvested (m ³)	AAC (m ³)	Variance (m ³)	Variance (%)
1999/2000	524,553	630,400	-105,847	-16.8%
2000/2001	627,692	630,400	-108,555	-8.6%
2001/2002	542,827	630,400	-196,128	-10.4%
2002/2003	589,788	630,400	-236,740	-9.4%
2003/2004 (projected)	679,640	630,400	-187,500	-5.9%
Total	2,964,500	3,152,000	-187,500	-5.9%

Table 17. Actual Harvest Volume per Harvest Year versus AAC

Critical Element 5b: Resource businesses exist within a fair and competitive investment and operating climate

Value (5b) 1.: Economic benefit to local communities

Goal (5b) 1.1: Local communities and contractors have the opportunity to share in benefits such as jobs, contracts and services

Indicator (5b) 1.1a: The economic contribution that Canfor Grande Prairie Operations makes to local communities and contractors

<p>Objective (5b) 1.1a.1: To maintain Canfor's contribution to local communities and contractors</p>	<p>Acceptable variance: To maintain Canfor's contribution to local communities in relation to the prevailing economic climate</p>
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Status: Meets

Canfor contributes to the local economy in the form of wages and benefits, property taxes, purchases of goods and services and community donations (Table 17). In 2003, Canfor’s total contribution increased over 2002 by approximately 10 million dollars.

Contribution	Amount (\$Millions)					
	2003	2002	2001	2000	1999	1998
Property Tax	0.8	0.8	0.8	0.7	0.6	0.6
Salary Wages	14.6	13.5	12.0	11.6	11.6	10.6
Contract services Local ¹	34.6	29.0	25.3	24.8	26.8	32.3 (combined ²)
Contract services Non-Local ¹	8.6	7.2	7.0	6.9	2.3	
Supplies	5.5	4.4	5.6	5.0	4.6	4.6
Energy	4.0	4.2	6.8	2.3	2.2	1.9
Stumpage	2.9	3.0	4.6	2.3	10.9	6.8
Community Donations	0.1	0.1	0.1	0.1	0.1	0.1
TOTAL	71.2	62.3	62.1	53.8	59.1	56.9

Notes:
1. Canfor’s accounting ledger currently does not distinguish between local and non-local contractors. However, an estimate of the local versus the non-local has been determined, based on preliminary data stratification.
2. Local plus non-local contract services

Table 18. Key Contributions to the Local Community

Indicator (5b) 1.1b: The financial commitments as stated in Section 33, facility operation and FMA renewal commitments, of the Forest Management Agreement 9900037 are met

<p>Objective (5b) 1.1b.1: Within 60 months of the signed Forest Management Agreement 9900037, the Company shall upgrade its sawmill and fingerjoint as per Section 33 of the Forest Management Agreement 9900037</p>	<p>Acceptable variance: Zero, unless mutually agreed to by both Canfor and Alberta Sustainable Resource Development</p>
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Status: In Progress

The Forest Management Agreement 9900037 was signed in May 1999. Upgrades to the mill were completed in 1998, which included a \$3.2 million investment for a high speed edger. In 2000, \$22 million was spent on mill modernization and in 2003 \$2.5 million was spent on planer improvements.

Canfor has also established a partnership with Canadian Gas and Electric to construct a co-generation energy plant on Canfor’s mill site to utilize wood residue that is currently burned in its incinerator. Construction is well underway and the plant is expected to become operational in September 2004.

The sawmill projects have been submitted to the Minister as fulfillment of Section 33 of the Agreement. Once the Co-Generation project is complete, the Minister will determine if the commitment under Section 33(1) has been fulfilled.

<p>Objective (5b) 1.1b.2: To submit to the Minister for approval, a forestry project, in accordance with Section 33 subparagraph 4 of the Forest Management Agreement 9900037</p>	<p>Acceptable variance: Zero</p>
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Status: In Progress

“(4) No later than the tenth anniversary of the commencement date of this Agreement, the Company shall submit to the Minister a proposal for a forest industry project (the “forest project”), including an implementation timetable, that is acceptable to the Minister”

Canfor believes that the co-generation plant described in the previous objective meets the requirement of a forestry project under Section 33(4) as well. In a letter dated May 14th, 2001, the Minister advised *“A further assessment of this project (Co-Generation plant) will be done at the completion to determine if it might also meet your obligation under Section 33(4).”*

Critical Element 5c: Forest provide a mix of market and non-market goods and services

Value (5c) 1.: Multiple benefits from forests

Goal (5c) 1.1: Maintain the opportunity for others to use the forest for market and non-market goods and services

Indicator (5c) 1.1a: Amount of coniferous timber available to locals

<p>Objective (5c) 1.1a.1: 0.5% of the conifer AAC is made available for local use</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

The information for this objective is reported by timber year not fiscal year.

In accordance with the Forest Management Agreement (FMA), paragraph 8(d), 0.5% of the AAC (3,152 m³) 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 Sustainable Resource Development (SRD) and are subject to government regulations.

Canfor and Sustainable Resource Development worked cooperatively to identify areas for this program. There have been a total of 10 permits issued since 1999 (Table 19).

Timber Year Issued	# of Permits Issued
1999/2000	6
2000/2001	2
2001/2002	2
2002/2003	0
2003/2004 forecasted	4

Table 19. Number of Permits Issued within FMA Area

Objective (5c) 1.1a.2:

Up to a set volume of 10,000 m³ of conifer is available in the FMA area for the Community

Acceptable variance:

Zero

Status: Meets

In accordance with the Forest Management Agreement (FMA), paragraph 8(d), Canfor must also make up to 10,000 m³ available for a Community Timber Use (CTU) Program.

Canfor and SRD are cooperating to make this volume available for a CTU program in the 2004/2005 season.

Indicator (5c) 1.1b: Recreational opportunities**Objective (5c) 1.1b.1:**

Complete a recreational assessment within 5 years after the DFMP is approved

Acceptable variance:

Zero

Status: In Progress

The DFMP was approved on November 3rd, 2003. Canfor is reviewing the options for completing a recreation assessment and is awaiting recommendations from Canfor Chetwynd. These recommendations will be reviewed in 2004.

Objective (5c) 1.2b.1:

Ensure 100% of Canfor campgrounds are maintained on the FMA area for use by the public

Acceptable variance:

No campgrounds will be removed

Status: Meets

Canfor maintains and promotes 5 recreational areas near Grande Prairie (MacLeod Flats, Economy Lake, Frying Pan Creek, Westview and Swan Lake) and Hines Creek (Stoney Lake). Contractors are retained to perform maintenance duties which include: maintenance and repair of the campsites, buildings and chattels, repair of vandalism, painting, garbage collection and removal, sanitary facilities cleaning and stocking, road maintenance, sanitation pump out, firewood and delivery, snag removal and access barrier installation.

In 2003, a survey was conducted on weekends and weekdays to gather data regarding usage, satisfaction, comments, etc. Data was collected during 71 surveys, and preliminary statistics are provided in Tables 20 to 23.

Town/City	Percentage						Total
	Macleod Flats	Economy Lake	Frying Pan Creek	Westview	Swan Lake	Stoney Lake	
Beaverlodge, AB	7.9	0.0	0.0	0.0	0.0	0.0	3.3
Grande Prairie, AB	60.5	44.4	33.3	0.0	50.0	5.9	41.8
Laglace, AB	2.6	0.0	0.0	0.0	0.0	0.0	1.1
Not specified	2.6	11.1	16.7	80.0	0.0	0.0	7.7
Wembley, AB	5.3	0.0	0.0	0.0	0.0	0.0	2.2
Grovedale, AB	18.4	0.0		0.0	0.0	0.0	7.7
Bezanson, AB	2.6	22.2	0.0	0.0	0.0	0.0	3.3
Sundre, AB	0.0	11.1	0.0	0.0	0.0	0.0	1.1
Valleyview, AB	0.0	0.0	0.0	0.0	31.3	0.0	5.5
St. Albert, AB	0.0	11.1	0.0	0.0	0.0	0.0	1.1
Edmonton, AB	0.0	0.0	16.7	0.0	18.8	0.0	4.4
Grande Cache, AB	0.0	0.0	16.7	20.0	0.0	0.0	2.2
Spruce Grove, AB	0.0	0.0	16.7	0.0	0.0	0.0	1.1
High Prairie, AB	0.0	0.0	0.0	0.0	0.0	5.9	1.1
Fairview, AB	0.0	0.0	0.0	0.0	0.0	29.4	5.5
Hines Creek, AB	0.0	0.0	0.0	0.0	0.0	29.4	5.5
Worsley, AB	0.0	0.0	0.0	0.0	0.0	17.6	3.3
Woking, AB	0.0	0.0	0.0	0.0	0.0	5.9	1.1
Bluesky, AB	0.0	0.0	0.0	0.0	0.0	5.9	1.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 20. Visitor Home Town/City

Recreation Area	Percent								
	Hunting	Fishing	Nature/Camping	Picnic	ATV	Boat / Canoe	Hiking	Work	Total
Macleod Flats	3.4	0.0	39.7	0.0	29.3	17.2	10.3	0.0	100.0
Economy Lake	15.0	0.0	15.0	0.0	20.0	50.0	0.0	0.0	100.0
Frying Pan Creek	66.7	0.0	16.7	0.0	0.0	0.0	16.7	0.0	100.0
Westview	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Swan Lake	0.0	88.9	0.0	5.6	5.6	0.0	0.0	0.0	100.0
Stoney Lake	0.0	46.2	38.5	7.7	3.8	0.0	0.0	3.8	100.0

Table 21. Activities

Recreation Area	No. of Campsites				Day Use Area	Picnic Sites	Number Sites Available ¹	Number of Occupied Sites	% Occupancy
	Single	Double	Triple	Total					
Macleod Flats	5	7	0	12	Yes	Yes	1,980	296	14.9
Economy Lake	11	0	3	14	Yes	Yes	2,310	84	3.6
Frying Pan Creek	11	1	0	12	Yes	Yes	1,476	51	3.5
Westview	2	0	1	3	Yes	Yes	369	11	3.0
Swan Lake	0	0	0	0	Yes	Yes	0	3	0 ²
Stoney Lake	28	0	0	28	Yes	Yes	2,044	38	0.0
							8,179	483	5.9

Note:
 1. Based on number of days sites were occupied i.e. MacLeod Flats was occupied for 165 days
 2. Swan Lake has no developed sites, but users camp there none the less

Table 22. Occupancy

Recreation Area	Site Rating			
	Poor	Fair	Good	Excellent
Macleod Flats	0.0	0.0	15.8	84.2
Economy Lake	0.0	0.0	12.5	87.5
Frying Pan Creek	0.0	0.0	60.0	40.0
Westview	0.0	0.0	0.0	0.0
Swan Lake	0.0	0.0	56.3	43.8
Stoney Lake	0.0	5.9	82.4	11.8

Table 23. Rating of Site and Facility Quality

Objective (5c) 1.1b.3:
Promote Canfor campgrounds to the public

Acceptable variance:
Not applicable

Status: Meets

Canfor prepares a brochure that is available at the following locations: Canfor Office, Grande Prairie Tourism Center, Rotary city bus tour (during summer months) and Muskoseepi Park. In 2002, the distribution of the brochure expanded to include the Valleyview Tourism Center, High Prairie Tourism and Dunvegan Visitor Center. The brochure is currently being revised to include information regarding Stoney Lake.

Indicator (5c) 1.1c: Communication with trappers impacted by harvest operations

Objective (5c) 1.1c.1:
Contact all trappers directly impacted by harvest operations

Acceptable variance:
Zero

Status: Does not meet

In accordance with the Trappers Compensation and Notification Program, maps for the 2002/2003 harvest season were hand delivered to trappers with registered traplines on the FMA area. For the 2003/2004 harvest season, maps were hand delivered as well, but once harvesting began, it was discovered that one trapper was not contacted prior to harvesting. Sustainable Resource Development was notified and follow up with the trapper was conducted.

Any concerns reported by the trappers are tracked in Canfor's Incident Tracking System (ITS), along with mitigative actions.

Indicator (5c) 1.1d: Communication with outfitters impacted by harvest operations

Objective (5c) 1.1d.1:
Contact all outfitter directly impacted by harvest operations

Acceptable variance:
Zero

Status: Meets

For the reporting period of May 1st, 2002 to Dec 31st, 2003, all outfitters were contacted by mail prior to harvest.

Goal (5c) 1.2: Improve the value of raw timber material from the FMA area

Indicator (5c) 1.2a: To increase lumber recovery from the coniferous timber resource during the milling process

Objective (5c) 1.2a.1:

To increase lumber recovery by 14% at the millsite

Acceptable variance:

Variance to LRF: zero

Variance in time frame: between 3-6 months after the May 7th, 2000 target date

Status: Complete

This objective was completed and reported in the May 1st, 2001-April 30th, 2002 Annual Performance Monitoring Report.

7. Criterion 6: Accepting Society’s Responsibility for Sustainable Development

Critical Element 6a: Forest Management

Value (6a) 1.: Social values

Goal (6a) 1.1: To be responsive to the social values identified by the FMAC and other publics

Indicator (6a) 1.1a: Topics on in the current Issue List (compiled by FMAC since inception) are addressed by the Company to the Committee’s satisfaction

<p>Objective (6a) 1.1a.1: 100% of the topics in the Issue List, as of June 30th, 2000, are addressed to the Committee’s satisfaction by the submission date of the DFMP</p>	<p>Acceptable variance: To address 90%</p>
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Status: Complete

The Issues List was reviewed with FMAC on April 16th, 2003. All topics were addressed to the Committee’s satisfaction. The issues were incorporated into the DFMP that was approved November 3rd, 2003.

Indicator (6a) 1.1b: The number of Canfor responses to written letters or public meeting issues, etc.

<p>Objective (6a) 1.1b.1: 100% of public issues received after November 1999 are responded to by Canfor.</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

All public concerns or comments are tracked in Canfor’s Incident Tracking System (ITS). In the reporting period there were 14 concerns/comments. All have received response or are in the process of receiving response. A summary of the concerns/comments follows:

- 7 regarding hauling (near misses, dust etc.);
- 3 regarding concern about harvesting in the Caribou Area;
- 2 regarding alleged speeding of Canfor/Canfor contractor trucks;
- 1 regarding CSA; and
- 1 regarding trapper compensation.

Critical Element 6b: Duly established Aboriginal and treaty rights are respected

Value (6b) 1.: Understand and respect treaty and Aboriginal rights

Goal (6b) 1.1: Avoid infringement of treaty and Aboriginal rights

Indicator (6b) 1.1a: Amount of opportunity for input by Aboriginal peoples

Objective (6b) 1.1a.1: To provide increased opportunities for input	Acceptable variance: Zero
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Status: Meets

Canfor provided opportunities for Aboriginal input for the reporting period through the following methods:

- As members of Canfor Forest Management Advisory Committee;
- Holding separate meetings to discuss specific topics of concern;
- By hosting open houses in local communities;
 - Annual Operating Plan (AOP) open houses in Grande Prairie, Grande Cache and Valleyview in November 2002 and November 2003;
 - Vegetation Management Plan open house in Valleyview in February 2003; and
- Through the Trappers Consultation and Notification Program (see objective (5c)1.1c.1)

Metis Zone 6 was an active member of Canfor’s Forest Management Advisory Committee (FMAC) during the reporting period. This Committee provides a venue for the group to provide input into Canfor’s management and operational plans. In the FMAC Terms of Reference for CSA Certification, there are many statements regarding input from the members:

- “Provide input regarding Forest Ecosystem Management Objectives”;
- “In partnership with Canfor, will review, refine and implement the Public Involvement Program”; and
- “All members will be given the opportunity to voice their perspectives.”

In addition, Canfor plans to schedule a meeting with the Metis Zone 6 in 2004 to discuss increased opportunities for input.

Sturgeon Lake Cree Nation (SLCN) is a member of Canfor’s FMAC, but did not participate during the reporting period. Meetings have been held with SLCN throughout the reporting period to develop a working relationship. In 2003 alone, 8 meetings between SLCN and Canfor were convened to draft a Memorandum of Understanding (MOU) between the two parties. A final version, containing information regarding opportunities for input, is expected in 2004.

Objective (6b) 1.1a.2: To be responsive to aboriginal input	Acceptable variance: Zero
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Status: Meets

Canfor is responsive to aboriginal input received through the initiatives listed in objective (6b) 1.1a.1, as well as via other correspondence.

Metis Zone 6 was an active member of Canfor’s FMAC for the reporting period. Canfor was responsive to input from the Metis Zone 6 representative in all meetings held throughout the reporting period.

During meetings between Canfor and SLCN throughout the reporting period, the two parties worked to prepare a draft Memorandum of Understanding (MOU). The MOU is still in draft form, but when finalized, will contain information regarding Canfor’s response to SLCN input.

In addition all questions/concerns that were received from individuals throughout the reporting period by letter, phone call, open house and trapper meetings were entered into Canfor’s Incident Tracking System (ITS) and all follow up was documented.

Critical Element 6c: The special and unique needs of Aboriginal peoples are respected and accommodated in forest management decisions

Value (6c) 1.: Understand and respect Aboriginal special needs

Goal (6c) 1.1: Effective consultation with Aboriginals

Indicator (6c) 1.1a: Early consultation prior to decisions being made

Objective (6c) 1.1a.1: To develop and implement early consultation	Acceptable variance: Zero
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Status: Meets

All methods of obtaining input listed in objective (6b) 1.1a.1 are examples of early consultation that occurred during the reporting period.

In addition the MOU between Canfor and SLCN, when finalized, will contain commitments to develop an effective, inclusive consultation process.

Goal (6c) 1.2: To be open to the development of partnerships and working arrangements with Aboriginals that are based on good, sound business practices and are mutually beneficial

Indicator (6c) 1.2a: Employment and business opportunities

Objective (6c) 1.2a.1: To identify present and future employment business opportunities	Acceptable variance: Zero
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Status: Meets

During the reporting period, Sturgeon Lake Cree Nation successfully completed stand tending contracts in 2002 and 2003. SLCN is also currently conducting timber harvesting operations on the FMA area through a joint venture with a local contracting company.

In addition, the MOU between Canfor and SLCN, when finalized, will contain information regarding business ventures, future employment, education and training.

Goal (6c) 1.3: Respect special cultural and historic sites

Indicator (6c) 1.3a: Location of special cultural sites



Status: Complete

In 2002, Alberta Western Heritage (AWH) developed a Heritage Potential Model that received approval from Alberta Community Development (ACD). Since that time Canfor has used this model to complete overview assessments of cutblocks, roads and clearings. The overview assessments consider such things as the heritage potential (high, medium or low), the season of the activity, the type of activity, level of disturbance, proximity to existing sites, trails etc. As a result of the overview assessment, pre-impact and post-impact field surveys are conducted by certified archaeologists.

Overview assessments were completed on cutblocks and roads for the 2001/2002 and the 2002/2003 harvest seasons by Canfor in collaboration with AWH. Pre and post impact surveys for the same seasons were completed by AWH.

The Heritage Potential Model is continually being calibrated and improved as new sites are discovered within the FMA area. Due to their sensitivity, all heritage sites are confidential.

Sturgeon Lake Cree Nation plans to conduct a Traditional Use Study in the FMA area in 2004 with commitments from Canfor and other parties. The progress made on this initiative will be summarized in the 2004 Annual Performance Monitoring Report.

Critical Element 6d: The decision-making process is developed with input from directly affected and local interested parties

Value (6d) 1.: Public input

Goal (6d) 1.1: To proactively involve directly affected and local interested parties in the development of the decision-making process

Indicator (6d) 1.1a: Approved terms of reference for the FMAC

<p>Objective (6d) 1.1a.1: To conduct the activities of the FMAC according to the Terms of Reference</p>	<p>Acceptable variance: Zero for the listed activities in DFMP</p>
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Status: Meets

The FMAC Terms of Reference (TOR) was reviewed and updated prior to the commencement of the process to upgrade Canfor's SFMP to the new CSA Z809-02 standard. The new TOR was ratified at the November 19th, 2003 meeting.

Critical Element 6e: Decisions are made as a result of informed, inclusive, and fair consultation with people who have an interest in forest management or are affected by forest management decisions

Value (6e) 1.: Informed and enlightened public

Goal (6e) 1.1: To provide information regarding forest management practices

Indicator (6e) 1.1a: A report on Canfor's forest management practices

Objective (6e) 1.1a.1:

To provide an annual report to the public on Canfor's forest management practices

Acceptable variance:

The report will be available within 2 months after submission of the Annual Performance Monitoring Report

Status: Meets

The Annual Public Report is a 4-6 page summary of operational performance that functions as a handout to the general public.

The last Annual Public Report was completed in September 2002. The next report will be produced by May 2004.

Indicator (6e) 1.1b: Copies of DFMP, AOP/5 Year GDP and Sustainable Forest Management Plan (SFMP) to all public libraries in the local area**Objective (6e) 1.1b.1:**

To provide copies of DFMP, AOP/5 Year GDP and Sustainable Forest Management Plan (SFMP) to all public libraries in the local area

Acceptable variance:

Zero

Status: Meets

The following libraries have current versions of Canfor's DFMP/SFMP and AOP/5 Year GDP

- Grande Prairie;
- Grande Prairie Regional College;
- Valleyview;
- DeBolt;
- Grande Cache; and
- Spirit River.

Indicator (6e) 1.1c: Amount of elementary, secondary and post-secondary school-based forest educational opportunities supported by Canfor**Objective (6e) 1.1c.1:**

To participate in at least 5 different types of educational opportunities

Acceptable variance:

Zero on an annual basis

Status: Meets

Canfor participated in a number of educational opportunities:

1. Canfor booth at 2003 the Forestry Trade Show;
2. Support of Grande Prairie and Area Forest Educator. The Forest Educator makes presentations to classrooms (about 140 classrooms per year), as well as conducting student hikes to experience the forest with hands-on learning. The Forest Educator also coordinates the hands-on "Envirothon" for high school kids to learn about forestry, soils, water, oil & gas and wildlife;
3. National Forest Week "Walk through the Forest" in May 2003. This is an outdoor venue for kids grades 4-6 to learn about tree identification, wildlife, insects infestations/tree diseases, tree measurements, planting of trees and logging/forest products;
4. National Forest Week "Arbour Day" where employees visit grade 1 students to explain the importance of trees. They also distribute seedling and demonstrate how to plant them;
5. Grande Prairie Regional College (GPRC) Practicum Program. Canfor mentored 2 GPRC students during their practicums where they receive hands on learning of forestry practices;
6. Forestry and certification presentations to post-secondary students; and
7. Presentations to high school students. The GPRC practicum students assisted the Forest Educator by making presentations regarding forestry on behalf of Canfor.

Indicator (6e) 1.1d: Use of experts (i.e. Herbicide guest lecture, wildlife biologists, ecological task force, etc.) to increase knowledge and understanding of forest ecosystems for the FMAC

<p>Objective (6e) 1.1d.1: Utilize the information provided by experts to increase knowledge and understanding of forest ecosystems</p>	<p>Acceptable variance: Not applicable</p>
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Status: Meets

FMAC members were exposed to the following:

- December 12th, 2003 - Gordon Stenhouse, a grizzly bear specialist with the Foothills Model Forest, gave a presentation on grizzly bears;
- May 21st, 2003 - Jeff Reynolds presented the new CSA Z809-02 standard; and
- Attendance at Provincial Public Advisory meetings.

Value (6e) 2.: Informed company

Goal (6e) 2.1: To obtain public input on forest management practices using an open, transparent and accountable process

Indicator (6e) 2.1a: Amount of different types of public involvement opportunities that have been incorporated into the Company’s planning as per the Public Involvement Program

<p>Objective (6e) 2.1a.1: To incorporate at least 4 different types of public involvement opportunities into the Company’s planning activities on an annual basis</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

Canfor offered the following opportunities for public involvement into its planning activities during the reporting period:

- An active FMAC advisory group;
- Open Houses
 - Annual Operating Plan (AOP) open houses in Grande Prairie, Grande Cache and Valleyview in November 2002 and November 2003;
 - Vegetation Management Plan open house in Valleyview in February 2003;
- Annual trapper and outfitter consultation and notification regarding harvest and silviculture plans;
- Letters and telephone calls to Canfor received response and were tracked in Canfor’s Incident Tracking System (ITS);
- Annual Performance Monitoring Report for May 1st, 2001 - April 30th, 2002 was distributed in August 2002; and
- The Annual Public Report For May 1st, 2001 – April 30th, 2002 was distributed in September 2002.

Critical Element 6f: Collective understanding of forest ecosystems, values and management is increased and used in the decision-making process

Value (6f) 1.: Knowledge of forest ecosystems and processes

Goal (6f) 1.1: To use adaptive management to improve the knowledge regarding ecological processes and the natural historic and current disturbance patterns for each ecosystem and to apply this knowledge to management of the resources within the FMA area

Indicator (6f) 1.1a: The degree to which actual field performance aligns with the DFMP

<p>Objective (6d) 1.1a.1: To produce a Forest Stewardship Report, every 5 years, as a measure of accountability to the public of management effectiveness</p>	<p>Acceptable variance: The report will be submitted within 1 month of the submission schedule, as stated in the DFMP</p>
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Status: In Progress

The Forest Stewardship Report, due 5 years after the approval of the DFMP, is scheduled for submission November 3rd, 2008.

<p>Objective (6d) 1.1a.2: To validate Canfor’s assumptions and test new theories to improve knowledge of forest ecosystems by conducting on-going research</p>	<p>Acceptable variance: Zero</p>
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Status: Meets

Canfor is involved in numerous research projects. See Table 24 for a list of the current projects.



PROJECT	DESCRIPTION	TERM	STATUS
Forest Protection	Primarily provides funds to ensure SRD has sufficient resources to fight fires within the FMA area. Tops up funds to Sturgeon Lake Resources when they act as Initial Attack.	1999 - 2004	Active
Forest Educator	Forest Educator provides educational opportunities to K - 12 regarding Forestry.	1997 - 2005	Active
Caribou	Continues Canfor's contribution to the U of A and WCACSC to conduct collaborative research in the Little Smoky range.	1997 - 2004	Active
Caribou Range Recovery	Collaborative project initiative to mitigate some of the impacts caused by linear corridors by undertaking activities that assist in restoration of specific linear corridors, or portions of corridors, within the FMA area.	2000 - 2004	Active
Caribou Habitat Supply Analysis	A collaborative project to develop a habitat assessment for the Little Smoky and A La Peche caribou herds to evaluate the quality, effectiveness, quantity and distribution of caribou habitat. Caribou habitat will be evaluated using forest cover data supplemented by current and future cutover activities and landuse disturbances (primarily road, pipeline, well site and seismic activity). May play a role in completion of work required for the CSA caribou nonconformance.	2004	Active
Grizzly Bear	FMF study researching habitat and impact questions. Will produce models and tools for grizzly management that are applicable to the FMA area.	2000 - 2004	Active
Foothills Growth & Yield	Collaborative project for forecasting and monitoring of managed stand growth and yield of lodgepole pine in the Lower and Upper Foothills and the Subalpine Natural Sub-regions of Alberta.	2000 - 2006	Active
WESBOGY	Collaborative project (Long Term Study) to establish, monitor, and assess a series of plots to study tree and stand development (establishment to final harvest) under controlled densities of aspen and white spruce with removal of competing understory vegetation. Early stand growth, mortality and crown dynamics will be used to develop an individual tree growth model.	2000 - 2006	Active
NIVMA	Collaborative project to provide a system of silviculture monitoring by: 1. Monitoring years to breast height for timber supply planning purposes, 2. Monitoring years to free growing, 3. Monitor tree performance in relation to competing vegetation, 4. Monitoring years to breast height in the context of site disturbance, 5. Monitoring years to green-up height, 6. Monitoring tree performance from various silviculture regimes to assist in identifying trends, 7. Describing changes in plant species communities; and 8. Monitoring forest health in managed stands. Some companies desire Assoc. to focus on growth and yield issues.	2000 - 2005	Active
Stand Tending I to VI	In 1993, Juvenile Stand Surveys program where approximately 21,000 hectares within the FMA AREA required some form of stand tending to make them more productive by reducing hardwood competition. Since that time 9,593 ha have been treated under the FRIP program.	2002 - 2005	Active
Campsite Maintenance	Collaborative project to promote and maintain six campsites to enable the public to enjoy the resources within the FMA area and quota areas.	2002 - 2006	Active
Monitoring Sedimentation	Project to fulfill CSA objective 3c) 1.1a.1 to assess current methodologies and practices to measure siltation caused by forest road construction. The SCQI monitoring system developed by P Beaudry & Associates has been selected to achieve the objective. SCQI is a simple field-based indicator that generates reliable information about how well stream networks have been protected from increased sediment delivery caused by road crossings. It is not a detailed and quantitative sediment delivery model, but rather a simple but meaningful indicator of the protection of water quality.	2002 - 2006	Active
Sustainable Forest Management Network	Canfor's sponsorship assists the SFMN to fulfill its mission to deliver an internationally recognized, interdisciplinary program that undertakes relevant university-based research. It assists to facilitate development of networks of researchers, industry, government and First Nations partners, and offer innovative approaches to knowledge transfer. Lastly, it assists SFMN to train scientists and advanced practitioners to meet the challenges of modern natural resource management	2001 - 2005	Active
Fisheries	A collaborative project to enhance fisheries knowledge base to minimize the ecological footprint of past and future developments on fish populations and aquatic habitats. Enhanced fish and fish habitat data will lend itself to achieving existing and immediate operational objectives (mitigation of problem crossings). Further, the information collected will be applied to improved strategic forest planning.	2003 - 2005	Active
Biodiversity Monitoring Pilot	A collaborative project to conduct a pilot project to test and validate ABMP sampling protocols. Data will be collected at approximately 5% of ABMP sites (106 ABMP sites) and that data will be used to demonstrate how biodiversity change will be measured and portrayed. Resource managers will be able to evaluate products and services produced by the ABMP, and assess the degree to which these can be used to meet their social and regulatory requirements and to make effective decisions about managing biodiversity	2004 - 2006	Active
Insect & Disease Monitoring	In 1998, members of the Northwest Boreal Regional Integrated Pest Management Working Group (NBRIPMWG) participated in the development of an insect and disease monitoring system. In 2001, some of the members of the working group implemented a pilot project (DMI 01-33), testing all elements of the prototype in order to determine its strengths and weaknesses and to determine the time and resources needed to implement the system on a long-term basis. The pilot project was completed October 2001. In 2003, SRD, Buchanan Lumber Ltd., Canadian Forest Products Ltd. (Grande Prairie), Manning Diversified Forest Products Ltd. and Slave Lake Pulp Corporation implement the insect and disease monitoring system for 2003.	2003 - 2005	Active
Wildlife Habitat Maintenance	The primary objective of this project is to control the deciduous competition on specific coniferous blocks (C and CD) utilizing motor manual brushsaw treatment technique which provides the greatest overall benefit to many species of wildlife. Cost for the project were recouped from FRIAA based on incremental cost differences between herbicide and brushsaw treatments.	2003 - 2004	Active
Mixedwood Management Association (HC)	The MWMA's overall goal is to increase the understanding of mixedwoods and to encourage and assist in the use of this knowledge in forest management. The Association has seven objectives with the primary one to develop a unified and defensible monitoring protocol for the collection of common growth and yield response variables in post-treatment operation trials that will enable data pooling and analysis among interested companies.	2003 - 2005	Active
EMEND I to VI (1997 - 2003) (HC)	In the widest sense, the EMEND project integrates the efforts of biologists, economists, sociologists, and modellers to determine how harvest and regeneration of upland, mixedwood forest can best approximate natural disturbance regimes in NW Alberta. The project is designed to test predictions about benefits of alternative approaches to forest management. Participants in the project will study the ecological and production implications of harvest patterns that leave various amounts of residual structure after harvest. EMEND is an award winning project of world class status that is recognized as the largest multi-jurisdictional project in the world.	1997 - 2006	Active
Evaluation of Yield Groups (HC)	The project provides an alternative approach to exploring yield curve trends, through the incorporation of both ecological information (ecosite) and silvicultural treatments. The process was carried out in three phases: 1. Validation (support) of existing yield groups, 2. Recommendations to refine the existing yield groups, and 3. Identification of new opportunities. Validation of the existing yield groups was accomplished through indirect and direct comparison of the ecological data and the models, assumptions, and equations used in developing the original yield groups. This project was integral to the completion of the Hines Creek Model II project. The second component of this project was the development of ecological sensitivity rating for soil compaction hazard, soil erosion hazard, plant competition hazard, rare plant occurrence, species specific productivity, and white spruce understory probability.	2000 - 2003	Completed
Model II (HC)	The objective of the project was to develop Model II Regeneration Standards based on ecological and structural stand classification.	2000 - 2003	Completed

Table 24. Research Projects in Which Canfor is Currently Participating

Additional Goals, Objectives and Indicators

Canfor has developed other objectives in addition to those presented in the preceding section.

<p>Objective (7) To produce fully integrated operational plans – Annual Operating Plan (AOP) and 5 Year General Development Plan (GDP) for the 2003 submission</p>	<p>Acceptable variance: Zero</p>
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Status: Does not meet

Tolko and Ainsworth have been granted the rights to the deciduous timber in the FMA area. Only Tolko, is actively harvesting timber from its Deciduous Timber Allocations (DTAs). Full integration has not been achieved for this report period. However; Canfor and Tolko have made progress towards a fully integrated Annual Operating Plan (AOP) and General Development Plan (GDP) by incorporating Tolko’s proposed cutblocks into Canfor’s database. Maps of the combined coniferous/deciduous harvest designs were produced and submitted separately to Sustainable Resource Development (SRD) for approval. Additional discussions between the two companies are required to finalize a fully integrated plan in 2004.

<p>Objective (8) To evaluate the range of variable retention configurations and develop a strategy by September 1st, 2004</p>	<p>Acceptable variance: Zero</p>
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Status: In progress

The development of a variable retention strategy for the FMA area is currently underway and will be implemented in 2004.

Objective (9)

To identify ranges and type of stands that are being utilized by woodland caribou to assist in development of a strategy compatible with West Central Alberta Caribou Standing Committee objectives

Acceptable variance:

Not applicable-research is ongoing

Status: In progress

Canfor is a member of the West Central Alberta Caribou Standing Committee and is currently working with the committee to complete a caribou habitat supply analysis. Due to a minor non-conformance in the August KPMG periodic assessment, Canfor was required to develop an action plan with clear target dates for implementation of the caribou habitat supply analysis. To date, Canfor has gathered GIS coverages, defined habitat quality (HQ) and habitat effectiveness (HE) parameters, and is in the process of calculating the current HQ and HE.

8. Summary

The status of the 91 objectives found throughout this Annual Performance Monitoring Report is summarized in Table 25.

Number that are completed	7
Number that meet	53
Number that do not meet	4
Number that are in progress	17
Number that are not at their scheduled reporting time	10
Total number of objectives	91

Table 25. Result of Objectives Found Throughout Report

Canfor’s performance is constantly being assessed through internal and external audits. During the reporting period Canfor has undergone the following audits:

- November 2002 - Independent third party re-certification audit of CSA Z809-96 and ISO 14001, re-certifying Canfor to these standards;
- August 2003 - Independent third party periodic assessment of CSA Z809-96 and ISO 14001, and re-certification of ForestCARE; and
- November 2003 – Canfor internal audit of CSA Z809-96 (done corporately).

During audits, three types of findings are possible:

- Non-compliances – a finding that Canfor is doing something against government regulations. These can be classified as minor and major;
- Non-conformances – a finding that Canfor is doing something against company commitments. These can be classified as minor and major;
- Opportunities for Improvement – a finding that shows a weakness in Canfor’s system that could potentially lead to a non-conformance or a non-compliance.

The results of the audits conducted during the reporting period are:

- November 2002 - Independent Third Party Audit
 - 2 minor non-conformance
 - 3 opportunities for improvement
- August 2003 - Independent Third Party Periodic Assessment
 - 1 minor non-conformance
 - 3 opportunities for improvement
- November 2003 – Canfor Internal Audit
 - 6 minor non-conformances
 - 13 opportunities for improvement

In addition to the audit process, any non-compliances, non-conformances and operational issues discovered by Canfor during normal operations, are recorded and tracked in its Incident Tracking System (ITS) to continually improve operations.



Additional Information

Canfor's Sustainable Forest Management Plan (SFMP) and KPMG's Certification Updates are available on-line for public viewing on Canfor's website at www.canfor.com.

The complete DFMP/SFMP is available at the Canfor Grande Prairie office and at the following libraries: Grande Prairie, Grande Prairie Regional College, Valleyview, DeBolt, Grande Cache and Spirit River.

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For more information visit www.canfor.com