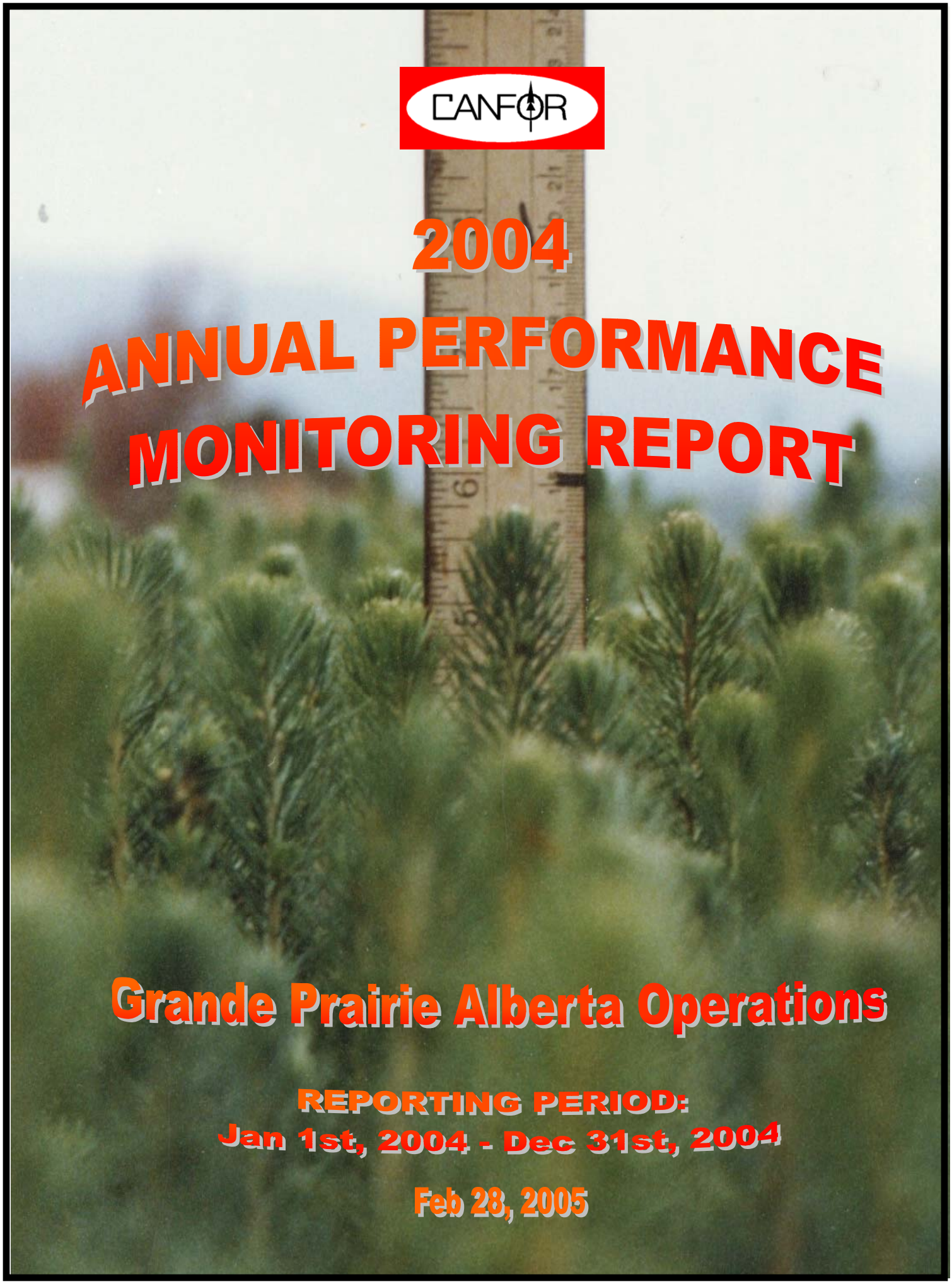

2004 ANNUAL PERFORMANCE MONITORING REPORT

Grande Prairie Alberta Operations

REPORTING PERIOD:
Jan 1st, 2004 - Dec 31st, 2004

Feb 28, 2005

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Prepared By:

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Executive Summary

This Annual Performance Monitoring Report has been prepared in accordance with the CSA-Z809-96 standard. It summarizes the progress and performance that Canfor Grande Prairie Alberta Operations has achieved in meeting and maintaining the Sustainable Forest Management (SFM) standard requirements.

In addition to the CSA standard requirements, Canfor, corporately has also defined SFM commitments to which each operation must adhere. These include the *Environment Policy* and *Canfor's Forestry Principles*.

Corporately, in 2004 Canfor worked to amalgamate the former Slocan and Canfor Environmental Management Systems (EMS) in the Sustainable Forest Management System (SFMS) and to document the system in the Forest Management System (FMS) Manual. The FMS manual is scheduled for completion in early 2005.

Canfor Grande Prairie's Forest Management Advisory Committee (FMAC) has assisted Canfor to identify the local level values, goals, indicators and objectives that are contained within this report. The Sustainable Forest Management Plan (SFMP) was written as a compilation of CSA standard requirements, corporate commitments and local level values, goals, indicators and objectives. To solidify Canfor's commitment to SFM, the SFMP was incorporated in the Detailed Forest Management Plan (DFMP) required under the terms of Forest Management Agreement (FMA) 990037 (Province of Alberta Order in Council 198/99). The DFMP was reviewed and approved by the FMAC, then submitted to and approved by the Alberta government on November 3rd, 2003.

In 2004, Canfor Grande Prairie maintained overall conformance to the SFM requirements of the CSA Z809-96 standard and Canfor commitments. However, public concerns continued regarding the management of caribou and caribou habitat within the Little Smoky caribou herd range, a portion of which lies within Canfor's FMA area. Furthermore, the Alberta Woodland Caribou Recovery Team categorized the Little Smoky herd as in "Immediate Risk of Extirpation" in the draft *Alberta Woodland Caribou Recovery Plan 2004/05 – 2013/14*. Canfor Grande Prairie operations responded by continuing to apply financial and other resources in partnership with industry, government and other groups to further research, monitoring and modeling initiatives. Canfor also implemented additional mitigation measures in conjunction with operational activities in the caribou range area.

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

Number of objectives completed	9
Number of objectives met	56
Number of objectives not met	0
Number of objectives in progress	16
Number of objectives not due for reporting	10
Total number of objectives	91

Please Note: In the May 1st, 2002 – December 31st, 2003 Annual Report it was reported that 53 objectives were achieved, and 17 objectives were in progress. Objective (4b) 1.2a.1 was incorrectly reported as meeting when in actuality it was in progress. In 2003 the revised number of objectives achieved was 52, and the revised number of objectives in progress was 18. Canfor apologizes for the error.

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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. Canadian Forest Products Ltd. (Canfor) Grande Prairie has sought and achieved certification under a variety of respected standards including International Organization for Standardization (ISO) 14001, Canadian Standards Association (CSA) Z809-96 and Forest*Care*. See Quick Facts box for details.

As a preparatory step, Canfor corporately developed an Environmental Management System (EMS) to the ISO 14001 standard. The company's EMS provided the platform on which to build the Sustainable Forest Management System (SFMS) to the CSA standard. Canfor is currently working with the former Slocan and Canfor operations to amalgamate the EMS's under a single SFMS system in the Canfor Forest Management System (FMS) Manual. The FMS Manual is scheduled to be completed in early 2005.

Quick Facts

1997 - Forest*Care* 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 (CSA-Z809-96)

2002 - (November) Successful re-certification audit to ISO 14001 and CSA-Z809-96 standards

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

Canfor Grande Prairie and its public group the Canfor Forest Management Advisory Committee (FMAC) has developed and certified its Sustainable Forest Management Plan (SFMP) to the CSA Z809-96 standard.

1.2. The CSA Standard

The purpose of the CSA SFM 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 the 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 twenty-two in total. Under the CSA standard, adoption of the CCFM criteria and elements as a framework for value identification provides vital links between local sustainable forest management and national and provincial-scale forest policy, as well as a strong measure of consistency in identification of local forest values across Canada. This standard, which utilizes a continual improvement approach, requires public participation, practical demonstration of sustainable forest management practices, and management commitment. Through a process of public participation, the CSA performance framework attains local relevance to the critical elements in the form of locally determined values[1], goals[2], indicators[3] and objectives.[4] Canfor's public advisory group, the Forest Management Advisory

[1] Values represent a principle, standard or quality considered worthwhile or desirable
[2] Goals are broad, general statements 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

Committee (FMAC), assisted Canfor in the development of its Sustainable Forest Management Plan (SFMP) by identifying quantifiable local level values, goals, indicators and objectives of sustainable forest management.

1.3. Sustainable Forest Management (SFM) Policy

Senior Canfor management has endorsed the *Environment Policy* (Figure 1) and *Canfor's Forestry Principles* (Figure 2) that apply to all Canfor forestry operations located within British Columbia and Alberta.

Environment Policy

We are committed to responsible stewardship of the environment throughout our operations.

We will:

- Comply with or surpass legal requirements.
- Comply with other environmental requirements to which the company is committed.
- Set and review environmental objectives and targets to prevent pollution and to achieve continual improvement in our environmental performance.
- Create opportunities for interested parties to have input to our forest planning activities.
- Practice forest management that recognizes ecological processes and diversity and supports integrated use of the forest.
- Promote environmental awareness throughout our operations.
- Conduct regular audits of our environmental management system.
- Communicate our environmental performance to our Board of Directors, shareholders, employees, customers and other interested parties.

J. Shepherd
President and Chief Executive Officer

P.J.G. Bentley
Chairman

April, 2004

Figure 1. Canfor's Environment Policy

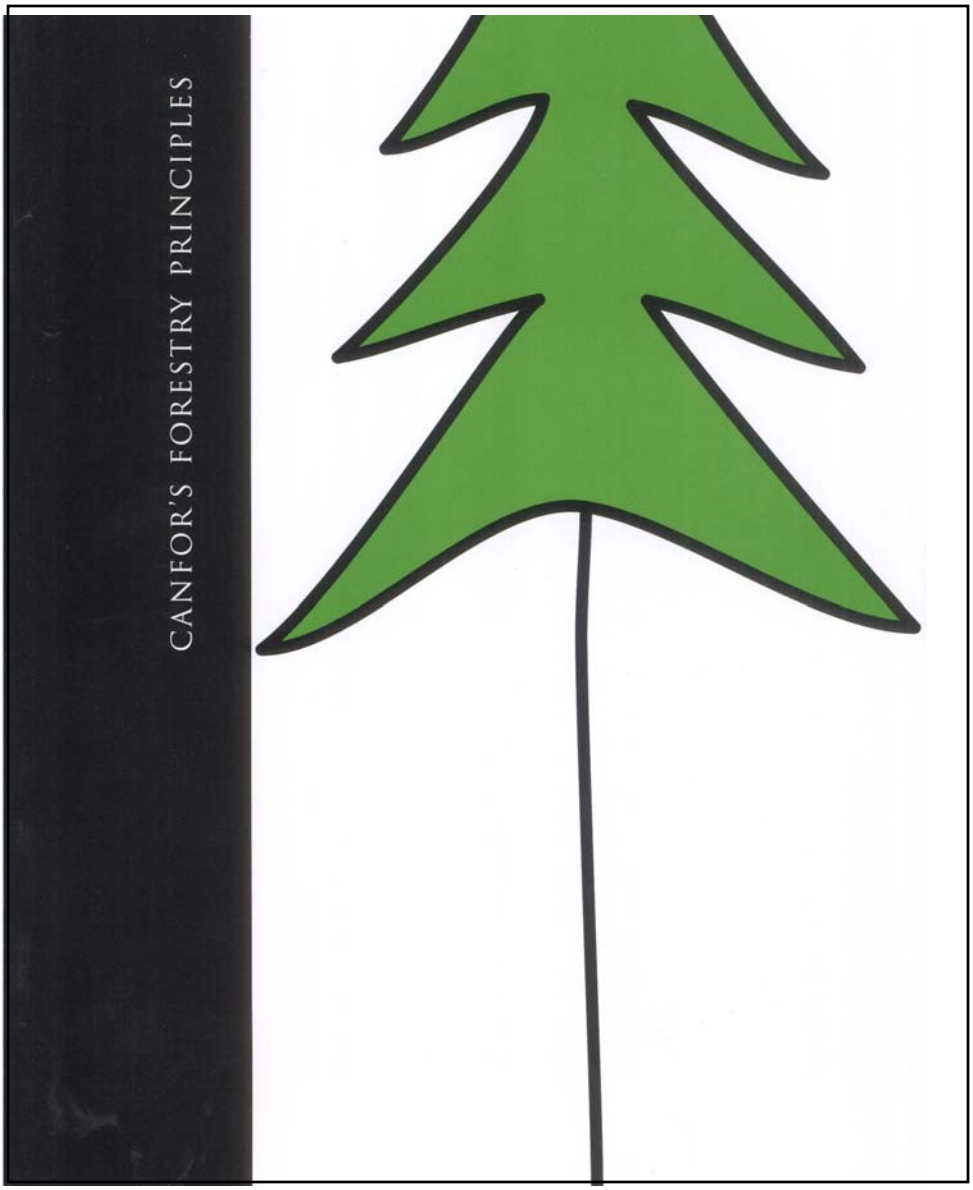

Figure 2. Canfor's Forestry Principles

1.4. The Defined Forest Area (DFA)

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

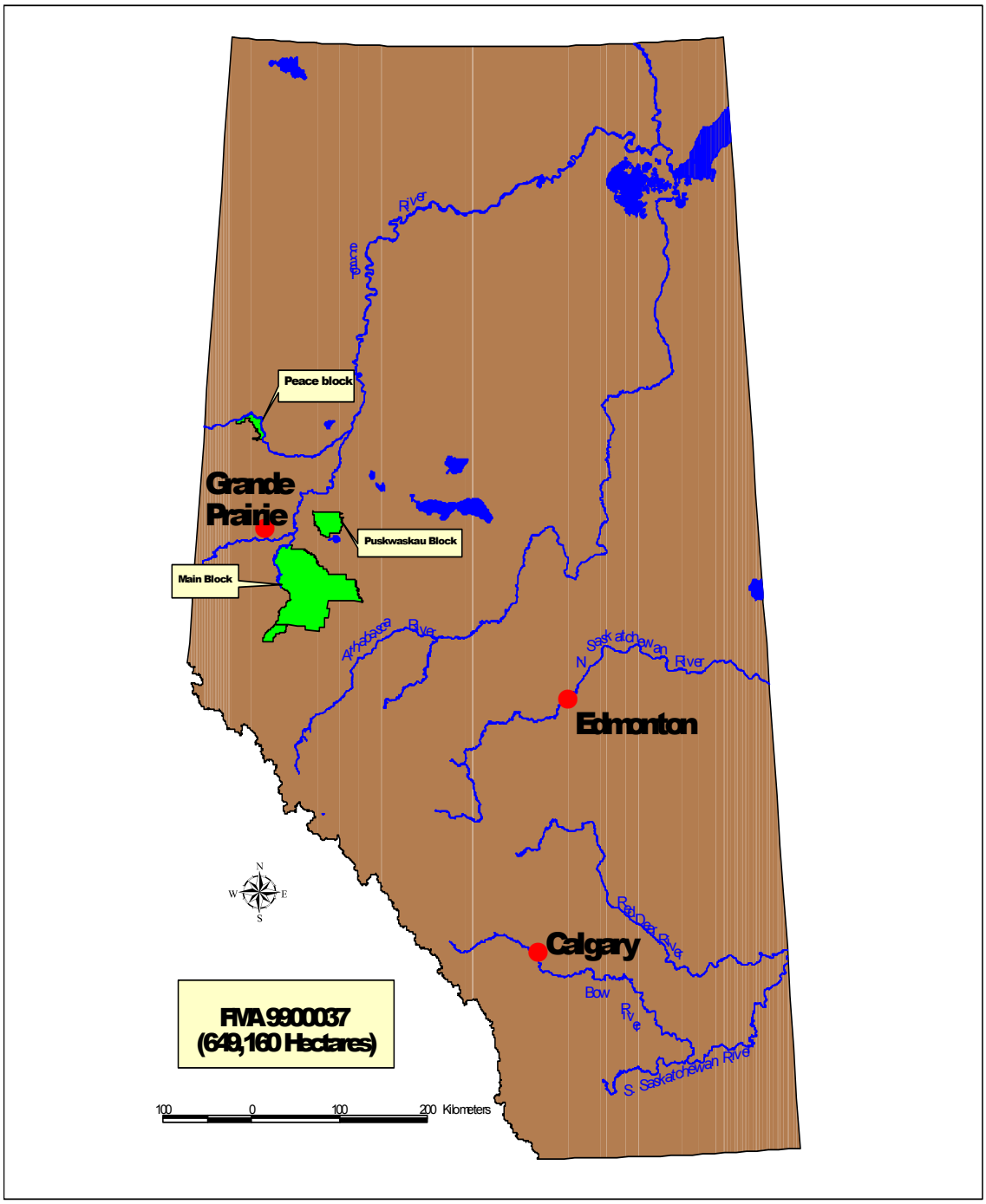

Figure 3. Defined Forest Area (DFA)

1.5. Landbase & Resource Information

Total Landbase: 649,160 ha
Productive Landbase (Coniferous and Deciduous): 474,193 ha
Coniferous AAC: 630,400 m^3/yr
Deciduous AAC: 451,726 m^3/yr

1.6. Annual Report

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 contains information on the progress towards meeting and maintaining Sustainable Forest Management (SFM) requirements in general (Section 2) and also indicates the status of each of the 91 objectives (Sections 3-9). Five classifications for each objective are used for reporting the status:

- Completed;
- Meets;
- Does not meet;
- In progress; or
- Not a scheduled reporting time.

2. Progress in Meeting and Maintaining SFM Requirements

Corporately, in 2004 Canfor worked to amalgamate the former Slocan and Canfor Environmental Management Systems (EMS) in the Sustainable Forest Management System (SFMS) and to document the system in the Forest Management System (FMS) Manual. Representatives from each Canfor operation met to more clearly define the corporate Canfor FMS requirements and processes. The updated FMS Manual is scheduled to be posted in early 2005. As well, it was determined that improvements to the corporate annual review were required. Updates were made including a review of the corporate policies and commitments, company-wide progress with SFM implementation, summaries of operations management reviews, and the allocation of resources to the FMS, which will occur in the 2005 corporate annual review.

In 2004, Canfor Grande Prairie maintained overall conformance to the SFM requirements of the Canadian Standards Association (CSA) Z809-96 standard and Canfor corporate commitments. Results of audits can be found in Section 10. However, public concerns continued regarding the management of caribou and caribou habitat within the Little Smoky caribou herd range, a portion of which lies within the Canfor FMA area. Furthermore, the Alberta Woodland Caribou Recovery Team categorized the Little Smoky herd as in "Immediate Risk of Extirpation" in the draft *Alberta Woodland Caribou Recovery Plan 2004/05 – 2013/14*. Canfor Grande Prairie operations responded by continuing to apply financial and other resources in partnership with industry, government and other groups to further research, monitoring and modeling initiatives. Canfor also implemented additional mitigation measures in conjunction with operational activities in the caribou range area.

Additionally, in 2004, the Canfor Forest Management Advisory Committee (FMAC) worked to develop quantifiable local level values, objectives, indicators and targets of sustainable forest management as defined in the CSA Z809-02 standard. The new updated Sustainable Forest Management Plan (SFMP) will be completed in 2005 and the operation will undergo a third party independent registration audit in September of 2005 under the new standard.

Progress on individual objectives is found throughout the remainder of the report.

3. 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:	**Acceptable variance:**
One hundred percent (100%) of identified and validated rare physical environments will not be harvested	Zero

Status: Meets.

Canfor conducted no harvesting in any of the identified rare physical environments during this reporting period. See Table 1 below for the rare physical environments identified on the Forest Management Agreement (FMA) area.

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
Total Dunvegan West Wildland	**4,471.1**
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:	**Acceptable variance:**
Nominate Cactus Hills and Peace Parkland areas as candidate sites for Alberta Special Places Program	These have already been nominated

Status: Complete.

These areas received official designation as a special place[5] 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:	**Acceptable variance:**
Maintain old seral stages within the natural disturbance regimes at present and at key points in time	Not to fall outside the range of natural disturbance regimes for the old seral stage in the FMA area and FMUs.

Status: Not scheduled reporting time

[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

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

Objective (1a) 1.2b.1:	**Acceptable variance:**
Maintain seral stages within the natural disturbance regimes at present and key points in time	To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs

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

Objective (1b) 1.1a.1:	**Acceptable variance:**
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	Zero variance, as directed by the Province

Status: Meets

Canfor has three gates on Canfor Licenses of Occupation (LOCs) that lead into the Caribou Area to control access; one on the 4000 road, one on Norton Creek road and one on the W (Boulder) road (Figure 4). The gates on the 4000 and the Norton Creek roads were locked except during active log hauling. The W road gate was not locked during the previous reporting period as access is restricted from the north by the gate on the 4000 road.

It was recognized that traffic could enter the Caribou Area from non-Canfor LOCs from the south so in 2004 Canfor ensured that the gate on the W road remained locked immediately after hauling was completed.

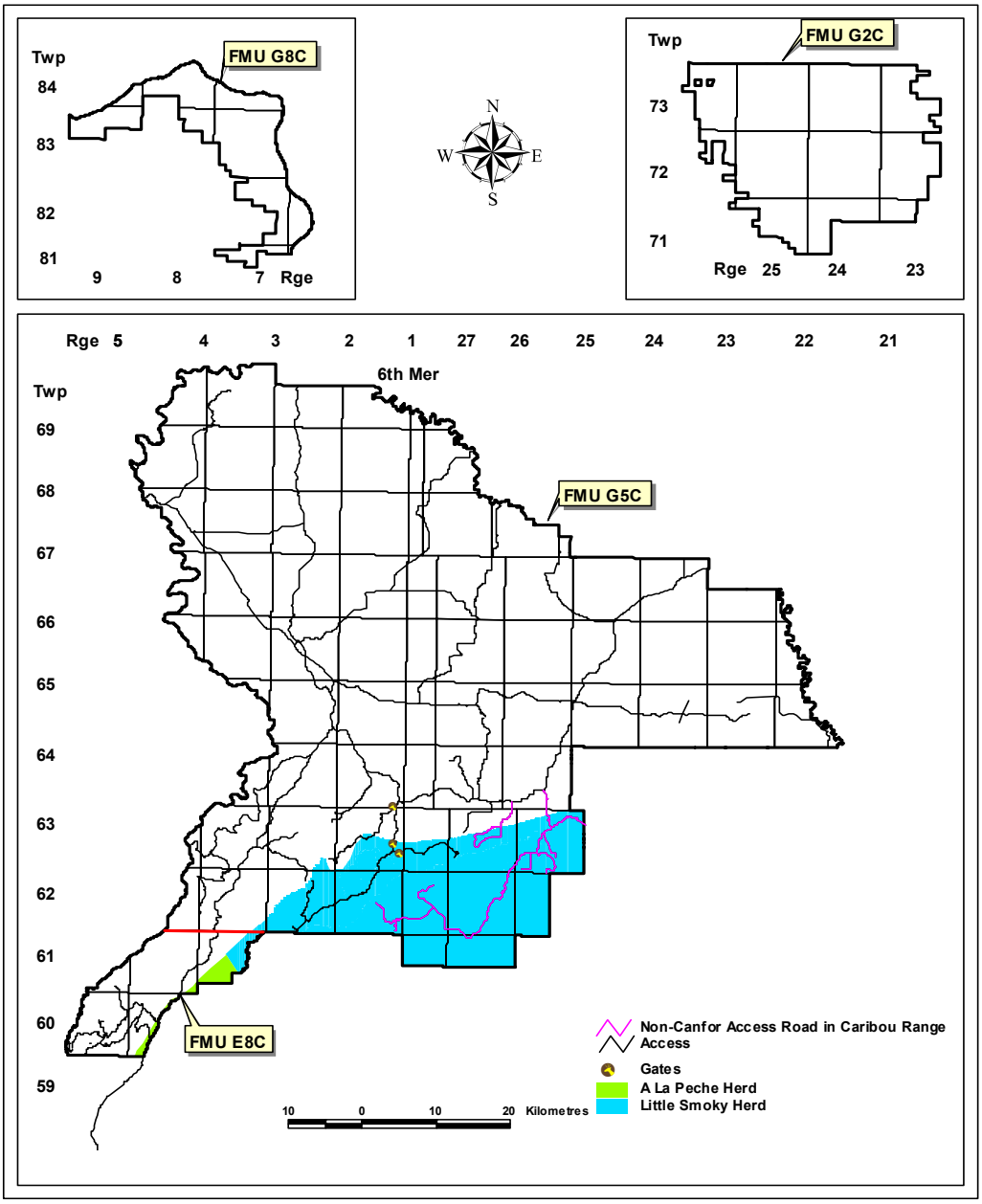

Figure 4. Caribou Area Map with Gate Locations

LOC 023022 was constructed in 2003 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. Canfor complied with this timing restriction by removing the bridge by March 15th, 2004.

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 were implemented in 2004 including: 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 additional signage indicating "locked gates ahead". Although these improvements were implemented, locks were broken or cut off on several occasions. The locks were replaced as soon as possible.

Gate monitoring was also implemented in 2004. Canfor staff, road patrol and contract persons were used. Canfor required oil and gas companies to have a 24 hour gate person opening and closing the gates for some projects such as pipelining and drilling. Similarly, Canfor was requested by SRD to have a gate person in place for hauling inventory wood from W144 in late September / October 2004.

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.

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

Objective (1b) 1.1b.1: Maintain habitat conditions required by identified selected indicator species using HSI models	**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)

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 progress report regarding 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

Woodland Caribou and Bull Trout targets are checked yearly through the DFMP/AOP validation process developed by Timberline Forest Inventory Consultants. The compiled results for these species are derived by merging the current Annual Operating Plan (AOP) into the Detailed Forest Management Plan (DFMP) with an updated harvest sequence.

Targets established for Woodland 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 in 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 in old seral stage. Initial baseline (1999) results, previously reported in the May 1st, 2001- April 30th, 2002

report, show that Canfor had 13% in pioneer/young seral stages and 10% in old seral stage in the FMA area. Canfor calculates the results of the pioneer/young seral stage annually. The DFMP/AOP validation process, that included the 2004 planned harvest cutblocks, indicated 14% of the FMA area is in the pioneer/young seral stage. 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 Area[6] (ECA) in Bull Trout watersheds above the H60[7] line. Initial baseline (1999) results indicate there are 3 watersheds above the ECA of 35% that were flagged for concern (Table 3). Each year Canfor utilizes the DFMP/AOP validation process to verify whether watersheds exceed the target. The 2004 results indicate there are no additional watersheds exceeding the target than were shown in the 1999 baseline data. The ECA values for each of these watersheds have decreased in 2004 from 1999, with only one watershed (2057) remaining above the 35% target. Table 3 indicates that by 2009 (the next reporting period) the ECA for all three watersheds will be less than 35%.

Watershed ID	1999 ECA %	2004 ECA %	2009 ECA %
2057[1]	48	42	-
4257[1]	36	16	-
5642[1]	37	32	-
[1]Bull trout watershed			

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

Trumpeter swan habitat is managed by identifying water bodies supporting trumpeter swans and maintaining a 200 metre “no-harvest” buffer to protect nesting sites. SRD and Canfor staff have identified forty-six water bodies on the FMA area which require 200 metre “no-harvest” buffers. In this reporting period, no additional water bodies with nest sites were identified. By superimposing the 2002/2003 cutblocks onto the AVI it was found that no harvesting trespasses occurred within the 200 metre “no-harvest” buffers of the identified swan habitat waterbodies.

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

Objective (1b) 1.1c.1:	**Acceptable variance:**
Protect 100% of identified significant wildlife minerallicks	Zero

Status: Meets

Canfor implements 100 metre buffers on identified natural mineral licks.

	2003 and Earlier	2004	Total to date
Mineral Licks – Natural (buffered)	60	16	76
Mineral Licks – Man-Made (shot holes-not buffered)	12	5	17
Total	72	21	93

Table 4. Number of Mineral Licks

In 2004, sixteen natural mineral licks were identified and buffered within the FMA area. An additional 5 man-made mineral licks, created from seismic shot holes, were also identified. Sustainable Resource

[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)

Development (SRD) does not require buffers on these man-made licks as the seismic company is responsible for capping these holes. All licks discovered in 2004 were located during cutblock layout with the exception of one that was found and buffered in 2002 but was GPS'd in 2004, one that was found during the aerial spray program, and two that were found by crews conducting thinning operations. There were no timber harvesting trespasses into any wildlife licks in 2004.

Figure 5. Natural Mineral Lick

Figure 6. Man-Made Mineral Lick

All field staff are trained in the identification of wildlife licks. As well, in 2004 a field trip was organized with SRD to view various natural and man-made wildlife licks to confirm which would be buffered.

Goal (1b) 1.2: Maintain flora and fauna on the landscape
Indicator (1b) 1.2a: The amount of area in each seral stage at present and key points in time

Objective (1b) 1.2a.1:	**Acceptable variance:**
Maintain seral stages within the natural disturbance regimes at present and key points in time	To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs.

Status: Not scheduled reporting time

Refer to objective (1a) 1.2b.1.

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

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

Status: Complete

A model for predicting occurrence(s) of rare plants within the FMA area was developed in 2003.

All field staff are trained to watch for rare plants. The Pre Harvest Assessment (PHA) crew utilizes maps from the model to identify potential sites that may contain rare plants. These sites are then field checked for rare plants. An example of a map produced from the model can be seen in Figure 7. No rare plants were identified in 2004.

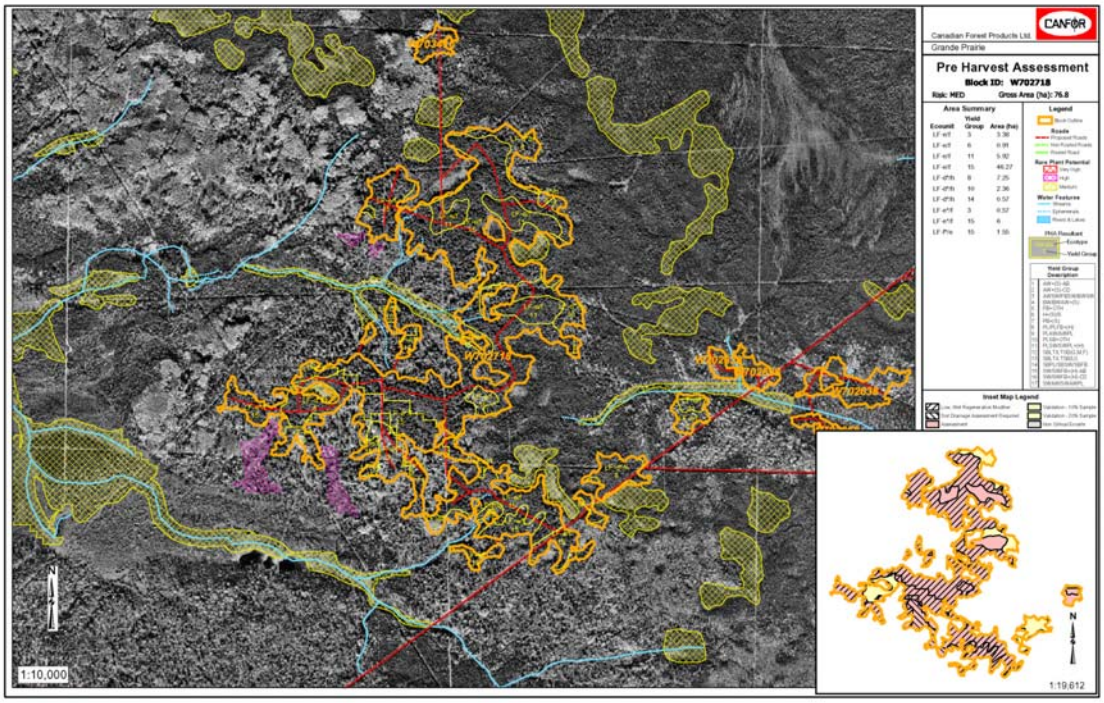

Figure 7. Map with Rare Plant Potential

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

Objective (1b) 1.2c.1:	**Acceptable variance:**
To develop management strategies to address the identified endangered or threatened wildlife species on the FMA area	Zero

Status: Meets

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

Canfor's list of 'endangered'[8] and 'threatened'[9] wildlife species was developed in April 2004. The list was compiled from Schedule 1 of the *Species At Risk Act* (SARA), species lists prepared by the Committee on the Status of Endangered Wildlife In Canada (COSEWIC) and lists maintained by Alberta Sustainable Resource Development. In January 2005, the Minister gave notice that 76

[8] Endangered - any species facing imminent extirpation or extinction.
Extirpation - a species no longer existing in the wild in Canada but occurring elsewhere in the wild.
Extinction - a species that no longer exists.

[9] Threatened - any species likely to become endangered if limiting factors are not reversed.

additional species were added to the *Species at Risk Act* (SARA). After review of the SARA list, one additional species of 'special concern'[10] was incorporated into Canfor's list i.e. grizzly bear. Canfor has supported the Foothills Model Forest grizzly bear project since 2000 and in January 2005 received habitat maps and resource selection function models for its FMA area. Canfor is currently evaluating these resources to determine their applicability to strategic and operational planning. Targets and indicators for other 'endangered' and 'threatened' species are presently being developed through the CSA Z809-02 recertification process.

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

Objective (1b) 1.2d.1:	**Acceptable variance:**
Compile a list of habitat requirements for selected indicator species within Canfor's FMA area	To maintain a carrying capacity within -10% of the current status at key points in time (0, 10, 20, 50, 100 and 200

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) 1.2d.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 important 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 number 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.

In 2004, ABMP personnel commenced implementation of a small-scale pilot project (2004 – 2006) to test the effectiveness of the program. 49 sites, including twelve sites accessible by helicopter only, were sampled in 2004. Each site was visited three times. A basic data management system has been developed and data conversion is being conducted to incorporate GIS and remote sensing data. Protocols for arthropods, fungi and aquatic species were developed and will be reviewed by experts in early 2005. Field-testing of additional protocols is scheduled for summer/fall 2005.

[10] Species of Concern - a species that may become endangered or threatened because of a combination of biological characteristics and identified threats.

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: In progress

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 marginally above the target of 300–600. This number will be reduced to within the target range following completion of the rouging process (removing poorly performing genotypes). Seed production in the orchard has not met target levels, so no rouging was completed in 2004.

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

Objective (1c) 1.1b.1:	**Acceptable variance:**
To maintain sufficiently large and balanced orchard populations of unrelated trees (20-60 genotypes) to safeguard diversity in a given seed orchard	Zero for maintaining the minimum number, however more than 60 clones are acceptable

Status: In progress

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

Status: Meets

Production of genetically improved stock is low (Table 5) as the seed orchard is still in the early stages of development.

2004 was the first year that genetically improved White Spruce was planted (44.4%). The percentage of genetically improved Lodgepole Pine stock planted decreased in 2004 (15.8%) compared to 2003 (22.7%) due to decreased area harvested in the zones where the improved stock can be planted (Central Mixedwood, Dry Mixedwood and Lower Foothills). The goal is to eventually use 70% orchard stock and 30% bulk seed stock for Canfor's planting program.

Stock Origin	2002 (%)	2003 (%)	2004 (%)
Bulk Lodgepole Pine Seed Collection Stock	76.4	77.3	84.2
Bulk White Spruce Seed Collection Stock	100.0	100.0	55.6
Bulk Black Spruce Seed Collection Stock	100.0	100.0	100.0
Genetically Improved Lodgepole Pine Seed Orchard Stock	23.6	22.7	15.8
Genetically Improved White Spruce Seed Orchard Stock	0	0	44.4
Genetically Improved Black Spruce Seed Orchard Stock	0	0	0

Table 5. Percent of Bulk Seed Collection Stock 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

Objective (1c) 1.1d.1:	**Acceptable variance:**
To include cones of at least 400-750 mother trees for the bulk seed collections for lodgepole pine and whitespruce and 50-150 mother trees for black spruce over a ten year period	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

Status: Meets.

No bulk seed was collected in 2004. The seed requirements within the various seed zones are currently being analyzed. It is predicted that Black Spruce and Lodgepole Pine seed will be collected in the summer of 2005.

When seed is collected, the cones are collected using a helicopter cone rake, which enables quick cone collection from many trees (Figure 8). The higher the number of trees the seed is collected from, the higher the genetic diversity.

Figure 8. 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

To compare current landscape structure to future landscape structure at key points in time and develop management strategies	**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

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.

4. 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.

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

Status: Meets

All harvested areas containing burned piles are infrared scanned the following spring after burning. Results from spring 2004 indicate no hot spots. There was no company caused fires from all other activities in the FMA area for this reporting period.

There were 4 minor fires in the FMA area, none of which were caused by Canfor. Table 6 details a complete list of the fires on the FMA area for 2004. Table 7 shows fire history over the last three years.

FIRE NUMBER	LOCATION	CAUSE	SIZE
GWF-039-04	12-1-66-25-W5M	Flaring gas	0.01 ha
GWF-056-04	NE16-67-2-W6M	Unknown	0.01 ha
GWF-067-04	SE16-69-4-W6M	Lightning	0.02 ha
GWF-073-04	SW23-69-26-W5M	Lightning	0.01 ha
Total			**0.05 ha**

Table 6. Fires on Canfor's FMA area in 2004 Supplied by SRD

Year	2002	2003	2004
Area Burned (ha)	61.90	6.31	0.05

Table 7. Fire History on Canfor's FMA Area

Please note: the number of fires reported on the FMA area in the May 1st, 2002- December 31st, 2003 Annual Report was 17 fires. Upon investigation it was found that 3 of the 17 actually were outside of the FMA area. The actual number of fires that occurred in that reporting period was 14. Canfor apologizes for the error.

Windfall is monitored on all types of flights (recon, aerial spray, final clearances). During a recent harvesting flight, some non-catastrophic windfall was observed in the E8 area. Portions of this windfall located directly adjacent to active harvest areas will be salvaged; however, no special efforts will be made to harvest the remoter portion given its small area (+/-15 ha.). In addition, during the various flights for reforestation activities, the stands adjacent to harvest areas, shown in Table 8, contained varying amounts of windfall. These will be evaluated during the summer of 2005 and, where appropriate, harvesting plans will be formulated.

Harvest Area	Comment	Approximate Area
E64002	Blowdown North end.	3.0
E64013	Blowdown NE corner	3.0
E64030	Blowdown south end	3.0
G28004	Blowdown in large patch	5.0
P32078	Blowdown mapped.	3.0
S130213	Blowdown near block	3.0
S130232	Blowdown near block	3.0
S14031	Massive blowdown.	5.0
S140659	Blowdown near block	3.0
S261516	Blowdown NE side.	3.0
W71034	Heavy blowdown	5.0
Total		**39.0**

Table 8. Status of Windfall Adjacent to Previously Harvested Areas

There were no catastrophic events of insects and disease reported in the FMA area for this reporting period.

During 2004, Canfor has become increasingly concerned about the Mountain Pine Beetle (MPB) outbreaks near Chetwynd, B.C. and Willmore Wilderness Area in Alberta. Canfor has become a member of the Peace Area Coalition – Mountain Pine Beetle and the West Yellowhead Mountain Pine Beetle Coordinating Committee. Canfor believes that MPB can be prevented from causing extensive damage within the FMA area by actively supporting these monitoring and suppression efforts.

Canfor and Weyerhaeuser have been actively involved in the pre-suppression and suppression activities to control MPB in areas of B.C. To that end, a proposal entitled, “A Collaborative Proposal to Monitor and Control Mountain Pine Beetle Incursions into West Central Alberta”, was prepared by Canfor and Weyerhaeuser. This was submitted to the Forest Resource Improvement Association of Alberta in December, 2004 and subsequently approved in January 2005.

Figure 9. Mountain Pine Beetle

Figure 10. Mountain Pine Beetle Attack

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

Objective (2b) 1.1a.1:	**Acceptable variance:**
To regenerate 100% of the harvested area as per the regenerated yield group as defined in the DFMP	+/- 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%)

Status: In progress

Canfor made a commitment within the DFMP to compare planned versus actual reforestation by yield group over a 5-year period. Tables 9 presents 4 years of data for 2000 - 2003. Of the 8 yield groups listed, all except 9, 11, 14 and 17 are within the acceptable variance. Silviculture staff are working to get each yield group within the acceptable variance

	Yield Group (ha)									
	2	**3**	**8**	**9**	**11**	**12**	**14**	**16**	**17**	**Total**
Pre Regeneration Yield Group (AVI)	1116	630	3022	177	581	616	480	3246	1281	11149
Treated Regeneration Yield Group	1036	683	3149	156	653	559	530	3353	1029	11149
Percent Difference	**6%**	**-9%**	**-5%**	**12%**	**-13%**	**9%**	**-11%**	**-4%**	**19%**	**0%**

Table 9. Planned Versus Actual Reforestation by Yield Group

The Company also monitors this 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, less than 1% (0.8%) of the blocks have changed from their original declaration. This is within the acceptable variance of 5%.

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

Objective (2b) 1.1b.1:	**Acceptable variance:**
Maintain seral stages within the natural disturbance regimes at present and key points in time	To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs

Status: Not scheduled reporting time

Repeat objective. Refer to objective (1a) 1.2b.1.

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

Objective (2b) 1.1c.1:	**Acceptable variance:**
All harvested sites are treated within 18 months after the end of the timber year	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

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

A report of the cutblocks harvested in the 2002/2003 timber year was generated from Canfor's block tracking database (Genus). The results showed that all cutblocks were planted within 18 months after the end of the timber year (Table 10).

Timber Year	# of Cutblocks Harvested	# of Cutblocks Planted Within 18 Months
2000/2001	130	130
2001/2002	136	136
2002/2003	127	127

Table 10. Number of Blocks Harvested that Were Planted Within 18 Months

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

Objective (2c) 1.1a.1:	**Acceptable variance:**
Maintain habitat conditions required by identified key indicator species using HSI models	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)

Status: Not scheduled reporting time

Repeat objective. Refer to objective (1b)1.1b.1.

Objective (2c) 1.1a.2:	Acceptable variance:
Maintain habitat conditions required by identified selected indicator species, using habitat constraint modeling	**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: Not scheduled reporting time

Repeat objective. Refer to objective (1b)1.1b.2.

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

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

Status: In progress

Ecosite phases[11] on the FMA area are defined in, "Refinement of Northern and West-Central Alberta Field Guides" (Canfor, 1999).

For the 2004 field season the collection process of Pre Harvest Assessment (PHA) data was amended. The initial stratification step now involves utilization of the landscape level ecosite mapping (Ecological Analysis and Modelling Reports). Once in the field, the mapped ecosite is confirmed or amended to the actual. All spatial and tabular data is entered into Canfor's block tracking database (Genus) at the end of the field season.

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

Objective (2c) 1.1c.1:	Acceptable variance:
Maintain growth and yield projections for tree species, as stated in the DFMP	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 submitted a growth and yield monitoring program to SRD which was approved on May 3rd of 2004. Establishment of field plots will commence in the 2005 field season.

[11] 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.

5. 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:	**Acceptable variance:**
To have less than 2% of productive area in Canfor's future permanent roads (LOC)	Zero

Status: Meets

A 2% withdrawl of productive forest landbase equals 12,983 ha or approximately 5,000 km of roads. Since 1999, Canfor has added approximately 103 ha (54 km) of LOC roads (Table 11). Please note that LOC 033475 was added to the 2003 results as it was missed in the previous report.

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 LOC 020871 LOC 020870	Camp 1 W77 E8 S-road E8 E road	8.28 9.94 4.86	11.81 14.98 8.11
2003	LOC 030770 LOC 031510 LOC 033475	E8 Ridge road Camp 5 K-road E8 Bolton Mainline	8.23 1.15 7.26	14.89 1.73 23.39
2004	LOC 040261	T140 access to SML 04005	0.62	1.21
Total			**54.18**	**102.88**

Table 11. 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:	**Acceptable variance:**
To minimize loss of area by working with other parties	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

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/Raven Energy Ltd**. – Canfor assigned its LOC 900871 consisting of 29 km (30 hectares) located from 64-24-W5M to 65-25-W5M to Raven Energy Ltd. Canfor no longer required the LOC and Raven could utilize this road to access its numerous wellsites in the area without the need for new road construction.
- **Canfor/Suncor Energy Ltd**. – To avoid the need for 'new' construction, Suncor reactivated three of Canfor's inactive LOC's; LOC 791358 (6.2 km), LOC 821100 (3.5 km) and LOC 831101 (6.6 km) to access its Cabin Creek Pipeline project which runs from 63-25-W5M to 61-1-W6M.

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 new ones are constructed.

The area withdrawn as a result of the energy sector since 1994 is reflected in Table 12.

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		388
2004	418	399
Total		**4,790**

Table 12. Area Loss From Energy Sector Withdrawals

Canfor initiated an integrated land management project in 2004. The objective of the project is to develop agreements with energy sector companies that will lead to increased collaboration of activities and reduce the cumulative impact on the landbase.

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

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

Status: Meets

Repeat objective. Refer to Objective (1a) 1.1a.1.

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

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 2003/2004 harvest cuts were superimposed onto the AVI. Results indicated that no cutblock boundaries overlapped into grasslands.

Objective (3a) 2.1a.3:	**Acceptable variance:**
Protect 100% of identified significant wildlife Mineral licks	Zero

Status: Meets

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

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

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

Status: Complete.

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

Goal (3a) 2.3: Maintain a combination of managed and rare physical environments on the forest landbase
Indicator (3a) 2.3a: The amount of area in managed forests and rare physical environments

Objective (3a) 2.3a.1:	**Acceptable variance:**
A combination of managed and rare physical environments will always be managed on the landbase	Zero

Status: Meets

This objective is very similar to objective (1a) 1.1a.1. 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)

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

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

Objective (3b) 1.1b.1:	**Acceptable variance:**
To develop a methodology to measure coarse woody debris, post harvesting	On average, no less than 90% of the pre-harvest CWD (coarse woody debris) left on site

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). Data was collected during the merchantable waste survey. It was determined later 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 appropriate protocols. Because this survey occurs in conjunction with the merchantable waste survey, data collection now occurs every second year commencing in 2002.

During the summer of 2004, coarse woody debris was measured in conjunction with the merchantable waste survey (for the 2003/2004 timber year). A report, entitled “Coarse Woody Debris: Survey Results”, was prepared by J.S. Thrower & Associates Ltd. and submitted to Canfor on January 25, 2005. Table 13, below, summarizes the results.

Description	Target Result (m3/ha)	Actual Result (m3/ha)
Pre & Post Coarse Woody Debris	96.4	206.8

Table 13. Coarse Woody Debris Results

To describe the results, J.S. Thrower & Associates Ltd. indicates:

At the block level, there are four main contributors to the high post-harvest volume including:

- *Logging waste left on site;*
- *Existing CWD;*
- *Non-merchantable trees left in the setting;*
- *Undersize, merchantable species;*
- *Undersize, non-merchantable species;*
- *Merchantable size, non-merchantable species;*
- *Live and dead useless trees.*

Some possible explanations for a higher post-harvest CWD are:

- *A large number of trees were left on site following harvest;*
- *A block had a large amount of live and dead useless trees or a high amount of non-merchantable trees;*
- *Blocks were treated differently, such that they contribute more CWD. If many plots were located in these blocks, these higher plots will influence the overall average."*

The report also indicates that the surveyors had a difficult time measuring the CWD that was in an advanced state of decay. This may distort some of the results.

The next survey is planned for the summer of 2006. The planned survey for that year will be examined in light of the 2005 results from this year to determine if the survey methodology needs modification.

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

Objective (3b) 1.1c.1:	**Acceptable variance:**
To meet the Forest Soil Conservation Report Guidelines	**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

Status: Meets

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

Canfor's new *Operating Ground Rules* (approved November 11th, 2004) specify that:

> *"**9.04** Non-productive landbase created by timber harvesting operations shall not exceed five percent of each harvest area without prior approval of Alberta. Non-productive landbase is created by temporary roads, rutting, bared landing areas, displaced soil, and debris piles.*
>
> ***9.06** Not more than two percent of the harvest area shall be disturbed by ruts as measured by a linear transect system as defined in the Forest Soils Conservation Guidelines."*

According to the *Forest Soils Conservation Guidelines*, 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.*

Rutting is assessed occularly during harvest and silviculture inspections. Results for the 2003/2004 timber year show there was no rutting greater than 2%.

The following was reported in the 2004/2005 Annual Operating Plan:

> "*During the 2003 Harvest Season, 120 blocks on the FMA were harvested for a total area of 2,717 ha. Total FMA road area was 82.9 ha. The FMA percent area in roads was 3.0%. The targeted road allowance is 5%. A total of 8 blocks exceeded the target (Table 14). Generally this occurred in small blocks (<10ha) as well as topography related blocks such as blocks in operational area E8.*"

Block	Operational Area	Planned Road Length (m)	Road Length (m)	Road Area (ha)	Block Area (ha)	%	Justification
W742559	DS	80	104	0.05	0.8	6.5	Blk<10ha
P330283	Pusk	500	874	0.44	5	8.7	Blk<10ha
P331084	Pusk	150	278	0.14	1.5	9.3	Blk<10ha
E600281	E8	1490	1641	0.82	14.9	5.5	Steep
E632522	E8	1650	1784	0.89	16.5	5.4	Steep
G230699	ES	290	301	0.15	2.9	5.2	Blk<10ha
S22038	DN	380	531	0.27	3.8	7	Blk<10ha
S260388	DN	440	450	0.22	4.4	5.1	Blk<10ha

Table 14. Road Allowance Results

Value (3b) 2.: Soil Quality
Goal (3b) 2.1: Minimize soil erosion
Indicator (3b) 2.1a: Occurrence of slumping caused by road construction

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

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 m^2;
- Minor slumps affect ≤ 2500 m^2; and
- Major slumps affect >2500 m^2.

Annual road inspections were conducted in the summer of 2004 for the 2003/2004 harvest season. The results indicate there were no major slumps caused by road construction. In 2004, however, two minor slumps (Ridge Road, station 7+659 and Waskahigan Mainline, station 0+506) were identified in addition to the two previously reported (Norris Road, station 15+430 and Big Mountain One-Way, station 17+100). As well, it was discovered that a minor slump that had occurred in 2000 (Norris Road station 14+444), had not been previously recorded. See text below for details.

Minor slumps identified or monitored in 2004 are as follows:

- Ridge Road (LOC 030770) TWP 60 RGE 4 W6M. Road constructed fall 2003.
  - Station 7+659, date of slump: 2004, size approximately 300 m^2.
    - 2004 remediation efforts included reducing slope angle, removal of trees above slump, seeding. Will be monitored twice per year until stabilized.

- Norris Road (LOC 971399) TWP 59 RGE 5 W6M, road constructed in 1997.
  - Station 14+444, date of slump: 2000, size: 250 m^2.
    - 2004 remediation efforts: removal of wasted material to re-establish ditchline, clean out culvert, seeding. Will be monitored twice per year until stabilized
  - Station 15+430, monitored since 2001, size: 200 m^2.
    - 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;
    - Fall 2002: No problems noted;
    - June 2003: Situation stable, no new slumping; and
    - September 2004: Site stable, no additional movement noted. Site to be re-inspected twice per year until stabilized.
- Waskahigan Mainline (LOC 1292) TWP 64 RGE 1 W6M. Road constructed 1970.
  - Station 0+506, date of slump 2004, size: 200 m^2.
    - Slump occurred in 2004 (Figure 11), creeping of soil in previous years;
    - Remediation in 2004 included installation of "weeping pipe" drain, sloping and compaction of site, seeding, ditching (Figure 12); and
    - Site to be re-inspected twice per year until stable.
- Big Mountain One-Way (LOC 1206) TWP 70 RGE 5 W6M. Road constructed 1970's.
  - Station 17+100, monitored since 1999.
    - Continues to be stable, will be monitored yearly.

Figure 11. Slump on Waskahigan Mainline

Figure 12. Remediation of Slump

Figure 13. Remediated Slump

Along with slumps, road grade cut failures (Table 15) are also tracked in Canfor's Forest Roads Management System (FRMS-in Genus).

Road ID	Approximate Station	Area (m^2)
Canfor Mainline (2000 Road)	83+373	80
Canfor Mainline (2000 Road)	43+150	70
Lower Smoky Road	3+251	25
Lower Smoky Road	8+152	30
Lower Smoky Road	12+354	35
Lower Smoky Road	32+755	80
Lower Smoky Road	34+929	40
Lower Smoky Road	36+556	90
Camp 1 Road (7000 Rd)	0+452	20
Camp 1 Road (7000 Rd)	0+907	25
Camp 1 Road (7000 Rd)	5+044	50
Camp 1 Road (7000 Rd)	5+270	50
Norris Road	5+709	30
Norris Road	6+403	10
Norris Road	14+468	50
Ridge Road	5+470	50
Ridge Road	5+808	80
Ridge Road	6+353	90
Ridge Road	6+653	60
Bolton Mainline	3+815	20

Table 15. Annual Road Inspection 2003/2004 Harvest Season Results of Road Cut Failures

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

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

Status: Meets

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

Aerial and ground surveys conducted in the 2003/2004 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 14).

- 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.
  - Fall 2004. Inspected by Canfor staff and SRD representative. Established with vegetation and no movement noted. Site stable.

Figure 14. 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

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

Status: Meets

A process was initiated in 2003 to assess methodologies for evaluating the effects of forest roads on water quality. The goal was to develop a sustainable forest management (SFM) indicator that could be used to evaluate and document how well current erosion control practices are protecting water courses from accelerated delivery of fine sediment. To achieve this objective, the following three-phase adaptive management plan was designed:

- Phase I: Literature Review and Development of the Monitoring Program. This phase was completed in March of 2003.
- Phase II: Pilot Project. This phase was initiated in the summer of 2003 and included field trials to test the applicability of the Stream Crossing Quality Index (SCQI) survey in west central Alberta. The work was conducted in several operational areas of FMA 9900037, including the E8 (Bolton Creek), Deep North and Simonette areas. Along with the field trials, this pilot project included a comprehensive report and a series of recommendations for:
  - Improving the SCQI survey methodology; and
  - Improving erosion and sediment control (ESC) practices.
- Phase III – Data Collection, Analyses and Reporting.

Phase III began in May 2004 with the planning of field work to objectively test and validate the SCQI methodology through a formal water quality monitoring program. This program was implemented in July 2004 using automated turbidity monitoring equipment in an upstream-downstream experimental

design. Turbidity monitoring continued until freeze-up when the equipment was removed from the field (end of October 2004). The water quality monitoring identified some problems with the SCQI survey procedure when applied in areas with very fine textured soils. The SCQI procedure was subsequently revised and improved based on the initial water quality monitoring results. The Phase III program also included applying the revised SCQI procedure in different select regions of the FMA area to see how well it could be used operationally. Recommendations made to Canfor concerning the feasibility of the SCQI method as an SFM indicator for the protection of water quality are based on the integrated results of the 2004 SCQI surveys and the analyses of continuous turbidity data. The 2004 water quality monitoring program was implemented at five crossings within the area surveyed in 2003. Continuous turbidity data was collected upstream and downstream for each of the five crossings for a time spanning from July and to late October. Data from the upstream crossing is considered the "control" for the downstream site. The difference in turbidity between the upstream and downstream data is termed "induced turbidity", and is normally attributed to suspended sediment generated by the stream crossing. This difference is then compared to the "predicted" outcome provided by the SCQI individual crossing score. A regression analysis is then used to determine how well the SCQI method is able to predict the actual measured level of induced turbidity.

Figure 15. Data Logger Housing

Figure 16. Turbidity Monitoring

Figure 17. Turbidity Monitoring

The data logger housing for the SCQI validation water quality program can be seen in Figure 15. Figures 16 and 17 show the probe casing (black ABS pipe) in the stream while the data logger (grey case) is bolted to the fence post on stream bank.

Although water quality monitoring successfully measured induced turbidity throughout the season at all five crossings, the monitoring sites that were selected were only able to represent crossings with a Water Quality Concern Ratings (WQCR) in the Medium, High and Very High categories (Table 16). The graph in Figure 18 shows a strong relationship (R2 = 0.9555) between the measured turbidity value and the SCQI score assigned to the crossing. This relationship is essentially the measure that confirms the ability of the SCQI procedure to indicate the degree of sedimentation that results from forest road stream crossings.

Score	Water Quality Concern Rating (WQCR)
0	None
0< score <0.4	Low
0.4≤ score ≤0.7	Moderate
0.8≤ score ≤1.6	High
> 1.7	Very High

Table 16. SCQI Crossing Score and Corresponding WQCR

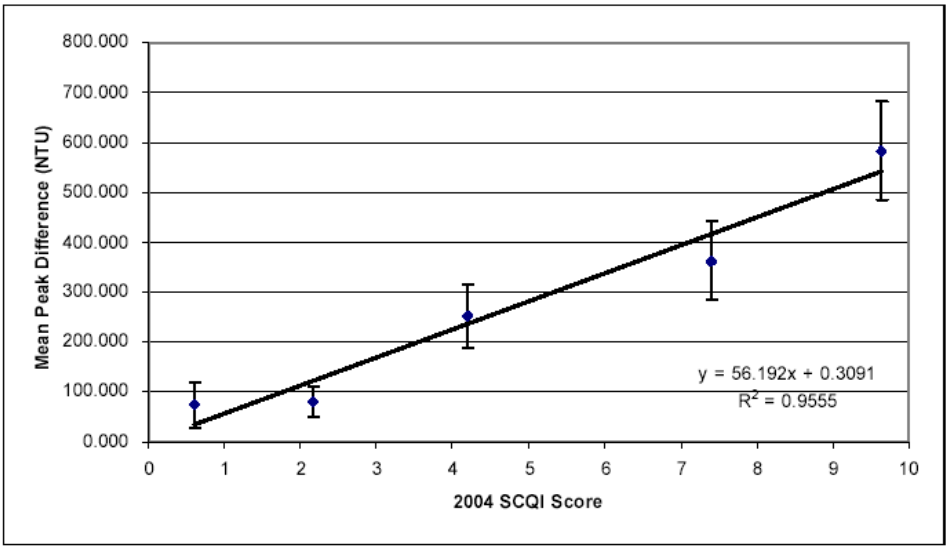

Figure 18. Average Difference Between Upstream and Downstream Monitoring Sites

SCQI surveys conducted in the FMA in 2004 were focused on the Smoky, Deep South and Latronell Operational Units. Based on a sample of 291 stream crossings, 25.4% received a WQCR of High or Very High with 16.2% in the Moderate range (Table 17). The remaining 58.4% of crossings had a WQCR of Low or None.

Operational Unit	Area (ha)	# of Crossings Surveyed	None		Low		Moderate		High		Very High	
			#	%	#	%	#	%	#	%	#	%
Smoky	61,420	183	55	30.1	62	33.8	28	15	15	8.2	23	12.6
Deep South	105,700	44	15	34.1	15	34.1	5	7	7	15.9	2	4.5
Latornell	49,250	64	10	15.6	13	20.3	14	13	13	20.3	14	21.9
2004 Areas Cumulative	**216,370**	**291**	**80**	**27.5**	**90**	**30.9**	**47**	**16.2**	**35**	**12**	**39**	**13.4**

Table 17. Summary of 2004 SCQI Survey Results

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

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

Status: Meets

Prior to the SCQI method of rating sedimentation delivery potential, 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 3 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 installed to divert water off of the road running surface into the ditch where settling ponds were located to trap sediment from the runoff.

Figure 19. LOC 3735 e.g. of Geotextile

Figure 20. 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)

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

Status: Meets

There were no incidents of harvesting within approved buffer zones. Any deviations to the ground rules were noted in the Annual Operating Plan (AOP) and approved by SRD. A comparison of planned versus actual buffered watercourses was conducted (Table 18). In the Detailed Forest Management Plan (DFMP) a total of 65,333.7 ha were planned for buffering. The actual hectares that were buffered in the AOP were 67,201.9 ha. This demonstrates that the forest cover along watercourses is being maintained.

Year	DFMP Buffer Area (ha)	AOP Buffer Area (ha)
2004	63,333.7	67,201.9

Table 18. DFMP Buffer Area Versus AOP Buffer Area

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

Objective (3c) 1.1d.1:	**Acceptable variance:**
To have zero excursions of herbicide in water	Zero

Status: Meets

There were no excursions of herbicide in water.

In 2004, a review of approximately 35% of the cutblocks treated in the 2003 herbicide program revealed 6 herbicide excursions, down from 8 in 2003. None of the excursions were in water or riparian areas. All excursions were recorded as non-compliances/non-conformances in Canfor's Incident Tracking System (ITS) and reported to SRD. The total area affected was less than 2.5 ha. An example of one of the excursions can be seen in Figure 21.

Figure 21. Herbicide Excursion

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: Meets

Canfor has completed the process of developing a DFMP/AOP Validation Process with Timberline Forest Inventory Consultants, which enables Canfor to track and report the amount of forest cover removed above the H60 line.

Canfor verifies the watersheds that are exceeding the targets each year. The results of the ECA in the Bull Trout area can be found in Objective (1b) 1.1b.2. Of all watersheds outside of the Bull Trout area, none exceed the 40% target.

6. 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:	**Acceptable variance:**
All harvested sites are treated within 18 months after the end of the timber year	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.

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

Objective (4a) 1.1b.1:	**Acceptable variance:**
Limit the number of occurrences and amount of area impacted by fire and catastrophic events of insects, disease, windfall, etc.	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.

Indicator (4a) 1.1c: The numbers of equipment in use and amount of technology with low carbon dioxide (CO_2) and nitrogen oxides (NO_x) emissions

Objective (4a) 1.1c.1:	**Acceptable variance:**
To promote use of equipment and technology that minimizes CO_2 and NO_x emissions	Not know to date

Status: Meets

Canfor commissioned a report "*Investigative Report Addressing Carbon Dioxide (CO_2) 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 CO_2 emission technology.

The following clause was inserted in all harvesting, hauling and site preparation contracts for the 2005/2006 timber year:

1. *The contractor will report following to Canfor:*
   - 1.1. *The amount and type of fuel used by each major machine type, namely:*
     - 1.1.1. *feller/bunchers;*
     - 1.1.2. *skidders;*
     - 1.1.3. *processors;*
     - 1.1.4. *other heavy equipment;*
     - 1.1.5. *light vehicles;*
     - 1.1.6. *camp fuel use.*

This data will be compiled in 2005 and baseline values will be established for fuel emissions. Contractors will continue to report this data and will be encouraged to make improvements to the baseline values.

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

Objective (4a) 1.2a.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

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

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

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

Status: In progress

Repeat objective. Refer to objective (3b) 1.1b.1.

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

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

Status: Complete

In 2001, Geographic Dynamics Corp prepared a report titled, "Role of Vascular Plants as Indicators of Potential Nitrogen Levels in Canfor Grande Prairie's FMA Area", which was acknowledged 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

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

Status: Meets

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

The 2004 AOP submission included a validation between preliminary plans versus actual laid out areas. This comparison ensures operational planning coincides with DFMP management strategies. The AOP, including the variances, was approved by SRD (Table19). The variance target was +/- 20%.

Operational Sub-unit	% Variance
DS-2	0.07
E8-1	1.20
ES-2	-0.40
Lat-3	-1.20
Pusk-4	1.10
Sim-3	0.30
Smoky-1	-7.20
Smoky-3	-0.10

Table 19. Variation Between DFMP Planned and AOP Actual Laid Out Cutblocks

Goal (4b) 1.2: To reforest every hectare harvested
Indicator (4b) 1.2a: The amount of harvested area in the regenerated yield group

Objective (4b) 1.2a.1:	**Acceptable variance:**
To regenerate 100% of the harvested area as per the regenerated yield group as defined in the DFMP	+/-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%)

Status: In progress

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

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

Objective (4b) 1.2b.1:	**Acceptable variance:**
All harvested sites are treated within 18 months after the end of the timber year	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.

Goal (4b) 1.2: Maximize utilization of merchantable wood
Indicator (4b) 1.3a: Amount of merchantable wood (m^3) left on site

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

Status: Meets

Waste surveys are conducted every second year. The results from the survey in 2004 indicate the average merchantable waste was 0.84% for coniferous and 0.75% for deciduous. The range for coniferous merchantable waste was 0.36% to 1.44% while deciduous ranged from 0.12% to 2.60%.

The next waste survey is scheduled for 2006.

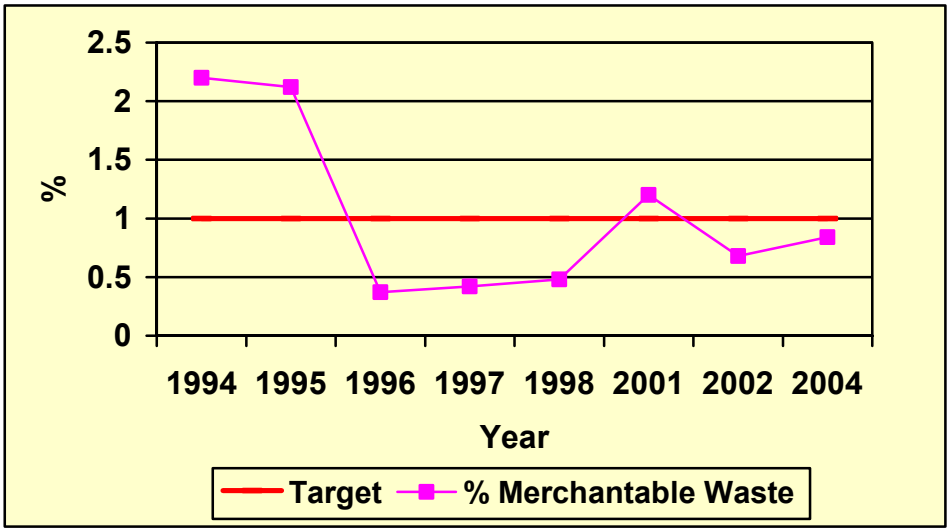

Figure 22. Merchantable Waste Survey Results (1994 to Present)

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

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

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 2004 (Table 20).

Timber Year (May 1 – April 30)	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**	**2002/ 2003**	**2003/ 2004**
Volume of Salvage Wood (m^3)	25,166*	14,480	8,440	4,418	16,943
* Volume indicated is higher than average due to the removal of forest cover for the Alliance Pipeline project in the FMA area					

Table 20. 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)

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

Status: Meets

Repeat objective. Refer to objective (3a) 1.1a.1.

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

Objective (4c) 1.1b.1:	**Acceptable variance:**
Maintain seral stages within the natural disturbance regimes at present and key points in time	To be within the range of the natural disturbance regimes for seral stages in the FMA area and FMUs

Status: Not scheduled reporting time.

Repeat objective. Refer to objective (1a) 1.2b.1.

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

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

Status: Meets

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

After superimposing all harvested cutblocks for the 2003/2004 timber year onto the Alberta Vegetation Inventory (AVI) it was determined that 15 of the 118 blocks harvested (Table 21) showed overlap between harvested area and yield group 13 . All of these areas were polygon slivers comprised of fringe types harvested with the cutblock or a forest cover type that was misclassified as yield group 13.

W72106 was the only cutblock that had an appreciable amount of the original yield group 13. After field verification, it was reclassified to yield group 14. The area that was harvested was a knoll of yield group 14 (Merchantable black spruce and pine type) within the midst of a black spruce unmerchantable yield group 13 stand type.

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Cutblock #	Area Harvested Overlapping Yield Group 13 (ha)
S23096	0.3
S232933	0.1
W741046	0.2
W772106	1.7
W772132	0.8
G230347	0.2
G231487	0.1
G232838	0.2
P330539	0.3
P330583	0.1
P33074	0.1
P331151	0.1
P373288	0.1
S130878	0.5
Total	**4.9**

Table 21. Cutblocks with Overlapping Yield Group 13

A total of 0.2% of the area harvested showed overlap with yield group 13 (Table 22) in 2004. All of these areas were polygon slivers or forest cover types misclassified as yield group 13.

Harvest Season	Total Area Harvested (ha)	Total Original AVI Forest Cover Yield Group 13 (ha)	Percent of Total Area Harvested Overlapping Yield Group 13 (%)
2002/2003	2,774.0	7.5	0.3%
2003/2004	2,808.9	4.9	0.2%

Table 22. Percentage of Total Area Overlapping Yield Group 13

Objective (4c) 1.1c.2:	**Acceptable variance:**
Delineate all low productive sites (>1 ha) within harvest areas as "no harvest zones"	Zero

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 118 cutblocks harvested in 2003/04 timber year, 9 contained low productive sites ranging from 0.16 to 1.42 ha in size (Table 23). Of the 9 cutblocks, only 1 contained sites>1 ha (S131526) and it had the appropriate no harvest zone applied.

Cutblock #	Original AVI Forest Cover Yield group 13 (ha)
G230347	0.24
G230614P	0.51
G231487	0.17
G233434	0.51
G303484	0.44
P331363	0.21
S131526	1.42
S232933	0.17
S260388	0.55
Total	4.22

Table 23. Cutblocks Containing Yield Group 13

Goal (4c) 1.2: Productive lands are restored to productive status
Indicator (4c) 1.2a: The amount of productive area regenerated (excluding cut units)

Objective (4c) 1.2a.1:	**Acceptable variance:**
Track amount of previously withdrawn areas brought back into productive status	Zero

Status: Meets

All previously withdrawn areas that are brought back to productive status are tracked (Table 24). No reforestation of withdrawn areas occurred in 2004. Plans are in place complete a reforestation program on selected withdrawn areas in 2005.

Year	Hectares of Wellsites/Roads/Seismic Lines Planted (ha)
1999	13
2000	0
2001	22
2002	121
2003	0
2004	0

Table 24. Previously Withdrawn Areas Reforested

Objective (4c) 1.2a.2:	Acceptable variance:
Track burned areas to ensure that they have been regenerated (with preference to natural regeneration)	To track regeneration success on fires >4 ha

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 hectares (Table 7) were burned in the FMA area of which 19.9 hectares were planted in 2002 and 36.2 hectares planted in 2003. Approximately 10 hectares remain to be planted in 2005; In 2003 a total of 6.31 hectares (Table 7) were burned, of this 2 hectares were in productive landbase and were planted in 2004 and the remainder will be left for natural regeneration; and in 2004 a total of 0.05 hectares were burned (Tables 6 and 7), which 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

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

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/Raven Energy Ltd**. – Canfor assigned its LOC 900871 consisting of 29 km (30 hectares) located from 64-24-W5M to 65-25-W5M to Raven Energy Ltd. Canfor no longer required the LOC and Raven could utilize this road to access its numerous wellsites in the area without the need for new road construction.
- **Canfor/Suncor Energy Ltd**. – To avoid the need for 'new' construction, Suncor reactivated three of Canfor's inactive LOC's; LOC 791358 (6.2 km), LOC 821100 (3.5 km) and LOC 831101 (6.6 km) to access its Cabin Creek Pipeline project which runs from 63-25-W5M to 61-1-W6M.

In 2004, Canfor established an Integrated Land Management Committee, which has developed a mandate and identified key activities that would be of interest to Canfor and the oil and gas industry such as:

- Road access
- Planning
- Surface Issues
- Social Issues

Canfor is currently in the process of negotiating with Canadian Natural Resources Limited, Suncor Energy Ltd., Devon Canada Corporation and Burlington Resources Ltd. to enter into Letters of Agreement with these companies. The intent is to work together at planning and operational levels to minimize and/or reduce the ecological footprint on the land base in Canfor's FMA area.

Canfor has also been working with Tolko to integrate operational planning. In the 2003\2004 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.

7. 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

Objective (5a) 1.1a.1:	**Acceptable variance:**
To harvest at levels less than or equal to the long-term level	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

Status: Meets

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

The 2003/2004 harvest season was the final year of the 5 year cut control quadrant, which concluded in an undercut situation (Table 25). The approved Annual Allowable Cut (AAC) for the Forest Management Agreement (FMA) area is 630,400 m^3, which includes an average salvage drain (timber removal from the energy industry). Because the salvage drain is variable year to year, the DFMP AAC (which does not includes the drain) of 640,000 m^3 is used and is balanced with the actual salvage drain numbers (included in the harvested volume).

Quadrant by Timber Year	Harvested (m^3)	AAC (m^3)	Variance (m^3)	Variance (%)
1999/2000	535,748	640,000	-104,252	-16.29%
2000/2001	643,349	640,000	3,349	0.52%
2001/2002	557,962	640,000	-82,038	-12.82%
2002/2003	596,531	640,000	-43,469	-6.79%
2003/2004	621,052	640,000	18,922	-2.96%
Total	**2,954,668**	**3,200,000**	**-245,332**	**-7.67%**
2004/2005 (projected)	633.395	640,000	-6,605	-1.03%

Table 25. 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

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

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 26). In 2004, Canfor's total contribution increased over 2003 by approximately 9 million dollars, for the most part due to the increased stumpage cost.

Contribution	Amount ($Millions)				
	2000	2001	2002	2003	2004
Property Tax	0.7	0.8	0.8	0.8	0.9
Salary Wages	11.6	12.0	13.5	14.6	14.7
Contract services Local[1]	24.8	25.3	29.0	34.6	36.9
Contract services Non-Local[1]	6.9	7.0	7.2	8.6	8.1
Supplies	5.0	5.6	4.4	5.5	6.0
Energy	2.3	6.8	4.2	4.0	4.4
Stumpage	2.3	4.6	3.0	2.9	7.9
Community Donations	0.1	0.1	0.1	0.1	0.1
TOTAL	**53.8**	**62.1**	**62.3**	**70.2**	**79.0**

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.

Table 26. 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

Objective (5b) 1.1b.1:	**Acceptable variance:**
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	Zero, unless mutually agreed to by both Canfor and Alberta Sustainable Resource Development

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 early 2005.

The sawmill projects were submitted to the Minister as fulfillment of Section 33(1) and 33(2) of the Agreement. Once the Co-Generation project is complete, the Minister will determine if the commitments under Section 33(1) and 33(2) have been fulfilled.

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

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. Once the Co-Generation project is complete, the Minister will determine if the commitment under Section 33(4) has been fulfilled.

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

Objective (5c) 1.1a.1:	**Acceptable variance:**
0.5% of the conifer AAC is made available for local use	Zero

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 m^3) 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 SRD worked cooperatively to identify areas for this program. There have been a total of 16 permits issued since 1999 (Table 27).

Timber Year Issued	# of Permits Issued
1999/2000	6
2000/2001	2
2001/2002	2
2002/2003	0
2003/2004	6
2004/2005 (forecasted)	5

Table 27. Number of Permits Issued within FMA Area

Objective (5c) 1.1a.2:	**Acceptable variance:**
Up to a set volume of 10,000 m^3 of conifer is available in the FMA area for the Community Timber Use Program	Zero

Status: Meets

In accordance with the Forest Management Agreement (FMA), paragraph 8(d), Canfor must make up to 10,000 m^3 available for a Community Timber Use (CTU) Program.

The 2004/05 harvest season was the first year that the SRD has requested that the 10,000 m^3 volume be made available. This volume was made available in the Economy and Puskwaskau areas. The volume in Puskwaskau was bid on by the local sawmillers in the Valleyview area, however, none of the sawmillers or local loggers bid on the volume in the Economy area. This volume went up for competitive bid and Canfor was the only bidder on this volume. It was incorporated into Canfor's 2004/05 harvest plan.

Canfor and SRD are cooperating to make the CTU and Local Timber Permit (LTP) volume available as part of it's 5 year General Development Plan. Canfor plans to show the location of the next 5 years worth of timber in the 2005 Annual Operating Plan (AOP).

Indicator (5c) 1.1b: Recreational opportunities

Objective (5c) 1.1b.1:	**Acceptable variance:**
Complete a recreational assessment within 5 years after the DFMP is approved	Zero

Status: In progress

The DFMP was approved on November 3rd, 2003. This objective will be completed by November 3rd, 2008.

Objective (5c) 1.1b.2:	**Acceptable variance:**
Ensure 100% of Canfor campgrounds are maintained on the FMA area for use by the public	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 1 near 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.

Since 2003, surveys have been conducted on weekends and weekdays to gather data regarding usage, satisfaction, comments, etc. Data was collected in 2003 and 2004 and the results are provided in Tables 28 to 31.

Town/City	Percentage						Total
	Macleod Flats	Economy Lake	Frying Pan Creek	Westview	Swan Lake	Stoney Lake	
Beaverlodge, AB	4.2	0	0	0	0	0	1.8
Grande Prairie, AB	73.2	33.3	33	0	42.2	7.1	47.1
Laglace, AB	1.4	0	0	0	0	0	0.6
Not specified	1.4	6.7	16.7	80	2.2	0	4.7
Wembley, AB	2.8	0	0	0	2.2	0	1.8
Grovedale, AB.	14.1	0	0	0	0	0	5.9
Bezanson, AB	2.8	40	0	0	0	0	4.7
Sundre, AB	0	6.7	0	0	0	0	0.6
Valleyview, AB	0	6.7	0	0	37.8	0	10.6
St. Albert, AB	0	6.7	0	0	0	0	0.6
Edmonton, AB	0	0	16.7	0	11.1	0	3.5
Grande Cache, AB	0	0	16.7	20	0	0	1.2
Spruce Grove, AB		0	16.7	0	0	0	0.6
High Prairie, AB	0	0	0	0	0	3.6	0.6
Fairview, AB	0	0	0	0	0	28.6	4.7
Hines Creek, AB	0	0	0	0	0	25.0	4.1
Worsley, AB	0	0	0	0	0	14.3	2.4
Woking, AB	0	0	0	0	0	3.6	0.6
Whitecourt, AB	0	0	0	0	2.2	0	0.6
Red Deer, AB	0	0	0	0	0	3.6	0.6
Eureka River, AB	0	0	0	0	0	3.6	0.6
Spirit River, AB	0	0	0	0	0	3.6	0.6
Camrose, AB	0	0	0	0	2.2	0	0.6
Bluesky, AB	0	0	0	0	0	7.1	1.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table 28. Visitor Home Town/City

Recreation Area	Percent										
	Hunting	Fishing	Nature/ Camping	Picnic	ATV	Photography	Horses	Boat / Canoe	Hiking	Work	Other
Macleod Flats	30.0	0	65.6	0	73.8	0	0	53.3	90	0	66.7
Economy Lake	30.0	0	7.8	0	21.4	0	0	33.3	0	0	0
Frying Pan Creek	40	0	1.6	0	0	0	0	0	10	0	0
Westview	0	0	1.6	0	0	0	0	0	0	0	0
Swan Lake	0	71.2	0	25	2.4	0	0	0	0	0	0
Stoney Lake	0	28.8	23.4	75	2.4	0	0	13.3	0	100	33.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table 29. Activities

Recreation Area	No. of Campsites				Number Sites Available [1] (2003-2004)	Number of Occupied Sites	% Occupancy (2003-2004)
	Single	Double	Triple	Total			
Macleod Flats	5	7	0	12	3,960	627	15.8
Economy Lake	11	0	3	14	4,620	133	2.9
Frying Pan Creek	11	1	0	12	29,52	63	2.1
Westview	2	0	1	3	738	23	3.1
Swan Lake	0	0	0	0	0	103	0[2]
Stoney Lake	28	0	0	28	4,088	88	0
					16,358	483	6.3

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 30. Occupancy

Recreation Area	Site Rating				Total (%)
	Poor	Fair	Good	Excellent	
Macleod Flats	0	0	15.5	84.5	100.0
Economy Lake	0		14.3	85.7	100.0
Frying Pan Creek	0	0	60.0	40.0	100.0
Westview	0[1]	0[1]	0[1]	0[1]	0
Swan Lake	0	0	85.1	14.9	100.0
Stoney Lake	0	14.3	67.9	17.9	100.0
Overall	0	2.4	45.5	52.1	100.0

Note:
1. Surveys were conducted but no people were available for interviews

Table 31. Rating of Site and Facility Quality

Objective (5c) 1.1b.3:	**Acceptable variance:**
Promote Canfor campgrounds to the public	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), Muskoseepi Park, Valleyview Tourism Center, High Prairie Tourism and Dunvegan Visitor Center. The brochure has been revised to include information regarding Stoney Lake.

Figure 23. Swan Lake Recreational Area

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

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

Status: Meets

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

In accordance with the Trappers Consultation and Notification Program, maps for the 2004/2005 harvest season were hand delivered to trappers with registered traplines on the FMA area.

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:	**Acceptable variance:**
Contact all outfitters directly impacted by harvest operations	Zero

Status: Meets

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

All outfitters were contacted by mail with a 5 year General Development Plan (GDP) map prior to harvest in 2004.

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:	**Acceptable variance:**
To increase lumber recovery by 14% at the millsite	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.

8. 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

Objective (6a) 1.1a.1:	**Acceptable variance:**
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	To address 90%

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.

Objective (6a) 1.1b.1:	**Acceptable variance:**
100% of public issues received after November 1999 are responded to by Canfor.	Zero

Status: Meets

All public concerns or comments are tracked in Canfor's Incident Tracking System (ITS). In 2004, there were 21 concerns/comments tracked. All of them received a response from Canfor. A summary of the concerns/comments follows:

- 7 regarding hauling an log trucks;
- 6 regarding concerns for wildlife, protected areas, or general information about the Sustainable Forest Management Plan (SFMP);
- 3 regarding vegetation management;
- 1 regarding trapping;
- 1 regarding Swan Lake;
- 1 regarding highway cleanup;
- 1 regarding waste surveys; and
- 1 regarding Canfor's Forest Management Advisory Committee (FMAC).

As well, Canfor received a number of concerns/comments regarding the Hines Creek Mill closure. Although this is not in the Canfor Grande Prairie Defined Forest Area (DFA), it should be noted that these concerns/comments were answered either in person or through the media.

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:	**Acceptable variance:**
To provide increased opportunities for input	Zero

Status: Meets

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

- As members of Canfor Forest Management Advisory Committee;
  - The Metis Zone 6 was an active member of Canfor's Forest Management Advisory Committee (FMAC) in 2004. As well, a representative from the Sturgeon Lake Cree Nation (SLCN) committed to becoming an active member in late 2004. 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."*
- Holding separate meetings to discuss specific topics of concern;
  - Meetings have been held with SLCN throughout the reporting period to continue with a working relationship. In 2004 work continued on a draft Memorandum of Understanding (MOU) between the two parties. A final version, containing information regarding opportunities for input, is expected in 2005; and
  - In November 2004 Canfor met with the Asenewuche Winewak Nation (AWN) to discuss the concept of an MOU between Canfor and AWN.
- By hosting open houses in local communities;
  - Annual Operating Plan (AOP) open houses were held in Grande Prairie, Grande Cache and Surgeon Lake in November 2004; and
  - A Vegetation Management Plan open house was held in Valleyview in February 2004.
- Through the Trappers Consultation and Notification Program (see objective (5c)1.1c.1); and
  - In January 2004 a letter was sent to SLCN proposing a trapper liaison position and other consultation opportunities; and
  - Canfor hosted a meeting with SLCN trappers at the band office.
- By responding to letters.
  - In September 2004, Canfor responded to the Kelly Lake Metis Settlement questions contained in their Aug 12, 2004 letter. The response included answers to questions about how Canfor manages wildlife habitat and provided direction regarding how to access Canfor planning documents and other information.

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

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.

The 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. An example of this is the response Canfor provided to the Kelly Lake Metis Settlement questions about forestry planning, especially regarding environmental and wildlife management.

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:	**Acceptable variance:**
To develop and implement early consultation	Zero

Status: Meets

All methods of obtaining input listed in objective (6b) 1.1a.1 are examples of early consultation.

But one of the earliest methods of consultation that become operational practice is via participation in the Forest Management Advisory Committee (FMAC). The group provides direction to Canfor's certification commitments in the Detailed Forest Management Plan/ Sustainable Forest Management Plan.

The Metis Zone 6 was an active member of FMAC in 2004. Its representative reviewed the May 1st, 2002-Dec 31st, 2003 Annual Performance Monitoring Report and was present during the development of the values, objects, indicators and targets under Elements 6.1 "*Aboriginal and Treaty Rights*" and 6.2 "*Respect for Aboriginal Forest Values, Knowledge and Uses"* which will comprise components for updating the SFM P to the CSA Z809-02-standard

A representative from the Sturgeon Lake Cree Nation (SLCN) committed to becoming an active member in late 2004. Canfor provided the new values, objectives indicators and targets for review in November of 2004. No changes were recommended from the SLCN.

As well, Canfor met with the Asenewuche Winewak Nation (AWN) to discuss its potential membership. AWN participates on the Foothills Model Forest public group and are not interested in joining Canfor's FMAC at this time.

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:	**Acceptable variance:**
To identify present and future employment business opportunities	Zero

Status: Meets

The following are examples of aboriginal employment or initiatives at Canfor during 2004:

- Sturgeon Lake Cree Nation (SLCN) band members were hired for summer employment on the forestry field crew. The total was 6 person months;
- SLCN completed a 417 ha manual brushing project and a 85 ha cut-stump project;
- SLCN crews were hired to install delineator bags for the aerial herbicide spray program. Total area completed under the program: 3051 ha. The total time spent was 35 person days;
- SLCN crews were hired to conduct debris pile burning (24 person days) and sign maintenance (18 person days); and
- Canfor met with SLCN to review the council's concerns about draft 4 of the Memorandum of Understanding (MOU). Canfor agreed to develop a work plan to implement terms of MOU.

In addition, when the MOU between Canfor and SLCN is finalized, it 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

Objective (6c) 1.3a.1:	**Acceptable variance:**
Re-assess the status of the existing archaeological and historical overview assessment that was completed on the FMA area and update, if necessary	Zero

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 factors 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. Certified archaeologists conduct pre-impact and post-impact field surveys based on the results of the overview assessment.

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.

In 2004, Canfor personnel completed overview assessments on cutblocks and roads for the 2003/2004 harvest season in collaboration with AWH. Pre-impact surveys were completed by AWH prior to the blocks being harvested (fall 2003) and post-impact surveys were completed after harvesting (spring 2004). Overview assessments were also completed for the 2004/2005 harvest season in collaboration with AWH. Pre impact surveys were completed by AWH prior to the cutblocks being logged (fall 2004). Post-impact surveys for the 2004/2005 timber season will be completed In the spring of 2005.

There was a non-conformance during 2004 when one block was not fully evaluated through the overview assessment process when harvesting began. AWH was immediately contacted and it was determined that a survey was not required. The incident was recorded in Canfor Incident Tracking System (ITS) as a non-conformance to procedures.

Additionally, Canfor and other parties have agreed to support Sturgeon Lake Cree Nation (SLCN) to conduct a Traditional Use Study in the FMA area if they would like to do so. To date, no official decision has been made by SLCN whether they intend to undertake the study.

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

Objective (6d) 1.1a.1:	**Acceptable variance:**
To conduct the activities of the FMAC according to the Terms of Reference	Zero for the listed activities in DFMP

Status: Meets

FMAC activities were in accordance to the Terms of Reference (TOR) in 2004. The TOR was reviewed and ratified at the October 20th, 2004 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:	**Acceptable variance:**
To provide an annual report to the public on Canfor's forest management practices	The report will be available within 2 months after submission of the Annual Performance Monitoring Report

Status: Meets

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

The Annual Public Report was completed in May 2004 within two months of the Annual Performance Monitoring report being issued (in March 2004). The next report will be produced by May 2005.

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

Status: Meets

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

- 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:	**Acceptable variance:**
To participate in at least 5 different types of educational opportunities	Zero on an annual basis

Status: Meets

Canfor participated in a number of educational opportunities:

1. 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.
2. The "Envirothon" for high school students to learn about forestry, soils, water, oil & gas and wildlife;
3. National Forest Week "Walk through the Forest" in May 2004. 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. The Grande Prairie Regional College (GPRC) Practicum Program. Canfor mentored one GPRC student during her practicum where she received hands on learning of forestry practices; and
6. Reviewed GPRC Entomology students papers from lab completed on October 25th, 2004.

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

Status: Meets

FMAC members were provided information from experts for the following on December 10th, 2004:

1. "The State of Canada's Forests 2003-2004", an annual publication from Natural Resources Canada that gives an overview of Canada's forests;
2. The "Evergreen" magazine from the Evergreen Foundation (a non-profit forestry research and education organization) from the United States that dedicated a complete issue to forests and forestry in Canada;
3. The "Assessment of Selected Stream Crossings in Canfor Grande Prairie's Forest Management Agreement Area", a report by the Alberta Conservation Association (ACA) to increase fish passage by improving road crossings. Canfor is working with ACA on this initiative; and
4. The data from the "Alberta Reid – August 2004" poll completed on the public's view of forestry in Alberta.

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

Objective (6e) 2.1a.1:	**Acceptable variance:**
To incorporate at least 4 different types of public involvement opportunities into the Company's planning activities on an annual basis	Zero

Status: Meets

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

1. An active FMAC advisory group;
2. Open Houses
   - Annual Operating Plan (AOP) open houses in Sturgeon Lake November 23rd, Grande Prairie November 29th and Grande Cache November 30th, 2004; and
   - Vegetation Management Plan open house in Valleyview in February 26th, 2004.
3. Annual trapper and outfitter consultation and notification regarding harvest and silviculture plans; and
4. Letters and telephone calls to Canfor received response and were tracked in Canfor's Incident Tracking System (ITS).

As well, documents like the Annual Performance Monitoring Report, Annual Public Report, AOP/5 year GDP, DFMP/SFMP etc. are made available for the public in a variety of locations (at the Woodlands Office, Libraries, Open Houses, Forestry Shows, on Canfor.com website etc.).

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

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

Status: In progress

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

Objective (6f) 1.1a.2:	**Acceptable variance:**
To validate Canfor's assumptions and test new theories to improve knowledge of forest ecosystems by conducting on-going research	Zero

Status: Meets

Canfor is involved in numerous research projects. See Table 32 for a list of the current projects.

PROJECT	DESCRIPTION	TERM	STATUS
AB Forest Genetics Resources Council (AFGRC)	A collaborative project to assist the AFGRC to foster communication, dialogue and technology transfer among the various stakeholders and participants in forest genetics research, development and practical applications in Alberta.	2000 -2004	Active
AB Biodiversity Monitoring (ABMP)	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
Boreal Forest Research Centre	Collaborative project to provide operating funds for the Center. The Boreal Forest Research Centre is a consensus governed, multi-party forest consolidation group that identifies and advocates for the regional research, development and educational priorities of the northwest boreal forest region. Their objectives are: 1. Promote public awareness and involvement in forest research, 2. Promote the coordination of research and development activities, 3. Promote technology transfer and training and 4. Promote high school student education in forest research	2000-2008	Active
Campsite Maintenance (HC and GP)	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
Caribou Habitat Assessment	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).	2004-2005	Active
Caribou Phase I-IV	Continues Canfor's contribution to the U of A and West Central Caribou Standing Committee (WCACSC) to conduct collaborative research in the Little Smoky herd 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. Additional work invcolves testing tree falling as an impediment to predator movement.	2000 - 2004	Active
Ecological Classification P15 (HC)	An initiative to provide a detailed landscape level ecological classification at the ecosite and ecosite phase level of resolution for portions of P15 FMU. This will be accomplished through ecological land classification information, digital elevation models (DEMs), ground truthing and an assessment of plot data already collected in the field.	2004-2005	Active
EMEND I to VIII (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
Fisheries	A 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
Foothills Growth & Yield Association	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
Forest Protection	Primarily provides funds to ensure SRD has sufficient resources to prevent and control fires within and adjacent to the FMA area.	1999 - 2009	Active
Forest Resource Educator (GP)	The Grande Prairie Education Society retains a Forest Resource Educator provides educational opportunities to K - 12 regarding Forestry.	1997 - 2010	Active
Forest Resource Educator (HC)	Forest Educator from Mackenzie Educational Committee who provides educational opportunities to K - 12 regarding Forestry.	2001-2008	Active
Grizzly Bear	FMF project to extend Grizzly research to all portions of Eastern Slopes. Validation of models and tools developed by FMF in initial project will be validated in 2004-2007.	2001 - 2007	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, ASRD, 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 - 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
Model II (M2RS)	The objective of the project is to develop Model II Regeneration Standards (M2RS) based on ecological and structural stand classification. The M2RS standards were completed Dec 2003. A three phase project was initiated in Jan. 2004 toandards to: 1.) Phase I: Validation and refinement of monitoring threshold values by increasing the sample size for stem analysis; 2.) Phase II: Field testing the Model 2 regeneration standards; and 3.) Phase II: Determining the relationship between treatments and strata standards.	2003 - 2005	Active
Monitoring Sedimentation	Project to fulfil CSA objective 3c) 1.1a.1 to assess current methodologies and practices to measure siltation caused by forest road construction. The Stream Crossing Quality Index (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
Mountain Pine Beetle Monitoring	A collaborative project to establish pheromone bait traps to monitor beetle populations in mature pine stands within the collaborator's respective FMA areas. The work will include the use of a helicopter to establish and recover the traps. Analysis of the trap contents will be conducted by SRD	2005-2007	Active
Northwest Seedling Performance Project	A collaborative project that will provide the basis for understanding how past and current silvicultural applications and ecological site quality affect the growth and survival of regenerating stands. In order to integrate knowledge on how new treatments may be effective it is necessary to test stand responses not only to the current range of available treatments but also relative to proposed treatments. Data gaps where information is required to make informed silviculture decisions will be identified. The purpose of this project is to use retrospective analysis of existing data to develop an understanding of ecological processes in managed stands, specifically, stand responses to different silvicultural treatments on various ecosites.	2004-2005	Active
Sustainable Forest Management Network	Canfor's sponsorship assists the SFMN to fulfil 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
Stand Tending VI	In 1993, Juvenile Stand Surveys program that 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
Western Boreal Growth and Yield Cooperative (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
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

Table 32. Research Projects in Which Canfor is Currently Participating

9. Additional Goals, Objectives and Indicators

Canfor and the FMAC developed other objectives in addition to those presented in the preceding sections.

Objective (7)	**Acceptable variance:**
To produce fully integrated operational plans – Annual Operating Plan (AOP) and 5 Year General Development Plan (GDP) for the 2003 submission	Zero

Status: Complete

Tolko and Ainsworth have deciduous interests on Canfor FMA 9900037. Tolko has two DTA allocations with approved Annual Allowable Cuts (AAC's) of 114,712 m^3 (DTA G150001) and 167,817 m^3 (DTA G150002). Ainsworth has a reserved allocation of 170,000 m^3 pending fulfillment of specified conditions with the Government of Alberta. Until such time that the conditions are fulfilled, the specified volume under reserve is not available for harvest.

On June 1st, 2004, Canfor and Tolko submitted an integrated GDP/AOP to SRD detailing required volumes and block locations from the FMA and DTA's respectively. This was approved by SRD in July 2004.

Objective (8)	**Acceptable variance:**
To evaluate the range of variable retention configurations and develop a strategy by September 1st, 2004	Zero

Status: Complete

A strategy for variable retention was submitted to ASRD on August 26th. A subsequent amendment to the strategy was submitted on Nov 26th, 2004. On Dec 6th, the variable retention strategy was approved by SRD.

The final harvest plan will specify the target and methodology for structure retention. Volume targets for structure retention will vary by block with an overall FMA target of 1% merchantable coniferous volume and 1% merchantable deciduous volume. The actual targets will be reconciled at the end of each 5-year cut control period. An acceptable variance over the 5-year target is +/- 10%.

To determine results, Canfor will conduct an ocular assessment of the retention volume left on site and then verify it using large-scale photography (Softcopy) to accurately determine the size of patches and their volume.

Annually, a report on structure retention results by operational unit and FMA area will be included in the General Development Plan (GDP). The first report will be in the 2005 GDP.

Objective (9)	**Acceptable variance:**
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	Not applicable-research is ongoing

Status: In progress

Canfor is a member of the West Central Alberta Caribou Standing Committee and have been active in caribou research and analysis of caribou habitat. 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. Since that time, Canfor has participated in three initiatives that reviewed the influence of its operations on caribou habitat:

- A collaborative project conducted by The Forestry Corp. on behalf of Alberta Newsprint Company (ANC), Hinton Forest Products Ltd., Weyerhaeuser Company Limited and Canfor. The project represents the four companies efforts to develop an initial review of caribou habitat quality and an assessment of the current (2003) influence of habitat on population growth for the entire Little Smoky/ A La Peche ranges. Two habitat assessment methods were used in the project:
  - A summary of caribou habitat quality based on vegetation characteristics and patterns (Hervieux 2002, Szkorupa 2002, Szkorupa et al 2003) for base year 2003 and forecasted for the periods 2008, 2013, 2018, and 2023 (Forestry Corp. 2004),
  - An assessment of current (2003) habitat values (habitat effectiveness) using the Boreal Caribou Committee planning tool (BCC 2003). The tool is a linear regression model that correlates industrial footprint and recent fire history with caribou herd population trends. The model was selected because it is the only method supported by a body of research.
- A project conducted by The Forestry Corp. that utilized the BCC planning tool to evaluate the influence of harvesting on caribou population trends within the FMA area for the current year (1999) and projections for 2003, 2008, 2013 2018 and 2023. Two scenarios for the Little Smoky herd were evaluated – the first where harvesting was conducted and the second without harvesting. In both cases the finite rate of population increase (λ) for the base year (1999) was 0.90. Under scenario 1 (harvesting), λ decreased from the base year value of 0.90 to 0.89 in 2023; a decrease of 0.01. Under scenario 2 (no harvesting), the λ value did not change. The data indicates that harvesting within the caribou ranges within the FMA area has no influence on population trends.
- An FMA area based project conducted by Timberline Forestry Consultants Ltd. to incorporate HQ/ HE metrics into the timber supply analysis for Canfor's FMA area to evaluate the potential impact of alternative strategies for caribou habitat management on the timber supply. The DFMP Base Case timber supply scenario (4C) was used to calculate and map caribou habitat quality for the years 1999, 2009, 2019, 2049, 2099 and 2199.

Canfor's initiatives are complementary to the draft Caribou Recovery Plan (May 2004) prepared by the Alberta Woodland Caribou Recovery Team and submitted to the Minister for his consideration. That plan recommends goals, objectives, strategies and actions, both short- and long-term, required to maintain caribou populations in Alberta.

10. Summary

The status of the 91 objectives found throughout this Annual Performance Monitoring Report is summarized in Table 33.

Number that are completed	9
Number that meet	56
Number that do not meet	0
Number that are in progress	16
Number that are not at their scheduled reporting time	10
Total number of objectives	91

Table 33. Result of Objectives Found Throughout Report

Canfor's performance is constantly being assessed through internal and external audits. During audits, three types of findings are possible:

Non-compliances – a finding that Canfor is doing something against government regulations. These can be classifies as minor and major;

Non-conformances – a finding that Canfor is doing something against company commitments. These can be classifies 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.

In 2004, Canfor was audited, with the following results:

- June 2004 - Canfor internal audit of CSA Z809-96 (GP) and ISO 14001 (GP and HC)
  - 12 minor non-conformances
  - 31 opportunities for improvement
- July 2004 - independent third party periodic assessment of CSA Z809-96 and ISO 14001
  - 3 minor non-conformances
  - 0 opportunities for improvement

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

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

In addition to the audit process, any non-compliances and non-conformances discovered by Canfor during operations, are recorded and tracked in it's ITS to continually improve its operations.

11. 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.

Any inquiries can be directed to Jill Ashley (780) 538-7793 or Dwight Weeks at (780) 538-7745.

12. Literature Cited

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