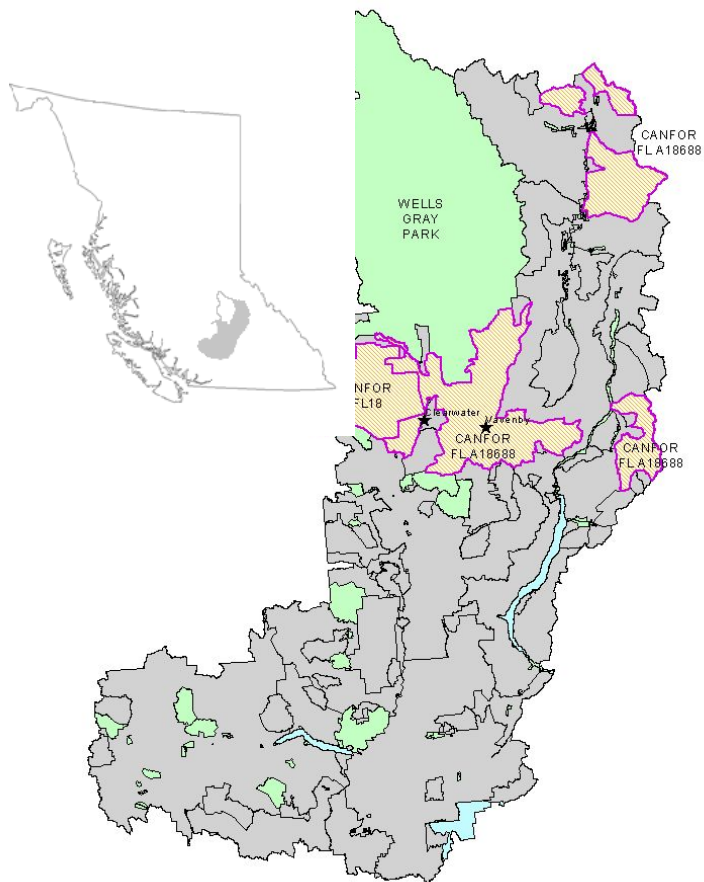


Sustainable Forest Management Plan for the Canfor-Vavenby Division Defined Forest Area



May 2008

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Vision Statement

The Sustainable Forest Management Plan will foster forest management practices - based on a balance of science, professional judgment and local and First Nations input - that sustain the long-term health and productivity of forest ecosystems while contributing to a strong economy and thriving communities throughout the Kamloops Timber Supply Area.

Executive Summary

Between February and June 2000 the forest tenure holders ("licensees") operating in the Kamloops Timber Supply Area worked with a group of public and First Nation representatives (the SFM Advisory Group) to develop a Sustainable Forest Management Plan (SFM Plan) for the Kamloops TSA. This SFM Plan has since been updated (January 2008) to address changes in forest condition and local community values.

The initial development and subsequent changes to the SFM Plan have all been established through the working relationship with the Kamloops SFM Advisory Group. Members of the SFM Advisory Group represented a cross-section of local interests including recreation, tourism, ranching, forestry, conservation, water, community, and First Nations.

The resulting SFM Plan includes a set of values, objectives, indicators and targets that address environmental, economic and social aspects of forest management in the Kamloops TSA. The Plan is based on the Canadian Standards Association (CSA) Sustainable Forest Management; Requirements and Guidance, which is one of the certification systems currently being used in British Columbia. The CSA system sets performance objectives and targets over a defined forest area to reflect local and regional interests. Consistent with most certifications, the CSA standards expect compliance with existing forest policies, laws and regulations.

Following the structure, content and guidance of the Kamloops TSA SFM Plan, Canadian Forest Products Ltd. (Canfor) has designed an SFM Plan for the Canfor-Vavenby Defined Forest Area (DFA). This SFM Plan localizes the implementation and monitoring of the indicators.

The SFM Plan is an evolving document that will be reviewed and revised on an annual basis with the SFM Advisory Group. Canfor-Vavenby is committed to the achievement of the SFM Plan and each year the SFM Advisory Group will review an annual report prepared by Canfor-Vavenby to assess achievement of performance measures. This monitoring process will provide Canfor-Vavenby, public and First Nations with an opportunity to bring forward new information and to provide input concerning new or changing public values that can be incorporated into future updates of the SFM Plan, both at the DFA and TSA level.

1.0 Introduction and Overview

Due to the increasing worldwide demand for certified wood products a number of forest products companies have been moving towards various certification systems. These certification systems are to provide assurance to consumers that timber has been produced using environmentally and socially responsible forest practices.

The Canadian Standards Association (CSA) Sustainable Forest Management Standard (Z809-02) is one such certification system currently being used in British Columbia. The CSA system sets performance objectives and targets over a defined forest area to reflect local and regional interests. The process of CSA certification includes advisory committees composed of a range of public, First Nations, and stakeholder interests.

Forest licensees in the Kamloops Timber Supply Area (TSA) have been working with the public to develop responsible forest management plans for over 20 years. These planning processes include development of strategic and operational plans, analyses, setting of standards, monitoring and public review. Licensees prepare Forest Development Plans that incorporate the direction provided through these various planning processes. Standards and operating plans are continuously updated as new information comes forward.

In addition to these plans, the Kamloops TSA licensees have developed and continually revised the Kamloops Sustainable Forest Management Plan (SFM Plan – 2008) based on the CSA certification system. That SFM Plan provides management direction to all licensed forest lands in the TSA, Tree Farm Licenses (TFLs) 35 and 18 and subscribing Woodlot Licensees. The Kamloops TSA SFM Plan and subsequent licensee SFM Plans is an example of the commitment of licensees to adapt their management practices in response to changes in society's values.

The localization of the Canfor-Vavenby SFM Plan will allow forestry operations within the DFA to meet the public participation requirements of the national certification standard. This SFM Plan will serve as a “roadmap” to current and long-term management in the Canfor-Vavenby DFA, setting performance targets and management strategies that are reflective of the ecological and social values across the DFA. It will be consistent with the Kamloops TSA SFM Plan and the Kamloops Land and Resource Management Plan (LRMP), which was developed from 1992 - 1995 by a cross-section of local stakeholders, interests groups and members of the public.

This SFM Plan includes three sections:

- Section 1.0 Introduction and Overview
- Section 2.0 The Plan Area
- Section 3.0 Indicators and Indicator Matrices

Additionally, the plan includes a Glossary of Terms and three appendices:

- Appendix 1 Canfor-Vavenby Defined Forest Area Map
- Appendix 2 Identified Wildlife Management Species

Appendix 3 SFM Plan Reporting Format

The values, objectives, indicators, targets, and guiding principles described in this document adhered to those documented in the TSA SFM Plan. Similar to the Kamloops TSA SFM Plan, this is an evolving document that will be revised on an annual basis following review of the TSA SFM Plan with the SFM Advisory Group to reflect changes in forest condition and local community values.

Table 1 provides website information on the background and status of SFM initiatives within the Kamloops TSA and within Canfor's operations.

Table 1: Website Information

For more information:		
Kamloops TSA	Certification process, Sustainable Forest Management Planning, meeting summaries, annual reporting and maps	Kamloops TSA Certification Website www.kamloopssustainableforestry.ca
Canfor	Company's certification process and achievement	Canfor's Website: http://www.canfor.com/sustainability/certification/

2.0 The Plan Area

2.1 Area Description

The Defined Forest Area (DFA) for Canfor-Vavenby SFM Plan is located in the southern interior of British Columbia. The DFA resides wholly in the Headwaters Forest District of the Southern Interior Forest Region.

The DFA includes Crown land within Canfor's Forest Licence A18688 (FL A18688), as well as Tree Farm Licence 18 (TFL 18). Woodlot Licences, as well as all private land are excluded. The DFA includes areas that are not available for harvesting; those include parks, inoperable areas and non-productive areas. Table 2 provides a breakdown of the landbase within the DFA. A map of the DFA, including both FL A18688 and TFL 18 is found in Appendix 1. The FL A18688 area also included areas to the south of the traditional operating area to assist other licensees in addressing the mountain pine beetle infestation.

Table 2: DFA Landbase Summary

DFA Land Base	DFA Area (ha)	TFL #18 Area
Total TSA	2,666,375	74,542
Crown Ownership – approx. 67%	1,773,481	74,542
Crown Forested Land Base (CFLB) – approx. 53%	1,409,110	67,315
Non-Productive / Private, inoperable... – approx. 14%	368,250	6,575
Timber Harvesting Land Base (THLB) ¹ – approx. 39%	1,040,860	63,812

Biophysical Information

This DFA is found in the northern portion of the Kamloops TSA. In this portion, the North Thompson River is bounded by the high peaks of the Monashee and Cariboo Mountains. These mountains – part of the Interior Wet Belt – experience wet to very wet conditions, with high snowfalls. The valley bottoms are covered in dense cedar-hemlock forest, changing to spruce-balsam at higher elevations.

¹ The timber harvesting land base (THLB) is the portion of the management unit where forest licensees under license to the province of BC are expected to harvest timber. The THLB excludes areas that are inoperable or uneconomic for timber harvesting, or are otherwise off-limits to timber harvesting. The THLB is a subset of the crown forested land base.

Biogeoclimatic Ecosystem Classification (BEC) & Tree Species

The DFA includes six biogeoclimatic zones that are listed and described in Table 3.

Table 3: BEC Zones in the DFA

Biogeoclimatic Zones (Elevation)	Location/Description
Interior Douglas-fir (IDF) zone (between 350 and 1450 m)	Dominates the lower to mid-elevations and generally occurs between the Ponderosa Pine Zone and the Montane Spruce Zone
Montane Spruce (MS) zone is found at mid-elevations (between 1300 and 1650 m)	Often between the Interior Douglas-fir Zone and the Engelmann Spruce-Subalpine Fir Zone in the southern half of the TSA.
Interior Cedar-Hemlock (ICH) zone (1400 to 1450 m)	Generally in the northern and central parts of the Kamloops TSA above the IDF zone.
Sub-Boreal Spruce (SBS) zone (1000 to 1450 m)	Occurs at middle elevations in central portions of the TSA on the Nehalliston Plateau, generally below the Engelmann Spruce-Subalpine Fir zone.
Engelmann Spruce-Subalpine Fir (ESSF) zone (from 1500 to 2050 m)	This is the uppermost forested zone in the Kamloops TSA - generally above the ICH, SBS or MS zones, below the Alpine Tundra zone.
Alpine Tundra (AT) Zone (above 2000 m in the south, 2200 m in the north of the TSAP)	Lies above the ESSF Zone, and is by definition treeless although stunted (or krummholz) trees are common at the lower elevations of this zone. Overall, this zone is dominated by rock, ice and grassy meadows. The Alpine Tundra (AT) zone occurs at the highest elevations, above the ESSF zone.

Parks

Portions of the DFA are adjacent to Wells Grey Provincial Park. Taweel Park occupies 282 ha in the southern portion of TFL 18. Several campsites and recreation areas are also located in TFL 18 as well as 2 forest recreation campsites in FL A18688.

Wildlife & Wildlife Habitat

The diverse forests of the DFA host a wide variety of wildlife species including grizzly bear, black bear, moose, mule deer, goat, California bighorn sheep and marten. Appendix 2 provides a listing of identified wildlife management species (IWMS) that exist within the DFA.

The TSA overlaps the range of a provincially important and viable herd of mountain caribou. Due to winter conditions, these caribou require sufficient canopy cover, provided by mature forests, to move between feeding areas, which requires attention during planning of forest development activities.

Riparian

The DFA contains numerous fish bearing lakes, (particularly in TFL 18) and salmon-producing streams, as well as many additional fish-supporting streams. These waterbodies support some of the finest inland fisheries in B.C. Species of high recreational or economic value include

rainbow trout, steelhead, kokanee, brook trout, and Dolly Varden. The Thompson, North Thompson, South Thompson and Adams rivers and their tributaries support a significant population of anadromous fish — steelhead and sockeye, coho, chinook and pink salmon. The North Thompson River also contains most of the wild stocks of rainbow trout within the TSA.

Socio- Economic Description

According to the 2006 census, the population of the Kamloops TSA was 114,675, a 2.6 percent increase from 2001. Almost 80 percent of the TSA's residents live in the City of Kamloops. Other communities include Ashcroft, Cache Creek, Savona, Chase and Logan Lake in the south, and Avola, Barriere, Blue River, Clearwater, Little Fort and Vavenby in the north. The population for the Canfor-Vavenby DFA is concentrated in Clearwater and Vavenby with a combined population of approximately 5,000.

Tenure Description

The Canfor-Vavenby DFA is comprised of Forest Licence A18688 and Tree Farm Licence 18. These replaceable licences grant Canfor the right to harvest an allowable annual cut (AAC) of Crown timber each year, which is specified in cutting permits and road permits. The tenure allows Canfor to harvest, process, sell and distribute wood products derived from the forest area in the Kamloops TSA. Canfor retains the reforestation responsibility until trees are free growing and has responsibility for road construction and maintenance.

Current AAC

In British Columbia, the annual allowable cut (AAC) for all TSAs and TFLs is established every five years by the Chief Forester or Deputy Chief Forester of the province. The current allowable annual cut of the Kamloops TSA is 4,352,770m³ effective January 2004, up from the previous level of 2 679 180m³. This current AAC consists of seven components:

- * a regular or conventional allowable harvest of 2 361 900 cubic metres;
- * a partition of 200 000 cubic metres per year for old cedar and hemlock stands;
- * a partition of 86 000 cubic metres per year for Pulpwood Agreement 16.
- * A partition of 20 000 cubic metres per year for deciduous
- * An IFPA of 14,870 cubic metres per year
- * 670 000 cubic metres to salvage fire damaged timber
- * 1 000 000 cubic metres for mountain pine beetle salvage

A new AAC determination was due in late 2007 but has been delayed until mid 2008.

TFL 18 is a replaceable area based tenure issued by the Government of BC to Canfor. It grants the Company the right to harvest an allowable annual cut (AAC) of 259,000 cubic metres of Crown timber each year, during the term of Management Plan #10 which is 2006 - 2011. This AAC includes an uplift to accelerate the salvage of mountain pine beetle attacked timber. In addition, 10,500 m³ annually is allocated to BC Timber Sales (BCTS). The AAC is scheduled for review based on Management Plan #11 at the end of 2010.

Replaceable forest licenses account for 72% of the apportionment of the AAC. Canfor has rights to 231,750 m³ attached to its replaceable forest licence, accounting for 8.7% of the current AAC in the TSA. The specific boundary of the FL A18688 is contained within Canfor's GIS and agreed to by all Licensees and the Government within the TSA (Appendix 1). Table 4 presents the current apportionment and commitments for the Kamloops TSA.

Table 4: Kamloops TSA AAC Apportionment and Commitments (m³ & % of AAC)

Licensee by Form of Agreement	m³/year	% of AAC
Forest Licences Replaceable	1,935,065	72.2
<i>Tolko Industries Ltd.</i>	641,088	23.9
<i>Weyerhaeuser Company Ltd.</i>	456,276	17.0
<i>Canadian Forest Products Ltd.</i>	231,750	8.7
<i>International Forest Products Ltd.</i>	249,594	9.3
<i>West Fraser Mills Ltd.</i>	209,124	7.8
<i>Ainsworth Lumber Co. Ltd.</i>	109,345	4.1
Forest Licences Non-Replaceable	182,000	6.8
BCTS Timber Sale License/License to Cut	402,544	15.1
Timber Sale Licences	1,813	0.1
Woodlot Licences	44,453	1.6
Forest Service Reserve	27,305	1.0
Pulpwood Agreements – PA 16	86,000	3.2
2001 Determined Annual Cut²	2,679,180	100.0
Pulpwood Agreement for areas outside of PA 16	20,000	
Innovative Practices and Activities within the Adams Lake IFPA area	14,870	
Exclusion of woodlot licences issued since the 1996 determination	-31,280	
2003 Determined Allowable Annual Cut	2,682,770	
Fire-Damaged Timber salvage	670,000	
Mountain Pine Beetle NRFL	1,000,000	
2004 Determined Allowable Annual Cut	4,352,770	
Tree Farm Licence #18	167,150	

Source: Ministry of Forests, Revenue Tenures and Engineering Branch

Employment & Services

Canfor is the fourth leading forest industry employer in the TSA, after Weyerhaeuser Ltd.(Weyerhaeuser), Tolko Industries Ltd. (Tolko), and West Fraser Mills Ltd. Canfor owns a dimension lumber mill at Vavenby and has rights to approximately 9% of the TSA's AAC, in addition to the 259,000m³ AAC from TFL 18. In addition to the volume obtained from Canfor licences in the DFA Canfor purchases approximately an additional 200,000m³ to meet the needs of the Vavenby mill.

Including harvesting, planning, transportation, and timber processing from both FL A18688 and TFL 18 Canfor generated an average of 191 person years of forest industry employment involved with harvesting and processing its' Kamloops TSA Forest Licence and Tree Farm timber over the 2001 - 2007 period.

Canfor's dimension lumber mill in Vavenby has an annual capacity of 150 million board feet of lumber. It produces high quality dimension lumber and is one of the only mills in the provinces interior specializing in long length lumber (18' to 24') to meet market demand for a higher value product. Residual chips are currently shipped to Domtar Pulp in Kamloops. Hog fuel is currently burnt in Canfor's beehive burner. Trials have commenced with shipping hog fuel to a Domtar Co-generation plant in Kamloops. This is expected to continue with the eventual de-commissioning of the beehive burner.

Table 5 presents recent harvesting and employment results for Canfor in the Kamloops TSA.

Table 5: Canfor annual average harvests and employment, 1997-2000

Canfor Harvest / Employment	Result from TSA and TFL Landbase
Harvest	Timber volume (m3)
Allowable Annual Cut (AAC)	468,638
Annual average harvest, 2001-2007	465.560
2007 harvest	464,255
Employment	Person-Years (PYs)
Harvesting, planning & administration	104
Timber processing	87
Total	191

Source: Ministry of Forests, survey of licensees, TSR 3 Analysis Report and TFL 18 AAC Determination

Community Dependence

The Kamloops TSA timber harvest provides roughly 13% of the basic employment in the TSA. The volume harvested from FL A18688 and TFL 18 provides a significant contribution to employment in the local area.

Non Forestry Tenures & Interests

Other tenures within Canfor's DFA include traplines, guide outfitters, range tenures, domestic and irrigation water licences.

2.2 Mountain Pine Beetle

Overview

Mountain pine beetle is severely impacting mature lodgepole pine stands in the southern part of the Kamloops TSA. A summary of the current situation is described based on excerpts from:

- Timber Supply And The Mountain Pine Beetle Infestation In British Columbia, Ministry Of Forests Forest Analysis Branch October, 2003
- Oct. 30, 2003 Ministry Of Forests Backgrounder; Timber Supply Analysis Mountain Pine Beetle Infestation

- Kamloops Timber Supply Area Rationale For Allowable Annual Cut (AAC) Determination Effective January 1, 2004
- Timber Supply Review for the Kamloops timber supply area – Oct 2007

The mountain pine beetle (MPB), *Dendroctonus ponderosae* Hopkins (Coleoptera: Scolytidae), is the most damaging insect attacking lodgepole pine forests in BC. Mountain pine beetles exist naturally in mature lodgepole pine forests, at various population levels, depending on pine availability and weather conditions. They play an important role in the natural succession of these forests by attacking older or weakened trees, which are then replaced by younger, healthy forests. The beetle population levels in British Columbia's interior have been increasing steadily since 1994 with an exponential increase seen in 2004 as a result of the 2003 beetle flight and increasing to include the majority of the mature pine in the TSA by 2007.

Area Affected

Thirty-one percent of the area in the TSA has lodgepole pine (PI) as the leading species. The 2006 aerial overview surveys for the Kamloops TSA resulted in classifying about 478,489 ha as affected by the mountain pine beetle. This represents a significant increase in area affected in the Kamloops TSA from 2004 to 2006.

The Canfor Vavenby DFA contains a smaller percentage of PI stands than the TSA average. Susceptible stands are mainly concentrated in the southern portion of the DFA in FLA18688. As with the remainder of the TSA there has been a significant increase in beetle populations over the past two years.

Strategy and Response

Given the economic importance of lodgepole pine and the potential impact of the current beetle infestation on forest-dependent communities in BC's interior, the forest industry and government jointly created the Mountain Pine Beetle Emergency Task Force in 1999 to manage and reduce the impact of the infestation. The Task Force has helped to ensure that management strategies are well-planned and as effective as possible. These strategies have been aggressive and have been successful in making a difference in reducing the spread of the infestation and limiting the amount of killed timber in some areas.

Due to the lower percentage of PI stands in Canfors' DFA salvage efforts to date have been concentrated in other licensees traditional operating areas to assist in salvage of heavier attacked stands. Salvage activities have increased significantly in TFL 18 during 2007/08.

The Ministry of Forests and the forest industry have been actively trying to control and manage the mountain pine beetle infestation in the TSA. Licensees have been dedicating a significant portion of their harvest to management efforts aimed at the infestation. In the fall of 2003 the Chief Forester of BC allocated a three million cubic meter uplift to the Kamloops TSA to help address the building problem.

Factors Influencing the Severity of Attack

Two key factors contributing to the recent expansion of the mountain pine beetle infestation are the large amounts of older lodgepole pine on the land base and the relatively warm weather conditions experienced in recent years in the interior of the province. Both fire and insects have historically played an important role in the natural disturbance and replacement of lodgepole pine forests in much of the province's interior. Forest management policies, i.e. patch size and fire control have contributed to an accumulation of old pine forest above historical levels. Once lodgepole pine trees are mature (generally older than 80 years), they are highly susceptible to attack by the pine beetle, particularly during times of prolonged favourable weather conditions. Experts concur that moderated climate conditions coupled with the increasing amount of susceptible, mature lodgepole forests has led to the current, unprecedented mountain pine beetle outbreak.

Environmental impacts of the beetle infestation

Before extensive fire suppression, BC's central interior forests naturally underwent large-scale stand replacing events brought on by wildfire and insect outbreaks.

Fires and insect outbreaks have been a part of normal ecosystem dynamics in BC, most likely for many thousands of years. However, much more of the province is now occupied by older pine forests than historically has been the case. With the epidemic population of mountain pine beetles and the abundance of susceptible mature pine, the rate of conversion from older to younger forested habitats will be increased, by insect attack followed by eventual blowdown, or by harvesting to control the rate of spread and salvage the attacked timber. Even with harvesting, both live and dead stands unaltered by harvesting will remain on the landscape. Nonetheless, both the epidemic beetle population and timber harvesting, either for insect control or for salvage, will result in complex consequences for pine forests and associated wildlife habitats in BC's interior.

Outlook

There is no indication the spread of the infestation will slow significantly without sufficiently cold weather to kill the developing beetle brood. Temperatures need to reach -30°C in the early fall or late spring when the beetles are not fully in their "over-wintering state" or have sustained winter temperatures of less than -40°C to kill the brood. If the beetle is not stopped due to climatic conditions, populations will only collapse when they encounter a shortage of acceptable, mature pine. Additionally, 20 year and older pine plantations are starting to be impacted by MPB, specifically when adjacent to high beetle populations in the mature pine.

As the impact to the SFM plan from the MPB are better understood, further refinements to this plan may be required.

3.0 Indicators and Indicator Matrices

Indicators and targets provide the performance measures that are to be met through on-the-ground forest management activities. This section provides the targets, variance, current condition and responsibilities for each indicator, as they apply to the Vavenby DFA. Full compliance is required for many targets (i.e. there is no variance). Where full compliance may not be achievable, an acceptable level of variance is indicated for the target. A detailed description of each of the indicators and targets, including monitoring procedures, can be found within the Kamloops TSA SFM Plan. The annual report format that is used by all licensees within the TSA is provided in Appendix 3.

Objectives, Indicators and Targets

The Kamloops TSA SFM plan process served to refine the information and concerns of the public local in the TSA. The Canfor-Vavenby incorporates the results of that planning process within this SFM Plan and further localizes with refinements and results at the indicator level – specific to the Canfor-Vavenby DFA.

Indicator

The incorporation of the TSA level concerns and ideas into Canfor-Vavenby operations through the established performance measures and ongoing monitoring will ensure long term sustainability of the forest resource. The indicators established in the Kamloops TSA SFM Plan and applicable at the local DFA level are as included below.

Target & Variance

Some of the targets in the SFM that refer to full compliance with existing regulations also make reference to exceeding regulations (e.g. indicator 2). In these cases, compliance is the performance baseline and exceeding the requirement is a goal that Canfor-Vavenby strives for as conditions permit.

Current Status of Indicators

This section of the Indicator Matrix reflects the current condition for Canfor-Vavenby as summarized in the 2007 monitoring report.

Responsibility for Implementation, Monitoring & Reporting

Canfor staff that are responsible the implementation of strategies, monitoring and subsequent reporting of indicators are provided below.

Legal Requirements

Awareness of legal requirements is essential when considering suitable Objectives for an Element, and determining appropriate Indicators and Targets. The Kamloops TSA SFM Plan contains applicable Acts and Regulations in the Indicator Tables as noted in the “Legal

Requirements” section. Specific Sections/Subsections of these Acts and Regulations have not been identified to avoid having to manage the ongoing changes to forest legislation.

Although not included within the Canfor-Vavenby SFM Plan, the company ensures that specific legislation related to Objectives, Indicators and Targets is known and complied with by staying current with legal requirements. The company subscribes to a commercial service called “Quickscribe”.

Table 6: Indicator Matrices for Indicators 1 – 29

Indicator	(1) Achievement of the TSA's old forest strategy.
Target	Operations will respect the LRMP's objectives for retaining old forest as a component of seral stage distribution by landscape unit.
Means of achieving objective and target	A draft strategy is in place to ensure that these targets are implemented. Protected areas are identified on Licensee maps Draft OGMA's are identified on Licensee maps based on LRMP biodiversity emphasis options
Variance	None.
Current status of indicator	Canfor has met the intent of the Kamloops LRMP for old forest retention.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

Indicator	(2) Level of conformance to riparian management area and lakeshore commitments contained within plans³.
Target	100 percent conformance to riparian and lakeshore commitments made within plans.
Means of achieving objective and target	Licensees will attempt to identify small and unclassified wetlands and will take measures to minimize impacts to these features. All commitments are included and highlighted in Licensee plans
Variance	Minus 5 percent. Variance to accommodate nonconformance to plans that have little or no impact to the environment and/or to the social and ecological objectives of lakeshore areas. ⁷
Current status of indicator	Of a total of 1,549.1 hectares of cutblock and right-of-ways harvested, there was 0 nonconformance.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Operations Superintendent

Indicator	(3) Level of FPC compliance with caribou strategies.
Target	Full compliance with FPC & LRMP caribou strategy.
Means of achieving objective and target	LRMP strategy is incorporated into Licensee plans
Variance	As provided for within the legal framework. The statutory decision maker may approve variances from standard requirements provided adequate rationale is provided and long-term objectives continue to be met.
Current status of indicator	Canfor operated within 207.5 hectares meeting caribou management strategies. A total of 219.0 hectares were harvested within the caribou resource management zones. (R170 (12.5 ha) did not meet strategies due to salvage requirements but variance applied for and approved by DM)
Responsibility for Implementation, Monitoring & Reporting	Development Superintendent

³ Plans prepared by licensees are in accordance with legal and LRMP requirements

Indicator	(4) Percent of cutblocks greater than 5 hectares that have individual wildlife trees/stubs and/or associated wildlife tree patches upon completion of harvest.
Target	Provision for the location and distribution of patches or individual wildlife/leave trees by ensuring 80 percent of cutblocks greater than 5 hectares will have individual wildlife trees/stubs and/or associated wildlife tree patches.
Means of achieving objective and target	During forest development planning, licensees incorporate strategies for maintaining diversity of structure and function within cutblocks including wildlife/leave tree retention. Retention of wildlife trees/stubs in cutblocks is subject to worker safety considerations. Value should be optimized both through the variety of tree types (e.g., species, size, live and dead, etc.) retained, and the amount of trees retained.
Variance	Acceptable range is between 70 percent and 100 percent. Variances are provided for within the <i>Provincial Wildlife Tree Policy and Management Recommendations</i> (February 2000).
Current status of indicator	42 cutblocks with WTPs and a total of 51 were harvested – 82 %
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

Indicator	(5) Percent of cutblocks consistent with coarse woody debris requirements in plans.
Target	100 percent of cutblocks will be consistent with coarse woody debris requirements contained in plans.
Means of achieving objective and target	Companies will refer to provincial utilization standards and broad regional guidelines in preparing Forest Development Plans, which will subsequently be approved by the Ministry of Forests District Manager. Licensees achieve the target by the setting of related objectives within their plans ⁴ .
Variance	None
Current status of indicator	A total of 58 cutblocks were harvested during the reporting period. All cutblocks followed coarse woody debris strategies.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Operations Superintendent

Indicator	(6) Average regeneration period from time of harvest.
Target	Regeneration established within three years or less on average from time of harvest.
Means of achieving objective and target	Licensees will follow guidelines specifying tree species that are most suited ecologically to maintain natural forest composition in an area. Silviculture regime and forward plans schedule activities consistent with established key dates contained within plans.
Variance	12 months beyond the 3-year target
Current status of indicator	Average regeneration delay was 24 months (2.0 years).
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

⁴ Plans prepared by licensees are in accordance with legal and LRMP requirements

Indicator	(7) Level of compliance with management strategies for all known rare ecosystems.
Target	Full Compliance with management strategies for all known rare ecosystems.
Means of achieving objective and target	If a licensee identifies a unique feature (e.g. nesting site, rare habitat, unique landform, etc.) at anytime, best efforts will be made to incorporate the feature into planned operations. Protected areas are identified on Licensee maps
Variance	None
Current status of indicator	Rare Ecosystems have not currently been made known for the Forest Development Plan process in the TSA.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

Indicator	(8) Level of conformance with management strategies for all identified wildlife (under IWMS).
Target	100 % conformance with management strategies for those species identified in the Identified Wildlife Management Strategy.
Means of achieving objective and target	The Kamloops LRMP directs resource managers to prepare appropriate local level plans for threatened and endangered species and habitats. Direction provided by a local level plan is incorporated in licensee plans.
Variance	None
Current status of indicator	Canfor harvested 0 hectares in 2004 in areas requiring IWM Strategies..
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

Indicator	(9) Age class distribution for coniferous species and percent of land base for broad leaf species.
Target	No net loss for broad leaf species.
Means of achieving objective and target	Maintain broad leaf species through individual tree and patch retention and through natural regeneration in harvested areas. Maintain natural diversity of coniferous species through stocking and natural regeneration.
Variance	5% reduction in broad leaf species (uncontrolled events associated with licensee operations: forest pests etc)
Current status of indicator	37,878 hectares or 2.7 % of the landbase are leading in broadleaf species. (TSR 2 – 2001). This value is recalculated every five years through the TSR.
Responsibility for Implementation, Monitoring & Reporting	SFM Representative

Indicator	(10) Annual percent of harvested areas in permanent access structures (e.g. roads and landings).
Target	Less than 6 percent, on average, of harvested areas will be in permanent roads and landings.
Means of achieving objective and target	Loss of the landbase to access structures can be minimized with <ul style="list-style-type: none"> • careful access planning to minimize the length of road required for harvesting and the number of landings • and use of proper road construction and maintenance procedures
Variance	None
Current status of indicator	The percentage of roads and landings within the total harvested area averaged 2.7 percent.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

Indicator	(11) Annual harvest level relative to annual allocation.
Target	Harvest the annual cut allocation for the year consistent with the Cut Control Regulation and Policy.
Means of achieving objective and target	Licensees contribute to the sustainable harvest level by adhering to their apportioned harvest volume within the TSA. Cut control regulations dictate the short-term harvest flexibility.
Variance	According to the Cut Control Regulation and Policy
Current status of indicator	The volume harvested in 2002 was 496,542 cubic meters, which is 110.2 percent of the allocated volume of 450,695 cubic meters.
Responsibility for Implementation, Monitoring & Reporting	Operations Superintendent

Indicator	(12) Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.
Target	12a: Open communications with local First Nations during Operational Plan reviews will include consideration of and will manage for, where appropriate traditional knowledge, non-timber resources, and cultural and spiritual values. 12b: TSA Licensees respond to all written requests for communication from First Nations 12c: Incorporation of traditional knowledge, non-timber resources, and cultural and spiritual values in forest planning, where available.
Means of achieving objective and target	Open communications with local First Nations during Plan reviews. Written requests for communication are responded to. Traditional knowledge, non-timber resources, and cultural and heritage values are appropriately managed for and protected in licensee plans.
Variance	None
Current status of indicator	Canfor had 6 meetings that resulted in meaningful communication. As well, 1 cutblock required specific actions and taken.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Development Superintendent

Indicator	(13) Level of conformance to soil conservation commitments contained within plans.
Target	100 percent conformance to soil conservation measures contained within plans.
Means of achieving objective and target	Maximum planned levels of soil disturbance are assigned to all cutblocks based on related field data. Site preparation is generally beneficial to soil productivity, creating suitable growing conditions and beneficial microsites for crop establishment, mixing and aerating the soil, and minimizing opportunities for growth of competing vegetation. Expeditious re-establishment of new stands can assist in preventing erosion and other forms of soil displacement.
Variance	None
Current status of indicator	Soil disturbance objectives were met on all 1811.2 hectares of harvested cutblocks with no incidences of non-compliance.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Operations Superintendent

Indicator	(14) Number of months for road cut and fill slope seeding application.
Target	All planned road cut and fill slope seeding application carried out within 12 months of completed road construction on suitable sites
Means of achieving objective and target	Timely revegetation of exposed soils on newly constructed road cut and fill slopes is completed per licensee plans.
Variance	3 months
Current status of indicator	Road cuts and fill slopes were seeded or planted on average in 6 months of disturbance, compared to a target of 12 months.
Responsibility for Implementation, Monitoring & Reporting	Operations Superintendent

Indicator	(15) Percent of status roads inspected in accordance with schedule.
Target	Manage water quality and erosion control by ensuring that 100 percent of status roads (temporary and permanent) are assessed for level of risk and that the frequency of inspections occurs at planned levels commensurate with level of risk.
Means of achieving objective and target	Proactive development of maintenance or deactivation plans for forestry roads will prevent or mitigate short- and long-term impacts of roads as they are developed. Maintenance and deactivation plans include an assessment of risk and subsequent road inspections are undertaken commensurate with the risk.
Variance	Minus 2 percent for high risk rated roads, minus 10 percent for moderate risk and minus 20 percent for low risk.
Current status of indicator	1415.5 kilometers of status roads within Canfor's operating area and all have been assigned a risk rating for the purpose of inspection. However, they did not track the number of inspections by high/med/low but all roads were inspected at least once.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Operations Superintendent

Indicator	(16) Level of participation in the annual reporting of results and the number of advisory group meetings held annually.
Target	100 percent participation in the SFM Plan monitoring process and hold at least one meeting per year with the SFM Public Advisory Group to review results.
Means of achieving objective and target	All Licensees: Schedule meeting and attend
Variance	None
Current status of indicator	Canfor contributed to the annual plan and attended meetings with the SFM Advisory Group.
Responsibility for Implementation, Monitoring & Reporting	SFM/FMS Representative

Indicator	(17) Number of registrations to a recognized third party certification.
Target	Maintain and/or increase the number of registrations to a recognized third party certification.
Means of achieving objective and target	Licensees maintain a TSA SFMP that facilitates individual licensees interested in registering to their own Plan. Licensees support those seeking registration.
Variance	None
Current status of indicator	Canfor is in the process of obtaining third party certification (CSA).
Responsibility for Implementation, Monitoring & Reporting	SFM Representative

Indicator	(18) Protected Ecosystems
Target	12% protected areas. (This indicator is reported at the TSA level)
Means of achieving objective and target	<p>The forest licensees participated in the Kamloops LRMP which delineated a series of protected areas and special natural, cultural heritage and recreational features and special management zones within the TSA. This achieved the geographic and ecological goals of the provincial Protected Areas Strategy. Protected areas, including Wells Gray Park, are shown on the overview map.</p> <p>Cultural and spiritual areas of importance will be protected or managed for in the future through implementation of the Archaeological Overview Assessment (AOA) process (refer to Indicator 25).</p> <p>Identification of rare ecosystems (Indicator 7) will lead to protection or management.</p>
Variance	None
Current status of indicator	632,423.1 ha are maintained as protected areas. (TSR 2 – July 2001) This is 23.7% of the Kamloops TSA Landbase
Responsibility for Implementation, Monitoring & Reporting	SFM Representative

Indicator	(19) Percent of affected ranchers with whom meetings are held.
Target	Where forest operations are planned within range units, the forest licensee will meet annually with the rancher to help ensure forest operations will not adversely affect existing animal unit months (AUMs).
Means of achieving objective and target	Where a rancher may be affected by a planned forestry operation, forest licensees commit to meeting range tenure holders every year to discuss any issues and concerns that the ranchers may have and considering those concerns in forest development planning.
Variance	Minus 10 percent of 90 percent target
Current status of indicator	One hundred percent of ranchers affected by planned operations were communicated with during the reporting period compared to a target of 90 percent.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Development Superintendent Operations Superintendent

Indicator	(20) Level of conformance to strategies in plans designed to achieve preservation, retention and partial retention of visual quality objectives.
Target	100 percent conformance to strategies contained in plans.
Means of achieving objective and target	Visual impact assessments are completed by licensees for operations proposed in scenic areas with established VQOs at the planning stage. They are used to estimate the potential visual impact of proposed operations on scenic resources and to assess whether the VQOs would be achieved. If visual quality objectives are not met, remedial action can often be undertaken to minimize visual impact.
Variance	Minus 5 percent.
Current status of indicator	24 of 24 cutblocks harvested met visual quality objectives.
Responsibility for Implementation, Monitoring & Reporting	Development Superintendent

Indicator	(21) Mean Annual Increment (MAI)
Target	Maintain the long term productivity of the forest as measured by the mean annual increment (m ³ /ha/yr) for Lodgepole pine.
Means of achieving objective and target	Mean Annual Increment can be influenced by: <ul style="list-style-type: none"> ▪ Climate, elevation soil conditions, forest age and forest practices. ▪ Using effective silviculture practices to increase growth rates (prompt regeneration, superior seed, effective site preparation etc.)
Variance	None
Current status of indicator	Current MAI is 1.86 m ³ /ha/yr (data to come from current TSR).
Responsibility for Implementation, Monitoring & Reporting	SFM Representative

Indicator	(22) Forest age class distribution
Target	Maintain a stable forest age class distribution on the timber harvesting land base. Each age class to 100 years old [1 (0 to 20), 2 (21-40), 3 (41-60), 4 (61 to 80) and 5 (81 to 100)] occupies at least 8.5% of the timber harvesting land base.
Means of achieving objective and target	Maintain current harvest priority: Forest health management – harvesting attacked and susceptible stands (generally older stands) “Available” stands with the most years beyond culmination (maximum mean annual increment) Immediate implementation.
Variance	Attaining age class balance earlier a benefit. Later – 20 years.
Current status of indicator	All age classes except age class 1 have less than 8.5% area representation. Age classes 1 to 5 average only 6.3% reflecting the disproportionate area in over mature classes. This target will be achieved over time. (TSR2 – 2001)
Responsibility for Implementation, Monitoring & Reporting	SFM Representative

Indicator	(23) The number of working relationships with applicable First Nations.
Target	Maintain and/or increase the number of working relationships (partnerships, joint ventures, cooperative agreements, memorandum of understanding, or business contracts) with First Nations.
Means of achieving objective and target	Licensees engage in building mutually beneficial relationships with Aboriginal peoples.
Variance	None
Current status of indicator	There is 1 working relationships with First Nations in the DFA.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Development Superintendent

Indicator	(24) Number of classroom or field visits by licensees to elementary, secondary, and post-secondary school levels.
Target	The TSA Licensees will maintain educational support to forestry programs at the elementary level, secondary and post-secondary levels that lead to a balanced and broad-based understanding of forestry. Target 40 actions per year (visits, field trips, information provision, etc).
Means of achieving objective and target	Licensees will be involved with educational support to ensure the importance of resource management is conveyed.
Variance	None
Current status of indicator	There were 0 classroom visits by Canfor.
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent Development Superintendent Operations Superintendent

Indicator	(25) Participation with First Nations to implement and improve upon the revised Archaeological Overview Assessment model and process.
Target	TSA Licensees will participate with First Nations to implement and improve upon the revised Archaeological Overview Assessment model and process.
Means of achieving objective and target	Licensees participation with First Nations to develop and improve upon the revised Archaeological Overview Assessment model and process.
Variance	None
Current status of indicator	64 cutblocks had AOAs and 63 included a field site
Responsibility for Implementation, Monitoring & Reporting	Development Superintendent

Indicator	(26) Participant satisfaction survey
Target	26a. 80% of responses "3" or better 26b. All written comments, and all line responses averaging less than 3 become action items
Means of achieving objective and target	Licensees provide all Advisory Group members, and interested public who have shown notable interest (written comments or SFMP meeting attendance) during the year, a feedback form at the first meeting called to review the previous years monitoring report. At least one question in the survey will address the effectiveness of information delivery (Indicator (27)).
Variance	None
Current status of indicator	Survey response was an average of 3.9 out of 5. There were 14 respondents to the survey.
Responsibility for Implementation, Monitoring & Reporting	SFM Representative

Indicator	(27) Public awareness of the SFMP
Target	27a: Licensees will keep members of the public informed of TSA strategies being developed, and planning occurring by: <ul style="list-style-type: none"> • Maintaining a website • Circulating SFMP and other information to the public at least annually (news release/leaflet/open house/LRUP etc.) 27b: TSA Licensees respond to all written requests from the public for communication within 30 days of their receipt.
Means of achieving objective and target	Licensees cooperatively manage a web site dedicated to providing the latest SFMP information. The site also provides topical forestry information either by maintaining the information on the web site or providing links to applicable sites. Licensees develop and distribute SFMP and other information to the public at least annually
Variance	27a: None 27b: None
Current status of indicator	27 a The SFM website is maintained and available to the public. The website address was advertised in local newspapers in conjunction with the Annual Report notification 27b Canfor had 0 written requests for information during 2004
Responsibility for Implementation, Monitoring & Reporting	SFM Representative Forestry & Planning Superintendent

Indicator	(28) Number of opportunities/ avenues for public participation in decision-making processes.
Target	<p>28a: TSA Licensees will provide opportunities/avenues for public participation in decision-making processes through participation in:</p> <ul style="list-style-type: none"> • LRMP committees (strategic level); • 70 percent of Local Resource Use Plan meetings (local level); • Forest Development Plans (FDPs) (operational level) (number of meetings); and, • Community meetings (number of meetings). <p>28b: TSA Licensees respond to all written requests from the public for communication within 30 days of their receipt.</p>
Means of achieving objective and target	<p>Licensees are committed to work with members of the public on forest management issues and to improve the effectiveness of public processes.</p> <p>Licensees will provide opportunities/avenues for public participation in decision-making processes through participation in committees, meetings, and plan discussions.</p> <p>Licensees respond to all written requests from the public for communication.</p>
Variance	<p>28a: No variance in meeting targets for LRMP involvement;</p> <ul style="list-style-type: none"> • Minus 10 percent or plus 30 percent variance of the 70 percent target for attending LRUP meetings; • No variance for Forest Development Plans⁵; and • No variance for community meetings⁶. <p>28b: None</p>
Current status of indicator	<p>28a:</p> <ul style="list-style-type: none"> • Canfor's interests were represented at LRMP meetings. • Canfor attended 100% of LRUP meetings. • A total of 4 FDP review meetings were attended. • A total of 1 community meetings were attended. <p>28b: Canfor had no written requests from the general public. The only reviews were verbal with Ranchers. Community forest and woodlot discussions are not included in this number.</p>
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

⁵ Forest Development Plans (FDP) meetings are held by licensees to present information to the public or may be held at the request of the public to address a specific resource management issue related to the FDP.

⁶ All integrated resource management (IRM) meetings proposed by licensees or where licensees are requested to attend IRM meetings by local community interests.

Indicator	(29) Report on number of research and extension initiatives licensees have participated in.
Target	29a: TSA licensees will participate in research and extension activities. 29b: Identify priorities for reinvestment in the forest sector through the TSA committee annual review and support of research programs and strategies.
Means of achieving objective and target	Research and extension initiatives summarized, compiled and distributed as part of annual SFMP performance reporting. Licensees will meet annually to review and prioritize proposed research and extension initiatives.
Variance	None
Current status of indicator	Canfor is directly or indirectly represented on the Southern Interior Forest Extension and Research Partnership Committee.
Responsibility for Implementation, Monitoring & Reporting	Operations Superintendent

Indicator	(30) Percent of harvested cutblocks having three or more tree species identified in the free growing inventory.
Target	70 percent of cutblocks harvested will have three or more tree species (includes conifer and deciduous comprising one percent or more of total trees) in the free growing survey.
Means of achieving objective and target	Licencee plans will incorporate strategies that promote multi species regeneration.
Variance	None
Current status of indicator	77.4% of cutblocks have 3 or more tree species
Responsibility for Implementation, Monitoring & Reporting	Forestry & Planning Superintendent

Glossary of Terms

Glossary of Terms

The following definitions were taken from the CAN/CSA-Z809 02, the *Forest Practices Code of British Columbia Act*, the Ministry of Forests Glossary of Resource Planning Terms (April, 1996) and from discussions with the SFM Advisory Group.

Aboriginal Rights: are recognized and affirmed by *Sec. 35(1) of the Constitution Act, 1982*. Aboriginal rights involve practices that were integral to the aboriginal society before contact. For example, Aboriginal rights may include (but are not limited to) fishing, hunting, gathering, trapping, and the use of land and resources for social, medicinal, spiritual and ceremonial purposes (*Sparrow Decision, Guerin Decision, Calder Decision, Jack Decision*). Generally the priority set in the Courts is conservation first, aboriginal rights to carry on an activity and/or practice next. (SFM Advisory Group)

Aboriginal Title: (*Delgamuukw Decision*): is an Aboriginal right recognized and affirmed in Section 35(1) of the *Constitution Act, 1982*. Aboriginal title is right to the land itself and encompasses the right to exclusive use and occupation of the land held pursuant to that title for a variety of purposes, which need not be aspects of those aboriginal practices, customs and traditions which are integral to distinctive aboriginal cultures (Para 177). Aboriginal title also encompasses within it a right to choose to what ends a piece of land can be put (Para 168). (SFM Advisory Group)

Adaptive management: a learning approach to management that recognizes substantial uncertainties in managing forests and incorporates into decisions experience gained from the results of previous actions. (CAN/CSA-Z809-02)

Biological Diversity: means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (UN Convention on Biological Diversity).

Cultural and spiritual resources and values: To assist readers and users of the plan in understanding the nature of resources and values, the following examples are provided. It should be understood that there are many more cultural and spiritual resources than these few examples. (SFM Advisory Group)

	Resource	Value
Cultural	<ul style="list-style-type: none">▪ Thompson River salmon▪ Deer▪ Berries	<ul style="list-style-type: none">▪ Fishing▪ Hunting▪ Gathering
Spiritual	<ul style="list-style-type: none">▪ Sacred medicinal plants▪ Spiritual site	<ul style="list-style-type: none">▪ Spiritual medicines (herbs/weeds)▪ Vision quest

Defined Forest Area (DFA): a specified area of forest, including land and water (regardless of ownership or tenure) to which the requirements of this Standard apply. The DFA may or may not consist of one or more contiguous blocks or parcels. (CAN/CSA-Z809-02)

Forest resources: all resources and values associated with forests and range including, without limitation, timber, water, wildlife, fisheries, recreation, tourism, botanical forest products, forage, and biological diversity. (*Forest Practices Code of British Columbia Act*)

Indicator: a variable that measures or describes the state or condition of a value (see Figure 5 of Standard). (CAN/CSA-Z809-02)

Licensee SFM Plan: An SFM plan specific to the DFA for a licensee seeking or having acquired CSA Z09 certification.

Known information: a feature, objective or other thing that is contained in a higher level plan or is otherwise made available by a district manager or designated environment official at least four months before the Licensee plan is submitted for approval. (*Forest Practices Code of British Columbia Act*)

Objective: a broad statement describing a desired future state or condition of a value (see Figure 5 of Standard). (CAN/CSA-Z809-02)

Old growth management area: means an area established under a higher level plan which contains or is managed to replace structural old growth attributes. (*Forest Practices Code of British Columbia Act, Operational and Site Planning Regulation*)

Plans: There are a variety of plans that apply to forest management including the following.

Regional and subregional plans – apply to large areas of the Crown land base (i.e. 500,000 to 5 million hectares). These plans establish direction for land use in the form of general resource management objectives that are applied consistently across the plan area and area specific resource management zones that provide objectives for a defined portion of the plan area.

Sustainable resource management plans – translate broad ‘strategic’ land use plans (i.e., regional and sub-regional plans) into more specific and tangible resource management direction that is needed for operational planning and day-to-day resource management decisions at a landscape or watershed level. SRMPs define resource objectives in precise terms that are measurable, geographically specific, and clearly communicate the intended resource integration or trade-offs.

Forest stewardship plans – Forest stewardship plans describe the approaches that the licensee will use to achieve the results specified in resource management objectives, but do specify the planning and forest management prescriptions that will be applied to achieve the target results for the objectives

Site plans – are required for any cutblocks or roads prior to harvesting on the cutblock or harvesting in relation to the road construction. A site plan must identify the approximate location of cutblocks and roads, be consistent with the forest Stewardship Plan and identify how the intended results or strategies described in the forest stewardship plan apply to the site.

Woodlot licence plan – must specify intended results and strategies and be consistent with objectives set by government for a defined set of resource values

Licensee plans – detail the logistics for forest and range development in particular locations. Methods, schedules and responsibilities for accessing, harvesting, renewing, and protecting the resources are set out to enable site specific operations to proceed. Licensee plans include forest development plans, range use plans, silviculture prescriptions and site plans. (*Forest Practices Code of British Columbia Act*)

Permanent access structures: are roads, landings, borrow pits, gravel pits, and quarries that are required to be used or provide access for timber harvesting or other forest management activities and whose continuous or periodic use will continue for a long enough time to prevent the re-establishment of forested vegetation. Permanent access structures are not part of productive landbase. (*Forest Practices Code of British Columbia Act*)

Rare ecosystem: is an ecosystem (site series or surrogate) that makes up less than 2 percent of a landscape unit and is not common in adjacent landscape units. (*Forest Practices Code of British Columbia Act, Biodiversity Guidebook*)

Seral stage distribution: the stages of ecological succession of a plant community (e.g., from young stage to old stage). The characteristic sequence of biotic communities that successively occupy and replace each other by which some components of the physical environment become altered over time. (*Glossary of Resource Planning Terms*)

Sustainable forest management: management to maintain and enhance the long-term health of forest ecosystems, while providing ecological, economic, social, and cultural opportunities for the benefit of present and future generations. (CAN/CSA-Z809-02)

Sustainable forest management system: the structure, responsibilities, practices, procedures, processes, and time frames set by a registrar for implementing, maintaining, and improving SFM (see Figure 2 of Standard). (CAN/CSA-Z809-02)

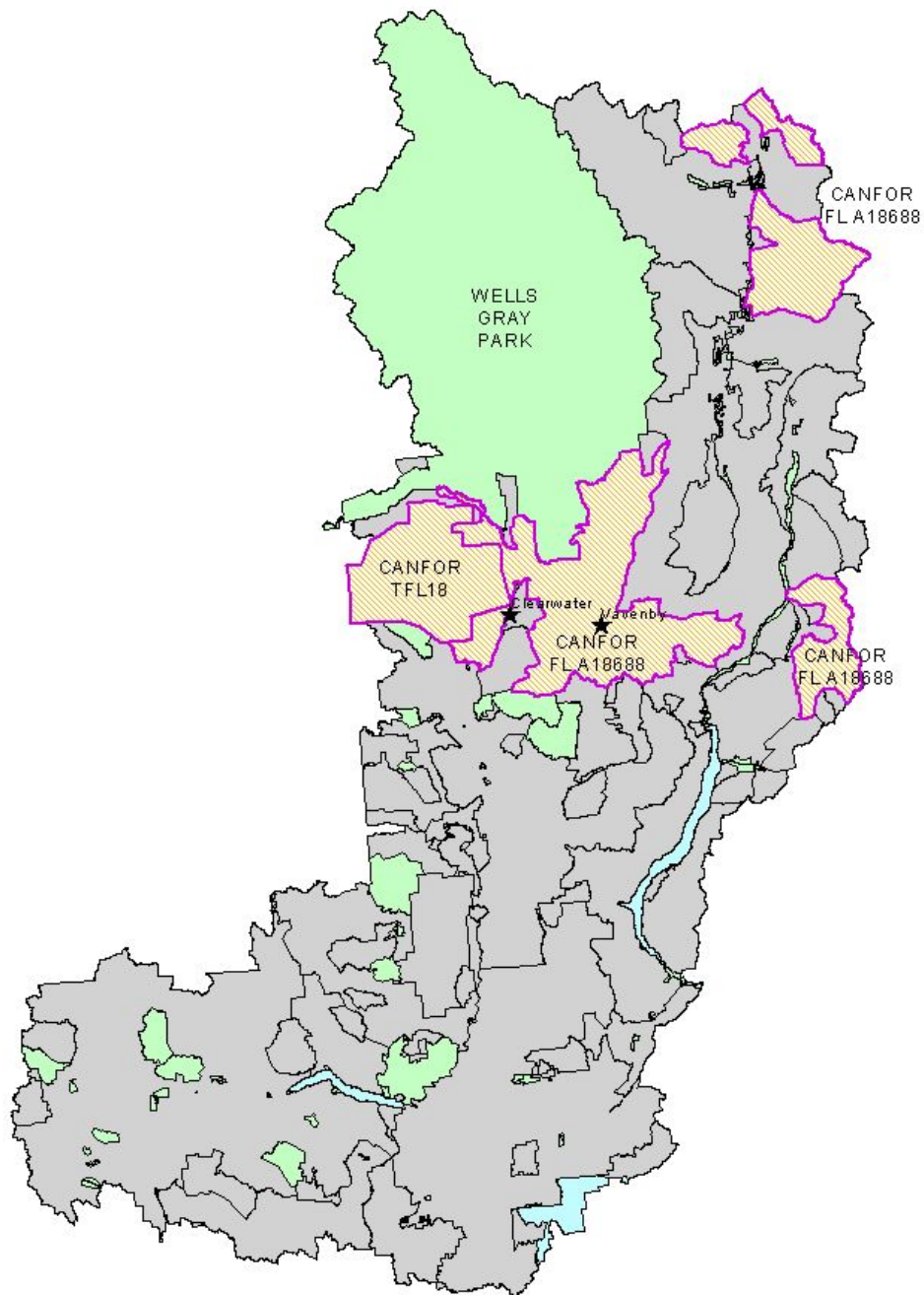
Target: a specific statement describing a desired future state or condition of an indicator. Targets should be clearly defined, time-limited, and quantified, if possible (see Figure 5 of Standard). (CAN/CSA-Z809-02)

Appendix 1

Canfor Vavenby

Defined Forest Area Map

Appendix 1: Canfor Vavenby Defined Forest Area Map



Appendix 2

Identified Wildlife Management Species

Appendix 2: Identified Wildlife Management Species

Identified Wildlife Management Species for the Canfor-Vavenby Defined Forest Area are shown in the following table.

Species	BC Status
Lewis's Woodpecker	Blue
Long-billed Curlew	Blue
Badger	Red
Grizzly Bear	Blue
Wolverine	Blue
Mountain Caribou	Red

Appendix 3

SFM Plan Reporting Format

Appendix 3: SFM Plan reporting format

Following is the format that licensees will use when reporting the results of monitoring the SFM Plan. Licensees provide the information required in the form annually. Information from individual licensees is compiled into a TSA Annual Monitoring Report. The Monitoring Report contributes to an annual review to confirm that the CSA performance measures are being met. The SFM Advisory Group reviews and comments on the Monitoring Report.

loops TSA Sustainable Forest Management Plan Annual Report

Name of licensee: _____

Reporting year: _____

Tar #	Monitoring parameter	Monitoring results
1	Have Licensees respected and are they living up to the intent of the direction set forth in the LRMP relating to old forest retention?	Yes _____ No _____
2	Licensees will report the number of riparian and lakeshore related non conformances to plans occurring during the reporting year as compared to the gross area of cutblocks that were harvested that had riparian management areas within or adjacent to them. Variance: To accommodate non conformance to plans that have little or no impact to the environment and/or to the social and ecological objectives or lakeshore areas.	Number of riparian and lakeshore non conformances to plans _____ Gross area of cutblocks harvested having RMAs within/adjacent: _____
3	Area (ha) harvested meeting LRMP caribou strategies against the area harvested within the LRMP caribou strategy area during the reporting year. Variance: As provided for within the legal framework. The statutory decision maker may approve variances from standard requirements provided adequate rationale is provided and long-term objectives continue to be met.	Number of hectares meeting caribou strategies _____ Area harvested within caribou resource management zones _____

Tar #	Monitoring parameter	Monitoring results
4	<p>For cutblocks greater than 5 hectares, the number of cutblocks with wildlife tree patches within or parented to the cutblock and/or individual trees/stubs within the cutblock, versus the total number of cutblocks greater than 5 ha in size upon completion of harvest, during the reporting year.</p> <p>Variance: Acceptable range is between 70 percent and 100 percent.</p>	<p>Number of cutblocks with WTPs _____</p> <p>Total number of cutblocks harvested _____</p>
5	<p>Number of cutblocks where the Coarse Woody Debris (CWD) requirements contained in Licensee plans were followed compared to the number of cutblocks harvested, during the reporting year.</p>	<p>Number of cutblocks where CWD requirements were followed _____</p> <p>Number of cutblocks harvested _____</p>
6	<p>The average time (weighted by area) for regeneration establishment on areas where regeneration delay was declared during the reporting period.</p> <p>Variance: 12 months beyond the 3-year target</p>	<p>Average time for regeneration establishment⁷ (months) _____</p>
7	<p>The number of known rare ecosystems in the operating area versus the number of known rare ecosystems where management strategies were followed.</p> <p><i>*Where no activity or planned activity occurred in/around a known rare ecosystem, management strategies are considered to be "followed".</i></p>	<p>Number known rare ecosystems in the operating area _____</p> <p>Number known rare ecosystems where management strategies were followed* _____</p>

⁷ For natural regeneration, average age of trees from the first survey and for artificial regeneration, date of initial planting.

Tar #	Monitoring parameter	Monitoring results
8	<p>The area harvested within IWMS areas, whether the harvest areas had strategies to manage for the identified wildlife in plans, and whether the plan was followed.</p> <p>Did harvest areas have strategies to manage for the identified wildlife in plans?</p> <p>Was the plan followed?</p> <p><i>*Where no activity or planned activity occurred in/around IWMS cutblocks, management strategies are considered to be "followed".</i></p>	<p>Area (ha) harvested within IWMS areas _____</p> <p>Yes _____ No _____</p> <p>Yes _____ No _____</p>
9	<p>Age class distribution for coniferous species.</p> <p>Percent of the land base for broad leaf species.</p>	<p>See Indicator 22 information</p> <p>Land base ha. and broad leaf ha. (data to come from current TSR).</p>
10	<p>Area (ha) of permanent roads and landings identified in Licensee plans over gross block area (ha) for cutblocks harvested during the reporting year, using information contained within Licensee plans.⁸</p>	<p>Number of hectares of roads and landings within harvested areas _____</p> <p>Gross block area (ha) _____</p>
11	<p>Harvest level allocated for each licensee and harvest level cut (cut control volume) for the past reporting year.</p> <p>Variance: According to Cut Control Regulation and Policy.</p>	<p>Allocated harvest level _____</p> <p>Cut control volume _____</p>

⁸ If Ministry of Forests inspection reports the plan number has been exceeded, the actual number will be used in the report.

Tar #	Monitoring parameter	Monitoring results
12	<p>Licensees will report:</p> <ul style="list-style-type: none"> • Number of meetings and meaningful communications with First Nations that included management and protection of traditional knowledge, non-timber resources, and cultural and spiritual values; and, • Number of cutblocks where specific actions were requested and were taken, using traditional knowledge where available, to manage for and/or protect non-timber resources, and cultural and spiritual values. • Licensees will report on the number of written requests for communication from First Nations versus the number of responses made to First Nations. Reporting is on a one to one ratio (one response for each request) 	<p>Number of meetings and meaningful communications _____</p> <p>Number of cutblocks where specific actions were requested taken ____</p> <p>Number of written requests for communication ____</p> <p>Number of responses made ____</p>
13	<p>Licensees will report the net area (hectares) where soil disturbance commitments were achieved as compared to the total net area of cutblocks that were harvested during the reporting year.</p> <p>Licensee performance will be guided by internal and MOF inspections. Reports will use DM determinations or violation tickets, to confirm whether soil disturbance levels were met.</p>	<p>Number of hectares where soil disturbance commitments were achieved: _____</p> <p>Total net area of cutblocks harvested during the reporting year (ha): _____</p>
14	<p>Average time for road cut and fill slope seeding application on areas of new road construction during the reporting year.</p>	<p>Average time for application (months) _____</p>

Tar #	Monitoring parameter	Monitoring results
15	Total number of kilometers of status roads and the number of those that have been assigned a risk rating for the purpose of inspections. Licensees will also report on the number of road inspections made against the plan for high, moderate and low risk.	Total number of kilometers of status roads: _____ Of the above, how many kilometers of status roads have been assigned a risk rating for the purpose of inspections: _____ Number of road inspections made against the plan for high _____, moderate _____ and low risk _____.
16	Did you contribute to the annual plan? Did you participate in a meeting with the SFM Advisory Group?	Yes _____ No _____ Yes _____ No _____
17	Number of registrations to a recognized third party certification that apply over the TSA area for the reporting period.	Number of registrations to a third party certification _____
18	Licensee report the current Protected Area status as last reported by a Timber Supply Review	Number of hectares maintained as Protected Areas (data to come from current TSR).
19	Percent of ranchers affected by planned operations that were communicated with during the reporting period. Variance: Minus 10 percent of the 90 percent target	Number of affected ranchers _____ Number of affected ranchers communicated with during reporting period _____
20	Number of harvested blocks that achieve the visual intent as described in plans versus the number of blocks harvested within the past year that had preservation, retention or partial retention visual quality objectives.	Number of blocks with preservation, retention or partial retention achieving visual intent _____ Number of blocks harvested with VQOs: _____

Tar #	Monitoring parameter	Monitoring results
21	<p>Licensee report the current mai as last reported by a Timber Supply Review. For all pine leading stands:</p> <ul style="list-style-type: none"> ▪ develop a report of hectares by age class for each pine leading analysis unit at time 0 and time 100 years out ▪ determine mai for each age class for each analysis unit at time 0 and time 100 ▪ calculate an area weighted average mai for each analysis unit ▪ calculate an area weighted average mai for the total area of pine leading stands (combine the analysis units) 	<p>Current mai in m³/ha/yr (data to come from current TSR). _____</p> <p>Forecast (100 yr) mai in m³/ha/yr (data to come from current TSR). _____</p>
22	<p>Licensee report the current age class distribution as last reported by a Timber Supply Review</p>	<p>Age class as percent of timber harvesting land base (data to come from current TSR).</p>
23	<p>Number of working relationships with applicable First Nations (partnerships, joint ventures, co-operative agreements, memorandums of understanding, or business contracts* over \$5,000 or over 500 cubic meters in volume) during the reporting year.</p> <p><i>*Examples of a business contract include a work agreement or a direct timber sale with a First Nation Band or First Nation Contractor. For consistency in reporting, count multiple work agreements with one band or contractor or direct sales with one band or contractor as a single business contract. For example, multiple work agreements or multiple direct sales would count as a single business contract if they occurred with the same band or contractor.</i></p>	<p>Number of working relationships _____</p>
24	<p>Number of classroom or field visits during the reporting year.</p>	<p>Number of classroom or field visits in current year _____</p>

Tar #	Monitoring parameter	Monitoring results
25	<p>Licensees will report on the number of cutblocks where an AOA was conducted.</p> <p>Licensees will report on the number of cutblocks where the AOA included a field visit.</p>	<p>Number of cutblocks where an AOA was conducted. _____</p> <p>Number of cutblocks where the AOA included a field visit. _____</p>
26	<p>Survey responses coded 1 (poor), 2, 3 (satisfactory), 4, 5 (well done)</p> <p>Results of feedback form compiled and reported as part of annual monitoring program.</p>	<p>Response average ____</p> <p>Results of feedback form compiled and reported ____ yes ____ no</p>
27	<p>27a: Licensees will report a yes/no answer as to whether the web site is being maintained, and whether SFMP and other information was made publicly available in the last year. Similar to Indicator 28</p> <p>27b: Licensees will report on the number of responses sent out by licensees compared to the number of written requests for communication. Report the average timeline for response. Indicator 28</p>	<p>Web site is being maintained ____ Yes, ____ No</p> <p>SFMP and other information was made publicly available in the last year ____ Yes, ____ No</p> <p>Number of written requests for communication _____</p> <p>Number of responses ____</p> <p>Average timeline for response ____ days</p>

Tar #	Monitoring parameter	Monitoring results
28	<p>28a)</p> <ul style="list-style-type: none"> Were licensee interests represented at LRMP meetings? Number of LRUP meeting attended against the number held within their operating area. <p>Variance: Minus 10 percent to plus 30 percent of the 70 percent target</p> <ul style="list-style-type: none"> Number of FDP review meetings attended Number of community meetings held or attended for the reporting period. <p>28b) Number of responses sent out by licensees compared to the number of written requests from the public for communication. Include average time for response.</p>	<p>Yes _____ No _____</p> <p>Number of LRUP meetings attended _____</p> <p>Number of LRUP meetings held _____</p> <p>Number of FDP review meetings attended _____</p> <p>Number of community meetings attended _____</p> <p>Number of responses from Licensee _____</p> <p>Number of written requests from public _____</p> <p>Average response time (in days)..... _____</p>
29	<p>29a) Are licensees directly or indirectly represented on the Forest Research Extension Partnership?</p> <p>29b) Are TSA wide research results shared with members of the Public Advisory Group on an annual basis?</p> <p>Describe the type of research undertaken and its value and applicability to sustainable forest management (emphasize projects where operational use of research has been\will be initiated).</p>	<p>Yes _____ No _____</p> <p>Yes _____ No _____</p> <p>Research: _____</p> <p>Type of research and value and applicability to SFM:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

Tar #	Monitoring parameter	Monitoring results
30	<p>Percent of cutblocks with three or more tree species identified at free growing.</p> <ul style="list-style-type: none"> • Report results during the reporting period where entire block has achieved free growing. • Species data is based on inventory layer • Average % primary species is based on number of cutblocks with three or more species (sum of leading tree species % for all cutblocks with three or more species divided by the number of cutblocks) 	<p>Cutblocks with three or more species: _____</p> <p>Cutblocks achieving free growing status _____</p> <p>Percent of cutblocks with three or more species: _____</p> <p>Percent primary species (average) for cutblocks with three or more tree species : _____</p>

Appendix 4

2006 - 2011 FOREST STEWARDSHIP PLAN SUMMARY

Appendix 4: 2006-2011 FOREST STEWARDSHIP PLAN SUMMARY

Canfor Vavenbys' Forest Stewardship Plan (FSP) was approved on December 6, 2007. The FSP covers all operations in Vavenbys' DFA.. The FSP identifies the location of Forest Development Units (FDUs) for a 5 year period (2007 – 2012). The DFA is divided in to 4 FDUs which include the entire TFL as one unit and the FL divided in to north and south units and an additional unit that covers operations in the Kamloops Forest district in other licensees traditional operating areas that addresses salvage of mountain pine beetle attacked stands.

FDUs identify the location where primary forestry activities occur that include harvesting, road building and silviculture activities over the 5 year term of the FSP.

The plan specifies results, strategies and objectives for each FDU as they relate to primary forest activities that are consistent with:

- * Objectives set by government under the Forest Practices Code (FPC), Forest & Range Practices Act (FRPA) and the Forest Plans & Practices Regulation.

Results and strategies address the management of numerous resource values in the DFA including, but not limited to water, riparian, fisheries, soils, ecosystem management, biodiversity, range, wildlife, recreation, visual resource, cultural heritage as well as identified special resource management zones.

The FSP identifies measures to prevent the introduction or spread of noxious weeds and mitigating the loss of natural range barriers. Stocking standards, regeneration date and free growing height are also identified to ensure harvested areas are reforested to an acceptable standard.

An amendment to the FSP may be considered at any time to address any changes required to address new or changing legislation, changes in higher level plans and where existing plans are not adequately addressing resource objectives. When amendments to the plan are required, they will follow legislated requirements for content, review and comment.

Appendix 5

TFL 18 MANAGEMENT PLAN #10

SUMMARY

Appendix 5: TFL 18 MANAGEMENT PLAN #10 SUMMARY

Management Plan #10 was approved on July 1, 2006 and is in effect for a five year period ending on June 30, 2011. The Management Plan covers the TFL 18 portion of the DFA. The Management Plan outlines the strategies that Canfor – Vavenby will follow in Forest Management Planning or Forest Stewardship Planning for the defined timeframe (2006-2011) after which time the Management Plan will be replaced with Management Plan #11 as approved by the Chief Forester.

The management planning process includes a timber supply analysis and information package, a twenty year plan and the management plan text.

The information package documents the procedures, assumptions, data and model to be used in the timber supply analysis. The assumptions used in the information package are used to guide the development of the timber supply analysis.

The timber supply analysis examines the availability of wood volume for harvesting over a defined period of time. The analysis provides the Chief Forester with information regarding short and long term timber supply. The analysis involves the testing and reporting of a variety of assumptions and management strategies based on resource inventories of the TFL. The purpose of the timber supply analysis is to provide the chief forester with sufficient information to make an informed Annual Allowable cut determination for the term of the Management Plan.

The 20 Year Plan supports the timber supply analysis by spatially confirming a hypothetical sequence of harvest over a 20 year period. The 20 year plan spatially identifies the timber harvesting landbase, existing and proposed harvest areas, existing and proposed road access, special resource management constraints, type and quality of timber and suitable harvest methods.

The management plan text proposes management objectives and, as necessary, strategies for achieving objectives for all forest resources on Crown and private land within the TFL, and provides an opportunity for other agencies, the public and other interested parties to review and comment on the proposed objectives and strategies. It also includes details regarding the status of various resource inventories

The management plan provides guidance for other planning processes including the Forest Stewardship Plan.