SUSTAINABLE FOREST MANAGEMENT PLAN

2001 ANNUAL REPORT

Final

Canadian Forest Products Ltd.

Peace Region

Chetwynd Operations —TFL 48

Canadian Forest Products Ltd.

Chetwynd
Chetwynd, BC V0C 1J0

Version 2.0

June 18, 2002

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EXECUTIVE SUMMARY

The following table highlights the revisions suggested in the 2001 Annual Report:

Indicator	Synopsis of significant revisions, progress or methodology
1-2 Seral Stage Over Time	Proposed framework for establishing long term objectives to be based on NDU's.
2 Patch Size Distribution	New target patch size is proposed for early and mature plus old patches.
5 Habitat Supply for Indicator Species	Habitat supply for 5 of 12 indicator species has been modelled 200 years into the future. Results are presented. Revised target date for completion of all models across TFL is suggested.
11 Wildlife Tree Patches	Detailed accounting of WTP's is presented by Landscape Unit and BEC. Canfor suggests revising the monitoring procedure to annually as part of the Annual report rather than with the FDP submission.
13 Coarse Woody Debris	Preliminary report of coarse woody debris accumulations based on VRI analysis.
23 Area of a Stream	Proposal to discontinue monitoring and replace with Indicators 22, 24, and 25.
24 Sediment Levels	First year report on continuous water quality monitoring program (Meadow Creek). Adoption of Stream Crossing Quality Index and summary of report. Proposal for annual Stream Crossing Quality Index and suggested targets.
25 Stream Flows	Adoption of Peak Flow Index as a procedure to monitor and predict the impact of forest management on stream flows. Report on current status of Peak Flow Index on all blocks in TFL.
28 LRF	Proposal to increase target range to reflect improvements in sawmill.
39 Botanical Forest Products	Work plan to conduct native medicinal plant inventory complete. Proposal to extend timeframe for completion.

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ACKNOWLEDGEMENTS

We would like to thank Carol Norris for her hard work in compiling the document and the Chetwynd Woodlands staff and Small Business Forest Enterprise Program (Dawson Creek) staff for compiling data.

We would like to thank the Public Advisory Committee members and advisors for their continued input to the CSA process and providing input on the draft document.

1 INTRODUCTION & OVERVIEW

Canadian Forest Products Ltd. (Canfor) achieved registration under the Canadian Standards Association CAN/CSA Z809-96 Sustainable Forest Management Standards for Tree Farm Licence (TFL) 48's (see Figure 1) forestry operations in July 2000. In partial fulfilment of achieving that registration, a public group — Chetwynd Public Advisory Committee (PAC) — was formed at the beginning of 2000 to help Canfor identify quantifiable local-level Indicators and Objectives of sustainable forest management. The 52 Indicators and Objectives identified by the PAC were detailed with associated forest management practices to achieve those objectives in Management Plan 3 for Tree Farm Licence 48 (Canfor, 2000 and 2001). The 2001 Annual Report is a summary report on the status of each indicator and provides revisions to several indicators, objectives, or the way they are measured. The 2001 Annual Report is the second time reporting has been undertaken.

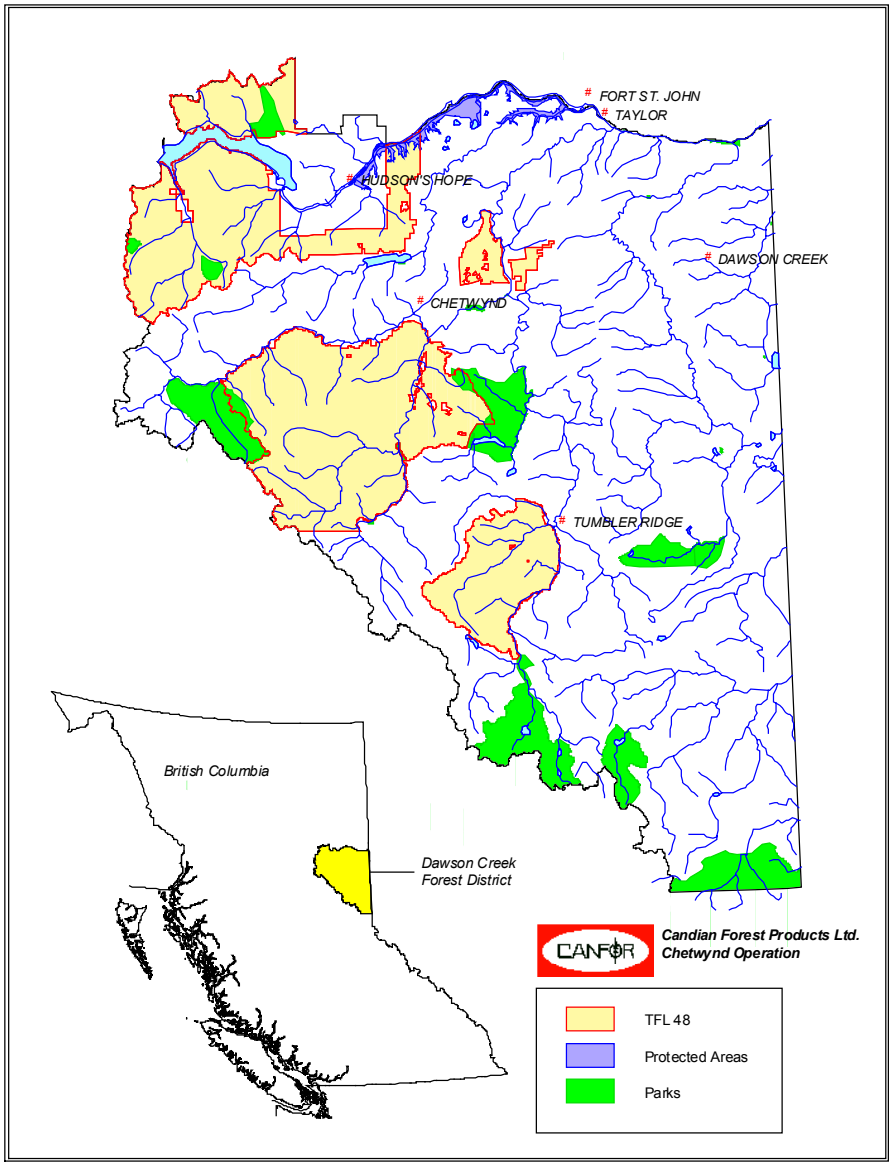


Figure 1: Tree Farm Licence 48

This report is prepared as an annual report required by the CSA standard and also serves as a TFL Annual Report. This report provides the status, to the end of 2001, for most of the 52 Indicators and Objectives of Management Plan. In this report, each Indicator is reiterated, and a brief status report is provided. For additional information on the Indicators and Objectives, or the practices involved, the reader should refer to Canfor's Management Plan 3 for Tree Farm Licence 48 (Canfor, 2001).

1.1 OVERVIEW

Generally, the status of the Indicators has changed little since they were first reported in the draft Management Plan. Given the long-term nature of forest management and forest management practices, these small changes are not surprising. A poor forest products market and resultant shutdowns of the Chetwynd sawmill have resulted in a second year of reduced socio-economic performance (Indicator 34) for 2001 but generally either the objectives are still being met, or results are expected in the long-term.

Substantial progress has been made on objectives such as Wildlife Habitat Modelling (Indicator 5), Patch Size (Indicator 2), and various water quality issues (Indicators 24 and 25), but other objectives such as habitat connectivity (Indicator 3) will require further quantification. Further review during preparation of this report has shown that some timelines for either completion or reporting of objectives will require revision. Those suggested revisions are explained throughout this report.

The format of the remainder of this document and the detailed status of each indicator are provided below. *This document is subject to review by the Public Advisory Committee (PAC).*

Comments and suggestions on the format of the annual report received during the Canfor internal audit have been incorporated where possible to help make the report more meaningful and easier to use by not having to refer to multiple documents.

Information noted as SBFEP was collected and provided by the Small Business Forest Enterprise Program staff at the Dawson Creek Forest District. Canfor then included this information into applicable Indicator reporting. No new information was provided by Louisiana Pacific as no activities occurred on the TFL in 2001.

2 SFM INDICATORS AND OBJECTIVES

The format of each status report is described below:

X.X INDICATOR NAME

Indicator:	Objective:
#. A reiteration of the Indicator as identified in the SFM matrix.	A reiteration of the Objective as identified in the SFM matrix.

STATUS AND COMMENTS

This section provides an update on the status of each Indicator and Objective. The best information available up to and including December 31 2001 (except where noted) was used for the preparation of this status report.

REVISIONS

When required, this section describes Canfor's suggested revisions to details (i.e., wording, reporting periods) of the Indicator and Objective. These revisions will be presented to the PAC for their review.

2.1 CONSERVATION OF BIOLOGICAL DIVERSITY

Indicator:	Objective:
1. Forest type and seral stage distribution	**1-1** We will sustain forest types over time. **1-2** We will sustain seral stage within the natural range over time.

2.1-1 Forest Types Over Time

STATUS AND COMMENTS

There is no new information to present for this indicator. Canfor will continue to develop a tracking system over the term of MP 3 to track forest types over time. The status of this indicator was reported in MP 3 shown in Table 1:

Table 1: Forest Types March 2000

Forest Type	Area ('000 ha)	%
Coniferous	455	80%
Mixed-Coniferous	28	5%
Mixed-Deciduous	19	3%
Deciduous	69	12%
Totals	571	100%

Source: VRI 1999

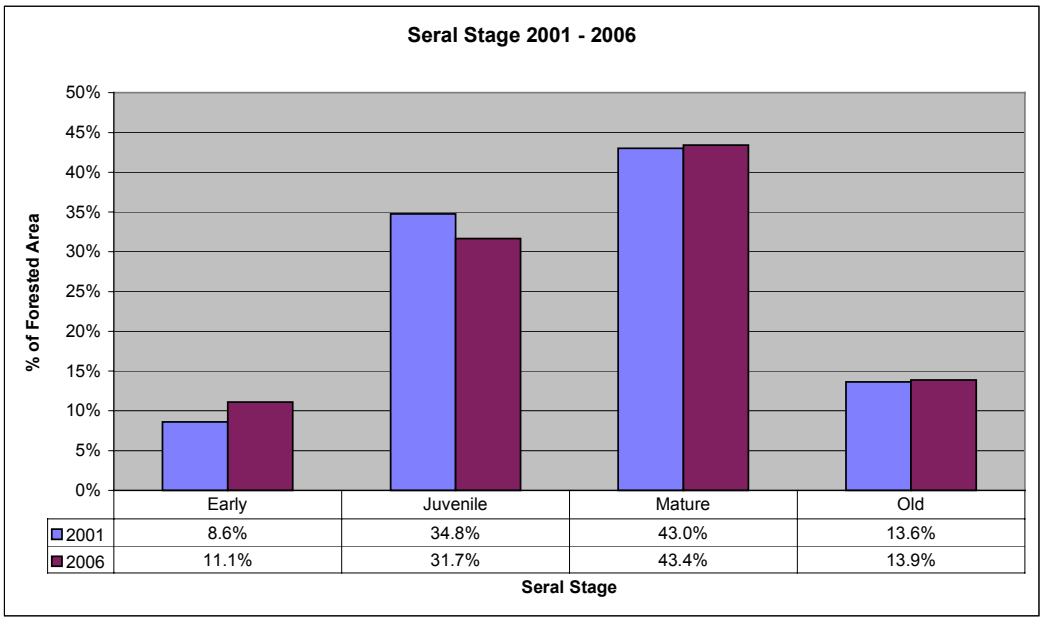
REVISIONS

No revisions are suggested for this indicator or objective.

2.1-2 Seral Stage Over Time

STATUS AND COMMENTS

Figure 2 shows the seral stage distribution as of October 2001 and the distribution after the proposed development. Table 2 shows seral distribution by landscape unit and biogeoclimatic unit.



	Early	Juvenile	Mature	Old
2001	8.6%	34.8%	43.0%	13.6%
2006	11.1%	31.7%	43.4%	13.9%

Figure 2: 2001 - 2006 Seral Stage Summary for TFL 48

The seral stage distribution for 2001 is based on the updated Vegetation Resource Inventory (VRI) to October 2001 and the 2006 seral stage distribution is based on the draft FDP submitted in January 2002 to the Ministry of Forests.

October 2001 was chosen as the reporting period rather than December 31, 2001 to facilitate analysis of the 2002 – 2007 Forest Development Plan prior to submission in January 2002.

Table 2: Seral Stages 2001 and 2006

Seral Stage Area (ha) of Productive Forest by Landscape Unit / BEC Zone for 2001 and 2006		Seral Stage																		Total Forested Area
		Early				Juvenile				Mature				Old						
		2001		2006		2001		2006		2001		2006		2001			2006			
Landscape Unit	BEC	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Surplus / Deficit	Area	%	Surplus / Deficit	Old Target
BOUCHER	BWBSmw 1-C	1,509	13.3%	1,706	15.0%	5,241	46.1%	5,228	46.0%	3,802	33.5%	3,651	32.1%	807	7.1%	-125	776	6.8%	-156	8.2%	11,359
	BWBSmw 1-D	162	1.0%	992	6.2%	8,864	55.3%	8,659	54.0%	2,987	18.6%	2,764	17.2%	4,009	25.0%	2,455	3,607	22.5%	2,052	9.7%	16,022
	BWBSwk 1-C	442	8.4%	1,765	33.5%	1,374	26.1%	1,349	25.6%	3,094	58.8%	1,837	34.9%	354	6.7%	-78	315	6.0%	-117	8.2%	5,264
	BWBSwk 1-D	8	0.4%	89	4.9%	855	47.2%	842	46.5%	517	28.6%	489	27.0%	431	23.8%	255	390	21.5%	214	9.7%	1,810
	SBS wk 2	5	0.6%	5	0.5%	881	92.5%	882	92.5%	66	7.0%	66	7.0%		0.0%	-64		0.0%	-64	6.7%	953
BOUCHER Total		**2,126**	**6.0%**	**4,556**	**12.9%**	**17,215**	**48.6%**	**16,959**	**47.9%**	**10,467**	**29.6%**	**8,806**	**24.9%**	**5,600**	**15.8%**		**5,087**	**14.4%**			**35,408**
BURNT-LEMORAY	AT	7	6.4%		0.0%	77	67.5%	85	73.9%	30	26.1%	30	26.1%		0.0%			0.0%		N/A	114
	BWBSmw 1-C	0	0.0%		0.0%	2	20.1%	2	20.1%	0	0.1%	0	0.0%	7	79.8%	6	7	79.9%	6	8.2%	8
	BWBSmw 1-D		0.0%		0.0%	1	2.5%	1	2.5%	2	4.0%	2	4.0%	41	93.4%	36	41	93.4%	36	9.7%	43
	ESSFwc 3	2,006	4.8%	710	1.7%	16,364	39.3%	14,882	35.8%	19,735	47.4%	21,715	52.2%	3,501	8.4%	-2,407	4,299	10.3%	-1,609	14.2%	41,606
	ESSFwcp3	57	2.0%		0.0%	2,539	87.5%	2,515	86.7%	306	10.5%	387	13.3%	0	0.0%		0	0.0%		N/A	2,902
	ESSFwk 2	4,491	11.5%	4,949	12.7%	12,941	33.1%	10,606	27.1%	14,644	37.5%	15,846	40.6%	6,988	17.9%	1,441	7,662	19.6%	2,115	14.2%	39,064
	SBS wk 2	2,213	9.6%	2,606	11.3%	8,389	36.4%	7,268	31.6%	11,127	48.3%	11,681	50.7%	1,298	5.6%	-245	1,471	6.4%	-72	6.7%	23,027
BURNT-LEMORAY Total		**8,776**	**8.2%**	**8,266**	**7.7%**	**40,312**	**37.8%**	**35,358**	**33.1%**	**45,843**	**42.9%**	**49,661**	**46.5%**	**11,834**	**11.1%**		**13,480**	**12.6%**			**106,765**
CARBON	AT	0	0.0%	0	0.0%	212	99.3%	212	99.3%	1	0.7%	1	0.7%		0.0%			0.0%		N/A	214
	BWBSmw 1-C		0.0%		0.0%	5	46.2%	5	46.2%	5	53.8%	5	53.8%		0.0%	-1		0.0%	-1	8.2%	10
	BWBSmw 1-D		0.0%		0.0%	5	29.8%	5	29.8%		0.0%		0.0%	12	70.2%	10	12	70.2%	10	9.7%	17
	ESSFmv 2	1,462	3.2%	2,549	5.5%	13,805	29.9%	12,732	27.6%	27,120	58.7%	27,243	59.0%	3,777	8.2%	684	3,640	7.9%	547	6.7%	46,164
	ESSFmvp2	19	0.6%	19	0.6%	2,397	76.7%	2,367	75.7%	709	22.7%	738	23.6%	0	0.0%		0	0.0%		N/A	3,125
	ESSFwc 3		0.0%	178	1.8%	1,546	15.9%	1,545	15.9%	6,385	65.9%	6,213	64.1%	1,765	18.2%	388	1,761	18.2%	384	14.2%	9,696
	ESSFwcp3		0.0%		0.0%	885	62.7%	885	62.7%	523	37.0%	523	37.0%	5	0.3%		5	0.3%		N/A	1,413
	ESSFwk 2	41	0.9%	421	9.6%	297	6.8%	297	6.8%	2,133	48.8%	1,884	43.1%	1,901	43.5%	1,280	1,770	40.5%	1,149	14.2%	4,371
	SBS wk 2	2,535	16.7%	2,861	18.8%	746	4.9%	650	4.3%	11,179	73.6%	10,931	72.0%	732	4.8%	-285	751	4.9%	-267	6.7%	15,192
CARBON Total		**4,057**	**5.1%**	**6,028**	**7.5%**	**19,898**	**24.8%**	**18,698**	**23.3%**	**48,055**	**59.9%**	**47,538**	**59.3%**	**8,192**	**10.2%**		**7,939**	**9.9%**			**80,203**
DUNLEVY	AT	0	0.5%	0	0.5%	75	79.1%	75	79.1%	19	20.4%	19	20.4%		0.0%			0.0%		N/A	94
	BWBSmw 1-C	1,474	14.2%	1,805	17.4%	2,883	27.8%	2,771	26.8%	4,725	45.6%	4,506	43.5%	1,276	12.3%	426	1,276	12.3%	426	8.2%	10,358
	BWBSmw 1-D	555	6.0%	682	7.4%	4,527	49.3%	4,752	51.7%	626	6.8%	466	5.1%	3,475	37.8%	2,584	3,283	35.7%	2,392	9.7%	9,183
	BWBSwk 2-C	1,177	15.9%	1,445	19.5%	2,436	32.9%	2,395	32.4%	2,896	39.1%	2,842	38.4%	892	12.0%	285	719	9.7%	112	8.2%	7,401
	BWBSwk 2-D	11	0.2%	293	5.7%	1,440	28.1%	1,330	26.0%	723	14.1%	754	14.7%	2,950	57.6%	2,453	2,748	53.6%	2,251	9.7%	5,125
	ESSFmv 4	1,149	9.8%	1,572	13.4%	7,007	59.7%	6,976	59.4%	3,564	30.4%	3,164	26.9%	23	0.2%	-764	31	0.3%	-756	6.7%	11,743
	ESSFmvp4	39	2.7%	36	2.5%	876	61.6%	879	61.8%	503	35.4%	504	35.4%	3	0.2%		3	0.2%		N/A	1,422
DUNLEVY Total		**4,406**	**9.7%**	**5,833**	**12.9%**	**19,244**	**42.5%**	**19,178**	**42.3%**	**13,056**	**28.8%**	**12,255**	**27.0%**	**8,619**	**19.0%**		**8,060**	**17.8%**			**45,325**
EAST PINE	BWBSmw 1-C	920	15.7%	1,490	25.5%	305	5.2%	312	5.3%	4,405	75.2%	3,868	66.1%	225	3.8%	-256	185	3.2%	-295	8.2%	5,855
	BWBSmw 1-D	884	6.4%	1,809	13.1%	4,984	36.2%	4,995	36.3%	693	5.0%	964	7.0%	7,213	52.4%	5,877	6,006	43.6%	4,670	9.7%	13,774
EAST PINE Total		**1,805**	**9.2%**	**3,156**	**16.1%**	**5,289**	**26.9%**	**5,306**	**27.0%**	**5,099**	**26.0%**	**4,832**	**24.6%**	**7,437**	**37.9%**		**6,334**	**32.3%**			**19,629**

Seral Stage Area (ha) of Productive Forest by Landscape Unit / BEC Zone for 2001 and 2006

		Seral Stage																		
		Early				Juvenile				Mature				Old						
		2001		2006		2001		2006		2001		2006		2001			2006			Old Target	Total Forested Area
Landscape Unit	BEC	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Surplus / Deficit	Area	%	Surplus / Deficit		
GETHING	BWBSmw 1-C	2,674	29.4%	2,816	31.0%	764	8.4%	748	8.2%	2,476	27.3%	1,827	20.1%	3,168	34.9%	2,423	3,690	40.6%	2,946	8.2%	9,082
	BWBSmw 1-D	395	15.7%	49	2.0%	234	9.3%	600	23.9%	31	1.2%	29	1.2%	1,849	73.7%	1,605	1,830	73.0%	1,587	9.7%	2,508
	ESSFmv 2	2,607	10.8%	3,391	14.1%	3,509	14.6%	3,417	14.2%	17,655	73.4%	16,962	70.6%	269	1.1%	-1,341	269	1.1%	-1,341	6.7%	24,039
	ESSFmvp2		0.0%		0.0%	98	92.4%	98	92.4%	8	7.6%	8	7.6%		0.0%			0.0%		N/A	106
	SBS wk 2	4,566	22.7%	5,773	28.7%	973	4.8%	986	4.9%	14,411	71.6%	13,191	65.5%	183	0.9%	-1,166	183	0.9%	-1,166	6.7%	20,133
GETHING Total		**10,241**	**18.3%**	**12,030**	**21.5%**	**5,578**	**10.0%**	**5,849**	**10.5%**	**34,581**	**61.9%**	**32,017**	**57.3%**	**5,469**	**9.8%**		**5,973**	**10.7%**			**55,869**
HIGHHAT	BWBSmw 1-C	198	2.6%	496	6.5%	2,728	35.9%	2,293	30.2%	2,851	37.5%	2,527	33.3%	1,823	24.0%	1,200	2,284	30.1%	1,661	8.2%	7,600
	BWBSmw 1-D	92	1.1%	413	4.8%	1,641	19.1%	919	10.7%	3,940	45.8%	3,441	40.0%	2,932	34.1%	2,097	3,831	44.5%	2,997	9.7%	8,604
	BWBSwk 1-C	1	13.9%	1	13.9%		0.0%		0.0%	0	4.5%	0	4.5%	8	81.6%	8	8	81.6%	8	8.2%	10
	ESSFmv 2	2,032	6.5%	4,300	13.7%	15,068	48.1%	11,671	37.3%	13,213	42.2%	14,336	45.8%	995	3.2%	-2,042	1,001	3.2%	-2,036	9.7%	31,308
	ESSFwc 3	0	0.0%		0.0%	7	91.6%	4	55.8%	1	8.4%	4	44.2%		0.0%	-1		0.0%	-1	14.2%	8
	ESSFwk 2	0	0.0%	371	14.6%	1,450	57.0%	947	37.2%	963	37.9%	1,130	44.4%	130	5.1%	-231	96	3.8%	-265	14.2%	2,544
	SBS wk 2	2,362	6.3%	3,933	10.5%	15,106	40.3%	12,884	34.4%	18,712	49.9%	19,717	52.6%	1,282	3.4%	-1,228	928	2.5%	-1,582	6.7%	37,462
HIGHHAT Total		**4,685**	**5.4%**	**9,514**	**10.9%**	**36,002**	**41.1%**	**28,719**	**32.8%**	**39,680**	**45.3%**	**41,155**	**47.0%**	**7,170**	**8.2%**		**8,149**	**9.3%**			**87,537**
MARTIN CREEK	BWBSmw 1-C	2,001	15.8%	2,772	22.0%	3,861	30.6%	3,283	26.0%	4,323	34.2%	3,932	31.1%	2,442	19.3%	1,407	2,640	20.9%	1,604	8.2%	12,627
	BWBSmw 1-D	58	0.5%	617	5.9%	2,984	28.4%	2,157	20.5%	3,252	30.9%	3,132	29.8%	4,224	40.2%	3,204	4,612	43.8%	3,592	9.7%	10,518
	BWBSwk 1-C	1,422	7.6%	2,306	12.3%	5,008	26.8%	3,958	21.2%	8,912	47.7%	8,634	46.2%	3,348	17.9%	1,815	3,791	20.3%	2,258	8.2%	18,689
	BWBSwk 1-D	48	2.2%	88	4.0%	869	39.7%	674	30.8%	831	38.0%	952	43.5%	440	20.1%	228	474	21.7%	262	9.7%	2,188
	ESSFmv 2	75	0.6%	788	5.9%	7,022	52.1%	5,223	38.8%	6,161	45.7%	7,236	53.7%	219	1.6%	-684	228	1.7%	-675	6.7%	13,476
MARTIN CREEK Total		**3,603**	**6.3%**	**6,572**	**11.4%**	**19,743**	**34.3%**	**15,296**	**26.6%**	**23,479**	**40.8%**	**23,886**	**41.5%**	**10,673**	**18.6%**		**11,745**	**20.4%**			**57,498**
WOLVERINE	AT	8	1.3%		0.0%	639	98.1%	641	98.5%	4	0.6%	10	1.5%		0.0%			0.0%		N/A	651
	BWBSmw 1-C	441	10.9%	712	17.5%	756	18.6%	708	17.4%	1,275	31.4%	938	23.1%	1,589	39.1%	1,256	1,703	41.9%	1,370	8.2%	4,061
	BWBSmw 1-D	7	0.5%	63	4.3%	469	31.7%	418	28.2%	355	23.9%	350	23.6%	650	43.9%	507	651	43.9%	507	9.7%	1,481
	BWBSwk 1-C	408	7.8%	1,266	24.2%	1,483	28.3%	1,200	22.9%	992	19.0%	961	18.4%	2,351	44.9%	1,922	1,806	34.5%	1,377	8.2%	5,233
	BWBSwk 1-D	4	0.3%	53	3.6%	915	63.1%	843	58.1%	153	10.6%	215	14.8%	378	26.1%	238	340	23.4%	199	9.7%	1,451
	ESSFmv 2	4,926	14.4%	1,767	5.1%	17,301	50.4%	18,689	54.5%	9,588	27.9%	11,169	32.5%	2,504	7.3%	204	2,695	7.9%	395	6.7%	34,319
	ESSFmvp2	154	5.0%		0.0%	2,042	65.8%	1,963	63.3%	902	29.1%	1,112	35.9%	5	0.2%		28	0.9%		N/A	3,103
	ESSFwc 3	55	1.0%	225	4.0%	921	16.5%	859	15.4%	3,470	62.1%	3,379	60.5%	1,142	20.4%	349	1,126	20.1%	332	14.2%	5,588
	ESSFwcp3	0	0.0%		0.0%	1,141	63.1%	1,130	62.4%	631	34.9%	638	35.2%	37	2.1%		42	2.3%		N/A	1,810
	ESSFwk 2	523	7.7%	971	14.4%	985	14.6%	899	13.3%	2,397	35.5%	2,138	31.6%	2,855	42.2%	1,895	2,752	40.7%	1,792	14.2%	6,760
	SBS wk 2	1,755	13.4%	1,202	9.2%	7,151	54.6%	6,586	50.3%	3,587	27.4%	4,674	35.7%	604	4.6%	-273	635	4.9%	-242	6.7%	13,097
WOLVERINE Total		**8,254**	**10.6%**	**6,232**	**8.0%**	**33,803**	**43.6%**	**33,935**	**43.8%**	**23,354**	**30.1%**	**25,583**	**33.0%**	**12,144**	**15.7%**		**11,806**	**15.2%**			**77,555**
Grand Total		47,953	8.5%	62,188	11.0%	197,084	34.8%	179,297	31.7%	243,615	43.1%	245,733	43.4%	77,138	13.6%		78,572	13.9%			565,790

* Targets are as per TFL 48 Base Case Timber Supply Analysis (See Table 40 and Appendix C of Info Pack)

VARIANCES

The following variances to the old seral target have been identified as part of the FDP proposal. These variances are consistent with MP 3 for previously approved blocks. No new harvesting of old forest has been proposed or approved since the development of MP 3.

1. Boucher LU; BWBSmw 1 – C

Previously approved blocks (T2039, 040 and 041) in Lebleau Creek that contained old forest has been dropped from the plan. 28 hectares of old is approved for harvest in previously approved blocks (CP 364 and 501). 16 hectares of old in proposed block T2044 will be reserved from harvest, if field check confirms that this type is old forest. No other old forest is either approved or proposed for harvest. At the end of 2006, the amount of old will be 6.8%, 1.4% less than target. Approximately 3600 hectares of mature is available for recruitment.

2. Boucher LU; BWBSwk 1 – C

Previously approved blocks (T2039, 040 and 041) in Lebleau Creek that contained old forest has been dropped from the plan. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 6.0%, 2.2% less than target. Approximately 1800 hectares of mature is available for recruitment.

3. Boucher LU: SBSwk 2

No old forest exists and no old forest planned for harvest.

4. Burnt- LeMoray LU; ESSFwc 3

3.5 hectares of old forest in CP issued blocks and 37 hectares in Category A Approved blocks is scheduled for harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 10.3%, 3.9% less than target. Approximately 21,700 hectares of mature is available for recruitment.

5. Burnt- LeMoray LU; SBSwk 2

52 hectares of old forest in Category A Approved blocks are scheduled for harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 6.4%, 0.3% less than target. Approximately 11,600 hectares of mature is available for recruitment.

6. Carbon LU: SBSwk 2

1.2 hectares of old forest in CP issued blocks are scheduled for harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 4.9%, 1.8% less than target. Approximately 10,900 hectares of mature is available for recruitment.

7. Dunlevy LU; ESSFmv 4

No old forest planned for harvest. 756 hectare deficit in 2006. 3100 hectares of mature to recruit from in 2006.

8. East Pine LU; BWBSmw 1 – C

19 hectares of old forest in Category A Approved blocks is scheduled for harvest.11 hectares of old in T3018 and 10 hectares of old in T3019 will be reserved from harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 3.2%, 5.0% less than target. Approximately 3,800 hectares of mature is available for recruitment.

9. Gething LU; ESSFmv 2

No old forest planned for harvest. 1341 hectare deficit in 2006. 16,900 hectares of mature to recruit from in 2006.

10. Gething LU; SBSwk 2

No old forest planned for harvest. 1166 hectare deficit in 2006. 13,200 hectares of mature to recruit from in 2006.

11. Highhat LU; ESSFmv 2

0.3 hectares of old forest in CP issued blocks, 28 hectares in Approved SBFEP blocks and 92 hectares in Category A Approved blocks is scheduled for harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 3.2%, 6.5% less than target. Approximately 14,300 hectares of mature is available for recruitment.

12. Highhat LU; ESSFwk 2

30 hectares of old forest in Approved SBFEP blocks and 4 hectares in Category A Approved blocks is scheduled for harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 3.8%, 10.4% less than target. Approximately 1,100 hectares of mature is available for recruitment.

13. Highhat LU; SBSwk 2

32 hectares of old forest in CP issued blocks, 5 hectares in Approved SBFEP blocks and 324 hectares in Category A Approved blocks is scheduled for harvest. 5 hectares in proposed block T4068 and 4 hectares in proposed block T4070 will be reserved from harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 2.5%, 4.2% less than target. Approximately 19,700 hectares of mature is available for recruitment.

14. Martin Creek LU; ESSFmv 2

29 hectares of old forest in proposed block T4072 will be reserved from harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 1.7%, 5.0% less than target. Approximately 7,200 hectares of mature is available for recruitment.

15. Wolverine LU; SBSwk 2

2 hectares of old forest in Approved block T5003 is scheduled for harvest. No other old is either approved or proposed for harvest. At the end of 2006, the amount of old will be 4.9%, 1.8% less than target. Approximately 4,600 hectares of mature is available for recruitment.

REVISIONS

In the 2000 annual report Canfor suggested that using the 1960 seral stage baseline as a target may not meet habitat objectives and community stability dependent upon steady harvest flows. Rather than continue with the Natural Disturbance/Fire Regime study for portions within the North and South Peace River Region as indicated in the 2000 Annual Report, Canfor has supported and provided data in support of the Ministry of Forests Prince George Region initiative to define Natural Disturbance Patterns for the PG Region (DeLong). This work will form the basis for establishing Natural Disturbance frequencies, patterns and sizes. Subsequent work will then be required to determine when mature and old attributes are present within stands in the northeast. These works will then be considered to establish targets for the TFL. It is anticipated that this work will take 3 to 5 years to complete.

Figure 3 shows the Natural Disturbance Units that are applicable to TFL 48.

Until revised targets are proposed Canfor will continue to monitor the performance of achieving seral stage distribution targets consistent with the TFL 48 base case Timber Supply Analysis in support of MP 3 at each Forest Development Plan submission. This will include updating the VRI to reflect current status and projecting the results of the proposed development.

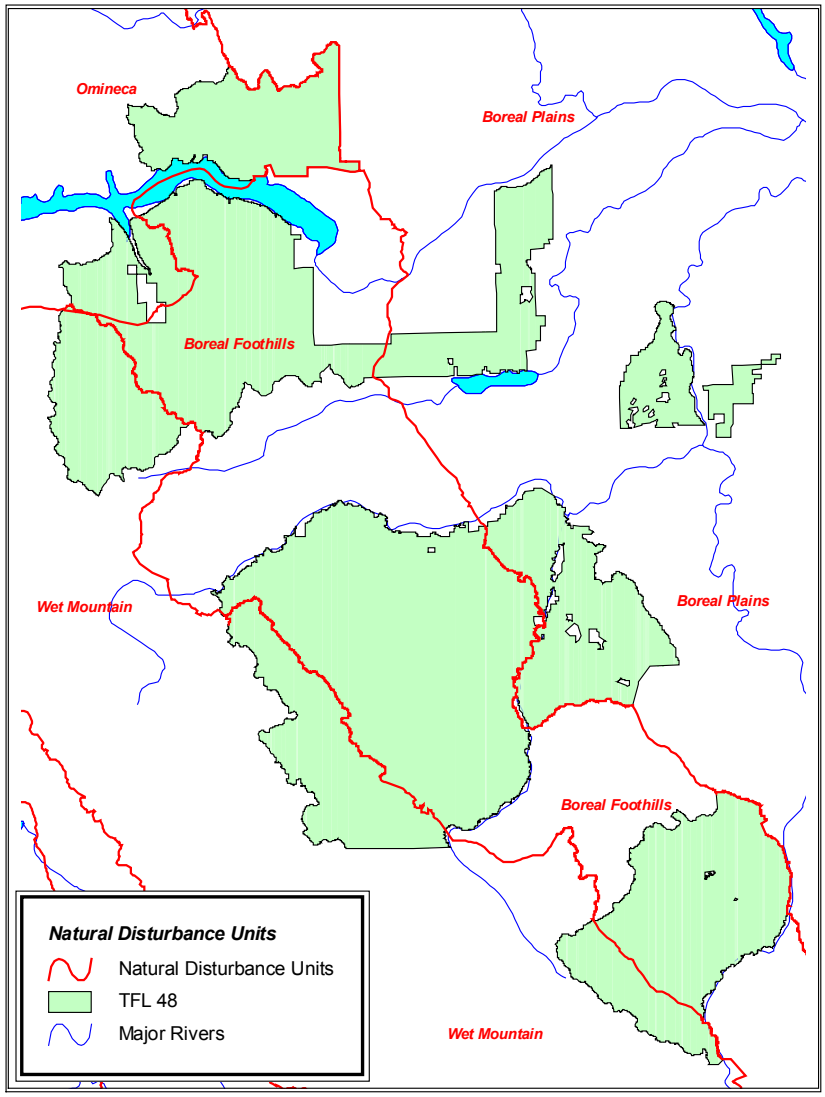


Figure 3: Natural Disturbance Units

2.2 PATCH SIZE DISTRIBUTION

Indicator:	Objective:
2. Patch size distribution	We will maintain a patch size consistent with natural disturbance types.

STATUS AND COMMENTS

Work completed as part of the MoF PG Region Natural Disturbance Project (DeLong) has estimated patch size distribution as indicated in the target column of Table 3 and Figure 4 below.

The methodology for monitoring patch size in early seral stages is as described in the 2000 Annual Report. In the original TFL 48 MP3 analysis roads, trails and seismic lines were buffered and removed from the forested landbase resulting in small patches being reported. For this patch size analysis, disturbances less than 10m wide were amalgamated back into the early seral patch. A manual step was then done to assess early patches that were in close proximity to each other and were functioning as one larger patch. This was done to ensure that we were not underestimating the amount of larger early patches present on the landscape. Mature and old seral stages as defined in Indicator 2.1-2 above were combined.

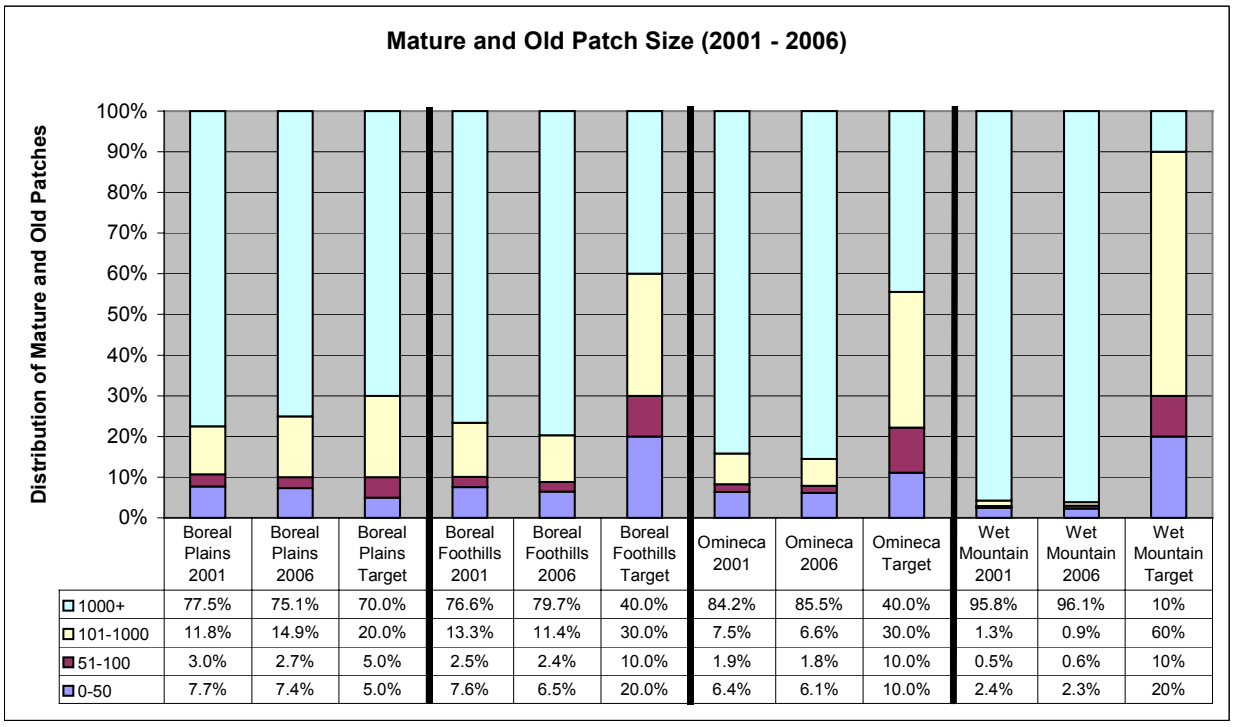
Patch size is reported only at the Natural Disturbance Unit (NDU) level. Patches that crossed a NDU boundary are reported by the NDU in which the largest portion of the patch exists.

The 2002 – 2007 Forest Development Plan has proposed to include larger patch sizes primarily through patch amalgamation. Generally smaller to mid-size early patches are over-represented on the TFL than naturally would have occurred. To ensure that we continue to have large mature and old patches now and in the future we must start creating large early patches.

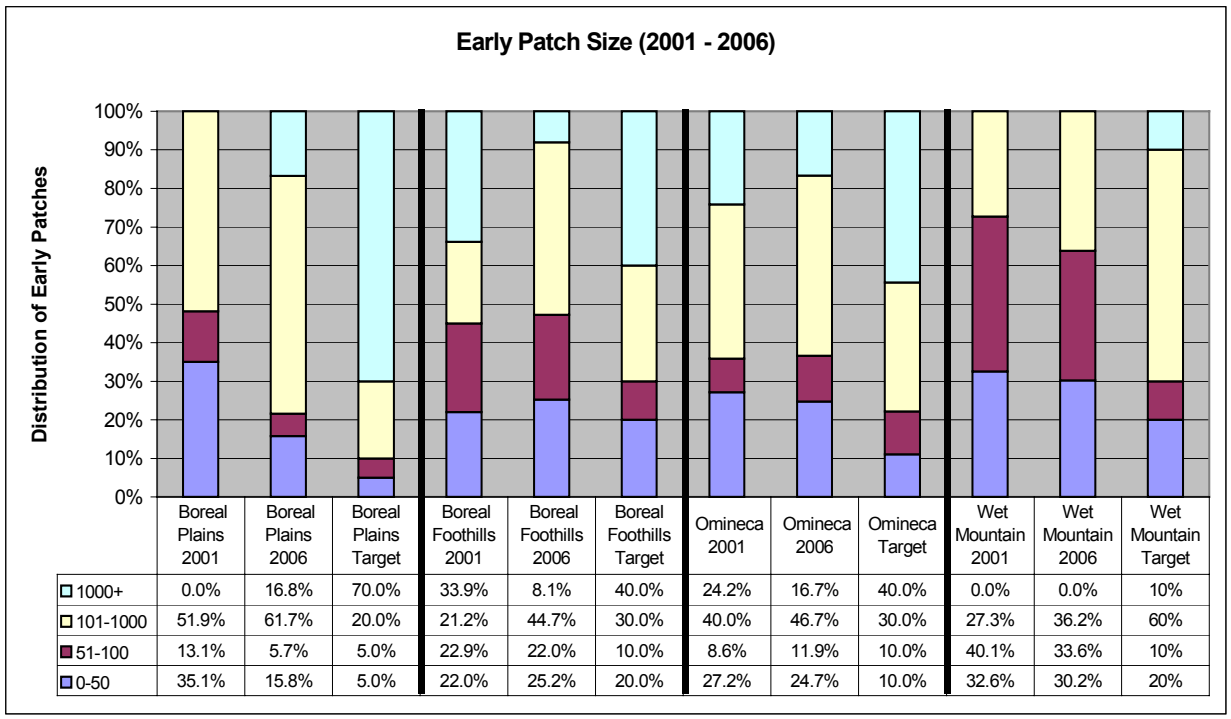
Indicator 2.1-2 (Seral Stage) over time establishes the amount of mature and old forest present on the landscape, the indicator on patch size (Indicator 2.2) will direct the size and distribution of sizes of seral stages.

Table 3: Patch Size Distribution Status and Targets

NDU	Patch Size Class	Early Patches				Mature and Old Patches				Target
		Current – 2001		Post FDP – 2006		Current – 2001		Post FDP 2006		
		Ha	%	Ha	%	Ha	%	Ha	%	
Boreal Plains	0-50	3,331	35.1%	2,758	15.8%	4,638	7.7%	4,339	7.4%	5%
	51-100	1,240	13.1%	996	5.7%	1,809	3.0%	1,571	2.7%	5%
	101-1000	4,927	51.9%	10,737	61.7%	7,091	11.8%	8,780	14.9%	20%
	1000+	0	0.0%	2,918	16.8%	46,583	77.5%	44,275	75.1%	70%
Boreal Plains Total		9,498	100.0%	17,409	100.0%	60,120	100.0%	58,965	100.0%	
Boreal Foothills	0-50	6,748	22.0%	8,344	25.2%	10,986	7.6%	9,867	6.5%	20%
	51-100	7,034	22.9%	7,278	22.0%	3,637	2.5%	3,606	2.4%	10%
	101-1000	6,493	21.2%	14,810	44.7%	19,309	13.3%	17,442	11.4%	30%
	1000+	10,378	33.9%	2,667	8.1%	111,186	76.6%	121,520	79.7%	40%
Boreal Foothills Total		30,654	100.0%	33,098	100.0%	145,119	100.0%	152,433	100.0%	
Omineca	0-50	1,615	27.2%	2,023	24.7%	2,316	6.4%	2,152	6.1%	10%
	51-100	513	8.6%	974	11.9%	671	1.9%	617	1.8%	10%
	101-1000	2,371	40.0%	3,827	46.7%	2,711	7.5%	2,296	6.6%	30%
	1000+	1,435	24.2%	1,363	16.7%	30,383	84.2%	29,951	85.5%	40%
Omineca Total		5,934	100.0%	8,187	100.0%	36,081	100.0%	35,016	100.0%	
Wet Mountain	0-50	1,759	32.6%	2,263	30.2%	2,009	2.4%	1,920	2.3%	20%
	51-100	2,166	40.1%	2,512	33.6%	447	0.5%	536	0.6%	10%
	101-1000	1,476	27.3%	2,706	36.2%	1,104	1.3%	747	0.9%	60%
	1000+	0	0.0%	0	0.0%	80,291	95.8%	79,294	96.1%	40%
Wet Mountain Total		5,402	100.0%	7,480	100.0%	83,850	100.0%	82,497	100.0%	



	Boreal Plains 2001	Boreal Plains 2006	Boreal Plains Target	Boreal Foothills 2001	Boreal Foothills 2006	Boreal Foothills Target	Omineca 2001	Omineca 2006	Omineca Target	Wet Mountain 2001	Wet Mountain 2006	Wet Mountain Target
1000+	77.5%	75.1%	70.0%	76.6%	79.7%	40.0%	84.2%	85.5%	40.0%	95.8%	96.1%	10%
101-1000	11.8%	14.9%	20.0%	13.3%	11.4%	30.0%	7.5%	6.6%	30.0%	1.3%	0.9%	60%
51-100	3.0%	2.7%	5.0%	2.5%	2.4%	10.0%	1.9%	1.8%	10.0%	0.5%	0.6%	10%
0-50	7.7%	7.4%	5.0%	7.6%	6.5%	20.0%	6.4%	6.1%	10.0%	2.4%	2.3%	20%



	Boreal Plains 2001	Boreal Plains 2006	Boreal Plains Target	Boreal Foothills 2001	Boreal Foothills 2006	Boreal Foothills Target	Omineca 2001	Omineca 2006	Omineca Target	Wet Mountain 2001	Wet Mountain 2006	Wet Mountain Target
1000+	0.0%	16.8%	70.0%	33.9%	8.1%	40.0%	24.2%	16.7%	40.0%	0.0%	0.0%	10%
101-1000	51.9%	61.7%	20.0%	21.2%	44.7%	30.0%	40.0%	46.7%	30.0%	27.3%	36.2%	60%
51-100	13.1%	5.7%	5.0%	22.9%	22.0%	10.0%	8.6%	11.9%	10.0%	40.1%	33.6%	10%
0-50	35.1%	15.8%	5.0%	22.0%	25.2%	20.0%	27.2%	24.7%	10.0%	32.6%	30.2%	20%

Figure 4: Patch Size Distribution by Natural Disturbance Unit (2001 - 2006)

REVISIONS

Canfor suggests that the monitoring procedure for this indicator be adjusted to report early patch size distribution and a mature plus old patch size distribution at each FDP submission stage, as this is the management practice that will determine the size of future mature and old patches.

Based on the Natural Disturbance analysis completed by the MoF Prince George Regional office, Canfor recommends adopting the patch size targets for early and mature plus old seral patches as indicated in Table 3 and Figure 4 shown above.

2.3 PROTECTED AREA BY SERAL STAGE

Indicator:	Objective:
3. Protected area by seral stage	We will identify seral stage distribution in Protected Areas within the TFL.

STATUS AND COMMENTS

Management Plan 3 shows that currently there are 260 ha of early, 6,637 ha of juvenile, 5,247 ha of mature and 1,590 ha of old forest in Protected Areas within the TFL boundaries (Table 4). A detailed summary of the seral stage distribution by Protected Areas is provided in Management Plan 3. No known new disturbances have occurred that would have influenced this analysis.

Table 4: Current Status of Seral Stages within Protected Areas as of July 2000

		Seral Stage of Vegetated Treed Areas								
		Existing				+ 5 Years				Total Area
Protected Area	BEC	Early	Juvenile	Mature	Old	Early	Juvenile	Mature	Old	
Bocock Peak	ESSF wc3	-	91	317	29	-	79	328	30	437
	ESSF wk2	-	22	91	81	-	22	91	81	194
Bocock Peak Total		-	113	408	110	-	101	419	111	631
Butler Ridge	BWBS mw1 C	3	128	480	98	3	128	480	98	709
	BWBS mw1 D	179	322	64	461	105	389	71	461	1,026
	BWBS wk2 C	-	156	279	21	-	156	279	21	456
	BWBS wk2 D	-	103	15	74	-	219	43	74	192
	ESSF mv4	60	2,362	218	-	60	2,352	228	-	2,640
Butler Ridge Total		242	3,071	1,056	654	168	3,244	1,101	654	5,023
Gwillim Lake	BWBS mw1 C	-	-	22	4	-	-	20	6	26
	BWBS mw1 D	-	-	-	5	-	-	-	5	5
	BWBS wk1 C	-	193	304	126	-	174	310	139	623
	BWBS wk1 D	11	27	52	27	11	13	65	28	117
	ESSF mv2	7	880	660	94	7	784	756	94	1,641
Gwillim Lake Total		18	1,100	1,038	256	18	971	1,151	272	2,412
Klin Se Za	ESSF wc3	-	219	761	70	-	191	787	72	1,050
	ESSF wk2	-	8	32	28	-	8	32	28	68
Klin Se Za Total		-	227	793	98	-	199	819	100	1,118
Peace Boudreau	BWBS mw1 C	-	301	97	22	-	301	97	22	420
	BWBS mw1 D	-	1,190	442	47	-	1,190	442	47	1,679
Peace Boudreau Total		-	1,491	539	69	-	1,491	539	69	2,099
Pine – LeMoray	ESSF wc3	-	445	1,278	261	-	349	1,316	319	1,984
	ESSF wk2	-	136	135	142	-	134	77	202	413
	SBS wk2	-	54	-	-	-	1	53	-	54
Pine – LeMoray Total		-	635	1,413	403	-	484	1,446	521	2,451
Grand Total		**260**	**6,637**	**5,247**	**1,590**	**186**	**6,490**	**5,475**	**1,727**	**13,734**

The next review of seral stage distribution within protected areas will be done in conjunction with Management Plan 4. It will represent forest conditions as of March 31, 2005. This analysis will occur in the spring of 2005.

REVISIONS

No revisions are suggested for this indicator or objective.

2.4 SPECIES AT RISK

Indicator:	Objective:
4. Number of forest dependent plant species, plant associations, fish and wildlife classified as threatened, endangered or vulnerable within the TFL	We will ensure no species is uplisted as a result of Canfor management activities within the TFL.

STATUS AND COMMENTS

Canfor first developed a list of species at risk in the TFL for Management Plan 2 in 1995; this list was updated in Management Plan 3 and the 2000 Annual Report. This is the fourth time that formal reporting has occurred. For a complete list of species at risk the reader is directed to Management Plan 3.

Species at risk include those listed federally, provincially (red or blue) and as Identified Wildlife under the Forest Practices Code. Some species can appear on all three lists; for example, grizzly bear is listed federally as special concern (formerly referred to as vulnerable), blue-listed provincially and is Identified Wildlife under the Forest Practices Code. Others appear only on one list; Northern Goshawk for example, is listed only as Identified Wildlife.

There has been no change in the number of species at risk between 2000 and 2001 within the TFL as indicated in either the British Columbia Conservation Data Centre (April 2001) or the COSEWIC (November 2001) species at risk documentation.

Since 1999, the number of species at risk has declined by three on the TFL. There have been no changes to the status of fish at risk in the TFL. There are still 6 mammals listed at risk, but the northern population of caribou was uplisted from yellow to blue. There are still 15 bird species at risk but one of these, the Black-throated Green Warbler, was downlisted provincially from red to blue. The number of plant species at risk decreased by one; the boreal paintbrush *(Castilleja fulva)* was previously listed provincially as red, it is no longer listed. The number of plant associations at risk decreased by two, both associations were previously provincially blue listed and are no longer listed. The two plant associations were Subalpine Fir/Black Spruce/Labrador Tea, and Black Spruce/Black Huckleberry/Coltsfoot.

Table 5: Number of Species at Risk by Taxa 1999 - 2001

Taxa	1999	2000	2001
Mammals	6	6	6
Fish	2	2	2
Birds	15	15	15
Plants	22	21	21
Plant Associations	4	2	2
Total	**49**	**46**	**46**

The changes in status noted above were not a direct result of Canfor management practices but a result of more information being available for those species/species associations. For example, for the past 5 years there has been a substantial amount of songbird work in northeastern BC funded by Forest Renewal BC and other agencies. This inventory information has led to the downlisting of the Black-throated Green Warbler.

REVISIONS

No revisions are suggested for this indicator or objective.

2.5 HABITAT SUPPLY FOR INDICATOR SPECIES

Indicator:	Objective:
5. Habitat supply for indicator species	**5-1** We will ensure distribution of habitat for indicator species across the TFL. **5-2** We will ensure sufficient furbearer habitat on a drainage-by-drainage basis exists to enable the maintenance of populations.

2.5-1 Wildlife Models

STATUS AND COMMENTS

Of the 12 species with habitat models for TFL 48, 5 are now complete. This includes Moose, Grizzly Bear, Marten, Blackthroated Green Warbler and Northern Goshawk. These 5 species have had habitat supply modelling projected 200 years into the future based on the current base case timber supply analysis as determined as part of MP 3. The following Figures 5 to 10 show the projected quantity of habitat by class across the TFL.

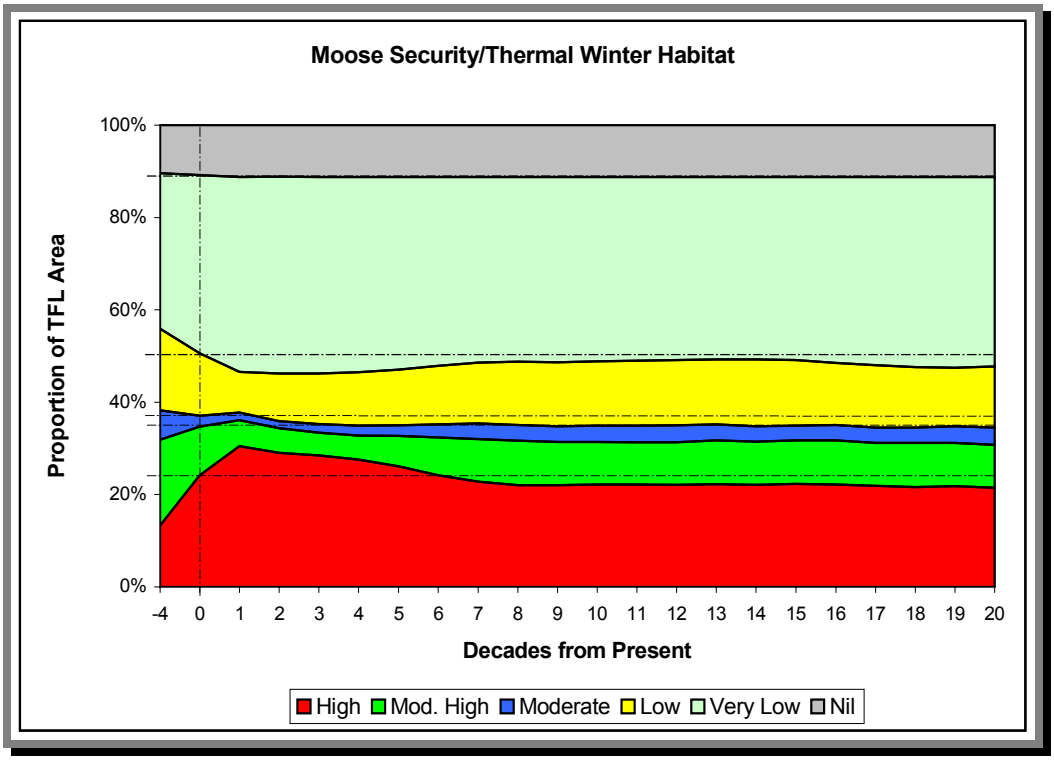


Figure 5: Moose Security / Thermal Winter Habitat

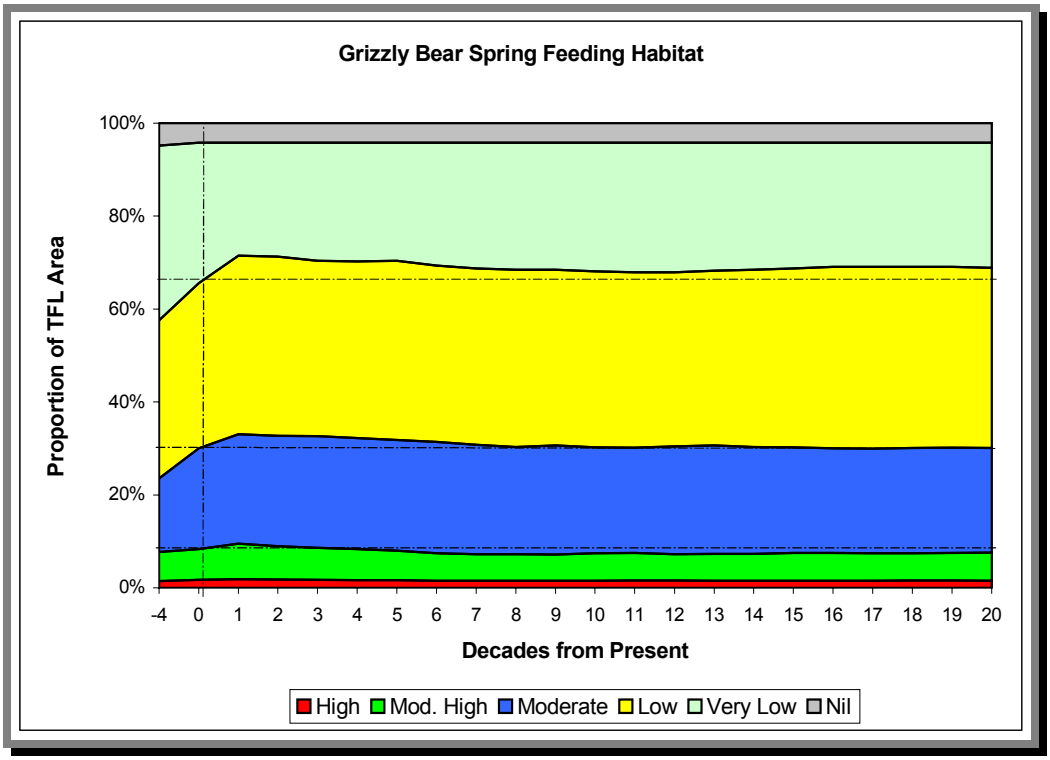


Figure 6: Grizzly Bear Spring Feeding Habitat

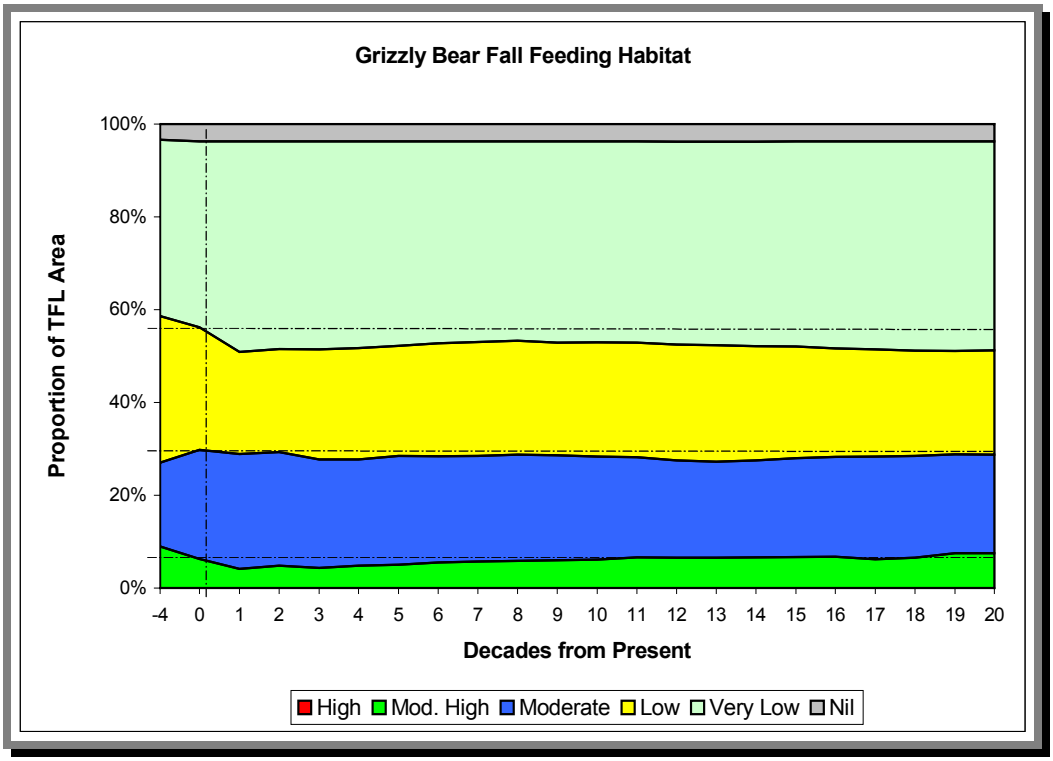


Figure 7: Grizzly Bear Fall Feeding Habitat

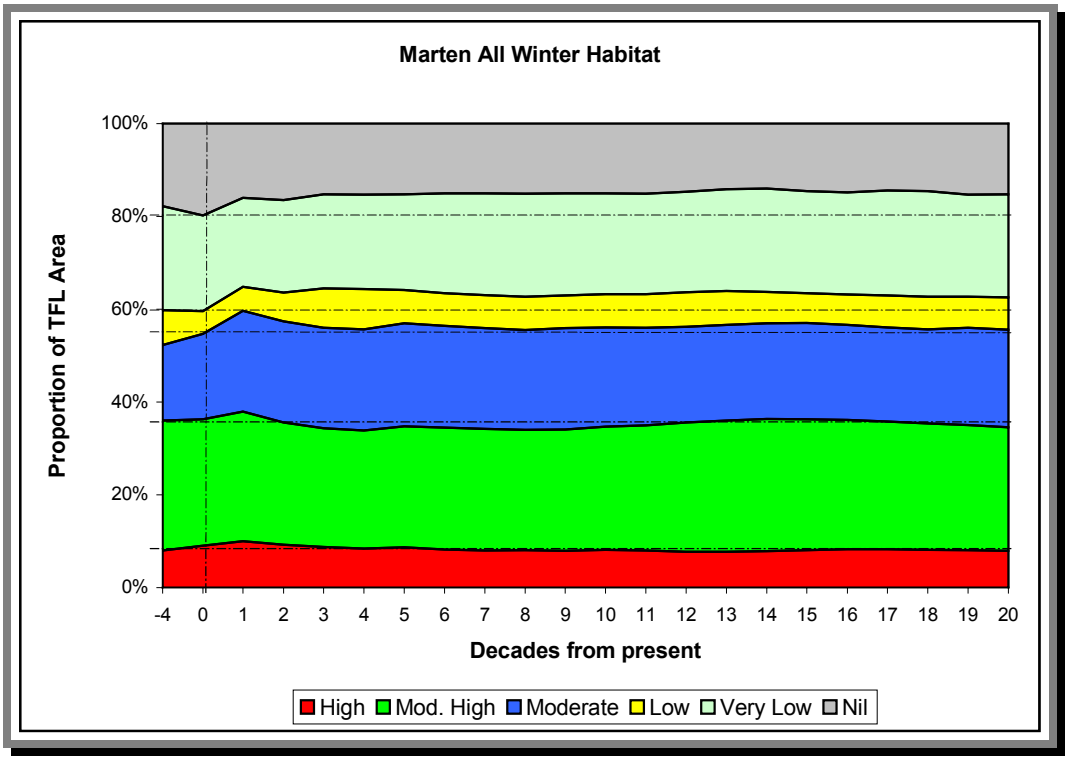


Figure 8: Marten All Winter Habitat

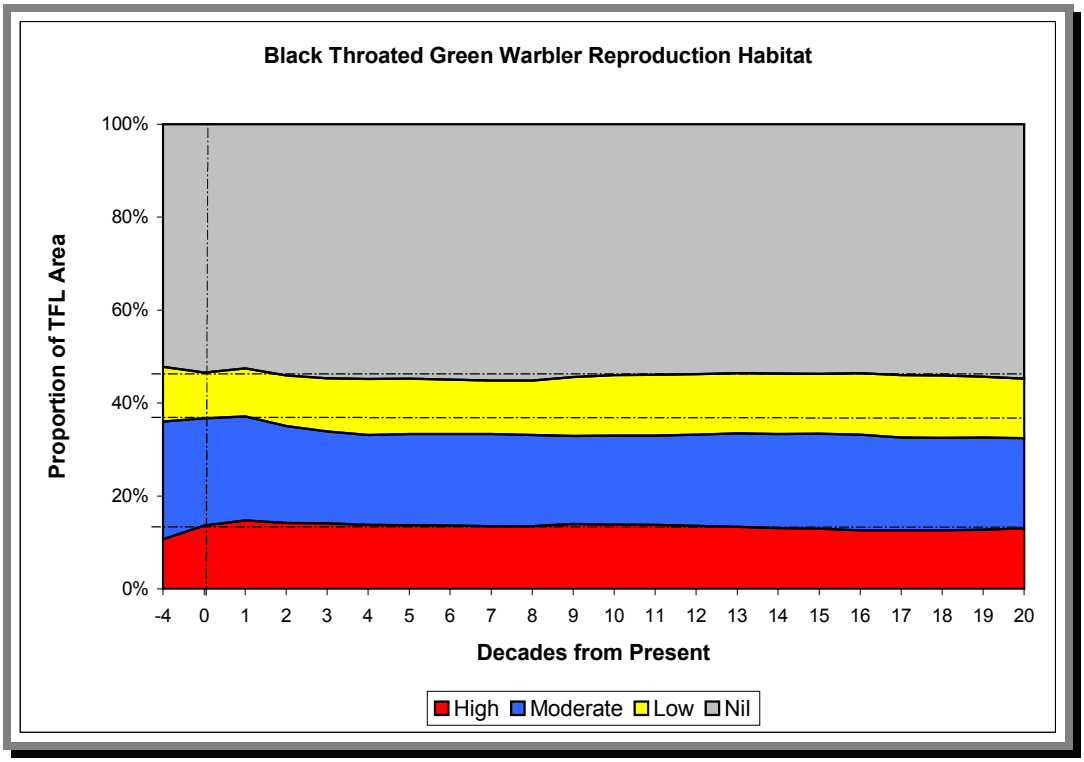


Figure 9: Blackthroated Green Warbler Reproduction Habitat

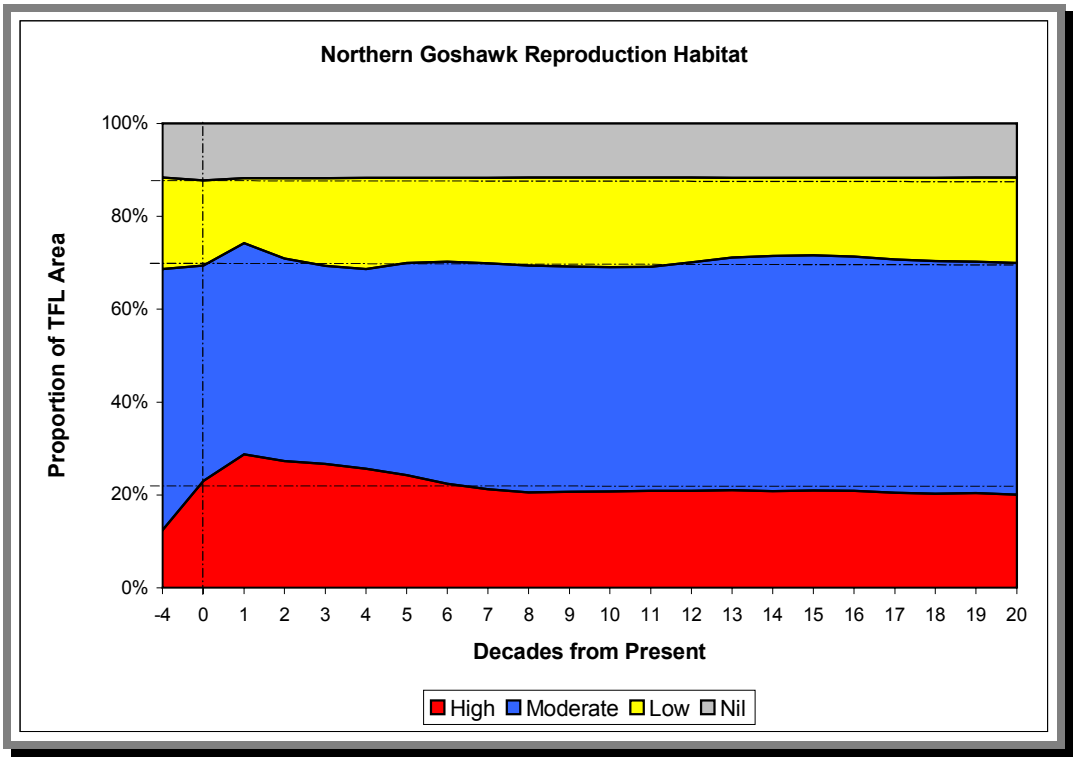


Figure 10: Northern Goshawk Reproduction Habitat

Decade –4 indicated in the previous habitat graphs represents the habitat present based upon the 1960 baseline created for TFL 48. Of the species examined to date, moderately high Grizzly Bear fall feeding is the only habitat life requisite that decreases from the 1960 baseline. This is caused primarily by some ageing large shrub structural stages originated by fire, and the harvest rate within these areas not replacing this habitat element to the same level as what existed in 1960.

REVISIONS

Due to delays in completing the habitat models and finalizing the site series mapping, Canfor proposes to change the completion date of applying models across the TFL to December 15, 2003 and establishing a baseline at this time.

2.5-2 Furbearer Habitat Availability

STATUS AND COMMENTS

As shown above in Figure 8, Marten all-winter habitat is forecasted to remain relatively constant. High, moderately high, and moderate habitat classes remain at almost the same levels throughout the planning horizon. Fisher habitat remains to be modelled across the TFL.

REVISIONS

Canfor proposes to adjust the implementation schedule as per indicator 2.5-1 above.

2.6 DISEASE TRANSMISSION TO SHEEP

Indicator:	Objective:
6. Disease transmission from domestic sheep grazing activities	No disease transmission from domestic sheep to wild sheep populations from domestic sheep use in Canfor activities.

STATUS AND COMMENTS

There has been no known transmission of disease from domestic sheep to wild sheep, up to December 31, 2001. Sheep grazing in the TFL was limited to the Rice Property in 2001. There are no known wild sheep populations in this area.

REVISIONS

No revisions are suggested for this indicator or objective.

2.7 COLLECTION AND USE OF REGISTERED SEED

Indicator:	Objective:
7. Collection and use of registered seed for coniferous planted species.	All seeds registered.

STATUS AND COMMENTS

All (100%) of trees grown to be planted within the TFL are registered in accordance with the Tree Cone, Seed and Vegetative Material regulation. Table 6 shows all trees and their source that Canfor and SBFEP planted on the TFL in 2001.

Table 6: Tree Seed Origin

Species	Seedlot	Number of Trees	Seed Class	Seed Worth	Seed Origin		
					Latitude	Longitude	Location
Pli	02198	24,420	B		552000	1204000	Sundown Creek
Pli	30750	36,970	B		552500	1202800	Oetata Ridge
Pli	30779	233,927	B2		554500	122000	Hulcross Creek - North
Pli	45715	242,325	B2		553000	1224000	Link Creek
Pli	45716	157,140	B2		550800	1210800	Wolverine River
Sw	33269	89,490	B2		561300	1220000	Farrell Creek
Sx	01822	2,455	B		544500	1210000	Kinuseo Valley
Sx	01839	838,792	B2		555000	1214000	Moberly Lake
Sx	04140	288,970	B2		560100	1221900	Gaylard Creek
Sx	31310	535,830	B3		562800	1222900	Colt Creek CP 64
Sx	39429	8,560	B		552200	1230700	Emerson Lakes
Sx	39432	35,015	B		552200	1230700	Emerson Lakes
Sx	39501	438,600	B3		554000	1220500	Hulcross Creek - South
Sx	40124	25,900	B		561100	1230600	Nabesche Valley
Sx	44274	263,210	B2		553100	1221200	Falling Creek

Species	Seedlot	Number of Trees	Seed Class	Seed Worth	Seed Origin		
					Latitude	Longitude	Location
Sx	60119	60,060	A	18	530900	1221100	Vernon Seed Orchard[1]
Total Trees Planted		**3,281,664**					

[1] Seedlot 60119 is a class A seedlot produce by the Vernon Seed Orchard Company (VSOC). Parent trees from across the Prince George Region were selected and seedlings produced from these parents were outplanted in various progeny tests across the region. The results from the progeny tests allowed tree breeders to select the best growing parents for the PG seed-planning zone. The selected parents were than planted at the VSOC which now produce seedlots such as 60119.

REVISIONS

No revisions are suggested for this indicator or objective.

2.8 INCIDENCE OF FIRE, WINDFALL INSECTS AND DISEASE

Indicator:	Objective:
8. Area and severity of incidence of fire, windfall, insects and disease	**8-1** We will minimize Non-Recoverable Losses to less than 10% of AAC based on a 10 year rolling average. **8-2** We will salvage 90% of merchantable timber volumes within the THLB damaged by fire, windfall, insects and disease within 18 months of occurrence.

2.8-1 Minimize Non-Recoverable Losses

STATUS AND COMMENTS

During 2001 the following incidence of fire, windfall, insects or disease have been noted on TFL 48. Table 7 summarizes the incidence of forest health issues and associated actions.

Table 7: Forest Health Incidence

Forest Health Factor	Incidence	Action
Fire	None	N/A
Insect		
Balsam Bark Beetle	Incidence very light in mountain areas. No formal surveys required.	N/A
Spruce Budworm	None	• MoF confirmation that no Spruce Budworm found in 2000 survey.
Spruce Bark Beetle	3 locations noted in MoF overview flight. Boucher, Burnt, and Gulf Creek	• These areas monitored during 2001 and confirmed that no current activity was present. • Confirmed that salvage action not necessary.
	1 localized infestation near Stott Creek (See 644-006	• Harvest in 2002 and check local area for any remaining (aerial

Forest Health Factor	Incidence	Action
	below).	overview) during 2002.
Forest Tent Caterpillar	none	N/A
Blowdown	CP 245-001 ~60m^3 CP 316-002 ~500m^3 CP 644-006 ~1,800m^3 CP 644-015 ~700m^3	• Quantify as non-recoverable losses for 2002, cancel SP. • Assess for suitability of salvage in 2002. • To be harvested as part of beetle/blowdown salvage 2002. • Harvesting is scheduled to occur coincident with CP 267.

Forest Health Factor	Incidence	Action
Environmental	None noted in 2001	N/A
Disease	None – Disease is typically slow to develop over a long period of time. Hence it is difficult to identify until stand level prescriptions are developed.	• Continue to monitor and prescribe appropriate silviculture strategies at stand level.

REVISIONS

No revisions are suggested for this indicator or objective.

2.8-2 Salvage of Merchantable Timber Volumes

STATUS AND COMMENTS

Table 8: Summary of Salvage

Year	Total Losses (m^3)	Salvage Completed (m^3) Recovered		Salvage Planned (m^3)		No Salvage Proposed (m^3) Non-Recovered		Salvage Remaining to be Assessed (m^3)	
2000	3,370								
2001		100				210			
2002		1,800		700		60		500	
Totals	**3,370**	**1,900**	**56%**	**700**	**20%**	**270**	**8%**	**500**	**15%**

The 700m^3 of proposed salvage (644-015) has exceeded the 18 month objective. This is due to the location of the salvage on the Dowling Creek Rd. Four bridges are required to be reinstalled to provide access to this area. As such harvesting of the salvage area was delayed until harvesting of the adjacent CP 267 was scheduled.

REVISIONS

No revisions are suggested for this indicator or objective.

2.9 PERCENT OF A HARVESTED AREA REFORESTED

Indicator:	Objective:
9. Percent of a harvested area that is reforested	We will reforest 100% of the net area to be reforested within 2 years of harvest on average.

STATUS AND COMMENTS

A review of silviculture records was completed for Management Plan 3. This review indicated that since January 1, 1995 the area weighted regeneration delay was 0.6 years.

The next review of regeneration delay will be done for Management Plan 4 in 2005 and will be based on performance through 2004.

REVISIONS

No revisions are suggested for this indicator or objective.

2.10 MINIMUM HARVEST AGE

Indicator:	Objective:
10. Minimum harvest age (as a surrogate for nutrient cycling)	Minimum harvest ages in years will be: Aspen 61, Cottonwood 61, Pine 81, Subalpine fir 81, Spruce 121 (based on leading species and average stand age).

STATUS AND COMMENTS

Table 9 shows the average age of proposed category A cutblocks in the most recent Forest Development Plan for TFL 48 submitted in the January 2002. All ages are consistent with the objective.

Table 9: Average Harvest Age for Proposed Category A Blocks

LICENCE	CUT BLOCK #	GROSS CUTBLOCK AREA, HA	FDP STATUS	Average Age	Spruce %	Pine %	Balsam %	Aspen %	Cottonwood %	Birch %
TFL48	T4075	248	PA	76	5%	9%		81%	3%	2%
TFL48	T2042	140.6	PA	91	15%	0%	9%	21%	55%	0%
TFL48	T4076	127.3	PA	100	2%	29%		61%	6%	2%
TFL48	T5009	93.4	PA	100	4%	51%		27%	18%	
TFL48	T2046	85.9	PA	103	13%	15%		64%	5%	3%
TFL48	T1025	692	PA	105	24%	6%		36%	34%	0%
TFL48	T3017	251.5	PA	106	26%	4%		25%	45%	0%
TFL48	T4066	161.3	PA	107	26%	0%		45%	21%	8%
TFL48	T4071	65.5	PA	108	13%	30%		45%	9%	3%
TFL48	T5010	79.5	PA	112	12%	74%	0%	7%	6%	
TFL48	T3016	318.4	PA	113	15%	1%		60%	24%	0%
TFL48	T2044	485.2	PA	115	17%	20%		50%	11%	3%
TFL48	T1024	381.1	PA	119	31%	6%		42%	20%	
TFL48	T5006	44.2	PA	119	21%	73%	0%		6%	

LICENCE	CUT BLOCK #	GROSS CUTBLOCK AREA, HA	FDP STATUS	Average Age	Spruce %	Pine %	Balsam %	Aspen %	Cottonwood %	Birch %
TFL48	T4074	366.4	PA	120	34%	39%	2%	18%	6%	
TFL48	T3018	553.6	PA	121	41%	2%		48%	9%	
TFL48	T4073	294.8	PA	123	60%	30%	9%	1%	1%	0%
TFL48	T5008	184.1	PA	127	41%	33%	0%	14%	12%	
TFL48	T4067	217.2	PA	133	60%	16%	22%	1%	0%	
TFL48	T4064	348.3	PA	135	54%	31%	13%	1%		
TFL48	T4062	731.5	PA	137	26%	67%	0%	2%	6%	0%
TFL48	T5004	318.2	PA	137	46%	41%	2%	3%	9%	0%
TFL48	T4070	486.6	PA	139	36%	62%	1%	0%	1%	
TFL48	T4063	233	PA	140	11%	78%	0%	6%	5%	
TFL48	T1005	32.3	PA	141	71%	26%	3%			
TFL48	T2045	266.4	PA	141	28%	67%	4%	1%	0%	
TFL48	T4069	68.5	PA	144	20%	74%	0%	1%	4%	
TFL48	T4065	430.2	PA	145	41%	49%	9%	0%	0%	
TFL48	T4068	268.5	PA	146	34%	64%	1%	0%	0%	
TFL48	T5007	877.8	PA	146	45%	45%	3%	1%	6%	
TFL48	T4077	274.1	PA	147	46%	45%	8%	1%	0%	
TFL48	T5005	157.7	PA	147	57%	32%	3%	1%	7%	
TFL48	T1003	62.8	PA	149	77%	14%	9%			
TFL48	T2043	219.5	PA	152	40%	54%	4%	1%	0%	
TFL48	T4078	264.8	PA	155	62%	27%	11%	0%	0%	
TFL48	T4072	280.6	PA	156	42%	41%	13%	1%	2%	
TFL48	T2051	264.1	PA	157	40%	38%	14%	0%	7%	
TFL48	T2047	74	PA	159	45%	23%	18%		15%	0%
TFL48	T1004	30.4	PA	162	67%	18%	16%			
TFL48	T2049	53.5	PA	181	38%	61%	1%	0%	0%	
TFL48	T2048	71.9	PA	182	54%	44%	2%	0%	0%	
TFL48	T2050	35.9	PA	203	69%	26%	0%	0%	5%	
TFL48	T5011	69.3	PA	213	83%		17%			

REVISIONS

No revisions are suggested for this indicator or objective.

2.11 WILDLIFE TREE PATCHES

Indicator:	Objective:
11. Wildlife tree patches	Wildlife tree patches will not be less than 8% of the harvested area, on average.

STATUS AND COMMENTS

In the draft Management Plan 3 it was reported that blocks harvested since 1995 had on average 17.6% in Wildlife Tree Patches (WTP). The current status of all areas harvested with WTP's is 13%, and 11% on planned and harvested blocks. This is the first reporting at the Landscape Unit by BEC variant level. As such the distribution is not even by variant. Some permits may have more than the required amount of WTP's however when examined in relation to the BEC variant some variants may be under represented.

The information provided in Table 10 will be used to guide future WTP placement to ensure representative distribution of WTP's.

Table 10: Wildlife Tree Patch by Landscape Unit and BEC Variant

LU	BEC / Variant	Total Forest Area	THLB	% Available for Harvest	Harvested with no WTR	% THLB Harvested with no WTR	Harvested with WTR	% Harvested with WTR	Area WTR	% WTP of Area Harvested with WTR	Planned Harvest	WTP Planned Harvest	% WTP of Area Harvested or Planned with WTR
Boucher	BWBSmw1 (con)	11,359	8,281	73%	1,029	12%	-	0%	-	0%	201	4	2%
	BWBSmw1 (dec)	16,022	10,130	63%	14	0%	-	0%	-	0%	231	27	12%
	BWBSwk1 (con)	5,264	4,953	94%	299	6%	-	0%	-	0%	-	-	0%
	BWBSwk1 (dec)	1,810	914	50%	-	0%	-	0%	-	0%	-	-	0%
	SBS wk2	953	702	74%	-	0%	-	0%	-	0%	-	-	0%
Burnt-LeMoray	BWBSmw1 (con)	8	8	92%	-	0%	-	0%	-	0%			0%
	BWBSmw1 (dec)	43	14	32%	-	0%	-	0%	-	0%			0%
	ESSF wc3	41,606	9,386	23%	370	4%	26	0%	2	8%	176	6	4%
	ESSF wk2	39,064	24,546	63%	3,259	13%	1,209	5%	81	7%	348	64	9%
	SBS wk2	23,027	14,090	61%	1,966	14%	238	2%	39	16%	72	3	14%
Carbon	BWBSmw1 (con)	10	1	12%	-	0%	-	0%	-	0%	-	-	0%
	BWBSmw1 (dec)	17	0	1%	-	0%	-	0%	-	0%	-	-	0%
	ESSF mv2	46,164	17,750	38%	687	4%	832	5%	79	9%	414	45	10%
	ESSF wc3	9,696	2,202	23%	153	7%	-	0%	-	0%	-	-	0%
	ESSF wk2	4,371	2,418	55%	6	0%	176	7%	29	16%	254	-	7%
	SBS wk2	15,192	10,155	67%	1,977	19%	1,011	10%	263	26%	220	19	23%
Dunlevy	BWBSmw1 (con)	10,358	6,555	63%	225	3%	245	4%	49	20%	78	9	18%
	BWBSmw1 (dec)	9,183	2,865	31%	-	0%	-	0%	-	0%	-	-	0%
	BWBSwk2 (con)	7,401	5,396	73%	113	2%	71	1%	7	10%	71	6	9%
	BWBSwk2 (dec)	5,125	2,206	43%	-	0%	-	0%	-	0%	-	-	0%
	ESSF mv4	11,743	5,426	46%	66	1%	-	0%	-	0%	95	1	1%
East Pine	BWBSmw1 (con)	5,855	10,039	171%	657	7%	238	2%	58	24%	232	19	16%
	BWBSmw1 (dec)	13,774	6,644	48%	302	5%	41	1%	1	2%			2%
Gething	BWBSmw1 (con)	9,082	6,933	76%	2,584	37%	377	5%	86	23%	188	23	19%
	BWBSmw1 (dec)	2,508	879	35%	-	0%	-	0%	-	0%	-	-	0%
	ESSF mv2	24,039	14,503	60%	1,353	9%	1,302	9%	174	13%	10	-	13%
	SBS wk2	20,133	15,053	75%	3,964	26%	464	3%	80	17%	466	44	13%

LU	BEC / Variant	Total Forest Area	THLB	% Available for Harvest	Harvested with no WTR	% THLB Harvested with no WTR	Harvested with WTR	% Harvested with WTR	Area WTR	% WTP of Area Harvested with WTR	Planned Harvest	WTP Planned Harvest	% WTP of Area Harvested or Planned with WTR
Highhat	BWBSmw1 (con)	7,600	5,650	74%	217	4%	92	2%	4	4%	275	14	5%
	BWBSmw1 (dec)	8,604	5,053	59%	-	0%	-	0%	-	0%	112	7	6%
	BWBSwk1 (con)	10	7	65%	1	15%	-	0%	-	0%	-	-	0%
	ESSF mv2	31,308	20,794	66%	1,385	7%	653	3%	57	9%	338	22	8%
	ESSF wc3	8	2	29%		0%		0%		0%			0%
	ESSF wk2	2,544	1,759	69%	-	0%	70	4%	16	23%	58	11	21%
	SBS wk2	37,462	26,946	72%	1,357	5%	1,193	4%	123	10%	448	45	10%
Martin Creek	BWBSmw1 (con)	12,627	10,230	81%	1,823	18%	476	5%	24	5%	62	1	4%
	BWBSmw1 (dec)	10,518	5,332	51%	53	1%	139	3%	8	6%	64	-	4%
	BWBSwk1 (con)	18,689	15,115	81%	1,562	10%	103	1%	5	4%	247	3	2%
	BWBSwk1 (dec)	2,188	1,245	57%	-	0%	-	0%	-	0%	-	-	0%
	ESSF mv2	13,476	7,197	53%	22	0%	33	0%	3	8%	456	43	9%
Wolverine	BWBSmw1 (con)	4,061	3,041	75%	387	13%	189	6%	31	16%	-	-	16%
	BWBSmw1 (dec)	1,481	677	46%	-	0%	-	0%	-	0%	-	-	0%
	BWBSwk1 (con)	5,233	4,139	79%	416	10%	42	1%	6	15%	-	-	15%
	BWBSwk1 (dec)	1,451	369	25%	-	0%	-	0%	-	0%	-	-	0%
	ESSF mv2	34,319	17,829	52%	1,138	6%	326	2%	17	5%	-	-	5%
	ESSF wc3	5,588	1,757	31%	53	3%	145	8%	22	15%	172	-	7%
	ESSF wk2	6,760	3,840	57%	399	10%	478	12%	53	11%	391	11	7%
	SBS wk2	13,097	8,547	65%	406	5%	68	1%	9	13%	196	90	38%
Total		**565,790**	**321,576**	**57%**	**28,241**	**9%**	**10,237**	**3%**	**1,322**	**13%**	**5,875**	**517**	**11%**
Sub Total by Variant	**SBS wk2**	**109,865**	**75,494**	**69%**	**9,670**	**13%**	**2,974**	**4%**	**514**	**17%**	**1,402**	**201**	**16%**
	ESSF wk2	**52,738**	**32,563**	**62%**	**3,663**	**11%**	**1,934**	**6%**	**179**	**9%**	**1,051**	**86**	**9%**
	ESSF mv2	**149,307**	**78,074**	**52%**	**4,584**	**6%**	**3,146**	**4%**	**329**	**10%**	**1,218**	**110**	**10%**
	ESSF wc3	**56,899**	**13,347**	**23%**	**576**	**4%**	**171**	**1%**	**24**	**14%**	**348**	**6**	**6%**
	BWBSmw1 (con)	**49,584**	**42,449**	**86%**	**5,894**	**14%**	**1,617**	**4%**	**250**	**15%**	**835**	**66**	**13%**
	BWBSmw1 (dec)	**62,151**	**31,592**	**51%**	**370**	**1%**	**180**	**1%**	**9**	**5%**	**407**	**34**	**7%**
	BWBSwk1 (con)	**29,197**	**24,214**	**83%**	**2,278**	**9%**	**145**	**1%**	**11**	**7%**	**247**	**3**	**3%**
	BWBSwk1 (dec)	**5,449**	**2,527**	**46%**	**-**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**-**	**0%**

REVISIONS

The current monitoring schedule for WTP's is at the Forest Development Plan (FDP) stage. Canfor recommends that this be changed to the Annual Report. WTP's are not designated at the FDP stage; rather they are designated during layout and stand level prescription. Future WTP percentages reported would be based on the area harvested and the area planned for harvest with stand level prescriptions completed by Landscape Unit and BEC variant.

2.12 OLD GROWTH MANAGEMENT AREAS

Indicator:	Objective:
12. Old growth management areas	We will sustain old growth habitat values within the TFL.

STATUS AND COMMENTS

Management Plan 3 presents a detailed analysis of the amount of available Old Growth currently available in the TFL. Old Growth Management Areas (OGMAs) will be identified by December 15, 2003. Canfor has initiated a preliminary process for identifying potential OGMAs. See also Indicator 1.2 for levels of old growth on the TFL based on the proposed 2002-2007 Forest Development Plan.

REVISIONS

No revisions are suggested for this indicator or objective.

2.13 COARSE WOODY DEBRIS

Indicator:	Objective:
13. Coarse woody debris	We will maintain natural levels of coarse woody debris (CWD) across the TFL.

STATUS AND COMMENTS

Natural levels of Coarse Woody Debris (CWD) are yet to be identified as part of the Vegetation Resources Inventory (VRI) Phase II sampling which will be completed during 2002. Once the sampling is completed, comprehensive data analyses will be undertaken and a CWD management strategy will be developed. Reported below is a first approximation of the CWD analysis from **incomplete** data. This data provided is meant to demonstrate progress on this objective and provide preliminary information on the levels of CWD accumulation across the TFL.

Table 11: CWD Accumulations by Biogeoclimatic Unit

Zone	Sub-Zone	*n*	Stand Age (Min)	Stand Age (Max)	Stand Age (Avg)	CWD Vol (m^3/ha) (Min)	CWD Vol (m^3/ha) (Max)	CWD Vol (m^3/ha) (Avg)
BWBS	mw	26	17	178	87	0	133	40
BWBS	wk	9	25	133	83	0	69	25
ESSF	mv	30	79	170	125	0	115	30
ESSF	mvp	1	76	76	76	0	0	0
ESSF	wc	2	57	230	144	0	54	27
ESSF[b]	wk	3	N/A	N/A	N/A	7	137	86
SBS	wk	18	43	201	119	0	136	36

[a] Number of plots sampled

[b] Age data not available

Natural levels of CWD accumulations vary widely across the TFL both within and between biogeoclimatic units. For example BWBS mw CWD accumulations vary from 0 –133m^3/ha with an average of 40m^3/ha while the ESSF mv has an average CWD accumulation of 30m^3/ha and a range of 0 – 115 m^3/ha (Table 11). In general it appears that CWD accumulations are highly

variable across the landscape. Stand history and ecosystem characteristics – each inherently variable – combined with a variation in age appear to cause just as much variation within biogeoclimatic units as between them. Thus at this point, biogeoclimatic unit specific management of CWD is probably of secondary importance to managing overall CWD diversity.

REVISIONS

No revisions are suggested for this indicator or objective.

2.14 HABITAT CONNECTIVITY

Indicator:	Objective:
14. Habitat connectivity	Maintain an adequate level of habitat connectivity at landscape and stand levels with an emphasis on species dependent on mature forest or forest types (e.g., caribou and marten) recognizing that habitat connectivity may shift across the landscape.

STATUS AND COMMENTS

This indicator is linked to patch size and distribution (Indicator 2) and habitat supply for indicator species (Indicator 5); please see Indicator 2 and 5 for progress to date.

Reporting on habitat connectivity is due by December 15, 2003.

REVISIONS

No revisions are suggested for this indicator or objective.

2.15 AREA OF THE TFL OCCUPIED BY PERMANENT ACCESS CORRIDORS

Indicator:	Objective:
15. Area of the TFL occupied by permanent access corridors associated with forest management activities	We will limit impacts on the landbase due to the presence of permanent access corridors to less than 3.5% of the gross landbase of the TFL.

STATUS AND COMMENTS

In Management Plan 3 Canfor committed that rehabilitated roads and landings recorded on hardcopy maps would be entered into its Forest Road Management System. This was completed and as of April 2002 there are 166 km of temporary road that are or will be rehabilitated.

The next review of this indicator will be done in conjunction with Management Plan 4. It will represent road conditions up to the end of 2004. The analysis will occur in the spring of 2005.

REVISIONS

No revisions are suggested for this indicator or objective.

2.16 NUMBER OF REPORTABLE SPILLS

Indicator:	Objective:
16. Number of reportable spills entered into Incident Tracking System	We will minimize the number of reportable spills.

STATUS AND COMMENTS

There were no reportable spills entered into the Incident Tracking System for 1999, 2000 and 2001.

The performance target for 2001 is zero spills reportable to regulatory authorities.

REVISIONS

No revisions are suggested for this indicator or objective.

2.17 USE OF ENVIRONMENTALLY FRIENDLY LUBRICANTS

Indicator:	Objective:
17. Use of environmentally friendly lubricants	We will research and identify environmentally friendly lubricants biannually

STATUS AND COMMENTS

Based on recommendations arising from the PAC meeting on September 20, 2001 this indicator will be monitored biannually. The objective has been changed to reflect the biannual monitoring rather than the one time review completed by March 1, 2001. The next reporting will be done in 2003.

REVISIONS

No revisions are suggested for this indicator or objective.

2.18 SOIL PRODUCTIVITY MEASURES

Indicator:	Objective:
18. Soil productivity measures	We will use site index measures based on BEC zone to confirm the predicted long-term soil productivity.

STATUS AND COMMENTS

The current status for site index measures at free growing is shown in Table 12. The site index reported is the area weighted site index for each species by site series. The area declared free growing has increased from 3,628 ha to 6,108 ha in 2001. The majority of this area is attributable to backlog areas within the TFL. Due to the age and quality of the site series mapping for these old blocks, site series was derived from the draft (March 2001) site series mapping covering the whole TFL. This has revealed considerably more site series than was reported in Management Plan 3.

Four of the ninety-four species/site series combinations are outside of the acceptable variance (Table 12). Several factors may influence this including adverse brush and competition on the site. This indicator will continue to be monitored to determine ongoing trends.

Table 12: Average Site Index by Leading Species

Average Site Index (BHA 50)		Species					
		Alpine Fir		Spruce		Lodgepole Pine	
BEC	Site Series	Actual SI	Predicted	Actual SI	Predicted	Actual SI	Predicted
BWBSmw1	01	21.3	N/A	19.2	15	22.8	18
	02	23.7	N/A	19.4	9	18.0	12
	03	22.2	N/A	19.5	15	15.2	18
	04	-		18.8	12	25.0	15
	05	21.6	N/A	23.9	18	18.6	18
	06	-		18.8	18	-	
	07	15.0	N/A	21.8	18	18.0	18
BWBSmw1 Ave SI		21.5		19.5		21.6	
BWBSwk1	01	13.8	N/A	18.6	12	17.3	15
	02	-		20.6	9	17.0	12
	03	15.0	N/A	16.5	9	16.9	12
	04	15.0	N/A	17.6	12	15.8	15
	05	15.0	N/A	15.1	15	-	
	06	15.0	N/A	15.0	15	-	
	07	-		15.0	9	-	
	08	-		15.0	6	-	
BWBSwk1 Ave SI		14.1		18.1		16.7	
BWBSwk2	01	19.0	N/A	18.5	12	-	
	03	-		21.0	12	-	
	04	-		18.0	9	-	
BWBSwk2 Total Ave SI		19.0		18.6		-	
SBSwk2	01	17.6	15	19.5	18	20.3	21
	02	18.2	12	19.1	15	21.0	15
	03	16.5	12	18.7	18	20.4	18
	04	15.8	N/A	19.5	18	21.0	18
	05	19.6	18	18.5	21	20.3	21
	06	20.1	18	15.4	24	19.8	21
SBSwk2 Ave SI		17.2		19.1		20.5	
ESSFmv2	01	20.1	12	16.5	15	21.5	15
	02	22.8	9	17.4	9	21.7	12
	03	12.0	6	16.0	6	21.6	9
	04	18.4	15	20.8	15	20.5	18
	05	23.0	15	12.5	15	21.8	15
	06	-		-		15.0	15
ESSFmv2 Ave SI		20.1		17.0		21.5	
ESSFmv4	01	-		18.0	15	-	
	02	-		18.0	9	-	
	03	-		18.0	6	-	
ESSFmv4 Ave SI		-		18.0		-	
ESSFwc3	01	15.0	15	-		-	
	02	-		-		-	
	03	14.3	15	-		-	
ESSFwc3 Ave SI		14.8		-		-	
ESSFwk2	01	15.2	15	16.8	15	19.9	N/A
	02	16.3	9	16.7	9	19.9	N/A
	03	14.6	12	15.3	12	18.0	15
	04	15.3	15	16.2	15	-	
	05	16.8	15	17.7	15	-	
	06	-		18.0	12	15.0	N/A
ESSFwk2 Ave SI		15.2		16.7		19.8	

REVISIONS

No revisions are suggested for this indicator or objective.

2.19 SOIL DEGRADATION

Indicator:	Objective:
19. Soil degradation	We will not exceed site degradation guidelines.

STATUS AND COMMENTS

All areas harvested in 2001 were within the prescribed allowable limits for site degradation (Table 13).

Table 13: Blocks Harvested in 2001 Within Site Degradation Guidelines

Licence	Cut Block	Silviculture Prescription within Site Degradation Guidelines	Harvesting Consistent with Silviculture Prescription Site Degradation Limits
SBFEP-TFL	A57974-002	Yes	Yes
SBFEP-TFL	A57974-003	Yes	Yes
SBFEP-TFL	A57974-006	Yes	Yes
SBFEP-TFL	A58765-003	Yes	Yes
SBFEP-TFL	A58765-004	Yes	Yes
SBFEP-TFL	A58765-011	Yes	Yes
SBFEP-TFL	A58765-012	Yes	Yes
TFL48	080-002	Yes	Yes
TFL48	236-006	Yes	Yes
TFL48	246-003	Yes	Yes
TFL48	247-004	Yes	Yes
TFL48	273-001	Yes	Yes
TFL48	273-002	Yes	Yes
TFL48	275-002	Assessment in 2002	Assessment in 2002
TFL48	275-007	Assessment in 2002	Assessment in 2002
TFL48	276-003	Assessment in 2002	Assessment in 2002
TFL48	330-001	Yes	Yes
TFL48	330-002	Yes	Yes
TFL48	330-003	Yes	Yes
TFL48	610-001	Assessment in 2002	Assessment in 2002
TFL48	612-001	Yes	Yes
TFL48	612-003	Yes	Yes
TFL48	612-005	Yes	Yes
TFL48	619-001	Yes	Yes
TFL48	619-002	Yes	Yes
TFL48	619-005	Yes	Yes
TFL48	620-001	Yes	Yes
TFL48	620-002	Yes	Yes
TFL48	624-001	Yes	Yes
TFL48	624-002	Yes	Yes
TFL48	624-003	Yes	Yes

Licence	Cut Block	Silviculture Prescription within Site Degradation Guidelines	Harvesting Consistent with Silviculture Prescription Site Degradation Limits
TFL48	634-006	Yes	Yes
TFL48	640-001	Yes	Yes
TFL48	689-004	Yes	Yes
TFL48	689-005	Yes	Yes
TFL48	689-006	Yes	Yes
TFL48	689-007	Yes	Yes
TFL48	T2012	Yes	Yes
TFL48	T4001	Yes	Yes

REVISIONS

No revisions are suggested for this indicator or objective.

2.20 SEEDLING GROWTH OR ESTABLISHMENT

Indicator:	Objective:
20. Seedling growth or establishment	We will meet Free Growing requirements within Silviculture Prescriptions.

STATUS AND COMMENTS

The current status of free growing stands is shown in Table 14. The area of stands meeting the Free Growing status has increased by 2,012 ha, 289 ha and 179 ha for the backlog areas, TFL 48 license, and the SBFEP licenses respectively from 2000 - 2001. The reported NSR area has increased by 602 ha for the backlog areas. This is due to more current information being collected for these areas through silviculture surveys. Canfor is planning to plant or fillplant 1,623 ha of appraisal blocks in 2002 to achieve stocking status. No areas are past the Free Growing deadline in approved silviculture prescriptions.

Table 14: Free Growing Status as of April 2002

	Licence				
	Backlog Areas (Pre 1987)	TFL48 (1987- 2001)	SBFEP (1985 -2001)	PA13 (1990-1999)	Grand Total
Avg. Logged (ha/yr)	N/A	1072	157	60	N/A
Total Area Logged to Date	17,968	16,071	2675	542	37,256
Area NSR (ha)	982	1,377	512	186	3,057
Area Not FG	12,408	15,711	2,487	542	31,148
Area FG	5,560	360	188	0	6,108
Area Past FG Date	N/A	0	0	0	0

Source: Canfor Genus Report (April 2002) – Genus queries and Genus spatial data for SBFEP and PA 13

REVISIONS

No revisions are suggested for this indicator or objective.

2.21 SOIL DISTURBANCE SURVEYS

Indicator:	Objective:
21. Soil disturbance surveys	We will not exceed soil disturbance limits within cutblocks.

STATUS AND COMMENTS

Harvesting and silviculture activities completed in 2001 complied with allowable soil disturbance limits.

See list of blocks referenced in Indicator 19.

REVISIONS

No revisions are suggested for this indicator or objective.

2.22 AREA IN CUTBLOCK MANAGED AS RRZ OR RMZ

Indicator:	Objective:
22. Area in cutblock managed as Riparian Reserve Zone or Riparian Management Zone by appropriate stream, lake or wetland classification	We will meet or exceed appropriate riparian measures as recommended by the Forest Practices Code Riparian Guidebook.

STATUS AND COMMENTS

Management Plan 3 describes a comprehensive approach for accounting for riparian net downs across the landbase. The Annual Reports provide a current status for riparian reserve (RRZ) and management (RMZ) zones for rivers, streams, lakes and wetlands each year (Table 15). In 2000 and 2001 no blocks were harvested adjacent to wetlands or lakes only near rivers and streams.

For all riparian classes, regulatory riparian management requirements were met or exceeded (Table 15). In all cases the actual Riparian Management Area (RMA) exceeded the required RMA area. This is evident in both 2000 and 2001. In two cases (e.g. the S1 and S5 streams in 2001) RMZ's were replaced in favor of using larger RRZ's. It is important to note that in practice, the use of wider reserves on certain blocks often includes the required RMZ area within the RRZ. Thus the total RMA area values reported are more indicative of how riparian areas are managed.

In 2001, most (89%) of the Silviculture Prescriptions specified a clearcut or clearcut with reserves silviculture system. Thus most of the RMZ's retained non-merchantable trees or non-commercial species and the percent retention with in the RMZ's was typically low. However many of the RMZ's were managed as part of the RRZ. Since RRZ's are not harvested, 100% retention is achieved within some RMZ's but this feature is not accounted for in the analysis.

REVISIONS

No revisions have been made to this indicator or objective.

Table 15: Summary of Riparian Reserve and Management Zones in 2000 - 2001

Year	Stream, Wetland or Lake Class	Total Stream Length (m)[b]	RRZ – Required		RRZ–Actual		RMZ Required		RMZ – Actual		Total RMA		RMZ Percent Retention (Area Weighted)
			Width (m)[c]	Area (ha)[d]	Width (m)[c]	Area (ha)[d]	Width (m)[c]	Area (ha)[d]	Width (m)[c]	Area (ha)[d]	Required (m)	Actual (m)	
2000	S1[a] (n=0)	0	50	N/A	N/A	N/A	20	N/A	N/A	N/A	70	N/A	N/A
	S2 (n=2)	2,200	30	6.6	30	6.6	20	4.4	50	11.0	50	80	81%
	S3 (n=1)	350	20	0.7	20	0.7	20	0.7	60	2.1	40	80	100%
	S4 (n=1)	1,700	0	0	0	0	30	5.1	30	5.1	30	30	20%
	S5 (n=0)	0	0	0	N/A	N/A	30	N/A	N/A	N/A	30	N/A	0
	S6 (n=19)	13,750	0	0	0	N/A	20	27.5	32	44.0	20	32	14%
2001	S1[a] (n=1)	800	50	4	78.7	6.3	20	1.6	0	0	70	78.7	0
	S2 (n=0)	0	30	N/A	N/A	N/A	20	N/A	N/A	N/A	50	N/A	N/A
	S3 (n=0)	0	20	N/A	N/A	N/A	20	N/A	N/A	N/A	40	N/A	N/A
	S4 (n=0)	0	0	0	N/A	N/A	30	N/A	N/A	N/A	30	N/A	N/A
	S5 (n=7)	6,680	0	0	46.3	30.9	30	20	4.8	3.2	30	51.1	0
	S6 (n=83)	36,985	0	0	9.1	33.6	20	74.0	15.3	56.5	20	24.4	2%
2-year Average	S1[a] (n=1)	800	50	4.0	78.7	6.3	20	1.6	0	0	70	78.7	0%
	S2 (n=2)	2,200	30	6.6	30	6.6	20	4.4	50	11.0	50	80.0	81%
	S3 (n=1)	350	20	0.7	20	0.7	20	0.7	60	2.1	40	80.0	100%
	S4 (n=1)	1,700	0	0	0	0	30	5.1	30	5.1	30	30.0	20%
	S5 (n=7)	6,680	0	0	46.3	30.9	30	20	4.8	3.2	30	51.1	0%
	S6 (n=102)	50,735	0	0	6.6	33.6	20	101.5	19.8	100.5	20	26.4	7%

[a] Channel widths for S1 streams are >20m, <100m. [b] Streams that flow through, rather than adjacent to a block have had their lengths doubled to account for the application of RMA's to both sides. Therefore true stream length is less than reported in this table. [c] RRZ and RMZ widths are applied to a single side of a stream. If stream flows through the block the length has been doubled (see footnote a) and the widths are not doubled. [d] Areas are equal to the length of stream as reported on the table multiplied by the reserve width.

REVISIONS

No revisions are planned for this indicator.

2.23 AREA OF A STREAM AFFECTED BY HARVESTING AND ROAD CONSTRUCTION

Indicator:	Objective:
23. Area of a stream affected by timber harvesting and road construction	**23-1** We will identify hazard indices through watershed assessment procedures as necessary. **23-2** We will identify watercourses and hazards to watercourses as they arise.

2.23-1 Hazard Indices

STATUS AND COMMENTS

Canfor has initiated several two projects that deal with assessing hazard indices and watershed assessments: Stream Quality Crossing Index study (Indicator 24), and the Peak Flow Index study (Indicator 25).

REVISIONS

To reduce duplication between the objective for this indicator and indicators 24 and 25 Canfor proposes that we no longer monitor objective 23-1.

Canfor proposes that indicator "23 – Area of a stream effected by timber harvesting and road construction" is more appropriately addressed through the detailed reporting of stream riparian reserve and management zones in indicator 22. The amount of stream effected by road construction is more appropriately dealt with by the Stream Crossing Quality Index described and monitored as part of indicator 24.

2.23-2 Watercourses and Hazards to Watercourses

STATUS AND COMMENTS

A variety of restoration prescriptions and projects were completed in 2001. Table 16 below, is a listing of the status of watershed restoration projects on the TFL completed through FRBC. Additional water quality concerns will be identified as part of the SCQI monitoring (see Indicator 24).

Table 16: Ongoing and Planned Watershed Restoration Works for 2001

Road Name (km)	Creek	Restoration	Status
Burns Road (17)	Seven Mile	Road Fill slump	Field work complete – Quality certificate issued
Club Creek (6.5)	Club	Road Fill Slump	Prescription Complete (not a water quality issue, no further works proposed as part of a water quality project)
Hasler (22)	Tributaries to Hasler	Backwater Culverts (fish barrier)	Field work complete – Quality certificate issued

Road Name (km)	Creek	Restoration	Status
Johnson FSR (35)	Track	Road Fill Slump	Prescription Complete (No external funding available. Canfor will monitor and conduct maintenance to minimize sediment delivery)
Johnson FSR (36)	Track	Road Fill Slump	Prescription Complete (No external funding available. Canfor will monitor and conduct maintenance to minimize sediment delivery)
Perry Creek	Perry	Pull Bridges	Field work complete – Quality certificate issue
Upper Burnt Road (28)	Upper Burnt River	Road Fill Slump	Field work scheduled for 2002 (No external funding work will be completed by Canfor)
Table Creek (0.5)	Gaylard	Road Cut Slump	Field work complete – Quality certificate issued
Table Creek (1.5)	Gaylard	Road Cut/Fill Slump	Completed Summer 2000
Table Creek (12)	Table Creek	Road Cut/Fill Slump	No funding (Canfor stabilized site and repaired culvert in 2001, Identified as a Medium Water Quality Concern in 2001 SCQI)
Table Creek (24.5)	Tributary to Williston Lake	Road Cut Slump	Field work complete – Quality certificate issued
Tentfire Creek (9)	Tentfire	Road Cut/Fill Slump	Scheduled for 2001, access not possible (washout of Wolverine FSR. Canfor will monitor the site and conduct maintenance to minimize sediment delivery potential.)

REVISIONS

As indicated above in objective 23-1 Canfor proposes to track water related issues through indicators 22, 24 and 25 and discontinue indicator 23. Objective 23-2 is more appropriately monitored through follow up actions plans developed as a result of implementing the Stream Crossing Quality Index proposed in indicator 24.

2.24 SEDIMENT LEVELS

Indicator:	Objective:
24. Sediment levels	We will ensure that sedimentation due to harvesting and road building activities falls within acceptable limits.

STATUS AND COMMENTS

In 2001, Canfor implemented 2 studies to monitor the effects of forest management on sediment levels:

A) Continuous Monitoring:

The Meadow Creek Water Quality Monitoring Program is a long term (2–5 year) continuous monitoring project designed to investigate point-source and cumulative impacts of forest management on sediment levels, discharge and temperature. The study area is within the Fort St. John district but the control site is located on a tributary of Aylard Creek which is within TFL 48. The goals of this project are to identify and quantify the effect of forest management on sediment generation, to field test the Stream Crossing Quality Index (explained below), and to provide information on erosion and sediment delivery to streams (Beaudry 2002_a). The first year (fall season) results (Beaudry 2002_a) of this study indicate that:

- Normal turbidity (sediment) in unmanaged watersheds is very low during the fall months (data collected from late August to Late October);
- In unmanaged watersheds during late fall, turbidity and discharge are not markedly increased over baseflows by "normal" rainfall events;
- Ice dams, as they form and thaw in the fall, have short-term impacts on stream turbidity and discharge;
- Water temperatures are less than 10°C and decrease continuously from late September to October.

Subsequent monitoring will provide information on seasonal (i.e. spring peakflows and summer baseflow) and annual trends (climatic variations from year to year) in unmanaged systems. Post harvest monitoring will provide information on the effect of forest management on stream quality relative to the natural conditions of an unmanaged watershed. The monitoring will also be used to evaluate the efficacy of the SCQI.

B) Stream Crossing Quality Index:

The second study Canfor undertook in 2001 was an extensive survey of stream crossings in six sub-basins on the TFL. The method chosen for monitoring stream crossings is known as the Stream Crossing Quality Index (SCQI). The SCQI is a refinement of the stream crossing density index that has traditionally been used to determine the impact that stream crossings have on the aquatic resources within a watershed.

One of this technique's advantages is that it assesses impacts of individual stream crossings on water quality and the cumulative effect of the individual crossings on the watershed in question. In this way SCQI can be used to inform of specific crossing problems as well as monitor watershed level impacts of forest management.

SCQI scores for individual crossings range between 0 and 1, depending on the impact the crossing is having on water quality. A score of 1 indicates that the crossing has a substantial impact on water quality. As the impact is reduced the score decreases until it eventually reaches 0. Watershed level SCQI's are calculated by adding the individual crossing scores and dividing this value by the watershed area. Time, sediment control, erosion control and drainage control techniques can improve a crossing's SCQI score which provides an incentive to implement appropriate construction and deactivation techniques.

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Example Calculation of SCQI (Table17):

Watershed name: Bogus watershed
Watershed size: 30 km^2

Table 17: Stream Crossing Inventory for Bogus Watershed

Culvert ID	Field Comments	Score	Sum of Score
#1	Not checked	1	
#2	No erosion	0	
#3	Severe erosion	1	
#4	Mild erosion	0.2	
#5	Not checked	1	
#6	De-activated and stable	0.0	
#7	Not checked	1	
#8	Moderate erosion	0.5	
#9	Not checked	1.0	
#10	Severe erosion	1.0	
Equivalent Stream Crossing Number =			**6.7**

Stream crossing density = 10/30 km2 = 0.33 crossings/km^2

The SCQI score for the Bogus watershed = 6.7/30km2 = 0.22 crossings/km^2

SCQI values were calculated for six sub-basins on 279 crossings within the TFL in 2001 (See Figure 11 for Watersheds sampled). All of the sub-basin SCQI values are significantly less than their corresponding stream crossing density index values (Table 18). This suggests that the crossings within each watershed are having a low impact on water quality (Beaudry 2002_b). The watersheds surveyed would have to experience a severe degradation in crossing quality or a rapid increase in crossing density to have a medium or high impact on water quality (Beaudry 2002_b).

The SCQI scores for individual crossings proved to be a valuable tool in identifying areas of concern for local water quality. Water Quality Concern Ratings (WQCR) of None, Low, Medium or High were assigned to each crossing based on their SCQI scores. The majority of the crossings surveyed within the TFL had WQCRs of low or none (Table 18). There were however some areas that had concentrations of high WQCRs. Generally large water crossings were done well, and our areas of high concern tend to be on smaller (<1.5m) streams, and/or streams on newly deactivated roads.

Canfor will visit all identified crossings with a High water quality concern rating in 2001 and prepare an action plan for reducing the water quality concern rating.

Table 18: SCQI and Water Quality Concerns for Six Sub-Basins within TFL 48

Watershed Name	n	Erosion Indices			Water Quality Concern Ratings				
		Stream Crossing Density Index	Sum of Stream Crossing Quality Scores	Stream Crossing Quality Index	Stream Width Class[5]	None[1] % (#streams/ #streams sampled)	Low[2] % (#streams/ #streams sampled)	Medium[3] % (#streams/ #streams sampled)	High[4] % (#streams/ #streams sampled)
Gaylard	47	0.30	14.9	0.10	1	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)
					2	33.3 (2/6)	66.7 (4/6)	0.0 (0/6)	0.0 (0/6)
					3	40.0 (6/15)	20.0 (3/15)	26.7 (4/15)	13.3 (2/15)
					4	46.7 (7/15)	13.3 (2/15)	26.7 (4/15)	13.3 (2/15)
					5	36.4 (4/11)	18.2 (2/11)	9.0 (1/11)	36.4 (4/11)
Lower Peace	61	0.44	18.7	0.14	1	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)
					2	33.3 (1/3)	33.3 (1/3)	33.3 (1/3)	0.0 (0/3)
					3	12.5 (1/8)	75.0 (6/8)	12.5 (1/8)	0.0 (0/8)
					4	31.3 (5/16)	50.0 (8/16)	0.0 (0/16)	18.7 (3/16)
					5	23.5 (8/34)	41.2 (14/34)	11.8 (4/34)	23.5 (8/34)
Gething	70	0.38	28.3	0.15	1	60.0 (3/5)	40.0 (2/5)	0.0 (0/5)	0.0 (0/5)
					2	0.0 (0/3)	0.0 (0/3)	66.7 (2/3)	33.3 (1/3)
					3	36.4 (4/11)	27.2 (3/11)	36.4 (4/11)	0.0 (0/11)
					4	24.0 (6/25)	40.0 (10/25)	4.0 (1/25)	32.0 (8/25)
					5	19.2 (5/26)	23.1 (6/26)	19.2 (5/26)	38.5 (10/26)
Wolverine	51	0.28	16.2	0.09	1	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)
					2	25.0 (1/4)	75.0 (3/4)	0.0 (0/4)	0.0 (0/4)
					3	60.0 (3/5)	0.0 (0/5)	0.0 (0/5)	40.0 (2/5)
					4	46.7 (7/15)	33.3 (5/15)	13.3 (2/15)	6.7 (1/15)
					5	18.5 (5/27)	44.5(12/27)	33.3 (9/27)	3.7 (1/27)
Middle Wolverine	22	0.13	3.96	0.02	1	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)
					2	66.7 (2/3)	0.0 (0/3)	0.0 (0/3)	33.3 (1/3)
					3	72.7 (8/11)	9.1 (1/11)	0.0 (0/11)	18.2 (2/11)
					4	50.0 (2/4)	50.0 (2/4)	0.0 (0/4)	0.0 (0/4)
					5	75.0 (3/4)	25.0 (1/4)	0.0 (0/4)	0.0 (0/4)
Hasler[6]	28	0.15	12.1	0.06	1	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)	0.0 (0/0)
					2	100.0 (1/1)	0.0 (0/1)	0.0 (0/1)	0.0 (0/1)
					3	0.0 (0/2)	100.0 (2/2)	0.0 (0/2)	0.0 (0/2)
					4	40.0 (4/10)	20.0 (2/10)	10.0 (1/10)	30.0 (3/10)
					5	6.7 (1/15)	33.3 (5/15)	26.7 (4/15)	33.3 (5/15)

1 1 = greater than 20m, 2 = 5 to 20m, 3 = 1.5 to 5m, 4 = 0.5 to 1.5m, 5 = less than 0.5m

2 SCQI scores of 0.00

3 SCQI scores between 0.01 and 0.39

4 SCQI scores between 0.40 and 0.79

5 SCQI scores greater then 0.80

6 Hasler only partially completed. Scheduled to be completed in 2002.

REVISIONS

SCQI Sampling:

Sampling of the Stream Crossing Quality Index will continue to be monitored and reported on an annual basis. Canfor proposes to monitor SCQI using the following sampling approach:

1) The TFL will be divided into practical sub-basins, (See Figure 11 for initial estimate)
2) SCQI will be assessed in each sub-basin on approximately a five year cycle (e.g. if there were 15 sub-basis defined in 1, three sub-basins would be sampled in each year),
3) All crossings will be assessed in the selected sub-basins
4) Terrain/topography type and the amount of existing vs. proposed activity within the sub-basin would prioritize sub-basins. For example the Adams or Aylard Creek would not be sampled until such time as development takes place in these sub-basins.
5) Reports on SCQI and WQCR will be presented in the Annual Report

SCQI Thresholds:

The original Interior Watershed Assessment Procedure (IWAP) uses a concept called an impact score to determine the level of disturbance associated with forest practices such as rate of harvest, road building and riparian harvesting (Government of BC, 1995). One of the indices used for the watershed assessment procedure is the "road crossing density". The original IWAP document suggests the following values to determine the level of potential impact related to stream crossings (Table 19):

Table 19: Interior Watershed Assessment Procedure Suggested Stream Crossing Density Impacts

Level of Potential Impact	Stream Crossing Density (number of crossings/km^2)
LOW	Less than 0.40
MEDIUM	0.40 to 0.60
HIGH	Greater than 0.60

Based on this approach, a target watershed SCQI score of 0.40 could be established to keep the potential impacts to a low level.

Canfor proposes to replace the existing objective for Indicator 24 – Sediment Levels with the following Objectives

24-1 We will conduct a sampling of stream crossing quality assessments and ensure that the watershed level SCQI score does not exceed 0.40

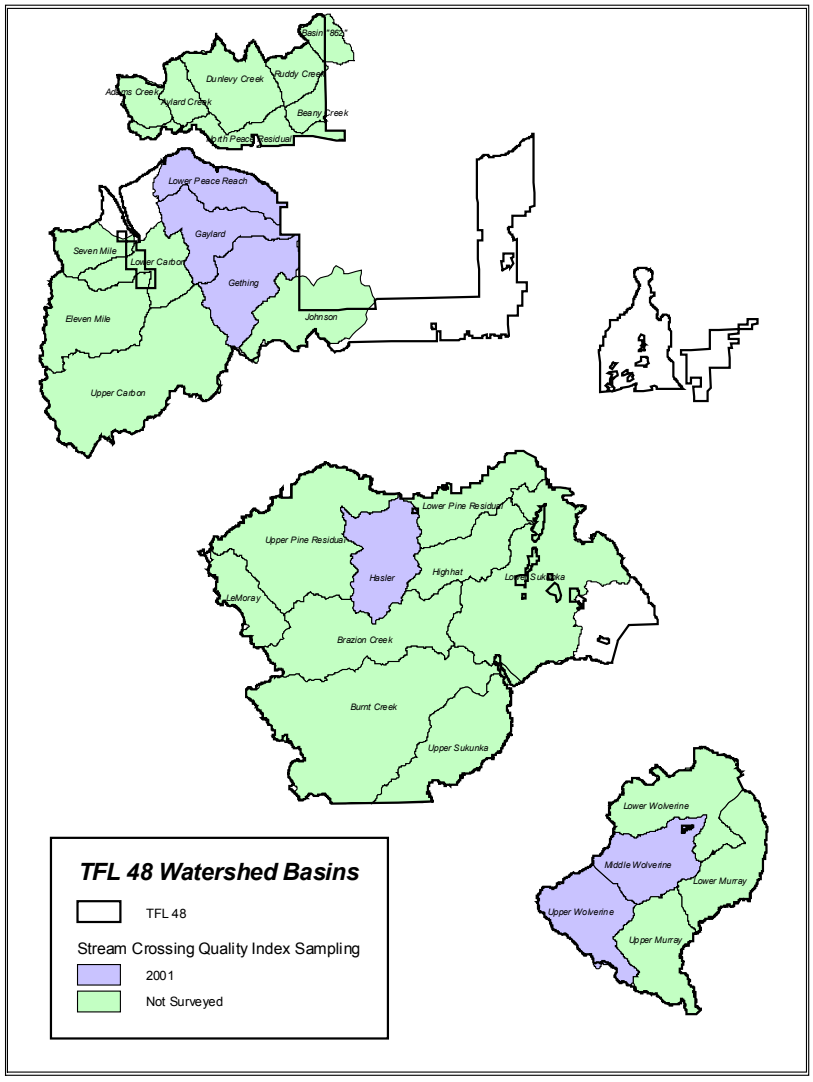
24-2 We will visit all crossings with a High WQCR within one year of detection and prepare an action plan to reduce the WQCR. Priority for remedial projects shall be in the following order: streams used for domestic water supply, fish bearing streams, and others.

2.25 STREAM FLOWS

Indicator:	Objective:
25. Stream flows	We will design forest management activities to minimize impact on stream flow.

STATUS AND COMMENTS

Peak Flow Index (PFI) is the measure that will be used to monitor the impact of forest management (harvesting) on stream flows. The PFI is based on the Equivalent Clear-cut Area principle (i.e. the percentage of a watershed that is or will be disturbed) and the amount of disturbance occurring at higher elevations. Equivalent clear-cut area (ECA) is the amount of a watershed that has been disturbed, reduced by a factor that accounts for the hydrological recovery due to the growth in height of a regenerating forest. The recovery factors are obtained from the Coastal and Interior Watershed Assessment Procedure Guidebook (BC Government 1999) and heights can be obtained from forest inventory data or predicted using site index. The PFI index also acknowledges that disturbance occurring in higher elevations has a greater effect on stream flows than disturbance at lower elevations. Therefore the ECA is adjusted upwards by 50% when harvesting takes place at higher elevations. (Example: an ECA of 100 ha, half of which is at low elevations and the other half at high elevations would have a PFI of 125. 50ha * 1.5 + 50ha = 125.)



Maximum PFI's have been established by an independent hydrologist for most of the watersheds (see Figure 11) within Canfor's TFL (Tables 20 and 21). These thresholds differ based on the characteristics of the watershed and are conservative targets aimed at maintaining the sustainability of the aquatic resource. Currently none of the blocks of the TFL 48 have any concerns for increased peak flows (Tables 20 and 21)

Figure 11: Watershed Sub-basins for TFL 48

Table 20: Peak Flow Index (Current and Target) and Watershed Characteristics for Block 1 and Block 2

Block	Watershed Name	Current ECA (%)	Current PFI	Amount of Lakes and Swamps	Mainstream Gradient	Dominant Topography	Mainstream Channel Type	Mainstream Stability	Peak Flow Sensitivity	Target ECA	Target PFI
Block 1 - Dunlevy Area	Adams	0.0	0.0	Low	Moderate	3	RPc	Stable	3	35	43
	Aylard	0.0	0.0	Low	Moderate	3	SPc	Localized instability	4	30	37
	Dunlevy	0.8	1.1	Low	Low	3	SPc	Generally unstable	5	25	31
	North Peace	0.0	0.0	Low	N/A	2	N/A	Stable	2	40	50
	Ruddy	1.1	1.1	Low	Low	2	RPc	Generally unstable	5	25	31
	Beany	0.0	0.0	Low	Moderate	2	RPc	Generally unstable	4	30	37
	Basin 862	6.1	8.4	Low	Low	1	RPg	Localized instability	3	35	43
Block 2 - Gething Area	Seven Mile	1.9	2.5	Low	Moderate	2	RPg	Stable	3	35	43
	Lower Carbon	9.5	11	Low	Low	3	RPg	Stable	2	40	50
	Eleven Mile	3.2	3.2	Low	Moderate	3	RPg	Localized instability	3	35	43
	Upper Carbon	3.6	3.6	Low	Low	3	RPc	Localized instability	4	30	37
	Lower Peace	16.3	19.9	Low	N/A	2	N/A	Stable	2	40	50
	Gaylard	11.7	13.5	Low	Low	3	RPc	Generally unstable	5	25	31
	Gething	10.8	12.7	Low	Low	3	RPc	Generally unstable	5	25	31
	Johnson	12.9	18	Low	Moderate	2	RPc	Localized instability	4	30	37

Table 21: Peak Flow Index (Current and Target) and Watershed Characteristics for Block 4 and Block 5

Block	Watershed Name	Current ECA (%)	Current PFI	Amount of Lakes and Swamps	Mainstream Gradient	Dominant Topography	Mainstream Channel Type	Mainstream Stability	Peak Flow Sensitivity	Target ECA	Target PFI
Block 4 – Hasler Area	Lower Pine	4.2	6.4	Low	N/A	2	N/A	Stable	3	35	43
	Highhat	10.2	13.1	Low	Low	2	RPc	Localized instability	3	35	43
	Lower Sukunka	6	7.6	Low	Low	3	RPg	Localized instability	3	35	43
	Hasler	8.5	11.2	Low	Low	3	N/A	Localized instability	4	30	37
	Brazion	13.3	16	Low	Low	3	RPc	Localized instability	4	30	37
	Burnt Creek	9.8	11.6	Low	Low	3	RPc	Localized instability	4	30	37
	Upper Pine	2.3	2.8	Low	N/A	3	N/A	Localized instability	4	30	37
	LeMoray	5.1	5.1	Low	Moderate	3	CPc	Localized instability	4	30	37
Block 5 – Wolverine Area	Lower Wolverine	6.9	8.4	Low	Low	3	RPc	Localized instability	4	30	37
	Middle Wolverine	20.9	29.3	Low	Low	3	RPc	Stable	3	35	43
	Upper Wolverine	5.7	6.4	Low	Low	3	RPc	Localized instability	4	30	37
	Lower Murray	0.2	0.3	Low	Low	3	RPc	Localized instability	4	30	37
	Upper Murray	5.7	6.7	Low	Low	3	RPc	Localized instability	4	30	37

1. Topography classes: 1= Gently rolling, 2= Hilly, gentle mountains, 3= Mountainous with localized steepness, 4= Generally steep
2. Peak flow sensitivity classes: 1= least sensitive, 2=mildly sensitive, 3=moderatly sensitive, 4=sensitive, 5=very sensitive
3. Mainstem gradient definitions: Low = less than 2%, Moderate = 2-6% , High = 6- 12%, very High = greater than 12%
4. Mainstem channel types: RPg = Riffle-pool-gravel, RPc= Riffle-pool cobble, CPc=Cascade-pool-cobble, CPb=Cascade-pool-boulder, SPb=Step-pool-boulder, SPr=Step-pool-rock.

REVISIONS

Canfor proposes that the objective for this indicator be changed to read: "We will design forest management activities so that PFI thresholds in designated sub-basins are not exceeded."

Monitoring of this indicator will be once every 5 years in conjunction with the Management Plan, unless a sub-basin is approaching the threshold target. Where sub-basins are approaching the threshold targets proposed harvesting will be assessed to ensure the target is not exceeded. Next reporting of this indicator will be done in conjunction with Management Plan 4. It will represent conditions up to the end of 2004 and be completed in the spring of 2005.

2.26 FOREST HEALTH

Indicator:	Objective:
26. Forest health	We will minimize Non-Recoverable Losses to less than 10% of AAC based on a 10 year rolling average.

STATUS AND COMMENTS

See Indicator 8.

This indicator is a complete duplication of Indicator 8. In the 2000 Annual Report Canfor proposed to delete Indicator 26 and continue to track Indicator 8. The PAC accepted this recommendation

REVISIONS

No revisions are suggested for this indicator or objective.

2.27 ALLOWABLE ANNUAL CUT

Indicator:	Objective:
27. Allowable Annual Cut	We will ensure that the allowable annual cut will not adversely impact Long Term Harvest Level.

STATUS AND COMMENTS

On September 20, 2001 the British Columbia Deputy Chief Forester determined the allowable annual cut will be 580,000 cubic metres, a 66,000 cubic metre increase from the last determination in 1996. Of the total allowable annual cut, 525,000 cubic metres is to come from coniferous stands and 55,000 cubic metres from deciduous stands.

This AAC will not adversely impact the Long Term Harvest Level.

REVISIONS

No revisions are suggested for this indicator or objective.

2.28 SAWMILL LRF, CRF AND SHIPMENT OF MINI-CHIPS

Indicator:	Objective:
28. Sawmill Lumber Recovery Factor, Chip Recovery Factor and shipment of mini-chips	We will target an annual range of 246 - 252 fbm/m^3, 0.15 BDU/m^3 and 60,000 tonnes/year respectively.

STATUS AND COMMENTS

Sawmill Lumber Recovery performance in 2001 exceeded the target range (Table 22). This is due to improvements to processes within the sawmill.

Chip Recovery in 2001 was within the target range (Table 22).

Mini-chip shipments were below target range for the second successive year. The shipment of mini-chips to Fletcher Challenge's Pulpmill in Mackenzie dropped (Table 22). This was the result of a poor pulp markets (decreased demand).

Table 22: Summary of Lumber Recovery Targets for 1999, 2000 and 2001

Measure (Target)	1999	2000	2001
Lumber Recovery Factor (247-252 fbm/m^3)	250 fbm/m^3	248 fbm/m^3	264 fbm/m^3
Chip Recovery (0.145-0.155 BDU/ m^3)	0.150 BDU/ m^3	0.160 BDU/ m^3	0.148 BDU/ m^3
Minichip shipments (50-70,000 tonnes/year)	60,000 tonnes/year	33,000 tonnes/year	26,694 tonnes/year

REVISIONS

Canfor suggests that the Lumber Recovery Factor target annual range be raised to 260 – 270 fbm/m^3 to reflect improvements within the sawmill.

2.29 HARVEST LEVELS / VOLUMES

Indicator:	Objective:
29. Harvest levels/volumes	We will achieve periodic cut control within 10% of target, over 5 years.

STATUS AND COMMENTS

Volumes harvested by year since 1987 are summarized in Table 23. One year remains in the current Periodic Cut Control period (1997 – 2002); the four-year average (1997 – 2000) cut is currently within 3.5% of the target. For the period ending in 2001, we achieved periodic cut control within 10% of target.

Table 23: Actual Recorded and Allowable Annual Cut Summary

Year	Allowable Annual Cut (m^3)	Adjustment (m^3)	Actual Recorded Cut (m^3)	Cut Control (%)
1987	348,500.0		319,871.0	91.8
1988	348,500.0		277,930.0	79.8
1989	348,500.0		183,330.0	52.6
1990	348,500.0		456,600.0	131.0

Year	Allowable Annual Cut (m^3)	Adjustment (m^3)	Actual Recorded Cut (m^3)	Cut Control (%)
1991	348,500.0		555,001.0	159.3
Subtotal	**1,742,500.0**		**1,787,732.0**	**102.6**
1992	348,500.0	-8,315.0	280,820.0	82.5
1993	348,500.0	-8,315.0	389,447.9	114.5
1994	348,500.0	-8,314.0	284,526.6	83.6
1995	348,500.0	-8,314.0	313,409.0	92.1
1996	348,500.0	-8,314.0	391,717.0	115.1
Subtotal	**1,742,500.0**	**-41,572.0**	**1,659,920.5**	**97.6**
1997	401,370.0	16,516.0	343,587.6	82.2
1998	401,370.0	16,516.0	435,088.2	104.1
1999	401,370.0	16,516.0	532,574.3	127.4
2000	401,370.0	16,516.0	302,668.0	72.4
2001	419,713.0	16,516.0	339,306.1	77.8
Subtotal	**2,025,193.0**	**82,580.0**	**1,953,224.2**	**92.7**

Source: MoF Annual Cut Control Letters (1987-2001)

For the period April 1999-March 2000 the SBFEP harvested 35,354 m^3, and for the period April 2000-March 31, 2001, 50,068 m^3 was harvested. For these 2 years the SBFEP has harvested under their 55,350 m^3 annual apportionment.

In 2001, 80,261 m^3 was harvested from SBFEP areas.

REVISIONS

No revisions are suggested for this indicator or objective.

2.30 WASTE

Indicator:	Objective:
30. Waste	We will assess all waste volumes for harvested blocks and report annually.

STATUS AND COMMENTS

In 2001 all areas harvested by Canfor and SBFEP were within the MOF benchmarks.

Table 24: Summary of Waste and Residue 1998 – 2001

YEAR	BEC	Total Net Area (ha)	Average Waste (mandatory utilization) m^3 per ha	Average of MOF Benchmark
1998	BWBS	543	0.96	4.0
	ESSF	550	1.34	20.0
	SBS	844	0.55	10.0
1998 Total		1937	0.88	

YEAR	BEC	Total Net Area (ha)	Average Waste (mandatory utilization) m^3 per ha	Average of MOF Benchmark
1999	BWBS	345	1.64	4.0
	ESSF	705	1.33	20.0
	SBS	408	0.97	10.0
1999 Total		1457	1.27	
2000	BWBS	72	0.58	4.0
	ESSF	547	0.67	20.0
	SBS	130	0.81	10.0
2000 Total		748	0.53	
2001	BWBS	201	0.72	4.0
	ESSF	964	1.40	20.0
	SBS	249	2.66	10.0
2001 Total		1414	1.62	

REVISIONS

No revisions are suggested for this indicator or objective.

2.31 TIMBER HARVESTING UTILIZATION STANDARDS

Indicator:	Objective:
31. Timber harvesting utilization standards	We will meet or exceed timber utilization standards of 1999 (i.e., 4 inch tops).

STATUS AND COMMENTS

Timber harvesting utilization levels were discussed at the 8th PAC meeting on December 7, 2000. The top size diameter limit has been varied due to severe economic conditions.

From May 1, 2001 to April 30, 2002 approximately 7.6% of the total log volumes were optional grades of timber. This is down slightly from the previous year (8.4%) and from 2000 (8%).

REVISIONS

No revisions are suggested for this indicator or objective.

2.32 AREA OF FORESTED LAND

Indicator:	Objective:
32. Area of forested land	**32-1** We will track, monitor and project losses to other uses and incorporate these losses in to AAC calculations every 5 years.

2.32-1 Track and Project Losses

STATUS AND COMMENTS

The next review of area of forested land will be done in conjunction with Management Plan 4. It will represent forest conditions as of March 31, 2005. This analysis will occur in the spring of 2005.

REVISIONS

No revisions are suggested for this indicator or objective.

2.33 INVESTMENT IN NEW TECHNOLOGY, CAPITAL MAINTENANCE AND CONSTRUCTION

Indicator:	Objective:
33. Average investment in new technology, capital maintenance and construction at Canfor operations in Chetwynd	We will invest $2.5 million annually based on a 10 year rolling average, in new technology, capital maintenance and construction.

STATUS AND COMMENTS

Average investment for the last 3 reporting periods has been higher than the $2.5 MM target (Table 25).

Table 25: Annual Average Investment

10 Year Period (Rolling)	Average Annual Investment
1990-1999	$4.0 MM
1991-2000	$4.3 MM
1992-2001	$4.4 MM

REVISIONS

No revisions are suggested for this indicator or objective.

2.34 ECONOMIC CONTRIBUTION TO LOCAL COMMUNITIES AND CONTRACTORS

Indicator:	Objective:
34. The economic contribution that Canfor Chetwynd makes to local communities and contractors	**34-1** We will report annually on the economic indices that reflect Canfor's contribution to local communities and contractors, and jobs per cubic metre. **34-2** We will provide contracting opportunities that support local employment where the skills exist.

2.34-1 Local Economic Indices

STATUS AND COMMENTS

Local economic indices have been reported for three years. Local contractor payments remained fairly consistent from 2000 to 2001 and there was a 45% increase in non-local contractor payments (Table 26). However there was a 17% decrease in salaries and benefits paid out in 2001. This was brought on by 93 days of down time over the course of the year.

The index "Jobs/ m^3" decreased by 16% from 2000 – 2001 but is still up 27% compared to 1999. The provincial average employment produced in the forest industry is approximately 1.4 jobs/1000m^3 based on 1997 data (COFI 1998). These fluctuations reflect the variation in production costs in the industry. Community donations dropped to $2000 in 2001 however donations are now being administered through Canfor's corporate offices.

Table 26: Canfor's Contribution to Local Communities

Index	Amount ($MM) 1999	Amount ($MM) 2000	Amount ($MM) 2001
Property Taxes	0.3	0.3	0.4
Salary Wages and Benefits	13.3	13.8	11.5
Contract Services (Local)	23.1	16.7	16.9
Contract Services (Non-local)	13.5	6.4	9.25
Supplies	2.4	1.7	1.6
Community Donations	0.008	0.10	0.002
Jobs/m^3	1.39/1000 m^3	1.82/1000 m3	1.66/1000 m3

The number of jobs/m^3 is calculated as follows:

(Total Wages/Average Provincial Wage)/Actual Recorded Cut

Where:

Total wages = Salaries, Wages and Benefits + Local Contractors + Non-local Contractors

Average Provincial Wage = This is based on Pricewaterhouse Coopers Annual Report on the Forest Industry in British Columbia. In 1999 the provincial average forest industry employee earned $67,042.

Actual Recorded Cut = Indicator 29

REVISIONS

No revisions are suggested for this indicator or objective.

2.34-2 Local Contractors

STATUS AND COMMENTS

From 2000 – 2001 there was an increase in the number of contractors on the approved contractor database from 330 to 343; a 4% increase in available contractors. The percentage of local contractors in Canfor's Peace Region approved contractor database dropped from 71% in 1999 to 68% in 2000 and to 61% in 2001. Similarly, the percentage of non-local contractors on Canfor's approved contractor database went up 32% from 2000 to 2001. Since the actual number of local contractors remained consistent, the increased percentage of non-local contractors is due to growth in the database – primarily from non-local contractors – and not a reduction in the actual number of local contractors.

REVISIONS

No revisions are suggested for this indicator or objective.

2.35 ANIMAL UNIT MONTHS

Indicator:	Objective:
35. Animal unit months	We will maintain an annual average of 1000 Animal Unit Months (excludes brush control by sheep).

STATUS AND COMMENTS

Table 27 shows the animal unit months (AUM) of range tenure that were issued on the TFL for 2001. Some of these tenures overlap the TFL and are not totally contained within the TFL. The methodology to derive this was to simply prorate by area the number of AUM's attributable to the TFL.

The total number of AUM's has increased by 47 from 2, 503 in 2000 to 2,550 in 2001.

Table 27: Animal Unit Months on TFL 48 for 2001

Range Tenure	Total AUM's	% Area TFL	AUM's on TFL
Grazing Lease	10	100.0%	10
RAN071469	161	98.8%	159
RAN071476	254	11.3%	29
RAN071818	148	99.6%	147
RAN072876	30	100.0%	30
RAN072880	20	95.9%	19
RAN073021	944	58.2%	549
RAN073876	1,080	34.8%	376
RAN074239	50	100.0%	50
RAN074307	240	40.3%	97
RAN074782	204	100.0%	204

RAN074779	120	100.0%	120
RAN074781	280	100.0%	280
RAN074778	480	100.0%	480
Total			**2,550**

REVISIONS

No revisions are suggested for this indicator or objective.

2.36 VISUAL LANDSCAPE INVENTORY

Indicator:	Objective:
36. Visual Landscape Inventory	We will maintain and update an approved visual landscape inventory.

STATUS AND COMMENTS

A new Visual Landscape Inventory (VLI) was completed in 2000. Canfor submitted recommended Visual Quality Objectives for the VLI completed in 2000 on March 4, 2002. Upon review and acceptance the District Manager may make the objectives known under the Forest Practices Code of British Columbia Act.

REVISIONS

No revisions are suggested for this indicator or objective.

2.37 LEVEL OF PUBLIC ACCEPTANCE

Indicator:	Objective:
37. Level of public acceptance of Visual Landscape inventory	**37-1** We will include public input in reviewing and updating the visual landscape inventory. **37-2** We will propose and manage harvesting cutblocks consistent with Visual Sensitivity Classes.

2.37-1 Visual Landscape Inventory Public Input

STATUS AND COMMENTS

As per the direction by the District Manager, Visual Impact Assessments (VIA) were referred to the District of Hudson's Hope, Portage Mountain Yacht Club and James Rhymer, Trapper for CP's along Williston Lake. This was due to the previous Visual Landscape Inventory not covering off all visible areas along the lake. CP 275-001, 002, 005, 007, CP 276-003, 004, 006, CP 241-T2011, T2012, CP 327-001, 004, 005, CP 329-001, 002, 003, 004 and CP 238-T2001 where referred. Comments resulted on CP 327 and 329, which were answered, but significant changes were not made due to the increased environmental impact of more road and skid trails if patch cut systems were used rather than strip cut cable harvesting.

REVISIONS

No revisions are suggested for this indicator or objective.

2.37-2 Visual Impact Assessments

STATUS AND COMMENTS

Requirements for landscape design and perspective modelling is identified at each forest development plan.

Reporting performance for this indicator identified all blocks which had harvesting completed between January 1 and December 31, 2001. This is slightly different from how this indicator was reported in the 2000 annual report. In 2000 blocks were reported based on whether harvesting started in the calendar year of the year of interest rather than year harvesting was completed. This was changed to standardize the reporting effort for multiple indicators. As well conformance reporting of the VIA is easier to report after harvesting was completed. This has resulted in some blocks being reported in the 2000 annual report and then being reported again in this 2001 report, however this change in methodology will not result in any blocks not being reported on.

Harvested blocks were compared with the 1995 Visual Landscape Inventory (VLI) and the 2000 Visual Landscape Inventory. Table 28 shows all blocks where harvesting was completed in 2001. Those highlighted fall within either the 1995 or 2000 VLI. All blocks in a visual area have had visual impact assessments completed except blocks 247-004, 273-001 and 273-002. These two blocks are outside the 1995 visual areas but within the 2000 visual areas and had cutting permits issued on August 1, 1998 and May 15, 1998 respectively, hence with the best available information at the time a visual impact assessment was not required. As well some blocks have had VIA completed that were outside of the defined visual areas.

All blocks in visual areas have post harvest visual assessments scheduled to ensure that the plans have achieved the desired results.

Table 28: Blocks Harvested in 2001 with VIA Requirements

Licence	Cut Block	Visual Impact Assessment	Harvesting Consistent with VIA
SBFEP-TFL	A57974-002	Not Required	
SBFEP-TFL	A57974-003	Not Required	
SBFEP-TFL	A57974-006	Not Required	
SBFEP-TFL	A58765-003	Not Required	
SBFEP-TFL	A58765-004	Not Required	
SBFEP-TFL	A58765-011	Not Required	
SBFEP-TFL	A58765-012	Not Required	
TFL48	080-002	Done	To be completed by Oct 1, 2002
TFL48	236-006	Done	Not Visible; will be verified with photos when the rest of the CP is completed
TFL48	246-003	Not Required	
TFL48	247-004	Not Required	N/A
TFL48	273-001	Not Required	N/A
TFL48	273-002	Not Required	N/A
TFL48	275-002	Done	Will be verified with photos when CP complete
TFL48	275-007	Done	Will be verified with photos when CP complete
TFL48	276-003	Done	Will be verified with photos when CP complete
TFL48	330-001	Done	To be completed by Oct 1, 2002
TFL48	330-002	Done	To be completed by Oct 1, 2002
TFL48	330-003	Done	To be completed by Oct 1, 2002

Licence	Cut Block	Visual Impact Assessment	Harvesting Consistent with VIA
TFL48	610-001	Not Required	
TFL48	612-001	Not Required	
TFL48	612-003	Not Required	
TFL48	612-005	Not Required	
TFL48	619-001	Not Required	
TFL48	619-002	Not Required	
TFL48	619-005	Not Required	
TFL48	620-001	Not Required	
TFL48	620-002	Not Required	
TFL48	624-001	Not Required	
TFL48	624-002	Not Required	
TFL48	624-003	Not Required	
TFL48	634-006	Not Required	
TFL48	640-001	Done	To be completed by Oct 1, 2002
TFL48	689-004	Done	Yes
TFL48	689-005	Done	Yes
TFL48	689-006	Done	Yes
TFL48	689-007	Done	Yes
TFL48	T2012	Done	Not Visible; will be verified with photos when the rest of the CP is completed
TFL48	T4001	Not Required	

REVISIONS

No revisions are suggested for this indicator or objective.

2.38 BACK COUNTRY CONDITION

Indicator:	Objective:
38. Back country condition	We will maintain or increase backcountry condition in Klin Se Za, Bocock, Butler Ridge, Pine LeMoray, Peace Boudreau, and Elephant Ridge/Gwillim Protected Areas and manage special management zones (Klin Se Za, North Burnt, Dunlevy) as per LRMP.

STATUS AND COMMENTS

In 2001, Canfor had activities within only one of the backcountry areas described in the management plan. These activities are shown in Tables 29 and 30.

Table 29: Canfor Road Activity within Backcountry Areas in 2001

PAS / SMZ	Road Name	Length (km)	Activity
Dunlevy SMZ	27507.100	1.6	New Construction, temporary deactivation
	27502.100	1.0	New Construction, temporary deactivation
	27603.200	0.2	New Construction, temporary deactivation
	27603.100	0.5	New Construction, temporary deactivation
	27506.100	3.0	New Construction, gate installed at ~0.5 km to control access.
	27501.100	2.2	New Construction, temporary deactivation
Dunlevy Total		8.5	

Table 30: Canfor Harvest Activity within Backcountry Areas in 2001

PAS / SMZ	Block	Area (ha)	Activity
Dunlevy SMZ	275-001	20.6	Harvest started and not completed
	275-002	7.8	Harvest started and completed 2001
	275-005	21.5	Harvest started and completed spring 2002
	275-007	27.4	Harvest started and completed 2001
	276-003	15.0	Harvest started and completed 2001
	276-004	44.4	Harvest started and completed spring 2002
Dunlevy Total		136.7	

The Dunlevy Management Plan has been accepted and was approved by government on January 30, 2002. This indicator will be further reviewed and revised if necessary to ensure consistency with the Dunlevy Management Plan. Operations conducted in 2001 were consistent with the Dunlevy Management Plan.

The following Table 31 is as per the Management Plan 3 and shows the ROS for the Backcountry areas. During 2000 the roaded areas were further investigated and all existing motorized access was identified. Maps and Table 32 was presented to the PAC at the December 6, 2001 meeting. For the purposes of tracking forest industry impacts to the ROS in the Dunlevy SMZ and the Butler Ridge Protected Area Table 32 will be considered the baseline condition.

Table 31: Area of ROS Class by PAS and SMZ's from MP 3

PAS / SMZ	Recreation Opportunity Spectrum			
	Roaded (ha)	Semi-Primitive Motorized (ha)	Semi-Primitive Non Motorized (ha)	Grand Total (ha)
Bocock			988	988
Butler Ridge	1,479		5,035	6,513
Dunlevy SMZ	3,619	8,672	18,871	31,162
Elephant Ridge/Gwillim	25		2,890	2,915
Klin Se Za			2,668	2,668
North Burnt SMZ	6,305		10,574	16,879
Peace River/Boudreau	2,089			2,089
Pine/LeMoray	1,017	1	2,262	3,280
Klin Se Za Mountain SMZ	1,709		7,364	9,073
Klin Se Za Headwaters SMZ	7,146	140	10,419	17,704
Total	**23,388**	**8,813**	**61,071**	**93,272**

Table 32: Revised Baseline Area of ROS Class for Butler Ridge and Dunlevy

PAS / SMZ	Recreation Opportunity Spectrum			
	Roaded (ha)	Semi-Primitive Motorized (ha)	Semi-Primitive Non Motorized (ha)	Grand Total (ha)
Butler Ridge	1,133	1,309	4,150	6,591
Dunlevy SMZ	5,283	4,589	21,976	31,848
Total	**6,415**	**5,897**	**26,126**	**38,439**

REVISIONS

No revisions are suggested for this indicator or objective.

2.39 BOTANICAL FOREST PRODUCTS

Indicator:	Objective:
39. Habitat supply for botanical forest products	We will investigate local uses of botanical forest products to determine habitat requirements.

STATUS AND COMMENTS

Canfor's knowledge of botanical forest product use in the TFL is currently based on anecdotal information. At present there is no large-scale commercial use of botanical forest products in the TFL. Current uses include gathering of berries, medicinal plants and possibly such features as mushrooms and tree burls by both the public and Aboriginal people.

In an effort to better determine how botanical forest products are used on the TFL, Canfor solicited information through newspaper advertisements in March 2001 and through meetings in relation to the Klin Se Za Special Management Zone.

Canfor attempted to complete the native medicinal plant and plant community inventory project with West Moberly First Nation (WMFN), however the required personnel were not available. Instead Canfor drafted a work plan to conduct the inventory with the WMFN. When carried out,

this inventory will provide Canfor with knowledge about important plants and the ecosystems that they inhabit. Canfor can then devise management plans that conserve or protect these plants and potentially develop habitat models to assist with long-term planning. WMFN will benefit from this inventory by having a list of plants used by elders for teaching and archive purposes.

REVISIONS

Canfor proposes to extend the completion date of the native medicinal plant and plant community inventory project to field the 2003 season with the report completed in time for the 2003 Annual Report.

2.40 PUBLIC ADVISORY COMMITTEE

Indicator:	Objective:
40. Public Advisory Committee	**40-1** We will establish and maintain a Public Advisory Committee and hold at least two meetings annually. **40-2** We will hold an annual open house to review SFM plan performance.

2.40-1 Public Advisory Committee

STATUS AND COMMENTS

Canfor held three meetings with the Public Advisory Committee in 2001 (See Table 33)

Table 33. Summary of Meeting Dates, Committee, Advisors and Public Attendance

Meeting #	Date	# of Committee Members	Quorum	# of Advisors	# of Public
1	May 17, 2001	7	Yes	12	4
2	Sept 21, 2001	4	No	6	3
3	Dec 6, 2001	5	Yes	6	1

PAC meetings were mainly focused on reviewing indicators and providing input on Canfor's recommendations for change. Various presentations were given to the PAC throughout the year, as listed below (Table 28).

Table 34: Summary of Presentations to the PAC

Related Indicator	Presenter	Company	Topic
Indicator 2	Don Rosen	Canfor	Patch size distribution
Indicator 4	Andrew DeVries	Canfor	Grizzly bear and goshawk modelling
Indicator 7	Don Rosen	Canfor	Seral stage distribution
Indicator 27	Warren Jukes	Canfor	Annual allowable cut increase
Indicator 50	John Nelson	UBC	Research project on visual quality
N/A	Paul Wooding	Canfor	Changes to the CSA certification process
N/A	Peter Sheehan	Western Coal Corp	Development information

Two PAC members participated in the KPMG audit. A communities representative participated in the office review portion of the audit, and an environment representative participated in the office and field review portions.

The committee was composed of the following interests in 2001:

- Communities
- Environment
- Forest Workers
- Independent Forest Operators
- Oil and Gas
- Recreation
- Trapping
- Both Saulteau and West Moberly First Nations were invited to each meeting, but chose not to attend.

REVISIONS

No revisions are suggested for this indicator or objective.

2.40-2 Annual Open House

STATUS AND COMMENTS

The second annual open house was held on May 10, 2001, at the Chetwynd Recreation Centre. One member of the public attended.

The next open house is scheduled for June 12, 2002. In attempt to increase attendance, it will be held in conjunction with Canfor's contractors' conference. This annual conference is attended by Canfor's primary logging contractors and their employees. The open house will be set up in the same facility as the contractors conference, and will display the forest development plan, the notification for intent to treat and the SFM plan.

REVISIONS

No revisions are suggested for this indicator or objective.

2.41 PARTICIPATION IN LRMP

Indicator:	Objective:
41. Participation in LRMP	We will attend meetings, and provide information as required, for LRMP functions.

STATUS AND COMMENTS

Canfor has attended 100% of all LRMP related meetings scheduled in 1999 (2) and 2000 (4). Special Management Zone meetings were held for the Dunlevy in 2000 (3) and 2001 (4) as well as one meeting was held for the Klin Se Za in 2000.

The Dunlevy Creek Management Plan was accepted and approved by government on January 30, 2002.

REVISIONS

No revisions are suggested for this indicator or objective.

2.42 LRMP AND LAND USE PLANS

Indicator:	Objective:
42. LRMP and land use plans	We will manage operations to the spirit and intent of the Dawson Creek LRMP.

STATUS AND COMMENTS

The 2000 Forest Development Plan has been approved and includes wording regarding the spirit and intent of the Dawson Creek LRMP. Canfor continues to work and report on items of the LRMP such as Protected Areas (Indicator 3), Special Management Zones (Indicators 38 and 41) and wildlife species (Indicators 4 and 5).

REVISIONS

No revisions are suggested for this indicator or objective.

2.43 PROACTIVE CONSULTATION PROCESS

Indicator:	Objective:
43. Proactive consultation process for significant activities such as proposed timber harvesting	Forest Development Plan will be referred to Saulteau and West Moberly First Nations.

STATUS AND COMMENTS

No official development plan process was conducted in 2001. However as part of Canfor's commitment to proactive consultation, a map and letter outlining the unofficial management intentions for the 2002 – 2007 FDP was circulated to the West Moberly, Saulteau and McLeod Lake First Nations in May 2001.

Summaries of concerns are presented in Indicator 48.

REVISIONS

No revisions are suggested for this indicator or objective.

2.44 ARCHAEOLOGICAL IMPACT ASSESSMENTS

Indicator:	Objective:
44. Archaeological impact assessments on proposed harvest blocks	We will conduct archaeological impact assessments as indicated through archaeological overviews or inventory.

STATUS AND COMMENTS

No Archaeological Impact Assessments were conducted or required in 2001. AIA's will continue to be conducted as required.

REVISIONS

No revisions are suggested for this indicator or objective.

2.45 ABORIGINAL LIAISON

Indicator:	Objective:
45. Aboriginal liaison	We will increase the level of aboriginal input to forest management by meeting with band councils, representatives, contractors and/or individuals as issues and opportunities arise.

STATUS AND COMMENTS

Although not specific to the TFL, Canfor met 3 times with the Saulteau First Nation regarding a Memorandum of Understanding relating to capacity funding. This funding is to be directed towards furthering the ability of Saulteau to review and comment on regulatory planning processes and general forest management issues both within and outside of the TFL. Canfor also met 4 times with the West Moberly First Nation regarding a joint venture on a new Forest Licence. This relates to Canfor's Economic Contribution to Local Communities (Indicator 34) and Aboriginal Employment (Indicator 47).

As the Forest Development Plan Process was not initiated until 2002, no official meetings between Canfor and First Nations groups were held in 2001 relating to operational plans.

As part of the Pesticide Management Plan (PMP) process, letters from Canfor were sent to the West Moberly and Saulteau First Nations requesting meetings regarding the PMP (letters on file in 2001 Notice of Intent to Treat Binder – Silviculture Forester). Neither group responded or requested further consultation. Canfor will continue to strive towards accessing aboriginal input on forest management activities

Table 35: Number of Meetings Held with First Nations Annually

First Nation	1999	2000	2001
Saulteau	1	1*	3
West Moberly	2	1	4

* Chief and Council did not attend a meeting on Nov. 30, 2000 but trappers from Saulteau did.

REVISIONS

No revisions are suggested for this indicator or objective.

2.46 INCORPORATE OBJECTIVES OF KLIN SE ZA INTO FDP AND MP

Indicator:	Objective:
46. Incorporate objectives of Klin Se Za into FDP and MP	We will maintain or increase backcountry condition in Klin Se Za, Bocock, Butler Ridge, Pine LeMoray, Peace Boudreau, and Elephant Ridge/Gwillim Protected Areas and manage special management zones (Klin Se Za, North Burnt, Dunlevy) as per LRMP.

STATUS AND COMMENTS

See Indicator 38.

REVISIONS

No revisions are suggested for this indicator or objective.

2.47 ABORIGINAL EMPLOYMENT

Indicator:	Objective:
47. Aboriginal employment	We will budget $100,000 annually for aboriginal contractors.

STATUS AND COMMENTS

Aboriginal Contractors conducted $99,358 forestry related work in 2001. Contributions were $447,988 in 2000 and $465,000 in 1999.

REVISIONS

No revisions are suggested for this indicator or objective.

2.48 FDP, PMP AND MP

Indicator:	Objective:
48. FDP, PMP AND MP	We will advertise and refer plans to all parties in a proactive manner (public, agencies and other licence holders).

STATUS AND COMMENTS

Management Plan #3 and PMP's were advertised in accordance with regulatory requirements in 2001. Operational plan referrals during 2001 were as follows:

1. MP # 3 – Open House, May 2001 Chetwynd – 1 member of public attended, no follow up response required.

2. FDP – no new FDP was issued in 2001. A "Pre-FDP" describing the intent and location of large block proposals were referred to the following stakeholders:
   - Letter and maps referred to District of Tumbler Ridge, District of Hudson's Hope, District of Chetwynd, Chetwynd Environmental Society, West Moberly First Nations, Saulteau First Nations and McLeod Lake Indian Band – May 29/01.
   - Trappers (29) and Outfitters (8) notified of plan and upcoming harvesting/road building activities at same time, including map of their traplines - May 29 2001.
   - Responses: 10 responses, resulted in 4 meetings, District of Hudson's Hope, Chetwynd Environmental Society, Rohel/Davis family (didn't show up) and Ken Sheen (trapper), 4 telephone conversations, two letters. There are no outstanding concerns at this time.

3. Operational Plans
   - Trapper Notification – May notification included in above.
   - Trapper Notification – November notification – 29 trappers with 13 cc's where trapline held by family. Two telephone responses were noted and there are no outstanding issues.
   - No Road Permit referrals.

- No Silviculture Prescription referrals, other than those associated with the VIA referrals below.
- Visual Impact Assessment referrals – as directed by the District Manager, VIA's were referred to the District of Hudson's Hope, Portage Mountain Yacht Club and James Rhymer, Trapper for CP's along Williston Lake. This was due to the previous Visual Landscape Inventory not covering off all visible areas along the lake. CP 275-001, 002, 005, 007, CP 276-003, 004, 006, CP 241-T2011, T2012, CP 327-001, 004, 005, CP 329-001, 002, 003, 004 and CP 238-T2001 where referred. Comments resulted on CP 327 and 329, which were answered, but significant changes were not made due to the increased environmental impact of more road and skid trails if patch cut systems were used rather than strip cut cable harvesting.

4. PMP – Notification of Intent to Treat
   - Advertised in Chetwynd Echo, Community Connections, Tumbler Ridge, The Mirror, Dawson Creek.
   - Referred to 4 range tenures.
   - Referred to First Nations – McLeod Lake Indian Band, West Moberly First Nations, Saulteau First Nations, Kelly Lake First Nation Society, Treaty Eight Tribal Association
   - Referred to Guide/Outfitters – 5 (1 was for FL only).
   - Trappers – 16 (2 for FL only).
   - Responses: Treaty Eight Tribal Association – concerned with infringement of rights, Canfor unable to respond.

REVISIONS

No revisions are suggested for this indicator or objective.

2.49 PUBLIC ENQUIRY FORMS

Indicator:	Objective:
49. Public enquiry forms	We will respond to public inquiries on our practices (in addition to normal planning processes within 1 month of receipt, and maintain and track forms as per the Environmental Management System.

STATUS AND COMMENTS

Canfor received 7 Public Enquiries in 2001; this is 1 more than received in 2000. These enquiries included 3 requests for information, 1 compliment, 2 complaints and one concern (Table 36). There are no outstanding issues from the Public Enquiries received in 2001. Generally public enquiries documented from 1999 – 2001 have been easy to resolve by providing information to the concerned parties.

Table 36: Summary of Public Enquiries Received in Relation to TFL 48 in 2001

Person - Date	Concern	Canfor Response
Trapper – 2001/01/02	Question regarding notification for commencement of harvesting in CP 689, Club Creek.	Issue resolved.
Trapper – 2001/01/11	Question regarding whether snowmobiles were damaging seedlings.	Silviculture forester investigated and determined there was no significant concern.

Person - Date	Concern	Canfor Response
Trapper – 2001/01/11	Level of deactivation restricts the use of snowmobiles.	Hired trapper to fix the problem.
District of Hudson's Hope - 2001/08/15	Compliment on Dunlevy Special Management Plan completion.	No response required.
District of Hudson's Hope - 2001/08/15	Request to exclude clearcut harvesting from CP 275 in Dunlevy	No change to prescription, letter sent explaining why. CP 275 approved in 1998 FDP, prior to LRMP and Dunlevy SMZ approval. Canfor feels that clearcut harvesting is still consistent with the natural disturbance patterns for the Dunlevy SMZ and block was subject to visual design techniques.
District of Hudson's Hope - 2001/11/27	Request to present how AAC was determined for MP #3.	Presentation on TSR and AAC given.
Chetwynd Environmental Society – 2001/09/27	Request to present patch size work to justify large blocks on TFL 48.	Presentation on Patch Size Analysis and Habitat Models given.

REVISIONS

No revisions are suggested for this indicator or objective.

2.50 LEVEL OF PUBLIC COMMENTS

Indicator:	Objective:
50. Level of public comments	We will provide feedback to concerned individuals and the PAC on how concerns were addressed.

STATUS AND COMMENTS

As per the May 17th, 2001 PAC meeting and the 2000 Annual Report, this objective for this indicator is reported as part of Indicator 49.

REVISIONS

No changes are proposed for this indicator or objective.

2.51 SPATIAL AND TEMPORAL MODELS

Indicator:	Objective:
51. Spatial and temporal models	**51-1** We will use leading edge modelling systems to develop rotation length plans. **51-2** We will use up-to-date vegetation inventory. **51-3** We will use the best available science to develop an understanding of ecological response.

2.51-1 Modelling Systems

STATUS AND COMMENTS

A three-year research partnership between Canfor, the Canadian Forest Service and National Science and Engineering Research Council (NSERC) was approved in November 2000 and has provided funding for the University of British Columbia to develop and refine an ecosystem-based modelling framework.

In 2001 UBC provided the PAC a brief overview of the co-operative research project with Natural resources Canada and National Research Council. This project provides a realistic and sound opportunity to visualise potential management decisions on the forest landscape. Using an intensive photo library along with detailed growth and yield models, various harvesting methods can be projected.

REVISIONS

No revisions are suggested for this indicator or objective.

2.51-2 Vegetation Inventory

STATUS AND COMMENTS

The VRI has been updated to October 2001. Current status and post development plan analysis was completed in support of the 2002-2007 FDP.

Phase II sampling did not happen in the 2000 field season. A multi-year contract was issued for 2001/2002. Plots will be completed by 2003.

REVISIONS

No revisions are suggested for this indicator or objective.

2.51-3 Best Available Science

STATUS AND COMMENTS

See 51-1 for status and comments.

REVISIONS

No revisions are suggested for this indicator or objective.

2.52 NUMBER OF RECREATIONAL TRAILS AND CAMPSITES

Indicator:	Objective:
52. Number of recreational trails and campsites	We will provide and/or maintain a minimum of one trail and three recreation sites on the TFL.

STATUS AND COMMENTS

Carbon, Gething, and Wright Lake recreation sites had inspections conducted in the fall of 2001. No concerns were noted.

REVISIONS

No revisions are suggested for this indicator or objective.

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Appendix 1. Glossary of Acronyms and Terms

GLOSSARY OF TERMS

AAC (Allowable Annual Cut)

The annual rate of timber harvesting specified for an area of land by the chief forester of the BC Ministry of Forests. The chief forester sets AACs for timber supply areas (TSAs) and Tree Farm Licences (TFLs) in accordance with Section 8 of the *Forest Act*.

Abiotic

Not of biological origin (see biotic). E.g., windthrow, forest fires, flooding.

Active Access

Active access is defined as those roads that have not been deactivated to a level that restricts motorized access.

Adaptive Management

A learning approach to management that incorporates the experience gained from the results of previous actions into decisions. It is a continuous process requiring constant monitoring and analysis of the results of past actions that are used to update current plans and strategies.

Anthropogenic

Influenced by the impact of man on nature.

BEC (Biogeoclimatic Ecosystem Classification)

A hierarchical classification scheme having three levels of integration; regional, local and chronological; and combining climatic, vegetation and site factors. The hierarchical classification includes Biogeoclimatic Zone⇒ sub-zone ⇒ variant⇒ site series.

Biogeoclimatic Zone

A geographic area having similar patterns of energy flow, vegetation, and soils as a result of a broadly homogenous macroclimate. British Columbia has 14 biogeoclimatic zones, of which the AT (Alpine Tundra), ESSF (Englemann Spruce Subalpine fir), SBS (Subboreal Spruce), BWBS (Boreal White and Black Spruce) are found in TFL 48.

Biogeoclimatic Variant

A subdivision of a biogeoclimatic subzone. Variants reflect further differences in regional climate and are generally recognised for areas slightly drier, wetter, snowier, warmer or colder than other areas in the subzone. For example, the BWBS mw1 is warmer than the BWBS wk1.

Biodiversity (or Biological Diversity)

The variability among living organisms from all sources including 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.

Biotic

Relating to living beings, or of biological origin (see abiotic). E.g., insect outbreak, disease

Blue-listed Species

In British Columbia, the designation of an indigenous species, sub-species, or population as being vulnerable or at risk because of low or declining numbers or presence in vulnerable habitats. Included in this classification are populations generally suspected of being vulnerable, but for which information is too limited to allow designation in another category.

Botanical Forest Products

Non-timber based products gathered from forest and range land. There are seven recognised categories: wild edible mushrooms, floral greenery, medicinal products, fruits and berries, herbs and vegetables, landscaping products, and craft products.

CDC (Conservation Data Centre)

The British Columbia Conservation Data Centre (CDC) (see Blue-listed and Red-listed Species). The staff specialists at the CDC, in co-operation with scientists and specialists throughout the province, have identified those vertebrate animals, vascular plants and plant associations in the province which have become most vulnerable. Each of these rare and endangered species and plant associations has been assigned a global and provincial rarity rank according to an objective set of criteria established by The Nature Conservancy of the United States, and a status on the provincial Red or Blue lists.

CITES (Convention on International Trade in Endangered Species)

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement which regulates trade in a number of species of animals and plants, their parts and derivatives, and any articles made form them. The Convention is applied in Canada in accordance with the Wild Animal and Plant Trade Regulations made under the Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA).

Appendix I animals and plants are rare or endangered, and people are not allowed to trade them, or their parts or derivatives for commercial purposes. Animals and plants listed on Appendix II are there for one of two reasons: 1) Their trade is being controlled because, if left unregulated, there is a risk that they will become rare or endangered, or 2) the species are similar to a rare or endangered Appendix I species. Appendix III animals and plant are being carefully managed by the country which has asked to have them added to the CITES control list.

COSEWIC

The Committee on the Status of Endangered Wildlife In Canada (COSEWIC) determines the national status of wild Canadian species, sub-species and separate populations suspected of being in danger. It bases its decisions on the best up-to-date scientific information available.

DFA (Defined Forest Area)

A specific area of land, forest and water delineated for the purposes of registration of a Sustainable Forest Management system (i.e., TFL 48).

CMT (Culturally Modified Tree)

A culturally modified tree (CMT) is a tree that has been altered by native people as part of their traditional use of the forest. Non-native people also have altered trees, and it is sometimes difficult to determine if an alteration (modification) is of native or non-native origin. There are no reasons why the term "CMT" could not be applied to a tree altered by non-native people. However, the term is commonly used to refer to trees modified by native people in the course of traditional tree utilization.

ECA (Equivalent Clearcut Area)

Equivalent clearcut area (ECA) is the area that has been harvested, cleared or burned, with consideration given to the silvicultural system, regeneration growth, and location within the watershed. ECA and road density are the two primary factors considered in an evaluation of the potential effect of past and proposed forest harvesting on peak flows.[10]

Ecosystem

A dynamic complex of plants, animals, and micro-organisms and their non-living environment interacting as a functioning unit. The term “ecosystem” can describe small-scale units, such as a drop of water, as well as large-scale units, such as the biosphere.[4] Ecosystems are commonly described according to the major type of vegetation, for example, forest ecosystem, old growth ecosystem, or range ecosystem.[1]

EMS (Environmental Management System)

An Environmental Management System is a set of standards established by the International Organization for Standardization (ISO 14001). This process includes commitment, public participation, preparation, planning, implementation, measuring and assessing performance, and review and improvement of a management system. The incorporation of feedback loops into the process allows for ongoing enhancement of the integrity and performance of the management system, and is designed to lead to continual improvement.

FDP (Forest Development Plan)

An operational plan guided by the principles of integrated resource management (the consideration of timber and non-timber values), which details the logistics of timber development over a period of usually five years. Methods, schedules, and responsibilities for accessing, harvesting, renewing, and protecting the resource are set out to enable site-specific operations to proceed.

FPC (Forest Practices Code)

The Code is a term commonly used to refer to the Forest Practices Code of BC Act, the regulations made by Cabinet under the act and the standards established by the chief forester. The term may sometimes be used to refer to field guides as well. It should be remembered that unlike the act, the regulations and standards, field guides are not legally enforceable.

Free Growing

Young trees that are as high or higher than competing brush vegetation with one metre of free-growing space surrounding their leaders. As defined by legislation, a free growing crop means a crop of trees, the growth of which is not impeded by competition from plants, shrubs or other trees. Silviculture regulations further define the exact parameters that a crop of trees must meet, such as species, density and size, to be considered free growing.

GIS (Geographic Information System)

Computer systems designed to allow users to collect, manage, and analyse large volumes of spatially referenced information and associated attribute data.

Greened-up

A cutblock that supports a stand of trees that has attained the green-up height specified in a higher level plan for the area, or in the absence of a higher level plan for the area, has attained a height that is 3 m or greater. Also, if under a silviculture prescription, meets the stocking requirements of that prescription, or if not under a silviculture prescription, meets the stocking specifications for that biogeoclimatic ecosystem classification specified by the regional manager.

Harvested Area

The area that was actually harvested. Differs from NAR in that it excludes every area that did not have a commercial crop of trees harvested. Also excludes areas harvested under a different cutting authority i.e. road permit areas within cutblocks. See also Net Area to be Reforested.

Incident Tracking System (ITS)

A database maintained by Canfor to track regulatory incidents.

Indicator Species

Species chosen for their ecological, social and economic attributes to monitor habitat supply over time. Based on the LRMP, provincial and federal endangered species lists, the Identified Wildlife Guide and input from the PAC Canfor has selected the following indicator species: grizzly bear, marten, fisher, wolverine, moose, elk, caribou, mountain goat, Blackthroated Green Warbler, Northern Goshawk, Trumpeter Swan and Three-toed Woodpecker.

Or, in a silvicultural prescription, species of plants used to predict site quality and characteristics.

IWMS (Identified Wildlife Management Strategy)

Those species at risk that the deputy minister of Environment, Lands and Parks or a person authorised by that deputy minister, and the chief forester, agree will be managed through a higher level plan, wildlife habitat area or general wildlife measure.

Long Run Sustained Yield (LRSY)

The maximum biological capacity of the land base with no recognition of items such as Non Recoverable Losses.

Long-term

At a minimum, twice the period in years of the average life expectancy of the predominant tree species up to a maximum of 300 years.

Long Term Harvest Level (LTHL)

The level at which harvest can occur given management assumptions and rate of harvest. In contrast to LRSY, LTHL takes into account Non Recoverable Losses.

Lumber Recovery Factor (LRF)

The volume of lumber recovered in board feet per cubic metre of log processed (fbm/m^3).

LU (Landscape Units)

An area of land and water used for long-term planning of resource management activities. It is important for designing strategies and patterns for landscape level biodiversity and for managing other forest resources. A landscape unit may be used by the District Manager (DM) to establish objectives for any propose permitted under section 2 of the *Forest Practices Code of British Columbia Act.*

Mean Annual Increment (MAI)

The average annual increase in volume of individual trees or stands up to the specified point in time. The MAI changes with different growth phases in a tree's life, being highest in the middle years and then slowly decreasing with age. The point at which the MAI peaks is commonly used to identify the biological maturity of the stand and its readiness for harvesting.

MELP (Ministry of Environment, Lands and Parks)

Provincial government ministry.

MoF (Ministry of Forests)

Provincial government ministry responsible for the management and protection of the province's forest and range resources for the best balance of economic, social, and environmental benefits to British Columbia.

Monitor

Repeated observation, through time, of selected objects and values in the ecosystem to determine the state of the system. In particular, it entails the comparison of objects (e.g., organisms) and processes (e.g., streamflow) before and after management actions to determine the effect of those actions upon the ecosystem.[1]

NAR (Net Area to be Reforested)

The area under a Silviculture Prescription that will be reforested. This excludes areas occupied by permanent roads, areas incapable of growing a stand of trees (rock, wetland etc.), and reserves. This may include areas that did not contain a commercial stand of trees, but because it is capable of growing a stand of trees, will be reforested. See also harvested area

Non Recoverable Losses (NRLs)

Losses of timber due to fire, insects or windfall that are either too small or too inaccessible to be retrieved for lumber production.

OGMA (Old Growth Management Area)

Defined in the *Forest Practices Code of British Columbia Act* Operational Planning Regulation as an area established under a higher level plan which contains or is managed to replace structural old growth attributes.

Old growth forests on BC's coast are characterised by the following:

1. Two or more tree species of variable sizes and spacing;
2. Large live trees;
3. Patchy understory;
4. A deep, multi-layered crown canopy with gaps;
5. Standing dead trees (snags) and coarse woody debris of variable sizes.

OPR (Operational Planning Regulations, Operational Plans)

Within the context of area-specific management guidelines, operational plans detail the logistics for development. Methods, schedules, and responsibilities for accessing, harvesting, renewing, and protecting the resource are set out to enable site-specific operations to proceed. Operational plans include a forest development plan, logging plan, access management plan, range use plan, silviculture prescription, stand management prescription and 5 year silviculture plan.

PAC (Public Advisory Committee)

A public group comprised of a variety of interests, which provides input to Canfor on local Values, Goals, Indicators and Objectives.

Permanent Access Corridors

Permanent access corridors are defined as those roads that are not planned to be returned to a forested state. Some roads may be managed to meet access strategies but are still classed as a permanent reduction in forest area.

Preferred and Acceptable Species

Preferred and acceptable tree species are those commercial tree species that are suited to the growing conditions of the site, and are identified in the Silviculture Prescription.

Red-listed Species

In British Columbia, the designation of an indigenous species, sub-species, or population as endangered or threatened because of its low abundance and consequent danger of extirpation or extinction. Endangered species are any indigenous species threatened with imminent extinction or extirpation throughout all or a significant portion of their range in BC Threatened species are any indigenous species that are likely to become endangered in BC if factors affecting that vulnerability are not reversed.

Regeneration Delay

The maximum time allowed in a prescription, between the start of harvesting in the area to which the prescription applies, and the earliest date by which the prescription requires a minimum number of acceptable well-spaced trees per hectare to be growing in that area.

Registered Seed

Seeds which are tested to standards for germination and quality, from a healthy source and ensures the uses of local seed sources.

Reportable Spills

Reportable level spill as defined in Canfor-Chetwynd's Emergency Preparedness and Response Plan (2000). The following is adapted from that document:

Material	Reportable Levels Canfor	MOE
a) Antifreeze	5 /	5 kg
b) Diesel Fuel	20 /	100 /
c) Gasoline (auto & chainsaw)	20 /	100 /
d) Greases	20 /	100 /
e) Hydraulic Oil	20 /	100 /
f) Lubricating Oils	20 /	100 /
g) Methyl Hydrate	10 /	5 kg
h) Paints & Paint Thinners	10 /	100 /
i) Solvents	10 /	100 /
j) Pesticides	Any	1 kg
k) Explosives	Any	Any

ROS (Recreation Opportunity Spectrum)

A recreation opportunity is the availability of choice for someone to participate in a preferred recreation activity within a preferred setting and enjoy the desired experience.

Rotation

The planned number of years between the formation and regeneration of a tree crop or stand and its final cutting at a specified stage of maturity.

Sawmill Lumber Recovery Factor

(Define?)

Selection Silviculture System

A silviculture system that removes mature timber either as single scattered individuals or in small groups at relatively short intervals repeated indefinitely, where the continual establishment of regeneration is encouraged and an uneven-aged stand is maintained. As defined in the Code's Operation Planning Regulation, group selection removes trees to create openings in a stand less than twice the height of mature trees in the stand.

Seral Stage

Any stage of development of an ecosystem from a disturbed, unvegetated state to a climax plant community. (FP Code)

Seral Stage Age Classes by BEC Zone BEC Zone	Early	Juvenile	Mature	Old
BWBS – Conifer	<40	40-100	100-140	>140
BWBS – Deciduous	<20	20-80	80-100	>100
SBS	<40	40-100	100-250	>250
ESSF	<40	40-120	120-250	>250

BWBS – Boreal White and Black Spruce Zone
SBS – Sub-Boreal Spruce Zone
ESSF – Engelmann Spruce – Subalpine Fir Zone

Shelterwood Silviculture System

A silviculture system in which trees are removed in a series of cuts designed to achieve a new even-aged stand under the shelter of remaining trees.

SFMP

Sustainable Forest Management Plan

Site Degradation

Productive forest land significantly degraded or permanently lost to forest production.

Site Index

An expression of the forest site quality of a stand, at a specified age, based either on the site height, or on the top height (height of the largest diameter tree on a 0.01 ha plot, providing the tree is suitable), which is a more objective measure (FPCode). The measure of the relative productive capacity of a site for a particular tree species, based on height at a given reference or base age (50)

Site Series

Variation in site conditions encountered within a biogeoclimatic unit is accommodated within the site classification of BEC. The site series describes all land areas capable of supporting specific climax vegetation. This can usually be related to a specified range of soil moisture and nutrient regimes within a subzone or variant, but sometimes other factors, such as aspect or disturbance history, are important determinants as well. A classification of site series for most of the biogeoclimatic units of the province has been developed by the BC Ministry of Forests and is presented in regional field guides.[12]

SFM (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.

SMZ (Special Management Zone)

The Dawson Creek LRMP has Special Management Zones based on major resource values to be given a high priority in land and resource planning and development. Resource development is permitted but must consider and address all significant values identified. SMZ include: wildlife habitat and wilderness recreation, major river corridors, and culture and heritage.

Snag

Standing dead tree or part of a dead tree.

SP (Silviculture Prescription)

A site-specific management plan that is a legal prerequisite to logging on Crown Land. SPs specify planned forest activities, the methods to be used, and the proposed constraints necessary to protect the site and its resource values.

Stand Level

The level of forest management at which a relatively homogeneous land unit can be managed under a single prescription, or set of treatments, to meet well-defined objectives.

Terrain Stability Map

Terrain mapping is a method to categorise, describe and delineate characteristics and attributes of surficial materials, landforms, and geological processes within the natural landscape. Terrain stability mapping is a method to delineate areas of slope stability with respect to stable, potentially unstable, and unstable terrain within a particular landscape. Terrain stability map polygons indicate areas or zones of initiation of slope failure.[11] *(See Terrain Survey Intensity)*.

TFL (Tree Farm Licence)

A Tree Farm Licence (TFL) is a stewardship agreement based on a sustained yield, land-based management unit. This includes the right to harvest a specified volume of timber annually and the obligation to carry out all phases of forest management on behalf of the Ministry of Forests. The licence has a term of 25 years and is replaceable every 10 years.

Timber

Timber means trees, whether standing, fallen, living, dead, limbed, bucked or peeled (Forest Act)

Timber Harvesting Land Base

The portion of the total area of a management unit considered contributing to, and being available for, long-term timber supply. The harvesting land base is defined by reducing the total land base according to specified management assumptions.

Timber Supply Analysis

An assessment of future timber supplies over long planning horizons (more than 200 years) by using timber supply models for different scenarios identified in the planning process.

Timber Supply Review (TSR)

The timber supply review program regularly updates timber supply in each of the 37 TSAs and 34 TFLs areas throughout the province. By law, the chief forester must re-determine the AAC at least once every five years to ensure AACs are current and reflect new information, new practices and new government policies.

TIPSY (Table Interpolation Projection Program For Stand Yields)

A program that interpolates data from TASS (tree and stand simulator) – a computer model that simulates the growth of individual trees and stands. This program is based on growth trends observed in fully stocked research plots growing in a relatively pest free environment. The yields will be very close to the potential of a specific site, species and management regime.

Twenty Year Plan

A TFL licensee submits an operational timber supply projection that indicates the availability of timber by setting out a hypothetical sequence of harvesting over a period of at least 20 years, consistent with proposed management objectives. The main purpose of the plan is to demonstrate whether or not the harvests projected in the base case over the next 20 years are spatially feasible, taking into account constraining factors such as Code requirements, timber harvesting land base deductions and the volume assignments per hectare on each entry.

Vegetation Resources Inventory (VRI)

Visual Quality Objective (VQO)

An approved resource management objective that reflects a desired level of visual quality based on the physical and sociological characteristics of the area; refers to the degree of acceptable human alteration to the characteristic landscape.

Waste

The volume of timber left on the harvested area that should have been removed in accordance with the minimum utilisation standards in the cutting authority. It forms part of the allowable annual cut for cut-control purposes.

Waterbody

Any land covered by water.

Windthrow

A tree or trees uprooted by the wind.

Appendix 2. ROS Polygon Delineation Standards

ROS Class	Factors					
	Remoteness		Naturalness		Social Experience	
	Distance from road (km)	Size (ha)	Motorized Use	Evidence of Humans	Solitude/Self-reliance	Social Encounters
Primitive (P)	>8	>5000 ha	• occasional air access, otherwise no motorized access or use in the area.	• very high degree of naturalness; • structures are extremely rare • generally no site modification • little on-the-ground evidence of other people • evidence of primitive trails	• very high opportunity to experience solitude, closeness to nature; self-reliance and challenge.	• very low interaction with other people; • very small party sizes expected;
Semi-Primitive Non-Motorized (SPNM)	> 1	> 1000 ha	• generally very low or no motorized access or use • may include primitive roads and trails if usually closed to motorized use.	• very high degree of naturalness; • structures are rare and isolated except where required for safety or sanitation • minimal or no site modification. • · little on-the-ground evidence of other people.	• high opportunity to experience solitude, closeness to nature, self-reliance and challenge.	• low interaction with other people; • very small party sizes expected;
Semi-Primitive Motorized (SPM)	> 1	> 1000 ha	• a low degree of motorized access or use.	• high degree of naturalness in the surrounding area as viewed from access route; • structures are rare and isolated • minimal site modification. • some on-the-ground evidence of other people • evidence of motorized use	• high opportunity to experience solitude, closeness to nature, self-reliance and challenge.	• low interaction with other people; • small party sizes expected;
Roaded Natural (RN)	< 1	N/A	• moderate amount of motorized use within the area. • may have high volume of traffic through the main travel corridor.	• moderate degree of naturalness in surrounding area • structures may be present and more highly developed; • moderate site modification. • some on-the-ground evidence of other people, • some on-site controls. • typically represent main travel corridors and recreation areas that have natural-appearing surroundings	• moderate to high opportunity to experience solitude, closeness to nature, self-reliance and challenge.	• moderate interaction with other people; • small to large party sizes expected;
Roaded Modified (RM)	< 1	N/A	• moderate to high degree of motorized use for both access and recreation.	• low degree of naturalness; • moderate number of more highly developed structures; • highly modified in areas; generally dominated by resource extraction activities. • on-the-ground evidence of	• low to moderate opportunity to experience solitude, closeness to nature, self-reliance and challenge.	• moderate to high interaction with other people; • moderate to large party sizes expected;

ROS Class	Factors					
	Remoteness		Naturalness		Social Experience	
	Distance from road (km)	Size (ha)	Motorized Use	Evidence of Humans	Solitude/Self-reliance	Social Encounters
				other people and on-site controls.		
Rural (R)	< 1	N/A	• high degree of motorized use for both access and recreation.	• very low degree of naturalness; • complex and numerous structures, high concentrations of human development and settlements associated with agricultural land. • obvious on-the-ground evidence of other people and on-site controls.	• low opportunity to experience solitude, closeness to nature, self-reliance and challenge.	• high interaction with other people; • large party sizes expected;
Urban (U)	< 1	N/A	• very high degree of motorized use for both access and recreation.	• very low degree of naturalness; • highly developed and numerous structures associated with urban development; • very high site modification. • obvious on-the-ground evidence of other people and on-site controls.	• very low opportunity to experience solitude, closeness to nature, self-reliance and challenge.	• very high interactions with other people; • very large party sizes expected;

Appendix 3. KPMG Forest Certification Update – January 2002

KPMG

Forest Certification UPDATE

Canadian Forest Products Chetwynd TFL 48

Canfor's TFL 48 holds ISO 14001 Environmental Management System (EMS) registration as well as being registered under the CSA's Sustainable Forest Management System (CSA-SFM) Standard.

The combination of ISO 14001 and CSA-SFM registration provides a robust framework for implementing and monitoring a sustainable forest management plan for the TFL. This was evident in the recent approval letter for the TFL's new management plan, which noted that the plan was "very well written, particularly with respect to the framework of criteria and indicators."

The framework of criteria and indicators used in the plan is based on the criteria and critical elements for sustainable forest management developed by the Canadian Council of Forest Ministers and embodied in the CSA-SFM Standard.

The specific indicators selected were achieved through a public involvement process using a multi-interest Public Advisory Committee (PAC).

In November 2001, an audit team from KPMG Quality Registrar Inc. carried out a periodic assessment of both the ISO 14001 and CSA-SFM registrations. This Certification Update summarizes the process and KPMG's findings.

Background to the audit

- Both the ISO 14001 and CSA-SFM standard require regular periodic assessments by the independent auditor (KPMG) to check continuing conformance with the standards.
- This was the fifth visit to the operation by an audit team from KPMG QRI.
- A team of 2 auditors (one forester, one biologist) conducted the assessment for TFL 48.
- The team conducted interviews with staff, contractors and 2 members of the PAC, examined EMS records, monitoring information and public involvement information and conducted a field assessment of conformance by operations and the accuracy of monitoring records.
- John Bavester, Senior Merchandise Manager for Wood Commodities with Wickes Lumber acted as an observer for a portion of the assessment.

Field operators were interviewed to assess their familiarity with key elements of operational plans, work instructions and emergency response procedures.

Findings – TFL 48

Noteworthy comments

- This was the second consecutive Periodic Assessment during which no nonconformances were identified.
- The SFM plan is now fully incorporated into an approved management plan for the TFL.
- A comprehensive annual SFM report was prepared and released in June covering activities during 2000.
- Excellent progress has been made in developing patch size targets that are consistent with natural disturbance patterns on the TFL.
- Review of incident tracking records indicates that the Operation's procedures are catching issues before they become a problem on the ground.
- The Public Advisory Committee (PAC) continues to play a role in resolving and clarifying issues around SFM objectives. Additionally, the Operation has provided additional public review and comment opportunities on its draft Forest Development Plan prior to submission to the MOF.
- Good field practices were observed during the audit field visits.
- The audit team noted that average timber retention rates were high around fish streams of all sizes.

Key opportunities for improvement

- Recommendations were made to improve the readability of the SFM annual report for the general public and to ensure that all information from the Ministry of Forests' Small Business Forest Enterprise Program is received in time for inclusion in the report.
- Field operators for one of the TFL contractors need to be more familiar with the elements of the Field Operations Manual that relate directly to their jobs.

Field audit of active and recent operations found a strong emphasis on good field practices.

January, 2001 IS0 14001 and CSA-SFM Periodic Assessments	
Major nonconformances	0
Minor nonconformances	0
Opportunities for improvement	3

Major nonconformances:
- Are pervasive or critical to the achievement of the EMS/SFM Objectives.

Minor nonconformances:
- Are isolated incidents that are non-critical to the achievement of EMS/SFM Objectives.

All nonconformances require an action plan within 30 days and must be addressed by the opertation.

Major nonconformances must be addressed immediately or registration can not be achieved/maintained.

Opportunities for Improvement:
- Are not nonconformances but are comments on specific areas of the EMS where improvements can be made.

Through KPMG QRI, KPMGs Vancouver based forestry specialist group is accredited to register forest companies to ISO 14001, CSA-SFM and AF&PA SFI certification standards. The group is lead by Mike Alexander and consists of a highly qualified team of professional foresters and industry experts.

Contacts:
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Chris Ridley-Thomas, RPBio, CEA (604) 691-3088
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Appendix 4. Canfor - Chetwynd SFM Matrix

Canfor SFM Matrix September 21, 2001
Version 1.0

Matrix Updated to reflect 2000 Annual Report

Canfor Changes

4.4 CCFM Criteria and Critical Elements The Canadian Council of Forest Ministers has developed criteria and indicators to define sustainable forest management in a national context. The six CCFM criteria reflect broad Canadian values to guide sustainable forest management. Each criterion contains a number of critical elements that further refine the scope of the criteria. All of the following critical elements of the CCFM criteria shall be addressed at the DFA level in order for an SFM System to be registered.	**Value** - a principle, standard, or quality considered worthwhile or desirable.	**Goal** - a broad, general statement that describes a desired state or condition related to one or more forest values.	**Indicator** - a measurable variable used to report progress toward the achievement of a goal.	**Objective** - a clear, specific statement of expected quantifiable results to be achieved within a defined period of time related to one or more goals. An objective is commonly stated as a desired level of an indicator.
1. Conservation of Biological Diversity - *Biological diversity is conserved by maintaining the variability of living organisms and the complexes of which they are part.*				
(a) Ecosystem diversity is conserved if the variety and landscape-level patterns of communities and ecosystems that naturally occur on the DFA are maintained through time.	Landscape level ecosystem diversity	We will conserve or restore ecosystem diversity within the natural limits of variation within DFA over time.	**1)** Forest type and seral stage distribution	**1-1)** We will sustain forest types over time.
				1-2) We will sustain seral stage within the natural range of variation over time.
			2) Patch size distribution	**2)** We will maintain a patch size consistent within natural disturbance types.
			3) Protected area by seral stage	**3)** Identify seral stage distribution in Protected Areas within the TFL (e.g.,Bocok, Butler, Ridge, Elephant Ridge/Gwilliam, Kiln Se Za, Pine/Lemoray, Peace River/Boudreau).
(b) Species diversity is conserved if all native species found on the DFA prosper through time.	Native species diversity	We will sustain suitable habitat levels to sustain species diversity	**4)** Number of forest dependant plant species, plant associations, fish and wildlife classified as threatened, endangered, or vulnerable in the TFL.	**4)** We will ensure no species is uplisted as a result of Canfor management activities within the TFL.
			5) Habitat supply for indicator species. (grizzly bear, wolverine, marten, fisher, elk, moose, mtn. goat, caribou, Northern Goshawk, Trumpeter Swan, Black-throated Green Warbler, and Three-toed Woodpecker)	**5-1)** We will ensure distribution of habitat for indicator species across the TFL.
				5-2) We will ensure sufficient furbearer habitat on a drainage-by-drainage basis exists to enable the maintenance of populations.
			6) Disease transmission from domestic sheep grazing activities.	**6)** No disease transmission from domestic sheep to wild sheep populations from domestic sheep use in Canfor activities.
(c) Genetic diversity is conserved if the variation of genes within species is maintained.	Genetic diversity	We will conserve genetic diversity of native plant species.	**1)** Forest type and seral stage distribution	**1-1)** We will sustain forest types over time.
				1-2) We will sustain seral stage within the natural range of variation over time.
			7) Collection and use of registered seed for coniferous planted species.	**7)** All seeds registered.
		We will conserve genetic diversity of wildlife	**2)** Patch size distribution to address habitat fragmentation	**2)** We will maintain a patch size consistent with natural disturbance types.

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2. Maintenance and Enhancement of Forest Ecosystem Condition and Productivity - *Forest ecosystem condition and productivity are conserved if the health, vitality, and rates of biological production are maintained.*				
(a) Forest health is conserved if biotic (Including anthropogenic) and abiotic disturbances and stresses maintain both ecosystem processes and ecosystem conditions within a range of natural variability.	Forest Health	We will conserve forest health	**8)** Area and severity of incidence of fire, windfall, insects and disease.	**8-1)** We will minimize Non Recoverable Losses to less than 10% of AAC based on a 10 year rolling average.
				8-2) We will salvage 90% of merchantable timber volumes within the THLB damaged by fire, windfall, insects and disease within 18 months of occurrence.
(b) Ecosystem resilience is conserved if ecosystem processes and the range of ecosystem conditions allow ecosystems to persist, absorb change, and recover from disturbances.	Ecosystem resilience	We will sustain ecosystem capability to recover from disturbance.	**9)** Percent of a harvested area that is reforested.	**9)** We will reforest 100% of net area to be reforested within 2 years of harvest, on average.
			1) Forest type and seral stage distribution	**1-1)** We will sustain forest types over time.
				1-2) We will sustain seral stage within the natural range of variation over time.
		We will sustain ecosystem components.	**10)** Minimum harvest age (as a surrogate for nutrient cycling).	**10)** Minimum harvest ages in years will be: Aspen 61, Cottonwood 61, Pine 81, Subalpine Fir 81, Spruce 121 (based on leading species and average stand age).
			11) Wildlife Tree Patches	**11)** Wildlife Tree Patches will not be less than 8% of the harvested area, on average.
			3) Protected Area by seral stage	**3)** Identify seral stage distribution in Protected Areas within the TFL (e.g.,Bocok, Butler, Ridge, Elephant Ridge/Gwilliam, Kiln Se Za, Pine/Lemoray, Peace River/Boudreau).
			12) Old Growth Management Areas	**12)** We will sustain old growth habitat values within the TFL.
			13) Coarse Woody Debris	**13)** We will maintain natural levels of coarse woody debris (CWD) across the TFL.
			14) Habitat Connectivity	**14)** Maintain an adequate level of habitat connectivity at landscape and stand levels with an emphasis on species dependant on mature forest or forest types (e.g., caribou and marten) recognizing that habitat connectivity may shift across the landscape.
(c) Ecosystem productivity is conserved if ecosystem conditions are capable of supporting all naturally occurring species.	Ecosystem productivity	We will sustain or enhance ecosystem productivity over time.	**15)** Area of the TFL occupied by permanent access corridors associated with forest management activities.	1**5)** We will limit impacts on the landbase due to the presence of permanent access corridors to less than 3.5% of the gross landbase of the TFL.
			9) Percent of a harvested area that is reforested.	**9)** We will reforest 100% of net area to be reforested within 2 years of harvest, on average.
		We will sustain habitat for all naturally occurring species at natural ranges.	**5)** Habitat supply for indicator species. (grizzly bear, wolverine, marten, fisher, elk, moose, mtn. goat, caribou, Northern Goshawk, Trumpeter Swan, Black-throated Green Warbler, and Three-toed Woodpecker)	**5-1)** We will ensure distribution of habitat for indicator species across the TFL.

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3. Conservation of Soil and Water Resources- *Soil and water resources and physical environments are conserved if *the quantity and quality of soil and water within forest ecosystems are maintained.*				
(a) Physical environments are conserved if the permanent loss of forest area to other uses or factors is minimized, and if rare physical environments are protected.	Forest land base	We will conserve productive area of forest land base.	**15)** Area of the TFL occupied by permanent access corridors associated with forest management activities.	1**5)** We will limit impacts on the landbase due to the presence of permanent access corridors to less than 3.5% of the gross landbase of the TFL.
(b) Soil resources are conserved if the ability of soils to sustain forest productivity is maintained within characteristic ranges of variation.	Soil productivity	We will conserve productive capacity of soil.	**15)** Area of the TFL occupied by permanent access corridors associated with forest management activities.	1**5)** We will limit impacts on the landbase due to the presence of permanent access corridors to less than 3.5% of the gross landbase of the TFL.
			16) Number of reportable spills entered into Incident Tracking System.	**16)** We will minimize the number of reportable spills.
			17) Use of environmentally friendly lubricants	**17)** We will research and identify environmentally friendly lubricants biannually
			18) Soil productivity measures	**18)** We will use site index measures based on BEC zone (SIBEC) to confirm the predicted long-term soil productivity.
			19) Soil degradation	**19)** We will not exceed site degradation guidelines.
	Soil Quantity	We will minimize soil erosion	**20)** Seedling growth or establishment	**20)** We will meet Free growing requirements within Silvicultural Prescriptions.
			21) Soil disturbance surveys	**21)** We will not exceed soil disturbance limits within cutblocks.
(c) Water resources are conserved if water quality and quantity is maintained.	Water quality and quantity	We will conserve water quality and quantity within the natural range of variation. Further discussion needed.	**22)** Area in cutblock managed as Riparian Reserve Zone or Riparian Management Zone by appropriate stream, lake or wetland classification.	**22)** We will meet or exceed appropriate riparian measures as recommended by the Forest Practices Code Riparian Guidebook.
			16) Number of reportable spills entered into Incident Tracking System.	**16)** We will minimize the number of reportable spills.
			23) Area of stream affected by timber harvesting and road construction	**23-1)** We will identify hazard indices through watershed assessment procedures as necessary.
				23-2) We will rehabilitate water courses and hazards to water courses as they arise.
			24) Sediment levels	**24)** We will ensure that sedimentation due to harvesting and road building activities falls within acceptable limits.
			25) Stream flow levels	**25)** We will design forest management activities to minimize impact on stream flow.

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4. Forest Ecosystem Contributions to Global Ecological Cycles – *Forest conditions and management activities contribute to the health of global ecological cycles. This contribution is maintained if*				
(a) the processes that are responsible for recycling water, carbon, nitrogen, and other life-sustaining elements are maintained;	Ecological cycles	We will maintain or restore ecological cycles within levels of historic variation.	**1)** Forest type and seral stage distribution	**1-1)** We will sustain forest types over time.
				1-2) We will sustain seral stage within the natural range of variation over time.
			8) Area and severity of incidence of fire, windfall, insects and disease.	**8-1)** We will minimize Non Recoverable Losses to less than 10% of AAC based on a 10 year rolling average.
			9) Percent of a harvested area that is reforested.	**9)** We will reforest 100% of net area to be reforested within 2 years of harvest, on average.
(b) utilization and rejuvenation are balanced and sustained; and	Sustainable yield of timber	We will balance annual growth rate and harvest rate.	**27)** Allowable Annual Cut	**27)** We will ensure that the Allowable Annual Cut will not adversely impact Long Term Harvest Level.
			28) Sawmill Lumber Recovery Factor (SLRF), Chip Recovery Factor and shipment of mini chips.	**28)** We will target annual range of 247-252 fbm/m3, 0.15 BDU/ m3 and 60,000 tonnes/year, respectively.
			29) Harvest levels/volumes	**29)** We will achieve periodic cut control within 10% of target, over 5 years.
			30) Waste	**30)** We will assess all waste volumes for harvested blocks and report annually
			31) Timber harvesting utilization standards	**31)** We will meet or exceed timber utilization standards of 1999 (i.e., 4 inch tops).
(c) forest lands are protected from sustained deforestation or conversion to other uses.	Forested land base	We will sustain forests within the TFL.	**32)** Area of forested land.	**32-1)** We will track and monitor losses to other uses and incorporate these losses into AAC calculations every five years.
			15) Area of the TFL occupied by permanent access corridors associated with forest management activities.	1**5)** We will limit impacts on the landbase due to the presence of permanent access corridors to less than 3.5% of the gross landbase of the TFL.
			9) Percent of a harvested area that is reforested.	**9)** We will reforest 100% of net area to be reforested within 2 years of harvest, on average.

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5. Multiple Benefits to Society - *Forests provide a sustained flow of benefits for current and future generations if multiple goods and services are provided over the long term. Multiple benefits are maintained if*				
(a) extraction rates are within the long-term productive capacity of the resource base;	Sustainable harvest levels	We will establish harvest at a level that can be maintained in perpetuity for coniferous and deciduous species.	**27)** Allowable Annual Cut	**27)** We will ensure that the Allowable Annual Cut will not adversely impact Long Term Harvest Level.
			29) Harvest levels/volumes	**29)** We will achieve periodic cut control within 10% of target, over 5 years.
(b) resource businesses exist within a fair and competitive investment and operating climate; and	Economic viability for Canfor	We will maintain a local, up to date timber processing facility and infrastructure.	**33)** Average investment in new technology, capital maintenance and construction at Canfor operations in Chetwynd.	**33)** We will invest $2.5 million annually, based on 10 year rolling average, in new technology, capital maintenance and construction.
	Local employment	We will ensure local communities and contractors have the opportunity to share in benefits such as jobs, contracts and sales.	**34)** The economic contribution that Canfor Chetwynd makes to local communities and contractors.	**34-1)** We will annually report on the economic indices that reflect Canfor's contribution to local communities and contractors. (property taxes, salary and wages, contract services {split out local vs. non-local}, supplies, community donations, and jobs/m3)
				34-2) We will provide contracting opportunities that support local employment where the skills exist.
(c) forests provide a mix of market and non-market goods and services.	Economic diversity	We will maintain domestic grazing levels over time.	**35)** Animal unit months	**35)** We will maintain an annual average of 1000 Animal Unit Months (excludes brush control by sheep grazing)
		We will sustain acceptable levels of habitat for key furbearer and big game species.	**5)** Habitat supply for indicator species (marten, fisher, moose, elk).	**5)** We will ensure distribution of habitat for indicator species across the TFL.
		We will sustain acceptable levels of visual quality in key public access, recreation, and tourism corridors.	**36)** Visual landscape inventory.	**36)** We will maintain and update an approved visual landscape inventory.
			37) Level of public acceptance of Visual Landscape Inventory	**37-1)** We will include public input in reviewing and updating the visual landscape inventory.
				37-2) We will propose and manage harvesting cutblocks consistent with Visual Sensitivity Classes.
		We will sustain backcountry condition in key backcountry areas.	**38)** Back country Condition	**38)** We will maintain or increase backcountry condition in Klin Se Za, Bocock, Butler Ridge, Pine/Lemoray, Peace River/Boudreau and Elephant Ridge/Gwilliam Protected Areas and manage special management zones (Klin se za, North Burnt, Dunlevy) as per LRMP.
		We will sustain acceptable levels of habitat to provide botanical forest products.	**39)** Habitat supply for botanical forest products.	**39)** We will investigate local uses of botanical forest products to determine habitat requirements.
		We will provide recreation opportunities on the TFL.	**52)** Number of recreation trails and campsites.	**52)** We will provide and/or maintain a minimum of one trail and three recreation sites on the TFL.

Canfor SFM Matrix September 21, 2001
Version 1.0

Matrix Updated to reflect 2000 Annual Report

Canfor Changes

4.4 CCFM Criteria and Critical Elements The Canadian Council of Forest Ministers has developed criteria and indicators to define sustainable forest management in a national context. The six CCFM criteria reflect broad Canadian values to guide sustainable forest management. Each criterion contains a number of critical elements that further refine the scope of the criteria. All of the following critical elements of the CCFM criteria shall be addressed at the DFA level in order for an SFM System to be registered.	**Value** - a principle, standard, or quality considered worthwhile or desirable.	**Goal** - a broad, general statement that describes a desired state or condition related to one or more forest values.	**Indicator** - a measurable variable used to report progress toward the achievement of a goal.	**Objective** - a clear, specific statement of expected quantifiable results to be achieved within a defined period of time related to one or more goals. An objective is commonly stated as a desired level of an indicator.
6. Accepting Society's Responsibility for Sustainable Development - *Society's responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made. Sustainable forest management requires that*				
(a) forests are managed in ways that reflect social values, and management is responsive to changes in those values;	Social responsibility	We will seek active partnerships that build community relationships and strengthen Canfor's business	**40)** Public Advisory Committee	**40-1)** We will establish and maintain Public Advisory Committee and hold at least two meetings annually.
		We will develop a process to provide ongoing involvement to reflect changes in social values.	**40)** Public Advisory Committee	**40-1)** We will establish and maintain Public Advisory Committee and hold at least two meetings annually.
		We will reflect the LRMP and other land use planning decisions in operations.	**41)** Participation in LRMP.	**41)** We will attend meetings and provide information as required, for LRMP functions.
			42) LRMP and land use plans	**42)** We will manage operations to the spirit and intent of the Dawson Creek LRMP through Management Plan and Forest Development Plans
(b) duly established Aboriginal and treaty rights are respected;	Treaty and Aboriginal rights	We will respect Treaty 8 rights	**43)** Pro-active consultation process for significant activities such as proposed timber harvesting.	**43)** Forest Development Plan to be referred to Saulteau and West Moberly FNs.
			44) Archaeological impact assessments on proposed harvest blocks.	**44)** We will conduct archaeological impact assessments as indicated through archaeological overviews or inventory.
(c) the special and unique needs of Aboriginal peoples are respected and accommodated in forest management decisions;	Aboriginal needs	We will increase our understanding of Aboriginal issues and needs and work with Bands to find solutions or give assistance where possible.	**45)** Aboriginal Liaison	**45)** We will increase the level of aboriginal input to forest management by meeting with Band councils, representatives, contractors, and/or individuals as issues and opportunities arise.
			46) Incorporate objectives of Klin Se Za into Forest Development Plan and Management Plan.	**46)** We will maintain Klin Se Za Protected Area and Special Management Zone as per LRMP.
			47) Aboriginal employment	**47)** We will budget $100,000 annually for aboriginal contractors.
(d) the decision-making process is developed with input from directly affected and local interested parties;	Public acceptance of decision making process	We will involve all parties (public, agencies, other licence holders, etc.) in development of decision-making process	**40)** Public Advisory Committee	**40-1)** We will establish and maintain Public Advisory Committee and hold at least two meetings annually.
				40-2) We will hold an annual openhouse to review SFM plan performance.
			48) Forest Development Plan, Pest Management Plan, TFL Management Plans	**48)** We will advertise and refer plans to all parties in a proactive manner (public, agencies and other licence holders).
			49) Public Enquiry Forms	**49)** We will respond to public inquiries on our practices (in addition to normal planning processes) within 1 month of receipt and maintain and track forms as per Environmental Management System.
(e) 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; and	Informed Decision Making	We will involve all parties (public, agencies, other licence holders, etc.) in decision making process.	**40)** Public Advisory Committee	**40-1)** We will establish and maintain Public Advisory Committee and hold at least two meetings annually.
				40-2) We will hold an annual openhouse to review SFM plan performance.
			50) Level of Public Comments (e.g., FDP Public Comments)	**50)** We will provide feedback to concerned individuals commenting on planning processes (e.g., FDP, PMP) within one month and the PAC by the next scheduled meeting on how concerns were addressed.
(f) collective understanding of forest ecosystems, values, and management is increased and used in the decision-making process.	Continual Improvement	We will improve and apply knowledge of forest ecosystems, values and management.	**51)** Spatial and temporal models	**51-1)** We will use leading edge modelling systems to develop rotation length plans within 3 years.
				51-2) We will use up-to-date vegetation inventory.
				51-3) We will use the best available science to develop an understanding of ecological response.