

SUSTAINABLE FOREST MANAGEMENT PLAN 4

2013 ANNUAL REPORT

TFL 48



Canadian Forest Products Ltd.
Chetwynd Division
PO Box 180
Chetwynd, BC V0C 1J0

Version 1.0

DATE December 16, 2014

SUSTAINABLE FOREST MANAGEMENT PLAN 4

2013 ANNUAL REPORT

Canadian Forest Products Ltd.
Chetwynd Operations — TFL 48

Preparation Coordinated by:



Jolene Fellhauer, FIT 5206
Planning Forester

EXECUTIVE SUMMARY

As shown in the following Table; of the 59 Indicators **8** were not reported on (14%), **44** indicators met the targets (75%) and in **6** instances targets were not met (10%).

Table 1: Summary of 2013 Performance

Indicator	Target			
	Met	Not Met	Not Reported (Next Date for Reporting)	Recommend Reporting be Suspended
2.1 Ecosystem Representation	✓			
2.2 Forest Types			2015	
2.3 Late Seral Forest	✓			
2.4 Patch Size Distribution	✓			
2.5 Snags/Live Tree Retention	✓			
2.6 Wildlife Tree Patches	✓			
2.7 Average Minimum Width of RRZ and RMZ	✓			
2.8 Shrubs/Early Forest			2015	
2.9 Wildlife Habitat Areas, Ungulate Winter Ranges and Dunlevy Creek Management Plan	✓			
2.10 Habitat Supply for Species of Public Concern			2015	
2.11 Species of Management Concern	✓			
2.12 Coniferous Seeds	✓			
2.13 Deciduous Seeds and Vegetative Material	✓			
2.14 Class A Parks, Ecological Reserves and LRMP Designated Protected Areas	✓			
2.15 Known Values and Uses Addressed in Operational Planning	✓			
2.16 Conformance to Elements Pertinent to Treaty Rights	✓			
2.17 Free Growing Stands	✓			
2.18 Regeneration Declaration	✓			
2.19 Area of Forested Land Lost to Non-forest Industry			2015	
2.20 Permanent Access Corridors			2015	
2.21 Harvest Levels/Volumes	✓			
2.22 Allowable Annual Cut	✓			
2.23 Soil Degradation	✓			
2.24 Soil Disturbance Surveys	✓			
2.25 Use of Environmentally Friendly Lubricants			2015	
2.26 Site Index		✓		
2.27 Coarse Woody Debris	✓			
2.28 Stream Crossing Quality Index	✓			
2.29 Action Plans for High Water Quality Concern Rating (WQCR)	✓			
2.30 Peak Flow Index	✓			
2.31 Watershed Reviews	✓			
2.32 Spills Entering Waterbodies	✓			
2.33 Carbon Sequestration			2017	
2.34 Ecosystem Carbon Storage (Mg) in the DFA			2017	
2.35 Range Opportunities	✓			
2.36 Harvest Method		✓		
2.37 Proportion of Harvesting Consistent with Visual Quality Objective	✓			
2.38 Back Country Condition	✓			

Indicator	Target			
	Met	Not Met	Not Reported (Next Date for Reporting)	Recommend Reporting be Suspended
2.39 Recreational Sites	✓			
2.40 Consistency with Third Party Action Plans	✓			
2.41 Waste	✓			
2.42 Forest Health	✓			
2.43 Proportion of Completed Forest Health Action Plans	✓			
2.44 Community Donations	✓			
2.45 Local Employment	✓			
2.46 Summer and Fall Deliveries	✓			
2.47 Level of Investment in Training and Skills Development	✓			
2.48 Level of Direct and Indirect Employment	✓			
2.49 Level of Aboriginal Participation in the Forest Economy	✓			
2.50 First Nations Awareness Training	✓			
2.51 Consultation and Information Sharing with First Nations on Management Plans	✓			
2.52 Diversifying the Local Economy	✓			
2.53 Safety Over the DFA	✓			
2.54 Public Advisory Committee Satisfaction	✓			
2.55 Public Advisory Committee		✓		
2.56 Public Advisory Committee Terms of Reference		✓		
2.57 Educational Opportunities		✓		
2.58 Response to Public Inquiries	✓			
2.59 Distribution/Access to SFM Plan, Annual Reports and Audit Results	✓			

ACKNOWLEDGEMENTS

We would like to thank the Chetwynd Woodlands staff and BC Timber Sales (Dawson Creek) staff and Louisiana Pacific staff on behalf of Chetwynd Mechanical Pulp for compiling or providing data.

We would also like to thank the Public Advisory Committee members and advisors for their continued input to the Sustainable Forest Management process and providing input on the draft document. This report was provided to the PAC on October 22, 2014 and revised on December 16, 2014.

Table of Contents

EXECUTIVE SUMMARY	i
ACKNOWLEDGEMENTS	iii
1 INTRODUCTION & OVERVIEW	1
1.1 Overview.....	2
1.2 Significant Changes.....	2
2 SFM INDICATORS AND OBJECTIVES	3
2.1 Ecosystem Representation	3
2.2 Forest Types.....	4
2.3 Late Seral Forest	5
2.4 Patch Size Distribution.....	8
2.5 Snags/Live Tree Retention	9
2.6 Wildlife tree patches	12
2.7 Average Minimum Width of RRZ and RMZ	13
2.8 Shrubs/Early Forest	16
2.9 Wildlife Habitat Areas, Ungulate Winter Ranges and Dunlevy Creek Management Plan	17
2.10 Habitat Supply for Species of Public Concern.....	17
2.11 Species of Management Concern.....	21
2.12 Coniferous Seeds	23
2.13 Deciduous Seeds and Vegetative Material.....	23
2.14 Class A Parks, Ecological Reserves and LRMP Designated Protected Areas	24
2.15 Known Values and Uses Addressed in Operational Planning	25
2.16 Conformance to Elements Pertinent to Treaty Rights.....	25
2.17 Free Growing Stands	26
2.18 Regeneration Declaration	27
2.19 Area of Forested Land Lost to Non-forest Industry.....	28
2.20 Permanent Access Corridors	29
2.21 Harvest Levels/Volumes	30
2.22 Allowable Annual Cut.....	31
2.23 Soil Degradation	32
2.24 Soil Disturbance Surveys.....	33
2.25 Use of Environmentally Friendly Lubricants	33
2.26 Site Index.....	34
2.27 Coarse Woody Debris.....	36
2.28 Stream Crossing Quality Index	36
2.29 Action Plans for High Water Quality Concern Rating (WQCR)	39
2.30 Peak Flow Index	39
2.31 Watershed Reviews	42
2.32 Spills Entering Waterbodies	42

2.33	Carbon Sequestration	43
2.34	Ecosystem Carbon Storage (Mg) in the DFA	45
2.35	Range Opportunities	46
2.36	Harvest Method	47
2.37	Proportion of Harvesting Consistent with Visual Quality Objective	48
2.38	Back Country Condition	49
2.39	Recreational Sites	51
2.40	Consistency with Third Party Action Plans	51
2.41	Waste	52
2.42	Forest Health	52
2.43	Proportion of Completed Forest Health Action Plans	54
2.44	Community Donations	55
2.45	Local Employment	56
2.46	Summer and Fall Deliveries	57
2.47	Level of Investment in Training and Skills Development	57
2.48	Level of Direct and Indirect Employment	58
2.49	Level of Aboriginal Participation in the Forest Economy	60
2.50	First Nations Awareness Training	60
2.51	Consultation and Information Sharing with First Nations on Management Plans	61
2.52	Diversifying the local economy	61
2.53	Safety over the DFA	62
2.54	Public Advisory Committee Satisfaction	62
2.55	Public Advisory Committee	64
2.56	Public Advisory Committee Terms of Reference	65
2.57	Educational Opportunities	65
2.58	Response to Public Inquiries	66
2.59	Distribution/Access to SFM Plan, Annual Reports and Audit Results	66
3	Abbreviations and Definitions	68

List of Tables

Table 1: Summary of 2011 Performance	i
Table 2: Forest Type Distribution Current and FDP Status and Target Ranges.....	4
Table 3: Current and Projected Harvest Status of Late Seral Forest – Deciduous.....	6
Table 4: Current and Projected Harvest Status of Late Seral Forest – Coniferous	7
Table 5: Early Patch Size Class Current and Projected.....	8
Table 6: Mature Patch Size Class Current and Projected.....	9
Table 7: Summary of WTP's in Areas Harvested Since 1995.....	12
Table 8: Summary of Riparian Reserve and Management Zones in 2000-2011.....	14
Table 9: Shrub Habitat	16
Table 10: Reductions to Land Base Due to Other Uses (Excluding Roads).....	29
Table 11: Permanent Access Corridors in TFL 48 (Existing).....	30
Table 12: Actual Recorded and Allowable Annual Cut Summary.....	31
Table 13: Annual Allowable Cut and Long-Term Harvest Level	32
Table 14: Site Index by Leading Species for Free Growing Stands	34
Table 15: SCQI and Water Quality Concerns for Watersheds within TFL 48 – Sampling Completed 2001 to 2011.....	36
Table 16: Peak Flow Index Post Development Status	41
Table 17: AUM's on TFL48 in 2011.....	47
Table 18: Baseline Condition – ROS Inventory.....	50
Table 19: Current Condition – ROS Inventory Updated to June 2005.....	50
Table 20: Summary of Forest Health Issues 2000-2011.....	53
Table 21: Employment Created - 3 Year Rolling Average.....	53
Table 22: Public Advisory Committee Meetings.....	64

List of Figures

Figure 1: Tree Farm Licence 48	1
Figure 2: Moose Habitat Supply	18
Figure 3: Elk Habitat Supply	18
Figure 4: Caribou Habitat Supply	19
Figure 5: Marten Habitat Supply	19
Figure 6: Fisher Habitat Supply	20
Figure 7: Grizzly Bear Habitat Supply	20
Figure 8: Wolverine Habitat Supply	20
Figure 9: Regeneration/Free Growing Status by Year of Harvest Start	27
Figure 10: An Example of Average C Sequestration Rates for a Natural Spruce Leading BWBS Mesic Site Stand (Forecast AU 5) and an Associated Managed Stand (Forecast AU m ³)	44
Figure 11: Carbon Sequestration (Mg C/year) within TFL 48 Over Time	44
Figure 12: An Example of C Storage for a Natural Spruce Leading BWBS Mesic Site Stand (Forecast AU 5) and an Associated Managed Stand (Forecast AU m ³)	45
Figure 13: Total Ecosystem Carbon (Mg) Storage in the DFA Over Time	46
Figure 14: Proportion of Conventional Harvest Systems Used 2007-2011	48
Figure 15: Proportion of Dollars Spent on Local vs Non-Local Contractors Error! Bookmark not defined.	
Figure 16: Summer and Fall Deliveries	57

Appendices

Appendix 1: Abbreviations and Definitions

65

1 INTRODUCTION & OVERVIEW

Canadian Forest Products Ltd. (Canfor) achieved registration under the Canadian Standards Association CAN/CSA Z809-96 Sustainable Forest Management System for Tree Farm Licence (TFL) 48's (see Figure 1) forestry operations in July 2000. A public group — the Chetwynd Public Advisory Committee (PAC) — was formed at the beginning of 2000 to help Canfor identify quantifiable local-level values, objectives indicators and targets for sustainable forest management.

The original indicators and targets identified by the PAC were detailed with associated forest management practices to achieve those targets in the Sustainable Forest Management Plan for Tree Farm Licence 48 (Canfor 2006). In 2006 BC Timber Sales (BCTS) joined the registration and a joint certificate was issued to Canfor and BCTS. In 2011 the Sustainable Forest Management Plan 4 was updated to the CAN/CSA Z809-08 Sustainable Forest Management standard. In 2013 separate registration certificates were provided to Canfor and BCTS.

The 2013 Annual Report provides a summary on the status of each indicator and lists information respecting proposed or recently completed revisions to indicators, targets, or the way they are measured.

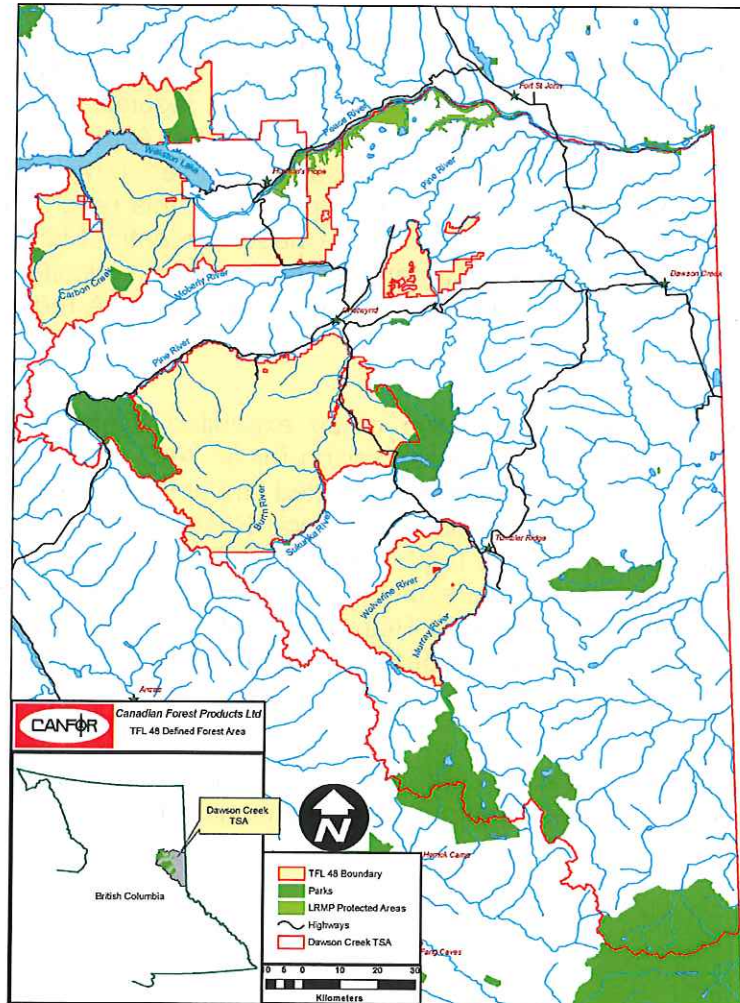


Figure 1: Tree Farm Licence 48

This report is prepared as an annual report required by the CSA standard. Annual performance as indicated in this report is for Tree Farm Licence (TFL) 48 which is the defined area for Canfor's CSA certification. 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 Sustainable Forest Management Plan 4 – December 2011 located on the Canfor corporate website at:

<http://www.canfor.com/responsibility/environmental/certification>

The Public Advisory Committee reviewed this report on December 17, 2014.

1.1 OVERVIEW

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).*

Information provided by Chetwynd Mechanical Pulp and BCTS for harvesting, road construction and silviculture activity was included into the applicable indicators.

1.2 SIGNIFICANT CHANGES

A significant development in the management of TFL 48 is the revision of SFMP4 from the CSAZ809-02 to the CSA Z809-08 Standard. SFMP 4 (2011) has also been updated to reflect the amendments made to the Acts and Regulations that regulate the forestry industry. Of particular importance is the amendment in the timing of Allowable Annual Cut (AAC) Determinations from 5 to 10 years. This has impacted the reporting period for a number of indicators which are identified in Table 1 at the beginning of this report. Changes to the Tree Farm Licence Regulation have also eliminated the need to identify Management Plan results and strategies for specific areas of forest management such as silviculture for example. All of the Indicators and Targets within SFMP 4 are meant to address CSA requirements and not the TFL Management Plan.

The 2013 reporting year saw the initiation of an expedited Timber Supply Review (TSR) conducted for TFL 48 in response to an application for an AAC uplift to effectively salvage a greater proportion of the mountain pine beetle affected timber within the TFL. As of the date of this report, the Ministry of Forests Lands and Natural Resource Operations has not made a determination regarding the AAC uplift request made by Canfor. In support of the AAC uplift request, Canfor has submitted a stand-alone TFL 48 Management Plan to the MFLNRO for approval. Upon approval of Management Plan #5, SFMP # 4 will be revised to remove the Management Plan #4 content which will become redundant with the approval of stand-alone Management Plan #5.

In 2013, BCTS was granted separate certification under the CAN/CSA Z809-08 standard. For reporting purposes, BCTS indicator performance information has been included in this annual report.

2 SFM INDICATORS AND OBJECTIVES

2.1 ECOSYSTEM REPRESENTATION

Criterion 1:	Element(s): 1.1, 1.2, 1.4
Biological Diversity	Ecosystem Diversity; Species Diversity; Protected Areas and Sites of Special Biological and Cultural Significance
CSA Core Indicator(s): 1.1.1: Ecosystem area by type 1.2.1: Degree of habitat protection for selected focal species, including species at risk 1.2.2: Degree of suitable habitat in the long term for selected focal species, including species at risk 1.4.1: Proportion of identified sites with implemented management strategies	
Indicator Statement	Target Statement
Proportion of rare ecosystem groups reserved from harvest	100% of rare ecosystems reserved from harvest
Value(s): Ecosystem Diversity, Native Species Richness, Protected areas and sites of special geological, biological, or cultural significance	
SFM Objective: We will conserve or restore ecosystem diversity within the natural range of variation within DFA over time. We will sustain sufficient and appropriately distributed suitable habitat elements to maintain native species richness. We will implement management strategies appropriate to the long term maintenance of protected areas and sites of special geological, biological, or cultural significance.	

STATUS AND COMMENTS:

In 2013 there were a total of 65 blocks harvested on the TFL. Canfor harvested 63 blocks. Four blocks contained the presence of rare ecosystems and in one case the rare eco identified was representative of a rare eco site series. However, the total area within the block was less than one ha (<1 ha) and so was logged in part with the rest of the cut block. In the other three blocks, the rare eco sites were retained as WTP's and so were removed from harvest. BCTS did not harvest any blocks within the TFL in 2013. Chetwynd Mechanical Pulp harvested 1 block early in 2013 and no rare ecosystems were identified in the block that was harvested.

REVISIONS:

Revision made to the indicator was reviewed and endorsed by the PAC January 30, 2014: Rare sites need to truly reflect the site series. For areas between 1-5ha in size the rare ecosystem needs to be 100% of the site series. Sites <1 ha will not be reserved from harvest. For site series complexes there needs to be >60% representation of an identified rare site series and these site series complexes will be reserved when >5ha in size. This information will guide management and reporting of performance under the indicator.

2.2 FOREST TYPES

Criterion 1:	Element(s): 1.1
Biological Diversity	Ecosystem Diversity
CSA Core Indicator(s): 1.1.2: Forest area by type or species composition	
Indicator Statement:	Target Statement
Percent distribution of forest type (deciduous, deciduous mixedwood, conifer mixedwood, conifer) >20 years old across DFA	100% of forest type groups will be within the target range (Conifer - 75-85%, Conifer Mixedwood - 4-6%, Deciduous - 9-15%, Deciduous Mixedwood - 2-4%)
Value(s): Ecosystem Diversity	
SFM Objective: We will conserve or restore ecosystem diversity within the natural range of variation within the DFA over time.	

STATUS AND COMMENTS:

This indicator is reported on every 5 years. The table below represents the status of this indicator at the end of 2010 and was reported on in the 2010 Annual Report. The next time this indicator will be updated will be in 2015.

Table 2: Forest Type Distribution Current and FDP Status and Target Ranges

Forest Type	Area by Forest Type					Target Range
	MP 3 % ¹	2005	%	2010	%	
Coniferous	80%	407,906	80%	423,107	80%	75-85%
Mixed - Coniferous	5%	26,477	5%	27,374	5%	4-6%
Mixed - Deciduous	3%	17,723	3%	18,121	3%	2-4%
Deciduous	12%	62,437	12%	63,743	12%	9-15%
Grand Total		514,543	100%	532,345	100%	

REVISIONS:

No revisions are suggested for this indicator or objective

¹ MP 3 data is shown as a percent due to a slight change in the way this indicator is reported. The indicator has changed to reporting only stands greater than 20 years old and there have been some changes to the area of TFL 48.

2.3 LATE SERAL FOREST

Criterion 1:	Element(s): 1.1
Biological Diversity	Ecosystem Diversity
CSA Core Indicator(s): 1.1.3: Forest area by seral stage or age class	
Indicator Statement:	Target Statement
The minimum acceptable proportion (%) of late seral forest by Natural Disturbance Unit (NDU) and NDU by BEC	The minimum proportion (%) of late seral forest by NDU and NDU by BEC as shown in Table 11
Value(s): Ecosystem Diversity	
SFM Objective: We will conserve or restore ecosystem diversity within the natural range of variation within DFA over time.	

STATUS AND COMMENTS:

As part of the annual reporting, an assessment on the impact of the existing and proposed harvest was made on the late seral targets for TFL 48. The following provides a summary of the results:

All targets are met for the deciduous NDU/BEC units (See Table 3).

Targets are met for the conifer NDU/BEC units: **Boreal Plains; Boreal Foothills – Valley; and Boreal Foothills – Mountain; Omineca – Valley and Omineca Mountain** (See Table 4).

The only target that is not being met is the **Omineca - Wet Mountain**. This unit did not achieve the target at the overall landscape level however each NDU/BEC combination did meet their identified targets. Both Omineca Mountain and Wet Mountain units have been in deficit in the amount of late seral since this indicator was developed. However, the Omineca – Mountain region reached the target threshold in 2012 and is no longer deficient. There is no harvesting activity planned within the Omineca – Mountain or Wet Mountain regions and therefore these two units should both continue to gain area in the late seral stage.

REVISIONS:

No revisions are suggested for this indicator or objective.



Table 3: Current and Projected Harvest Status of Late Seral Forest – Deciduous

	101+												Total Forested Area	101+ Target	Years to Meet Target		
	<40				40-100				101+								
	Current		Projected		Current		Projected		Current		Projected						
Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Surplus (Deficit)	Ha	%	Surplus (Deficit)		
NDJ																	
BEC																	
Boreal Plains - Deciduous	4,454	12%	4,585	12%	14,628	38%	13,827	36%	19,560	51%	15,696	40%	20,125	52%	16,261	38,641	10%
BWBSmw1	684	15%	672	15%	1,908	42%	1,644	36%	1,989	43%	1,531	39%	2,265	49%	1,807	4,581	10%
BWBSwk1	21	5%	21	5%	178	40%	162	36%	248	56%	203	50%	263	59%	218	446	10%
ESSFmv2																	
SBSwk2																	
Boreal Plains Total	5,159	12%	5,378	12%	16,725	38%	15,644	36%	21,826	50%	17,455	44%	22,682	52%	18,311	43,708	10%
Boreal Foothills - Valley - Deciduous	4,488	19%	3,947	17%	6,074	28%	6,176	26%	13,041	55%	10,681	27%	13,457	57%	11,097	23,603	10%
BWBSmw1	401	22%	403	22%	923	64%	909	50%	507	28%	324	24%	519	28%	336	1,831	10%
BWBSwk1	363	7%	210	4%	1,334	30%	1,281	25%	3,394	67%	2,885	23%	3,587	70%	3,078	5,091	10%
BWBSwk2	4,917	38%	4,986	38%	2,860	41%	2,624	20%	5,216	40%	3,917	30%	5,383	41%	4,084	12,993	10%
SBSwk2																	
Boreal Foothills Total	10,169	23%	9,546	22%	11,191	26%	10,990	25%	22,158	51%	17,806	45%	22,946	53%	18,594	43,518	10%
Grand Total	15,328	18%	14,924	17%	27,916	32%	26,634	31%	43,984	50%	43,984	100%	45,628	52%	45,628	87,226	



Table 4: Current and Projected Harvest Status of Late Seral Forest – Coniferous

NDU	BEC	<40						40-120						121-140						141+						Total Forested Area	Years to Meet Target
		Current		Projected		Current		Projected		Current		Projected		Current		Projected		Current		Projected							
		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Surplus (Deficit)	%				
Boreal Plains	BWBSmw1	6,621	21%	7,030	23%	6,280	20%	5,868	19%	9,934	32%	9,028	29%	7,995	26%	6,454	23%	8,905	29%	7,364	26%	30,830	5%				
	BWBSwk1	3,598	16%	3,768	16%	3,500	15%	3,192	14%	8,635	36%	8,205	36%	7,114	31%	5,972	34%	7,682	34%	6,540	31%	22,846	5%				
	ESSFmv2	1,195	9%	1,195	9%	559	4%	490	4%	5,035	39%	4,978	39%	6,155	48%	5,508	45%	6,282	45%	5,635	45%	12,945	5%				
	SBSwk2	0	0%	0	0%	178	89%	178	89%	5	2%	5	2%	17	8%	N/A	8%	17	8%	17	8%	201	N/A				
Boreal Plains Total		11,414	17%	11,993	18%	10,517	16%	9,728	15%	23,609	35%	22,216	33%	21,281	32%	9,921	34%	22,886	34%	11,526	34%	66,822	17%				
Boreal Foothills - Valley - Conifer	BWBSmw1	2,164	7%	1,894	6%	5,946	18%	5,691	19%	8,948	28%	6,728	23%	12,460	42%	10,382	47%	13,955	47%	11,877	47%	29,685	7%				
	BWBSwk1	378	7%	377	7%	1,067	21%	1,058	21%	1,061	21%	901	18%	2,299	46%	1,946	43%	2,462	43%	2,109	43%	5,042	7%				
	BWBSwk2	667	9%	131	2%	2,423	33%	2,915	39%	2,741	37%	1,990	27%	1,464	20%	942	30%	2,257	30%	1,736	30%	7,454	7%				
	SBSwk2	3,386	4%	9,435	12%	10,394	13%	8,197	11%	23,304	30%	19,735	26%	31,687	41%	26,279	41%	31,302	41%	25,895	41%	77,249	7%				
Boreal Foothills - Valley - Conifer Total		6,594	6%	11,837	11%	19,231	16%	17,861	16%	49,870	31%	43,721	29%	53,013	52%	42,740	52%	53,654	52%	43,381	52%	102,734	10%				
Boreal Foothills - Mountain - Conifer	ESSFmv2	1,557	2%	6,701	7%	14,884	14%	12,413	12%	26,732	26%	23,381	23%	27,674	28%	1,646	28%	3,529	32%	2,411	32%	11,182	10%				
	ESSFmv4	497	4%	95	1%	3,766	34%	4,082	37%	4,031	36%	3,344	30%	2,764	25%	1,646	25%	3,529	32%	2,411	32%	11,182	10%				
	ESSF-wc3	44	0%	37	0%	4,030	17%	3,198	13%	9,184	38%	8,473	35%	10,574	43%	8,141	43%	12,125	50%	9,691	50%	24,333	10%				
	ESSF-wk2	190	1%	1,328	5%	3,265	13%	2,783	11%	9,924	40%	8,524	35%	8,546	35%	6,078	38%	9,278	38%	6,810	38%	24,674	10%				
Boreal Foothills - Mountain - Conifer Total		5,674	2%	8,160	8%	25,945	16%	22,477	16%	49,870	31%	43,721	29%	53,013	52%	42,740	52%	53,654	52%	43,381	52%	102,734	10%				
Omineca - Valley	BWBSmw1	0	0%	0	0%	5	42%	5	42%	8	67%	8	67%	0	0%	N/A	0%	0	0%	0	0%	12	N/A				
	SBSwk2	631	11%	1,215	21%	84	1%	50	1%	2,276	40%	1,931	34%	2,713	48%	2,314	44%	2,509	44%	2,110	44%	5,704	7%				
Omineca - Valley Total		631	11%	1,215	21%	89	2%	55	1%	2,284	40%	1,939	34%	2,713	47%	1,998	44%	2,509	44%	1,194	44%	5,716	23%				
Omineca - Mountain	ESSFmv2	784	6%	2,097	16%	610	5%	431	3%	4,550	35%	3,566	27%	7,153	55%	4,927	53%	7,004	53%	4,778	53%	13,097	17%				
Omineca - Mountain Total		784	6%	2,097	16%	610	5%	431	3%	4,550	35%	3,566	27%	7,153	55%	(-443)	53%	7,004	53%	(-592)	53%	13,097	58%				
Wet Mountain	ESSFmv2	331	2%	314	2%	2,444	15%	1,045	6%	2,735	17%	3,522	22%	10,699	66%	6,647	70%	11,328	70%	7,276	70%	16,209	26%				
	ESSF-wc3	296	1%	292	1%	2,377	7%	1,658	5%	5,176	16%	5,607	17%	24,505	78%	16,417	77%	24,797	77%	16,709	77%	32,353	25%				
	ESSF-wk2	2,290	9%	2,290	9%	842	3%	678	3%	2,587	10%	2,639	10%	19,984	78%	13,558	78%	20,096	78%	13,670	78%	25,703	25%				
	SBSwk2	1,358	13%	1,354	13%	919	9%	862	8%	2,868	27%	2,910	27%	5,450	51%	2,802	52%	5,458	52%	2,810	52%	10,594	25%				
Wet Mountain Total		4,275	5%	4,260	5%	6,582	8%	4,243	5%	13,366	16%	14,678	17%	60,638	71%	(-10,644)	73%	61,679	73%	(-9,603)	73%	84,859	84%				
Grand Total		25,987	6%	39,562	9%	82,974	14%	54,795	12%	129,133	29%	115,474	25%	214,592	47%	47%	47%	222,641	49%	47%	47%	452,847	49%				

2.4 PATCH SIZE DISTRIBUTION

Criterion 1:	Element(s): 1.1
Biological Diversity	Ecosystem Diversity
CSA Core Indicator(s) 1.1.3: Forest area by seral stage or age class	
Indicator Statement	Target Statement
Percent area by Patch Size Class (0-50, 51-100 and >100 ha) by Natural Disturbance Unit (NDU) by early or mature and proportion of mature interior forest condition.	Targets by Patch Size Class by NDU by early or mature are shown in Table 15.
Value(s): Ecosystem Diversity	
SFM Objective: We will conserve or restore ecosystem diversity within the natural range of variation within DFA over time.	

STATUS AND COMMENTS:

In 2013, Canfor just met the patch size target in the Early Patch Size of >100 ha for the Wet Mountain. In 2012 Canfor it was thought that Canfor missed the target by 1%. However this was because of a typographical error in table 5 noting the target for the 100+ ha early patch size class, the target is <60%. In reality with 59% of the harvested area in the 100+ ha early patch class the target was met in 2012. Unfortunately the 2012 Annual Report noted the target as being >60%.

Currently there is no logging planned in the wet mountain in the near future. If harvesting is proposed in that area in the near future, we will consider a strategy of logging smaller patches to ensure we do not exceed the large patch target of <60%.

In all other cases (current and projected) for both early and mature patch size distribution the analysis shows that forest practices are maintaining the relative abundance of the various aged forests across the TFL.

Table 5: Early Patch Size Class Current and Projected

NDU	Current/ Projected	Patch Class (ha)								Total
		<50		50-100			100+			
		ha	%	ha	%	Target	ha	%	Target	
Boreal Plains	Current	1,078	7%	549	3%	<15%	14,697	90%	>50%	16,324
	Projected	1,169	5%	751	3%	<15%	20,500	91%	>50%	22,420
Boreal Foothills/Omineca	Current	4,647	11%	5,679	13%	<20%	31,835	76%	>40%	42,160
	Projected	3,226	5%	3,447	5%	<20%	61,236	90%	>40%	67,909
Wet Mountain	Current	1,235	18%	1,508	22%	<25%	4,125	60%	<60%	6,868
	Projected	1,251	14%	898	10%	<25%	6,597	75%	<60%	8,746

Table 6: Mature Patch Size Class Current and Projected

NDU	Current/ Projected	Patch Class (ha)							Grand Total	Total Interior Forest %	Interior Forest Target
		<50		50-100		100+					
		ha	%	ha	%	ha	%	Target			
Boreal Plains	Current	9,287	14%	4,329	6%	54,977	80%	>70%	68,593	48%	>30%
	Projected	9,224	14%	4,307	7%	51,660	79%	>70%	65,190	45%	>30%
Boreal Foothills/Omineca	Current	18,580	7%	8,203	3%	229,843	90%	>80%	256,626	58%	>35%
	Projected	19,259	8%	8,624	4%	207,957	88%	>80%	235,840	54%	>35%
Wet Mountain	Current	2,300	3%	307	0%	75,599	97%	>85%	78,206	62%	>60%
	Projected	2,356	3%	317	0%	73,943	97%	>85%	76,616	61%	>60%

REVISIONS:

No revisions are suggested for this indicator or objective.

2.5 SNAGS/LIVE TREE RETENTION

Criterion 1:	Element(s): 1.1, 1.2
Biological Diversity	Ecosystem Diversity, Species Diversity
CSA Core Indicator(s): 1.1.4: Degree of within-stand structural retention 1.2.2: Degree of suitable habitat in the long term for selected focal species, including species at risk	
Indicator Statement	Target Statement
Number of snags and/or live trees (>23.0 cm dbh) per ha on prescribed areas	Retain annually an average of at least 2 snags and/or live trees (>23.0 cm dbh) per hectare on prescribed areas
Value(s): Ecosystem Diversity, Native Species Richness	
SFM Objective: We will conserve or restore ecosystem diversity within the natural range of variation within DFA over time. We will sustain sufficient and appropriately distributed suitable habitat elements to maintain native species richness.	

STATUS AND COMMENTS:

In 2013 there were 42 blocks harvested to which this indicator applied. There were 12 instances where retention was not implemented due to 10% of the gross block area being designated under Wildlife Tree Patch (WTP) as the habitat element (snags/live trees) are considered well represented in the WTP area. T4128 had greater than 10% of the gross area designated as WTP and was logged using a cable yarder system and for safety and feasibility reasons no individual snag/live tree retention was prescribed on it. Three blocks (T4368, T4446 and T4447) are small scale salvage blocks and because of their small size and narrowness, tree retention was restrictive for machinery therefore no snag retention was prescribed.

Block	Area of Required Snag/Live Tree Retention (ha)	Area of Snag/Live Tree Retention in SP (ha)	Applied Correctly	Rationale
T2064	0.0	0	Yes	WTP > 10%
T2078	10.8	10.8	Yes	
T2113	1.7	1.7	Yes	
T2114	1.0	1.0	Yes	
T4096	120.0	27.2	Yes	WTP > 10%
T4128	0	2.4	Yes	WTP > 10%, entire block is cable harvest
T4164	36.4	36.4	Yes	
T4177	86.9	86.9	Yes	
T4179	178.6	178.6	Yes	
T4183	0	0	Yes	WTP > 10%
T4230	46.3	46.3	Yes	
T4238	56.5	56.5	Yes	
T4239	0	0	Yes	WTP > 10%
T4244	0	11.2	Yes	WTP > 10%
T4251	52.0	53.3	Yes	
T4254	38.7	38.7	Yes	
T4268	38.3	38.3	Yes	
T4272	34.8	34.8	Yes	
T4277	0	0	Yes	WTP > 10%
T4279	112.0	112	Yes	
T4280	36.4	36.4	Yes	
T4282	3.6	3.6	Yes	
T4283	3.0	3.0	Yes	
T4299	6.9	6.9	Yes	
T4312	70.1	70.1	Yes	
T4317	0	0	Yes	WTP > 10% (100 % PI)

T4318	0	0	Yes	WTP > 10%
T4319	97.2	97.2	Yes	
T4321	28.9	28.9	Yes	
T4322	4.8	4.8	Yes	
T4324	0	40.9	Yes	WTP > 10% (S9PI1 - majority)
T4367	5.9	5.9	Yes	
T4368	0	0	Yes	Due to narrowness and restrictions on harvest operations, no snag retention prescribed
T4369	31.4	31.4	Yes	
T4371	0	0	Yes	WTP > 10%
T4372	29.8	29.8	Yes	
T4418	3.4	3.4	Yes	
T4419	4.8	4.8	Yes	
T4420	2.1	2.1	Yes	
T4439	96.1	96.1	Yes	
T4446	0	0	Yes	Due to narrowness and restrictions on harvest operations, no snag retention prescribed
T4447	0	0	Yes	Due to narrowness and restrictions on harvest operations, no snag retention prescribed
A89919- T4402	56.3	19.4	Yes	WTP > 10%

REVISIONS:

The indicator DBH target was revised to match the DBH noted in the Target statement (23.0 cm). This revision was reviewed and endorsed by the PAC on May 29, 2014 and was incorporated in the 2013 report for this indicator. No further revisions are suggested for this indicator or objective.

2.6 WILDLIFE TREE PATCHES

Criterion 1:	Element(s): 1.1
Biological Diversity	Ecosystem Diversity
CSA Core Indicator(s): 1.1.4: Degree of within-stand structural retention	
Indicator Statement	Target Statement
Cumulative wildlife tree patch percentage in blocks harvested since 1995 by landscape unit by BEC sub zone	Cumulative wildlife tree patch % will be at least 8% by BEC sub zone
Value(s): Ecosystem Diversity	
SFM Objective: We will conserve or restore ecosystem diversity within the natural range of variation within DFA over time.	

STATUS AND COMMENTS:

The table below summarizes the current status for WTP retention levels for blocks on which harvesting began since 1995 and to the end of 2013. The WTP retention levels exceed the target in all subzones except the ESSFwc3. However in this BEC subzone 60% or 411 ha of the 689 ha under prescription have been harvested with an irregular shelterwood retention system. Typically in these irregular shelterwoods 55% of the area is retained between the trails so 55% of the 411 ha is 226 ha plus the 39 ha of WTP prescribed results in a total of 265 ha of retention or 38% of the total area under prescription. Therefore the target is considered achieved.

Table 7: Summary of WTP's in Areas Harvested Since 1995

BEC Sub Zone	Total Area Under Prescription (ha)	WTP Area (ha)	WTP %
BWBSmw	8,938	1,281	14%
BWBSwk	3,459	595	17%
ESSFmv	7,355	822	11%
ESSFwc	689	39	6%
ESSFwk	4,636	503	11%
SBSwk	11,570	1,849	16%
Total	36,646	5,090	14%

REVISIONS:

No revisions are suggested for this indicator or objective.

2.7 AVERAGE MINIMUM WIDTH OF RRZ AND RMZ

Criterion 1:	Element(s): 1.2, 3.2
Biological Diversity	Species Diversity; Water Quality and Quantity
CSA Core Indicator(s): 1.2.1: Degree of habitat protection for selected focal species, including species at risk 3.2.1: Proportion of watershed or water management areas with recent stand-replacing disturbance	
Indicator Statement	Target Statement
Average minimum width of retention by Riparian Reserve Zone or Riparian Management Zone by appropriate stream, lake or wetland classification within cutblocks	We will meet or exceed the regulatory retention widths by Riparian Reserve Zone by appropriate stream, lake or wetland classification within cutblocks
Value(s): Native Species Richness, Water Quality and Quantity	
SFM Objective: We will sustain sufficient and appropriately distributed suitable habitat elements to maintain native species richness. We will maintain water quality and quantity.	

STATUS AND COMMENTS:

Table 8 shows the summary of riparian reserve and management zones for 2013 as well as the cumulative average from 2000 to 2013. It should be noted that the RMZ actual widths for the cumulative 2000-2013 are showing averages below the required widths. However, this is because the areas were managed under an RRZ and was not split between RRZ and RMZ. The total RMA is still exceeding the requirements in all Stream and Wetlands classes.

Table 8.

The targets have been met in 2013 and all previous years. It should be noted that the RMZ actual widths for the cumulative 2000-2013 are showing averages below the required widths. However, this is because the areas were managed under an RRZ and was not split between RRZ and RMZ. The total RMA is still exceeding the requirements in all Stream and Wetlands classes.

Table 8: Summary of Riparian Reserve and Management Zones in 2000 – 2013

Year	Stream, Wetland or Lake Class	Total Stream Length (m ^b)	RRZ – Required Width (m ^c)	RRZ–Actual Width (m ^c)	RMZ Required Width (m ^c)	RMZ – Actual Width (m ^c)	Total RMA – Required width (m ^b)	Total RMA – Actual width (m ^b)
2013	S1 (n=0)	-	50	-	20	-	0	-
	S2 (n=3)	2947	30	31.9	20	22.1	50	53.9
	S3 (n=3)	4927	20	20.5	20	20.9	40	41.4
	S4 (n=3)	3427	0	-	30	31.2	30	31.2
	S5 (n=4)	6466	0	-	30	32.2	30	32.2
	S6 (n=67)	65877	0	-	20	21.2	20	21.2
	W3 (n=0)	-	0	-	30	-	30	-
	W5 (n=0)	-	10	-	40	-	50	-
Average 2000 to 2013	S1	34,694	50	104.4	20	4.8	70	109.2
	S2	28370	30	91.9	20	12.5	50	104.4
	S3	38020	20	48.1	20	16.5	40	64.6
	S4	20452	0	7.1	30	25.9	30	33.0
	S5	45175	0	17.4	30	29.2	30	46.6
	S6	390915	0	4.8	20	19.7	20	24.4
	W3	4,423	0	6.8	30	25.1	30	31.9
	W5	673	10	27.3	40	25.8	50	53.1

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 b) but the widths are not doubled.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.8 SHRUBS/EARLY FOREST

Criterion 1:	Element(s): 1.2
Biological Diversity	Species Diversity
CSA Core Indicator(s): 1.2.1: Degree of habitat protection for selected focal species, including species at risk	
Indicator Statement	Target Statement
The minimum proportion of shrub habitat (%) by Natural Disturbance Unit	Each Natural Disturbance Unit will meet or exceed the baseline target (%) proportion of shrub habitat (Table 20)
Value(s): Native Species Richness	
SFM Objective: We will sustain sufficient and appropriately distributed habitat elements to maintain native species richness.	

STATUS AND COMMENTS:

The following table indicates the initial condition of shrub habitat, in 2005, within the DFA. The status of shrub habitat at the end of 2010 is outlined in the table below as well. Within all NDU's there was an increase in the amount of shrub habitat over time. Because shrubs are intimately associated with early seral forest, harvested area is a significant contributor to the amount of shrub habitat. Back in 2005 the forecast for the amount of shrub habitat was higher than the actual which can be largely attributed to the curtailment of the operations which saw a suspension of harvesting for a period of nearly 2 years.

The next time this indicator will be reported on will be in 2015. It is anticipated that the next reporting period will contain the highest level of shrub habitat as the analysis considers forest stands less than 30 years of age as contributing to shrub area. Harvesting on the DFA began in 1986 which will represent 30 years of operations on the DFA in 2016. As managed stands become older than 30 years they will no longer contribute to shrub habitat which is why after 2016 it is anticipated that shrub habitat will remain in a relatively stable state and will most largely be impacted by natural disturbances such as fire.

Table 9: Shrub Habitat

NDU	NDU Subunit	Total NDU Area	Baseline Shrub Habitat		2010 Shrub		Baseline Target %
			Ha	%	Ha	%	
Boreal Plains		120,891	15,762	13%	17,803	15%	14%
Boreal Foothills	Valley	178,225	25,245	14%	27,687	16%	12%
	Mountain	205,406	20,936	10%	22,944	11%	11%
Omineca	Valley	6,504	727	11%	812	12%	7%
	Mountain	15,031	1,277	8%	1,719	11%	10%
Wet Mountain		117,618	12,634	11%	14,958	13%	7%
Grand Total		643,676	76,581	12%	85,924	13%	

REVISIONS:

No revisions are suggested for this indicator or objective.

2.9 WILDLIFE HABITAT AREAS, UNGULATE WINTER RANGES AND DUNLEVY CREEK MANAGEMENT PLAN

Criterion 1:	Element(s): 1.2, 1.4
Biological Diversity	Species Diversity; Protected Areas and Sites of Special Biological and Cultural Significance
CSA Core Indicator(s) 1.2.1: Degree of habitat protection for selected focal species, including species at risk 1.2.2: Degree of suitable habitat in the long term for selected focal species, including species at risk 1.4.1: Proportion of identified sites with implemented management strategies	
Indicator Statement	Target Statement
Proportion of activities consistent with objectives of Wildlife Habitat Areas (WHA), Ungulate Winter Ranges (UWR), and Dunlevy Creek Management Plan	All forest management activities will be consistent with objectives of Wildlife Habitat Areas (WHA), Ungulate Winter Ranges (UWR), and Dunlevy Creek Management Plan
Value(s): Native Species Richness, Protected Areas and Sites of Special Geological, Biological, or Cultural Significance	
SFM Objective: We will sustain sufficient and appropriately distributed suitable habitat elements to maintain native species richness. We will implement management strategies appropriate to the long term maintenance of protected areas and sites of special geological, biological, or cultural significance.	

STATUS AND COMMENTS:

In 2013 there were no activities within UWR's, WHA's, or the Dunlevy Creek Management Plan area.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.10 HABITAT SUPPLY FOR SPECIES OF PUBLIC CONCERN

Criterion 1:	Element(s): 1.2
Biological Diversity	Species Diversity
CSA Core Indicator(s): 1.2.1: Degree of habitat protection for selected focal species, including species at risk 1.2.2: Degree of suitable habitat in the long term for selected focal species, including species at risk	
Indicator Statement	Target Statement
Habitat supply for species of public interest (grizzly bear, wolverine, marten, fisher, elk, moose, caribou)	When habitat supply decreases by 20% over time beyond the natural range of variation baseline for species of public interest, stand level management strategies will be developed within one year
Value(s): Native Species Richness	
SFM Objective: We will sustain sufficient and appropriately distributed suitable habitat elements to maintain native species richness.	

STATUS AND COMMENTS:

This indicator was first reported on in 2005 and was originally tied to the AAC/TSR process which occurred every 5 years. With government regulation changes AAC Determinations can occur between every 10 and 15 years. To remain consistent with the reporting frequency this indicator will no longer be tied to the AAC/TSR process and will be reported on every five years. The next time this indicator will be reported on will be in the 2014- 2015 annual report.

Moose was modeled for the summer feeding period. TFL 48 represents excellent moose habitat with over 340,000 ha classified in very high, high and moderate categories of habitat supply.

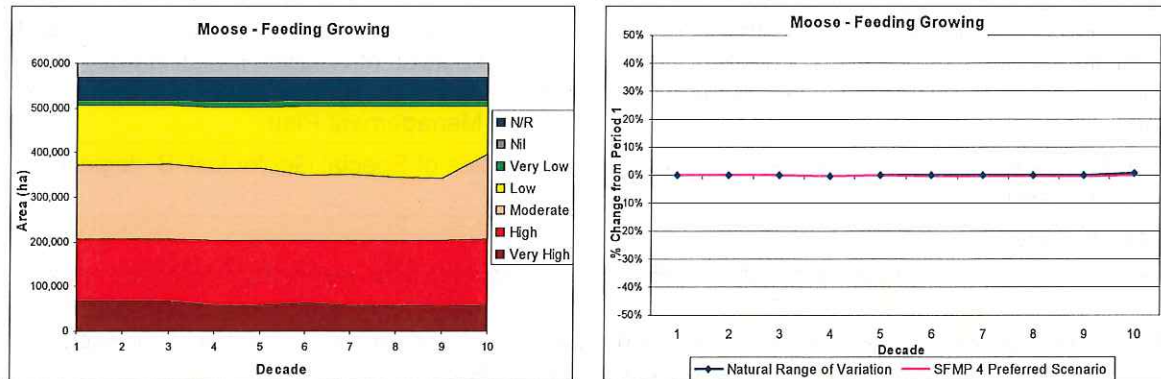


Figure 2: Moose Habitat Supply

Elk habitat was modeled as summer feeding habitat. TFL 48 represents excellent elk habitat with over 230,000 ha classified in very high, high and moderate categories of habitat supply.

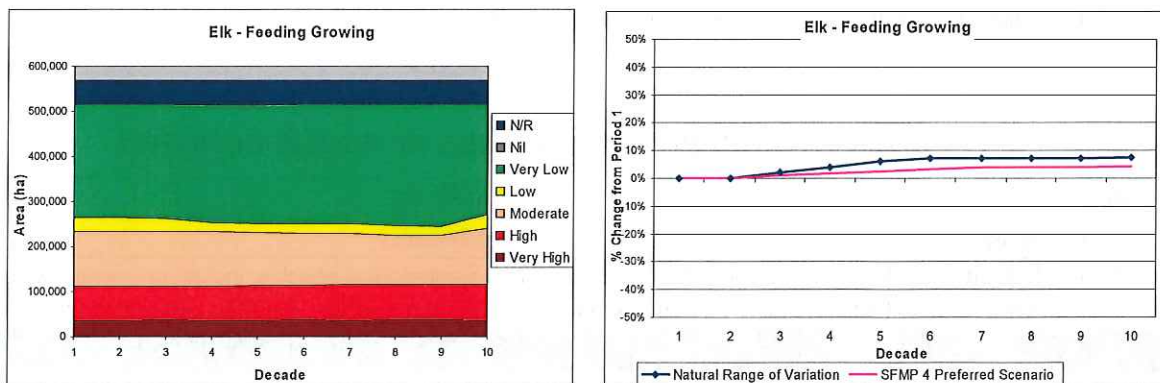


Figure 3: Elk Habitat Supply

Caribou was modeled for both late and early winter habitat types. In contrast to moose and elk there is comparatively little very high, high and moderate habitat for caribou, approximately 15,000 ha of early winter. (This is likely underrepresented with the current model.) Late winter habitat trends to a significantly less amount in the preferred scenario versus the natural range of variation baseline.

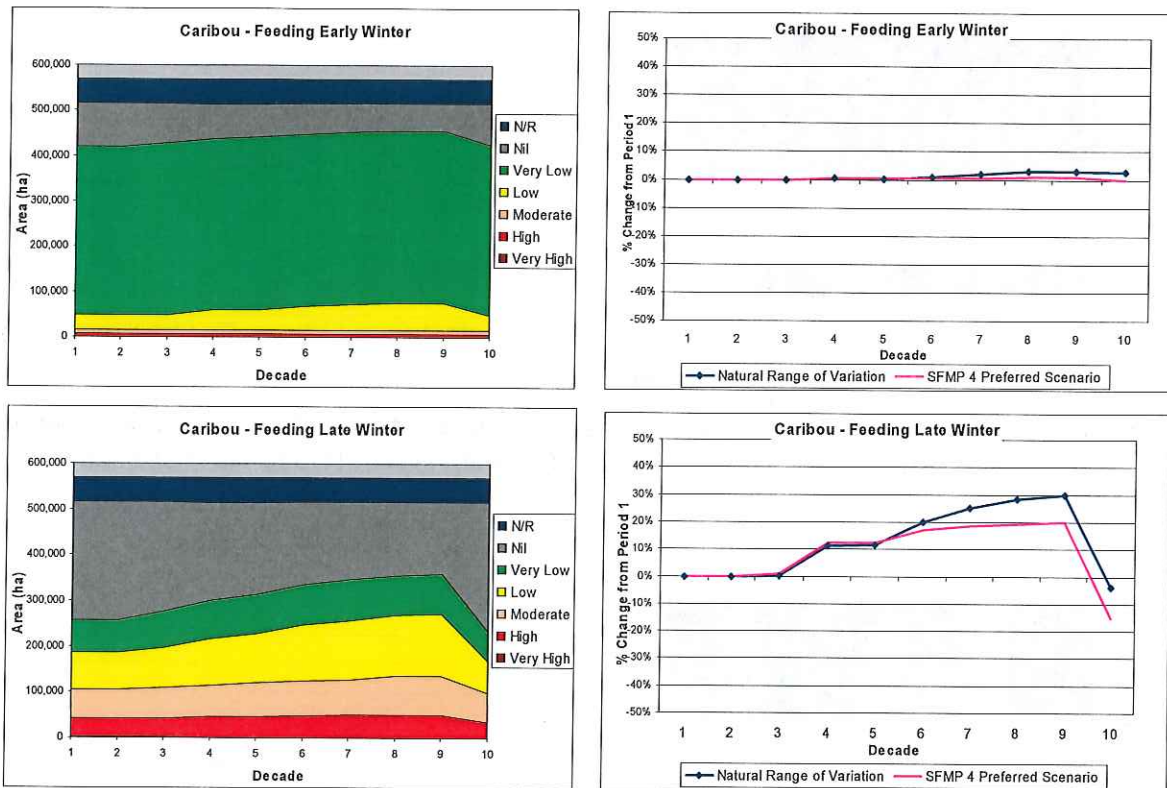


Figure 4: Caribou Habitat Supply

Marten habitat was modeled as general winter habitat. TFL 48 has a large amount of habitat (over 250,000 ha) modeled as very high, high and moderate. While habitat steadily declines over the 100 year simulation the preferred scenario has less of a decline than the natural range of variation simulation.

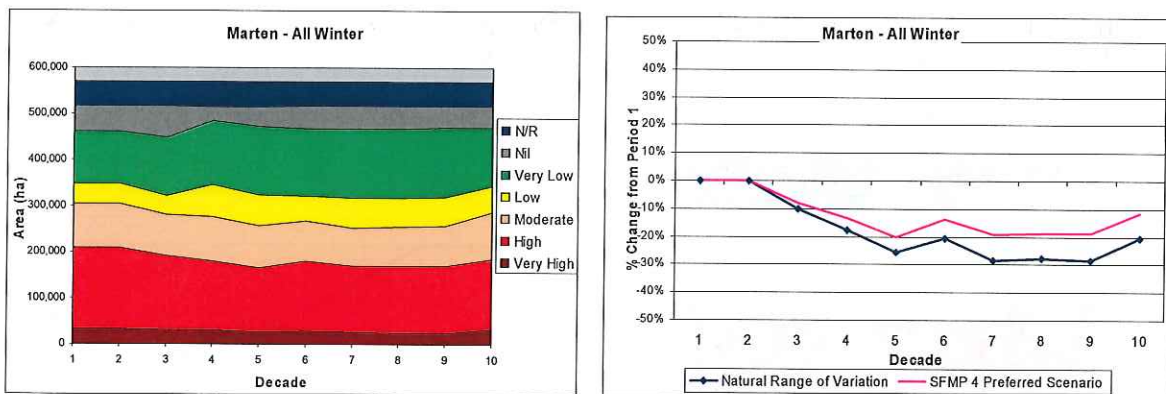


Figure 5: Marten Habitat Supply

Fisher habitat was modeled as general winter habitat. TFL 48 represents a large area of very high, high and moderate habitat with over 196,000 ha classified in these categories.

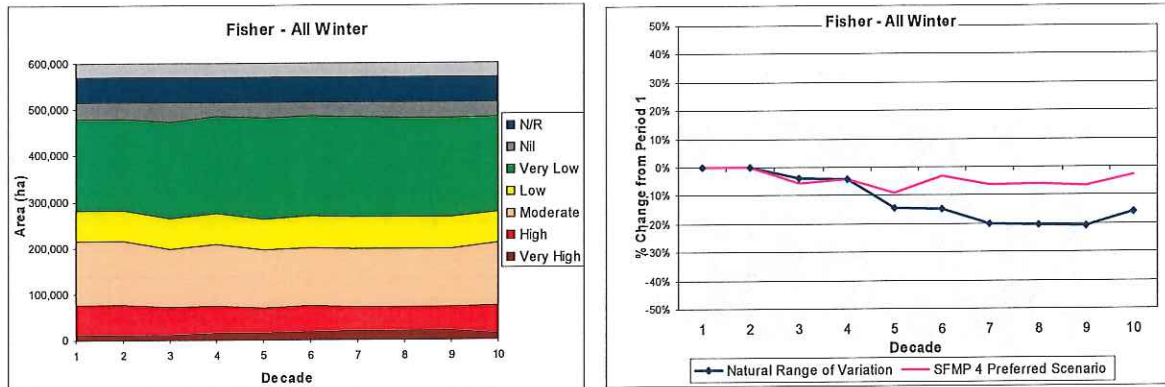


Figure 6: Fisher Habitat Supply

Grizzly bear habitat was modeled as spring feeding habitat. TFL 48 has a moderate amount of very high, high and moderate grizzly bear habitat with over 111,000 ha classified in these categories.

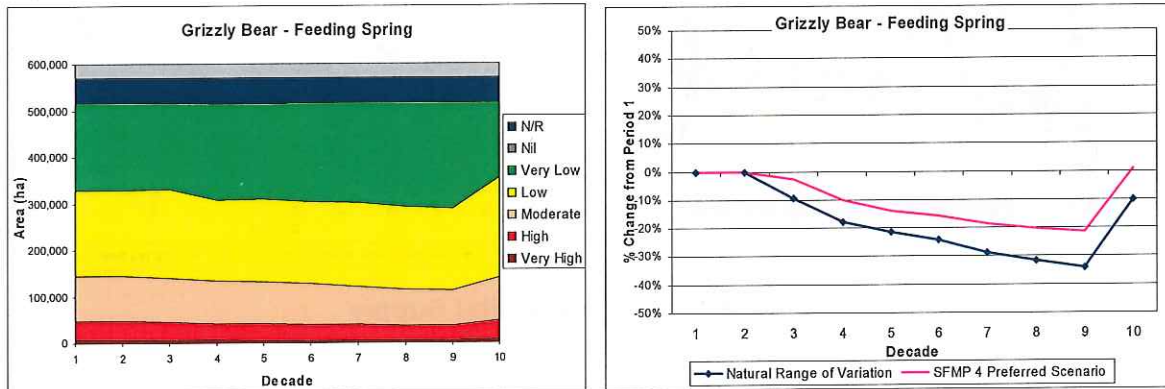


Figure 7: Grizzly Bear Habitat Supply

Wolverine habitat was modeled as winter feeding habitat. TFL 48 represents an excellent area for wolverine with over 440,000 ha modeled as high and moderate habitat quality. Again while the trend is for a decline in the overall amount of high quality habitat the preferred scenario shows less of a decline than the natural range of variation.

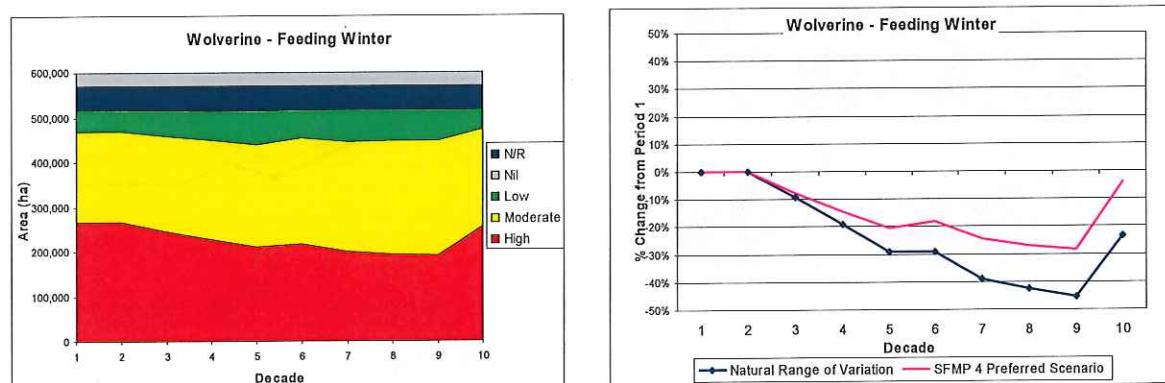


Figure 8: Wolverine Habitat Supply

REVISIONS:

Indicator will no longer be linked to the AAC/TSR process as AAC timelines have extended beyond meaningful data analysis time frames for this Indicator. This indicator will remain on a 5 year reporting schedule and will be reported on in 2015.

2.11 SPECIES OF MANAGEMENT CONCERN

Criterion 1:	Element(s): 1.2
Biological Diversity	Species Diversity
CSA Core Indicator(s): 1.2.1: Degree of habitat protection for selected focal species, including species at risk 1.2.2: Degree of suitable habitat in the long term for selected focal species, including species at risk	
Indicator Statement	Target Statement
Percent consistency with management strategies for species of management concern	On an annual basis, 100% of the management strategies for species of management concern are consistently being implemented as scheduled
Value(s): Native Species Richness	
SFM Objective: We will sustain sufficient and appropriately distributed suitable habitat elements to maintain native species richness.	

STATUS AND COMMENTS:

The implementation strategy for this indicator was to implement stand level management guidelines on all areas where layout was initiated after October 31, 2005. In 2013 there were 43 new blocks laid out. None of these blocks were in areas of, or contained environmental aspects of significance to the wildlife identified in the document *Guidelines for Species Using Localized Habitats for TFL48*.

REVISIONS:

This indicator was queried on both the field package and layout activity so that all blocks that were laid out and permitted were captured in the data set. This way the data can be properly analyzed through the site plan to see if any species of concern were noted on the block at the time of layout.

Below is a table that will now be part of the annual reporting for this indicator. The table contains a list of species that are provincially listed as being at some sort of risk of declining and whose habitat range includes TFL 48. This list guides our species accounting system and will be monitored and updated annually.

English Name	Scientific Name	COSEWIC ¹	BC CDC List ²	IWMS ³
AMPHIBIANS				
Western Toad	<i>Bufo boreas</i>	Special Concern (Nov 2012)	Blue	
FISH				
Bull Trout	<i>Salvelinus confluentus</i>	Special Concern (Nov 2012)	Blue	Yes (Jun 2006)
Cutthroat Trout, <i>lewisii</i> subspecies	<i>Oncorhynchus clarkii lewisii</i>	Special Concern (Nov 2006)	Blue	Yes (Jun 2006)
Goldeye	<i>Hiodon alosoides</i>		Blue	
Northern Redbelly Dace	<i>Chrosomus eos</i>		Blue	
Northern Redbelly Dace X Finescale Dace	<i>Chros. eos x Chro. neogaeus</i>		Blue	
Pearl Dace	<i>Margariscus nachtriebi</i>		Blue	
Spottail Shiner	<i>Notropis hudsonius</i>		Red	
BIRDS				

American Avocet	<i>Recurvirostra americana</i>		Red	
American Bittern	<i>Botaurus lentiginosus</i>		Blue	
Barn Swallow	<i>Hirundo rustica</i>	Threatened (May 2011)	Blue	
Bay-breasted Warbler	<i>Setophaga castanea</i>		Red	Yes (Jun 2006)
Black-throated Green Warbler	<i>Setophaga virens</i>		Blue	Yes (Jun 2006)
Broad-winged Hawk	<i>Buteo platypterus</i>		Blue	
Canada Warbler	<i>Cardellina canadensis</i>	Threatened (Mar 2008)	Blue	
Cape May Warbler	<i>Setophaga tigrina</i>		Red	Yes (Jun 2006)
Common Nighthawk	<i>Chordeiles minor</i>	Threatened (Apr 2007)	Yellow	
Connecticut Warbler	<i>Oporornis agilis</i>		Red	Yes (Jun 2006)
Lark Sparrow	<i>Chondestes grammacus</i>		Red	
Le Conte's Sparrow	<i>Ammodramus leconteii</i>		Blue	
Nelson's Sparrow	<i>Ammodramus nelsoni</i>	Not at Risk (May 1998)	Red	Yes (Jun 2006)
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Threatened (Nov 2007)	Blue	
Rusty Blackbird	<i>Euphagus carolinus</i>	Special Concern (Apr 2006)	Blue	
Sandhill Crane	<i>Grus canadensis</i>	Not at Risk (May 1979)	Yellow	Yes (Jun 2006)
Short-billed Dowitcher	<i>Limnodromus griseus</i>		Blue	
Short-eared Owl	<i>Asio flammeus</i>	Special Concern (Mar 2008)	Blue	Yes (May 2004)
Surf Scoter	<i>Melanitta perspicillata</i>		Blue	
Swainson's Hawk	<i>Buteo swainsoni</i>		Red	
Upland Sandpiper	<i>Bartramia longicauda</i>		Red	
Yellow Rail	<i>Coturnicops noveboracensis</i>	Special Concern (Nov 2009)	Red	
MAMMALS				
Wood Bison	<i>Bos bison athabascae</i>	Threatened (May 2000)	Red	
Plains Bison	<i>Bos bison bison</i>	Threatened (May 2004)	Red	
Wolverine	<i>Gulo gulo</i>	Special Concern (May 2003)	No Status	
Wolverine, <i>luscus</i> subspecies	<i>Gulo gulo luscus</i>	Special Concern (May 2003)	Blue	Yes (May 2004)
Eastern Red Bat	<i>Lasiurus borealis</i>		Red	
Fisher	<i>Martes pennanti</i>		Blue	Yes (Jun 2006)
Little Brown Myotis (Bat)	<i>Myotis lucifugus</i>	Endangered (Nov 2012)	Yellow	
Northern Myotis (Bat)	<i>Myotis septentrionalis</i>	Endangered (Nov 2012)	Blue	
Bighorn Sheep	<i>Ovis canadensis</i>		Blue	Yes (Jun 2006)
Caribou (southern mountain population)	<i>Rangifer tarandus</i> pop. 1	Threatened (May 2000)	Red	Yes (May 2004)
Caribou (boreal population)	<i>Rangifer tarandus</i> pop. 14	Threatened (May 2002)	Red	Yes (May 2004)
Caribou (northern mountain population)	<i>Rangifer tarandus</i> pop. 15	Threatened (May 2002)	Blue	Yes (May 2004)
Grizzly Bear	<i>Ursus arctos</i>	Special Concern (May 2002)	Blue	Yes (May 2004)

1 Committee on the Status of Endangered Wildlife in Canada: www.speciesatrisk.gc.ca

2 BC Conservation Data Center's Species and Ecosystem Explorer

3 IWMS - Identified Wildlife Management Strategy

2.12 CONIFEROUS SEEDS

Criterion 1:	Element(s): 1.2, 1.3
Biological Diversity	Species Diversity, Genetic Diversity
CSA Core Indicator(s): 1.2.3: Proportion of regeneration comprised of native species 1.3: Genetic Diversity – No core indicator	
Indicator Statement	Target Statement
The proportion of seeds for coniferous species collected and seedlings planted in accordance with the regulation	All coniferous seeds will be collected and seedlings will be planted in accordance with the regulations
Value(s): Native Species Richness, Genetic Diversity	
SFM Objectives: We will conserve genetic diversity of tree stock.	

STATUS AND COMMENTS:

In 2013 there were a total of 2,876,743 trees planted on TFL 48 of which Canfor planted 2,643,553. Chetwynd Mechanical Pulp planted 156,780 seedlings and BCTS planted 76, 410 trees. All seeds have been registered with and tracked by the Tree Improvement Branch of the Ministry of Forests Lands and Natural Resource Operations. Licensees operating on TFL 48 were 96.4% in compliance with the Chief Forester’s Standards for Seed Use effective April 1, 2005. The Standard requires that practices be in 95% or greater conformance which has been achieved. All of the non-compliances were trees that were known, or thought to have been, planted outside of the designated Seed Planning Zone.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.13 DECIDUOUS SEEDS AND VEGETATIVE MATERIAL

Criterion 1:	Element(s): 1.2, 1.3
Biological Diversity	Species Diversity, Genetic Diversity
CSA Core Indicator(s): 1.2.3: Proportion of regeneration comprised of native species 1.3: Genetic Diversity – No core indicator	
Indicator Statement	Target Statement
The proportion of seed or vegetative material for deciduous species collected and planted in accordance with the regulation	All deciduous species will be collected and planted in accordance with the regulations
Value(s): Native Species Richness, Genetic Diversity	
SFM Objectives: We will conserve genetic diversity of tree stock.	

STATUS AND COMMENTS:

There were no deciduous seedlings or vegetative propagates planted on TFL 48 in 2013. Seedlots grown or planted within TFL 48 will be registered in accordance with the Forest Planning and Practices Regulation and the Chief Forester’s Standards for Seed Use effective April 1, 2005. All seeds used in TFL 48 by Canfor and BCTS will be registered with and tracked by Tree Improvement Branch of the Ministry of Forests and Range.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.14 CLASS A PARKS, ECOLOGICAL RESERVES AND LRMP DESIGNATED PROTECTED AREAS

Criterion 1:	Element(s): 1.4
Biological Diversity	Protected Areas and Sites of Special Biological and Cultural Significance
CSA Core Indicator(s): 1.4.1 Proportion of identified sites with implemented management strategies	
Indicator Statement	Target Statement
Hectares of forestry related harvesting or road construction within Class A parks, protected areas, ecological reserves and LRMP designated protected areas	Zero hectares of forestry related harvesting or road construction within Class A parks, protected areas, ecological reserves or LRMP designated protected areas
Value(s): Protected Areas and Sites of Special Geological, Biological, or Cultural Significance	
SFM Objective: We will implement management strategies appropriate to the long term maintenance of protected areas and sites of special geological, biological, or cultural significance.	

STATUS AND COMMENTS:

In 2013 there was no harvesting or road construction for the purposes of carrying out forestry operations within Class A parks, protected areas, ecological reserves or LRMP designated protected areas within TFL 48.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.15 KNOWN VALUES AND USES ADDRESSED IN OPERATIONAL PLANNING

Criterion 1:	Element(s): 1.4, 6.1, 6.2
Biological Diversity	Protected Areas and Sites of Special Biological and Cultural Significance; Aboriginal and Treaty Rights; Respect for Aboriginal Forest Values, Knowledge and Uses
CSA Core Indicator(s): 1.4.2 Protection of identified sacred and culturally important sites 6.1.3: Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering) occur 6.2.1: Evidence of understanding and use of Aboriginal knowledge through the engagement of willing Aboriginal communities, using a process that identifies and manages culturally important resources and values	
Indicator Description	Target Statement
Percentage of known traditional site-specific aboriginal values and uses identified during SFMP, FDP, FSP, or PMP referrals addressed in operational plans	100% of known traditional site-specific aboriginal values and uses identified during SFMP, FDP, FSP, or PMP referrals will be addressed in operational plans
Value(s): Protected Areas and Sites of Special Geological, Biological, or Cultural Significance; Treaty and Aboriginal Rights; Aboriginal Forest Values and Uses	
SFM Objective: We will implement management strategies appropriate to the long term maintenance of protected areas and sites of special geological, biological, or cultural significance. We will recognize and respect Treaty 8 rights. We will respect known traditional Aboriginal forest values, and uses.	

STATUS AND COMMENTS:

In 2013 the site specific comments provided by First Nations regarding aboriginal values and uses were considered and addressed in operational plans. Two cutting permits were found to have site specific concerns which resulted in discussions between Canfor and the First Nations to address concerns and propose mitigation strategies. To date no mutually acceptable resolution has been reached and so the blocks remain un-harvested. Discussions are on-going between Canfor, the First Nations group and Ministry of Forests, Lands and Natural Resource Operations.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.16 CONFORMANCE TO ELEMENTS PERTINENT TO TREATY RIGHTS

Criterion 1:	Element(s): 1.4, 6.1
Biological Diversity	Protected Areas and Sites of Special Biological and Cultural Significance; Aboriginal and Treaty Rights
CSA Core Indicator(s): 1.4.2 Protection of identified sacred and culturally important sites 6.1.3: Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering) occur	

Indicator Statement	Target Statement
% conformance to SFM elements pertinent to treaty rights (i.e., hunting, fishing and trapping) defined in Treaty 8	100% conformance to the SFM indicators and targets of the SFM Elements pertinent to sustaining hunting, fishing and trapping, as follows: <ul style="list-style-type: none"> • Element 1.1 Ecosystem Diversity (Indicators 3.1, 3.2, 3.3, and 3.4), and Element 1.2 Species Diversity (Habitat Elements) Indicators (3.5, 3.6, 3.7, 3.8, and 3.10), • Element 3.1 Soil Quality and Quantity (Indicator 3.27), and • Element 3.2 Water Quality and Quantity Indicators (3.28, 3.29, 3.30, 3.31, and 3.32)
Value(s): Protected Areas and Sites of Special Geological, Biological, or Cultural Significance; Treaty and Aboriginal Rights	
SFM Objective: We will implement management strategies appropriate to the long term maintenance of protected areas and sites of special geological, biological, or cultural significance. We will recognize and respect Treaty 8 rights.	

STATUS AND COMMENTS:

In 2013 all indicators in Elements 1.1, 1.2, and 3.1 were met as well as all of the indicators in element 3.2. Canfor has maintained its obligation to consult with First nations on every herbicide program each year. Canfor has also put measures in place since the 2011 spray program to mitigate the potential for over sprays into water bodies in the future. In 2013 there were no incidences of over spray.

REVISIONS:

No revisions are suggested for this indicator or objective.

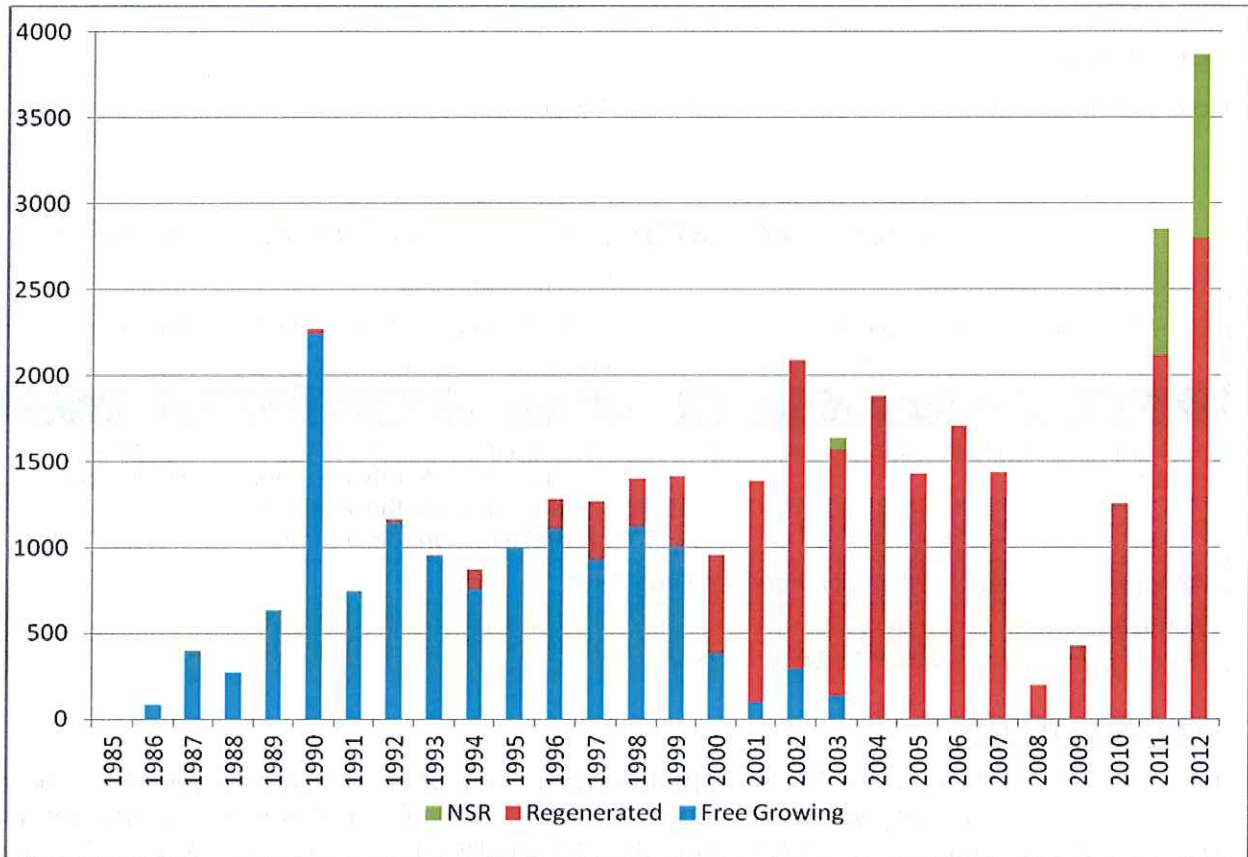
2.17 FREE GROWING STANDS

Criterion 2:	Element(s): 2.1
Ecosystem Condition and Productivity	Forest Ecosystem Resilience
CSA Core Indicator(s): 2.1.1 Reforestation success	
Indicator Statement	Target Statement
Proportion of area harvested that has free growing stands re-established	100% of the area harvested will meet the free growing requirements identified in the silviculture prescriptions/site plans
Value(s): Ecosystem Resilience	
SFM Objectives: We will sustain a natural range of variability in ecosystem function, composition and structure which allows ecosystems to recover from disturbance and stress.	

STATUS AND COMMENTS:

All areas harvested have met free growing requirements as identified in the silviculture prescriptions/site plans. No areas are past the free growing timelines. The NSR area in 2003 was fill planted in 2012 and is expected to meet free growing stats by 2020. See Figure 9 for status of areas harvested on TFL 48 where there is a free growing requirement.

Figure 9: Regeneration/Free Growing Status by Year of Harvest Start



REVISIONS:

No revisions are suggested for this indicator or objective.

2.18 REGENERATION DECLARATION

Criterion 2:	Element(s): 2.1, 4.1
Ecosystem Condition and Productivity	Forest Ecosystem Resilience; Carbon Uptake and Storage
CSA Core Indicator(s): 2.1.1 Reforestation success	
Indicator Statement	Target Statement
Area weighted average time delay from harvesting starting and initial restocking of harvest area by DFA	Average delay will be no more than 2 years
Value(s): Ecosystem Resilience, Carbon Uptake and Storage	
<p>SFM Objectives: We will sustain a natural range of variability in ecosystem function, composition and structure which allows ecosystems to recover from disturbance and stress. We will maintain the processes for carbon uptake and storage within the natural range of variation.</p>	

STATUS AND COMMENTS:

At the end of 2013 the average age of NSR on TFL 48 was 0.9 years for all areas where harvesting started prior to January 1, 2014. The average regeneration delay is therefore less than 2 years, the target has been achieved.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.19 AREA OF FORESTED LAND LOST TO NON-FOREST INDUSTRY

Criterion 2:	Element(s): 2.2, 4.2
Ecosystem Condition and Productivity	Forest Ecosystem Productivity, Forest Land Conversion
CSA Core Indicator(s): 2.2.1 Additions and deletions to the forest area	
Indicator Statement	Target Statement
Area of forested land lost due to non-forest industry	We will track, and monitor and report every 3 years, losses to other non-forest industry uses and incorporate these losses when AAC calculations are determined.
Value(s): Ecosystem Productivity, Forested Land Base	
SFM Objective: We will sustain forests within the DFA.	

STATUS AND COMMENTS:

This indicator was last reported on in 2010. During the term of MP 3 Canfor developed a spatial tracking system to identify what and where non-forest related activities were occurring within TFL 48. All activities proposed within TFL 48 are typically referred to Canfor. With substantial changes to industry users, company ownership, and key industry contacts it has become increasingly difficult to analyze other resource development based on referrals made to Canfor.

As such, the analysis used to determine the amount of forest land converted has utilized various government data bases which track other resource tenures. The following table shows reductions to the land base due to other uses. It is useful to note that industry, in efforts to minimize the amount of forest land converted to non-forest, attempt to locate sequential developments ovetop existing developments. The utilization of existing development amounted to 105 ha's. Out of the 6,095 ha's of land developed, 105 ha's was able to overlap with other development thus creating an actual reduction of forested land by 5,990 ha's instead of the entire 6,095 hectares.

This indicator will not be reported on again until 2014 or when the next TSR is conducted for the DFA, whichever occurs the soonest and will then be reported on every three years.

Table 10: Reductions to Land Base Due to Other Uses (Excluding Roads²)

Feature	Total Area (ha)
Well sites ³	464
Mines ⁴⁵	2,166
Pipelines	466
Cutlines	1,527
Trails	492
Transmission Lines	980
Grand Total	6,095

REVISIONS:

This Indicator will no longer be linked to the AAC/TSR process as AAC timelines have extended beyond meaningful data analysis time frames for this Indicator.

In 2013 the PAC membership requested a change in the reporting dates for this indicator as they felt that a 5 year reporting period was still too long between reporting times given the number of developments that occur on the TFL in any given year. As a result this indicator will change to a 3 year reporting schedule and will next be reported on in the 2014 annual report. The indicator revision was reviewed and endorsed by the PAC on January 29, 2014.

2.20 PERMANENT ACCESS CORRIDORS

Criterion 2:	Element(s): 2.2, 4.2
Ecosystem Condition and Productivity	Forest Ecosystem Productivity; Forest Land Conversion
CSA Core Indicator(s): 2.2.1 Additions and deletions to the forest area	
Indicator Statement	Target Statement
Percent of area of the DFA occupied by permanent access corridors associated with forest management activities	We will limit impacts on the land base due to the presence of permanent access corridors to less than 2.4% of the gross land base of the DFA
Value(s): Ecosystem Productivity, Forested Land Base	
SFM Objective: We will sustain forests within the DFA.	

STATUS AND COMMENTS:

The following table shows the status to the end of 2010. The data analysis for this indicator occurs when the Timber Supply Analysis/Review is conducted in support of determining the next AAC Determination for the DFA. Government regulation changes have extended the period between AAC determinations which has lengthened the reporting period for this particular indicator.

² Roads are captured in Indicator 20 and are not easily separated as to which are used only by other industries or which are used only by the forest industry.

³ Includes camps, decking areas, borrow pits and sumps

⁴ Includes mines where clearing had started prior to December 2004 (Quintette, Pine Valley Coal and Dillon Mine). Other proposed mines are included as a sensitivity analysis.

⁵ Includes roads within mine-cleared areas.

Table 11: Permanent Access Corridors in TFL 48 (Existing)

Road Type (RoW width in metres)	Total Area (ha)	% of Gross TFL Area (653,576 ha)
Undistinguished Road type but delineated in VRI	1,266	0.20%
1 - ML (25m)	2,292	0.36%
2 - Operational (20m)	2,176	0.34%
3 - Block Perm (10m)	2,634	0.41%
4 - Oil & Gas/Utility roads (10m)	889	0.14%
Grand Total	7,973	1.24%

Source VRI 2004

REVISIONS:

(Revision Accepted by PAC in 2011) Indicator will no longer be linked to the AAC/TSR process as AAC timelines have extended beyond meaningful data analysis time frames for this Indicator. This indicator will remain on a 5 year reporting schedule and will be reported on in 2015.

2.21 HARVEST LEVELS/VOLUMES

Criterion 2:	Element(s): 2.2, 5.1
Ecosystem Condition and Productivity	Forest Ecosystem Productivity; Timber and Non-Timber Benefits
CSA Core Indicator(s): 2.2.2: Proportion of the calculated long-term sustainable harvest level that is actually harvested	
5.1.1: Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
Harvest levels/volumes	Harvest volumes will not exceed 110% of the 5 year periodic cut control volume for the DFA
Value(s): Ecosystem Productivity, Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will sustain forests within the DFA. We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

STATUS AND COMMENTS:

As outlined in the table below Canfor over cut on the TFL in 2013 while BCTS cut only 30% of its allotted annual cut. Canfor logged 112% of it allotted annual cut apportionment. Canfor will need to reduce its cut level below the allotted allowable annual cut in order to meet the target of below 110% for the 5 year cut control period.

Table 12: Actual Recorded and Allowable Annual Cut Summary

Year	Canfor Annual Cut Summary				BCTS Summary ²			Deciduous Harvest Summary
	Allowable Annual Cut (m ³)	Adjustment (m ³)	Actual Recorded Cut (m ³)	Cut Control (%)	Direct Allocation (m ³)	Actual Recorded Cut (m ³)	Allocation (%)	
1987-1991	1,742,500		1,787,732.00	102.6%				
1992-1996	1,742,500	-41,572.00	1,659,920.50	95.3%				
1997-2001	2,025,193	82,580.00	1,953,224.20	96.4%				
2002-2006	2,331,850	57,575.04	2,344,509.91	100.5%	276,750.00	197,997.25	71.5%	66,084.52
2007-2011	3,311,101	0.00	1,719,885.00	51.9%	290,546.00	358,267.00	123.3%	252,155.00
2012	683,612	0	880,460	128.8%	116,388	70,256	60.3%	76,395
2013	683,612	0	767,187	112.3%	116,388	35,292	30.3%	16,152
2014								
2015								
2016								
Running Total	1,357,564	0	1,649,816	121.5%	116,916	105,548	90.3%	92,547

Source: MoF Annual Cut Control Letters (1987-2006)

- Note that this value represents the Ministries official billed volume. However based on Canfor's records the volume delivered to Canfor's scale was 431,324 m³ or 89.7% of the AAC. The difference is due to some problems with the Ministry's billing of stumpage at the end of the cut control annual period. The MoF reported this volume in 2004.
- BCTS volumes were reported using the MoFR Harvest Billing System reports.
- This value represents the volume delivered from A77788 in 2005 as reported in the MoFR Harvest Billing System (HBS).
- This value represents the volume delivered from A77788 in 2006 as reported in the MoFR Harvest Billing System (HBS).
- This value represents the volume delivered as reported in the MoFR Harvest Billing System (HBS)

REVISIONS:

No revisions are suggested for this indicator or objective

2.22 ALLOWABLE ANNUAL CUT

Criterion 2:	Element(s): 2.2
Ecosystem Condition and Productivity	Forest Ecosystem Productivity
CSA Core Indicator(s): 2.2.2 Proportion of the calculated long-term sustainable harvest level that is actually harvested	
Indicator Statement	Target Statement
Allowable Annual Cut (AAC)	We will ensure that the Allowable Annual Cut will not adversely impact Long Term Harvest Level
Value(s): Ecosystem Productivity	
SFM Objective: We will sustain forests within the DFA.	

STATUS AND COMMENTS:

The current AAC is based on the TSR Analysis Report completed and submitted in August 2006, and the AAC Rationale which was effective May 25th, 2007. See Table 13 for a history of the AAC's for TFL 48. The Deputy Chief Forester chose to increase the AAC slightly beyond what Canfor had requested to enable additional Mountain Pine Beetle salvage. This level does not jeopardize the Long Term Harvest Level. The amount of pine harvested in 2013 represented 59% of deliveries which is 11% below the target of 70% pine harvest. The cause of the drop in pine volume is due to the mixed nature of the Pine/Spruce forests across the THLB. The majority of the pine volume left on the TFL is in more mixed stands and therefore we are tending to harvest more incidental spruce volume in order to log the dead pine. This trend will continue as we move north into the more mountainous areas containing more mixed pine spruce stands. Canfor will continue to target the highest volume Pine stands on the TFL in order to address the mountain pine beetle epidemic and manage the midterm timber supply.

Table 13: Annual Allowable Cut and Long-Term Harvest Level

Partition	MP 1	MP 2	SFMP 3	SFMP 4
	AAC	AAC	AAC	AAC
Coniferous	410,000	460,000	525,000	800,000
Deciduous	0	54,000	55,000	100,000
Total	410,000	514,000	580,000	900,000

REVISIONS:

No revisions are suggested for this indicator or objective.

2.23 SOIL DEGRADATION

Criterion 3:	Element(s): 3.1
Soil and Water	Soil Quality and Quantity
CSA Core Indicator(s): 3.1.1 Level of soil disturbance	
Indicator Statement:	Target Statement
Soil degradation	We will not exceed site degradation guidelines as defined in site plans
Value(s): Soil Productivity	
SFM Objective: We will protect soil resources to sustain productive forests.	

STATUS AND COMMENTS:

In TFL 48 there were a total of 65 blocks with harvesting completed in 2013 between BCTS, LP Building Products on behalf of Chetwynd Mechanical Pulp Inc., and Canfor. All blocks harvested were within the site degradation guidelines defined in site plans.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.24 SOIL DISTURBANCE SURVEYS

Criterion 3:	Element(s): 3.1
Soil and Water	Soil Quality and Quantity
CSA Core Indicator(s): 3.1.1 Level of soil disturbance	
Indicator Statement	Target Statement
Soil disturbance surveys	We will not exceed soil disturbance limits within cutblocks as defined in site plans
Value(s): Soil Productivity	
SFM Objective: We will protect soil resources to sustain productive forests.	

STATUS AND COMMENTS:

There were a total of 65 blocks with harvesting completed in 2013 between BCTS, LP Building Products on behalf of Chetwynd Mechanical Pulp, and Canfor. All blocks harvested were within the soil disturbance limits defined in site plans.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.25 USE OF ENVIRONMENTALLY FRIENDLY LUBRICANTS

Criterion 3:	Element(s): 3.1
Soil and Water	Soil Quality and Quantity
CSA Core Indicator(s): 3.1.1 Level of soil disturbance	
Indicator Statement	Target Statement
Use of environmentally friendly lubricants	We will research and identify environmentally friendly lubricants bi-annually
Value(s): Soil Productivity	
SFM Objective: We will protect soil resources to sustain productive forests.	

STATUS AND COMMENTS:

This indicator has been looked at and continues to be a topic of discussion amongst the harvesting staff in each reporting period. In the past it has been explained as a non-viable option for our harvesting contractors. Many of the environmentally friendly lubricants are not made to withstand the harsh environmental conditions of northern BC. As well they can void warranties and are less effective than the alternative industrial lubricants. Harvesting operations are generally carried out on low risk areas away from running water where the main environmental impact could take place in a spill scenario. The high expense along with the above mentioned characteristics make environmentally friendly lubricants non-feasible at this time. Canfor will continue to watch the market for new, innovative products that could be an option for our loggers in the future. This indicator will be reported out again in 2015.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.26 SITE INDEX

Criterion 3:	Element(s): 3.1
Soil and Water	Soil Quality and Quantity
CSA Core Indicator(s): 3.1.1 Level of soil disturbance	
Measurement System:	Target Statement
Area weighted average Site Index by ecological site series by leading species	The area weighted average Site Index by leading species by site series at free growing will not be less than the SIBEC predicted site index
Value(s): Soil Productivity	
SFM Objective: We will protect soil resources to sustain productive forests.	

STATUS AND COMMENTS:

The following Table 14 shows the current status for stands declared free growing on TFL 48 and site productivity assessed using the growth intercept methodology.

Currently 3, down from 5 in 2011, BEC/site series units are not meeting the predicted SI target. Two of the units have <7ha surveyed which is a very limited sampling size and puts into question the statistical validity of the data. The one unit, SBSwk2 pine site series 5, has had 189 ha surveyed and does not meet the target performance. It is expected to meet the target within the next five years as survey methods are now more accurate. This unit will continue to be monitored to determine if a trend exists.

Table 14: Site Index by Leading Species for Free Growing Stands

		Species								
		Subalpine Fir			White Spruce			Lodgepole Pine		
BEC	Site Series	Ha	SI	Predicted SI	Ha	SI	Predicted SI	Ha	SI	Predicted SI
BWBSmw1	1	-	-	N/A	607.2	20.2	17.7	223.7	19.2	18
	2	-	-	N/A	95.3	18.6	9	20.5	19.6	12
	3	-	-	N/A	146.7	19.7	17	82.8	16.3	18
	4	-	-	N/A	63.7	18.7	12	25.2	18.5	15
	5	-	-	N/A	78.4	19.3	18	24.3	19.4	18
	6	-	-	N/A	49.0	19.6	18.1	0.2	9.0	18
	7	-	-	N/A	12.7	19.2	18	0.6	18.0	18
BWBSmw1 Total		-	-	N/A	1,052.9	19.8	16.6	377.4	18.6	17.6
BWBSwk1	1	-	-	N/A	157.4	19.3	12	296.3	17.2	15
	2	-	-	N/A	19.2	18.1	9	47.9	15.7	12
	3	-	-	N/A	37.9	17.8	9	54.5	14.6	12
	4	-	-	N/A	4.1	21.5	12	6.2	12.2	15
	5	-	-	N/A	0.0	0.0	15	0.5	16.0	15
	6	-	-	N/A	0.0	0.0	15	0.3	18.3	15
BWBSwk1 Total		-	-	N/A	218.7	19.0	11.5	405.6	16.6	14.6
BWBSwk2	1	-	-	N/A	36.9	17.1	12	46.4	19.0	15
	2	-	-	N/A		0	9	3.9	19.0	12
	3	-	-	N/A	36.9	17.1	12	50.3	19.0	15

	4	-	-	N/A	1,057.3	17.0	9	697.9	17.2	12
	5	-	-	N/A	73.5	17.0	15	52.8	18.0	15
BWBSwk2 Total		-	-	N/A	1,204.6	17.2	11.9	851.3	16.2	15
ESSFmv2	1	728.9	15.8	12	179.0	16.9	15	214.9	16.8	15
	2	19.4	14.5	9	4.1	17.0	9	0.6	15.5	12
	3	1.7	18.0	6	0.1	15.0	6	0.2	17.5	9
	4	3,425.3	15.0	15	1,331.5	17.0	15	1,004.8	17.1	18
	5	0.0	0.0	15	0.0	0.0	15	0.0	0.0	15
	6	0.0	0.0	15	0.0	0.0	15	0.0	0.0	15
ESSFmv2 Total		4,175.3	0	12.8	1,514.7	0	14.6	1,220.5	0	15.1
ESSFmv4	1	0.0	0.0	12	0.0	0.0	15	0.0	0.0	15
	2	0.0	0.0	9	0.0	0.0	9	0.0	0.0	12
	3	0.0	0.0	6	0.0	0.0	6	0.0	0.0	9
	4	0.0	0.0	15	0.0	0.0	15	0.0	0.0	18
ESSFmv4 Total		0.0	0	10.5	0.0	0	15	0.0	0	13.5
ESSFwc3	1	104.3	16.5	15	2.3	16.5	15	-	-	N/A
	2	1.3	14.0	9	0.0	0.0	9	-	-	N/A
	3	39.1	17.4	15	0.7	23.0	15	-	-	N/A
ESSFwc3 Total		144.7	16.7	15	3.0	17.9	13	0.0	-	N/A
ESSFwk2	1	641.0	16.8	15	289.2	17.4	15	80.2	16.5	N/A
	2	437.7	17.7	9	23.7	16.4	9	90.0	15.4	N/A
	3	341.3	16.9	12	49.8	18.6	12	11.6	17.3	15
	4	370.8	18.3	15	120.5	16.3	15	13.8	16.9	N/A
	5	232.8	19.5	15	62.1	19.6	15	3.6	13.9	N/A
	6	41.9	16.3	12	5.9	20.9	12	1.6	17.5	N/A
ESSFwk2 Total		2,065.5	17.6	12.4	551.2	17.5	14.1	200.9	16.0	15
SBSwk2	1	766.5	16.1	15	833.1	20.0	21.8	699.7	19.1	21
	2	16.9	18.4	12	50.4	19.9	15	47.8	18.8	15
	3	224.7	15.3	12	323.7	18.2	18	639.2	17.7	18
	4	98.3	14.7	N/A	418.5	18.8	15	224.3	17.8	18
	5	165.2	17.5	18	333.8	19.1	21	168.2	18.4	21
	6	31.4	18.2	18	147.6	21.8	24	2.4	20.2	21
	7	6.1	15.2	N/A	14.0	22.7	N/A	5.5	20.3	N/A
SBSwk2 Total		1,309.2	16.1	14.6	2,121.1	19.5	19.7	1,787.2	18.4	19.8
Grand Total		7,694.7	16.0	12.8	6,666.2	18.7	16.9	4,842.9	17.8	17.4

REVISIONS:

No revisions are suggested for this indicator or objective.

2.27 COARSE WOODY DEBRIS

Criterion 3:	Element(s): 3.1
Soil and Water	Soil Quality and Quantity
CSA Core Indicator(s): 3.1.2 Level of downed woody debris	
Indicator Statement	Target Statement
Average Coarse Woody debris size and m ³ /ha on blocks harvested on the TFL since Jan 1, 2004	Average retention level over the TFL since Jan 1, 2004 will be at least 92 m ³ /ha of which a minimum of 46 m ³ /ha will be greater than 17.5cm in diameter
Value(s): Ecosystem Productivity	
SFM Objective: We will protect soil resources to sustain productive forests.	

STATUS AND COMMENTS:

Currently 11 plots have been established on TFL 48. Progress to date for the 11 samples shows an average of 128 m³/ha of which 56 m³/ha is greater than 17.5 cm diameter. No blocks fell within the sampling grid in 2013.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.28 STREAM CROSSING QUALITY INDEX

Criterion 3:	Element(s): 3.2
Soil and Water	Water Quality and Quantity
CSA Core Indicator(s): 3.2.1 Proportion of watershed or water management areas with recent stand-replacing disturbance	
Indicator Statement	Target Statement
Maximum Stream Crossing Quality Index (SCQI) by watershed	The maximum SCQI score is 0.40 by watershed
Value(s): Water Quality and Quantity	
SFM Objective: We will maintain water quality and quantity.	

STATUS AND COMMENTS:

In the 2013 field season a total of 176 crossings were surveyed in the Upper Wolverine (69), the Lower Wolverine (22) and the Upper Sukunka (85) watersheds. Sampling of the above mentioned watersheds is based on the SCQI cumulative effects hazard rating. All of the sampled watersheds achieved an SCQI score well below the maximum target of 0.4. A total of 11 crossings were in the high to very high class. There was 1 crossing identified in the very high class which was located in the Middle Wolverine watershed with the remaining 10 crossings identified as high and located on streams being in either the 4 or 5 width classes.

In 2012 the table showed that the Hasler watershed was just over the target SCQI of 0.4. This watershed was surveyed in 2011 and 6 actions came out of the analysis. Canfor has addressed all of the actions identified on the roads under our responsibility. The other actions were on roads managed by other licensees. These actions were communicated to the license holders and should have been addressed. All watersheds should now meet the SCQI targets.

**Table 15: SCQI and Water Quality Concerns for Watersheds within TFL 48
– Sampling Completed 2001 to 2013**

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 ¹	% None (#streams/#streams sampled)	% Low (#streams/#streams sampled)	% Medium (#streams/#streams sampled)	% High (#streams/#streams sampled)
Gaylard (2009) ³	54	0.34	3.66	0.02	1	0	0	0	0
					2	66.7	33.3	0	0
					3	80	20	0	0
					4	8.3	83.3	8.3	0
					5	0	94.1	5.9	0
Lower Peace Reach (2009)	54	0.38	2.38	0.02	1	0	0	0	0
					2	0	0	0	0
					3	57.1	42.9	0	0
					4	6.1	93.9	0	0
					5	0	100	0	0
Gething (2009)	52	0.28	4.29	0.02	1	0	0	0	0
					2	50	50	0	0
					3	80	10	10	0
					4	0	95.5	4.5	0
					5	0	100	0	0
Upper Wolverine (2013)	69	0.28	16.2	0.09	1	0	0	0	0
					2	25	75	0	0
					3	60	0	0	40
					4	46.7	33.3	13.3	6.7
					5	18.5	44.5	33.3	3.7
Middle Wolverine (2013)	18	0.13	3.96	0.02	1	0	0	0	0
					2	66.7	0	0	33.3
					3	72.7	9.1	0	18.2
					4	50	50	0	0
					5	75	25	0	0
Hasler Creek (2011)	120	0.63	87.72	0.46	1	0	0	0	0
					2	20	80	0	0
					3	30.8	53.9	0	15.4
					4	7	67.5	20.9	4.7
					5	16.9	50.9	20.3	11.9
Brazion Creek (2002)	105	0.32	34.48	0.11	1	0	0	0	0
					2	20	40	0	40
					3	5.6	44.4	22.2	27.8
					4	27.2	47.3	16.4	9.1
					5	22.2	55.6	14.8	7.4
Highhat Creek (2012)	70	0.45	17.87	0.11	1	0	100	0	0
					2	50	50	0	0
					3	9.1	90.9	0	0
					4	40	60	0	0
					5	51.7	48.3	0	0
Lower Carbon (2010)	37	0.28	3.73	0.03	1	0	100	0	0
					2	100	0	0	0
					3	33.3	55.5	11.1	0

					4	42.9	42.9	14.3	0
					5	57.9	31.6	10.5	0
Seven Mile (2010)	17	0.22	2.96	0.04	1	0	0	0	0
					2	100	0	0	0
					3	0	100	0	0
					4	14.3	71.4	0	14.3
					5	60	20	20	0
Eleven Mile (2010)	22	0.1	0.56	0	1	0	100	0	0
					2	75	25	0	0
					3	100	0	0	0
					4	50	50	0	0
					5	60	40	0	0
Upper Carbon (2010)	55	0.12	1.9	0.01	1	75	25	0	0
					2	57.1	42.9	0	0
					3	33.3	66.6	0	0
					4	20	80	0	0
					5	60.9	39.1	0	0
Lower Sukunka (2006)	191	0.36	70.63	0.13	1	0	0	0	0
					2	0	66.7	0	33.3
					3	10	30	15	45
					4	20.2	41.5	10.6	27.7
					5	28.8	37	23.3	10.9
Upper Sukunka (2013)	89	N/A ²	N/A ²	N/A ²	1	100	0	0	0
					2	0	100	0	0
					3	30	20	20	30
					4	18.8	43.7	18.8	18.7
					5	31	34.5	31	3.4
Lower Pine Residual (2012)	78	0.44	1.62	0.01	1	0	0	0	0
					2	0	0	0	0
					3	0	0	0	0
					4	20	40	33.3	6.7
					5	9.5	54	11.1	25.4
Burnt Creek (2006)	205	0.33	72.66	0.12	1	100	0	0	0
					2	25	37.5	25	12.5
					3	37.9	27.6	20.7	13.8
					4	37.3	22.9	19.3	20.4
					5	29.3	26.8	20.7	33.2
Lower Murray (2007)	55	0.32	17.79	0.1	1	100	0	0	0
					2	50	50	0	0
					3	31.3	37.5	25	6.3
					4	10.7	71.4	3.6	14.3
					5	16.7	66.7	16.7	0
Upper Murray (2007)	154	0.86	32.18	0.18	1	100	0	0	0
					2	100	0	0	0
					3	54.5	27.3	13.6	4.5
					4	16.9	61	5.1	16.9
					5	52.4	11.1	25.4	11.1
Lower Wolverine	63	0.27	19.3	0.08	1	100	0	0	0
					2	75	25	0	0
					3	36.4	63.6	0	0
					4	31	40.5	4.8	23.8
					5	40	40	0	20
Upper Pine Residual	133	0.33	36.75	0.09	1	100	0	0	0
					2	55.6	33.3	11.1	0

(2008)					3	14.8	59.3	18.5	7.4
					4	29.5	51.1	10.2	9.1
					5	37.5	25	37.5	0
Johnson (2009)	49	0.23	5.23	0.02	1	0	0	0	0
					2	75	25	0	0
					3	38.5	61.5	0	0
					4	54.2	37.5	4.2	4.2
					5	25	75	0	0

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

3 = Year the watershed was surveyed

REVISIONS:

No revisions are suggested for this indicator or objective.

2.29 ACTION PLANS FOR HIGH WATER QUALITY CONCERN RATING (WQCR)

Criterion 3:	Element(s): 3.2
Soil and Water	Water Quality and Quantity
CSA Core Indicator(s): 3.2.1 Proportion of watershed or water management areas with recent stand-replacing disturbance	
Indicator Statement	Target Statement
Number of crossings with a High Water Quality Concern (WQCR) with actions plans prepared within one year of discovery	100% of High WQCR crossings will have action plans prepared within one year of discovery
Value(s): Water Quality and Quantity	
SFM Objective: We will maintain water quality and quantity.	

STATUS AND COMMENTS:

Of the outstanding action plan from 2012, to seed a road it was scheduled to be completed in 2013. This action was completed and so there are no longer any outstanding actions from the 2012 year. In 2013 there were 11 crossings requiring action plans. Of these 11 action plans comments from the survey were to grade the road to maintain crown if required. As the majority of these roads are still actively used they are being regularly graded and maintained throughout the year. All of the action plans that were under Canfor responsibility were completed. All crossings requiring action plans that were under the responsibility of other licensees were reported to the proper maintenance personnel in 2013.

REVISIONS:

No revisions are suggested for this indicator or objective

2.30 PEAK FLOW INDEX

Criterion 3:	Element(s): 3.2
Soil and Water	Water Quality and Quantity

CSA Core Indicator(s): 3.2.1 Proportion of watershed or water management areas with recent stand-replacing disturbance	
Indicator Statement	Target Statement
The percentage of watersheds within TFL 48 achieving baseline thresholds for Peak Flow Index	A minimum of 95% of the watersheds within TFL 48 will be below the baseline threshold
Value(s): Water Quality and Quantity	
SFM Objective: We will maintain water quality and quantity.	

STATUS AND COMMENTS:

A new projection of Peak Flow Index (PFI) has been completed for 2013. Currently 32 of 34 watersheds (94%) are meeting the PFI target. The projection for future development shows that two watersheds, Gaylard and the Gething, will be over the Max PFI target. Blocks that have not yet been developed are typically larger in size at the planning stage than they are post block layout. This is to ensure field crews capture as much pine infested with Mountain Pine Beetle. Block development within this watershed will be closely monitored such that the established target is not exceeded. The information presented in this annual report forecasts disturbances and growth to 2014.

It should be noted that the Peak Flow analysis presented here was updated in the late summer of 2014 and includes the disturbance created by the 2014 wildfires in TFL 48. The Mount McAllister fire has created the additional disturbance which has elevated the equivalent clearcut area in the Gaylard and Gething watersheds above the maximum PFI target.

Table 16: Peak Flow Index Post Development Status

2013 Data							
Watershed	H60 ELEV	Watershed (ha)	Current Development		Future Development		Max PFI Target
			ECA (ha)	PFI (%)	ECA (ha)	PFI (%)	
Adams Creek	1,107	5,462	3.7	0.1	1,032.60	18.9	43
Aylard Creek	1,036	5,460	35.6	0.7	313.1	5.7	37
Basin "862"	853	2,814	890.3	31.6	861.3	30.6	43
Beany Creek	958	3,902	15.7	0.4	221.1	5.7	37
Brazion Creek	1,220	32,768	2,496.30	7.6	3,947.30	12	37
Burnt Creek	1,185	67	0.0	0.0	0.0	0.0	37
Cameron Creek	783	778	79.9	10.3	81.9	10.5	50
Dunlevy Creek	1,047	17,020	699	4.1	1,971.40	11.6	31
Eleven Mile	1,326	563	90.6	16.1	91.6	6.9	43
Gaylard	1,029	95	56.1	59.3	53.4	56.5	31
Gething	996	124	91.3	73.5	87.6	70.6	31
Gwillim	1,066	844	289.1	34.2	289.1	34.2	43
Hasler Creek	1,077	62	14.9	24.0	14.9	24.0	37
Hihat Creek	1,037	15,657	2,846.60	18.2	5,687.10	36.3	43
Johnson	891	6,874	838.9	12.2	797.6	11.6	37
Lebleu Creek	874	81	6.4	7.9	6.4	7.9	50
LeMoray Creek	1,291	11,199	561.6	5	560	5	37
Lower Carbon	1,057	1,487	270.4	18.2	285.5	19.2	50
Lower Murray	1,066	7	1.2	0.1	1.2	0.1	37
Lower Peace Reach	955	522	99.1	10.4	99.1	10.4	50
Lower Pine Residual	923	16	3.1	0.3	3.1	0.3	43
Lower Sukunka	904	2,507	1063.6	42.4	997.7	39.8	43
Lower Wolverine	1,161	5	0.7	0.0	0.7	0.0	37
Medicine Woman Creek	975	65	13.2	1.4	13.2	1.4	35
Middle Wolverine	1,205	109	6.7	0.6	6.7	0.6	43
North Peace Residual	929	9,469	472.9	5	472.9	5	50
Ruddy Creek	922	60	24.9	2.7	24.9	2.7	31
Seven Mile	1,257	320	47.6	3.8	47.6	3.8	43
Trapper Creek	1,179	945	0.0	0.0	0.0	0.0	37
Upper Carbon	1,291	46,295	1,301.50	2.8	1,511.90	3.3	37
Upper Murray	1,294	17,868	2,843.70	15.9	3,073.10	17.2	37
Upper Pine Residual	1,082	40,158	5,783.90	14.4	8,263.40	20.6	37
Upper Sukunka	1,075	23,459	2,582.40	11	4,364.00	18.6	43
Upper Wolverine	1,378	18,042	1,497.20	8.3	1,435.50	8	37

REVISIONS:

No revisions are suggested for this indicator or objective.

2.31 WATERSHED REVIEWS

Criterion 3:	Element(s): 3.2
Soil and Water	Water Quality and Quantity
CSA Core Indicator(s): 3.2.1 Proportion of watershed or water management areas with recent stand-replacing disturbance	
Indicator Statement	Target Statement
The percentage of watershed reviews completed where the baseline threshold is exceeded	100% of watersheds that exceed the baseline threshold will have a watershed review completed when new harvesting is planned
Value(s): Water Quality and Quantity	
SFM Objective: We will maintain water quality and quantity.	

STATUS AND COMMENTS:

In 2013 there were no watershed reviews required as there were no watersheds where the PFI was exceeded and harvesting was proposed. Going forward however, if harvesting is proposed in the Gaylard and Gething watersheds reviews will be required. Each year this will be reassessed based upon growth and new areas proposed to be harvested. If it is forecasted that the PFI may be exceeded, such as is the case with the Gaylard and Gething watersheds, block development (layout) will be monitored to ensure that the ECA (equivalent clear cut area) does not elevate the PFI (peak flow index) to above the target as shown in Indicator 30.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.32 SPILLS ENTERING WATERBODIES

Criterion 3:	Element(s): 3.2
Soil and Water	Water Quality and Quantity
CSA Core Indicator(s): 3.2.1 Proportion of watershed or water management areas with recent stand-replacing disturbance	
Indicator Statement	Target Statement
Number of reportable spills or misapplications entering water bodies	Zero reportable spills or misapplications entering water bodies
Value(s): Water Quality and Quantity	
SFM Objective: We will maintain water quality and quantity	

STATUS AND COMMENTS:

There were no spills or misapplications of petroleum products into a riparian feature in 2013 on the DFA. In 2012 two reports of misapplication of herbicide into riparian features from the 2011 spray program. The first report entailed two drift areas that resulted in a very small amount of herbicide to enter the riparian buffers. The second report is on-going due to the identification of another riparian feature located in the block later on after snowfall. This report suggests that a

potential S4 stream was over sprayed with glyphosate. This incident required follow up in the 2013 year to be reported on and it was found that no overspray actually occurred. Measures and procedures have been put in place to address these issues and prevent them in the future.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.33 CARBON SEQUESTRATION

Criterion 4:	Element(s): 4.1
Role in Global Ecological Cycles	Carbon Uptake and Storage
CSA Core Indicator(s): 4.1.1 Net carbon uptake	
Indicator Statement	Target Statement
DFA Average Carbon (C) sequestration rate (Mg C/year)	Maintain DFA average carbon sequestration rates that are no more than 15% less than those achieved using the minimum natural range of variation
Value(s): Carbon Uptake and Storage	
SFM Objective: We will maintain the processes for carbon uptake and storage within the natural range of variation.	

STATUS AND COMMENTS:

There has been no change in the status of this indicator since reported in SFMP 4. The data analysis for this indicator occurs when the Timber Supply Analysis/Review is conducted in support of determining the next AAC Determination for the DFA. Government regulation changes have extended the period between AAC determinations which has lengthened the reporting period for this particular indicator. The next anticipated determination is expected in 2014-15.

Following are two graphs, which provides an example of the average C sequestration rate for both an individual stand (Forecast AU 3 – Natural and Forecast AU 34 – Managed) and shows the average C sequestration rate over the whole DFA over time.

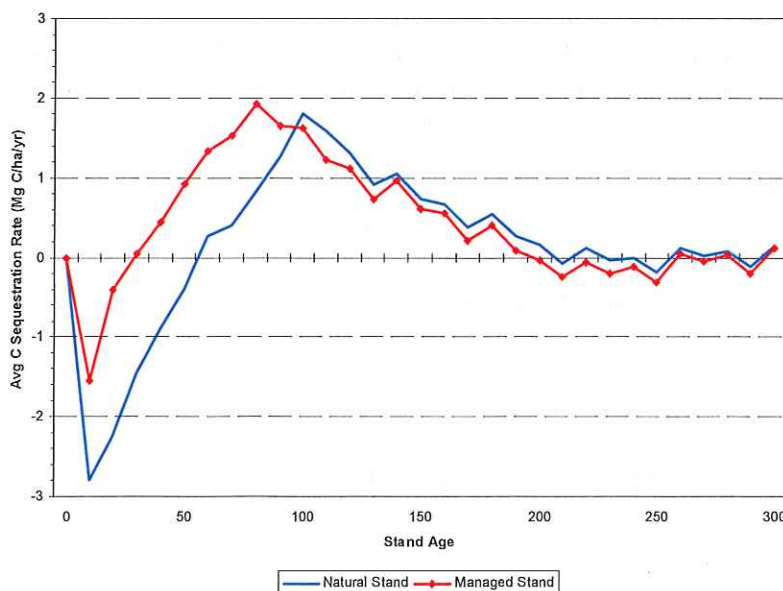


Figure 10: An Example of Average C Sequestration Rates for a Natural Spruce Leading BWBS Mesic Site Stand (Forecast AU 5) and an Associated Managed Stand (Forecast AU m³)

At the stand level there is a greater release of C to the atmosphere following the decomposition of the larger pool of dead organic matter (snags and CWD) in the natural stand which results in a lower sequestration rate during the first several decades of stand development (Figure 10). In the example provided, the average sequestration rate takes longer to return to positive values in the natural stand versus the managed stand. This is partly related to the fact that the harvested wood removed from the site during harvesting does not contribute to ecosystem C release to the atmosphere. Rather, it is assumed to be stored in wood products.

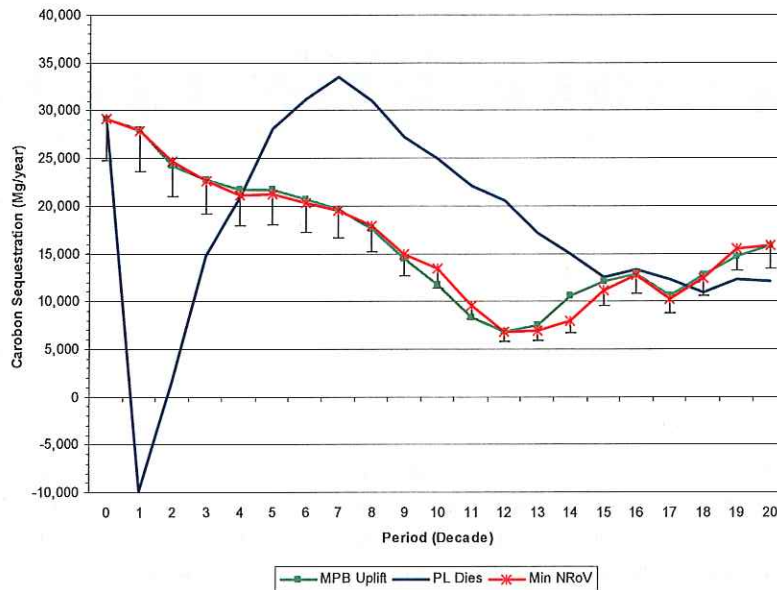


Figure 11: Carbon Sequestration (Mg C/year) within TFL 48 Over Time

At the DFA level the average sequestration rate declines from the present level of about 29,000 Mg C/yr over the next 120 years and stabilizes between 10,000 and 15,000 Mg C/yr in the long term. The decline from the current situation is due to the large amount of area (approximately 62%) that is between 40 and 140 years old and only 29% greater than 140 years old versus in 100 years the projection is that there will be only 31% of the land base between 40 and 140 years old and 58% greater than 140 years old. Over time the age class distribution is more evenly distributed with more area in younger stands and older stands with lower sequestration rates therefore the DFA level sequestration rate declines. For comparison purposes an estimate of the rate of C sequestration is provided for both the proposed AAC the sequestration rates using the minimum natural range of variation and the scenario where all pine is assumed to be killed in a mountain pine beetle outbreak.

There is no significant difference between the proposed harvest level and the minimum natural range of variation except for periods 10 and 11 in the simulation. After this point in time the sequestration rate is above or equivalent for the proposed harvest level.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.34 ECOSYSTEM CARBON STORAGE (MG) IN THE DFA

Criterion 4:	Element(s): 4.1
Role in Global Ecological Cycles	Carbon Uptake and Storage
CSA Core Indicator(s): 4.1.1 Net carbon uptake	
Indicator Statement	Target Statement
Ecosystem Carbon (C) Storage (Mg) in the DFA	Minimum of 95% of minimum natural range of variation disturbance levels of Ecosystem Carbon Storage
Value(s): Carbon Uptake and Storage	
SFM Objective: We will maintain the processes for carbon uptake and storage within the natural range of variation.	

STATUS AND COMMENTS:

There has been no change in the status of this indicator since reported in SFMP 4. The data analysis for this indicator occurs when the Timber Supply Analysis/Review is conducted in support of determining the next AAC Determination for the DFA. Government regulation changes have extended the period between AAC determinations which has lengthened the reporting period for this particular indicator. The next AAC determination is expected in 2014-15. There is an estimated 122 million Mg of C currently stored in the TFL 48 ecosystem declining in the long term to approximately 76 million Mg of C (Figure 13). Both the C storage levels based on the proposed AAC and the minimum and maximum range of variation decline over the next 180 years and then stabilize for the remainder of the simulation. There is no significant difference between the different alternate strategies and the proposed strategy in ecosystem carbon storage over time.

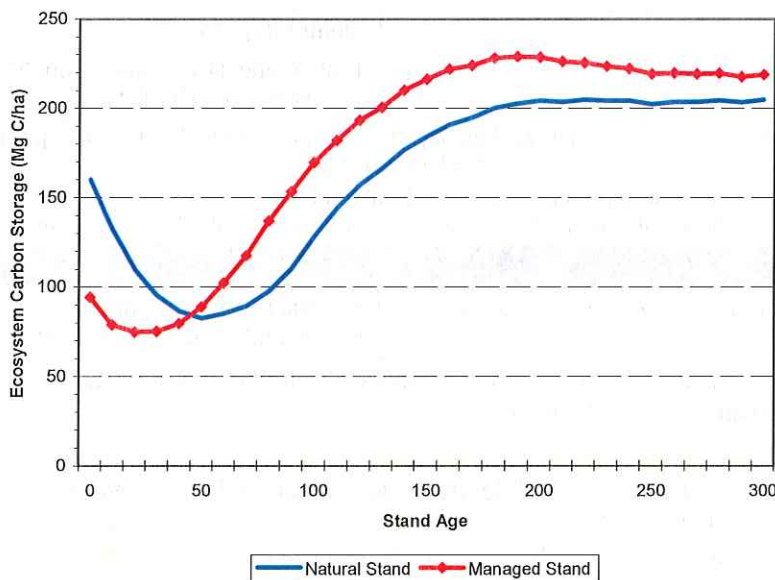


Figure 12: An Example of C Storage for a Natural Spruce Leading BWBS Mesic Site Stand (Forecast AU 5) and an Associated Managed Stand (Forecast AU m³)

For comparison a stand level graph (Figure 12) is provided which demonstrates a natural stand and its associated managed stand C storage levels over time. Note that while the natural stand

started with more C remaining on the site after the disturbance the managed stand catches up in about 40 years.

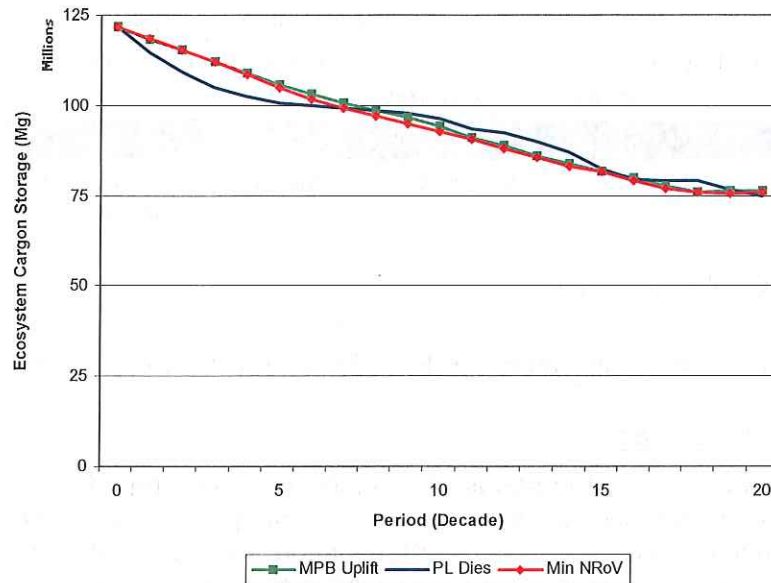


Figure 13: Total Ecosystem Carbon (Mg) Storage in the DFA Over Time

REVISIONS:

No revisions are suggested for this indicator or objective.

2.35 RANGE OPPORTUNITIES

Criterion 5:	Element(s): 5.1, 6.3
Economic and Social Benefits	Timber and Non-Timber Benefits; Forest Community Well-Being and Resilience
<p>CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA</p> <p>6.3.1 Evidence that the organization has co-operated with other forest-dependant businesses, forest users, and the local community to strengthen and diversify the local economy</p>	
Indicator Statement	Target Statement
Annual minimum number of Animal Unit Months opportunity	We will report out annually the number of Animal Unit Months that are authorized on the TFL.
Value(s): Timber and Non-Timber Multi-use Benefits, Strengthening and Diversifying Community Businesses and Business Opportunities	
<p>SFM Objective:</p> <p>We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.</p> <p>We will provide opportunities for local economic development.</p>	

STATUS AND COMMENTS:

In 2013, there was a total of 1,252 AUM's available on range tenures on TFL 48. This did not change from 2012.

Table 17: AUM's on TFL48 in 2013

Range Tenure	Total AUM's	TFL Proportion (%)	TFL AUM's
RAN077560	660	40.5	267
RAN073263	104	1.2	1
RAN073616	366	26.5	97
RAN073876	767	34.9	268
RAN074239	51	100.0	51
RAN074307	356	39.8	142
RAN075557	0	0.1	0
RAN075680	0	87.9	0
RAN076149	157	2.8	4
RAN076313	170	0.04	0
RAN076505	118	9.9	12
RAN076672	699	58.7	410
Total			1252

REVISIONS:

Completed in 2012.

2.36 HARVEST METHOD

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
Proportion (%) of coniferous harvesting area completed with conventional ground based methods by 5 year cut control period	A maximum of 84% of the coniferous harvesting area (ha) will be completed with conventional ground based methods by 5 year cut control period
Value(s): Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

STATUS AND COMMENTS:

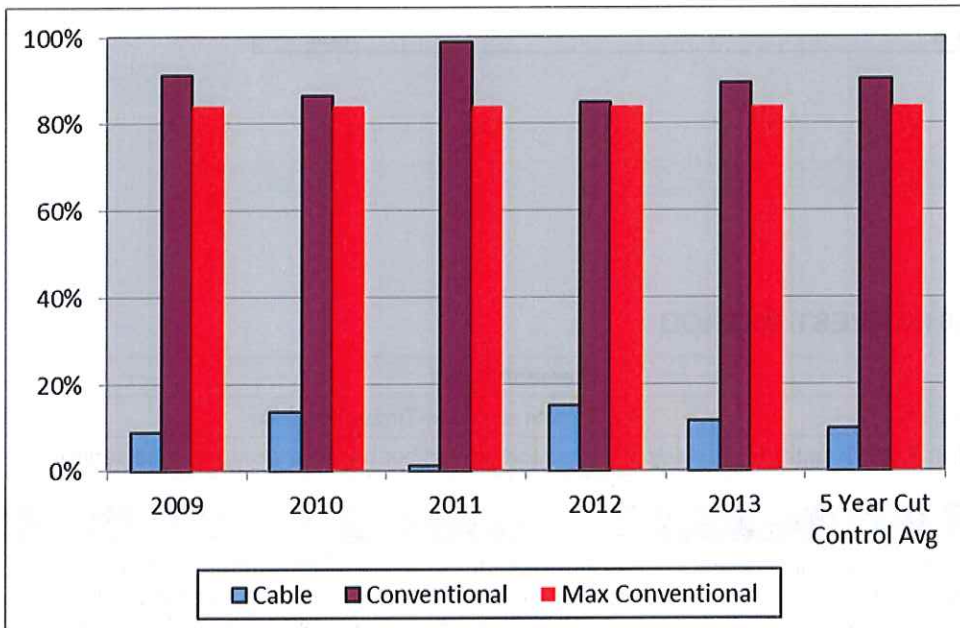
The following Figure 14 shows the history of the harvesting program over the cut control period 2009 – 2013. At the end of December 2013, 89% of area harvested used a conventional system with the remaining 11% utilizing the cable system. The indicator was missed by 4% and therefore the target was not achieved. Lumber market conditions have a direct effect on the pricing of forested stands. With poor market pricing the harvesting of stands using the cable system would result in added costs that would not get recognized in the value of the stand. The

added cost of utilizing cable harvesting is completely absorbed by the Licencees which have made many of these stands un-economical to harvest.

As market conditions improve, and forest licencees in the interior of the province begin to harvest stands not infested by the Mountain Pine Beetle, the value of forest stands will increase which will make stands in the Chetwynd area more attractive to harvest using cable or other steep slope systems. In order to achieve this target over the next 5 year cut control period Canfor is developing a strategy to target harvesting approximately 100,000m³ of volume by cable or other steep slope operations on an annual basis.

Canfor is working towards achieving the conventional/cable target and plans to increase the proportion of steep slope harvest in the 2014-2015 reporting year. Currently Canfor and other local licensees are faced with a lack of contractors that have the ability to operate cable or steep slope logging programs. This has been identified as a problem that will continue to plague us in the near future and we are subsequently looking at new and innovative ways to log on steeper ground within the TFL, in order to increase the proportion of steep slope harvest within the TFL.

Figure 14: Proportion of Conventional Harvest Systems Used 2008-2012



REVISIONS:

No revisions are suggested for this indicator or objective.

2.37 PROPORTION OF HARVESTING CONSISTENT WITH VISUAL QUALITY OBJECTIVE

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement

Proportion of harvesting within known visual areas that are consistent with the Visual Quality Objective (VQO)	100% of harvesting within visual areas will be consistent with the Visual Quality Objective
Value(s): Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

STATUS AND COMMENTS:

In 2013 there were 8 blocks that were harvested within areas requiring conformance with visual quality objectives. These blocks were consistent with the VQOs.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.38 BACK COUNTRY CONDITION

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
Proportion (%)of back country areas (ha) that are in a semi-primitive recreation opportunity spectrum (ROS) class	We will maintain or increase semi-primitive ROS in Klin-se-za, Bocock, Butler Ridge, Pine/Lemoray, Peace River/Boudreau and Elephant Ridge/Gwillim Protected Areas and manage Special Management Zones (Klin se za, North Burnt, Dunlevy) as per LRMP (See Table for baseline)
Value(s): Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

STATUS AND COMMENTS:

There has been no change to the status of this indicator since reported in the SFMP 4 in 2005. In 2013 there was no harvesting or road construction in or adjacent to any of the backcountry areas. In 2015 the inventory data will be updated.

The baseline (2001) and current (2005) recreational opportunity spectrum for the stated Backcountry areas are shown on the following tables (Table 18).

Table 18: Baseline Condition – ROS Inventory

Back Country Area	ROS Class Baseline Condition – (2001)							
	Roaded			Roaded Total	Semi Primitive		Semi Primitive Total	Grand Total
	Rural	Modified	Natural		Motorized	Non Motorized		
Bocock Peak						1,126	1,126	1,126
Butler Ridge			1,133	1,133	1,309	4,151	5,460	6,593
Dunlevy Creek			5,283	5,283	5,001	21,564	26,565	31,848
Elephant Ridge / Gwillim		12		12		2,801	2,801	2,813
North Burnt		53		53	6,076	10,683	16,759	16,813
Peace River / Boudreau	990			990		1,219	1,219	2,209
Pine - Lemoray					882	2,260	3,142	3,142
Klin Se Za			0	0		2,668	2,668	2,669
Klin Se Za Headwaters			7,140	7,140	137	10,581	10,718	17,857
Klin Se Za Mountain			1,711	1,711		4,639	4,639	6,350
Grand Total	990	65	15,266	16,321	13,404	61,694	75,098	91,419

Table 19 Current Condition – ROS Inventory Updated to June 2005

Back Country Area	ROS Class (2005)							
	Roaded			Roaded Total	Semi Primitive		Semi Primitive Total	Grand Total
	Rural	Modified	Natural		Motorized	Non Motorized		
Bocock Peak						1,126	1,126	1,126
Butler Ridge			1,133	1,133	1,309	4,151	5,460	6,593
Dunlevy Creek			5,283	5,283	5,946	20,619	26,565	31,848
Elephant Ridge / Gwillim		12		12		2,801	2,801	2,813
North Burnt		53		53	7,874	8,886	16,759	16,813
Peace River / Boudreau	990			990		1,219	1,219	2,209
Pine - Lemoray					882	2,260	3,142	3,142
Klin Se Za			0	0		2,668	2,668	2,669
Klin Se Za Headwaters			7,140	7,140	137	10,581	10,718	17,857
Klin Se Za Mountain			1,711	1,711		4,639	4,639	6,350
Grand Total	990	65	15,266	16,321	16,147	58,951	75,098	91,419

REVISIONS:

No revisions are suggested for this indicator or objective

2.39 RECREATIONAL SITES

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
Number of recreational trails and campsites maintained by Canfor	Canfor will provide and/or maintain 1 backcountry trail and 3 campsites on TFL 48
Value(s): Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will provide opportunities for a feasible mix of timber, recreational activities, visual quality and non-timber commercial values.	

STATUS AND COMMENTS:

Canfor maintains the Gething Creek, Carbon Lake and Wright Lake campsites and the Battleship Mountain Trail. The Gething and Carbon are road access sites. Wright Lake campsite is a remote wilderness site with off highway vehicle or hiking access. The Battleship Mountain trailhead is road accessible and in just a few hours you can be in the alpine. All of these recreational values provide a number of outdoor activities (hunting, fishing, hiking and canoeing). All of the above recreational sites can be accessed from the Johnson Creek FSR.

In 2013 campsite maintenance was set to be tendered out to a local contractor however the Mount McAlister fire that started in late July prevented any maintenance due to road closures and a very active and unpredictable fire.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.40 CONSISTENCY WITH THIRD PARTY ACTION PLANS

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
Consistency with mutually agreed upon action plans for guides, trappers, range tenure holders, and other non-timber commercial interests	Operations 100% consistent with the resultant action plans
Value(s): Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

STATUS AND COMMENTS:

In 2013 there were no action plan agreements signed with any users on the TFL. Nor were there any pre-existing action plans requiring implementation in 2013.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.41 WASTE

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
The percentage of blocks and roads assessed in which avoidable waste and residue levels are within the target range	Annually, 100% of cutblocks and roads will fall within the target avoidable waste and residue range where scale based stumpage is applied and waste and residue benchmarks are still in place.
Value(s): Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

STATUS AND COMMENTS:

In 2013 there were a total of 65 blocks harvested. Of the 63 Canfor blocks, 21 blocks fell under scale based stumpage where waste benchmarks still apply. The blocks that were surveyed were below waste benchmarks. The remaining blocks are not subject to waste assessments as they were either under cruise based stumpage or tabular rate stumpage which requires the licensee to pay for all of the volume of timber that is within the stand. BCTS did not report any waste issues in 2013. Chetwynd Mechanical Pulp also did not report any waste issues on the 1 block they logged in 2013.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.42 FOREST HEALTH

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
% of significant detected forest health damaging events which have treatment plans prepared	100% of significant detected forest health damaging events will have treatment plans prepared within 1 year of initial detection
Value(s): Timber and Non-Timber Multi-Use Benefits	

SFM Objective:

We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.

STATUS AND COMMENTS:

In 2013 there were no major detections of forest health issues relative to managed stands. Fill planting in 2013 was not required as all stands met planting density requirements and none were found to be NSR. In 2013 a total of 310.4 ha were brushed through aerial herbicide applications and an additional 80.2 ha were brushed manually.

In 2013 the ongoing Mountain Pine Beetle (MPB) infestation was the only significant forest health agent that occurred within the DFA.

In 2007 when the AAC was determined by the Chief Forester, the TSR package that was submitted to government to support the determination identified 26.8 million m³ of pine volume susceptible to MPB attack. Quantifying the extent of MPB attack with much precision is very difficult. In 2010 the government designated the TFL as a “salvage” Emergency Bark Beetle Management Area. Since that time there has been little to no monitoring of the rate of spread or level of attack of MPB on the TFL. However the forest health overview assessments completed by the MFLNRO have indicated that the rate of spread has decreased as the main wave of attack has moved north out of the TFL.

The 2013 projection is based on a variety of assumptions that takes into account both age class and pine stand density. This area totals approximately 67,636 ha. The corresponding volume is determined by multiplying the default volume per ha of 275. The area assumption is based on aerial flights and field observations completed by MFLNRO and Canfor staff on the spread and extent of the MPB.

Of the 73.1 million m³ of conifer volume on the TFL, 27.3 million m³ (37%) is pine and of this, approximately 18.6 million m³ (25% of the total conifer and 68% of pine volume) is attacked by MPB.

Table 20: Summary of Forest Health Issues 2000-2012

Factor	2013 Volume (m ³)	2013 Area (ha)	2000-2013 Volume (m ³)	2000-2013 Area (ha)	2013 Comments
Blow Down	0	0	10,665	38.8	Derived area from volume /275.
Mountain Pine Beetle	1,844,275	8743	18,599,900	67,636	Derived volume based on .35 m ³ per tree. Derived area from volume /275.
Spruce Bark Beetle	0	0	1,800	6.5	Derived area from volume /275.
Fire	18,300	151	21,425	247.6	No salvage operations initiated. Volume estimated at 100% mortality and 300m ³ /ha
Balsam Bark Beetle	0	0	0	0	Very light incidence in mountain areas.
Spruce Budworm	0	0	0	0	Possible incidence in 2000 – may have been misclassified.
Forest Tent Caterpillar	0	0	0	0	Scattered levels in 2000.
Environmental	0	0	0	0	Incidental and scattered snow damage – not quantifiable.
Total	1,862,575	6,857	9,329,715	34,095.9	

REVISIONS:

No revisions are suggested for this indicator or objective.

2.43 PROPORTION OF COMPLETED FOREST HEALTH ACTION PLANS

Criterion 5:	Element(s): 5.1
Economic and Social Benefits	Timber and Non-Timber Benefits
CSA Core Indicator(s): 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
Indicator Statement	Target Statement
Proportion of required actions completed as per forest health treatment plans	100% of required actions will be completed as per forest health treatment plans
Value(s): Timber and Non-Timber Multi-Use Benefits	
SFM Objective: We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

STATUS AND COMMENTS:

In 2013 there was only one directive regarding forest health and it is in regard to the harvest of MPB stands.

In June of 2010 the Ministry of Forests and Range released a memorandum regarding the Re-designation of Emergency Management Units. These units depict the location of various levels of Mountain Pine Beetle attack and associated with those levels of attack are one of three management strategies: aggressive; containment, and; salvage. The TFL was identified as an area that has sustained a high level of impact from the Mountain Pine beetle and was therefore identified as an area where the recommended management strategy is to harvest/salvage as much affected pine as possible. In 2007 when the Deputy Chief Forester determined the Annual Allowable Cut (AAC) for the TFL his direction/expectation for Canfor as the licensee was to direct harvesting towards pine leading stands with a target of exceeding 70% pine volume delivered. Deliveries from TFL 48 through 2013 were 59% pine being delivered (see Indicator 22).

REVISIONS:

No revisions are suggested for this indicator or objective.

2.44 COMMUNITY DONATIONS

Criterion 5:	Element(s): 5.2
Economic and Social Benefits	Communities and Sustainability
CSA Core Indicator(s): 5.2.1 Level of investment in initiatives that contribute to community sustainability	
Indicator Statement:	Target Statement
Canfor community donations per year	A minimum of \$7,000/year will be made available for community donations
Value(s): Local Employment	
SFM Objective: We will ensure local communities and contractors have the opportunity to share in benefits such as jobs, contracts and sales.	

STATUS AND COMMENTS:

In 2013 Canfor made a number of monetary and product donations to an array of interest groups. Monetary donations totaling \$7,700 were made as well as over \$2,000 in products.

Monetary donations were made to the Chetwynd Youth Soccer Association; the Ray Cunningham Charity which raises money for the local hospital and Senior's home; the Chetwynd Giant's Pre-Novice Team; the Sauleau First Nations Pemmican Day's event; the West Moberly Treaty Days Celebration; as well as the Chetwynd Christmas Bureau Society. Product donations included lumber to Camp Sagitawa for their housing project. In 2013 Chetwynd also received funding for their dry grad program, scholarship funds and other amateur sports programs. Chetwynd was also the winning recipient of the 2013 PNE Playhouse Challenge, which delivered the winning playhouse for our kids here in Chetwynd.

REVISIONS:

No revisions are suggested for this indicator or objective.

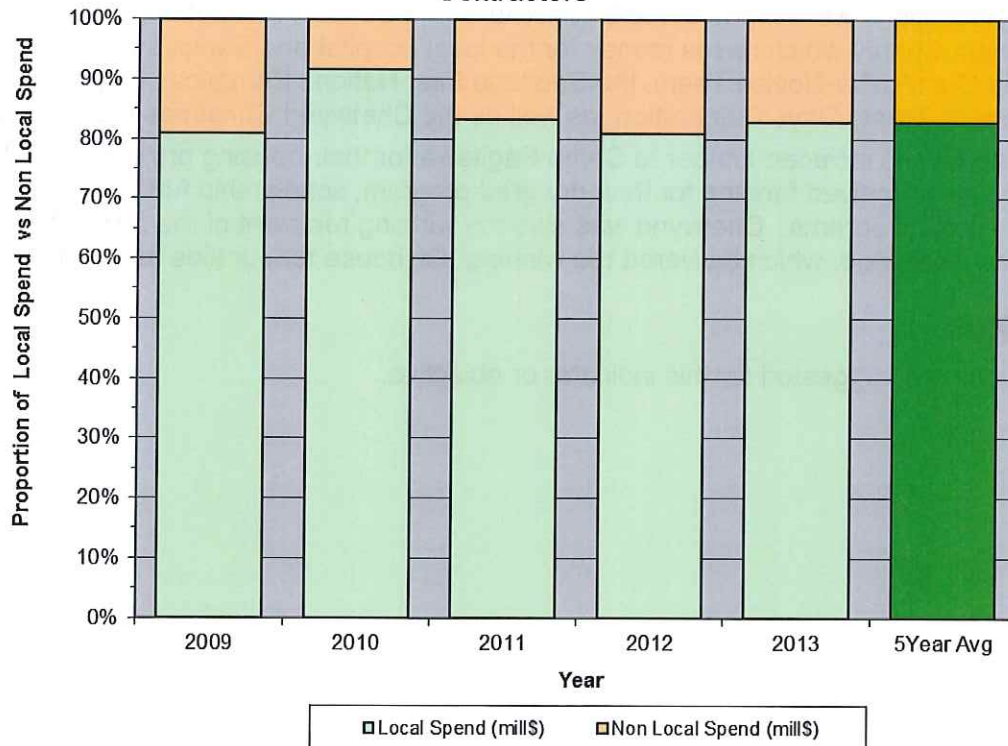
2.45 LOCAL EMPLOYMENT

Criterion 5:	Element(s): 5.2
Economic and Social Benefits	Communities and Sustainability
CSA Core Indicator(s): 5.2.1 Level of investment in initiatives that contribute to community sustainability	
Indicator Statement:	Target Statement:
The proportion of dollars spent on local versus non-local contractors	A 5 year rolling average of 65% of local vs. non-local contractors and an annual minimum of 50% local versus non-local
Value(s): Local Employment	
SFM Objective: We will ensure local communities and contractors have the opportunity to share in benefits such as jobs, contracts and sales.	

STATUS AND COMMENTS:

In 2013, not including stumpage, Canfor paid \$33.8MM to all vendors. Local vendors or contractors were paid \$28.0MM or 83% of total expenditures. The five-year rolling average from 2009 through 2013 saw 83% of expenditures made to local vendors or contractors.

Figure 15: Proportion of Dollars Spent on Local vs Non-Local Contractors



REVISIONS:

No revisions are suggested for this indicator or objective.

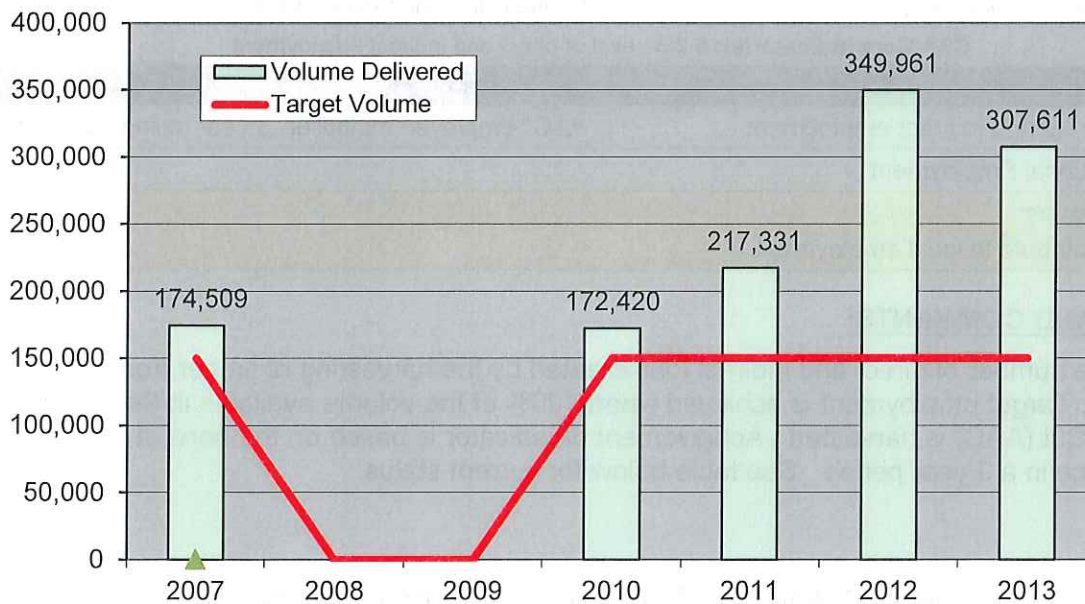
2.46 SUMMER AND FALL DELIVERIES

Criterion 5:	Element(s): 5.2
Economic and Social Benefits	Communities and Sustainability
CSA Core Indicator(s): 5.2.1 Level of investment in initiatives that contribute to community sustainability	
Indicator Element(s):	Target Statement
Volume (m ³) of timber delivered annually to Canfor Chetwynd mill between May 1st and October 31st	Minimum of 150,000 m ³ coniferous delivered to Canfor Chetwynd mill
Value(s): Local Employment	
SFM Objective: We will ensure local communities and contractors have the opportunity to share in benefits such as jobs, contracts and sales.	

STATUS AND COMMENTS:

This indicator was suspended in 2008 and 2009 when the mill was curtailed. There has been consistent achievement of this indicator when the mill is operating. In 2013 there was no significant downtime to mill operations. The only month that had no deliveries was the month of May. Between May 1st and October 31st Canfor delivered 307,611m³ of volume to the Chetwynd mill.

Figure 15: Summer and Fall Deliveries



REVISIONS:

No revisions are suggested for this indicator or objective.

2.47 LEVEL OF INVESTMENT IN TRAINING AND SKILLS DEVELOPMENT

Criterion 5:	Element(s): 5.2
Economic and Social Benefits	Communities and Sustainability
CSA Core Indicator(s): 5.2.2 Level of investment in training and skills development	
Indicator Statement	Target Statement
Consistency with training plans and requirements	Training will be 100% consistent with established training requirements
Value(s): Investment in People	
SFM Objective: We will invest resources to enhance safety and environmental knowledge and performance.	

STATUS AND COMMENTS:

All BCTS staff was trained according to their training requirements. All Canfor staff completed their required training in 2013.

REVISIONS:

No revisions are suggested for this indicator or objective.

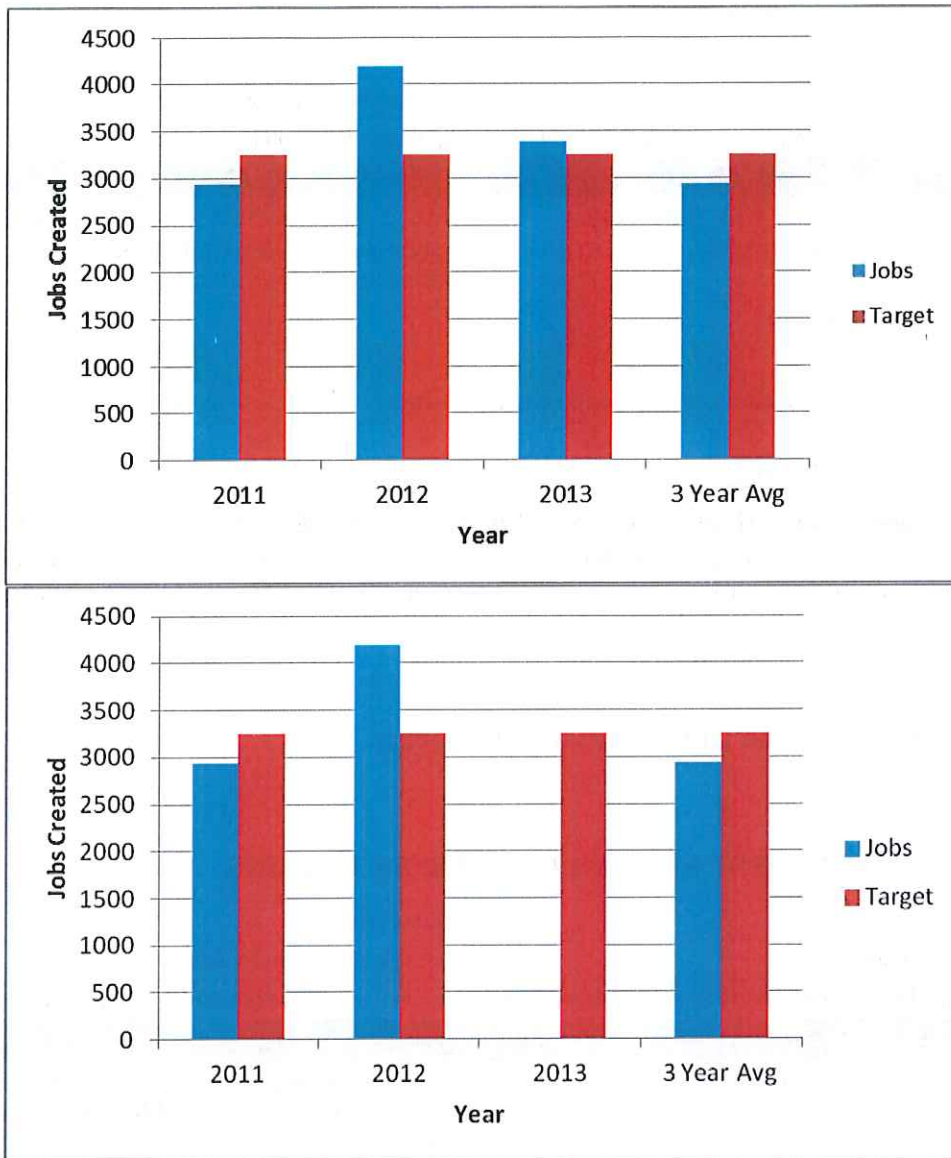
2.48 LEVEL OF DIRECT AND INDIRECT EMPLOYMENT

Criterion 5:	Element(s): 5.2
Economic and Social Benefits	Communities and Sustainability
CSA Core Indicator(s): 5.2.3 Level of direct and indirect employment	
Indicator Statement	Target Statement
Level of direct and indirect employment	AAC* employee multiplier, 3 year rolling average
Value(s): Local Employment	
SFM Objective: We will contribute to local employment.	

STATUS AND COMMENTS:

In 2013 the number of direct and indirect jobs created by the harvesting of timber from the TFL was 3,391. Target employment is achieved when 100% of the volume available in the Annual Allowable Cut (AAC) is harvested. Achievement of indicator is based on the harvest performance in a 3 year period. See table below for current status.

Table 21: Employment Created – 3 Year Rolling Average



REVISIONS:

No revisions are suggested for this indicator or objective.

2.49 LEVEL OF ABORIGINAL PARTICIPATION IN THE FOREST ECONOMY

Criterion 5:	Element(s): 5.2
Economic and Social Benefits	Communities and Sustainability
CSA Core Indicator(s): 5.2.4 Level of Aboriginal participation in the forest economy	
Indicator Statement	Target Statement
Opportunities available for First Nations to participate in the forest economy	Report annually the number and type of opportunities available to First Nations to participate in the forest economy
Value(s): Forest Economy	
SFM Objective: We will seek Aboriginal participation in the forest economy	

STATUS AND COMMENTS:

In 2013 there were 6 opportunities for First Nations to be involved in the forest economy. Canfor put out survey contracts for open bid as part of a Forests For Tomorrow Project and one project for Recreation site maintenance. There were 3 timber sale licences that were offered to the public by BCTS.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.50 FIRST NATIONS AWARENESS TRAINING

Criterion 6:	Element(s): 6.1
Society's Responsibility	Aboriginal and Treaty Rights
CSA Core Indicator(s): 6.1.1 Evidence of a good understanding of the nature of Aboriginal title and rights	
Indicator Statement	Target Statement
First Nations awareness training.	100% of Canfor and BCTS staff involved with First Nations shall receive First Nations awareness training.
Value(s): Treaty and Aboriginal Rights	
SFM Objective: We will recognize and respect Treaty 8 Rights.	

STATUS AND COMMENTS:

All licensee staff has received First Nations awareness training.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.51 CONSULTATION AND INFORMATION SHARING WITH FIRST NATIONS ON MANAGEMENT PLANS

Criterion 6:	Element(s): 6.1, 6.4
Society's Responsibility	Aboriginal and Treaty Rights; Fair and Effective Decision-Making
CSA Core Indicator(s): 6.1.2 Evidence of best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of the plans 6.4.3 Evidence of efforts to promote capacity development and meaningful participation for Aboriginal communities	
Indicator Statement	Target Statement
Consultation and Information sharing with First Nations on management plans	Information Sharing and Consultation will occur with affected First Nations on 100% of Management Plans
Value(s): Treaty and Aboriginal Rights, Level of Knowledge for Decision Making	
SFM Objective: We will recognize and respect Treaty 8 Rights. We will provide information to public and First Nations about forest ecosystem values and management. We will have an effective and satisfactory process that enables public participation of stakeholders and First Nations.	

STATUS AND COMMENTS:

Management Plans consulted on included: (1) the 2013 Annual Operating Plan/Fibre Development Plan which identifies proposed harvest cut blocks for both Canfor and BCTS, and (2) the 2013 Notification of Intent to Treat (NIT) which lists the reforested areas that are scheduled for vegetative control utilizing herbicides.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.52 DIVERSIFYING THE LOCAL ECONOMY

Criterion 6:	Element(s): 6.3
Society's Responsibility	Forest Community Well-Being and Resilience
CSA Core Indicator(s): 6.3.1 Evidence that the organization has co-operated with other forest-dependant businesses, forest users, and the local community to strengthen and diversify the local economy	
Indicator Statement	Target Statement
Primary and by-products that are bought, sold, or traded with other forest dependent businesses in the local area.	On an annual basis at least 5 first order wood products will be provided for production from trees harvested from the DFA.
Value(s): Strengthening and Diversifying Community Businesses and Business Opportunities	
SFM Objective: We will provide opportunities for local economic development.	

STATUS AND COMMENTS:

Over 2013 there were 5 products (lumber, trim blocks, chips, white wood, and hog) produced by the Chetwynd sawmill. All of these products were sold or had agreements in place for their use.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.53 SAFETY OVER THE DFA

Criterion 6:	Element(s): 6.3
Society's Responsibility	Forest Community Well-Being and Resilience
CSA Core Indicator(s): 6.3.2 Evidence of co-operation with DFA-related workers and their unions to improve and enhance safety standards, procedures, and outcomes in all DFA-related workplaces and affected communities 6.3.3 Evidence that a worker safety program has been implemented and is periodically reviewed and improved	
Indicator Statement	Target Statement
Implementation and maintenance of certified safety program	Canfor and BCTS will implement and maintain certified safety programs
Value(s): Level of Safety Committed to Operations	
SFM Objective: We will maintain safety certification and contribute to improving the safety of operations on the DFA	

STATUS AND COMMENTS:

Throughout 2013 Canfor operated under its Occupational Health & Safety system required by the BC Forest Safety Council and maintained its Safe Companies Certification. BCTS also maintained their Safe Companies Certification.

To ensure safety is of the utmost priority, Canfor and BCTS require that all contractors who conduct work on the DFA are also Safe Companies Certified or certified to an equivalent safety certification standard.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.54 PUBLIC ADVISORY COMMITTEE SATISFACTION

Criterion 6:	Element(s): 6.4
Society's Responsibility	Fair and Effective Decision-Making
CSA Core Indicator(s): 6.4.1 Level of participant satisfaction with the public participation process 6.4.2 Evidence of efforts to promote capacity development and meaningful participation in general	
Indicator Statement	Target Statement
PAG established and maintained a satisfaction survey established according to Terms of Reference	80% satisfaction from surveys
Value(s): Level of Knowledge for Decision Making	
SFM Objective: We will provide information to public and First Nations about forest ecosystem values and management. We will have an effective and satisfactory process that enables public participation of stakeholders and First Nations.	

STATUS AND COMMENTS:

There were no PAC meetings held in 2013; low attendance for a scheduled meeting in August, no planning forester for Chetwynd in September and extreme weather conditions in November prevented successful meetings from being held. A meeting was able to be held in January of 2014 where discussions of mandatory 2013 items such as review of the PAC Terms of Reference and an assessment of PAC satisfaction with the public participation process was completed.

The PAC's level of satisfaction with the public participation process was assessed using a standardized survey administered at the January 2014 meeting. The average satisfaction score achieved was 4.4 out of 5 or 88%.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.55 PUBLIC ADVISORY COMMITTEE

Criterion 6:	Element(s): 6.4
Society's Responsibility	Fair and Effective Decision-Making
CSA Core Indicator(s): 6.4.2 Evidence of efforts to promote capacity development and meaningful participation in general	
Indicator Statement	Target Statement
Public Advisory Committee	We will establish and maintain Public Advisory Committee and generally hold at least one meeting annually.
Value(s): Level of Knowledge for Decision Making	
SFM Objective: We will provide information to public and First Nations about forest ecosystem values and management. We will have an effective and satisfactory process that enables public participation of stakeholders and First Nations.	

STATUS AND COMMENTS:

There were no PAC meetings held in 2013; low attendance for a scheduled meeting in August, no planning forester for Chetwynd in September and extreme weather conditions in November prevented successful meetings from being held. A meeting was able to be held in January of 2014 where discussions of mandatory 2013 items was completed.

Table 22: Public Advisory Committee Meetings

Year	Number of PAC Meetings
2008	1
2009	1
2010	1
2011	3
2012	2
2013	0

The Chetwynd PAC aims to have two or three meetings per year with a field trip each year during the months of June or July to keep members interested in forestry activities with meetings having a presentation on a topic of interest to PAC members. Recruitment ads are run in the local papers prior to the PAC meetings and the Canfor Planning Supervisor calls PAC members prior to the meetings to help encourage member participation.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.56 PUBLIC ADVISORY COMMITTEE TERMS OF REFERENCE

Criterion 6:	Element(s): 6.4
Society's Responsibility	Fair and Effective Decision-Making
CSA Core Indicator(s): 6.4.2 Evidence of efforts to promote capacity development and meaningful participation in general	
Indicator Statement	Target Statement
Terms of reference (TOR) for the Chetwynd TFL 48 DFA public participation process	Obtain PAC acceptance of TOR for public participation process bi-annually (every 2 years)
Value(s): Level of Knowledge for Decision Making	
SFM Objective: We will provide information to public and First Nations about forest ecosystem values and management. We will have an effective and satisfactory process that enables public participation of stakeholders and First Nations.	

STATUS AND COMMENTS:

With the lack of meetings held in 2013, the TOR was reviewed and updated with the PAC on January 30, 2014. The next required review for acceptance of the PAC will be in 2016.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.57 EDUCATIONAL OPPORTUNITIES

Criterion 6:	Element(s): 6.5
Society's Responsibility	Information for Decision-Making
CSA Core Indicator(s): 6.5.1 Number of people reached through educational outreach	
Indicator Statement	Target Statement
The number of forestry related educational opportunities provided to the general public	On an annual basis two or more opportunities will be conducted that will promote forestry awareness to the general public.
Value(s): Level of Knowledge for Decision Making	
SFM Objective: We will have an effective and satisfactory process that enables public participation of stakeholders and First Nations.	

STATUS AND COMMENTS:

In 2013 there was 1 activity that was conducted to promote the awareness of forestry to the general public.

In October Canfor participated in an annual event sponsored by COFI (Council of Forest Industries) that seeks to educate local grade schools with regard to forest management. A variety of Canfor's supervising foresters presented and conducted training on some of the various aspects of forestry duties such as silviculture, ecotyping, navigation (map reading and compassing), and timber cruising activities to a group of 30 students and 2 teachers.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.58 RESPONSE TO PUBLIC INQUIRIES

Criterion 6:	Element(s): 6.5
Society's Responsibility	Information for Decision-Making
CSA Core Indicator(s): 6.5.2 Availability of summary information on issues of concern to the public	
Indicator Statement	Target Statement
Percentage of timely responses to public inquires	We will respond to 100% of public inquiries concerning our forestry practices within one month of receipt and provide summary to PAC annually
Value(s): Level of Knowledge for Decision Making	
SFM Objective: We will provide information to public and First Nations about forest ecosystem values and management.	

STATUS AND COMMENTS:

In 2013 there were no inquiries from the public regarding Canfor's operations on the TFL and only one inquiry from another Licensee regarding the TSR data and the AAC uplift Canfor has applied for. The questions were around the model used to project the amount of beetle attack that exists on the TFL as well as the predicted shelf life. A description of the model used was provided in conjunction with a description the flights and ground recces used to confirm/alter the model assumptions to create a more accurate picture of the MPB infestation and what the expected shelf life is of that timber was provided.

REVISIONS:

No revisions are suggested for this indicator or objective.

2.59 DISTRIBUTION/ACCESS TO SFM PLAN, ANNUAL REPORTS AND AUDIT RESULTS

Criterion 6:	Element(s): 6.5
Society's Responsibility	Information for Decision-Making
CSA Core Indicator(s): 6.5.2 Availability of summary information on issues of concern to the public	
Indicator Statement	Target Statement
Distribution/access to SFM Plan, Annual Reports and Audit Results	All SFM plans, annual reports, and audit reports will be made available during open houses, on Canfor's website (http://www.canfor.com/sustainability/certification/csa.asp), others upon request and distributed to PAC members and advisors
Value(s): Level of Knowledge for Decision Making	
SFM Objective: We will provide information to public and First Nations about forest ecosystem values and management.	

STATUS AND COMMENTS:

The SFM Plan for TFL 48 is available on Canfor's website at the following location (<http://www.canfor.com/responsibility/environmental/certification>). Also included are copies of annual reports and summaries of the 3rd party external audits completed on TFL 48. Copies of the above were circulated to members of the PAC.

TFL 48 was also randomly audited in 2012 by the Forest Practices Board. Results of the audit were to be made publicly available in 2013 by the Forest Practices Board. These audit results were discussed with the PAC during the January 2014 PAC meeting.

REVISIONS:

No revisions are suggested for this indicator or objective.

1 ABBREVIATIONS AND DEFINITIONS

AAC	Annual Allowable Cut
AOA	Archaeological Overview Assessment
AOP	Annual Operating Plan
AIA	Archaeological Impact Assessment
AUM	An animal unit month (AUM) is the quantity of forage consumed by a 450-kg cow (with or without calf) in a 30-day period.
BEC	Biogeoclimatic Ecological Classification
BWBS	Boreal White and Black Spruce BEC zone
CMI	Change Monitoring Inventory plots used to assess long term performance of managed stands
CMT	Culturally Modified Tree
COSEWIC	Committee on Status of Endangered Wildlife in Canada
DCMP	Dunlevy Creek Management Plan
DFA	Defined Forest Area. Used interchangeably with TFL or TFL 48
ESSF	Engleman Spruce Subalpine Fir BEC zone
FDP	Forest Development Plan
FSP	Forest Stewardship Plan. Replaces FDP under the Forest and Range Practices Act
Genus	Canfor's forest information management system. Includes both spatial and attribute information for our operational data including harvest areas, roads, and silviculture.
GPS	Global Positioning System
GY	Growth and Yield
LRMP	Land and Resource Management Plan
LTHL	Long Term Harvest Level
LTSY	Long Term Sustained Yield
LU	Landscape Unit
MoFR	Ministry of Forests and Range
NIT	Notification of Intent to Treat
NDU	Natural Disturbance Units
NVAF	Net Volume Adjustment Factor
OSB	Oriented Strand Board
PAC	<ul style="list-style-type: none"> • Permanent Access Corridors (also Permanent Access Structures is used) • Public Advisory Committee
Phase 2 plots	Unbiased ground sample plots completed as part of the Vegetation Resource Inventory for TFL 48.

<http://srmwww.gov.bc.ca/vri/standards/index.html> - vri

ROS	Recreation Opportunity Spectrum
RMZ	Riparian Management Zone
RRZ	Riparian Reserve Zone
SBS	Sub Boreal Spruce BEC zone
SFM(P)	Sustainable Forest Management (Plan)
SP	Site Plan/Silviculture Prescription (Forest and Range Practices Act/Forest Practices Code Act of BC)
TFL	Tree Farm Licence
TSA	Timber Supply Area
TSR	Timber Supply Review
TUS	Traditional Use Study
VQO	Visual Quality Objective
VIA	Visual Impact Assessment
VLI	Visual Landscape Inventory
VRI	Vegetation Resource Inventory
VSC	Visual Sensitivity Class
WCB	Workers Compensation Board
WTP	Wildlife Tree Patch

