

# SUSTAINABLE FOREST MANAGEMENT PLAN 5

## 2015 - 2016 ANNUAL REPORT

*TFL 48*



Canadian Forest Products Ltd.  
Chetwynd Division  
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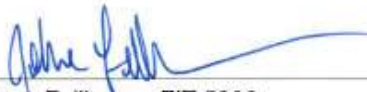


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## 2015 - 2016 ANNUAL REPORT

Canadian Forest Products Ltd.  
Chetwynd Operations — TFL 48

**Preparation Coordinated by:**



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## EXECUTIVE SUMMARY

As shown in the following Table; of the 59 Indicators only 1 (1.7%) was not reported this year, 54 indicators met the targets (91.5%) and in 4 instances targets were not met (6.8%). With the shutdown of Chetwynd Mechanical Pulp/Paper Excellence the data has been supplied only for their silvicultural operations in the 2015-2016 reporting year, with no harvesting or planting data available as no harvesting or planting occurred on the TFL in this reporting period. This data includes Canfor, BCTS and Chetwynd Mechanical Pulp operations on TFL 48.

**Table 1: Summary of 2015-2016 Performance**

Indicator	Target			
	Met	Not Met	Not Reported (Next Date for Reporting)	Recommend Reporting be Suspended
2.1 Ecosystem Representation	✓			
2.2 Forest Types	✓		2020-2021	
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	✓		2020-2021	
2.9 Wildlife Habitat Areas, Ungulate Winter Ranges and Dunlevy Creek Management Plan	✓			
2.10 Habitat Supply for Species of Public Concern	✓		2020-2021	
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			2017-2018	
2.20 Permanent Access Corridors	✓		2020-2021	
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	✓		2020-2021	
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	✓		2020-2021	
2.34 Ecosystem Carbon Storage (Mg) in the DFA	✓		2020-2021	

Indicator	Target			
	Met	Not Met	Not Reported (Next Date for Reporting)	Recommend Reporting be Suspended
2.35 Range Opportunities	✓			
2.36 Harvest Method		✓		
2.37 Proportion of Harvesting Consistent with Visual Quality Objective	✓			
2.38 Back Country Condition	✓			
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, BC Timber Sales (Dawson Creek) staff, and Chetwynd Mechanical Pulp (Louisiana-Pacific Canada) staff 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. The summary of indicator performance was reviewed with the Public Advisory Committee at the March 7, 2017 PAC meeting.







## Table of Contents

EXECUTIVE SUMMARY .....	i
ACKNOWLEDGEMENTS .....	iii
1 INTRODUCTION & OVERVIEW .....	1
1.1 Overview.....	3
1.2 Significant Changes .....	3
2 SFM INDICATORS AND OBJECTIVES .....	3
2.1 Ecosystem Representation .....	4
2.2 Forest Types.....	5
2.3 Late Seral Forest .....	6
2.4 Patch Size Distribution .....	9
2.5 Snags/Live Tree Retention.....	10
2.6 Wildlife tree patches.....	12
2.7 Average Minimum Width of RRZ and RMZ .....	13
2.8 Shrubs/Early Forest .....	14
2.9 Wildlife Habitat Areas, Ungulate Winter Ranges and Dunlevy Creek Management Plan .....	16
2.10 Habitat Supply for Species of Public Concern .....	16
2.11 Species of Management Concern .....	20
2.12 Coniferous Seeds .....	22
2.13 Deciduous Seeds and Vegetative Material.....	22
2.14 Class A Parks, Ecological Reserves and LRMP Designated Protected Areas.....	23
2.15 Known Values and Uses Addressed in Operational Planning .....	24
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.....	32
2.23 Soil Degradation .....	33
2.24 Soil Disturbance Surveys .....	33
2.25 Use of Environmentally Friendly Lubricants .....	34
2.26 Site Index.....	34
2.27 Coarse Woody Debris .....	36
2.28 Stream Crossing Quality Index.....	37
2.29 Action Plans for High Water Quality Concern Rating (WQCR) .....	40
2.30 Peak Flow Index .....	40
2.31 Watershed Reviews .....	43
2.32 Spills Entering Waterbodies .....	43



2.33	Carbon Sequestration .....	44
2.34	Ecosystem Carbon Storage (Mg) in the DFA .....	46
2.35	Range Opportunities .....	47
2.36	Harvest Method .....	48
2.37	Proportion of Harvesting Consistent with Visual Quality Objective .....	50
2.38	Back Country Condition .....	51
2.39	Recreational Sites.....	52
2.40	Consistency with Third Party Action Plans .....	53
2.41	Waste .....	54
2.42	Forest Health .....	54
2.43	Proportion of Completed Forest Health Action Plans .....	56
2.44	Community Donations.....	57
2.45	Local Employment .....	57
2.46	Summer and Fall Deliveries .....	59
2.47	Level of Investment in Training and Skills Development.....	60
2.48	Level of Direct and Indirect Employment.....	60
2.49	level of Aboriginal Participation in the Forest Economy .....	61
2.50	first Nations Awareness Training.....	62
2.51	Consultation and Information Sharing with First Nations on Management Plans .....	62
2.52	diversifying the local economy .....	63
2.53	Safety over the DFA.....	64
2.54	Public Advisory Committee Satisfaction .....	64
2.55	Public Advisory Committee .....	65
2.56	Public Advisory Committee Terms of Reference .....	66
2.57	educational Opportunities .....	67
2.58	Response to Public Inquiries.....	68
2.59	Distribution/Access to SFM Plan, Annual Reports and Audit Results .....	68
1	Abbreviations and Definitions .....	70



## List of Tables

Table 1: Summary of 2011 Performance .....	i
Table 2: Forest Type Distribution Current and FDP Status and Target Ranges .....	5
Table 3: Current and Projected Harvest Status of Late Seral Forest – Deciduous .....	7
Table 4: Current and Projected Harvest Status of Late Seral Forest – Coniferous.....	8
Table 5: Early Patch Size Class Current and Projected .....	9
Table 6: Mature Patch Size Class Current and Projected .....	10
Table 7: Summary of WTP's in Areas Harvested Since 1995 .....	13
Table 8: Summary of Riparian Reserve and Management Zones in 2000-2011 .....	13
Table 9: Shrub Habitat .....	15
Table 10: TFL 48 Species at Risk.....	23
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.....	33
Table 14: Site Index by Leading Species for Free Growing Stands .....	35
Table 15: SCQI and Water Quality Concerns for Watersheds within TFL 48 – Sampling Completed 2001 to 2011 .....	37
Table 16: Peak Flow Index Post Development Status.....	42
Table 17: AUM's on TFL48 in 2011 .....	48
Table 18: Baseline Condition – ROS Inventory .....	51
Table 19: Current Condition – ROS Inventory Updated to June 2005 .....	52
Table 20: Summary of Forest Health Issues 2000-2011 .....	55
Table 21: Employment Created - 3 Year Rolling Average.....	53
Table 22: Public Advisory Committee Meetings .....	66



## List of Figures

Figure 1: Tree Farm Licence 48.....	2
Figure 2: Moose Habitat Supply.....	17
Figure 3: Elk Habitat Supply.....	17
Figure 4: Caribou Habitat Supply.....	18
Figure 5: Marten Habitat Supply.....	18
Figure 6: Fisher Habitat Supply.....	19
Figure 7: Grizzly Bear Habitat Supply.....	19
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 <sup>3</sup> ).....	45
Figure 11: Carbon Sequestration (Mg C/year) within TFL 48 Over Time.....	45
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 <sup>3</sup> ).....	46
Figure 13: Total Ecosystem Carbon (Mg) Storage in the DFA Over Time.....	47
Figure 14: Proportion of Conventional Harvest Systems Used 2008-2012.....	50
Figure 15: Summer and Fall Deliveries.....	59

## Appendices

Appendix 1: Abbreviations and Definitions

72



## 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.

In 2014, the Sustainable Forest Management Plan was updated to remove the Management Plan content which basically consisted of the Timber Supply Data used for the determination of the Allowable Annual Cut (AAC) for TFL 48. This resulted in the creation of two separate stand-alone documents; SFMP #5 and the TFL 48 Management Plan.

In addition, a change was made to the period of the reporting year for the TFL 48 SFM Annual Report. The reporting period will now coincide with the government fiscal reporting year rather than the calendar year, going forward this Annual Report will cover all activities from the period between April 1 to March 31 annually. The Public Advisory Committee was notified, and agreed to this change at the October 22, 2014 PAC meeting.

The Sustainable Forest Management Plan #5 is the document referenced for the 2015-2016 Annual Report spanning the April 1, 2015 to March 31, 2016 reporting year. It reports on the status of each indicator and where appropriate suggests revisions to indicators and targets, or the way they are measured.

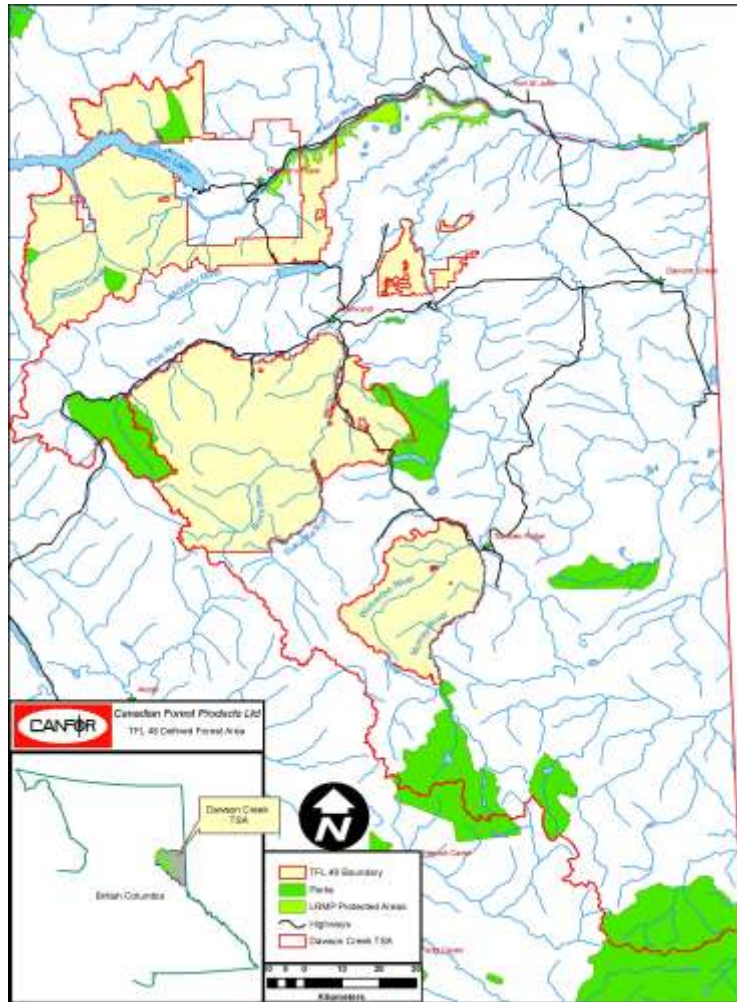


Figure 1: Tree Farm Licence 48



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 #5 located on the Canfor corporate website at: <http://www.canfor.com/responsibility/environmental/certification>

The Public Advisory Committee received a copy of this report (SFMP #5) to review at the April 22, 2016 Public Advisory Committee meeting.

## 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 was provided by BCTS for harvesting, road construction and silviculture activity for activities on the TFL and was included into the applicable indicators. As of the date of preparation and submission of this report to the Chetwynd Public Advisory Committee for review and comment, Chetwynd Mechanical Pulp is still shut down and their only activities are silviculture related. No harvesting or planting activities occurred on the TFL in the reporting period.

## 1.2 SIGNIFICANT CHANGES

A significant development in the management of TFL 48 is the revision of SFMP 4 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.

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.

The 2013 reporting year also 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 TFL 48. In support of the AAC uplift request, Canfor has submitted a stand-alone TFL 48 Management Plan (SFMP #5) to the MFLNRO for approval. Upon approval of Management Plan #5, SFMP # 4 was revised to remove the Management Plan #4 content which became redundant with the approval of stand-alone Management Plan #5. Management Plan #5 was approved in February 2015 and will be in effect starting April 1, 2015. The 2015-2016 Annual Report will report out on the indicators as written in SFMP #5.

As of October 15, 2015 TFL 48 saw an annual allowable cut increase granted by the Ministry of Forests Lands and Natural Resource Operations after an application for an AAC uplift was requested in 2013. The AAC saw an increase from 900,000 cubic meters to 1,550,000 cubic meters for a five year period ending October 15, 2020. With the AAC there is also included a 100,000 cubic meter cut which allows for the harvest of both deciduous and coniferous trees within deciduous-leading stands. A full TSR will be completed before the uplift period ends in October 2020.

## 2 SFM INDICATORS AND OBJECTIVES

### 2.1 ECOSYSTEM REPRESENTATION

<b>Criterion 1:</b>	<b>Element(s): 1.1, 1.2, 1.4</b>
Biological Diversity	Ecosystem Diversity; Species Diversity; Protected Areas and Sites of Special Biological and Cultural Significance
<b>CSA Core Indicator(s): 1.1.1: Ecosystem area by type</b> <b>1.2.1: Degree of habitat protection for selected focal species, including species at risk</b> <b>1.2.2: Degree of suitable habitat in the long term for selected focal species, including species at risk</b> <b>1.4.1: Proportion of identified sites with implemented management strategies</b>	
<b>Indicator Statement</b>	<b>Target Statement</b>
Proportion of rare ecosystem groups reserved from harvest	100% of rare ecosystems reserved from harvest
<b>Value(s):</b> Ecosystem Diversity, Native Species Richness, Protected areas and sites of special geological, biological, or cultural significance	
<b>SFM Objective:</b> 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:**

Between April 1, 2015 and March 31, 2016, 40 blocks were harvested on the TFL by Canfor and BCTS. Of those 40 cut blocks, Canfor harvested 33 blocks and BCTS sold 7 timber sales. Two Canfor blocks were identified to potentially contain rare ecosystems however only one block contained rare eco. The identified portion of the block that contained the rare eco was less than 5 ha in size but was removed from the harvest area as a Wildlife Tree Patch.

None of the BCTS cut blocks also had potentially identified the presence of rare ecosystems in the mapping phase and did not identify any rare ecosystems in the field. All blocks were in compliance with identifying and reserving rare eco as required.

#### **REVISIONS:**

A revision was made to this indicator and was reviewed and endorsed by the PAC on 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.

No revisions are suggested for this indicator or objective.

## 2.2 FOREST TYPES

<b>Criterion 1:</b>	<b>Element(s): 1.1</b>
Biological Diversity	Ecosystem Diversity
<b>CSA Core Indicator(s): 1.1.2: Forest area by type or species composition</b>	
<b>Indicator Statement</b>	<b>Target Statement</b>
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%)
<b>Value(s):</b> Ecosystem Diversity	
<b>SFM Objective:</b> 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 2015 and was reported on in the 2015-2016 Annual Report. The next time this indicator will be updated will be in 2020 and will be reported on in the 2020-2021 annual report.

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

Forest Type	MP 5 %	Area by Forest Type				Target Range
		2010	%	2015	%	
Coniferous	78%	423,107	80%	412,310	79%	75-85%
Mixed - Coniferous	6%	27,374	5%	25,768	5%	4-6%
Mixed - Deciduous	4%	18,121	3%	17,599	3%	2-4%
Deciduous	12%	63,743	12%	66,176	13%	9-15%
Grand Total		532,345	100%	521,853	100%	

### REVISIONS:

No revisions are suggested for this indicator or objective.

## 2.3 LATE SERAL FOREST

<b>Criterion 1:</b>	<b>Element(s): 1.1</b>
Biological Diversity	Ecosystem Diversity
<b>CSA Core Indicator(s): 1.1.3:</b> Forest area by seral stage or age class	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Ecosystem Diversity	
<b>SFM Objective:</b> 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 for late seral forest targets (101+), (See Table 3).

Late Seral targets are met for the conifer NDU/BEC units: **Boreal Plains; Boreal Foothills – Valley; and Boreal Foothills – Mountain; Omineca – Valley** (See Table 4). Each NDU/BEC continues to have a surplus in late seral forest above the 141+ target.

The only targets not being met is the **Omineca Mountain and Omineca - Wet Mountain units**. These units 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 continues to decrease in its deficit. Currently there is no logging planned in the wet mountain in the near future. Planned operations in these regions will be closely monitored and harvesting operations will ensure that there is sufficient near old seral forest to recruit to old seral forest.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

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

NDU	BEC	<40				40-100				101+				Total Forested Area	101+ Target	Years to Meet Target		
		Current		Projected		Current		Projected		Current		Projected						
		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Surplus (Deficit)	Ha				%	Surplus (Deficit)
Boreal Plains - Deciduous	BWBSmw1	1,179	27%	1,097	25%	879	20%	1,311	30%	2,244	52%	1,814	1,893	44%	1,463	4,302	10%	
	BWBSwk1	63	26%	7	3%	117	49%	166	69%	59	25%	35	67	28%	43	239	10%	
	ESSFmv2	1	50%	0	0%	1	50%	1	50%	0	0%	0	1	50%	1	2	10%	
	SBSwk2		0%		0%		0%		0%	0	0%	0	0	0%	0	2	N/A	
Boreal Plains Total		1,243	27%	1,104	24%	997	22%	1,478	33%	2,303	51%	1,849	1,961	43%	1,507	4,545	10%	0
Boreal Foothills - Valley - Deciduous	BWBSmw1	4,488	95%	934	20%	1457	31%	2,410	51%	1,347	28%	874	1,385	29%	912	4,729	10%	
	BWBSwk1	158	63%	131	53%	37	15%	91	37%	54	22%	29	26	10%	1	249	10%	
	BWBSwk2	122	29%	100	24%	32	8%	54	13%	267	63%	225	268	64%	226	421	10%	
	SBSwk2	2,773	72%	1,389	36%	546	14%	1,926	50%	510	13%	127	515	13%	132	3,829	10%	
Boreal Foothills Total		7,541	82%	2,554	28%	2,072	22%	4,481	49%	2,178	24%	1,255	2,194	24%	1,271	9,228	10%	0
Grand Total		8,784	55%	3,658	27%	3,069	22%	5,959	41%	4,481	37%	4,481	4,155	30%	4,155	13,773		



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

		<40				40-120				121-140				141+				Total Forested Area	141+ Target	Years to Meet Target		
NDU	BEC	Current		Projected		Current		Projected		Current		Projected		Current		Projected						
		Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Surplus (Deficit)	Ha	%	Surplus (Deficit)					
Boreal Plains	BWBSmw1	2,350	38%	2,229	36%	690	11%	836	13%	2,058	33%	1,775	29%	1,113	18%	803	1,371	22%	1,061	6,212	5%	
	BWBSwk1	1,260	23%	1,995	36%	763	14%	578	10%	2,057	37%	1,521	27%	1,498	27%	1,219	1,483	27%	1,204	5,577	5%	
	ESSFmv2	13	1%	1,101	58%	53	3%	30	2%	690	36%	252	13%	1,158	61%	1,062	530	28%	434	1,913	5%	
	SBSwk2	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	N/A	0	0%	0	0	N/A	
<b>Boreal Plains Total</b>		<b>3,622</b>	<b>26%</b>	<b>5,325</b>	<b>39%</b>	<b>1,506</b>	<b>11%</b>	<b>1,444</b>	<b>11%</b>	<b>4,804</b>	<b>35%</b>	<b>3,548</b>	<b>26%</b>	<b>3,768</b>	<b>28%</b>	<b>1,439</b>	<b>3,384</b>	<b>25%</b>	<b>1,054</b>	<b>13,701</b>	<b>17%</b>	<b>0</b>
Boreal Foothills - Valley - Conifer	BWBSmw1	1,548	22%	1,844	26%	214	3%	460	7%	1,523	22%	1,139	16%	3,676	53%	3,189	3,503	50%	3,015	6,961	7%	
	BWBSwk1	391	24%	672	41%	199	12%	52	3%	150	9%	73	4%	900	55%	785	459	28%	344	1,642	7%	
	BWBSwk2	97	10%	3	0%	30	3%	113	11%	608	60%	382	38%	279	27%	208	515	51%	444	1,013	7%	
	SBSwk2	4,773	28%	7,061	41%	770	5%	564	3%	3,786	22%	3,324	19%	7,783	45%	6,585	6,631	39%	5,433	17,112	7%	
<b>Boreal Foothills - Valley - Conifer Total</b>		<b>6,809</b>	<b>25%</b>	<b>9,580</b>	<b>38%</b>	<b>1,214</b>	<b>5%</b>	<b>1,189</b>	<b>4%</b>	<b>6,067</b>	<b>23%</b>	<b>4,918</b>	<b>18%</b>	<b>12,638</b>	<b>47%</b>	<b>6,491</b>	<b>11,107</b>	<b>42%</b>	<b>4,960</b>	<b>26,728</b>	<b>23%</b>	<b>0</b>
Boreal Foothills - Mountain - Conifer	ESSFmv2	2,773	21%	5,989	45%	727	5%	244	2%	2,799	21%	1,530	11%	7,056	53%	5,720	5,186	39%	3,851	13,355	10%	
	ESSFmv4	6	0%	0	0%	22	2%	27	2%	463	38%	319	26%	731	60%	609	875	72%	753	1,221	10%	
	ESSFwc3	55	17%	248	74%	0	0%	4	1%	193	58%	28	8%	84	25%	51	144	43%	111	333	10%	
	ESSFwk2	466	17%	1,395	50%	20	1%	23	1%	863	31%	630	23%	1,436	52%	1,157	1,348	48%	1,069	2,784	10%	
<b>Boreal Foothills - Mountain - Conifer Total</b>		<b>3,299</b>	<b>19%</b>	<b>7,632</b>	<b>43%</b>	<b>769</b>	<b>4%</b>	<b>298</b>	<b>2%</b>	<b>4,319</b>	<b>24%</b>	<b>2,507</b>	<b>14%</b>	<b>9,307</b>	<b>53%</b>	<b>3,468</b>	<b>7,553</b>	<b>43%</b>	<b>1,714</b>	<b>17,694</b>	<b>33%</b>	<b>0</b>
Omineca - Valley	BWBSmw1	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	N/A	0	0%	0	0	N/A	
	SBSwk2	16	1%	651	47%	12	1%	3	0%	695	50%	175	13%	664	48%	567	412	30%	315	1,386	7%	
<b>Omineca - Valley Total</b>		<b>16</b>	<b>1%</b>	<b>651</b>	<b>47%</b>	<b>12</b>	<b>1%</b>	<b>3</b>	<b>0%</b>	<b>695</b>	<b>50%</b>	<b>175</b>	<b>13%</b>	<b>664</b>	<b>48%</b>	<b>345</b>	<b>412</b>	<b>30%</b>	<b>93</b>	<b>1,386</b>	<b>23%</b>	<b>0</b>
Omineca - Mountain	ESSFmv2	80	3%	1,566	54%	40	1%	7	0%	1,273	44%	139	5%	1,485	52%	996	585	20%	96	2,878	17%	
<b>Omineca - Mountain Total</b>		<b>80</b>	<b>3%</b>	<b>1,566</b>	<b>54%</b>	<b>40</b>	<b>1%</b>	<b>7</b>	<b>0%</b>	<b>1,273</b>	<b>44%</b>	<b>139</b>	<b>5%</b>	<b>1,485</b>	<b>52%</b>	<b>-184</b>	<b>585</b>	<b>20%</b>	<b>-1,084</b>	<b>2,878</b>	<b>58%</b>	<b>0</b>
Wet Mountain	ESSFmv2	63	8%	62	8%	0	0%	0	0%	44	6%	44	6%	637	86%	451	637	86%	451	744	25%	
	ESSFwc3	32	13%	15	6%	1	0%	0	0%	0	0%	1	0%	215	87%	153	214	87%	152	247	25%	
	ESSFwk2	821	43%	1,043	54%	5	0%	43	2%	42	2%	46	2%	1,058	55%	577	1,058	55%	577	1,926	25%	
	SBSwk2	1,372	50%	830	30%	13	0%	152	6%	352	13%	358	13%	986	36%	305	986	36%	305	2,722	25%	
<b>Wet Mountain Total</b>		<b>2,288</b>	<b>41%</b>	<b>1,950</b>	<b>35%</b>	<b>18</b>	<b>0%</b>	<b>195</b>	<b>3%</b>	<b>438</b>	<b>8%</b>	<b>449</b>	<b>8%</b>	<b>2,896</b>	<b>51%</b>	<b>-1,841</b>	<b>2,895</b>	<b>51%</b>	<b>-1,842</b>	<b>5,639</b>	<b>84%</b>	<b>100</b>
<b>Grand Total</b>		<b>16,114</b>	<b>24%</b>	<b>26,704</b>	<b>39%</b>	<b>3,558</b>	<b>5%</b>	<b>3,136</b>	<b>5%</b>	<b>17,596</b>	<b>26%</b>	<b>11,736</b>	<b>17%</b>	<b>30,758</b>	<b>45%</b>		<b>25,936</b>	<b>38%</b>		<b>68,025</b>		

## 2.4 PATCH SIZE DISTRIBUTION

<b>Criterion 1:</b>	<b>Element(s): 1.1</b>
Biological Diversity	Ecosystem Diversity
<b>CSA Core Indicator(s) 1.1.3:</b> Forest area by seral stage or age class	
<b>Indicator Statement</b>	<b>Target Statement</b>
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.
<b>Value(s):</b> Ecosystem Diversity	
<b>SFM Objective:</b> We will conserve or restore ecosystem diversity within the natural range of variation within DFA over time.	

### **STATUS AND COMMENTS:**

In the 2015 – 2016 reporting year, Canfor has met the patch size targets in the Early and Mature Patch Sizes. The target for the Wet Mountain NDU remains equal with the target for this NDU in the Early Patch Size. This will be monitored to ensure any blocks developed within the Wet Mountain NDU, are all less than 100 ha to stay below the target of <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 a mixture of both smaller and medium sized patches to ensure we do not exceed the large patch target of <60% while maintaining a mixture of various aged forests across the TFL and specifically, within the Wet Mountain NDU.

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	1,158	6%	593	3%	<15%	17,541	91%	>50%	19,292
	Projected	1,187	6%	734	4%	<15%	18,115	90%	>50%	20,036
Boreal Foothills/Omineca	Current	4,087	8%	5,035	10%	<20%	43,311	83%	>40%	52,434
	Projected	3,186	5%	4,389	7%	<20%	55,541	88%	>40%	63,117
Wet Mountain	Current	1,274	18%	1,513	22%	<25%	4,146	60%	<60%	6,933
	Projected	1,265	19%	1,513	23%	<25%	3,933	59%	<60%	6,711

**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	8,682	13%	4,909	7%	52,885	80%	>70%	66,476	48%	>30%
	Projected	8,781	13%	4,864	7%	52,465	79%	>70%	66,110	46%	>30%
Boreal Foothills/Omineca	Current	17,986	8%	7,906	3%	212,591	89%	>80%	238,484	56%	>35%
	Projected	18,788	8%	7,756	3%	202,683	88%	>80%	229,228	54%	>35%
Wet Mountain	Current	2,402	3%	380	0%	75,356	96%	>85%	78,138	62%	>60%
	Projected	2,304	3%	444	1%	77,750	97%	>85%	80,498	63%	>60%

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.5 SNAGS/LIVE TREE RETENTION**

<b>Criterion 1:</b>	<b>Element(s): 1.1, 1.2</b>
Biological Diversity	Ecosystem Diversity, Species Diversity
<b>CSA Core Indicator(s): 1.1.4:</b> Degree of within-stand structural retention <b>1.2.2:</b> Degree of suitable habitat in the long term for selected focal species, including species at risk	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Ecosystem Diversity, Native Species Richness	
<b>SFM Objective:</b> 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 the 2015 – 2016 reporting year, there were 40 blocks harvested to which this indicator applied; thirty-three were logged by Canfor and the remaining seven were BCTS blocks. Of the Canfor harvested blocks there was 2 instances where snag/live tree 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. The remaining 31 blocks all had snag/live tree retention prescribed for the blocks.

All seven BCTS blocks were prescribed snag/live tree retention despite the 10% WTP allocation per block having Leave Trees prescribed at a minimum of two trees remaining per hectare.



Block	Area of Required Snag/Live Tree Retention (ha)	Area of Snag/Live Tree Retention in SP (ha)	Applied Correctly	Rationale
T2003	29.8	29.8	Yes	
T2070	11.4	11.4	Yes	
T2089	101.5	101.5	Yes	
T2120	156.1	156.1	Yes	
T2121	64.9	64.9	Yes	
T2126	170.5	170.5	Yes	
T2149	50.8	50.8	Yes	
T2156	120.3	120.3	Yes	
T2193	38.9	38.9	Yes	
T2194	29.0	29.0	Yes	
T2196	32.6	32.6	Yes	
T2203	54.2	54.2	Yes	
T2205	14.7	14.7	Yes	
T2258	255.5	255.5	Yes	
T2259	51.3	0	Yes	WTP % >10% of block area
T2260	132.7	132.7	Yes	
T2266	50.5	50.5	Yes	
T2267	36.0	36.0	Yes	
T2279	137.4	137.4	Yes	
T2288	111.4	111.4	Yes	
T4222	184.8	184.8	Yes	
T4227	8.0	8.0	Yes	
T4240	102.6	102.6	Yes	
T4245	152.9	152.9	Yes	
T4252	98.2	98.2	Yes	
T4281	48.6	48.6	Yes	
T4361	240.7	240.7	Yes	
T4410	121.9	0	Yes	WTP % >10% of block area
T4435	44.8	44.8	Yes	



T4436	21.5	21.5	Yes	
T4438	61.9	61.9	Yes	
T4440	100.4	100.4	Yes	
T5050	181.6	181.6	Yes	
A89920 - 1	92.6	92.6	Yes	
A89916 - 1	48.62	48.62	Yes	
A89923 - 1	135.16	135.16	Yes	
A89922 - 1	99.45	99.45	Yes	
A89923 - 2	34.83	34.83	Yes	
A92162 - 1	78.75	78.75	Yes	
A92162 - 2	60.64	60.64	Yes	

**REVISIONS:**

No further revisions are suggested for this indicator or objective.

**2.6 WILDLIFE TREE PATCHES**

<b>Criterion 1:</b>	<b>Element(s): 1.1</b>
Biological Diversity	Ecosystem Diversity
<b>CSA Core Indicator(s): 1.1.4:</b> Degree of within-stand structural retention	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Ecosystem Diversity	
<b>SFM Objective:</b> 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 March 31, 2016. The WTP retention levels now exceeds the target in all subzones. In the ESSFwc3 BEC subzone, 60% or 411 ha of the 689 ha under prescription at the time, had 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 80 ha of WTP prescribed resulted in a total of 306 ha of retention or 34% of the total area under prescription. Therefore the target is considered achieved.

As harvesting continues in this BEC zone, WTP retention has continued to be implemented. The BEC zone now shows that even without considering the irregular shelterwood retention system, the zone is above the minimum required 8% target for WTP area. BEC zones

approaching the minimum targets of 8% WTP will be monitored to ensure that the retention levels do not drop below the minimum 8%.

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

BEC Sub Zone	Total Area Under Prescription (ha)	WTP Area (ha)	WTP %
BWBSmw	9,533	1,372	14%
BWBSwk	4,605	721	16%
ESSFmv	11,706	1,183	10%
ESSFwc	892	80	9%
ESSFwk	5,597	623	11%
SBSwk	16,327	2,384	15%
<b>Total</b>	<b>48,660</b>	<b>6,362</b>	<b>13%</b>

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## **2.7 AVERAGE MINIMUM WIDTH OF RRZ AND RMZ**

<b>Criterion 1:</b>	<b>Element(s): 1.2, 3.2</b>
Biological Diversity	Species Diversity; Water Quality and Quantity
<b>CSA Core Indicator(s): 1.2.1:</b> Degree of habitat protection for selected focal species, including species at risk <b>3.2.1:</b> Proportion of watershed or water management areas with recent stand-replacing disturbance	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Native Species Richness, Water Quality and Quantity	
<b>SFM Objective:</b> 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:**

The following table (Table 8) shows the summary of riparian reserve and management zones for the 2015 – 2016 year as well as the cumulative average from 2000 to the end of March 31, 2016. The targets have been met in 2015 - 2016 and all previous years. It should be noted that the RMZ actual widths for the cumulative 2000 to March 31, 2015 are showing averages below the required widths for some riparian classes. 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 – 2015**

Year	Stream, Wetland or Lake Class	Total Stream Length (m <sup>b</sup> )	RRZ – Required Width (m <sup>c</sup> )	RRZ–Actual Width (m <sup>c</sup> )	RMZ Required Width (m <sup>c</sup> )	RMZ – Actual Width (m <sup>c</sup> )	Total RMA – Required width (m <sup>b</sup> )	Total RMA – Actual width (m <sup>b</sup> )
2015-2016	S1 (n=0)	-	50	-	20	-	0	-
		<b>2,362</b>					50	
	S2 (n=3)		30	33.0	20	22.4		55.5
	S3 (n=4)	<b>16,372</b>	20	21.3	20	21.4	40	42.8
	S4 (n=4)	<b>5,102</b>	0	0.0	30	32.3	30	32.3
	S5 (n=6)	<b>5,035</b>	0	0.0	30	31.6	30	31.6
	S6 (n=89)	<b>63,828</b>	0	0.0	20	21.0	20	21.0
	W3 (n=3)	-	0	-	30	-	30	-
W5 (n=0)	-	10	-	40	-	50	-	
Average 2000 to March 31, 2016	S1	<b>34,694</b>	50	104.4	20	4.8	70	109.2
	S2	<b>38,912</b>	30	75.7	20	15.2	50	90.9
	S3	<b>63,108</b>	20	37.4	20	18.4	40	55.8
	S4	<b>30,441</b>	0	4.8	30	27.9	30	32.6
	S5	<b>74,578</b>	0	10.6	30	30.3	30	40.8
	S6	<b>595,079</b>	0	3.1	20	20.4	20	23.5
	W3	<b>6,618</b>	0	4.5	30	27.4	30	31.9
	W5	<b>673</b>	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**

<b>Criterion 1:</b>	<b>Element(s): 1.2</b>
Biological Diversity	Species Diversity
<b>CSA Core Indicator(s): 1.2.1:</b> Degree of habitat protection for selected focal species, including species at risk	
<b>Indicator Statement</b>	<b>Target Statement</b>
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)
<b>Value(s):</b> Native Species Richness	
<b>SFM Objective:</b> 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 2015 is outlined in the table below as well. Within the Boreal Plains and Boreal Foothills NDU's there was an increase in the amount of shrub habitat over time while the Omineca and Wet Mountain NDUs showed no change in the amount of shrub habitat from the Baseline target run in 2005. Harvesting activities have been significantly reduced in these NDUs in the past few years and so it is not surprising that the shrub habitat shows no change. 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.

It is anticipated that the next reporting period will contain a similar 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. However, with the Mount McAllister fire in the late summer of 2014 burning approximately 26,280.8 ha in total including some area beyond the TFL boundaries, and concentrated harvesting within the Boreal Foothills NDU, it is expected that there will be an increase in shrub habitat in the Boreal Foothills NDU. This natural disturbance will contribute to the early seral forest bringing the proportion of shrub habitat well above the baseline target. The next time this indicator will be reported on will be in the 2020-2021 annual report.

**Table 9: Shrub Habitat**

NDU	NDU Subunit	Total NDU Area	Baseline Shrub Habitat		2015 Shrub		Baseline Target %
			Ha	%	Ha	%	
Boreal Plains		120,891	15,762	13%	19,169	16%	14%
Boreal Foothills	Valley	178,225	25,245	14%	30,177	17%	12%
	Mountain	205,406	20,936	10%	22,790	11%	11%
Omineca	Valley	6,504	727	11%	732	11%	7%
	Mountain	15,031	1,277	8%	1,219	8%	10%
Wet Mountain		117,618	12,634	11%	13,311	11%	7%
Grand Total		643,676	76,581	12%	87,397	14%	

## **REVISIONS:**

No revisions are suggested for this indicator or objective.

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

<b>Criterion 1:</b>	<b>Element(s): 1.2, 1.4</b>
Biological Diversity	Species Diversity; Protected Areas and Sites of Special Biological and Cultural Significance
<b>CSA Core Indicator(s)</b> 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	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Native Species Richness, Protected Areas and Sites of Special Geological, Biological, or Cultural Significance	
<b>SFM Objective:</b> 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 the 2015 – 2016 reporting year 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.

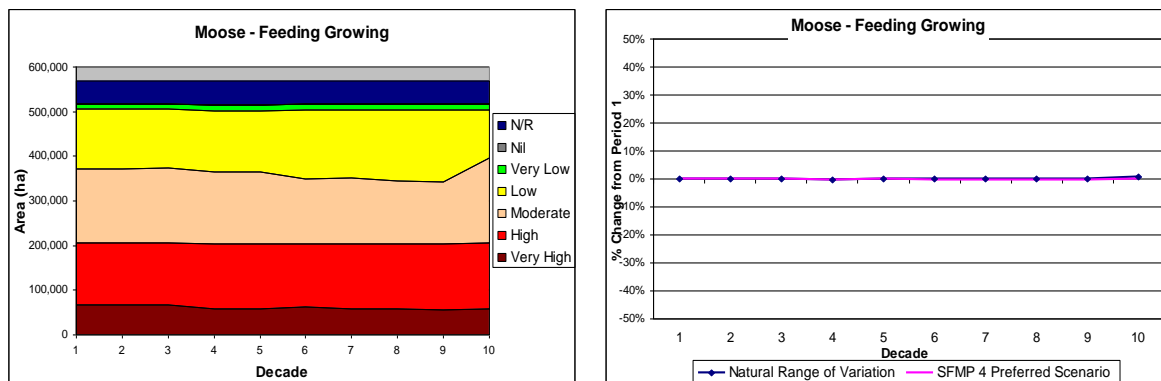
## 2.10 HABITAT SUPPLY FOR SPECIES OF PUBLIC CONCERN

<b>Criterion 1:</b>	<b>Element(s): 1.2</b>
Biological Diversity	Species Diversity
<b>CSA Core Indicator(s)</b> 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	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Native Species Richness	
<b>SFM Objective:</b> We will sustain sufficient and appropriately distributed suitable habitat elements to maintain native species richness.	

**STATUS AND COMMENTS:**

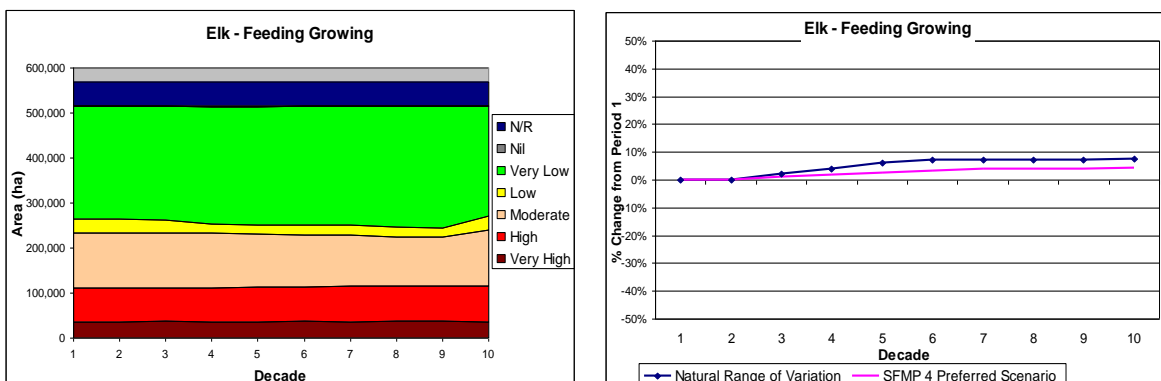
This indicator was first reported on in 2005 and was originally tied to the AAC/TSR process which occurred every 5 years. With government regulation changes AAC Determinations can occur between every 10 and 15 years. To remain consistent with the reporting frequency this indicator will no longer be tied to the AAC/TSR process and will be reported on every five years. These tables were updated for SFMP #5 and will be reported on again in the 2020-2021 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.



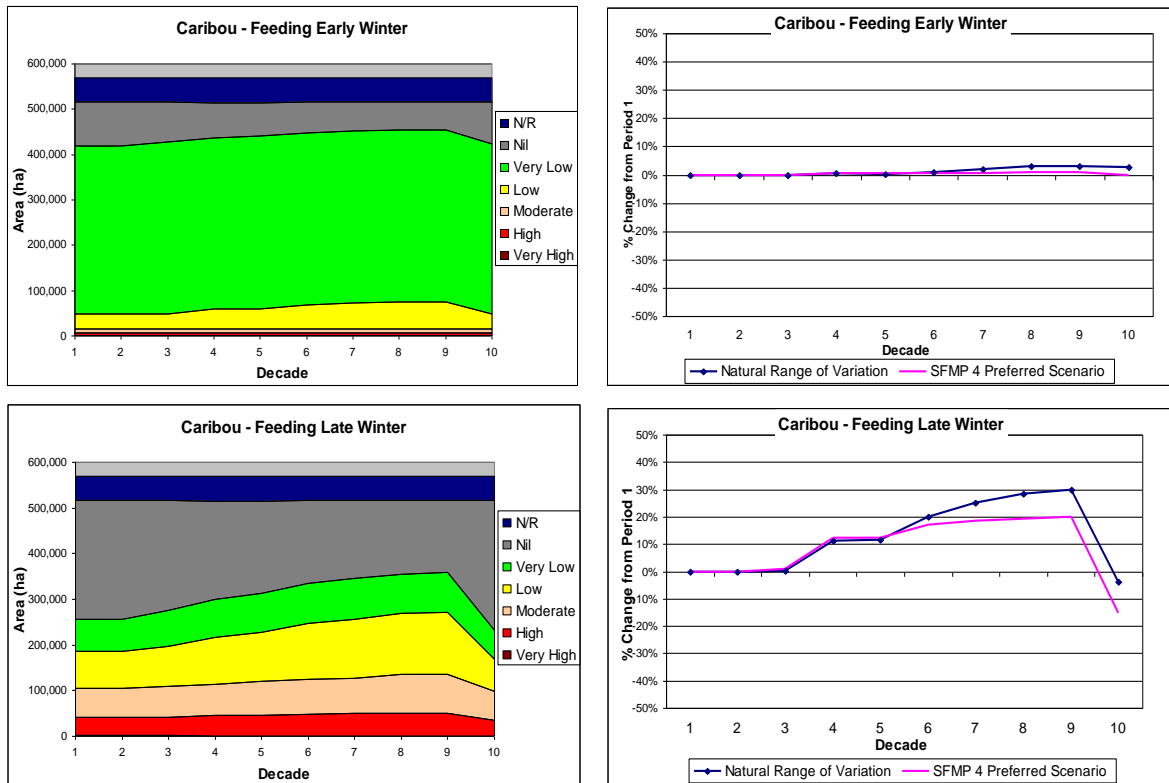
**Figure 2: Moose Habitat Supply**

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.



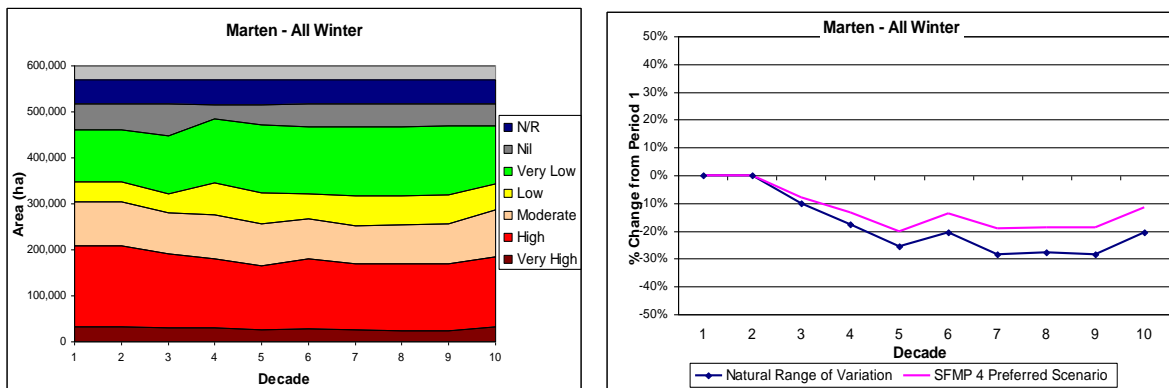
**Figure 3: Elk Habitat Supply**

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**

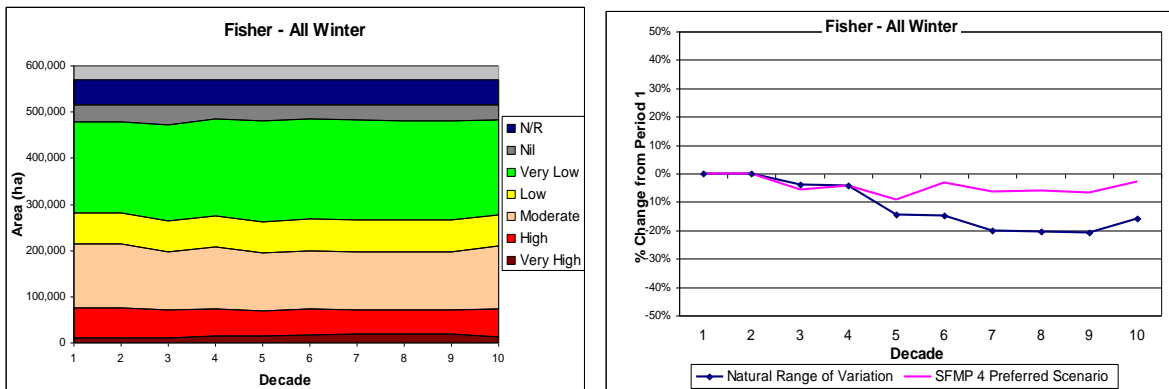
Marten habitat was modeled as general winter habitat. TFL 48 has a large amount of habitat (over 250,000 ha) modeled as very high, high and moderate. While habitat steadily declines over the 100 year simulation the preferred scenario has less of a decline than the natural range of variation simulation.



**Figure 5: Marten Habitat Supply**

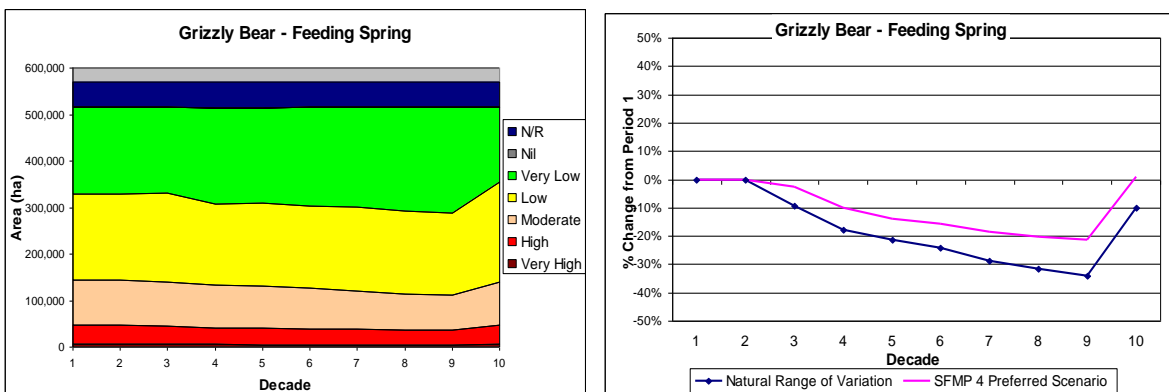
Fisher habitat was modeled as general winter habitat. TFL 48 represents a large area of very high, high and moderate habitat with over 196,000 ha classified in these categories.





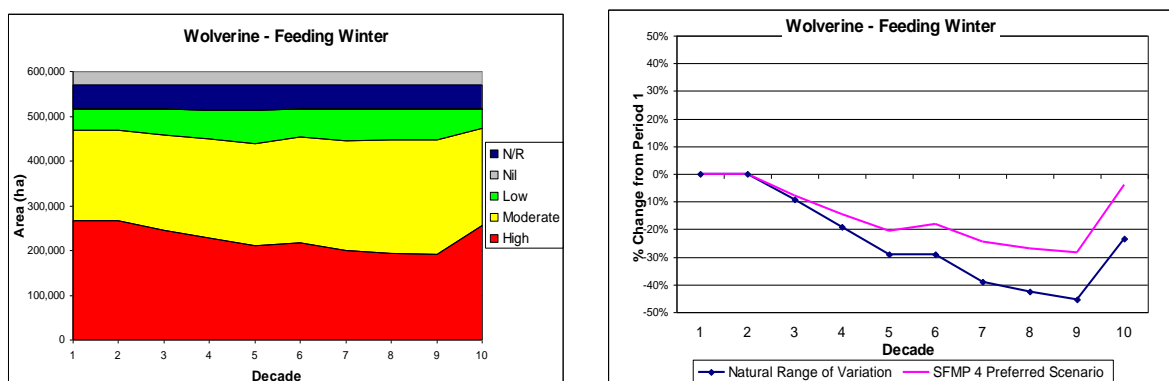
**Figure 6: Fisher Habitat Supply**

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 again in the 2020-2021 annual report.

#### 2.11 SPECIES OF MANAGEMENT CONCERN

<b>Criterion 1:</b>	<b>Element(s): 1.2</b>
Biological Diversity	Species Diversity
<b>CSA Core Indicator(s): 1.2.1:</b> Degree of habitat protection for selected focal species, including species at risk <b>1.2.2:</b> Degree of suitable habitat in the long term for selected focal species, including species at risk	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Native Species Richness	
<b>SFM Objective:</b> 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. Between April 1, 2015 and March 31, 2016, there were 33 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.

Table 10: TFL 48 Species at Risk

English Name	Scientific Name	COSEWIC <sup>1</sup>	BC CDC List <sup>2</sup>	IWMS <sup>3</sup>
<b>AMPHIBIANS</b>				
Western Toad	<i>Bufo boreas</i>	Special Concern (Nov 2012)	Blue	
Wood Frog	<i>Lithobates sylvaticus</i>		Yellow	
<b>FISH</b>				
Bull Trout	<i>Salvelinus confluentus</i>	Special Concern (Nov 2012)	Blue	Yes (Jun 2006)
Northern Redbelly Dace	<i>Chrosomus eos</i>		Blue	
Pearl Dace	<i>Margariscus nachtriebi</i>		Blue	
Spottail Shiner	<i>Notropis hudsonius</i>		Red	
<b>BIRDS</b>				
American Bittern	<i>Botaurus lentiginosus</i>		Blue	
American Three-toed Woodpecker	<i>Picoides dorsalis</i>		Yellow	
Barn Swallow	<i>Hirundo rustica</i>	Threatened (2011)	Blue	
Barrow's Goldeneye	<i>Bucephala islandica</i>		Yellow	
Bay-breasted Warbler	<i>Setophaga castanea</i>		Red	Yes
Black-backed Woodpecker	<i>Picoides arcticus</i>		Yellow	
Black-throated Green Warbler	<i>Setophaga virens</i>		Blue	Yes
Broad-winged Hawk	<i>Buteo platypterus</i>		Blue	
Brown Creeper	<i>Certhia americana</i>		Yellow	
Canada Warbler	<i>Cardellina canadensis</i>	Threatened (2008)	Blue	
Cape May Warbler	<i>Setophaga tigrina</i>		Blue	Yes
Common Nighthawk	<i>Chordeiles minor</i>	Threatened (2007)	Yellow	
Connecticut Warbler	<i>Oporornis agilis</i>		Blue	Yes
Harlequin Duck (western population)	<i>Histrionicus histrionicus</i>		Yellow	
Nelson's Sparrow	<i>Ammodramus nelsoni</i>		Red	Yes
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Threatened (2007)	Blue	
Peregrine Falcon, anatum subspecies	<i>Falco peregrinus anatum</i>	Special Concern (2007)	Red	
Rusty Blackbird	<i>Euphagus carolinus</i>	Special Concern (2006)	Blue	
Sandhill Crane	<i>Grus canadensis</i>		Yellow	Yes
Short-eared Owl	<i>Asio flammeus</i>	Special Concern (2008)	Blue	Yes
Surf Scoter	<i>Melanitta perspicillata</i>		Blue	
Swainson's Hawk	<i>Buteo swainsoni</i>		Red	
Yellow Rail	<i>Coturnicops noveboracensis</i>	Special Concern (2009)	Red	
<b>MAMMALS</b>				
Caribou (northern mountain population)	<i>Rangifer tarandus</i> pop. 15	Special Concern (2002)	Blue	Yes
Fisher	<i>Martes pennanti</i>		Blue	Yes

Grizzly Bear (western population)	Ursus arctos	Special Concern (2012)	Blue	Yes
Mountain Goat	Oreamnos americanus		Blue	
Northern Myotis	Myotis septentrionalis	Endangered (2013)	Blue	
Wolverine, luscus subspecies	Gulo gulo luscus	Special Concern (2003)	Blue	Yes

- 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

<b>Criterion 1:</b>	<b>Element(s): 1.2, 1.3</b>
Biological Diversity	Species Diversity, Genetic Diversity
<b>CSA Core Indicator(s): 1.2.3:</b> Proportion of regeneration comprised of native species <b>1.3:</b> Genetic Diversity – No core indicator	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Native Species Richness, Genetic Diversity	
<b>SFM Objectives:</b> We will conserve genetic diversity of tree stock.	

#### STATUS AND COMMENTS:

In 2015 there were a total of 5,711,650 trees planted on TFL 48 by Canfor and BCTS. Canfor planted 4,524,250 and BCTS planted 1,187,400 trees. No planting activities took place on the TFL by LP, as there has been no harvesting by LP on the TFL since 2014. 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 98.4% 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

<b>Criterion 1:</b>	<b>Element(s): 1.2, 1.3</b>
Biological Diversity	Species Diversity, Genetic Diversity
<b>CSA Core Indicator(s): 1.2.3:</b> Proportion of regeneration comprised of native species <b>1.3:</b> Genetic Diversity – No core indicator	
<b>Indicator Statement</b>	<b>Target Statement</b>
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

<b>Value(s):</b> Native Species Richness, Genetic Diversity
<b>SFM Objectives:</b> We will conserve genetic diversity of tree stock.

**STATUS AND COMMENTS:**

There were no deciduous seedlings or vegetative propagates planted on TFL 48 in 2015. Seed lots 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**

<b>Criterion 1:</b>	<b>Element(s): 1.4</b>
Biological Diversity	Protected Areas and Sites of Special Biological and Cultural Significance
<b>CSA Core Indicator(s): 1.4.1</b> Proportion of identified sites with implemented management strategies	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Protected Areas and Sites of Special Geological, Biological, or Cultural Significance	
<b>SFM Objective:</b> 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:**

Between April 1, 2015 and March 31, 2016 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

<b>Criterion 1:</b>	<b>Element(s): 1.4, 6.1, 6.2</b>
Biological Diversity	Protected Areas and Sites of Special Biological and Cultural Significance; Aboriginal and Treaty Rights; Respect for Aboriginal Forest Values, Knowledge and Uses
<p><b>CSA Core Indicator(s): 1.4.2</b> Protection of identified sacred and culturally important sites</p> <p><b>6.1.3:</b> Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering) occur</p> <p><b>6.2.1:</b> 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</p>	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Protected Areas and Sites of Special Geological, Biological, or Cultural Significance; Treaty and Aboriginal Rights; Aboriginal Forest Values and Uses	
<p><b>SFM Objective:</b></p> <p>We will implement management strategies appropriate to the long term maintenance of protected areas and sites of special geological, biological, or cultural significance.</p> <p>We will recognize and respect Treaty 8 rights.</p> <p>We will respect known traditional Aboriginal forest values, and uses.</p>	

### **STATUS AND COMMENTS:**

During the 2015-2016 reporting year, site specific comments provided by First Nations regarding aboriginal values and uses were considered and addressed in operational plans. Fifteen cutting blocks were found to have site specific concerns which resulted in discussions between Canfor and the First Nations to address concerns and propose mitigation strategies. Later this year, a mutually acceptable resolution was been reached and so the blocks were passed on to the Delegated Decision Maker for a decision on the cutting permit application.

A number of other blocks that were information shared throughout the 2015-2016 years were identified by First Nations as having traditional use values and so numerous meetings and email discussions allowed for mitigation strategies to be developed to protect and/or mitigate potential impacts from harvesting operations. For blocks that are information shared and allocated to the BCTS program, comments provided by First Nations are passed on to BCTS.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## 2.16 CONFORMANCE TO ELEMENTS PERTINENT TO TREATY RIGHTS

<b>Criterion 1:</b>	<b>Element(s): 1.4, 6.1</b>
Biological Diversity	Protected Areas and Sites of Special Biological and Cultural Significance; Aboriginal and Treaty Rights
<p><b>CSA Core Indicator(s): 1.4.2</b> Protection of identified sacred and culturally important sites</p> <p><b>6.1.3:</b> Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering) occur</p>	
<b>Indicator Statement</b>	<b>Target Statement</b>
% conformance to SFM elements pertinent to treaty rights (i.e., hunting, fishing and trapping) defined in Treaty 8	<p>100% conformance to the SFM indicators and targets of the SFM Elements pertinent to sustaining hunting, fishing and trapping, as follows:</p> <ul style="list-style-type: none"> <li>• 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),</li> <li>• Element 3.1 Soil Quality and Quantity (Indicator 3.27), and</li> <li>• Element 3.2 Water Quality and Quantity Indicators (3.28, 3.29, 3.30, 3.31, and 3.32)</li> </ul>
<b>Value(s):</b> Protected Areas and Sites of Special Geological, Biological, or Cultural Significance; Treaty and Aboriginal Rights	
<p><b>SFM Objective:</b></p> <p>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.</p>	

### **STATUS AND COMMENTS:**

For the 2015-2016 reporting period all indicators in Elements 1.1, 1.2, and 3.2 were met.

Only one indicator in Element 3.1 (Indicator 3.27) was not met. Though all the Site Plans prescribe the appropriate coarse woody debris management, the indicator itself takes into account the actual data collected from established plots in the coarse woody debris sample plots. In 2013 there were no sampling plots that fell into the grid and so no data was available for that year. The sample in the 2015 – 2016 reporting period only measured 2 plots which both showed an average of 48 m<sup>3</sup>/ha of CWD. Overall this brings the actual data for CWD below the target for this indicator (average retention level over the TFL since Jan 1, 2004 will be at least 92 m<sup>3</sup>/ha of which a minimum of 46 m<sup>3</sup>/ha will be greater than 17.5cm in diameter). As the sample sizes increase the trend should begin showing that the CWD retention on the TFL is headed back to the target. Since indicator 3.27 is considered not met, this indicator is also considered not met.

Canfor and BCTS continue to maintain their 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. Since 2014 there have been no incidences of over spray into water bodies by either Canfor or BCTS.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## 2.17 FREE GROWING STANDS

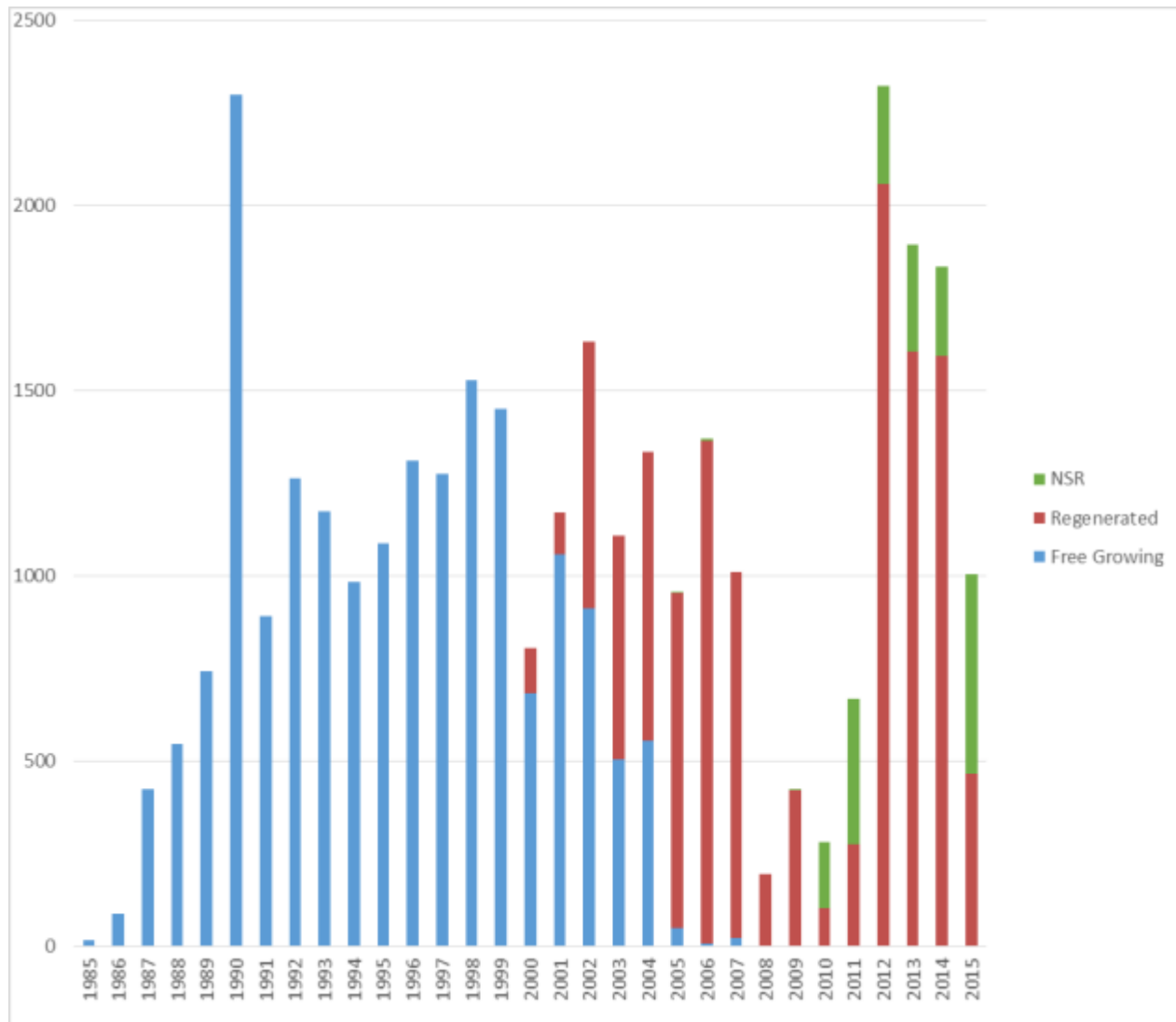
<b>Criterion 2:</b>	<b>Element(s): 2.1</b>
Ecosystem Condition and Productivity	Forest Ecosystem Resilience
<b>CSA Core Indicator(s): 2.1.1</b> Reforestation success	
<b>Indicator Statement</b>	<b>Target Statement</b>
Proportion of area harvested that has free growing stands re-established	100% of the area harvested will meet the free growing requirements identified in the silviculture prescriptions/site plans
<b>Value(s):</b> Ecosystem Resilience	
<b>SFM Objectives:</b> 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 have gone past the free growing timelines without achieving free growing requirements. See Figure 9 for status of areas harvested on TFL 48 where there is a free growing requirement. All areas on the TFL that show as NSR will be monitored to ensure they do not go beyond their free growing dates. If it looks like they might, then an action plan is developed and the free growing dates are amended or treatments implemented to ensure that free growing requirements are achieved. Approximately 200 ha on the TFL are scheduled to be re-planted. Some of these areas may require herbicide treatments this year before planting to allow those areas to reach free-grow status by the deadline.



**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**

<b>Criterion 2:</b>	<b>Element(s): 2.1, 4.1</b>
Ecosystem Condition and Productivity	Forest Ecosystem Resilience; Carbon Uptake and Storage
<b>CSA Core Indicator(s): 2.1.1 Reforestation success</b>	
<b>Indicator Statement</b>	<b>Target Statement</b>
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

<b>Value(s):</b> Ecosystem Resilience, Carbon Uptake and Storage
<b>SFM Objectives:</b> 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.

**STATUS AND COMMENTS:**

At the end of March 31, 2016 the average age of NSR on TFL 48 was 0.73 years for all areas where harvesting started prior to April 1, 2016. The average regeneration delay is therefore less than 2 years and so the target has been achieved. For the period between April 1, 2015 and March 31, 2016, the average age of regen delay is 0.36 years.

Blocks that had the conventional portion harvested were re-planted and the areas that were left for harvest by cable have been left until the cable portion has been planted. As areas harvested have been planted, all blocks are considered in compliance.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.19 AREA OF FORESTED LAND LOST TO NON-FOREST INDUSTRY**

<b>Criterion 2:</b>	<b>Element(s): 2.2, 4.2</b>
Ecosystem Condition and Productivity	Forest Ecosystem Productivity, Forest Land Conversion
<b>CSA Core Indicator(s): 2.2.1</b> Additions and deletions to the forest area	
<b>Indicator Statement</b>	<b>Target Statement</b>
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.
<b>Value(s):</b> Ecosystem Productivity, Forested Land Base	
<b>SFM Objective:</b> We will sustain forests within the DFA.	

**STATUS AND COMMENTS:**

This indicator was last reported on in 2010. After the accepted revision to the 2011 matrix, this indicator is to be updated every three years requiring this information to be updated and reported for the 2014 – 2015 reporting year.

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. This is also due in part, to the fact that referrals are often sent requesting comments on potential impacts, but often development does not occur therefore the area that we think has been developed may not actually be disturbed.

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 overtop existing developments. Preliminary analysis of this indicator shows that this may have been previously over estimated.

The next time this indicator will be updated will be in 2017 and reported in the 2017 – 2018 annual report.

**Table 11: Reductions to Land Base Due to Other Uses (Excluding Roads<sup>1</sup>)**

Feature	Total Area (ha)
Well sites <sup>2</sup>	464
Mines <sup>34</sup>	2,166
Pipelines	466
Cutlines	1,527
Trails	492
Transmission Lines	980
Grand Total	6,095

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## **2.20 PERMANENT ACCESS CORRIDORS**

<b>Criterion 2:</b>	<b>Element(s): 2.2, 4.2</b>
Ecosystem Condition and Productivity	Forest Ecosystem Productivity; Forest Land Conversion
<b>CSA Core Indicator(s): 2.2.1 Additions and deletions to the forest area</b>	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Ecosystem Productivity, Forested Land Base	
<b>SFM Objective:</b> We will sustain forests within the DFA.	

### **STATUS AND COMMENTS:**

Previously the data analysis for this indicator occurred when the Timber Supply Analysis/Review was conducted in support of determining the next AAC Determination for the DFA. Government regulation changes had extended the period between AAC determinations which had

<sup>1</sup> 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.

<sup>2</sup> Includes camps, decking areas, borrow pits and sumps

<sup>3</sup> 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.

<sup>4</sup> Includes roads within mine-cleared areas.

<sup>5</sup> Updated VRI data used, operational roads and Block Perm roads reduced in RoW width from 2004 data due to newer methods of analysing data and collecting actual measurements.

lengthened the reporting period for this particular indicator. A revision accepted by the PAC removed the indicator reporting time from the AAC/TSR process to a 5 year reporting schedule.

The following table shows the status to the end of 2015. The data used in the 2015-2016 reporting year, was taken from the most updated VRI (2015), along with existing GPS'd road data, data collected and made available by individual oil and gas companies downloaded from the BCGW and from shapefiles sent when various users sent referrals to Canfor for operations being conducted on the TFL.

**Table 12: 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	1,046	0.16%
1 - ML (25m)	2,382	0.36%
2 - Operational (15m)	2,291	0.35%
3 - Block Perm (8m)	2,836	0.43%
4 - Oil & Gas/Utility roads (10m)	952	0.15%
<b>Grand Total</b>	<b>7,973</b>	<b>1.45%</b>

Source VRI 2015

**REVISIONS:**

This indicator remains on a 5 year reporting schedule and will be updated and reported in the 2020-2021 annual report.

No revisions are suggested for this indicator or objective.

**2.21 HARVEST LEVELS/VOLUMES**

<b>Criterion 2:</b>	<b>Element(s): 2.2, 5.1</b>
Ecosystem Condition and Productivity	Forest Ecosystem Productivity; Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 2.2.2:</b> Proportion of the calculated long-term sustainable harvest level that is actually harvested	
<b>5.1.1:</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
Harvest levels/volumes	Harvest volumes will not exceed 110% of the 5 year periodic cut control volume for the DFA
<b>Value(s):</b> Ecosystem Productivity, Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> 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 Table 12 below, Canfor did not overcut on the TFL in the reporting period between April 1, 2015 and March 31, 2016 and BCTS continues to gain ground in cutting their apportionment on the TFL while making up for the significant undercut they have been in for the past number of years. For the 2015 calendar year, Canfor had logged 102.6% of the allotted annual cut apportionment in 2015. Canfor had only logged 16.7% in 2016 which brings the

overall target below 110% for the five year cut control period. BCTS remained in a deficit for their apportionment at 20.1% for the 2015 year and currently sits at 0 % of their target for the 2016 year. BCTS continues to remain in a deficit for harvest on the TFL for the five year cut control period.

The annual allowable cut increase granted in October 2015 has increased the total amount of volume that Canfor will be able to harvest on the TFL in this 5 year cut control period (from 2012-2016). At the end of the 2016 year, Canfor should be under the target of 110% for the 5 year cut control period. BCTS will continue to develop sales to bring their harvest levels back on track for their apportionment on the TFL.

**Table 13: Actual Recorded and Allowable Annual Cut Summary**

Year	Canfor Annual Cut Summary				BCTS Summary <sup>2</sup>			Deciduous Harvest Summary
	Allowable Annual Cut (m <sup>3</sup> )	Adjustment (m <sup>3</sup> )	Actual Recorded Cut (m <sup>3</sup> )	Cut Control (%)	Direct Allocation (m <sup>3</sup> )	Actual Recorded Cut (m <sup>3</sup> )	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	196,848	880,460	128.8%	116,388	70,256	60.3%	76,395
2013	683,612	83,575	767,187	112.3%	116,388	35,292	30.3%	16,152
2014	683,612	0	594,935	87.0%	116,388	131,030	112.6%	0
2015	794,736	0	815,040	102.6%	144,169	29,010	20.1%	0
2016	1,203,613	0	201,178	16.7%	246,387	0	0%	0
<b>Running Total</b>	<b>4,049,185</b>	<b>280,423</b>	<b>3,258,800</b>	<b>80.5%</b>	<b>739,720</b>	<b>265,588</b>	<b>35.9%</b>	<b>92,547</b>

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

1 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 m<sup>3</sup> 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.

2 BCTS volumes were reported using the MoFR Harvest Billing System reports.

3 This value represents the volume delivered from A77788 in 2005 as reported in the MoFR Harvest Billing System (HBS).

4 This value represents the volume delivered from A77788 in 2006 as reported in the MoFR Harvest Billing System (HBS).

5 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

<b>Criterion 2:</b>	<b>Element(s): 2.2</b>
Ecosystem Condition and Productivity	Forest Ecosystem Productivity
<b>CSA Core Indicator(s): 2.2.2</b> Proportion of the calculated long-term sustainable harvest level that is actually harvested	
<b>Indicator Statement</b>	<b>Target Statement</b>
Allowable Annual Cut (AAC)	We will ensure that the Allowable Annual Cut will not adversely impact Long Term Harvest Level
<b>Value(s):</b> Ecosystem Productivity	
<b>SFM Objective:</b> 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 25<sup>th</sup>, 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 the reporting period between January 1, 2014 and March 31, 2015 represented 57% of deliveries which was 13% below the goal of 70% pine harvest noted in the previous AAC determination rationale.

The focus for timber harvest on TFL 48 in the past few years and into the future is on pine leading stands. The actual proportion of pine volume harvested is less than the goal because of the mixed nature of the Pine/Spruce forests across the THLB as well as the condition of the majority of pine leading stands being identified and reccied for harvest. 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 as we log the dead pine stands. As predicted with this indicator, this trend is continuing 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. An expedited Timber Supply Review (TSR) was conducted in 2013/2014 as part of the requirements in requesting an uplift in harvest levels for TFL 48 which shows that a higher level of cut could be supported on the TFL without negatively impacting the midterm timber supply. October 15, 2015, saw a decision made on the Allowable Annual Cut which increased the AAC for TFL 48 to 1,550,000 mill m<sup>3</sup> which includes a 100,000 m<sup>3</sup> cut which allows for the harvest of both deciduous and coniferous trees within deciduous-leading stands. This uplift will only be in effect for 5 years ending in October 2020. After October 2020, the AAC will then be reduced to 871,000 m<sup>3</sup> which will continue to include the 100,000 m<sup>3</sup> cut which allows for the harvest of both deciduous and coniferous trees within deciduous-leading stands. For the 2015-2016 annual report the AAC has been updated as shown in Table 13.

**Table 14: Annual Allowable Cut and Long-Term Harvest Level**

Partition	MP 1	MP 2	SFMP 3	SFMP 4	SFMP 5
	AAC	AAC	AAC	AAC	AAC
Coniferous	410,000	460,000	525,000	800,000	1,450,000
Deciduous	0	54,000	55,000	100,000	100,000
<b>Total</b>	<b>410,000</b>	<b>514,000</b>	<b>580,000</b>	<b>900,000</b>	<b>1,550,000</b>

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.23 SOIL DEGRADATION**

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

**STATUS AND COMMENTS:**

In TFL 48 there were a total of 40 blocks with harvesting completed in 2015-2016 reporting year between BCTS 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**

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

**STATUS AND COMMENTS:**

There were a total of 40 blocks with harvesting completed between April 1, 2015 and March 31, 2016 between BCTS, 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**

<b>Criterion 3:</b>	<b>Element(s): 3.1</b>
Soil and Water	Soil Quality and Quantity
<b>CSA Core Indicator(s): 3.1.1</b> Level of soil disturbance	
<b>Indicator Statement</b>	<b>Target Statement</b>
Use of environmentally friendly lubricants	We will research and identify environmentally friendly lubricants bi-annually
<b>Value(s):</b> Soil Productivity	
<b>SFM Objective:</b> 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 continue to be 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 on again in the 2020-2021 annual report.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.26 SITE INDEX**

<b>Criterion 3:</b>	<b>Element(s): 3.1</b>
Soil and Water	Soil Quality and Quantity
<b>CSA Core Indicator(s): 3.1.1</b> Level of soil disturbance	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Soil Productivity	
<b>SFM Objective:</b> 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.

Since 2013 year one unit, SBSwk2 pine site series 5, has not been meeting the target performance. This unit was to be monitored to ensure it would reach its target SI over the next five years. Between the 2013 and 2015-2016 years, the predicted SI has come up which shows that the target performance is moving in the right direction. This Si is expected to reach the predicted SI. In the 2015-2016 reporting period, two other BEC/site series showed a decrease in the predicted SI putting them below the negative 10% variance. The BWBSwk1 white spruce site series 5, and the SBSwk2 pine site series 1 and 6 show a decrease in the predicted SI putting them below the negative 10% variance that is considered acceptable for this indicator. Site index is a relative measure of forest site quality and is influenced by soil moisture and rainfall. As this indicator is also linked to indicators 2.23 Soil Degradation and 2.24 Soil Disturbance Surveys which were both within compliance, it is possible that the drier summers we have had in the past few years, have influenced the SI for these BEC zones/site series. These units will continue to be monitored as well as the SBSwk2 site series 1, to determine if a trend exists.

**Table 15: 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	504.1	20.4	17.7	247.3	17.7	18
	2	-	-	N/A	50.5	19.3	9	18.1	16.4	12
	3	-	-	N/A	224.8	19.5	17	74.9	17.9	18
	4	-	-	N/A	212.0	18.2	12	80.6	17.7	15
	5	-	-	N/A	95.5	19.0	18	140.4	20.3	18
	6	-	-	N/A	19.0	19.6	18.1	3.4	17.7	18
	7	-	-	N/A	58.4	19.9	18	1.0	18.0	18
BWBSmw1 Total		-	-	N/A	1,164.5	19.6	16.6	565.6	18.3	17.6
BWBSwk1	1	-	-	N/A	140.0	18.1	12	81.1	16.6	15
	2	-	-	N/A	11.6	17.9	9	51.8	18.9	12
	3	-	-	N/A	71.5	13.6	9	84.6	15.5	12
	4	-	-	N/A	5.6	21.5	12	18.6	14.1	15
	5	-	-	N/A	5.7	12.3	15	0.4	17.3	15
	6	-	-	N/A	0.0	0.0	15	2.4	16.0	15
BWBSwk1 Total		-	-	N/A	234.4	16.6	11.5	239.3	16.5	14.6
BWBSwk2	1	-	-	N/A	15.7	17.7	12	9.4	15.6	15
	2	-	-	N/A	0.0	0.0	9	0.0	0.0	12
	3	-	-	N/A	0.0	0.0	12	5.7	16.6	15
	4	-	-	N/A	0.0	0.0	9	0.0	15.0	12
	5	-	-	N/A	0.0	0.0	15	0.0	0.0	15
BWBSwk2 Total		-	-	N/A	15.7	17.7	11.9	15.1	16.0	15
ESSFmv2	1	1,490.8	15.1	12	650.1	16.6	15	365.1	17.0	15
	2	191.2	13.3	9	132.3	15.6	9	20.3	17.9	12



	3	226.1	14.1	6	33.9	15.5	6	51.9	14.6	9
	4	852.7	15.4	15	255.1	15.6	15	202.0	16.3	18
	5	156.6	17.6	15	25.2	15.0	15	1.0	15.2	15
	6	29.7	16.8	15	0.0	18.6	15	3.3	19.8	15
<b>ESSFmv2 Total</b>		<b>2947.0</b>	<b>15</b>	<b>12.8</b>	<b>1096.6</b>	<b>16.2</b>	<b>14.6</b>	<b>643.7</b>	<b>16.6</b>	<b>15.1</b>
ESSFmv4	1	1.6	12.3	12	0.7	12.0	15	0.0	0.0	15
	2	1.2	12.3	9	1.1	12.0	9	0.0	0.0	12
	3	0.0	0.0	6	0.0	0.0	6	0.0	0.0	9
	4	10.8	12.3	15	0.0	0.0	15	0.0	0.0	18
<b>ESSFmv4 Total</b>		<b>13.5</b>	<b>12</b>	<b>10.5</b>	<b>1.8</b>	<b>12.0</b>	<b>15</b>	<b>0.0</b>	<b>0.0</b>	<b>13.5</b>
ESSFw3	1	117.4	17.6	15	6.3	22.8	15	-	-	N/A
	2	24.7	17.6	9	0.0	0.0	9	-	-	N/A
	3	82.2	19.0	15	2.5	23.0	15	-	-	N/A
<b>ESSFw3 Total</b>		<b>224.3</b>	<b>18.1</b>	<b>15</b>	<b>8.8</b>	<b>22.9</b>	<b>13</b>	<b>-</b>	<b>-</b>	<b>N/A</b>
ESSFwk2	1	489.9	17.7	15	263.3	18.9	15	47.4	17.5	N/A
	2	294.8	16.5	9	83.1	16.9	9	89.9	17.6	N/A
	3	349.3	17.2	12	41.6	17.9	12	124.9	17.0	15
	4	495.0	17.9	15	143.6	15.6	15	27.5	16.2	N/A
	5	311.6	15.3	15	40.8	18.3	15	26.6	16.7	N/A
	6	28.1	18.5	12	1.3	17.7	12	1.7	17.5	N/A
<b>ESSFwk2 Total</b>		<b>1968.7</b>	<b>17.1</b>	<b>12.4</b>	<b>573.7</b>	<b>17.7</b>	<b>14.1</b>	<b>318.1</b>	<b>17.2</b>	<b>15</b>
SBSwk2	1	833.6	16.2	15	732.9	19.0	21.8	844.4	17.8	21
	2	85.0	17.7	12	156.0	20.4	15	201.5	19.2	15
	3	231.0	15.8	12	703.3	19.2	18	1086.2	19.2	18
	4	322.4	14.7	N/A	569.1	18.4	15	436.9	18.3	18
	5	430.6	16.7	18	505.7	19.5	21	315.6	18.0	21
	6	44.6	18.7	18	173.3	19.8	24	25.1	19.7	21
	7	29.0	15.7	N/A	44.2	16.1	N/A	55.6	20.2	N/A
<b>SBSwk2 Total</b>		<b>1976.2</b>	<b>16.1</b>	<b>14.6</b>	<b>2884.4</b>	<b>19.1</b>	<b>19.7</b>	<b>2965.2</b>	<b>18.5</b>	<b>19.8</b>
<b>Grand Total</b>		<b>7205.2</b>	<b>16.1</b>	<b>12.8</b>	<b>5979.8</b>	<b>18.4</b>	<b>16.9</b>	<b>4747.1</b>	<b>18.1</b>	<b>17.4</b>

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.27 COARSE WOODY DEBRIS**

<b>Criterion 3:</b>	<b>Element(s): 3.1</b>
Soil and Water	Soil Quality and Quantity
<b>CSA Core Indicator(s): 3.1.2</b> Level of downed woody debris	
<b>Indicator Statement</b>	<b>Target Statement</b>
Average Coarse Woody debris size and m <sup>3</sup> /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 <sup>3</sup> /ha of which a minimum of 46 m <sup>3</sup> /ha will be greater than 17.5cm in diameter
<b>Value(s):</b> Ecosystem Productivity	
<b>SFM Objective:</b> We will protect soil resources to sustain productive forests.	

### **STATUS AND COMMENTS:**

In the April 1, 2015 to March 31, 2016 reporting year, 2 plots were established on TFL 48. Progress to date for the 2 samples shows an average of 48 m<sup>3</sup>/ha of which 39 m<sup>3</sup>/ha is greater than 17.5 cm diameter. With such a small sample size on the TFL it is likely that the samples for the year are showing lower volumes for this reporting period. A review of the site plans in the 2015 – 2016 reporting year show that CWD is being retained on harvested blocks and in the 2016 – 2017 reporting year, site plans will continue to be reviewed to ensure CWD management strategies are meeting the target in this indicator.

Though all the Site Plans prescribe the appropriate coarse woody debris management, the indicator itself takes into account the actual data collected from established plots in the coarse woody debris sample plots. In 2013 there were no sampling plots that fell into the grid and so no data was available for that year. The sample in the 2015 – 2016 reporting period only measured 2 plots which both showed an average of 48 m<sup>3</sup>/ha of CWD. Overall this brings the actual data for CWD below the target for this indicator (average retention level over the TFL since Jan 1, 2004 will be at least 92 m<sup>3</sup>/ha of which a minimum of 46 m<sup>3</sup>/ha will be greater than 17.5cm in diameter). As the sample sizes increase the trend should begin showing that the CWD retention on the TFL is headed back to the target.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## **2.28 STREAM CROSSING QUALITY INDEX**

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

### **STATUS AND COMMENTS:**

In the 2015 field season a total of 35 crossings were surveyed in the Gething, Johnson and Upper Carbon 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 below the maximum target of 0.4. There were no crossings identified in the high class.

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 are currently meeting the SCQI targets.

**Table 16: SCQI and Water Quality Concerns for Watersheds within TFL 48  
– Sampling Completed 2001 to 2014**

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 <sup>1</sup>	% None (#streams/#streams sampled)	% Low (#streams/#streams sampled)	% Medium (#streams/#streams sampled)	% High (#streams/#streams sampled)
Gaylard (2009) <sup>3</sup>	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 (2015)	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 (2014)	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 (2014)	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 (2015)	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 <sup>2</sup>	N/A <sup>2</sup>	N/A <sup>2</sup>	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 (2014)	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 (2015)	49	0.2 3	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)**

<b>Criterion 3:</b>	<b>Element(s): 3.2</b>
Soil and Water	Water Quality and Quantity
<b>CSA Core Indicator(s): 3.2.1</b> Proportion of watershed or water management areas with recent stand-replacing disturbance	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Water Quality and Quantity	
<b>SFM Objective:</b> We will maintain water quality and quantity.	

**STATUS AND COMMENTS:**

In 2015 – 2016 reporting year there were 4 crossings requiring action plans due to broken/plugged culverts. As the majority of these roads are still actively used they are being regularly maintained throughout the year. All of the action plans that were under Canfor responsibility are scheduled for actions to fix/replace culverts. There were no crossings requiring action plans that were under the responsibility of other licensees in the 2015 – 2016 year.

**REVISIONS:**

No revisions are suggested for this indicator or objective

**2.30 PEAK FLOW INDEX**

<b>Criterion 3:</b>	<b>Element(s): 3.2</b>
Soil and Water	Water Quality and Quantity
<b>CSA Core Indicator(s): 3.2.1</b> Proportion of watershed or water management areas with recent stand-replacing disturbance	
<b>Indicator Statement</b>	<b>Target Statement</b>



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
<b>Value(s):</b> Water Quality and Quantity	
<b>SFM Objective:</b> We will maintain water quality and quantity.	

**STATUS AND COMMENTS:**

A new projection of Peak Flow Index (PFI) has been completed for the 2015 – 2016 reporting period. Currently all watersheds are well below the max PFI targets. 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 the watersheds are closely monitored such that the established target is not exceeded. The information presented in this annual report forecasts disturbances and growth to the end of 2015.

Table 17: Peak Flow Index Post Development Status

2015-2016 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	12	0.2	1,032.6	18.9	43
Aylard Creek	1,036	5,460	27	0.5	313.1	5.7	37
Basin "862"	853	2,825	1,075	38.1	861.3	30.5	43
Beany Creek	958	3,902	18	0.5	221.1	5.7	37
Brazion Creek	1,220	32,398	1,977	6.1	3,947.3	12.2	37
Burnt Creek	1,185	62,216	2,757	4.4	0.0	0.0	37
Cameron Creek	783	3,615	199	5.5	81.9	2.3	50
Dunlevy Creek	1,047	17,020	640	3.8	1,971.4	11.6	31
Eleven Mile	1,326	21,621	548	2.5	91.6	0.4	43
Gaylard	1,029	15,652	2,968	19.0	53.4	0.3	31
Gething	996	18,521	1,380	7.5	87.6	0.5	31
Gw illim	1,066	4,520	810	17.9	289.1	6.4	43
Hasler Creek	1,077	19,027	4,817	25.3	14.9	0.1	37
Hihat Creek	1,037	15,659	3,923	25.1	5,687.1	36.3	43
Johnson	891	21,169	3,522	16.6	797.6	3.8	37
Lebleu Creek	874	2,000	12	0.6	6.4	0.3	50
LeMoray Creek	1,291	11,199	381	3.4	560.0	5.0	37
Low er Carbon	1,057	13,178	982	7.5	285.5	2.2	50
Low er Murray	1,066	17,408	1,703	9.8	1.2	0.0	37
Low er Peace Reach	955	14,361	2,340	16.3	99.1	0.7	50
Low er Pine Residual	923	16,239	4,518	27.8	3.1	0.0	43
Low er Sukunka	904	54,308	7,880	14.5	997.7	1.8	43
Low er Wolverine	1,161	23,283	2,122	9.1	0.7	0.0	37
Medicine Woman Creek	975	1,877	49	2.6	13.2	0.7	35
Middle Wolverine	1,205	17,674	3,456	19.6	6.7	0.0	43
North Peace Residual	929	9,469	233	2.5	472.9	5.0	50
Ruddy Creek	922	6,450	128	2.0	24.9	0.4	31
Seven Mile	1,257	7,885	256	3.2	47.6	0.6	43
Trapper Creek	1,179	7,575	2	0.0	0.0	0.0	37
Upper Carbon	1,291	46,295	896	1.9	1,511.9	3.3	37
Upper Murray	1,294	17,868	2,272	12.7	3,073.1	17.2	37
Upper Pine Residual	1,082	40,159	5,643	14.1	8,263.4	20.6	37
Upper Sukunka	1,075	23,459	1,964	8.4	4,364.0	18.6	43
Upper Wolverine	1,378	18,042	1,011	5.6	1,435.5	8.0	37

**REVISIONS:**

No revisions are suggested for this indicator or objective.



### 2.31 WATERSHED REVIEWS

<b>Criterion 3:</b>	<b>Element(s): 3.2</b>
Soil and Water	Water Quality and Quantity
<b>CSA Core Indicator(s): 3.2.1</b> Proportion of watershed or water management areas with recent stand-replacing disturbance	
<b>Indicator Statement</b>	<b>Target Statement</b>
The percentage of watersheds 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
<b>Value(s):</b> Water Quality and Quantity	
<b>SFM Objective:</b> We will maintain water quality and quantity.	

#### **STATUS AND COMMENTS:**

In 2016-2016 reporting year there were no watershed reviews required as there were no watersheds where the PFI was exceeded and harvesting was proposed. Watersheds will continue to be monitored and going forward if harvesting is proposed in the watersheds that are approaching the PFI target, a watershed review 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, 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

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

#### **STATUS AND COMMENTS:**

There were no spills or misapplications of petroleum products into a riparian feature between April 1, 2015 and March 31, 2016 on the DFA. When the efficacy flights were conducted for the 2015 aerial herbicide program there were no incidences of overspray occurring.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.33 CARBON SEQUESTRATION**

<b>Criterion 4:</b>	<b>Element(s): 4.1</b>
Role in Global Ecological Cycles	Carbon Uptake and Storage
<b>CSA Core Indicator(s): 4.1.1 Net carbon uptake</b>	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Carbon Uptake and Storage	
<b>SFM Objective:</b> We will maintain the processes for carbon uptake and storage within the natural range of variation.	

**STATUS AND COMMENTS:**

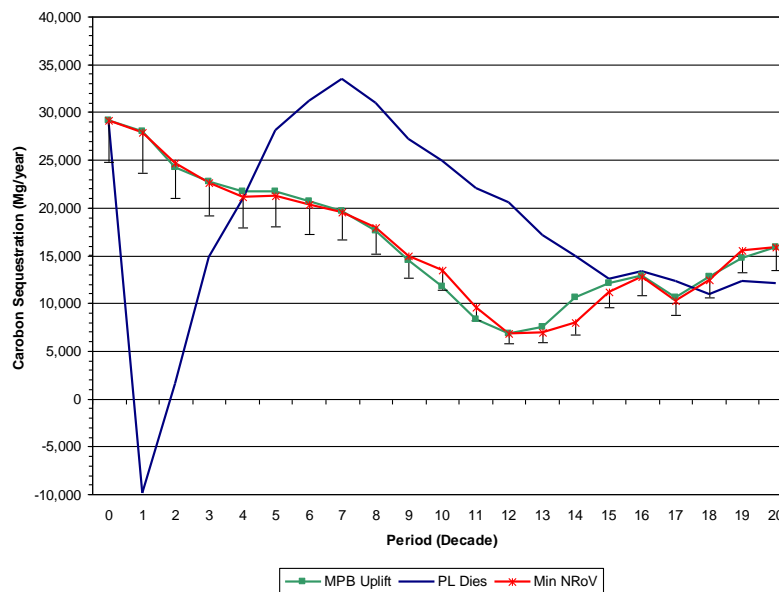
There has been no change in the status of this indicator since reported in SFMP 4. The data analysis for this indicator occurs when the Timber Supply Analysis/Review is conducted in support of determining the next AAC Determination for the DFA. Government regulation changes have extended the period between AAC determinations which has lengthened the reporting period for this particular indicator. The next anticipated determination was delivered in October of 2015 and so this indicator was updated for this annual reporting period. The next time this indicator will be updated will be when the next TSR is completed, before the expiry of the current AAC uplift in October of 2020.

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 m<sup>3</sup>)**

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:**

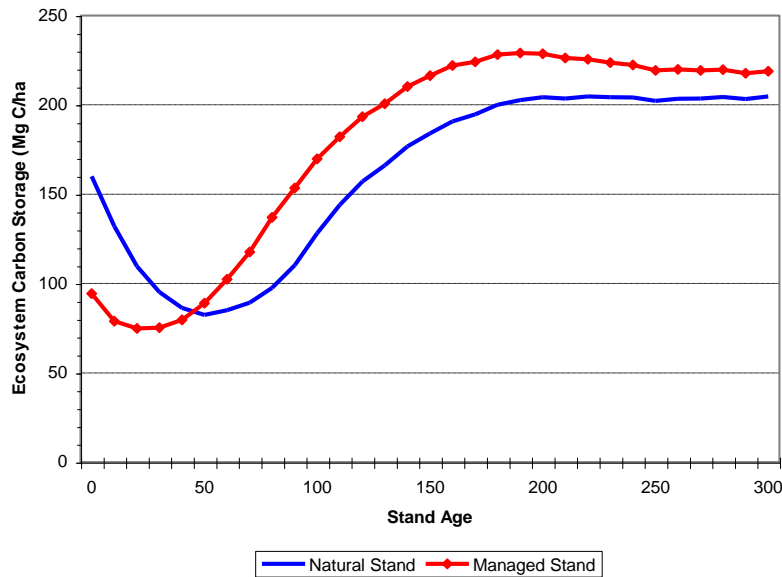
No revisions are suggested for this indicator or objective.

### 2.34 ECOSYSTEM CARBON STORAGE (MG) IN THE DFA

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

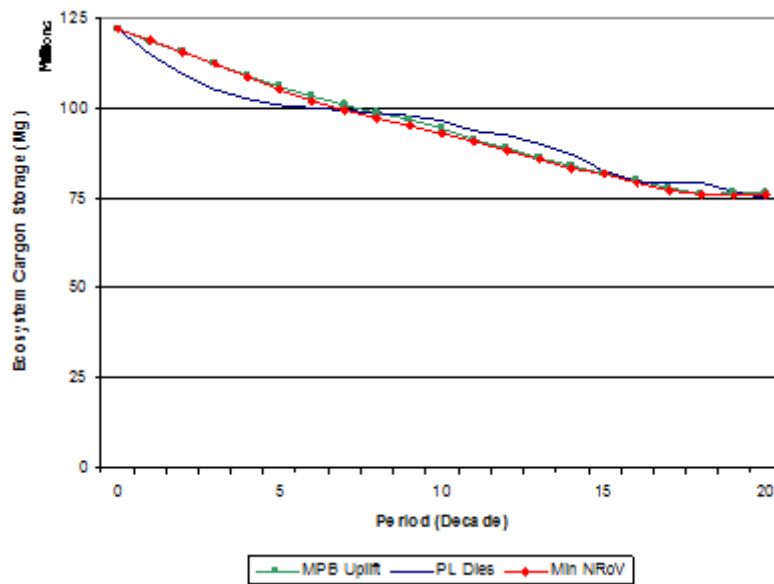
**STATUS AND COMMENTS:**

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 was delivered in October of 2015 and so this indicator was updated for this annual reporting period. The next time this indicator will be updated will be when the next TSR is completed, before the expiry of the current AAC uplift in October of 2020.



**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<sup>3</sup>)**

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**

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.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.35 RANGE OPPORTUNITIES**

<b>Criterion 5:</b>	<b>Element(s): 5.1, 6.3</b>
Economic and Social Benefits	Timber and Non-Timber Benefits; Forest Community Well-Being and Resilience
<b>CSA Core Indicator(s):</b> 5.1.1 Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA 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	
<b>Indicator Statement</b>	<b>Target Statement</b>
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.
<b>Value(s):</b> Timber and Non-Timber Multi-use Benefits, Strengthening and Diversifying Community Businesses and Business Opportunities	
<b>SFM Objective:</b> We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

We will provide opportunities for local economic development.

**STATUS AND COMMENTS:**

In 2015, there was a total of 1083, AUM's available on range tenures on TFL 48. This is a slight decrease in AUM's from the 2014-2015 reporting period.

**Table 18: AUM's on TFL48 in 2015**

Range Tenure	Total AUM's	TFL Proportion (%)	TFL AUM's
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	105	87.9	98
RAN076149	157	2.8	4
RAN076313	170	0.04	0
RAN076505	118	9.9	12
RAN076672	699	58.7	410
<b>Total</b>			<b>1083</b>

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.36 HARVEST METHOD**

<b>Criterion 5:</b>	<b>Element(s): 5.1</b>
Economic and Social Benefits	Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 5.1.1</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
Proportion (%) of coniferous harvesting volume completed with conventional ground based methods by 5 year cut control period by each participant.	A maximum of 93% of the coniferous harvesting volume (m3) will be completed with conventional ground based methods by 5 year cut control period by each participant.
<b>Value(s):</b> Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> 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 2012 – 2016. In early 2016 a change was made to the amount of cable and conventional harvesting on the TFL, to a maximum of 93% conventional harvest on the TFL.

In both 2012 and 2013, the target was at 14.9% and 12.0% respectively utilizing the cable system; 85% and 88% of the area harvested used a conventional system in those years. By the end of 2016, 15.4% of the area overall, was harvested using a cable system with 84.6% harvested conventionally. Cable area allocated to BCTS was included in this table with cable volume being harvested only in the 2013 year. Going forward BCTS is being allocated cable volume on the TFL which is expected to help continue to meet the cable/conventional harvest method percentage on the TFL.

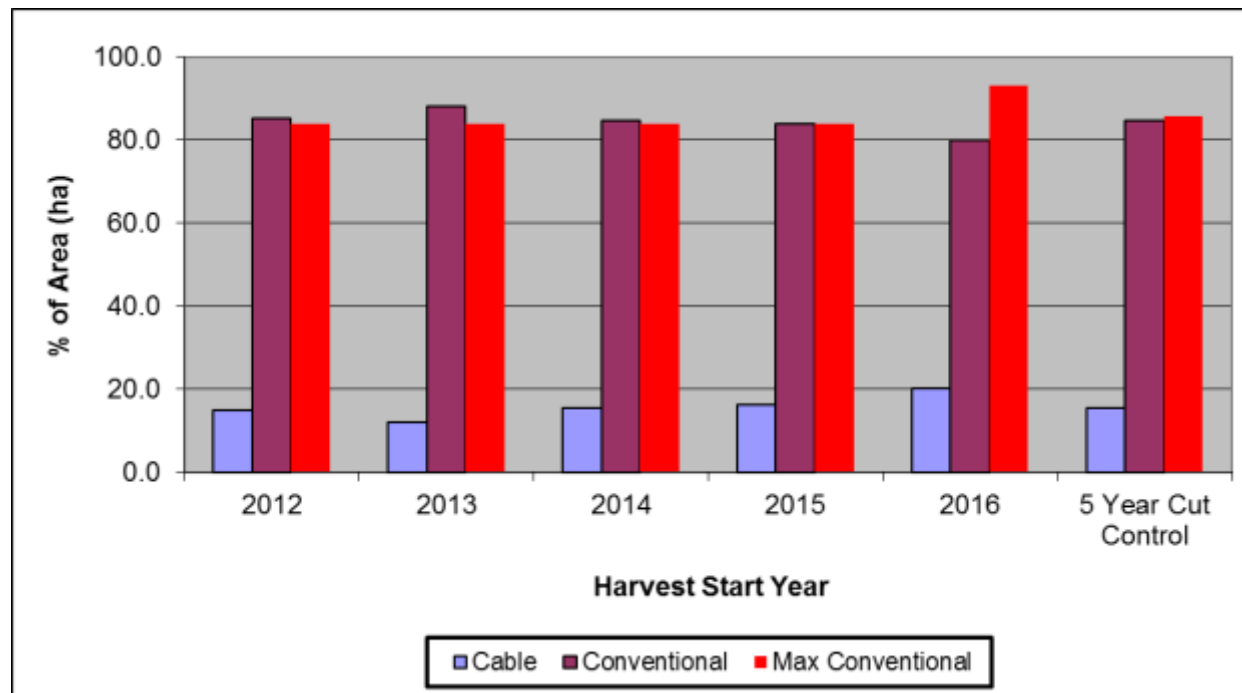
In the 5 year cut control period, Canfor and BCTS met the target of harvesting a maximum of 84% using conventional ground based methods for this 5 year cut control period.

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 results 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 Licensees which have made many of these stands un-economical to harvest. As market conditions improve, and forest licensees 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 the 2015 – 2016 reporting year, Canfor saw the introduction of a steep slope harvester put into use on the TFL which will help towards achieving the conventional/cable target to increase the proportion of steep slope harvest on the TFL. Canfor and other local licensees continue to be 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 challenge us in the near future. It is hoped that with the advances in harvesting systems and machinery being utilized that increasing options for equipment to be used in steeper ground will provide new and innovative ways to log on this steeper ground within the TFL, in order to increase the proportion of steep slope harvest.

For the next 5 year cut control period, in order to achieve this target Canfor is developing a strategy to target harvesting approximately 100,000m<sup>3</sup> of volume by cable or other steep slope operations on an annual basis. Other Licensees that are provided the opportunity to harvest timber on the TFL (through timber sales or other agreements), are being encouraged to utilize cable systems as well. Volume allocated to the BCTS program now includes cable volume to ensure that the BCTS TFL 48 harvest program reflects the timber and operational profile of TFL 48.

**Figure 14: Proportion of Conventional Harvest Systems Used 2012-2016**



**REVISIONS:**

A revision was proposed by Canfor and BCTS to address the external audit finding in 2016 which identifies the shortfall in cable harvesting on the TFL for two consecutive years. The proposed change was brought forward to the PAC at the October 2015 meeting. It was agreed that this indicator would be revised and the Licensees would review this indicator and present a change at the next PAC meeting in early 2016. At the February 2016 meeting, Licensees proposed that a maximum of 93% of the conifer harvesting volume (m3) would be completed with conventional ground based methods by 5 year cut-control period, by each participant. This was accepted by the PAC members and would be reported in the 2015 – 2016 annual report.

**2.37 PROPORTION OF HARVESTING CONSISTENT WITH VISUAL QUALITY OBJECTIVE**

<b>Criterion 5:</b>	<b>Element(s): 5.1</b>
Economic and Social Benefits	Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 5.1.1</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	





**STATUS AND COMMENTS:**

Between April 1, 2015 and March 31, 2016 there were 14 blocks (12 Canfor blocks and 2 BCTS blocks) that were harvested within areas requiring conformance with visual quality objectives. These blocks were all consistent with the VQO objectives.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.38 BACK COUNTRY CONDITION**

<b>Criterion 5:</b>	<b>Element(s): 5.1</b>
Economic and Social Benefits	Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 5.1.1</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
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, Boccock, 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)
<b>Value(s):</b> Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> 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 2015 – 2016 reporting year there was no harvesting or road construction in or adjacent to any of the backcountry areas. The Mount McAllister wildfire which burned in the summer of 2014 and into the winter, burned very close to the Klin Se Za Park. Despite the size of this fire, there was only a slight increase in the ROS inventory within the Klin Se Za Mountain area. The VRI data was updated in the 2015 year as well as a change in the layers available from the Oil and Gas Commission which shows more access into these areas. With these updates to the data used, a slight change in the ROS inventory is noticed. These changes however are not all directly caused directly by forestry activities on the TFL.

The baseline (2001) and current (2015) recreational opportunity spectrum for the stated Backcountry areas are shown on the following tables (Table 19).

**Table 19: Baseline Condition – ROS Inventory**

Back Country Area	ROS Class Baseline Condition – (2001)						Grand Total	
	Roaded			Roaded Total	Semi Primitive			Semi Primitive Total
	Rural	Modified	Natural		Motorized	Non Motorized		



Back Country Area	ROS Class Baseline Condition – (2001)							Grand Total
	Roaded			Roaded Total	Semi Primitive		Semi Primitive 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 2015

Back Country Area	ROS Class (2005)							Grand Total
	Roaded			Roaded Total	Semi Primitive		Semi Primitive 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**

<b>Criterion 5:</b>	<b>Element(s): 5.1</b>
Economic and Social Benefits	Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 5.1.1</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
Number of recreational trails and campsites maintained by Canfor	Canfor will provide and/or maintain 1 backcountry trail and 3 campsites on TFL 48
<b>Value(s):</b> Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> 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 and 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 2015 and 2016, campsite maintenance was tendered out to a local contractor for maintenance of the three campsites and the Battleship Mountain Trail. The campsites are also checked each year by a Canfor representative throughout the course of the year to determine maintenance needs which are passed along to the local contractor. A campsite maintenance contract was developed and awarded early in 2015 and again in early 2016 to ensure this indicator remains in compliance.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## **2.40 CONSISTENCY WITH THIRD PARTY ACTION PLANS**

<b>Criterion 5:</b>	<b>Element(s): 5.1</b>
Economic and Social Benefits	Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 5.1.1</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

### **STATUS AND COMMENTS:**

In the 2015-2016 reporting period there were no action plan agreements signed with any users on the TFL. Nor were there any pre-existing action plans requiring implementation in the 2015-2016 reporting year.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## 2.41 WASTE

<b>Criterion 5:</b>	<b>Element(s): 5.1</b>
Economic and Social Benefits	Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 5.1.1</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
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.
<b>Value(s):</b> Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

### **STATUS AND COMMENTS:**

Between April 1, 2015 and March 31, 2016 there were a total of 40 blocks harvested by Canfor and BCTS. Of the 33 Canfor blocks, 14 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. From the April 1, 2015 to March 31, 2016 reporting period neither Canfor nor BCTS reported any waste issues.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## 2.42 FOREST HEALTH

<b>Criterion 5:</b>	<b>Element(s): 5.1</b>
Economic and Social Benefits	Timber and Non-Timber Benefits
<b>CSA Core Indicator(s): 5.1.1</b> Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	
<b>Indicator Statement</b>	<b>Target Statement</b>
% 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
<b>Value(s):</b> Timber and Non-Timber Multi-Use Benefits	
<b>SFM Objective:</b> We will provide opportunities for a feasible mix of timber, recreational activities, visual quality, and non-timber commercial activities.	

### **STATUS AND COMMENTS:**

In the period between April 1, 2015 and March 31, 2016, there were no major detections of forest health issues relative to managed stands. The one block (24.3 ha) planted in 2013 which was burned in the Mount McAllister forest fire which will need to be re-planted in the summer of 2016 which will address the concern on this block.

For 2015 approximately 200 ha of area is scheduled to be replanted and will require close monitoring to ensure they reach free-grow status in the allotted time period. It is likely that these areas will require a brushing treatment before planting can occur in order to ensure the seedlings can become established in the planting year.

In the 2014-2015 reporting period, the ongoing Mountain Pine Beetle (MPB) infestation was the only significant forest health agent of concern on TFL 48. 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 m<sup>3</sup> 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 2014 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 m<sup>3</sup> of conifer volume on the TFL, 27.3 million m<sup>3</sup> (37%) is pine and of this, approximately 18.6 million m<sup>3</sup> (25% of the total conifer and 68% of pine volume) is attacked by MPB.

While not yet significant, there are some signs of suspected spruce beetle infestations (<50 ha) noted in the southern portion of TFL 48 by MFLNRO forest health overview assessment flights. It was noted that there are some spruce trees showing signs of stress and in some areas single trees with significant pitch tubes. Preliminary checks were completed and it was noted that there are areas where spruce beetle is beginning to show signs of heavier than usual infestations in the spruce trees. Spruce beetle continues to be a concern on the TFL and monitoring will continue in spruce leading stands to ensure the beetle populations are being kept in check. These areas will be closely monitored over the 2015 – 2016 reporting year and if required, a treatment plan will be developed. To date, spruce beetle populations seem to remain at endemic levels. Should a major outbreak occur a trap tree program may be implemented with a more direct focus on sanitation harvesting in the heavier hit stands in an attempt to control a possible outbreak.

**Table 20: Summary of Forest Health Issues 2000-2015**

Factor	2015 Volume (m <sup>3</sup> )	2015 Area (ha)	2000-2015 Volume (m <sup>3</sup> )	2000-2015 Area (ha)	2015 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 <sup>3</sup> 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

Factor	2015 Volume (m <sup>3</sup> )	2015 Area (ha)	2000-2015 Volume (m <sup>3</sup> )	2000-2015 Area (ha)	2015 Comments
					300m <sup>3</sup> /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.
<b>Total</b>	<b>1,862,575</b>	<b>6,857</b>	<b>9,329,715</b>	<b>34,095.9</b>	

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.43 PROPORTION OF COMPLETED FOREST HEALTH ACTION PLANS**

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

**STATUS AND COMMENTS:**

In the 2015-2016 reporting year 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.

Noted in the 2015 – 2016 reporting year, spruce bark beetle has begun to increase in populations in the adjacent forest districts to the south and to the west suggesting an increased awareness and monitoring of spruce bark beetle populations on the TFL. While the focus for harvesting on the TFL remains on salvaging MPB impacted stands, a request from FLNRO to look for and report spruce beetle populations in proposed blocks and cutting permit applications

was also made. To date, spruce beetle populations seem to remain at endemic levels though the TFL is being monitored.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## **2.44 COMMUNITY DONATIONS**

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

### **STATUS AND COMMENTS:**

In the 2015-2016 reporting period a total of \$7,478.99 was donated to various interest groups in both monetary donations as well as products for various fundraisers and door prizes. Monetary donations were made to the Archie Shannon Ball/Golf Club which raises money for the local hospital and Senior's home, West Mo Days and the West Mo First Nations Youth Sports as well as the Peace Northern Caribou Committee.

Product donations included lumber to Camp Sagitawa for their picnic tables and to the Chetwynd Firefighter's Association for door prizes and 2 tickets to their annual firefighter's ball. Over the 2015-2016 year, Chetwynd continued to receive funding for their dry grad program, scholarship funds and other amateur sports programs. In 2015-2016 year also saw the continued sponsorship of the free Pancake Breakfast held on the Saturday of the Chainsaw Carving Competition which is held annually. A carver was also sponsored for the annual event.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## **2.45 LOCAL EMPLOYMENT**

<b>Criterion 5:</b>	<b>Element(s): 5.2</b>
Economic and Social Benefits	Communities and Sustainability
<b>CSA Core Indicator(s): 5.2.1</b> Level of investment in initiatives that contribute to community sustainability	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Local Employment	

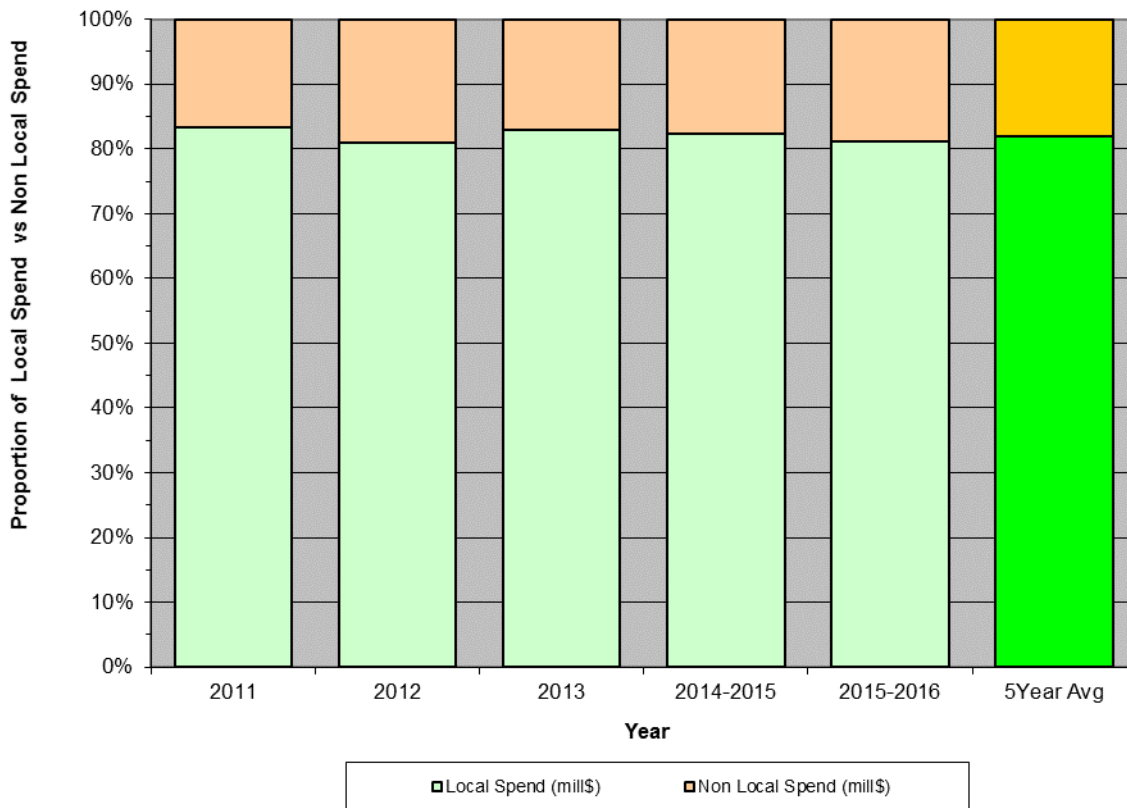
**SFM Objective:**

We will ensure local communities and contractors have the opportunity to share in benefits such as jobs, contracts and sales.

**STATUS AND COMMENTS:**

Between April 1, 2015 and March 31, 2016 not including stumps, Canfor paid \$56.5MM to all vendors. Local vendors or contractors were paid \$43.2MM or 81% of total expenditures. The five-year rolling average from 2011 through to the end of March 31, 2016 saw 82% of expenditures made to local vendors or contractors.

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



**REVISIONS:**

This indicator was reviewed by the PAC on April 22, 2015 suggesting consideration of increasing the target to up the “annual minimum of 50% local versus non-local” employment to match the 65% five year rolling average as the actual achievement is continually significantly higher than the 50% that is stated in the current target statement. Licensees were to review and comment on the proposal at the October 22, 2015 meeting. At the October meeting Licensees agreed to change the target to a 65% rolling average.

No further revisions are suggested for this indicator or objective.



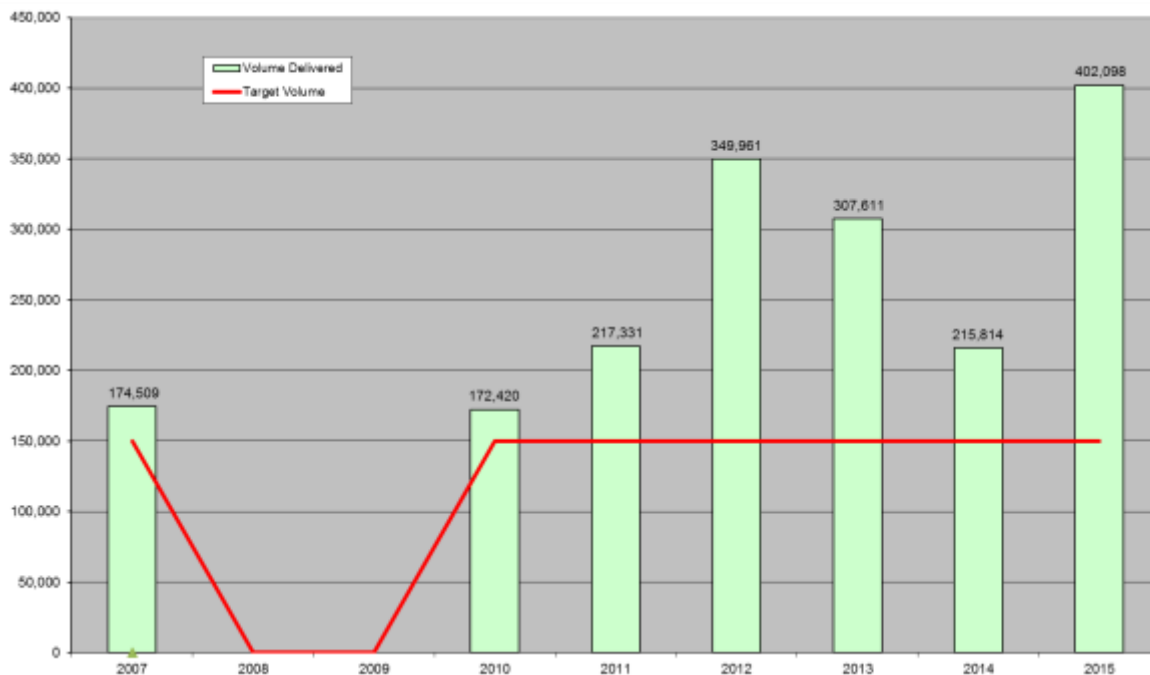
### 2.46 SUMMER AND FALL DELIVERIES

<b>Criterion 5:</b>	<b>Element(s): 5.2</b>
Economic and Social Benefits	Communities and Sustainability
<b>CSA Core Indicator(s): 5.2.1</b> Level of investment in initiatives that contribute to community sustainability	
<b>Indicator Statement</b>	<b>Target Statement</b>
Volume (m <sup>3</sup> ) of timber delivered annually to Canfor Chetwynd mill between May 1st and October 31st	Minimum of 150,000 m <sup>3</sup> coniferous delivered to Canfor Chetwynd mill
<b>Value(s):</b> Local Employment	
<b>SFM Objective:</b> 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 2015 there was no significant downtime to mill operations. Between May 1<sup>st</sup> and October 31<sup>st</sup> Canfor delivered 402,098m<sup>3</sup> 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

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

### **STATUS AND COMMENTS:**

All Canfor and BCTS staff were trained according to their training requirements for the reporting period in the 2015 – 2016 reporting year.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

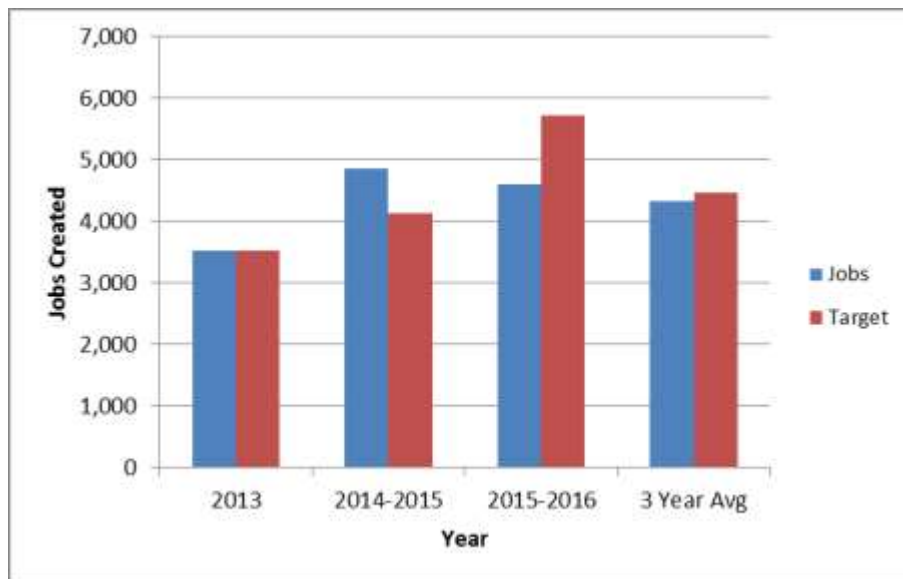
## 2.48 LEVEL OF DIRECT AND INDIRECT EMPLOYMENT

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

### **STATUS AND COMMENTS:**

Between April 1, 2015 and March 31, 2016 the number of direct and indirect jobs created by the harvesting of timber from the TFL was 4,599. 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 where no less than 90% of the target will be achieved. In the 2015 – 2016 reporting period saw an increase in the AAC for the TFL. As this indicator reports on both BCTS and Canfor volume, actual harvest volume is recorded. As BCTS continues to work towards developing and selling their apportionment on the TFL, the number of jobs created should continue to increase which will close the gap between the actual number of jobs created, and the target for each year. For this indicator, no less than 90% of the target will be achieved. The 3 year rolling average is at 97% so this indicator is considered met. 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**

<b>Criterion 5:</b>	<b>Element(s): 5.2</b>
Economic and Social Benefits	Communities and Sustainability
<b>CSA Core Indicator(s): 5.2.4</b> Level of Aboriginal participation in the forest economy	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Forest Economy	
<b>SFM Objective:</b> We will seek Aboriginal participation in the forest economy	

**STATUS AND COMMENTS:**

In 2015 - 2016 reporting period there were 8 opportunities for First Nations to be involved in the forest economy. Canfor put out a contract for one project for recreation site maintenance on the TFL and there were 7 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

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

### **STATUS AND COMMENTS:**

All Canfor and BCTS staff have 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

<b>Criterion 6:</b>	<b>Element(s): 6.1, 6.4</b>
Society's Responsibility	Aboriginal and Treaty Rights; Fair and Effective Decision-Making
<b>CSA Core Indicator(s): 6.1.2</b> Evidence of best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of the plans	
<b>6.4.3</b> Evidence of efforts to promote capacity development and meaningful participation for Aboriginal communities	
<b>Indicator Statement</b>	<b>Target Statement</b>
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
<b>Value(s):</b> Treaty and Aboriginal Rights, Level of Knowledge for Decision Making	
<b>SFM Objective:</b> 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:**

Numerous meetings, discussions, flights and field visits have taken place over the 2015 - 2016 reporting year to ensure First Nations are provided an opportunity to provide comments and share site specific information relating to the various Fibre Development Plans/Forest Operating Plans and herbicide treatment plans (Notification of Intent to Treat – NITs). At the request of First Nations the information sharing process has changed slightly to include a smaller number of blocks shared more frequently with digital files being included in an acceptable format to allow for GIS overlay with Traditional Use Data held by First Nations.

In the 2014 reporting year the information sharing process was revised to include the referral of general areas to be considered for block development ahead of the actual block design and proposed block information sharing process. The purpose of adding an opportunity to comment earlier in the proposed block design process was to allow First Nations to comment on the larger polygon to identify site specific concerns First Nations have about the area that could be incorporated into the block design process. These comments could then be considered in the proposed block development stage and allow for more dialogue between Canfor and First Nations to ensure concerns are addressed as early as possible. This process continues to be monitored and is subject to revision at the request of First Nations and Canfor. This process seems to be working as First Nations have provided comments which have allowed for subsequent block development to adjust proposed boundaries to exclude features and/or culturally significant features and values.

Canfor Management Plans consulted on included: (1) the fall 2015 and the spring 2016 Fibre Development/Forest Operating Plan which identifies proposed harvest cut blocks for both Canfor and BCTS, (2) the May 2016 Trapper Creek Fibre Development/Forest Operating Plan, and (3) the Pest Management Plan (PMP) which will be in effect from 2016 to 2021. BCTS also consulted on a Notification of Intent to Treat (NIT) which listed the reforested areas that are scheduled for vegetative control utilizing herbicides for timber sales that were previously offered and sold by BCTS.

**REVISIONS:**

No revisions are suggested for this indicator.

**2.52 DIVERSIFYING THE LOCAL ECONOMY**

<b>Criterion 6:</b>	<b>Element(s): 6.3</b>
Society's Responsibility	Forest Community Well-Being and Resilience
<b>CSA Core Indicator(s): 6.3.1</b> 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	
<b>Indicator Statement</b>	<b>Target Statement</b>
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.
<b>Value(s):</b> Strengthening and Diversifying Community Businesses and Business Opportunities	
<b>SFM Objective:</b> We will provide opportunities for local economic development.	

**STATUS AND COMMENTS:**

Over 2015-2016 reporting year 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. Late in the 2014 year saw the beginning development of a pellet mill/energy plant (Chetwynd Pellet Mill) in partnership with Canfor Chetwynd, to utilize the sawdust waste from the sawmill and create pellets which will be sold while the energy generated will be re-routed to run the pellet plant and off-set some of the energy consumption in the planer mill and potentially even the sawmill. In 2015 the project was completed and is now fully operational and shipping pellets to buyers in China.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.53 SAFETY OVER THE DFA**

<b>Criterion 6:</b>	<b>Element(s): 6.3</b>
Society's Responsibility	Forest Community Well-Being and Resilience
<b>CSA Core Indicator(s): 6.3.2</b> 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 <b>6.3.3</b> Evidence that a worker safety program has been implemented and is periodically reviewed and improved	
<b>Indicator Statement</b>	<b>Target Statement</b>
Implementation and maintenance of certified safety program	Canfor and BCTS will implement and maintain certified safety programs
<b>Value(s):</b> Level of Safety Committed to Operations	
<b>SFM Objective:</b> We will maintain safety certification and contribute to improving the safety of operations on the DFA	

**STATUS AND COMMENTS:**

Throughout the 2015-2016 year Canfor operated under its Occupational Health & Safety system and maintained its BC Forest Safety Council 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**

<b>Criterion 6:</b>	<b>Element(s): 6.4</b>
Society's Responsibility	Fair and Effective Decision-Making
<b>CSA Core Indicator(s): 6.4.1</b> Level of participant satisfaction with the public participation process <b>6.4.2</b> Evidence of efforts to promote capacity development and meaningful participation in general	
<b>Indicator Statement</b>	<b>Target Statement</b>
PAG established and maintained a satisfaction survey established according to Terms of Reference	80% satisfaction from surveys
<b>Value(s):</b> Level of Knowledge for Decision Making	
<b>SFM Objective:</b> 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:**

Throughout the 2015-2016 reporting year, the PAC has remained successful in staying on track holding at least one-to-two meetings per year (as outlined in the Terms of Reference) and one field tour as well. Between April 1, 2015 and March 31, 2016 there were three PAC meetings and one field tour conducted. The PAC reviewed all mandatory items including the 2015 Matrix and the Terms of Reference specifically as they related to member and advisor roles and responsibilities and recruitment efforts. Discussions included topics such as the Timber Supply Review for the Allowable Annual Cut uplift applied for by, and granted to, Canfor, and the Draft Sustainable Management Plan #5. The PAC also completed an assessment of the PAC satisfaction with the public participation process.

The PAC's level of satisfaction with the public participation process was assessed using a standardized survey administered at the October 2015 meeting. Overall the PAC member's remains satisfied with the process and would like to continue to see licensee efforts to recruitment new members and public for the meetings. As a result licensees continue to put forth the effort into actively recruiting new members and soliciting public attendance at these meetings. Recruitment ads continue to be included in the local papers prior to the PAC meetings and the Canfor Planning Supervisor calls and/or emails PAC members prior to the meetings to help encourage member participation. The average satisfaction score achieved was 4.4 out of 5 or 88%. Public Advisory Committee members also requested that licensees' share new information with the PAC regarding impacts to the environment, sustainability and on-the-ground forestry activities and plans with the group.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

## **2.55 PUBLIC ADVISORY COMMITTEE**

<b>Criterion 6:</b>	<b>Element(s): 6.4</b>
Society's Responsibility	Fair and Effective Decision-Making
<b>CSA Core Indicator(s): 6.4.2</b> Evidence of efforts to promote capacity development and meaningful participation in general	
<b>Indicator Statement</b>	<b>Target Statement</b>
Public Advisory Committee	We will establish and maintain Public Advisory Committee and generally hold at least one meeting annually.
<b>Value(s):</b> Level of Knowledge for Decision Making	
<b>SFM Objective:</b> 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:**

Between April 1, 2015 and March 31, 2016 there were three PAC meetings and one field tour conducted. The April 22, 2015 meeting reviewed the Mount McAllister fire salvage plan and the immediate fire impacts to the TFL and the forested area burned. A discussion brought forward

questions and concerns regarding timber values and the potential impacts to both the short and long term timber supply, as well as planting and reforestation activities and potential wildlife impacts. Mandatory items including the 2014-2015 Matrix was reviewed and a discussion about the potential changes to the CSA-Z809 standards were also talked about at the April meeting. The October 22, 2015 meeting reviewed the audit findings, the Timber Supply Review and the AAC Uplift Request and newly released decision as well as an indicator review for harvest method which would be a topic in the February 2016 PAC meeting. The July field tour visited the McAllister fire area and included a discussion on caribou and the population recovery efforts being put forth.

**Table 22: Public Advisory Committee Meetings**

Year	Number of PAC Meetings
2008	1
2009	1
2010	1
2011	3
2012	2
2013	0
January 1, 2014- March 31, 2015	4
April 1, 2015 – March 31, 2016	4

The Chetwynd PAC continues to aim to have two or three meetings per year (as needed) along with a field trip each year during the months of June or July, to inform members about forestry activities and/or topics of interest as they relate to forest management on the TFL.

### **REVISIONS:**

No revisions are suggested for this indicator or objective.

### **2.56 PUBLIC ADVISORY COMMITTEE TERMS OF REFERENCE**

<b>Criterion 6:</b>	<b>Element(s): 6.4</b>
Society's Responsibility	Fair and Effective Decision-Making
<b>CSA Core Indicator(s): 6.4.2</b> Evidence of efforts to promote capacity development and meaningful participation in general	
<b>Indicator Statement</b>	<b>Target Statement</b>
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)
<b>Value(s):</b> Level of Knowledge for Decision Making	
<b>SFM Objective:</b>	
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:**

Due to the lack of meetings held in 2013, the TOR was reviewed and updated with the PAC on January 30, 2014. The 'Roles and Responsibilities related to the PAC' and the 'Decision Making



Methodology' were updated. The next required review of the PAC Terms of Reference will be in 2016 and this was a topic as part of the February 2016 PAC meeting. Changes were made to the number of meetings to be held each year as well as timeline updates for PAC meetings. Roles and responsibilities were again reviewed and updated at the meeting.

The target was achieved.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.57 EDUCATIONAL OPPORTUNITIES**

<b>Criterion 6:</b>	<b>Element(s): 6.5</b>
Society's Responsibility	Information for Decision-Making
<b>CSA Core Indicator(s): 6.5.1</b> Number of people reached through educational outreach	
<b>Indicator Statement</b>	<b>Target Statement</b>
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.
<b>Value(s):</b> Level of Knowledge for Decision Making	
<b>SFM Objective:</b> We will have an effective and satisfactory process that enables public participation of stakeholders and First Nations.	

**STATUS AND COMMENTS:**

Between April 1, 2015 and March 31, 2016 there were three activities that were conducted to promote the awareness of forestry to the general public.

In May 2015 Canfor participated in an event put on at the local elementary school to help educate local students with regard to forest management on a very basic level. Canfor Chetwynd's planning supervisor presented information on non-timber forest values and First Nations culture to mixed groups of grades 1 – 5 elementary students.

In July 2015 a field tour was conducted for the PAC which invited the public to attend to learn more about forestry operations on the TFL which toured the area impacted by the 2014 Mount McAllister wildfire and a discussion lead by Dr. Dale Seip regarding caribou habitat and general ungulate management practices was held. Both the PAC members and the public were able to ask questions about Canfor's practices and see how those practices were actually implemented on the ground with respect to ungulates and habitat requirements as well as reforestation in the event of large scale fire disturbance.

In February 2016 a brief write-up was submitted to the local Coffee Talk sharing some information about the Chetwynd Public Advisory Committee.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

**2.58 RESPONSE TO PUBLIC INQUIRIES**

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

**STATUS AND COMMENTS:**

In the reporting period between April 1, 2015 and March 31, 2016 there were three inquiries from the public regarding Canfor's activities on the TFL and one from the City of Dawson Creek. The questions from the public were about the AAC uplift request, and the TSR that was conducted to support the uplift request along with a map of the T2 – Johnson Creek area; a request for information on Canfor's biodiversity strategy and WTPs within a specific trapline area; and a request for the July PAC field tour information which resulted in a new member joining the Public Advisory Committee. A request was made from the City of Dawson Creek as well requesting information to help with a watershed review for the City's drinking water source.

The requested information was provided within the target timeline.

**REVISIONS:**

No revisions are suggested for this indicator or objective.

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

<b>Criterion 6:</b>	<b>Element(s): 6.5</b>
Society's Responsibility	Information for Decision-Making
<b>CSA Core Indicator(s): 6.5.2</b> Availability of summary information on issues of concern to the public	
<b>Indicator Statement</b>	<b>Target Statement</b>
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 ( <a href="http://www.canfor.com/sustainability/certification/csa.asp">http://www.canfor.com/sustainability/certification/csa.asp</a> ), others upon request and distributed to PAC members and advisors
<b>Value(s):</b> Level of Knowledge for Decision Making	
<b>SFM Objective:</b>	

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 made publicly available in 2013 by the Forest Practices Board. These audit results were discussed with the PAC during the January 2014 PAC meeting. No 3<sup>rd</sup> party external audits have taken place since the 2012 FPB audit.

On-site internal and external audits were conducted in 2015 for TFL 48 and the results of both audits were discussed with the PAC in the April 22, 2015 PAC meeting (internal audit findings) and the October 2015 PAC meeting (external audit findings).

**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
MFLNRO	Ministry of Forests, Lands and Natural Resource Operations
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"> <li>• Permanent Access Corridors (also Permanent Access Structures is used)</li> <li>• Public Advisory Committee</li> </ul>
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