Fort St. James
Sustainable Forest Management Plan

Annual Report 2010/11

Prepared by:

Fort St. James Sustainable Forest Management Public Advisory Group

BCTS BC Timber Sales Stuart-Nechako

CANFOR

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Table 1: Summary of Indicator/ Objective Status, April 1, 2010 to March 31, 2011 overall for all Licensees / BC Timber Sales combined.

No.	Indicator Description	Objective		
		Met	Pending	Not Met
1	Relative Abundance of Ecosystems			X
2	Old Forest by Natural Disturbance Unit	X		
3	Old Interior Forest		X	
4	Young Patch Size Distribution		X	
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8	Ungulate Winter Range Objectives	X		
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26	Road Related Erosion Events	X		
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28	Stream Crossing Inspections	X		
30	Conformity to the Risk Ranking System	X		
31	Permanent Crossing Structures & Fish Passage	X		
32	Riparian Management Area Commitments	X		
34	Reforestation Timing	X		
35	Watershed Peak Flow Index	X		
36	Watershed Reviews	X		
37	Free Growing Obligations			X
38	Cut Level Volumes			X
39	Visual Quality Requirements			X
40	Archaeological Assessments	X		
41	Communication with Interested Individuals	X		
43	Expression on Interest	X		
44	Personal Notification	X		
46	Known Subsistence Uses, Recreational/Cultural Trails/Sites & Spiritual Sites	X		
48	Contracts Serviced by North Central British Columbia	X		
49	Employment Opportunities Advertised Locally	X		
50	Bidding Opportunities for Local Forestry-Based Businesses	X		
55	Local Aboriginal Participation in Forest Management	X		
56	Archaeological Assessment Referrals to Aboriginal Peoples	X		
59	First Nations Values and Indicators	X		
62	Satisfaction with the PAG Process	X		
63	PAG SFM Information Gap Inquires	X		
65	Hardwood Stands	X		
66	Douglas Fir Stands	X		
68	Landscape Level Strategy for Protection of Known Subsistence Uses, Recreational/Commercial & Cultural Trails/ Sites and Spiritual Sites	X		
70	Road Deactivation	X		
	Totals:	**40**	**2**	**5**

INTRODUCTION

This is the fifth annual report of the Fort St. James Sustainable Forest Management Plan (SFMP) and covers the reporting period of April 1, 2010 to March 31, 2011. The Fort St. James SFMP is the combined effort of several major licensees and the Fort St. James portion of the Stuart-Nechako BC Timber Sales towards achieving Canadian Standards Association (CSA) certification to the CSA Z809-02 standard. The signatories to the plan are:

- BC Timber Sales - Stuart Nechako
- Canadian Forest Products Ltd. - Prince George and Houston operations
- Takla Track and Timber Ltd. (managed in this plan by Canfor - Prince George)

The primary purpose of the Fort St. James SFMP is to provide an intensive planning document that will meet CSA SFM certification standards and provide a framework for the participating Licensees and BC Timber Sales to implement sustainable forest management (SFM). The Standard describes the requirements for SFM on a Defined Forest Area (DFA), which must be met to achieve certification. This Standard was prepared by the Technical Committee on Sustainable Forest Management and has been approved as a National Standard by the Standards Council of Canada.

The primary public participation method proposed in the CSA SFM standard is the Public Advisory Group (PAG), which allows continual local input from a broad range of interested parties. The Licensees/BC Timber Sales established a PAG in the fall of 2004 to assist with the SFMP development. The PAG began work on the SFMP Criteria and Elements Performance Matrix and also created a continuous improvement matrix to assist itself and the PAG in tracking issues that could not be addressed at the current time. Between November 2004 and October 2005, the PAG met on 10 occasions, with an average of 10 public members at each meeting, to undertake the work necessary to develop the SFMP. By the end of 2004 they had developed the Terms of Reference. It is important to note that the SFMP was not intended to be a static document but rather in a state of continual improvement, adapting to changes in the environment, forest management practices, research findings and public values. The door was, and still is, open to any member of the public and First Nation peoples to participate at the PAG meetings.

The CSA SFM Z809-02 Standard uses the criteria and elements outlined in the Canadian Council of Forest Ministers as a framework for identifying values and to provide consistency in determining local forest values across Canada. The Fort St. James PAG identified one or more specific local *values* for each element as well as objectives and targets to maintain these values.

The following table summarizes the results for the Area Under the Plan (AUTP) as a whole of the current reporting period. The reader should refer to the Fort St. James SFMP for a detailed explanation of the indicators and monitoring methods.

SFM INDICATORS AND OBJECTIVES

Indicator 1 - Relative Abundance of Ecosystems

Indicator Statement	***Target and Variance***
Relative abundance of ecosystems (Number / types of habitats).	Target: Implement Interim Targets: •Common Ecosystem Groups ≥15% in NHLB •Ecosystems with High Stewardship Resp. ≥30% in NHLB •Uncommon Ecosystem Groups ≥50% in the NHLB •Rare Ecosystem Groups 100% retention Variance: 0%

The relative abundance of ecosystems in the DFA is a measure of its biological richness as each type of ecosystem supports its own community of flora and fauna. Maintaining a representation of a full range of ecosystem types is a widely accepted strategy to conserve biodiversity. This indicator is intended to measure the success of the Licensees/BC Timber Sales to develop ecosystem representation targets from the predictive ecosystem mapping (PEM). PEM is the stratification of a landscape into map units, according to a combination of ecological features, primarily climate, physiography, surficial material, bedrock geology, soil, and vegetation (Government of BC, 2001a). The PEM in the Fort St. James DFA will stratify the landscape according to biogeoclimatic ecosystem classification (BEC), sub-divided by ecosections, biogeoclimatic subzone/variant, site Series, and certain site modifiers using geographic information systems (GIS) and computer modeling.

Preliminary predictive ecosystem mapping for the Fort St. James DFA was used in the Ecosystem Representation Analysis completed March 31, 2006. The preliminary results of this analysis were presented to the PAG March 21, 2007. The results were further reviewed and interpreted by a Registered Professional Biologist in the fall of 2007. A Risk Class Matrix was used in assessing the nature and extent to which the ecosystem groupings should be managed for in the timber harvesting land base. The Ecosystem Groupings were then placed into four different categories based on the current area on the crown forest land base as well as the area represented in the FSJ District relative to the rest of the province. Interim targets and management strategies are recommended until the final PEM data is available and the next Timber Supply Review (TSR) IV is completed.

Indicator 1: Relative abundance of ecosystems (Number / types of habitats).			**TARGET: See Management Strategies Variance: 0%**		
Ecosystem Group	**Total Area (ha)**	**NHLB%**	**THLB %**	**Target %**	**Management Strategy**
Xeric SBS dk	97	81%	19%	100%	No Harvest
Xeric-subxeric ESSF/SBSmc2	490	93%	7%	>50%	Monitor
Xeric-subxeric SBS dw3/mh	7144	64%	36%	>15%	Monitor
Subxeric-submesic SBS dk	61	34%	66%	100%	No Harvest
Subxeric-submesic SBPSdc/SBS	782	60%	40%	>50%	Monitor
Circum-mesic SBSdw/mw	38858	34%	66%	>15%	Monitor
Circum-mesic SBSdc/SBS	25153	27%	73%	>15%	Monitor
Circum-mesic ESSF	17136	69%	31%	>15%	Monitor
Circum-mesic SBS dk/mc2	15994	55%	45%	>15%	Monitor
Mesic SBS dw3	87875	26%	74%	>15%	Monitor
Mesic-hygric SBS dw3/mw	6	0%	100%	100%	No Harvest
Mesic-hygric SBPSmc/SBSdk	1701	64%	36%	>50%	Monitor
Subhygric SBS dw3/mc3	20748	35%	65%	>15%	Monitor
Subhygric-hygric SBS	4442	31%	69%	>15%	Monitor
Subhygric-hygric SBPSdc/SBS	1893	52%	48%	>50%	Monitor
Hygric ESSF	192	89%	11%	>50%	Monitor
Xeric ESSF mc	47544	91%	9%	>15%	Monitor

Xeric SBS mk1	2506	49%	51%	>15%	Monitor
Xeric-subxeric BWBS/SBS mk	9473	26%	74%	>15%	Monitor
Xeric-submesic SBS wk/mc2	13729	54%	46%	>15%	Monitor
Xeric-hygric BWBS	2596	36%	64%	>15%	Monitor
Subxeric-submesic ESSF mv3	31936	82%	18%	>15%	Monitor
Subxeric-submesic SBS mk1	1653	24%	76%	>50%	>15% WTP
Submesic SBS wk3	75	53%	47%	100%	No Harvest
Circum-mesic BWBS	11119	28%	72%	>15%	Monitor
Submesic-mesic SBS mk1	91589	16%	84%	>15%	Monitor
Submesic-mesic BWBS	7268	33%	67%	>15%	Monitor
Circum-mesic SBS	52942	18%	82%	>15%	Monitor
Circum-mesic ESSF mc	191595	75%	25%	>15%	Monitor
Circum-mesic SBS mk1/wk	251156	15%	85%	>15%	Monitor
Circum-mesic ESSFmv3/SBSmc2	480903	44%	66%	>15%	Monitor
Mesic ESSF mv3	5205	40%	60%	>15%	Monitor
Mesic ESSF mc	17082	53%	47%	>15%	Monitor
Mesic-subhygric SBS mc2/wk3	122059	17%	83%	>30%	>15% WTP
Mesic-subhygric SBS mc2	9998	28%	72%	>15%	Monitor
Mesic-subhygric SBS mk/wk2	76084	16%	84%	>15%	Monitor
Mesic-subhygric ESSF mv3	112180	33%	67%	>15%	Monitor
Subhygric BWBS	1361	12%	88%	>50%	>15% WTP
Subhygric-hygric SBS mc2	74	72%	28%	100%	No Harvest
Subhygric-hygric ESSF mc	14484	90%	10%	>15%	Monitor
Subhygric-hygric rich ESSF mc	1733	62%	38%	>50%	Monitor
Subhygric-hygric SBS mk1	17985	16%	84%	>15%	Monitor
Subhygric ESSF mv3/SBS wk3	24711	54%	46%	>30%	Monitor
Subhygric-hygric SBS wk/mc2	117865	21%	79%	>15%	Monitor
Subhygric-hygric ESSF mc	36728	61%	39%	>15%	Monitor
Subhygric-hygric SBS mc2	28369	50%	50%	>15%	Monitor
Hygric BWBS/SBS wk3	28353	36%	64%	>15%	Monitor
Hygric-subhygric SBS mk/wk2	18112	38%	62%	>15%	Monitor
Hygric-subhygric ESSF mc	1643	65%	35%	>50%	Monitor
Subhygric BWBS	1109	81%	19%	>50%	Monitor
Subhygric (unclassified)	25369	64%	76%	>15%	Monitor
Forest District Total	**2079160**	**38%**	**62%**		

Currently there are 50 Ecosystem Groupings in the Fort St. James Forest District.

- •Common Ecosystem Groups (33 groups)
- •Ecosystems with High Stewardship Responsibility (2 groups)
- •Uncommon Ecosystem Groups (10 groups)
- •Rare Ecosystem Groups (5 groups)

Of these 50 groupings, ? groupings do not currently meet targets. The following is the 'Interim Management Strategy' that will be implemented by Licensees and BCTS:

- No harvest in the following Rare ecosystem groups 1-05, 1-18, 2-09, 2-27
- 15% WTP in new blocks located in:
  - 2-07 (Uncommon group)
  - 2-26 (Uncommon group)
  - SBSwk3 portion of 2-21 (Stewardship group)

Table 2: Adherence to the identified Ecosystem grouping management strategy

April 1, 2010 to March 31, 2011

Licensee	Total Number of Openings Harvested between April 1 and March 31	Number of Openings harvested that met identified Ecosystem grouping management strategy between April 1 and March 31	% in DFA
BCTS	27	24	88.8%
Canfor	19	18	94.7%
Takla Track & Timber	Reported in conjunction with Canfor's openings		
TOTAL	**46**	**42**	91.3%

BCTS Discussion: BCTS missed this indicator and is reporting as a non-conformance. Prior to the 2010-2011 development seasons, BCTS Planners ran an analysis of all the proposed blks against the DJA RED/BLUE PEM mapping data that we had in our system. At this point in time any overlap was noted and handed off to the development team. These ecosystems were either excluded or managed for at the stand level. Unfortunately, it was not until this fall (2011) when BCTS planners had GIS re-run the analysis as part of our due diligence program did we notice the discrepancy. Upon further investigation it was determined that the original dataset was missing the SBSmc2/wk3 listing (typically yellow listed). These were the 3 that did not meet the 15% WTRA target as indicated in the table above. That being said, they did retain a percentage of these types in WTRA and probably (however no conclusive way to determine it) excluded it from the blk (A85253 is 3.2%, A85025 is 9.8%, and A85024 is 4.6%). Moving forward we ran the analysis on the next years datasets and came up with 4 blks that were currently in Multiphase development that would not have met the targets as above. We identified them and the field team is currently adjusting WTRA and retention boundaries to account for these species. Additionally, we are working internally to develop a better method or SOP to "catch" these issues.

Canfor Discussion: One block had been partially harvested in 2007 and completed in 2010. The site plan predates the targets set. The target retention was 15%, but there was only 12.7% retention.

All blocks harvested in Fort St. James DFA met the management strategies for the representative ecosystems identified in the table above. The ecosystem groups for the entire PG TSA were reviewed and refined in 2008. During the transition to the CSA Z809-08 standard, an Ecosystem Representation Analysis project will be carried out. This analysis is important, as it will be done using the most current land base data from the TSR IV data package. The analysis will reallocate the ecosystem groups according to the updated non-harvesting land base and timber harvesting land base definitions from TSR IV. The results of this analysis project will require the above table to be reviewed and updated.

Maintenance of representative ecosystem groupings on the Non-timber Harvesting Land Base (NHLB) is important for many reasons, primarily the use of natural landscapes in comparison to managed landscapes. Unmanaged stands play an important role as a precautionary buffer against errors in efforts intended to sustain species and a variety of genes within the managed forest.

Fort St. James contains two levels of unmanaged forest: 1) at the stand level, which includes wildlife tree patches and riparian reserve areas, and 2) at the landscape level, which includes provincial parks and other large reserve areas that have become part of the NHLB through strategic-level processes.

As mentioned above, the Fort St. James DFA includes 50 representative ecosystem groupings that were overlaid onto the NHLB and Timber Harvesting Land Base (THLB). A query of hectares associated with each habitat type within the NHLB and THLB was completed. The results were integrated into a preliminary rating of relative ecological risk associated with ecosystem representation and maintenance of representative ecosystem groupings. Targets were set for all habitat types based on whether they were uncommon or common. Seven representative ecosystem groupings did not meet the target set for area located in the NHLB, and therefore these habitat types have stand level retention strategies applied in

order to slowly increase the overall area located in the NHLB (stand level retention being a part of the NHLB). See Appendix B for table highlighting management strategies.

Indicator 2 - Old Forest by Natural Disturbance Unit

Indicator Statement	***Target and Variance***
Maintain "old forest" within each NDU (merged BEC).	Target: Maintain average percent of total old forest and not go below minimal natural variation (*As per the "Landscape Biodiversity Objectives for the PG TSA*"). Variance: Within the range of natural variation as per the *"Landscape Biodiversity Objectives for the PG TSA*".

This indicator is intended to quantify the amount of the landscape occupied by "old forests" at a point in time. Maintenance of old forest stands is crucial to forest management for the conservation of landscape ecosystem biodiversity. Old forests often contain unique plant and animal communities that contribute to ecological productivity and forest resilience. Old forests represent large volumes of stored carbon. Their maintenance helps manage levels of atmospheric carbon that is contributing to climate change.

As harvesting usually targets older stands, forest management must consider how harvesting affects the distribution and percentage of old forest stands across the landscape. Currently the Mountain Pine Beetle epidemic presents its own challenges, as older pine leading stands are the most susceptible to infestation. By ensuring the target percentage of old forest by Natural Disturbance Unit (NDU) merged BEC within the DFA is met, the long-term viability of those plant and animal species that depend on these forest types will be maintained. Forest ecosystem diversity can equate to a resilient forest more capable of adapting to the changing environment

The current status of old forest within the DFA exceeds the specified targets as per the Prince George TSA Landscape Biodiversity Objectives. It is apparent that harvesting activities can continue throughout the DFA as long as levels of old seral are closely monitored to ensure the targets are continually achieved or exceeded.

Table 3. Old Forest in the DFA and Associated Targets

Unit Label	Natural Disturbance Unit **	Merged Biogeoclimatic Units	Current Status as of March 31, 2011 (%)*	Target (%)	Non-pine Leading (%)	Variance (%)
E1	Moist Interior	ESSF mv1, ESSF mv3, ESSF mvp1	39%	>41%	36%	>41%
E2	Moist Interior	SBS dk	38%	>17%	40%	>17%
E3	Moist Interior	SBS mc2	46%	>17%	29%	>17%
E4	Moist Interior	SBS mk1, SBS wk3	26%	>17%	16%	>12%
E5	Moist Interior	SBS dw3	35%	>17%	27%	>12%
E6	Northern Boreal Mountains	ESSF wvp, ESSF mcp, ESSF mc, ESSF wv	81%	>37%	-	>37%
E7	Northern Boreal Mountains	SWB mks SWB mk	77%	>37%	-	>37%
E8	Northern Boreal Mountains	SBS mc2	82%	>37%	-	>26%
E9	Omineca Mtn.	ESSF mv	83%	>58%	-	>58%
E10	Omineca Mtn.	ESSF mc	85%	>58%	-	>41%
E11	Omineca Mtn.	ESSF mv3	67%	>58%	-	>41%
E12	Omineca Valley	SBS dk, SBS dw3	48%	>23%	-	>16%
E13	Omineca Valley	ICH mc1	90%	>23%		>23%
E14	Omineca Valley	BWBS dk1	65%	>23%	-	>16%
E15	Omineca Valley	SBS mc2	73%	>23%	-	>16%
E16	Omineca Valley	SBS mk1	43%	>23%	-	>16%

E17	Omineca Valley	SBS wk3	37%	>23%	-	>16%

*The current status is from the PG TSA Licensees' Memorandum of Understanding on the Order Establishing Landscape Objectives for the Prince George Timber Supply Area. Forest Cover and VRI (2007) data.
** Old Forest means ≥ 140 years for all NDU except for all moist Interior Plateau NDU and NDU E12, E14, E15, E16 where old forest is defined as ≥ 120 years.

Discussion: E1 is currently under the target at 39%. This was due an inventory age adjustment not harvesting. E1 was at a value of 47% (target 41%) before the age adjustment. A compliance and enforcement audit determined the same result for the PG district on the age adjustment there.

Indicator 3 - Old Interior Forest

Indicator Statement	***Target and Variance***
Maintain "old interior" forest conditions within each NDU (merged BEC).	Target: Greater than or equal to the targets set as per the "Landscape Biodiversity Objectives for the PG TSA", as per above target. Variance: As per the Landscape Biodiversity Objectives for the PG TSA.

Old interior forest conditions are achieved when the impact of adjacent younger stands no longer influences environmental conditions within the stand. Many plant and animal species are dependent upon old interior forest conditions to meet their habitat requirements.

The Landscape Objective Working Group (LOWG) has developed old interior forest retention objectives have been established for each Natural Disturbance Unit (NDU) that occurs within the Prince George DFA, which includes the Fort St. James AUTP.

Table 4: Fort St. James DFA Old Interior Forest Requirements

Unit Label	Natural Disturbance Unit	Merged Biogeoclimatic Units	Minimum % Old Forest required in Table 1 that must be Old Interior Forest (%)	Current Status* as of March 31, 2009 (%)*	Variance (%)
E1	Moist Interior	ESSF mv1 ESSF mv3 ESSF mvp1	40%	108%	0%
E2	Moist Interior	SBS dk	10%	212%	0%
E3	Moist Interior	SBS mc2	10%	242%	0%
E4	Moist Interior	SBS mk1 SBS wk3	25%	182%	0%
E5	Moist Interior	SBS dw3	25%	279%	0%
E6	N. Boreal Mountains	ESSF wvp ESSF mcp ESSF mc ESSF wv	40%	214%	0%
E7	N. Boreal Mountains	SWB mks SWB mk	40%	211%	0%
E8	N. Boreal Mountains	SBS mc2	25%	298%	0%
E9	Omineca Mtn.	ESSF mv	40%	138%	0%
E10	Omineca Mtn.	ESSF mc	40%	202%	0%
E11	Omineca Mtn.	ESSF mv3	40%	149%	0%
E12	Omineca Valley	SBS dk SBS dw3	25%	265%	0%
E13	Omineca Valley	ICH mc1	40%	390%	0%
E14	Omineca Valley	BWBS dk1	25%	391%	0%
E15	Omineca Valley	SBS mc2	25%	410%	0%

E16	Omineca Valley	SBS mk1	25%	268%	0%
E17	Omineca Valley	SBS wk3	25%	234%	0%

*The current status is from the PG TSA Licensees' Memorandum of Understanding on the Order Establishing Landscape Objectives for the Prince George Timber Supply Area. Forest Cover and VRI (2007) data

Indicator 4 - Young Patch Size Distribution

Indicator Statement	*Target and Variance*
Maintain a variety of young patch sizes in an attempt to approximate natural disturbance.	Target: As per the "Landscape Biodiversity Objectives for the PG TSA". Variance: As per the "Landscape Biodiversity Objectives for the PG TSA".

A patch is a forest unit with identifiable boundaries and vegetation different from its surroundings. Natural disturbances maintain plant and animal diversity over time and space. Young forests are defined as stands 0 to 20 years of age. In order to remain within the landscape's natural range of variability and move toward sustainable management of the forest resource, it is important to develop and maintain young patch size targets based on historical natural disturbance patterns. This indicator will monitor the consistency of harvesting patterns compared to the natural patterns of the landscape.

The Landscape Objective Working Group (LOWG) aided ILMB in the development of landscape biodiversity objectives for patch size distribution for the Prince George TSA, which includes the Fort St. James DFA. Young forest patch size distribution objectives have been established for each natural disturbance unit (NDU) that occurs within the Fort St. James DFA.

Table 5: Young Forest Patch Size Classes by NDU in the Fort St. James DFA

Natural Disturbance Unit	Patch Size Category	Current Status March 31, 2008 *	Target (%)	Trend	Future Condition (2013)
Moist Interior Plateau	≤ 50 ha	10.9%	5%	Toward	12.9%
	50-100	12.5%	5%	Toward	15.4%
	100-1000	22.7%	20%	Toward	35.2%
	>1000	53.9%	70%	Toward	36.5%
Moist Interior Mountain	≤ 50 ha	0%	20%	No change	0%
	50-100	91.9%	10%	Away	78.6%
	100-1000	8.1%	30%	Away	21.4%
	>1000	0%	40%	Away	0%
Omineca Valley	≤ 50 ha	12.5%	5%	Away	16.3%
	50-100	21.1%	5%	Toward	20.4%
	100-1000	39.7%	30%	Toward	42.4%
	>1000	26.7%	60%	Toward	20.8%
Omineca Mountain	≤ 50 ha	17.5%	20%	Toward	20.6%
	50-100	32.7%	10%	Away	32.1%
	100-1000	31.9%	30%	No change	25.4%
	>1000	17.9%	40%	Away	21.8%
Northern Boreal Mountains	≤ 50 ha	0%	5%	Away	0%
	50-100	0%	5%	No Change	0%
	100-1000	0%	30%	No change	0%
	>1000	0%	60%	No change	0%

*It can be difficult or impossible to trend towards the Young Patch targets in any given year. For this reason, Young Patch is reported out every five years. As harvesting continues, it is anticipated that the

distribution of patches in the appropriate size ranges will be achieved. As the table demonstrates, while current trends will take most patch size distributions toward targets, others will actually be further from achieving objectives due to previous harvesting practices.

Combined Discussion for Indicators 2-4:

Indicators 2 through 4 rely on analysis completed through the Landscape Objectives Working Group process, which is tied to the Biodiversity Order for the Prince George Timber Supply Area. All licensees operating in the PGTSA, including the members of the Licensee Steering Committee, have a legal obligation to participate in this process. Generally, the results of the LOWG analysis are reported out in the fall.

This year, the LOWG analysis has been influenced by an update to the inventory. The initial numbers that came out in September did not have the latest VRI data. All merged unit were consistent at that time. Updates in December changed results significantly. E1 dropped from 47% old forest to 39% after age adjustments. With a target of 41% it was no longer above target. This change did not relate to harvest levels.

Indicator 5 - Large Opening Design

Indicator Statement	***Target and Variance***
Percent of openings (> 100 ha) harvested annually that meet the large opening design criteria.	Target: >80% of openings. Variance: -10%

Forests in the Fort St. James DFA have historically been shaped by large-scale disturbance events such as wildfires. These fires often created large clearings that varied in shape and size, creating a mosaic of stands across the landscape. Forest managers when planning large harvesting openings try to emulate the characteristics of wildfire created stands. To help this planning process, large opening design criteria has been developed that allows planners to assess their harvest designs.

This indicator has a Licensee/BC Timber Sales specific target. Therefore, individual Licensees and BC Timber Sales track and monitor the number of large openings harvested annually which are consistent with the design criteria.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 6: Adherence to Large Opening Design Criteria

April 1, 2010 to March 31, 2011

Licensee	Total Number of Openings Harvested (>100ha)	Number Large Opening Design Criteria	% in DFA*
BC Timber Sales	12	11	91.67%
Canfor	5	5	100%
Takla Track & Timber	Reported in conjunction with Canfor's openings		
AUTP TOTAL	**17**	**16**	**94.1%**

Percent of openings = (openings that meet large design criteria / total number of large openings (>100ha) harvested) X 100

Canfor Discussion:

There were 5 openings greater than 100 ha with active harvesting. Openings varied in size from 560 to 10,655 ha. The largest patch is shrinking due to openings older than 20 years. All openings met the criteria. For the reserves the total chance plan reserves were used to calculate reserve areas.

BCTS Discussion:

The block that did not make it was due to the impacts of an adjacent licenses harvesting.

Indicator 7 - Plant Species Diversity Index

Indicator Statement	Target and Variance
The number of site association groups identified in Table 7, achieving plant diversity index baseline targets within managed stands.	Target: Annually, maintain the plant diversity index, for each site association group where the baseline target is known, above the baseline target for the site association group. Variance: 0%

Following the recommendations from the Timberline FIA report "*Monitoring Native Plant Diversity in the Prince George Timber Supply Area - 2008*", this indicator was not measured in the 2009 field season.

This indicator was not met during the 2010-11 reporting period. Licensees had followed the recommendations made in the Timberline FIA report "*Monitoring Native Plant Diversity in the Prince George Timber Supply Area – 2008*" and the sampling within the 9 grouped site associations was not conducted. The licensees consider the root cause of missing this indicator to be a process issue, as identified during an internal audit. The recommendations regarding monitoring were known when the 2008-09 annual report was presented to the PAG but due to the fact that the indicator had been met, this indicator was not discussed and Timberline's recommendations regarding monitoring were not presented to the PAG for approval.

Moving forward, this indicator is under review by the Licensees with respect to both the new standard and its relationship to both ecosystem resilience and rare plants. It is worth noting that ecologists use the terms "diversity" and "biodiversity" to mean different things. Diversity was first used to describe patterns in species abundance and the subsequent diversity indices that have been developed are theoretical in nature and not of great use to forest managers in providing guidance as to how to manage for a natural range of variation in plant communities on the landscape. The work completed to date on this indicator may serve as valuable baseline data about the plant communities in the AUTP for future indicators that seek to more closely align with the CSA SFM Element of Species Diversity.

Indicator 8 - Ungulate Winter Range Objectives

Indicator Statement	Target and Variance
Percentage of cutblocks harvested that are consistent with legally established ungulate winter range objectives.	Target: 100% Variance: 0%

Ungulates such as mule deer and caribou are found in many parts of the Fort St. James AUTP. An "Ungulate Winter Range (UWR)" is an area that contains habitat that is necessary to meet the winter habitat requirements of an ungulate species. As many UWR can be directly and indirectly affected by forest harvesting activities, it is important that Licensees and BC Timber Sales in the Fort St. James AUTP track their location and implement management objectives

A memorandum of understanding on the "Establishment of Ungulate Winter Ranges and Related Objectives" was developed in August of 2003, to meet UWR objectives across the province, to support the Forest Practices Code and the new Forest and Range Practices Act (FRPA). These orders prescribe specific objectives to maintain mule deer and caribou winter range, to provide high suitability snow interception, cover, and foraging opportunities.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 8: Ungulate Winter Range Requirements Identified in Operational Plans

April 1, 2010 to March 31, 2011

Licensee	Total Number of blocks harvested within Ungulate Winter Ranges	Number of cutblocks with Site Plans completed in accordance with Ungulate Winter Range Requirements	% in DFA*
BC Timber Sales	0	N/A	N/A
Canfor	0	N/A	N/A
Takla Track & Timber	0	N/A	N/A
AUTP TOTAL	**0**	**N/A**	**100%**

* % = (Total # of blocks harvested with site plans completed in accordance with UWR requirements / Total number of blocks harvested in UWR) X 10

Indicator 9 - Species at Risk Notices & Orders

Indicator Statement	*Target and Variance*
The percentage of cutblocks and roads harvested consistent with approved provincial Species at Risk Notice/ Orders requirements as identified in operational plans.	Target: 100% Variance: 0%

This indicator is intended to monitor the consistency between forest operations and approved provincial Species at Risk Notice/ Order requirements as identified in operational plans. Being consistent with these requirements will ensure that the habitats that are required to support these Species at Risk will be maintained. Overall ecosystem productivity will be maintained by ensuring these species continue to play their roles in the healthy functioning of the DFA's forests. This Provincial Order provides a list of species at risk that may be affected by forest or range management on Crown land and require protection in addition to that provided by other mechanisms (Government of BC, 2004b).

Legally identified wildlife includes those species identified through FRPA Section 7 Notices. In the Fort St. James AUTP, there are currently two legally identified wildlife species: caribou and mountain goat. The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 9: Species at Risk Notices & Orders

April 1, 2010 to March 31, 2011

Licensee	Total Number of cutblocks harvested that coincide with FRPA Sect. 7 Notices	Site Plans completed in accordance with FRPA Sect. 7.0 Notices	% in DFA*
BC Timber Sales	0	N/A	N/A
Canfor	0	N/A	N/A
Takla Track & Timber	0	N/A	N/A
AUTP TOTAL	**0**	**N/A**	**100%**

* % = (blocks harvested with site plans in accordance with FRPA section 7 notices / blocks harvested that coincide with Section 7 notices) X 100

Indicator 10 - Management Strategies for Sites and species of importance

Indicator Statement	*Target and Variance*
Indicator 10: Percentage of cutblocks and roads harvested that adhere to licensee specific strategies for: • Sites of biological importance; • Important wildlife, fish, and bird species; and,	Target: 100% Variance: -10%

• Valuable plants and plant communities. Within the DFA that are likely to be affected by industrial forestry activities.	

This indicator involves the implementation of licensee specific management strategies for sites of biological significance, important wildlife, fish, and bird species, plant species and communities identified in the AUTP that may be impacted by industrial forest activities.

Sites of biological significance include sites of unusual or rare forest conditions that are not covered by legislation. These sites cannot be identified from current established lists, but may be unique to the AUTP and warrant identification. Lists for important wildlife, fish, and bird species are taken from two sources; species identified through external processes, and species of importance to the PAG. The majority of the list is obtained from four external sources: legally identified wildlife (Section 7.0 notices – as described in the previous indicator #9), the Conservative Data Centre ranked blue and red listed species, regionally important wildlife, and Species at Risk. Lists for valuable plant species and plant communities are taken from the document "*Management Guidelines for Species and Plant Communities at Risk: Prince George Timber Supply Area, Timberline, March 31, 2009*". Only species and plant communities that occur within the Fort St. James Forest District have been included.

A detailed list of the important sites and species is contained in the current SFMP as an appendix. This list will be reviewed and updated as required.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 10: Sites and Species of Importance

April 1, 2010 to March 31, 2011

Licensee	Total Number of cutblocks and roads harvested Between April 1st and March 31st that coincide with sites or species relevant to Indicator #10 – see Appendix 8 of the SFMP	Number of cutblocks and roads harvested in accordance with the licensee specific strategies	% in DFA
BCTS	17	17	100%
Canfor	1	1	100%
Takla Track & Timber	0	N/A	N/A
AUTP TOTAL	**18**	**18**	**100%**

% = (# of blocks and roads that adhere to strategies for sites or species / total # of blocks or roads that are applicable to the indicator) X 10

Indicator 13 - Site Plans with Douglas Fir Management Strategies

Indicator Statement	*Target and Variance*
For blocks where Douglas fir (Fdi) exists in the stand, the percentage of Site Plans that incorporate the Douglas fir management strategy.	Target: 100% Variance: - 20%

Douglas fir plays an important role in biodiversity because it is at the northern extent of its range in Fort St. James. It contributes to genetic diversity, species diversity, acts as a unique contributor to vertical stand structure, wildlife habitat and coarse woody debris requirements.

Since 1999 the Licensees and BC Timber Sales have managed stands containing a Douglas fir component according to the BC Ministry of Forests "Douglas fir Management Guidelines for the Prince George Forest Region". This document provides guidelines for the maintenance and regeneration of Douglas fir across the PG Forest Region, which includes the Fort St. James AUTP. These guidelines are generally included in operational plans such as Site Plans, which prescribe what forest activities are required to meet Douglas fir management objectives.

By tracking the number of site plans that incorporate the Douglas fir management strategy, Licensees and BC Timber Sales will be able to evaluate the success of those activities over time. They will also be able to evaluate the consistency of procedures and compare them to other accepted approaches to managing Douglas fir.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 11: Site Plans that Incorporate the Douglas fir Management Strategies

April 1, 2010 to March 31, 2011

Licensee	Total number of cutblocks harvested containing Douglas fir	Cutblocks harvested incorporating the Douglas fir strategy	% in DFA*
BC Timber Sales	8	8	100%
Canfor	12	12	100%
Takla Track & Timber	0	N/A	N/A
AUTP TOTAL	**20**	**20**	**100%**

* % = (# of blocks the FDI strategy was incorporated / total # of blocks that the FDI strategy was applicable to) X 100

Indicator 14 - Stand Level Retention

Indicator Statement	*Target and Variance*
Percent wildlife trees and/or wildlife tree patches associated with areas harvested annually by licensee as measured across the DFA	Target: >7% by Licensee Variance: 0%

Stand level retention consists primarily of wildlife tree patches (WTP) and riparian management areas. WTP are forested patches of timber within or immediately adjacent to a harvested cutblock while riparian management areas are associated with water features. Stand retention provides a source of habitat for wildlife, sustains local genetic diversity, and protects important landscape or habitat features, such as mineral licks and raptor nesting sites. Maintenance of habitat through stand retention contributes to conservation of ecosystem diversity by conserving a variety of forest age classes, stand structure and unique features at the stand level.

Stand level retention, including wildlife trees and wildlife tree patches, is managed by each Licensee and BC Timber Sales in the AUTP on a site-specific basis. During the development of a cut block, retention areas are delineated based on a variety of factors. Stand level retention generally occurs along riparian features and will include unharvestable and sensitive sites if they are present in the planning area. Stand level retention also aims to capture a representative portion of the existing stand type to contribute to ecological cycles of the land base. Retention level in each block is documented in the associated site plan; recorded in the Licensee/ BC Timber Sales database systems and reported out in RESULTS, the provincial government database, on an annual basis.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 12: Wildlife Trees/WTP Associated with Areas Harvested

April 1, 2010 to March 31, 2011

Indicator 14: Percent wildlife trees and/or wildlife tree patches associated with areas harvested			**TARGET: >7% by licensee VARIANCE: 0%.**
Licensee	**Total Area Harvested (ha)**	**Total Area Wildlife Trees/Wildlife Tree Patches**	**% in DFA***
BC Timber Sales	3223.5	565.1	17.5%
Canfor	1500.9	183.1	12.2%
Takla Track & Timber	72.8	10.3	14.1% (Canfor portion only)
TOTAL	**4797.2**	**758.5**	**15.8%**

* % = (Total area left as wildlife trees or wildlife tree patches / Total area harvested) X 100

Indicator 15 - Thinning/ Spacing Prescriptions & Conifer Density

Indicator Statement	***Target and Variance***
Percentage of thinning and spacing prescriptions implemented annually that specify a post-treatment conifer density greater than the original planting density.	Target: 100% Variance: 0%

Thinning and spacing are silviculture treatments performed on young plantations to reduce the density of tree stems. This reduction is usually necessary when the natural germination of conifers is too high for the stand to reach its' growth potential. In the Fort St. James DFA, this usually occurs in plantations where Lodgepole pine has regenerated as this species has evolved to produce high numbers of stems per hectare following a disturbance event, especially fire.

When a block is identified for thinning/spacing, a prescription is prepared describing the post-treatment conifer density. This density should be higher than the density that the block was planted at for several reasons. If too few trees are present in the early stages of the plantation, the subsequent losses due to pests/ disease may result in mature stands that have too few trees, representing a genetic and economic loss. Higher post-treatment conifer densities may also result in higher wood quality as inter-tree competition will promote natural pruning of branches and less juvenile wood. This improved wood quality is expected to provide higher economic returns in the future when these plantations are harvested.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 13: Post Treatment Conifer Density Compared to the Original Planting Density

April 1, 2010 to March 31, 2011

Licensee	**Number of Thinning and Spacing Prescriptions Implemented**	**Prescriptions With Post Treatment Conifer Density Greater Than the Original Planting Density**	**% in DFA***
BC Timber Sales	0	0	100%
Canfor	0	0	100%
Takla Track & Timber	0	0	100%
TOTAL	**0**	**0**	**100%**

* % = (prescriptions with post treatment conifer density greater than original planting density number of thinning and spacing prescriptions) X 100.

Indicator 17 - Wildlife Habitat Guidelines

Indicator Statement	*Target and Variance*
Percentage of cutblocks harvested that are consistent with established guidelines for wildlife habitat features.	Target: 100% Variance: 0%

Legally established Wildlife Habitat Features are identified under the Government Actions Regulation of the Forest and Range Practices Act (FRPA) of British Columbia. Site plans are the site-specific plans that prescribe harvesting and silviculture activities for a cutblock. They are developed prior to harvesting and address management concerns for the area to be harvested. If there are wildlife habitat features in or adjacent to an area to be harvested, the site plan must be consistent with the guidelines established for that area to be compliant with legislation as well as to protect sites of biological significance within the AUTP.

Currently, there are no identified wildlife habitat features within the Fort St. James AUTP. However, when and where wildlife habitat features are encountered within cutblocks prior to harvesting, site level management strategies will be developed and implemented.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 14: Adherence to Wildlife Habitat Features Guidelines,

April 1, 2010 to March 31, 2011

Licensee	Blocks with Identified Wildlife Habitat Features	Site Plans Consistent With Guidelines	% in DFA*
BC Timber Sales	0	N/A	N/A
Canfor	0	N/A	N/A
Takla Track & Timber	0	N/A	N/A
TOTAL	**0**	**N/A**	**100%**

* % = (site plans consistent with guidelines for wildlife habitat features / number of site plans in wildlife habitat feature areas) X 100

Indicator 21 - Conversion of Non-forested Types (Cutblock Level)

Indicator Statement	*Target and Variance*
Percentage of cutblocks harvested having mappable non-forested types (> 0.5 ha) that are artificially converted to forested types through afforestation treatments.	Target: 0% Variance: +20%

Many cutblocks contain mappable non-forested types. The SFMP defines "mappable" as areas greater than 0.5 ha. Non-forested types include wetlands, rock outcrops, grasslands, brush, or other areas that are not dominated by trees. These types may be valuable sites for wildlife or may represent unique and unusual features that should be preserved in their non-forested state. If these types are not identified as being excluded from a planting area, they may be planted, either intentionally or non-intentionally, and converted to forest.

This indicator has a Licensee/BC Timber Sales specific target and will be managed on an individual block basis. The location of mappable non-forested types within cutblocks is included in the site plans for those cutblocks. While most Licensees and BC Timber Sales do not have formal policies preventing the planting of naturally occurring non-forested types, it is not common practice to do so. Planting these sites is not legally required (unless the site plan included them in the Net Area to Reforest), and it would be uneconomical to pay for the afforestation of sites unsuitable for trees.

Site Plan and planting information is tracked and retained by Licensees and BC Timber Sales in databases.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 15: Non-Forested Types Artificially Afforested

April 1, 2010 to March 31, 2011

Licensee	Total Number of Cutblocks planted that contain Non-Forested Areas*	Number of Those Cutblocks where the Non-Forested Areas are Afforested	% in DFA**
BC Timber Sales	0	0	0%
Canfor	15	0	0%
Takla Track & Timber	0	0	0%
TOTAL	**15**	**0**	**0%**

** non-forested areas >0.5 ha*
*** % = (number of cutblocks with non-forest areas that are planted/ total number blocks with non-forest areas) X 100*

Indicator 22 – Conversion of Non-Forest Types (Landscape Level)

Indicator Statement	*Target and Variance*
Existing areas of non-forested types artificially converted to forested types	Target: 0 ha. Variance: 0 ha.

The Fort St. James AUTP contains a variety of non-forested types that exist at the landscape level. These types may be wetlands, rock outcrops, grasslands, brush, or other areas that are not dominated by trees. These types may be valuable sites for wildlife, or may represent unique and unusual features that should be preserved in their non-forested state.

Sustainable forest management seeks to maintain the landscape diversity of the AUTP and this indicator is intended to achieve this by preventing the conversion of naturally occurring non-forested land to forested land. The locations of existing areas of non-forested types are identified in Forest Development Plans/Forest Stewardship Plans and other operational plans. Licensees and BC Timber Sales have established policies to ensure these areas are not included in the Net Area to Reforest of harvested blocks and adjacent cutblocks, and they will ensure planting contracts clearly identify these areas to be excluded from the planting area. Planting information is tracked and retained in Licensees and BC Timber Sales databases.

For this reporting period there were **0 ha** of non-forested land converted to forested land, which meets the target set for this indicator.

Table 16: Non-forested types artificially converted to forested types

April 1, 2010 to March 31, 2011

Indicator 22: Existing areas of non-forested types artificially converted to forested types	**TARGET: 0 ha by licensee annually VARIANCE: 0 ha.**
Licensee	**Total hectares of non-forested types, outside cutblocks (exhibit A areas), converted to forested types between April 1st and March 31st**
BCTS	0
Canfor	0
Takla Track & Timber	0
TOTAL	**0**

Indicator 23 - Coarse Woody Debris

Indicator Statement	*Target and Variance*

Percent of audited cutblocks harvested where post harvest CWD levels are within the acceptable natural range of variability (as stated in m^3/ha).	Target: 100% Variance: -10%

Coarse woody debris (CWD) in the Interior consists of a minimum of 4 logs per hectare each being a minimum of 2 m in length and 7.5 cm in diameter at one end (FRPA 2004). The logs include all stages of decay and consist of aboveground logs, exposed roots and large fallen branches (B.C. Ministry of Forests, 2000). CWD content in the Fort St. James AUTP is managed in conjunction with the *Forest and Range Practices Act* (FRPA). CWD is a vital component of a healthy functioning forest ecosystem in that it provides habitat for plants, animals and insects. It is also an important source of soil nutrients and contributes to soil moisture retention. Targets for CWD requirements are identified in operational plans, typically the site plan for each specific cutblock.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 17: CWD Levels within Natural Range of Variability

April 1, 2010 to March 31, 2011

Licensee	Total number of cutblocks audited for post harvest CWD	Audited cutblocks within the Natural Range of Variability for CWD	% in DFA*
BC Timber Sales	27	27	100%
Canfor	18	18	100%
Takla Track & Timber	0	0	100%
TOTAL	**45**	**45**	**100%**

% = (number of audited cutblocks within CWD limits/ total number of audited cutblocks) X 100

Indicator 24 - Soil Disturbance Levels

Indicator Statement	*Target and Variance*
Percent of cutblocks harvested where the soil disturbance limits identified in the Site Plan are exceeded (typically 5% on sensitive soils and 10% on other soils).	Target: 0% Variance: 0%

Soil conservation is crucial to sustainable forest management. To achieve this, forest operations have limits on the amount of soil disturbance they can create. Soil disturbance is defined in the Fort St. James SFM plan as disturbance caused by a forest practice on an area, including areas occupied by excavated or bladed trails of a temporary nature, areas occupied by corduroy trails, compacted areas, and areas of dispersed disturbance. Soil disturbance is expected to some extent from timber harvesting or silviculture activities, but these activities are held to the soil disturbance limits identified in site plans. The site plan prescribes strategies for each site to achieve forest management activities to remain within acceptable soil disturbance limits.

Soil information is collected as a component of site plan preparation, and soil disturbance limits are established based on the soil hazards for that block. A pre-work tracking system requires equipment operators to be aware of soil conservation measures outlined in the site plans, with post harvest inspections to assess compliance with the site plan guidelines. If required, temporary access structures are rehabilitated to the prescribed standards. Road construction within blocks is minimized, and low ground pressure equipment is used where very high soil disturbance hazards exist.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 18: Compliance with Soil Disturbance Limits Set in Site Plans

April 1, 2010 to March 31, 2011

Licensee	Total Number of cutblocks harvested	Cutblocks exceeding Site Plan soil disturbance limits	% in DFA*
BC Timber Sales	27	0	0%
Canfor	18	0	0%
Takla Track & Timber	0	0	0%
TOTAL	**45**	**0**	**0%**

** % = (# of Cutblocks harvested where soil disturbance limits are exceeded/ # cutblocks harvested) X 100*

Indicator 25 - Permanent Access Structures

Indicator Statement	*Target and Variance*
The total percent of forested land within the Timber Harvesting Landbase that is converted to non-forested land.	Target: <5% Variance: 0%

Indicator 25 compares the amount of area developed as permanent access structures within the DFA, in relation to the Timber Harvesting Landbase. Permanent access structures are areas permanently converted to non-forested land and include roads, bridges, landings, gravel pits, or other similar structures that provide access for timber harvesting. Area that is converted to non-forest land is removed from the productive forest land base and no longer contributes to the timber harvesting land base. Roads and associated stream crossings have the potential to increase impacts to water resources through erosion and sedimentation. As such, minimizing the amount of land converted to roads and other structures protects the forest ecosystem as a whole.

Current practices by Licensees and BC Timber Sales contractors within the Fort St. James AUTP are to minimize the amount of permanent access structures within cutblocks. The primary harvest method utilized in the DFA is roadside harvesting, which eliminates the need for landings to be established. However, operators require sufficient road area in order for wood to be processed efficiently and cost effectively.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 19: Permanent Access Structures

April 1, 2010 to March 31, 2011

Licensee	Total THLB by Licensee DFA *(ha)	Total Area of THLB in Permanent Access Structures** (ha)	% of Converted THLB in DFA***	Area of New Permanent Access Structures Constructed (ha)
BC Timber Sales	295,579	2758	0.93%	498.8
Canfor	595,419	5798.6	0.97%	71.6 ha
Takla Track & Timber	Included in Canfor result			
TOTAL	**890,998**	**8556.6**	**0.96%**	**570.4**

** TLHB: total harvestable landbase = gross area less non-productive landbase*
*** Area of Permanent Access Structures = Road length (km) X Road Width (Forest Service Roads (12m), Highways (25m), Licensee Road Permit Roads (8m), In-block Roads (6m), Mining Trails (3m)) + Area of Gravel Pits, Rock Quarries, etc (by shape area).*
**** % in DFA = Area of Permanent Access Structures/ THLB area) X 100*

Indicator 26 - Road Related Erosion Events

Indicator Statement	*Target and Variance*
Percent of road related soil erosion events that introduce sediment into a stream identified in annual road inspections that are addressed	Target: 100% Variance: 0%

Sedimentation can damage streams by degrading fish spawning beds, increasing turbidity, and reducing water levels. Forest management activities can potentially create unnatural inputs of sedimentation into water bodies. This may occur as a result of roads adjacent to streams, ditches delivering sediment to

stream channels, or from ruts on road surfaces. Licensees and BC Timber Sales conduct annual road inspections to monitor the condition of the roads and to ensure sedimentation of streams is not occurring. Once sedimentation occurrences are detected, mitigating actions are taken to stop further damage and to rehabilitate the site. Tracking these mitigation actions contributes to sustainable forest management by evaluating where, when and how sedimentation occurs and their success in correcting it.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 20: Soils Erosion Events Addressed

April 1, 2010 to March 31, 2011

Licensee	Number of Road Related Soil Erosion Events Introducing Sediment Into a Stream Identified	Number of these Erosion Events That Are Addressed	% in DFA*
BC Timber Sales	0	N/A	N/A
Canfor	**0**	N/A	N/A
Takla Track & Timber	0	N/A	N/A
TOTAL	**0**	**N/A**	**100%**

% = (Number of erosion events that are addressed / Total road related soil erosion events identified) X 100

Indicator 27 - Fish Stream Crossings & Sediment Control

Indicator Statement	*Target and Variance*
Percentage of fish stream crossings planned and installed to a reasonable design and sediment control standards.	Target: 100% annually Variance: 0%

The conservation of water resources is an important SFM objective. Forestry roads can have a large impact on water quality and quantity when they intersect with streams, particularly through sedimentation events. Sedimentation can affect fish, fish habitat, and spawning beds. Sedimentation is also a natural part of streams and lakes, as water must pass over soil in order to enter a water body. When stream crossings (bridges, culverts) are installed to a reasonable design and to sediment control standards the level of sedimentation may be minimized to help sustain the natural range of variation within the stream. By tracking this indicator, the success of installing stream crossings can be assessed, and, if required, steps can be taken to improve designs and standards.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 21: Fish Stream Crossings within Sediment Control Standards

April 1, 2010 to March 31, 2011

Licensee	Total Number of Fish Stream Crossings Installed	Crossings Installed to a Reasonable Design and Sediment Control Standard	% in DFA*
BC Timber Sales	3	3	100%
Canfor	6	6	100%
Takla Track & Timber	0	N/A	N/A
TOTAL	**9**	**9**	**100%**

- *% = (Number of crossings installed to a reasonable design and sediment control standard / Total number of fish stream crossings installed) X 100*

Indicator 28 - Stream Crossing Inspections

Indicator Statement	*Target and Variance*
Percentage of stream crossing inspections and resulting mitigation measures completed according to schedule.	Target: 100% annually Variance: -10%

Regular stream crossing inspections are necessary to ensure crossings are in good condition and are not posing a threat to water quality or to traveler safety. These inspections may find some stream crossings are causing sediment to enter the stream channel, which may damage fish, habitat and other aquatic life. If a stream crossing is found to be in need of mitigation measures to prevent sedimentation or to repair the structure, those measures are scheduled for action and completed at a later date. This indicator is intended to monitor the success of completing these mitigation measures according to schedule.

This indicator allows Licensees and BC Timber Sales to evaluate how well they are detecting and correcting forest management and operational related issues.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 22: Stream Crossing Inspections and Resulting Mitigation Measures

April 1, 2010 to March 31, 2011

Licensee	Total Number of Stream Crossing Inspections and Mitigation Measures Completed	Number of These Inspections and Mitigation Measures Completed According to Schedule	% in DFA*
BC Timber Sales	47	47	100%
Canfor	6	6	100%
Takla Track & Timber	0	N/A	N/A
TOTAL	**53**	**53**	**100%**

** % = (# of inspection/mitigation measures completed on time/# of inspections/ mitigation measures completed) X 100*

Indicator 30 - Conformity to the Risk Ranking System

Indicator Statement	*Target and Variance*
Conformity to the DFA risk ranking system developed for assessing stream crossing.	Target: 100% Variance: -10%

Assessing risks and planning according to the risk ranking system developed for assessing stream crossings in a consistent manner by the Licensees/BC Timber Sales helps maintain water quality in a proactive manner conducive to SFM. However, the risk ranking system is of little use on its own unless Licensees/BC Timber Sales in the AUTP conform to this system and ensures all actions in the field reflect the recommendations generated by the risk ranking system.

All Licensees and BC Timber Sales recognize the importance of assessing stream crossings in a consistent manner and are committed to conforming to the DFA risk ranking system. The Licensees and BC Timber Sales developed the risk ranking system in March 2006. Each Licensee/BC Timber Sales operation has assessed all existing stream crossings in the Fort St. James AUTP in accordance with the risk-ranking standard, and has achieved conformity with this system. The assessment of stream crossings according to the DFA risk ranking system has been fully incorporated into the operations of the Licensees and BC Timber Sales; therefore the target for this indicator has been revised.
The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 23: DFA Risk Ranking System for Assessing Stream Crossings

April 1, 2010 to March 31, 2011

Indicator 30: Conformity to the DFA risk ranking system developed for assessing stream crossings.			**TARGET: 100% VARIANCE: -10%**
Licensee	**Total Number of Stream Crossings Assessed Between April 1st and March 31st**	**Number of These Crossings Assessed According to the Risk Ranking System**	**% in DFA**
BCTS	34	34	100%
Canfor	6	6	100%
Takla Track & Timber	0	N/A	N/A
TOTAL	**40**	**40**	**100%**

% = (Number of stream crossings assessed according to the risk ranking system / Total number of stream crossings assessed) X 100

Indicator 31 - Permanent Crossing Structures & Fish Passage

Indicator Statement	***Target and Variance***
Percentage of permanent crossing structures installed on fish streams that will allow for adequate fish passage *(dependant on the presence/absence of fish)*.	Target: 100% annually Variance: 0%

When forest roads are constructed it is often necessary to build permanent crossing structures (i.e. culverts, bridges) over streams that may be fish habitat. In order to maintain the number and diversity of fish species, stream crossings cannot be a barrier to their migration. Barriers to fish passage include, but are not limited to, obstructions in culverts, placement of culverts above a stream creating an impassible step, and collapsed culverts. As fish are also an important food source for other species, the success of these structures (to provide for fish migration) contributes to the maintenance of these other species in the DFA. It is the intention of this indicator to ensure all new fish-stream crossings allow for adequate fish passage.

Streams and crossing structures are identified during operational plan preparation. The streams are surveyed for their potential for bearing fish and qualified personnel determine their probable peak flow volumes. The appropriate culvert size and installation procedure is then prescribed for the stream crossing. EMS or other tracking system pre-work forms are completed prior to crossing installation and the Licensee supervisor completes an inspection form at the time of completion. In addition, many stream crossing structures are inspected over time as part of Licensee's/BC Timber Sales EMS or other tracking system procedures.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 24: Permanent Crossing Structures and Fish Passage

April 1, 2010 to March 31, 2011

Licensee	**Number of Permanent Crossing Structures Installed on Fish Streams**	**Number of These Structures That Will Allow for Adequate Fish Passage**	**% in DFA***
BC Timber Sales	3	3	100%
Canfor	0	N/A	N/A
Takla Track & Timber	0	N/A	N/A
TOTAL	**3**	**3**	**100%**

*% = (# of structures that will allow fish passage/ total number of permanent crossings structures on fish streams) X 100

Indicator 32 - Riparian Management Area Commitments

Indicator Statement	*Target and Variance*
Percent of cutblocks harvested consistent with riparian management commitments.	Target: 100% Variance: 0%

Riparian areas occur next to the banks of streams, lakes, and wetlands and include both the area dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence on it (BC Ministry of Forests 1995a). The conservation of riparian and aquatic environments is key to the survival of flora and fauna species dependent on riparian conditions by providing critical habitat, home ranges and travel corridors for wildlife. They also function to conserve water quantity and quality features by reducing the risk of forest harvesting activities on adjacent watercourses.

Riparian values are generally identified through the planning process, with specific management strategies incorporated into site plans. Implementation of these strategies is verified on the ground during harvesting operations and through final harvest inspections. The level of compliance with commitments in operational plans is monitored through EMS or other tracking system inspections and recorded in databases such as GENUS or Inform.

The identification and conservation of riparian values is both a socially and ecologically important component of forest management.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 25: Cutblocks Harvested Consistent with Riparian Management Commitments

April 1, 2010 to March 31, 2011

Licensee	Cutblocks Harvested with Riparian Management Area Commitments	Blocks Harvested in Compliance with Identified Commitments	% in DFA*
BC Timber Sales	27	27	100%
Canfor	17	17	100%
Takla Track & Timber	1	1	100% (Canfor portion only)
TOTAL			

** % = (# of blocks harvested in compliance with identified commitments/number of harvested blocks with riparian management commitments) X 100*

BCTS Discussion:
TSL A82350 has an on block access road that crosses through an RMA. As it was a winter block, the on block road had an RL&D done and was designed as a One Winter Road. A Log culvert Xing was utilized on an S4 stream with the term in the RL&D that it be removed upon completion of harvest. The Licencee finished the block and harvest and removed all equipment from the site but did not deactivate the road. Freshet has since occurred and small amounts of sediment have been noticed as "potentially impacting the stream" and "very minimal environmental damage" noted. The Final Inspection noted Non Conformance for these aspects. More follow up to be determined.

Indicator 34 - Reforestation Timing

Indicator Statement	*Target and Variance*
Percentage of blocks >1.0ha harvested 3 years prior to the reporting period that have been	Target: 90%

reforested.	Variance: -20%

Prompt reforestation of harvested areas is a major component of sustainable forest management. In addition to creating wildlife habitat, new plantations help maintain hydrologic processes and contribute to the broader health of watersheds.

Regenerating cutblocks can also absorb significant amounts of carbon through photosynthesis. By reducing atmospheric greenhouse gases such as CO_2, regenerating cutblocks can contribute to reducing climate change. The sooner cutblocks are regenerated after the completion of harvesting the sooner this process can begin.

Three years for regeneration is an aggressive target, which is to be achieved through the quick and efficient completion of forestry operations with the consideration for piling and burning of debris and road deactivation schedules.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 26: Cutblocks Reforested within 3 years

April 1, 2010 to March 31, 2011

Licensee	Total number of cutblocks (>1.0ha) harvested 3 years prior to the reporting period	Total number of these cutblocks that are planted within 3 years of the completion of harvesting	% in DFA*
BC Timber Sales	55	55	100%
Canfor	23	23	100%
Takla Track & Timber	0	0	
TOTAL	**78**	**78**	**100%**

* % = (#cutblocks planted within 3 yr. of harvest /# of cutblocks with harvest completion date of 3 yr.) X 100

Indicator 35 – Watershed Peak Flow Index

Indicator Statement	*Target and Variance*
The percent of watersheds achieving baseline targets for the peak flow index	Target: Annually, 85% of the watersheds will be below the baseline target Variance: +/- 15%

Peak flow is the maximum water flow rate that occurs within a specified period of time, usually on an annual or event basis. The peak flow index is a measure of the potential effect of forest harvesting on water flow within a particular watershed. After an area has been harvested, both winter snow accumulation and spring melt rates increase. This effect is less important at low elevations, since the snow disappears before peak flow occurs. Harvesting at high elevations will have the greatest impact and is, therefore, of most concern. As a result, areas harvested at different elevations are weighted differently in the calculation of peak flow index (PFI). Most hydrologic impacts occur during periods of the peak stream flow in a watershed. In the interior of British Columbia, peak flows occur as the snow pack melts in the spring.

With regards to the conservation of water quality within the AUTP, it is important to be able to maintain the watershed level conditions within natural ranges of variation to ensure that other users of water are not adversely affected. The peak flow index provides a method of forecasting and evaluating the potential effects of future harvesting plans, to ensure that these harvested areas do not contribute to the degradation of the water resource.

There are currently 77 of an estimated 300 watersheds delineated for monitoring PFI. The signatory licensees have delineated and determined PFI targets for the watersheds within their DFA's, which are reported in the table below.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 27: Watershed Peak Flow Index

April 1, 2010 to March 31, 2011

Indicator 35: The percent of watersheds achieving baseline targets for the peak flow index.			**TARGET: Annually, 85% of the watersheds will be below the baseline target VARIANCE: +/- 15%**
Licensee	**Total number of watersheds that coincide with licensee DFA**	**Total number of watersheds with PFI below target**	**% in DFA**
BCTS	72	69	95.8%
Canfor	62	62	100
Takla Track & Timber	6	6	100%
TOTAL	**150**	**147**	**98.0%**

BCTS Discussion:
All watersheds pertaining to BCTS have now been analyzed and run through the Dobson calculations and models. PFI for both current and future have been completed. Based on this assessment BCTS is considering any Risk Rating of high as above the baseline targets. Moderate risk rating would be monitoring and low would be no action.

Based on the assumptions above 3 watersheds (2 from previous, see 2008/2009) ID# 485 and 486) are both adjacent to each other and in the Necoslie Operating Area and BCTS has harvested this area historically. At this time, BCTS has no new harvest planned. BCTS currently is only carrying out silviculture (RG and FG) in these 2 watersheds. The other Watershed in the Salmon has a Current rating of High (ID# 668). ID#668 has a planned polygon within it. At the time of analysis, the blocks were still in our system as quite large polygons in a small watershed. Once MP "pairs down block size" BCTS will need to reassess this "high" value.

Additionally, BCTS is rerunning the numbers with watersheds that coincide with operating areas, given the new areas added over the last few years. Sowchea Creek (WS #999) over laps the Marie Lake and jumps to mind with no previous data being reported. BCTS will keep the PAG apprised of its findings and at this time will not report on these watersheds. Should it result in an issue, BCTS will Report Fully in the next reporting cycle. Additionally, it gives this watershed a moderate hydrological risk. Therefore it is one BCTS will monitor. If others exist, they will be added and reviewed as necessary.

Analysis assumes worst case scenarios. Some of these openings will be calculated into the analysis based on the assumption that they are beetle impacted (when reality may dictate them to be exempt from PFI indicator i.e. a 35 year old plantation may be added as an opening when in reality it could be exempt and not beetle infested).

Indicator 36 - Watershed Reviews

Indicator Statement	***Target and Variance***
Percent of watershed reviews completed where the baseline target is exceeded, and new harvesting is planned.	Target: 100% Variance: 0%

The concepts of peak flow indices and baseline targets are discussed in detail in the previous indicator. If Peak Flow Index targets are exceeded, potentially detrimental impacts to water quality and quantity could occur with continued harvesting in these watersheds. This indicator is intended to ensure that where Peak Flow Index targets are exceeded within watersheds, a review is completed for all planned forest operations. Following the review, harvesting in the affected watershed will be planned in a manner that will help meet the baseline targets in the future.

Required watershed reviews will be completed by qualified hydrologists who will evaluate the potential risk of continuing to harvest in a given watershed. Depending on the results of the review, Licensees/BC Timber Sales may adjust harvest design, scheduling, and silviculture systems to mitigate any hydrologic impacts created by the harvest operations.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 28: Watershed Reviews

April 1, 2010 to March 31, 2011

Indicator 36: Percent of watershed reviews completed where the baseline target is exceeded, and new harvesting is planned.			**TARGET: 100% VARIANCE: 0%**
Licensee	**Number of new block watershed reviews required**	**Number of new block watershed reviews completed**	**% in the DFA**
BCTS	4	4	100%
Canfor	0	N/A	N/A
Takla Track & Timber	0	N/A	N/A
TOTAL	4	4	100%

Canfor Discussion:

The Hudson West watershed within the Canfor DFA is exceeding Peak Flow Index. As there are no plans to recruit volume in this watershed or conduct any forest operation activities, a watershed review is not required at this time.

BCTS Discussion:

WS ID #668 in the Salmon has 1 block potentially moving ahead while the remaining blocks are old carryovers. Need to rerun numbers once the final field design, shape, etc. are completed to determine if it is still in the high. Therefore this one is considered to be assessed.

WS ID# 485 and 486 are both adjacent to each other and in the Necoslie Operating Area adjacent the Stuart River Park. BCTS has harvested this area historically (prior to this indicator) and BCTS has no new harvest planned in this area. BCTS currently is only carrying out silviculture (RG and FG) in these 2 watersheds. Therefore these 2 are deemed to be assessed.

Additionally, Sowchea Creek (WS #999) over laps the Marie Lake operating area (this is the first year BCTS has run the analysis (choosing to report it here but final results not conclusive at this time) and results are still very preliminary). BCTS will keep the PAG apprised of its findings and at this time will not report on these watersheds. Should it result in an issue, BCTS will Report Fully in the next reporting cycle. If others exist, they will be added and reviewed as necessary.

Indicator 37 - Free Growing Obligations

Indicator Statement	***Target and Variance***
Percent of standards units declared annually that meet free growing requirements on or before the late free growing date.	Target: 100% Variance: 0%

A Standards Unit is a harvested area that will be managed as a uniform unit with respect to regeneration, stocking and soil conservation standards. Free growing dates and standards for each standards unit are recorded and maintained in each Licensee and BC Timber Sales databases, such as GENUS. Each cutblock is surveyed prior to the late free growing date to ensure the free growing standards have been met and that the stand of trees is at target heights, fully stocked, and healthy. The results of all surveys are summarized and maintained in Licensee/BC Timber Sales databases. If all free growing standards are met, the Licensee/BC Timber Sales makes an application to the Ministry of Forests and Range for the standards unit to revert to the Crown's responsibility.

While this percentage is important in a legal sense, as Licensees/ BC Timber Sales have an obligation to meet free growing standards, it is also important for sustainable forest management. Stands that meet free growing standards are deemed to have reached a stage where their continued presence and development is more assured. They are in numbers, health, and height that make them less vulnerable to competition and more likely to reach maturity. Producing a free to grow stand means that the forest ecosystem will continue to develop. It means that carbon sequestration will also continue, locking up additional green house gases as cellulose in the growing plantation. As more blocks reach free growing status, they could make a significant local contribution to reducing global climate change within the AUTP.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 29: Standards Units Meeting Free Growing Requirements on Late Free Growing Date

April 1, 2010 to March 31, 2011

Licensee	Total Number of Standards units Due to Meet Free Growing	Standards Units achieved Free Growing By Obligation Due Date.	% in DFA*
BC Timber Sales	50	50	100%
Canfor	92	92	100%
Takla Track & Timber	42	38	90.5%
TOTAL	**184**	**180**	**97.8%**

- % = (# of standards units achieving free to grow in allotted time/ # of standards units due in reporting year) X 100

Canfor Indicator 37 Rationale:
Two blocks (4 SU's) for Takla Track and Timber missed Late Free Growing. Both blocks were surveyed prior to the Late Free Growing Dates but do to inconsistent data the declarations were missed. Both blocks were entered into ITS and Action Plans were developed and completed. Both blocks had rust issues that required follow-up.

Indicator 38 - Cut Level Volumes

Indicator Statement	*Target and Variance*
Percent of licensee AAC harvested over a 5 year cut control period. Percent of BCTS Volume Offered over fiscal year.	Target: 100% Variance: +/- 10%

To be considered sustainable, harvesting a renewable resource such as timber cannot deteriorate the resource on an ecological, economic or social basis. An Allowable Annual Cut (AAC) is defined as the allowable rate of timber harvest by volume from a specified area of land. During AAC determination, various considerations are examined including the long-term sustainable harvest of the timber resource, community stability, wildlife use, recreation use, and the productivity of the DFA. The Fort St. James AUTP is part of the larger Prince George Timber Supply Area, comprising approximately 42% of the Timber Supply area.

By following the AAC determination, the rate of harvest is consistent with what is considered by the province to be sustainable within the DFA. The licensee must harvest the amount of volume specified in their license document within the legally specified thresholds. In the case of BC Timber Sales, they are not bound by cut control legislation but do have a volume apportionment as set out in the Timber Supply Review by the Chief Forester. Each fiscal year BCTS is committed to offer a volume of timber (based on

the volume apportioned (AAC)) for sale through a competitive bidding process. Each truckload of wood is assessed and accounted for at an approved Ministry of Forests and Range scale site.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 30: Licensee AAC Harvested Over a 5 year Cut Control Period/ BCTS Volume Offered for Fiscal Year

Licensee	5 year Total Harvest Volume Apportioned m^3	Actual Volume Harvested to date in Cut Control Period m^3	Number of years into Cut Control	Percent of 5 year cut control*
Canfor (A40873)	2,500,000	1,982,829	4	79.3%
Canfor (NRFL)	1,000,000	821,775	4	82.2%
Takla Track & Timber	1,000,000	504,371	4	50.4%
TOTAL	**4,500,000**	**3,308,975**		**73.5**
Licensee	**Total Volume Offered m^3**	**Apportionment Volume m^3**	**Fiscal Reported**	**Percent of Fiscal Year Target Achieved****
BC Timber Sales (Section 20 Volume Only)	931,197	1,040,000	2010-2011	89.5%

** % = (actual cut volume harvested to date/ 5 year apportionment) X 100*
*** % = (total volume offered for the fiscal year / volume apportionment for the fiscal year total) X 100%*
TBD = to be determined

The target for this indicator is based on the individual licensee five year cut control period and it will be measured at the end of that 5-year period. The volume harvested is reported on an annual basis to monitor each licensee's status in achieving the target goal for the five year cut control period. The target for BC Timber Sales is based on the fiscal year.

As Canfor's NRFL in the Fort St. James DFA expired on December 31st 2010, this will be the final year for reporting on that license.

BCTS Discussion:
Original Apportionment Target for DJA (Section 20) was 933,666 but with market and economy factors, target was reduced early in the season.

Indicator 39 - Visual Quality Requirements

Indicator Statement	*Target and Variance*
Percent of cutblocks harvested, in known scenic areas, which have visual assessments completed and implemented according to the recommendations.	Target: 100% Variance: None

Forests can provide intangible benefits in addition to their economic and ecological values. The perceived beauty of certain areas is one of these benefits and must be considered in forest management. Protection and maintenance of visual quality helps ensure that these values will be available for current and future generations. A Visual Quality Objective is a resource management objective established by the MoFR District Manager, or contained in a higher-level plan that reflects the desired level of visual quality. It is based on the physical characteristics and social concern for the area. Cutblocks that are planned within established scenic areas require some form of visual assessment such as a site line analysis, a visual simulation package or a visual impact assessment.

This indicator is designed to ensure that visual assessments are completed in all planned harvest areas that fall within identified scenic areas and ensure that recommendations from visual assessments are implemented on the ground. The maintenance of visual quality in known scenic areas is an important aspect of sustainable forest management because it contributes to the overall landscape condition and social acceptance of industrial forestry.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 31: Visual Requirements Met

April 1, 2010 to March 31, 2011

Licensee	Number of cutblocks harvested within Known Scenic Areas	Number Visual Assessments Implemented	% in DFA*
BC Timber Sales	11	11	100%
Canfor	3	2	67%
Takla Track & Timber	1	1	100%
TOTAL	**14**	**13**	**92.9%**

% = (# visual assessments completed and implemented/ number of cutblocks harvested in known scenic areas) X 100

What Happened?	Canfor harvested one block adjacent to the Salmon River that was located within a known scenic area. This block was harvested prior to the completion of a visual impact assessment.
Action Plan	Canfor will assess the block to ensure that the visual integrity of the landscape has been maintained. A root cause will be investigated to determine what factors lead to the harvesting of a block without having a visual impact assessment completed. Depending on the outcome of the root cause investigation, internal processes will be reviewed and if appropriate, changes will be made and communication to applicable staff members.

Indicator 40 - Archaeological Assessments

Indicator Statement	*Target and Variance*
Percent of blocks and roads harvested that are consistent with recommendations contained in site level archaeological assessments.	Target: 100% Variance: 0%

The Fort St. James DFA is rich in archaeological resources as a result of its long history of First Nations and European habitation. In order to determine the presence of archaeological features, Licensees/BC Timber Sales conduct archaeological assessments, including reconnaissance surveys, interim archaeological assessments or field based archaeological assessments

Forest Stewardship Plans/ Forest Development Plans use an Archaeological Predictive Model to assess the potential presence of archaeological resources within proposed harvest areas or road access corridors. Where activities are proposed within zones of high archaeological potential, Licensees and BC Timber Sales conduct site level archaeological assessments to identify, assess and record any archaeological resources that may be present. Management measures are prescribed in site plans based on the results of the archaeological assessment and these management measures are implemented at the site level during harvesting operations.

Once a strategy to conserve archaeological resources is included within a site plan, there is a legal obligation for the Licensee/ BC Timber Sales to implement and adhere to the strategy. Final harvest inspections ensure that these strategies are implemented in harvested cutblocks and roads as stated in the site plan.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 32: Adherence to Archaeological Assessments

April 1, 2010 to March 31, 2011

Licensee	Number of Cutblocks and Roads with Archaeological Assessments Completed	Number of Cutblocks and Roads adhering to Archaeological Assessment Recommendations	% in DFA*
BC Timber Sales	27	27	100%
Canfor	4	4	100%
Takla Track & Timber	1	1	100%
TOTAL	**31**	**31**	**100%**

% = (# of blocks that follow AIA recommendations/ number of blocks with AIA completed) X 100

Indicator 41 - Communication with Interested Individuals

Indicator Statement	*Target and Variance*
Percent of individuals who have expressed an identified interest in forest planning are communicated with.	Target: Annually, 100% Variance: -10%

The Licensee/ BC Timber Sales maintains a list of individuals who have expressed an interest in forest management planning. These interested parties include private landowners, lodge operators, trappers, hunting guides, recreationalists, mining tenure holders, and water licensees. Licensees and BC Timber Sales contact various stakeholders and members of the public when forestry operations are planned or ready to commence in a given area. Typically, communication is done by letter, but contact is also made by telephone or through face-to-face meetings. Communication of planned forestry activities with these individuals is to be done in a timely and efficient manner.

This indicator is intended to measure the success in communicating with individuals who have expressed an interest in forest planning and if necessary, improve that communication. Licensees and BC Timber Sales use a variety of tracking systems to record this communication. Licensees/BC Timber Sales will continue to strive in the maintenance of an accurate, inclusive contact list in order to communicate with all identified interested individuals when required.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 33: Communication with Interested Individuals

April 1, 2010 to March 31, 2011

Licensee	Number of Individuals Expressing an Interest in Forest Planning	Number of these Individuals who are Communicated with	% in DFA*
BC Timber Sales	11	11	100%
Canfor	94	94	100%
Takla Track & Timber	See Canfor		
TOTAL	**105**	**105**	**100%**

% = (Number of individuals communicated with / Total number of individuals expressing an interest in forest planning) X 100

Indicator 43 - Expression of Interest

Indicator Statement	*Target and Variance*
General notification to request expression of interest (newspaper ad).	Target: Annual notification. Variance: None

As sustainable forest management includes non-timber values, it is important that the forest industry works with interested individuals to plan operations that consider their concerns. This indicator is intended to measure the success in publishing the annual general notification to request expression of interest.

Licensees and BC Timber Sales maintain a list of individuals who have expressed an interest in forest planning which they notify when forestry operations/ developments are planned or are to occur. In order to provide an opportunity for individuals to be included in this communication list, The Licensees and BC Timber Sales currently publish notifications to request expression of interest in forest planning in local newspapers that serve the Fort St James DFA when a FDP/FSP is created or amended. All stakeholders and members of the public identified as interested in the forest planning process are communicated in a timely manner, through this advertisement process.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 34: Notification for Expression of Public Interest

April 1, 2010 to March 31, 2011

Licensee	Number of newspaper ads for an expression of interest in forest planning	Annual Notification Complete
BC Timber Sales	3	Yes
Canfor	2	Yes
Takla Track & Timber	See Canfor	
TOTAL	**3**	**Yes**

Two newspaper ads were done together.

Indicator 44 - Personal Notification

Indicator Statement	*Target and Variance*
Annual personal notification to every "known" non-	Target: 100%

timber licensed tenure holder.	Variance: 0%

Communication with the public in regards to forest planning is a crucial component of sustainable forest management. Non-timber license tenure holders are among the individuals that may be affected by forestry activities and are of particular interest, as their commercial livelihoods depend on the cooperation of the forest industry. Known non-timber license tenure holders include hunting guides, trappers, water users, mining interests, and range licensees that have been identified through their tenure identification.

This measure is intended to ensure the Licensees/ BC Timber Sales send an annual personal notification to every known non-timber licensed tenure holder that may be influenced by their operations. This notification is in the form of a letter that informs the licensee of the communication opportunities they may use to express concerns in regards to planned forest activities. The decision to act upon the opportunity to provide comments rests with the licensed non-timber tenure holder.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 35: Personal Notification to Non-Timber Licensed Tenure Holders

April 1, 2010 to March 31, 2011

Licensee	Total Number of known non-timber licensed tenure holder	Number of These Individuals Who receive annual personal notifications	% in DFA
BC Timber Sales	54	54	100%
Canfor	82	82	100%
Takla Track & Timber	See Canfor		
TOTAL	**136**	**136**	**100%**

**Canfor Discussion:
One individual was missed in the north portions of Fort St James. No current operations in the area.

Indicator 46 - Known Subsistence Uses, Recreational/ Cultural Trails/ Sites & Spiritual Sites.

Indicator Statement	*Target and Variance*
Percent of cutblocks and roads harvested that have incorporated information of known subsistence uses, recreational/cultural trails/sites, or spiritual sites that have been brought forward.	Target: 100% Variance: - 20%

Many areas of the Fort St. James DFA are used for subsistence uses such as berry picking, mushroom picking, hunting, fishing, and medicinal plant collection. Both First Nations' communities and non-First Nations' residents of the DFA may rely on these areas to supply a portion of their dietary and medicinal requirements. Many areas in the DFA are also valued for their recreational, cultural, or spiritual values. While some of these sites may be protected due to their archaeological significance, there may be others that are too recent to benefit from legislative protection, or do not possess any tangible evidence of their importance. These sites may include ski trails or ATV trails used to access favorite fishing and camping sites. Or, they may be areas of spiritual significance for First Nations, such as a mountain or lake. In the case of the latter, there may be no archaeological proof of this significance, but the lack of such physical evidence should not exclude these areas from proper management for their defined value.

This indicator is intended to measure the success of road and cutblock harvesting activities to incorporate information of known subsistence uses and information of known recreation/cultural/spiritual sites that have been brought forward. Site level plans that direct harvesting activities are dependent upon users of subsistence sites and recreation/cultural/spiritual sites to supply the Licensees/BC Timber Sales with the information needed to manage them appropriately. The Licensees/BC Timber Sales currently facilitates

opportunities for members of the public to provide input at the Forest Development Plan/Forest Steward Plan stage. When information on these non-timber resources is brought forward, site level plans will incorporate the information and prescribe management activities during road and cutblock harvesting where possible.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 36: Incorporation of Information of Known Subsistence Uses, Recreational/Cultural Trails, or Spiritual Sites

April 1, 2010 to March 31, 2011

Licensee	Number of Cutblocks with Non-Timber Forest Uses*	Cutblocks Incorporating Information on Non-Timber Uses	% in DFA**
BC Timber Sales	13	13	100%
Canfor	1	1	100%
Takla Track & Timber	0	N/A	N/A
TOTAL	**14**	**14**	**100%**

** Non-Timber uses means areas known for subsistence uses, recreational, cultural trails & sites or spiritual sites*

** % = (# of site plans that have incorporated subsistence use information/ site plans with known subsistence uses) X 100

Indicator 48 - Contracts Serviced by North Central British Columbia

Indicator Statement	*Target and Variance*
Percent of operational forestry contract value in dollars within the DFA serviced by north central British Columbia	Target: 90%- achieved annually (Excluding BC Timber Sales) Variance: -10%

Forests provide many ecological benefits but they also provide substantial socio-economic benefits. In order to have sustainable socio-economic conditions for local communities associated with the DFA, local forest related businesses should be able to benefit from the work that is required in the management of the DFA. Furthermore, for small companies to contribute to and invest in the local economy there must be assurances that there will be a consistent flow of work. This indicator is intended to measure the percentage of forestry contract value within the DFA serviced by north central BC businesses and demonstrates the commitment the Licensees are making towards maintaining the economic sustainability of the region.

The north central interior is defined in this SFMP as the land base that includes communities from 100 Mile House to Fort St. John (south to north) and Terrace to Valemount (west to east).
A query of the financial data stored within the Licensee's individual accounting systems tracks monies spent within the DFA to benefit the North Central Interior. In order to be meaningful, this financial data will be weighted based on the Allowable Annual Cut of each licensee.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 37: Contracts Serviced by North Central British Columbia
April 1, 2010 to March 31, 2011

Licensee	Percentage Spent in NCI
BC Timber Sales	83.05%
Canfor	99%
Takla Track & Timber	See Canfor

Takla Track & Timber Discussion:

Although Canfor manages forestry activities for Takla Track & Timber through Takla Forest Management Inc (TFMI), Canfor does not have access to the details of the financial records required to report on Indicator 48. Volume delivered under the A27823 license to Canfor's mills has been included in Canfor's reporting of Indicator 48.

Indicator 49 - Employment Opportunities Advertised Locally

Indicator Statement	*Target and Variance*
Percentage of advertised employment opportunities published in the local paper.	Target: 100% (Excluding BC Timber Sales) Variance: 0%

Forest Licensees and the contractors they employ constitute a major source of employment within the Fort St. James DFA. Many local people rely on the employment opportunities created by forest Licensees for their careers and livelihoods. To take advantage of local employment opportunities, residents of the DFA and other members of the local public must be aware of them. The Licensees have established a target of 100% of advertised employment opportunities to be published locally to reflect their commitment to contributing to the local economy. This indicator is intended to measure the success of Licensees to publish advertised employment opportunities in the local paper. For the purposes of this indicator, the local paper is the Caledonia Courier or the PG Citizen. Licensees currently publish all advertised employment opportunities in the local paper.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 38: Advertised Employment Opportunities Published in the Local Paper

April 1, 2010 to March 31, 2011

Licensee	Total Number of Advertised Employment Opportunities	Employment Opportunities Published in Local Paper	% in DFA*
BC Timber Sales	0	N/A	N/A
Canfor	0	N/A	N/A
Takla Track & Timber	See Canfor	See Canfor	
TOTAL	**0**	**0**	**100%**

- % = (# of employment opportunities advertised locally/ total # of employment opportunities advertised) X 100

Takla Track & Timber Indicator 49 Rationale:
As Canfor manages forestry activities for Takla Track & Timber through Takla Forest Management Inc (TFMI), Canfor's reporting for Indicator 49 can be applied to Takla Track & Timber, as far as forestry staff is concerned.

Indicator 50 - Bidding Opportunities for Local Forestry-Based Businesses

Indicator Statement	*Target and Variance*
Percentage of bidding opportunities that are provided to qualified local forestry-based resource businesses.	Target: 100% Variance: 0%

Forests provide substantial socio-economic benefits in addition to their many ecological benefits. In order to have sustainable socio-economic conditions for communities associated with the DFA, local forestry-based resource businesses should be able to benefit from the work that is required by forest Licensees

This indicator is intended to measure the bidding opportunities that are provided to qualified local forestry-based resource businesses. Bidding opportunities include woodlands related tendered projects, other than logging, hauling, and road building. These could include cruising, block layout, road layout, and silviculture activities such as tree planting, surveys, and stand tending. Local forestry-based businesses should have the opportunity to bid on these contracts and bring the economic benefits of the forest industry to the local community. These opportunities are usually expressed as advertisements in local

papers. For the purposes of this indicator, local forestry based resource business are defined as those that are located within the Fort St. James DFA.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 39: Bidding Opportunities Provided to Qualified Local Businesses

April 1, 2010 to March 31, 2011

Licensee	Total Number of Bidding Opportunities	Opportunities Provided to Local Qualified Businesses*	% in DFA**
BC Timber Sales	34	34	100%
Canfor	0	0	100%
Takla Track & Timber	See Canfor		
TOTAL	**34**	**34**	**100%**

** Opportunities provided to qualified local forestry based resource businesses*

** % = (# of bidding opportunities provided to local businesses/ total # bidding opportunities) X 100

Indicator 55 - Local Aboriginal Participation in Forest Management

Indicator Statement	*Target and Variance*
Solicit participation in forest management from local aboriginal communities for areas of overlapping interest.	Target: Twice a year, 100% of local aboriginal communities Variance: 0%

The forests of the Fort St. James DFA are valued from many resource use perspectives. These values may be economic, social, cultural, or spiritual, and should be considered in sustainable forest management planning. While the forest industry naturally focuses on the economic worth of the forests on the DFA, First Nations may have a different set of forest values of which the forest industry should be aware. Awareness of these values will enable the Licensees and BC Timber Sales to plan forest operations in consideration of those values, and therefore contribute to the overall goals of SFM.

The intent of this indicator is to provide SFM communication opportunities for First Nations whose traditional territories overlap with the area of the SFM plan. Currently, First Nations have the opportunity to communicate with the Licensee and BC Timber Sales during the FSP review phase and during the review of any FSP amendments. All comments received during FSP reviews are documented and responded to in a timely manner. First Nations' comments are considered in the development of the FSP or amendment.

The table below details the current status for this reporting period. The Kaska Dene and Tahltan have been removed from the table below, as their traditional Territories no longer overlap with the Fort St. James DFA.

Table 40: Local Aboriginal Peoples Participation in Forest Management Process

April 1, 2010 to March 31, 2011

Indicator 55: Solicit participation in forest management from local aboriginal communities for areas of overlapping interest.		**TARGET: Bi-annually 100% of local aboriginal communities Variance: 0**
Licensee	**Number of forest management participation solicitations to relevant First Nations Between April 1st and March 31st**	

	Total	Gitxsan	Lheidli T'enneh	McLeod Lake	Nak'azdli	Natooten	Takla	Tl'azt'en	Tsay Keh Dene	Yekooche	Halfway River	West Moberly First Nation
BCTS	**27**	0	0	3	5	2	2	6	0	3	3	3
Canfor (Houston and PG)	**32**	4	3	4	4	0	3	5	0	2	3	4
Takla Track & Timber	Included in Canfor's summary of communications											
Joint	**11**	1	1	1	1	1	1	1	1	1	1	1
Totals	**70**	**5**	**4**	**8**	**10**	**3**	**5**	**12**	**1**	**5**	**7**	**7**

Canfor Discussion:
As Canfor manages forestry activities for Takla Track & Timber through Takla Forest Management Inc (TFMI), Canfor's reporting for Indicator 55 can be applied to Takla Track & Timber.

Indicator 56 - Archaeological Assessment Referrals to Aboriginal Peoples

Indicator Statement	*Target and Variance*
Percentage of archaeological assessments completed, on cutblocks and roads harvested during the reporting period, that have been referred to relevant Aboriginal communities for review and comment prior to harvesting.	Target: 100% Variance: 0%

The Fort St. James DFA is rich in archaeological resources because of the long history of First Nations and European habitation. Archaeological Predictive Models are utilized to assess the potential presence of archaeological resources within proposed harvest areas or road access corridors. Where activities are proposed within zones of high archaeological potential, Licensees and BC Timber Sales conduct site level archaeological assessments to identify, assess and record any archaeological resources that may be present. Aboriginal communities have expressed a desire to be made aware of the evidence of historic use by their ancestors. These communities have cultural interests in managing archeological resources and Licensees/BC Timber Sales should solicit their input when these resources are detected.

This indicator is designed to ensure that archaeological assessments competed for all harvested cutblocks and roads have been referred to the relevant Aboriginal community for review and comment. Tracking such information will allow Licensees/BC Timber Sales to evaluate how successful communication strategies are with First Nations' communities and improve procedures as required prior to harvesting

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 41: Archaeological Assessments Referred to Aboriginal Communities

April 1, 2010 to March 31, 2011

Licensee	Number of cutblocks harvested with Archaeological Assessments completed	Archaeological assessments Referred to Aboriginal Communities for Comment	% in DFA*
BC Timber Sales	22	22	100%

Canfor	3	3	100%
Takla Track & Timber	1	1	100%
TOTAL	**26**	**26**	**100%**

- *% = (Number of archaeological field evaluations referred to aboriginal communities / number of archaeological field evaluations completed) X 100*

Indicator 59 - First Nations Forest Values and Indicators

Indicator Statement	***Target and Variance***
Percent of blocks and roads harvested by Licensees and BC Timber Sales that have been previously referred to applicable First Nations.	Target: 100% of blocks and roads harvested Variance: 0%

The forests of the Fort St. James DFA are valued from many resource use perspectives. These values may be economic, social, cultural or spiritual, and must be considered in the sustainable forest management planning process. Being aware of these values early in the block and road development stage enables Licensees and BC Timber Sales to plan forest operations that manage them and contribute to the overall values and associated objectives of SFM. It is anticipated that over time the commitment to the sharing and exchange of First Nations interests and values as well as associated management strategies will result in increased awareness of First Nations values, improved consistency of management strategies employed between licensees and increased incorporation of aboriginal knowledge in forest management

The intent of the indicator is to ensure that all development works put forward by licensees or BC Timber Sales identify and manage for important First Nations values and uses. Activities conducted by licensees and BC Timber Sales that are intended to identify and manage for important First Nations values and uses could include the following:

- First Nation information sharing activities and associated management of values and uses identified through following results and strategies in Forest Stewardship Plans for licensees and BC Timber Sales to address objectives set by Government for cultural resource values.
- Licensees and BC Timber Sales in conjunction with the Ministry of Forest and Range will provide First Nations with the information necessary for identifying and understanding the impact of forestry development works on important First Nations values and usage. Subsequent dialogue will take place between First Nations, Licensees or BC Timber Sales, and/or the Ministry of Forests and Range to identify First Nations values and uses as well as management strategies.
- Licensees and BC Timber Sales will share with each other important First Nations values and interests identified through their respective information sharing activities.

Table 42: Cutblocks and Roads Previously Referred to Applicable First Nations

April 1, 2010 to March 31, 2011

Licensee	Total Number of cutblocks and roads harvested Between April 1st and March 31st	Number of These cutblocks and roads harvested previously referred to the applicable First Nation	% in DFA
BCTS	27	27	100%
Canfor	20	20	100%
Takla Track & Timber	1	1	100%
TOTAL			

% = (Number of blocks and roads harvested that have been previously referred to First Nations / Total number of blocks and road harvested) X 100

Indicator 62 - Satisfaction with the PAG Process

Indicator Statement	*Target and Variance*
Percent of PAG meeting evaluations completed during the reporting period that obtain a minimum average acceptability score of 3.	Target: 80% Variance: -10%

The PAG is a key facilitator for public involvement in the SFM process. The Fort St. James PAG provided guidance, input and evaluation during development of the SFMP. It is also instrumental in maintaining links to current local values and forest resource uses within the DFA. Therefore, it is important that the PAG participants remain satisfied with the group and continue their involvement. This indicator will use meeting evaluations to determine the satisfaction level of the PAG with the public participation process.

At the end of each PAG meeting, each PAG member will complete a satisfaction survey. The results of the satisfaction surveys will be posted at meetings as well as reviewed by the Licensee team.

Indicator 62: Satisfied PAG membership.			**TARGET: 80% VARIANCE: -10%**
Licensee	**PAG meetings between April 1st and March 31st**	**% PAG meeting evaluations that obtained a minimum score of 3**	**Method Used to Query/Collect Data**
All	Sept 18/10	100%	PAG meeting evaluations from 2010-11
	Sept 25/10	100%	
	Nov 29/10	100%	
	Feb 21/11	83%	
	Mar 28/11	100%	
TOTAL	**5**	100%	

Indicator 63 - PAG SFM Information Gap Inquiries

Indicator Statement	*Target and Variance*
Percent of PAG SFM information gap inquiries responded to within 3 months	Target: 100% Variance: 0%

PAG is one of the key elements of public involvement in the SFM process. In order for the PAG to make decisions with regards to the content of the SFMP, such as indicators, targets, and levels of responsibility, they must have the necessary information to support those decisions. This information must be of sufficient quantity and quality and provided in a timely manner in order for the PAG to make sound decisions. SFM information gaps are identified during scheduled PAG meetings. At that time, Licensees/BC Timber Sales will be assigned tasks to locate and provide outstanding information to the group within 3 months.

If the SFMP is to succeed, the people who are involved in its creation and implementation must have a level of certainty that the information they need is delivered in a timely manner.

Indicator 63: Percent of PAG SFM information gap inquiries responded to within 3 months.			**TARGET: 100% annually VARIANCE: 0%**
Licensee	**Total Number of PAG SFM Information Gap Inquiries Made Between April 1st and March 31st**	**Number of Those Inquiries Responded to Within 3 Months**	
TOTAL	3	3	**0%**

Licensee Steering Committee Discussion:
Three information inquiries were made by the PAG during the 2010-11 reporting period. One related to the new standard and presentation of indicators, one related to new policy around deactivation of roads and one was about the source of a survey about relaxing constraints (e.g visuals).

Indicator 65 - Hardwood Stands

Indicator Statement	*Target and Variance*
The percent of hardwoods (mixed wood and deciduous leading stand) within the DFA.	Target: >4.0 overall. Licensee targets will vary due individual operating areas. Variance: -0.4

Hardwood stands are forest stands that are dominated by deciduous species, but may include a conifer component. The major hardwood species in the Fort St. James DFA are trembling aspen (*Populus tremuloides*), balsam poplar (*Populus balsamifera*), black cottonwood (*Populus trichocarpa*), and paper birch (*Betula papyifera*). These stands provide habitat for a variety of wildlife species and often represent unique plant communities. This indicator is intended to ensure that a certain percentage of the DFA land base is occupied by hardwood stands to maintain species diversity and to support sustainable populations of hardwood associated flora and fauna habitat.

Licensees / BC Timber Sales acknowledge the importance of maintaining hardwoods in the DFA from both an ecological and economic aspect and have established this indicator to ensure a percentage of the DFA remains in deciduous cover over the long-term. Licensees and BC Timber Sales have completed a GIS analysis of the hardwood component for the DFA based on a Vegetative Resource Inventory and targets were identified based on this analysis.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 43: Percentage of Hardwoods* within DFA

April 1, 2010 to March 31, 2011

Licensee	Total THLB by Licensee (ha.)	Total Area of Hardwoods *by Licensee (ha.)	% by Licensee	Licensee Target %
BC Timber Sales	273,929.2	23,691.17	8.65%	>5.0
Canfor	509, 549	27, 483	5.39%	>2.5%
Takla Track & Timber	71,028	3,564	5.02%	>3.0%
TOTAL	**854,506.2**	**54,738.2**	**6.4%**	**>4.0%**

Indicator 66 – Douglas-fir Stands

Indicator Statement	*Target and Variance*
Percent of Douglas-fir (mixed stands and Douglas fir leading stands) within the DFA.	Target: >1.0 overall. Licensee targets will vary due individual operating areas. Variance: -0.1

Douglas fir (*Pseudotsuga menziesii*) grows throughout much of southern British Columbia. There are two distinct forms of the species: coastal and interior. The Fort St. James DFA is at the northern extent of the interior Douglas fir's range, where it is found in small stands, or in mixed forests with spruce, pine, or birch. Douglas fir has played an important economic role in BC's forest industry, but due to its low numbers in the Fort St. James AUTP has limited economic importance. In recent years Douglas fir has gained more recognition for its value as a component of the forest ecosystem. Its' large size, longevity, fire resistance, and unique form provide habitat for a variety of species. Winter ungulate range, especially for mule deer, is particularly dependent on Douglas fir component.

The Licensees and BC Timber Sales acknowledges the importance of maintaining Douglas fir within the DFA and have established this indicator to ensure a percentage of the land base contains a Douglas fir

component. Past management activities have focused on Douglas fir at the stand level, and have not considered the broader presence of Douglas fir at the landscape/ DFA level. Licensees and BC Timber Sales have completed a GIS analysis of the Douglas fir component of the DFA based on a Vegetative Resource Inventory.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 44: Percentage of Douglas fir *within the DFA

April 1, 2010 to March 31, 2011

Licensee	Total THLB by Licensee (ha.)	Total Area of Douglas fir *by Licensee	% by Licensee	Licensee Target %
BC Timber Sales	273,929.2	11,452.48	6.16%	>2.0
Canfor	509, 548	4936	0.97%	>0.1%
Takla Track & Timber	71,028	0	0%	0.0%
TOTAL	**854,506.2**	**16,388.5**	**1.9%**	**>1.0%**

* Douglas fir includes mixed stands and Douglas fir leading stands

Indicator 68 - Landscape Level Strategy for Protection of Recreational, Commercial & Cultural Trails

Indicator Statement	*Target and Variance*
Total percent of forest operations that are consistent with a landscape level strategy for the management of recreational, commercial, and cultural trails as identified in the DFA.	Target: 100% Variance: -10%

Recreational, Commercial, and Cultural trails are prevalent throughout the AUTP. Sustainable forest management must consider non-forestry uses within the DFA land base, as well as in forest management planning. This indicator first was designed around the creation of a management strategy. At the March 28th, 2007 PAG meeting, consensus was reached amongst the members to adopt this landscape level strategy and indicator statement. See the current SFMP for the landscape level strategy.

In terms of recreational, commercial & cultural trails, a landscape level strategy to respect these non-timber resources will help coordinate planning by all Licensees/BC Timber Sales to ensure there is consistency in management. It will also enable Licensees/BC Timber Sales to develop landscape level plans that consider the overall affect forestry activities may have on recreational, commercial, and cultural trails.

This indicator is intended to measure the success of the Licensees and BC Timber Sales to adhere to the landscape level strategy that is detailed in the SFMP. By following this strategy, it is anticipated that the long-term sustainability of these trails can be maintained.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 45: Landscape Level Strategy for the Management of Trails.

April 1, 2010 to March 31, 2011

Indicator 68: Total percent of forest operations that are consistent with a landscape level strategy for the management of recreational, commercial, and cultural trails as identified in the DFA.			**TARGET: 100%** **VARIANCE: -10%**
Licensee	**Total number of forest operations by Licensee Between April 1st and March 31st that impact a recreational, commercial, or cultural trail**	**Total number of these forest operations that meet the landscape level strategy for management of these features**	**% in DFA**
BCTS	4	4	100%
Canfor	0	N/A	N/A
Takla Track & Timber	0	N/A	N/A
TOTAL	**4**	**4**	**100%**

- % = (Number forest operations that meet the landscape level strategy / number of forest operations that impact these trails) X 100

Indicator 70 – Road Deactivation

Indicator Statement	***Target and Variance***
Percent of roads deactivated that meet the deactivation criteria.	Target: 100% Variance: -20%

Road deactivation, in terms of amount and extent of deactivation, has been a discussion item with the PAG since 2005. The topic has been discussed over several meetings. This indicator was finalized at the March 5th, 2007 PAG meeting. The deactivation criteria referred to is within the current SFMP.

This indicator is intended to measure the success of the Licensees and BC Timber Sales to deactivate roads as per the accepted deactivation criteria. By following these criteria, it is anticipated that some consistency between licensees will be realized.

The table below details the current status of this indicator for this reporting period by individual Licensee and BC Timber Sales.

Table 46: Road Deactivation

April 1, 2010 to March 31, 2011

Indicator 70: Percent of roads deactivated that meet the deactivation criteria.			**TARGET: 100%** **VARIANCE: -20%**
Licensee	**Total number of roads deactivated by Licensee Between April 1st and March 31st**	**Total number of roads deactivated that meet the deactivation criteria**	**% in DFA**
BCTS	17	17	100%
Canfor	5	5	100%
Takla Track & Timber	0	N/A	N/A
TOTAL	**22**	**22**	**100%**

% = (Number of roads deactivated meeting the criteria / Total number roads deactivated) X 100

BCTS Discussion:
This indicator is based on FSR's (Forest Service Roads) and Road Permits that BCTS directly controls. It does not include in-block LPC roads. From engineering reports, BCTS deactivated 17 roads. Additional Note: BCTS has dealt with a few concerns/issues raised by stakeholders last year over the achievement of this indicator on some roads and crossings. BCTS has worked through/or is working through the issues and attempting to address any concerns.