



Mackenzie SFMP



Mackenzie Sustainable Forest Management Plan

Facilitator Report

March 31, 2014



101-2666 Queensway,
Prince George, BC,
V2L 1N2

March 31, 2014

Jason Neumeyer, RPF
Planning Forester
Canadian Forest Products Ltd.
Admin Building – Mill Road
Box 310
Mackenzie, BC
V0J 2C0

Dear Jason,

Here is the 2013/2014 Facilitator's Report for the "Fort St James SFM Plan Public Advisory Group."

This report contains the following:

1. Terms of Reference for the PAG
2. PAG Meetings (schedule of meetings, agendas, sign-in sheets, minutes)
3. Evaluations (sample of evaluation forms, feedback chart, feedback comments)
4. Mailing list and attendance list
5. Public Correspondence
6. First Nations Correspondence
7. CII Matrix and SFM Indicator Matrix
8. Annual Report
9. Audit Reports
10. Meeting Handouts

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Wiensczyk".

Alan Wiensczyk, RPF
Trout Creek Collaborative Solutions

Alan Wiensczyk, RPF
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Mackenzie SFMP



Mackenzie Sustainable Forest Management Plan

Public Advisory Group

Facilitator Report 2013-2014

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Mackenzie SFMP



Mackenzie Sustainable Forest Management Plan

Public Advisory Group

Terms Of Reference

March 19, 2014

Background

1.1 Purpose of a Sustainable Forest Management Plan

As society has been increasingly affirming a wider set of values that forests can provide, the forest industry has witnessed a distinct change in the philosophy of forest management. Though timber may still be the primary economic value from the forests, a wider range of economic, environmental and social values is being demanded.

Forest management now involves the sustainable management of a much larger spectrum of values and at the same time ensuring that the benefits we enjoy from the forests today do not impact on the ability of subsequent generations to enjoy benefits from the forests in the future. This concept is commonly referred to as "Sustainable Forest Management" (SFM). Sustainable Forest Management (SFM) refers to being economically sustainable on public land, respecting the social needs of the public, and sustaining viable ecosystems. The objective of SFM is to concurrently balance the sustainability of forestry-related ecological, social and economic values for a defined area.

SFM has gained acceptance at the international, national, and local levels. Furthermore, SFM has attracted the attention of buyers of forest products who are increasingly demanding that the industry demonstrate that products are derived from forests managed on a sustainable basis. As a result, forest certification has emerged as a dominant factor in the forest industry in order to provide assurances to buyers of wood products that the management of forests meets identified standards that are considered critical for SFM. As British Columbia forest companies have evolved and have become dependent on the global marketplace for the export of forest products, the issues of sustainable forest management and forest certification have become paramount.

Canadian Forest Products Ltd., in partnership with other licensees, academics, resource specialists, government agency staff, interested parties, and other related organizations has designed an integrated framework for sustainable forest management across its divisions. This Sustainable Forest Management (SFM) Framework has become a credible alternative to current forest management planning in the interior of British Columbia.

The primary purposes of Canadian Forest Products Ltd. are to:

- a. Rely on the SFM Framework as the conceptual forest management strategy for the certification effort in Mackenzie;
- b. Jointly develop a Sustainable Forest Management Plan (SFMP) within the geographic area of the Mackenzie Forest District to meet the SFM standard requirements (Z809-08) developed by the Canadian Standards Association (CSA). This standard and subsequent revisions may be viewed online at <http://shop.csa.ca> by searching CSA Z809;
- c. Support a public advisory process to:
 - Identify and select indicators, and targets, based on the SFM framework and any other criteria relevant to the DFA;
 - Develop, assess, and select from alternative strategies;
 - Review the SFMP;
 - Design monitoring programs, evaluate results and recommend improvement; and
 - Discuss and resolve any issues relevant to SFM in the DFA;
- d. Work together to fulfill the SFMP commitments including data collection and monitoring, participating in public processes, producing public reports, and continuous improvement.

The SFMP may be used by Canadian Forest Products Ltd. to prepare for eventual certification under the Canadian Standards Association's (CSA) SFM Standard (Z809-08).

This SFMP is intended to be consistent with all existing legislation and other strategic plans.

1.2 Mackenzie SFMP Steering Committee

The current Mackenzie SFMP Steering Committee for the Mackenzie SFMP consists of representatives from Canadian Forest Products Ltd. (Canfor).

1.3 Defined Forest Area

The SFMP applies to only the Defined Forest Area (DFA). A DFA is a specified area of forest, including land and water. The DFA for this SFMP is within the Mackenzie Forest District, excluding areas such as private lands, woodlots, Williston Reservoir, Indian reserves, Large Parks and Treaty 8 Lands¹. The DFA boundaries are shown on the map provided in Appendix A.

1.4 Public Advisory Group

The Public Advisory Group (PAG) for the Mackenzie SFMP is comprised of individuals representing the interests listed in section 6.1.1. who voluntarily participate in the PAG process. As outlined in these terms of reference, the PAG will specifically work under the Defined Goals (section 2) as an open, transparent and accountable process. The Mackenzie SFMP Steering Committee and the PAG recognize and agree that Aboriginal participation in the public participation process will not prejudice Aboriginal and Treaty rights.

1.5 Legislation

The Mackenzie SFMP Steering Committee and the PAG shall ensure that the indicators, and targets are consistent with current relevant government legislation, regulations and policies. The Mackenzie SFMP Steering Committee and the PAG must also respect the findings of any formal public participation processes that have developed values, objectives, indicators, or targets relating to the CSA SFM elements at a landscape or regional level in the area in which the DFA is situated.

2. Defined Goal

The goal of the Mackenzie SFMP is to demonstrate commitment to sustainable forest management for the DFA. The Mackenzie SFMP Steering Committee, with input from the PAG, will be responsible for developing and implementing the SFMP.

The PAG will have the opportunity to work with the Mackenzie SFMP Steering Committee to:

- a. Identify and select indicators, and targets, based on the SFM framework and any other criteria relevant to the DFA;
- b. Develop, assess, and select from alternative strategies;
- c. Review the SFMP;
- d. Design monitoring programs, evaluate results and recommend improvement; and
- e. Discuss and resolve any issues relevant to SFM in the DFA.

¹ Refers to fee simple and reserve lands

3. Timelines

Key dates for developing the SFMP:

	<u>To be completed by:</u>	<u>Completed on:</u>
a. Invitations sent to potential participants and newspaper ads published	January 15, 2006	Letters - January 10, 2006 Ads - January 17 & 24, 2006
b. Public Open House	January 21, 2006	January 23, 2006
c. Initial Public Advisory Group meeting	January 28, 2006	January 31, 2006
d. PAG input into the CSA matrix	June 2006	May 9, 2006
e. Strategic scenario analysis	September 2006	October 17, 2006
f. Review of draft SFMP by PAG	October 2006	October 2006
g. SFM Certification Audits	November 2006	November 2006 – February 2007
h. Review of Final SFMP by PAG	April 29, 2008	April 29, 2008
i. Plan updated and reviewed by the PAG		January 2010
j. Plan updated to the Z809-08 Standard and reviewed by the PAG		March 1, 2012

Following the completion of the SFMP, it is estimated that the PAG meeting schedule would include 3–4 meetings per year (as required) beginning in 2007.

4. Communication

4.1 Between the PAG and Mackenzie SFMP Steering Committee

- The Mackenzie SFMP Steering Committee will ensure that the PAG meeting summaries are distributed to the PAG with the meeting notice.
- The Mackenzie SFMP Steering Committee will strive to provide background and technical information to the PAG as related to the PAG's defined role, including information related to the DFA and SFM requirements. Confidential business information of the Mackenzie SFMP Steering Committee such as financial or human resource information may be deemed sensitive or proprietary and may not be released.
- The Mackenzie SFMP Steering Committee will respond to all recommendations from the PAG. The Mackenzie SFMP Steering Committee will indicate how they applied the recommendations or provide reasons for not applying them. The meeting summary will capture the reasons for not implementing any PAG recommendations, whole or in part.
- The Mackenzie SFMP Steering Committee will provide a copy of the SFMP and annual reports to the PAG.
- The Mackenzie SFMP Steering Committee may caucus prior to responding to the PAG.

4.2 With the Public

- The Mackenzie SFMP Steering Committee will make copies of the SFMP and annual reports available to the public.
- When communicating to the media and external parties about the SFMP and PAG process, the PAG and the Mackenzie SFMP Steering Committee will speak only on behalf of their own personal perspectives, will be respectful of each other, and avoid characterizing their comments as representing the PAG or the Mackenzie SFMP Steering Committee. They will also inform the PAG and Mackenzie SFMP Steering Committee of their communication with the media.

- c. The PAG and Mackenzie SFMP Steering Committee may invite the media to attend meetings as observers with advance notification to the PAG and Mackenzie SFMP Steering Committee.

5. Resources

5.1 Travel Expenses

- a. Air travel from Tsay Keh and Fort Ware will be reimbursed for PAG representatives (or in their absence, their alternates). When necessary, mileage between these villages to catch flights to attend Mackenzie PAG meetings will be reimbursed.
- b. Mileage to and from PAG meetings for those PAG representatives (or in their absence, their alternates) traveling more than 25 kilometers each way to the meeting site will be reimbursed per kilometer at the provincial government rate. Mileage for those PAG representatives (or in their absence, their alternates) traveling between Tsay Keh or Kwadacha to/from Mackenzie will be reimbursed at the discretion of the Mackenzie SFMP Steering Committee. PAG representatives (or in their absence, their alternates) traveling from outside the Mackenzie Forest District must obtain approval for travel expenses from the Mackenzie SFMP Steering Committee before the meeting.
- c. Overnight accommodation for PAG representatives and alternates traveling to PAG meetings will be reimbursed if pre-approved by the Mackenzie SFMP Steering Committee. As a general principle, accommodation should be economical.
- d. Expense forms with copies of receipts for the above must be submitted to the facilitator within two weeks following the PAG meeting.

5.2 Meeting Expenses

- a. The Mackenzie SFMP Steering Committee will provide meeting rooms, meals, refreshments, a facilitator, and a scribe.
- b. The Mackenzie SFMP Steering Committee will provide adequate material and other resources to assist the PAG in understanding the relevant concepts.

6. Responsibilities

6.1 Public Advisory Group

6.1.1 Membership Structure

The PAG reflects a range of interests in the DFA. Members of each identified sector will select one representative and one alternate to participate in the PAG. Each representative and alternate will be allowed to represent only one of the sectors listed in Appendix B.

In addition to members of the public participating in the PAG, Aboriginal peoples have a unique legal status and may possess special knowledge concerning Sustainable Forest Management based on their traditional practices and experience. Each of the local First Nations listed below will be encouraged to invite their members to participate in the Mackenzie SFMP PAG. Members of each of the local First Nations attending PAG meetings will be invited to select a representative and alternate to participate in the PAG:

- Kwadacha First Nation
- McLeod Lake Band
- Nak'azdli First Nation
- Saulneau First Nations
- Takla Lake First Nation
- Tsay Keh Dene
- West Moberly First Nations

6.1.2 Selection of the PAG

- a. The Mackenzie SFMP Steering Committee will recruit potential local PAG representatives and alternates through mailed invitations to individuals, an open house, posters, and advertisements through local media.
- b. Interested parties and the Mackenzie SFMP Steering Committee will review the potential membership at the initial PAG meeting. The Mackenzie SFMP Steering Committee will compile all names of potential representatives. Potential representatives for each interest area will discuss and agree as to who will stand as representative(s) and alternate(s). If they are unable to select a representative or alternate for the interest area, then the Mackenzie SFMP Steering Committee will recommend a solution.
- c. Once the PAG is established, the PAG and the Mackenzie SFMP Steering Committee can recommend changes in PAG structure, list of interests, and potential members.
- d. The Mackenzie SFMP Steering Committee, in consultation with the PAG, approves appointments and replacement of PAG representatives and alternates.

6.1.3 Responsibilities of PAG Representatives

PAG representatives are responsible for:

- a. Providing input related to the Defined Goals (defined in Section 2);
- b. Being prepared, informed and ready for meetings;
- c. Requesting of the Mackenzie SFMP Steering Committee an advisor to provide information when the PAG considers this necessary;
- d. Acting as a liaison between the PAG and others from the interest area they are representing;
- e. Assuming responsibility towards reaching consensus on recommendations to the Mackenzie SFMP Steering Committee;
- f. Attending meetings. It is recognized that PAG representatives may miss some meetings due to the nature of their work or other activities;
- g. Informing their alternate and the facilitator if unable to attend a PAG meeting. If a PAG representative misses more than two consecutive meetings without a valid reason and without notifying his/her alternate and the facilitator, the Mackenzie SFMP Steering Committee may, based on consultation with the PAG, replace or remove that representative;
- h. Ensuring that the alternate is informed, up-to-date and prepared prior to the alternate participating in a PAG meeting. This includes providing the alternate with a past meeting summary in a timely, effective fashion; and
- i. Providing their input on upcoming agenda items when they are aware that they will be absent from a PAG meeting. They may provide their information to another PAG member or the Mackenzie PAG Steering

Committee to present at the PAG meeting or forward it in writing to the facilitator who will then provide to the Mackenzie PAG Steering Committee or a specified PAG member to present at the meeting.

6.1.4 Responsibilities of PAG Alternates

An alternate may be appointed for each PAG representative. The PAG alternate is responsible for:

- a. Attending PAG meetings on behalf of the representative. When doing so, the alternate agrees to work according to the Terms of Reference; and
- b. Coming informed, up-to-date, and prepared for discussions and decision-making based on briefings by the representative when attending on behalf of the representative.

6.2 Mackenzie SFMP Steering Committee

The Mackenzie SFMP Steering Committee is responsible for:

- a. Providing and clarifying information to the PAG as related to the Defined Goals. Where possible, this material will be provided in advance of the meeting;
- b. Providing the PAG with necessary and reasonable human, physical, financial, information and technological resources;
- c. Where possible, informing the PAG (via the agenda) of any advisor attending a meeting;
- d. Not participating in reaching consensus on recommendations by the PAG;
- e. Considering and responding to the recommendations of the PAG;
- f. Making decisions regarding sustainable forest management and certification; and
- g. Preparing the PAG meeting agendas and summaries.

6.3 Advisors

The Mackenzie SFMP Steering Committee will invite advisors, as required, to provide technical information and advice to the PAG. These advisors could be from government agencies, professional organizations, academia, consulting firms, or other sources. Advisors are responsible for:

- a. Providing and/or clarifying technical or legal information as requested; and
- b. Not participating in reaching consensus on recommendations by the PAG.

6.4 Observers

The public is welcome to participate in discussions at PAG meetings. They may not participate in reaching consensus on recommendations by the PAG.

6.5 Facilitator

The PAG facilitator is responsible for:

- a. Ensuring that PAG meetings address the agreed-upon agenda items;
- b. Starting and ending meetings at the times stated in the agenda;
- c. Managing and implementing the Terms of Reference, including the appropriate participation of the PAG, the Mackenzie SFMP Steering Committee, advisors, and observers;

- d. Enabling equitable opportunity by all PAG representatives (or in their absence, their alternates) to participate in the meetings;
- e. Working to clarify interests and issues, and help the PAG build recommendations;
- f. Not participating in reaching consensus on recommendations by the PAG;
- g. Distributing the agenda prior to each PAG meeting; and
- h. Distributing the PAG meeting summaries following each PAG meeting.

7. Conflict of Interest

The PAG recognizes that a conflict of interest could occur if there is a potential for a representative (or his or her alternate) to personally and directly benefit from specific recommendations from the PAG. Therefore, if a PAG representative or alternate has a perceived or real conflict of interest that could result in a potential exclusive personal economic benefit in relation to his or her input to the Defined Goals, that representative or alternate, other PAG representatives and alternates, or a member of the Mackenzie SFMP Steering Committee must state the potential conflict. The PAG and the Mackenzie SFMP Steering Committee will then decide on what actions are needed.

Potential actions could include asking the representative or alternate to:

- a. Serve as an observer for the relevant specific issue(s) and recommendation(s);
- b. Take a leave from the PAG (length of term to be defined); or
- c. Carry on with normal participation.

8. Operating Guidelines

8.1 Meetings Guidelines

All participants in this process agree to:

- a. Arrive on time;
- b. Be prepared for each meeting;
- c. Follow the speakers list;
- d. Be respectful;
- e. Be concise; and
- f. Stay on topic.

8.2 Meeting Agenda and Schedule

The meeting agenda and schedule may change if agreed to by the PAG and Mackenzie SFMP Steering Committee.

8.2.1 Meeting Agenda

- a. Meeting agendas will address the needs of the SFMP and CSA requirements.
- b. The PAG may provide input to meeting agendas during each meeting.
- c. The agenda will include proposed objectives for the meeting.

8.2.2 Meeting Schedule

- a. The PAG and Mackenzie SFMP Steering Committee will agree upon meeting dates.
- b. Meetings will be held as needed to monitor and review the SFMP.

1.1.1 PAG Satisfaction

- a. PAG satisfaction with the meeting and public participation process is gauged and measured at each meeting through a satisfaction survey. The results and comments from these surveys are then reported out at the following PAG meeting. Specific sections are measured and reported out through the SFMP Indicator entitled "Satisfaction (PAG)" in the Annual Report.

9. Decision Making and Methodology

- a. Anyone attending PAG meetings may participate in the discussions. However, only representatives will participate in making decisions, that is, recommendations to the Mackenzie SFMP Steering Committee.
- b. The PAG agrees to work by consensus. Consensus is defined as no PAG representative substantially disagreeing on an issue and being willing to proceed to the next step. The PAG will work to identify the underlying issues, seek compromise, identify alternatives, and clarify information. The PAG shall make every effort to achieve consensus in a positive and respectful manner, and commits to arriving at the best solution possible.
- c. The PAG will not revisit past decisions unless the PAG representatives agree to do so.
- d. A quorum for any meeting of the PAG shall be greater than 50% of the average number of PAG representatives attending the past five (5) meetings.

10. Dispute Resolution Mechanism

10.1 Process Issues

The facilitator will resolve process issues.

10.2 Technical Issues

- a. Where an impasse is reached, the representation(s) with the outstanding issue shall offer solutions or options for resolution.
- b. If the impasse remains, the generally agreed-upon decision, along with the dissenting view(s), will be forwarded to the Mackenzie SFMP Steering Committee.

11. Review and Revisions

The PAG and Mackenzie SFMP Steering Committee will review and agree upon the Terms of Reference at least annually.

Approved:

Public Advisory Group
Mackenzie SFMP Steering Committee

Date: January 31, 2006

Date: January 31, 2006

Revised:

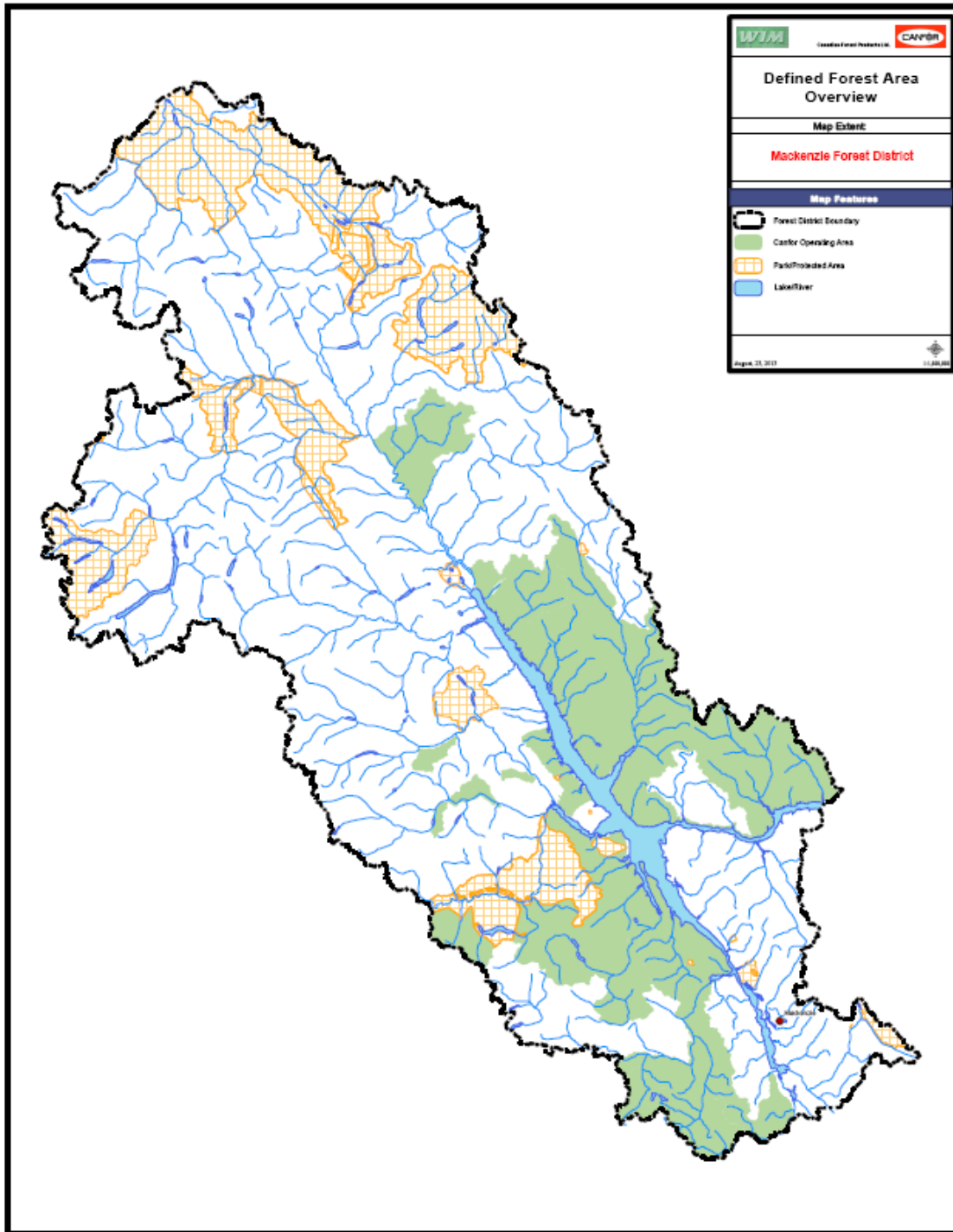
Public Advisory Group
Mackenzie SFMP Steering Committee

Date: March 27, 2013

Date: March 27, 2013

Appendix A

Map of the Defined Forest Area (DFA)



Appendix B

Public Advisory Group Sectors

Academia
Agriculture/Ranching
Contractors – Forestry
Environment/ Conservation
First Nations²
General Public
Germansen Landing
Labour – CEP
Labour – PPWC
Local Government
McLeod Lake Indian Band
Mining/Oil & Gas
Noostel Keyoh
Public Health & Safety
Recreation – Commercial
Recreation – Non-commercial
Recreation – Non-commercial (motorized)
Saulteau First Nations
Small Business – Germansen Landing
Small Business – Mackenzie
Small Community
Trapping
West Moberly First Nations
Woodlot

Approved:

Public Advisory Group	Date: January 31, 2006
Mackenzie SFMP Steering Committee	Date: January 31, 2006

Revised:

Public Advisory Group	Date: February 23, 2011
Mackenzie SFMP Steering Committee	Date: February 23, 2011

² This sector is open to allow participation of any First Nations person wishing to contribute



Mackenzie SFMP



**PAG Meetings
Quorum Table**

A quorum for any meeting of the PAG shall be greater than 50% of the average number of PAG members attending the past five (5) meetings. (Mackenzie PAG Terms of Reference)

Date	PAG members present	Quorum required
January 31, 2006	13	
February 14, 2006	13	
February 28, 2006	13	
March 14, 2006	12	
March 28, 2006	14	
April 11, 2006	10	
April 25, 2006	12	
May 9, 2006	10	
October 17, 2006	9	
February 20, 2007	8	6
March 28, 2007	9	5
March 13, 2008	3	5
April 29, 2008	4	4
May 27, 2008	3	4
October 28, 2008	5	3
January 21, 2009	5	3
May 26, 2009	8	3
June 24, 2009	6	3
October 14, 2009	3	3
December 15, 2009	5	3
February 10, 2010	8	3
June 2, 2010	9	3
October 20, 2010	4	4
February 23, 2011	7	3
October 26, 2011	5	4
March 7, 2012	4	4
June 19, 2012	4	3
October 24, 2012	5	3
March 27, 2013	6	3
August 21, 2013	3	3
March 19, 2014	8	3



Mackenzie SFMP



PAG Schedule of Completed Meetings

Date	Time	Key Agenda Items
August 21, 2013	9:00 AM – 4:30 PM	<ul style="list-style-type: none">- Field Tour<ul style="list-style-type: none">o Site Preparation (drag scarification)o Integrated Resource Management (Wildlife corridor)o Harvesting
March 19, 2014	10:00 AM – 2:00 PM	<ul style="list-style-type: none">- 2013 and 2014 Audit Results- 2012-13 Annual Report Results- Updates to SFMP



Mackenzie SFMP



PAG Field Tour

August 21, 2013

9:00 AM – 4:30 PM

Mackenzie Defined Forest Area

Agenda

Time	Item	Owner
9:00-9:15	Welcome and organizing transportation; Mackenzie Rec Center	
9:15-11:00	Travel from Mackenzie along Finlay FSR to the Blackwater Area	
11:00-11:30	Stop #1: Site Preparation <ul style="list-style-type: none">• Drag Scarification for Natural Regeneration in Rust prone areas	Andy
12:00-12:30	Lunch	
12:30-1:00	Travel to Bug Lake Area	
1:00-1:30	Stop #2: Integrated Resource Management <ul style="list-style-type: none">• Wildlife corridor planned with Trapper	Andy
1:30-1:45	Travel to Harvesting Site	
1:45-2:30	Stop #3; Harvesting <ul style="list-style-type: none">• Recent or Active Harvesting Block	Andy
2:30-4:00	Travel back to Mackenzie Rec Center	
4:00-4:30	Wrap-up	Andy



Mackenzie SFMP



PAG Meeting
August 21, 2013
9:00 AM – 5:00 PM
Field trip near Mackenzie

Field Tour Summary

Attendance:

<i>Public Advisory Group:</i> Lawrence Napier Alec Chingee Vi Lambie	<i>Steering Committee & Advisors:</i> Andrew Preston - Canfor
<i>Facilitator and Scribe:</i> Dwight Scott Wolfe (Tesera Systems Inc.) Alan Wiensczyk (Trout Creek Collaborative Solutions)	<i>Observers:</i> Steve Knowles - BCTS

1) Welcome and Introductions

- a. Members sign in
- b. Welcome by the Chair of the Steering Committee (Andrew Preston)
 - i. Dwight announced that he was stepping down as the facilitator of the Public Advisor Group and introduced Al Wiensczyk, who will be the new PAG facilitator.

2) Confirmed Agenda

- a. The field tour will look at site preparation, retention and harvesting.
- b. Agenda accepted as written.

3) Evaluation results for March 27, 2013 Meeting

- a. All results from the meeting were met or exceeded the target.

4) Summary of the March 27, 2013 Meeting

- a. Summary of the March 27, 2013 meeting were accepted as written.

5) Evaluation forms for the field tour

- a. Evaluation forms for the tour were forgotten.

Action Item: Facilitator will email the evaluation form for the field tour to participants.

6) Silviculture Stop #1; Drag Scarification

- a. Activity relates to many indicators but mainly 22-Regeneration delay and 23-Free growing.

- b. Regeneration of lodgepole pine in the Mackenzie DFA is challenging because of the presence of stem rusts (Western gall rust, and comandra and stalactiform blister rusts).
- c. Drag scarification is being undertaken to establish a very high density of pine stems in areas that historically have had a high incidence of pine stem rusts to address this challenge.
- d. However, can only be done in specific areas that meet these criteria;
 - i. Relatively flat ground
 - ii. Abundant pine cones present
 - iii. Coarse textured soils
 - iv. Low elevation
 - v. Must be done immediately after harvest (summer only).
- e. The high density of pine stems ensures that there will be sufficient densities of pine at free growing.
- f. The thick plantation will also help to limit the spread of the rust spores by wind.
- g. A rust predictability matrix was developed by the Mackenzie rust working group
- h. Canfor uses this matrix and has the predictability rating automatically printed on their maps.
- i. Naturally regenerated trees also have stronger root systems than planted trees and although take longer to establish, at age 8-10 years will outgrow a planted seedlings.
- j. However, Drag scarification also causes vigorous aspen suckering. Spruce have been planted around aspen residuals as soon as possible after harvesting.
- k. Blocks are surveyed approximately 5 years after initial treatment and any areas with inadequate regeneration are planted with a 50/50 mix of spruce and pine.
- l. A stand that is regenerated naturally is expected to be re-stocked in 7 years or less, and a plantation that is artificially regenerated is expected to be re-stocked in 4 years or less.

PAG members viewed 3 blocks at this stop

Block 1246

- Logged summer 2013
- Drag Scarified 2013.
- Unfortunately the drag scarification equipment was on route to this block and hadn't arrived yet so members were not able to see the scarification in action.
- See Appendix I for photos of the drag scarification equipment used by Canfor in their operations in Mackenzie. Photos were taken by Alan Wiensczyk at the Northern Silviculture Committee's summer field tour in Mackenzie in June 2011.

Block 1247

- Logged in summer 2010
- Drag scarified in 2010
- 84 ha planed in 2011 around aspen residuals

<http://www.sfmptgsa.com/>

- Surveyed 2013 – 5000-10000 stems per hectare of naturals, 1 inadequately regenerated area of 26 hectares found which will be planted in 2014 with 50/50 spruce and pine. Regeneration delay will be met in 4 years after gaps are fill planted.

Block 1363

- logged summer 2004
- Drag scarified summer 2004
- Planted around aspen in 2005
- Survey 2009
- Brushing 2009
- Planted in 2010 to fill inadequately regenerated areas
- Regeneration delay met in 2010
- Will be surveyed this year to assess for free growing.

Discussion:

- Some concerns from PAG members regarding the roadside piles
- Piles are burned in the fall
- PAG members wanted to know if any piles were left to provide wildlife habitat.
 - Response - No – all piles are typically burned.
 - Canfor uses other methods to maintain wildlife habitat in harvested areas including wildlife tree patches and retention of hardwoods
 - Any roadside piles that are left pose a fire risk and should a fire occur Canfor would be responsible for all costs associated with the fire, including have to re-regenerate the site to meet reforestation obligations should damage to the plantation occur as a result of the fire.
 - However, Canfor representative also noted that roadside processing of harvested areas is not their preferred harvest system and is only used on a very small proportion of their harvested blocks (see stop 3 for details).
 - Their preferred harvest system is for processing at the stump. This leaves fine and coarse woody debris scattered throughout the block. It is also a lower cost system – no piling costs and no burning costs.
 - PAG members were shown other examples of the typical Canfor stump-side harvest system and were satisfied with the amount and distribution of the woody debris throughout the block and felt that this would provide suitable habitat for furbearers.
 - Another suggestion was that if Canfor is going to continue with roadside processing that it would be beneficial to leave a few small scattered piles unburned.
- Concern also expressed about the amount of waste and why this material couldn't be used by the pulp mill or for bio-energy.
 - Response – Canfor would like that too as they have already paid for it through stumpage and also have costs associated with it's harvesting and processing. However, utilization of this material is very much driven by demand and

<http://www.sfmngtsa.com/>

economics. If pulp mill or bio-energy producer would like the material Canfor would be very happy to sell it to them.

- Demand is currently low for this material.
- Costs of transporting this material to the market are currently high and coupled with the current low demand do not make it economically viable.
- In addition there is a current shortage of logging trucks and drivers which also limits the ability to get this material to market in a cost-effective manner.
- Concern raised by the PAG members was regarding the recovery of herbaceous plants following drag scarification.
 - The visit to block 1363 and the abundance of herbaceous plants illustrated the recovery of these species.
- Question asked regarding alder and aspen competition
 - Alder not usually a problem. Will brush if it is.
 - Aspen – brushing usually required.

7) Stop #2 – Furbearer Corridor

- a) Indicator 30 – Input into Forest Planning and 31 – Public and Stakeholder concerns
- b) Blocks 1404 and 1410
- c) Stop shows how a wildlife corridor was jointly designed by Canfor and a local trapper. While information sharing with the stakeholder he asked if there could be a corridor left connecting the 2 patches of young pine with mature timber. This is a very good lynx area for the trapper.
- d) Result was approximately 8 hectares of mature timber were left and the initial block was split into 2 in order to maintain the corridor.
- e) The corridor also contains 3 fish-bearing streams. By combining the riparian features and the request of the trapper this corridor makes excellent sense and use of the landbase
- f) When multiple values can be incorporated into reserves and buffers it is a win/win for everyone involved.
- g) Proper communication is what lead to this being achievable.

Discussion:

- None

8) Stop #3 – Roadside harvesting

- a. Block 1421
- b. Relates to many indicators as report Canfor's operational performance, Riparian reserve effectiveness, soil conservation, reportable spills, prioritization of damaged stands, etc.
- c. Harvest system is not Canfor's typical method, which is stump-side harvesting.

<http://www.sfmptgsa.com/>

- i. Canfor Mackenzie has 1 contractor who delivers about 15-20% of their annual volume ($\approx 200,000 \text{ m}^3$) and who is set-up to do road-side only.
- ii. Stump-side harvesting – trees are processed in the block and only the logs are brought to the road using a forwarder
- iii. Road-side harvesting – Trees are brought to the road using a skidder and processed at the road-side
- iv. Benefits to road-side harvesting
 - Less accumulated brush for planters to deal with.
 - Summer blocks have some scarification from skidding which can result in increased natural regeneration.
 - Flexibility to deliver short or long logs.
 - On certain ground skidders are more productive than forwarders.
- v. Downside to road-side harvesting
 - Waste accumulates at the road and must be piled and burned.
 - Greater potential for disturbance in wet ground.
 - Less woody debris is left on the block.
 - More room is needed for processing at road-side.
- vi. Canfor is currently only delivering saw-logs from this block, grouped into small, medium, large and oversize sorts. Lengths range from 12-20 feet, with 16 & 20 feet preferable
- vii. Log quality is very important to Canfor but also so is utilization. These two values tend to be in conflict with each other and finding the happy medium is difficult.
- viii. Areas of this block are candidates for drag scarification as well.

Discussion:

- similar to drag scarification stop and the use of material in the piles.

Arrived back at the Mackenzie Recreation Centre at approximately 5:00 pm

Next Meeting:

The Canfor representative asked members if they would be interested in a Mill Tour in conjunction with the next PAG meeting.

There was general agreement that this would be a good idea.

Meeting date to be determined (fall 2013).

9) Actions

ID#	ACTION	WHO	DEADLINE	STATUS
April 29-03	Work with PAG representatives and others in the community to find new/replacement PAG representatives.	Licensee Steering Committee	Next Meeting	Ongoing
May 27-03	Add a non-timber benefits issue to the Continuous Improvement Matrix.	Licensee Steering Committee	March 31, 2011.	Ongoing
Oct 26 - 03	Provide PAG members with the results of the Forest Practices Board Audit of BCTS Operations in the Mackenzie District.	Licensee Steering Committee	Spring 2012	
Oct 26 - 04	Confirm with the PAG the status of the Phillips Forest Service Road.	Licensee Steering Committee	Spring 2012	
Mar 7 - 01	Provide PAG members with a link to more information on Species at Risk in the DFA.	Licensee Steering Committee	Spring 2012	
Mar 7 - 04	Provide recce information on the November 2010 blowdown event to the McLeod Lake Mackenzie Community Forest.	BCTS	Spring 2012	
June 19 – 01	Distribute the draft 2011-12 Annual Report to the PAG.	Licensee Steering Committee	Next meeting	
Aug 21 – 01	Send evaluation form for the field tour to tour attendees	PAG facilitator	Aug 30, 2013	Complete
Aug 21 – 02	Distribute photos of Drag Scarification equipment to tour attendees	PAG facilitators	Sept 6 , 2013	Complete

Appendix I: Photographs of equipment used by Canfor for drag scarification for natural regeneration in Mackenzie.



Figure 1: Skidder with drags attached.



Figure 2: Drags used for drag scarification to promote natural regeneration.



Figure 3: The drag end.

(Photos taken by Alan Wiensczyk at Northern Silviculture Committee (NSC) summer field tour in Mackenzie in June 2011)

<http://www.sfmngtsa.com/>



Mackenzie SFMP



PAG Meeting

March 19, 2014

10:00 AM – 2:00 PM

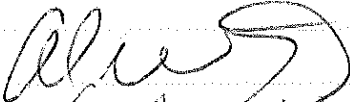



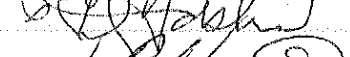





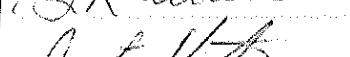
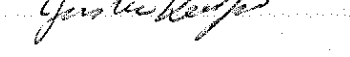
Conference room (2nd flr)

Mackenzie Recreational Centre

Agenda

1. Welcome and Introductions
2. Review Agenda
3. Evaluation Results (August 21, 2013)
4. Review and Approve Meeting Summary – August 21, 2013
5. Presentation: 2013 fall and 2014 winter FMS audit results
Jason Neumeyer, Planning Forester (Canfor)
6. Presentation: 2012-2013 annual report results
Jason Neumeyer
~ Lunch ~ (12:00 – 12:45)
7. Results of the coarse woody debris analysis
8. Updates to the Mackenzie SFMP
9. 2014 meeting schedule and topics
10. Other:
 - a.
11. Evaluation forms
12. Next PAG meeting:
 - a. TBD

Mackenzie PAG
 March 19, 2014

Name (Please Print)	Signature	PAG Rep/Act Observer SC/Advisor
Al Wienczyk		Facilitator
Vj Lambie		PAG Rep
VINCENT DAY		CANFOR
JASON NEUMEYER		CANFOR
DAVE FORSHAW		MWINA
LAWRENCE MAPIER		PAG REP.
Ron Crosby		PAG REP Woodlitz
Andy Preston		CANFOR
George Desjardins		WMSW
Mike Freer		SFN
Stephan Kellan		Destruct
Justin Kuntzer		MLIB

Hibroy



Meeting Summary

Attendance:

<i>Public Advisory Group:</i> Ron Crosby Justin Keutzer Vi Lambie George Desjarlais		<i>Steering Committee & Advisors:</i> Jason Neumeyer – Canfor Andy Preston – Canfor Vincent Day - Canfor
<i>Facilitator & Scribe:</i> Al Wiensczyk (TCC Solutions) Chris Bailey		<i>Observers:</i> Edward Cryingman
Dave Forshaw Stephanie Killam Lawrence Napier Michael Freer		

1) Welcome & Introductions

- a) Members signed in.
- b) Welcome by the Chair of the Steering Committee [Jason Neumeyer].
 - i) PAG members welcomed Justin Keutzer as the representative for the McLeod Lake Indian Band and Michael Freer from the Saulteau First Nation.

2) Confirmed agenda

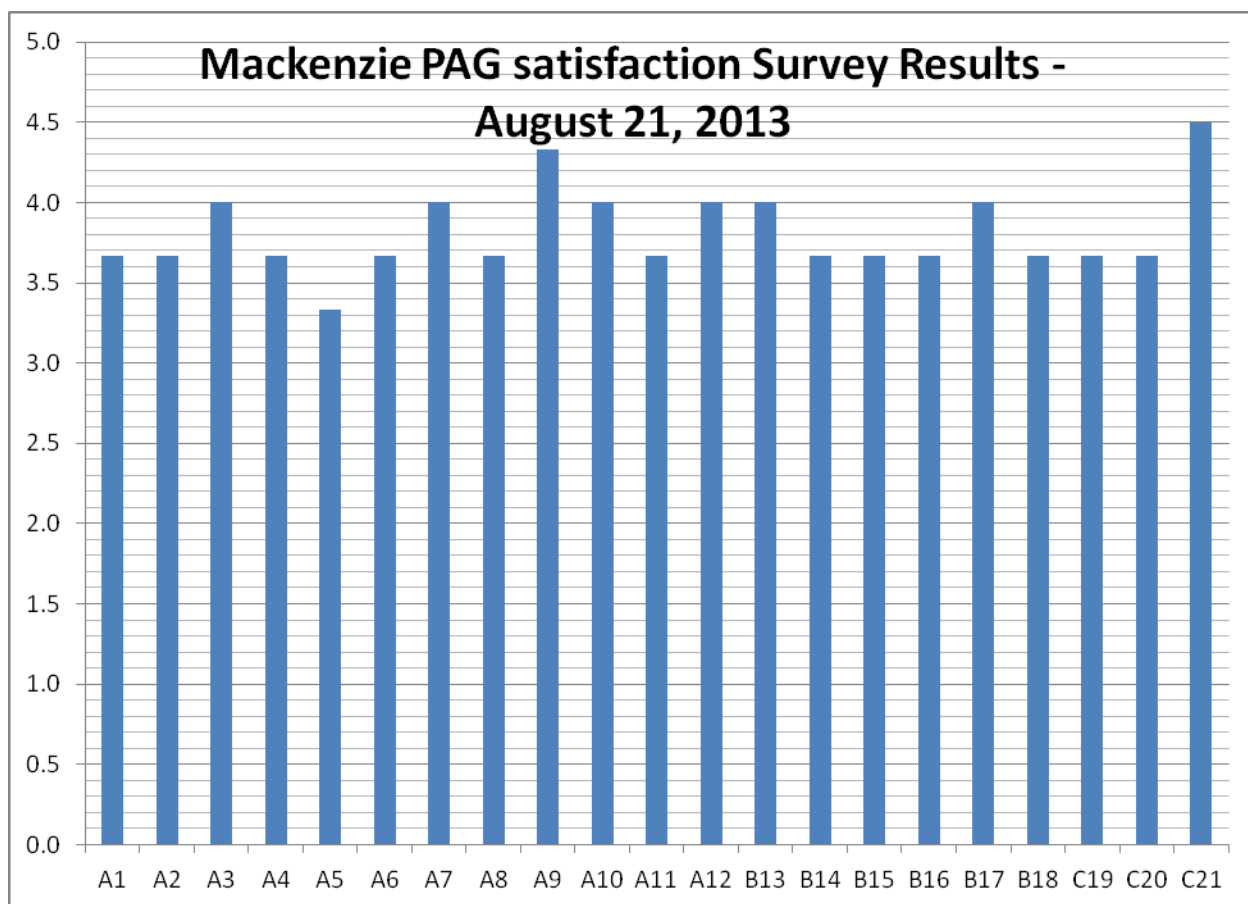
- a) Agenda accepted as written.

3) Evaluation results for August 21, 2013.

- i) Reviewed survey results from the August 2013 field tour.
 - Mailed out the survey forms to the attendees.
 - Three surveys were returned.

Comments:

- Good information circulated from the field tour to the members that did not attend.
- Food was good.
- Continue having an annual field tour.



4) Summary of the August 21, 2013 meeting minutes.

Summary of the August 21, 2013 field trip accepted as written

Discussion of corrections to the **March 27, 2013** meeting summary.

- Indicator #5 should be indicator #6.
- Indicator #23 reforestation success (copy and paste oversight)
 - o PAG consensus to change the wording for the indicator.

5) Presentation: 2013 fall and 2014 winter FMS audit results [Jason Neumeyer]

The audit summary presentation is included as APPENDIX I

- There have been four (4) audits since the last meeting.

- Annual audit are conducted by KPMG. Internal audit completed in Sept 2013 and an external audit completed in Oct 2013. Also, just completed an internal and external audit in Feb 2014.
- Winter field audits for the auditors were limited because the conditions.

Internal Audit Results 2013

- 2 Minor Non-Conformities
 - Fuel management (tidy tank not up to spec on a logging operations)
 - Fire suppression (contractor did not have all the equipment necessary onsite)
- 7 Opportunities for Improvement
 - 4 opportunities regarding fuel management and storage
 - Silviculture data for reporting purposes
 - Bridge assurance document use
 - PAG ToR to be posted on website (completed and posted to the PGTSA PAG website under PAG's Mackenzie) <http://www.sfmptsa.com/>
- 3 Best Practices
 - Use of the PGTSA SFM website
 - Creating Opportunity for Public Involvement (COPI) documentation of communication efforts was good
 - Contractor augmentation or logging map provides clear detail of Forest Management System (FMS) and Health and Safety (H&S) requirements.

External Audit Results 2013

- No Non-Conformances
- 1 Opportunity for Improvement
 - Update SFMP to account for departure of BCTS.
- 3 Operational Strengths
 - Contractor demonstrated good communication of critical site factors from Company Pre-work to the crew.

- Contractor developed a paperless system for conducting inspections, tracking training, reporting incident, production/progress reports, etc.
- SFM Coordinator progressing in a timely manner to update the SFMP to account for the departure of BCTS.

Internal Audit Results 2014

- 1 Minor Non-Conformance
 - Incident Tracking System and related action plans not maintained
- 2 Opportunities for Improvement
 - Consider more orderly transition in staffing to reduce work process lapses/delays and ensuring system actions are completed.
 - Record completeness and storage. Site plans checkboxes and bridge assurance documents.
- 1 Best Management Practice
 - Silviculture group working around partially harvested blocks in regards to free growing declarations. (Some old partially harvested blocks with spruce timber types still standing that have not been declared FTG because the entire blocks need to have harvesting complete. The harvesting on these blocks was postponed so it was not considered as billed waste. Blocks are located in the northern part of the District, some of which are cable harvesting. The ministry of Forests Lands and Natural Resource Operations (FNLRO) agreed to the postponements.)

External Audit Results 2014

- 1 Minor Non-Conformance
 - Gaps identified in Operational Controls; Camp Inspection Form, Fuel Tank Checklist for large tank (form was not filled out annually at camp).
- 4 Opportunities for Improvement
 - Concerns with some recent deactivation (Waterbars not facing the proper direction and logs from a culver were not removed and disposed of properly on the steep slope -safety issue.)
 - The level of deactivation is done so there is still access available

- Fuel management at Munro Camp; catchment area around generator shed, small fuel spill at fuel pumps.
- Outdated reference on Camp SWP and link to inspection form did not work.
- Could not be verified if temporary contractor camps require inspection form.
- 2 Operational Strengths
 - Silviculture department's use of "Rust Risk Free-growing Tool". (Mackenzie is a hotspot for pine rust in the Province. This tool was developed with FLNRO, licensees and researchers staff).
 - Good understory protection observed in KDL block and good overstory deciduous protection on Duz Cho block.

Comments:

- A lot of the work to removal BCTS references from the SFMP was in progress but KPMG reports what is currently posted.
- PAG member commented that they prefer that access is maintained by proper deactivation practices for mining, prospecting and other related activities.
- PAG member suggested that if the temporary contractor camp inspection form is for safety then possibly develop an in-house safety form.

6) Presentation: 2012-2013 annual report results [Jason Neumeyer]

The annual report summary presentation is included as APPENDIX II

- Discussion regarding the following three (3) indicators where the target was not met:
 - #4 Productive Forest Representation
 - #8 Riparian Management Effectiveness
 - #25 Harvest Volumes

Comments:

- Indicator #4 total ha in rare and none common ecosystems looking back on past harvesting. This was a new indicator changed about one (1) year ago and a summary indicated that they logged 4.7ha of ESSFmv3 in 2012.

Canfor harvested~ 4,000 ha last year and currently has systems in place to identify potential rare sites during the field reconnaissance phase. The cutting permit staff conducts the final verification to ensure no rare ecosystems are included in any of the permits.

- Indicator #8 Riparian management area effectiveness. One road was built that infringed slightly on wetland management zone. Only a portion of the road Right of Way (ROW) overlapped with the management zone so there was no area of the wetland was impacted. Canfor has systems in place to mitigate this happening in the future
- Indicator #25 harvest volumes. Only harvest 42.4% of the AAC of the 5-year cut control period was harvested. There were mill shut downs for the first few years and now that the mill is operating again the trend is moving in the right direction. Should be able to meet the target as the new cut control period is starting April 1 to March 31. Canfor has an internal deadline for the report (Sept 2014).

7) Results of the coarse woody debris analysis

- Scott MacNay of Wildlife Infometrics conducted a coarse woody debris analysis and the document will be posted to the web.
- The documents indicated that ~4 pieces per ha are required to be left on site and after reviewing several blocks the results indicate that current practices are leaving 400+ pieces on most blocks.

Comments:

- On PAG member expressed a concern that the logging specs may change resulting in less debris left on the sites because it will utilized by new milling practices and for bioenergy etc.
- Licensees prefer not to burn if possible, but sometimes it depends on the contractor and their equipment.
- One PAG member commented that piles closer to the tree line are more beneficial for furbearers if they are strategically placed at more frequent intervals and small in size. Big piles are not necessarily preferable. Birds will also use piles left on the block.
- The PAG steering committee will try to incorporate information from the report into the background information for Indicator #23 in the SFMP.

8) Updates to the Mackenzie SFMP & ToR

- Jason Neumeyer gave a brief overview of the updates of the SFMP and TOR to the PAG. The major update was to remove BCTS and any reference to BCTS from the documents.
- The information is still in the final stages of the revisions and will be signed off by Canfor.
- Added some wording to the ToR to make it consistent with other SFMP's.

Comments:

- A concern was raised about removing the glossary of terms as it was too long or perhaps making it shorter. A PAG member commented that a lot of time put in to making it material to be useful for everyone so unless there is a good reason to change it then it should be left as is.
- Suggestion was made to review the glossary and update it to reflect what is in the SFMP.

9) 2014 meeting schedule and topics

- Schedule annual field tour for August or September 2014. Coordinate the Mackenzie PAG field tour with the PG PAG field tour so they do not overlap because of duplicate members attending each of the PAG's.
- Timing windows for burning piles as a discussion topic at next meeting (Jason Keutzer).

10) Other

- A PAG member enquired if any of the pipeline companies will have any impacts on their operations. Currently just information sharing at a cooperate level. At this time it appears that Canfor will mostly be impacted by the access associated from building the pipelines.
- Canfor has expressed an interest in any wood available from pipeline development.

11) Actions updated

- See Action Table (below)

12) PAG Meeting Feedback (PAG questionnaire):

- PAG members filled out the feedback forms and submitted them to the facilitator.

13) Next meeting:

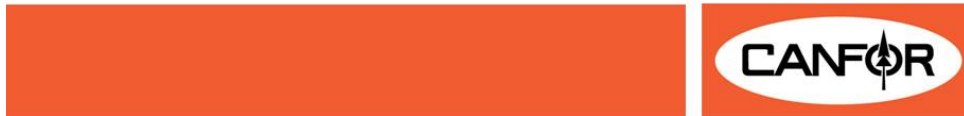
- Next meeting is tentatively scheduled for June 4, 2014 at CANFOR and will include a mill tour.

14) Actions

ID#	ACTION	WHO	DEADLINE	STATUS
April 29-03	Work with PAG representatives and others in the community to find new/replacement PAG representatives.	Licensee Steering Committee	Next Meeting	Ongoing
June 19 – 01	Distribute the draft 2011-12 Annual Report to the PAG.	Licensee Steering Committee	Next meeting	Complete
Mar 27 – 01	Note in the Annual Report if any boundary changes occurred to established OGMA's, and add this reporting requirement to the indicator detail sheet for Indicator 3 in the SFM Plan.	Licensee Steering Committee	Next meeting	Complete
Mar 27 – 02	Revise the indicator detail sheet for Indicator # 4 to include roads in the definition of "logged".	Licensee Steering Committee	Next meeting	Complete
Mar 19 -01	Provide the PAG with a list\map of the rare ecosystems	Licensee Steering Committee	Next meeting	
Mar 19 -02	Post the CWD survey to the website and advise the PAG	Licensee Steering Committee	Next meeting	
Mar 19 -03	Canfor to provide PAG with the guidance specifications they use with their contractors for piling	Licensee Steering Committee	Next meeting	
Mar 19 -04	Circulate the updated SFMP and ToR for the PAG to review	Licensee Steering Committee\ Facilitator	Next meeting	
Mar 19 -05	Add parks and the Mackenzie COMFOR to the updated maps	Licensee Steering Committee	Next meeting	
Mar 19 -06	Provide the PAG with any SFMP updates in advance of the meetings so they can be reviewed and discussed.	Licensee Steering Committee\ Facilitator	Ongoing	
Mar 19 -07	PAG to provide the facilitator ideas and/or agenda topics for the field tour	PAG	April 4, 2014	

APPENDIX I

Audit Summary Presentation



Mackenzie 2013 and 2014 Audit Summary

CANFOR CORPORATION



- **2 Minor Non-Conformities**
 - Fuel management,
 - Fire suppression
- **7 Opportunities for Improvement**
 - 4 opportunities regarding fuel management and storage
 - Silviculture data for reporting purposes
 - Bridge assurance document use
 - PAG ToR to be posted on website
- **3 Best Practices**
 - Use of the pgtsasfm website
 - COPI documentation of communication efforts was good
 - Contractor augmentation or logging map provides clear detail of FMS and H&S requirements.

CANFOR CORPORATION

March 21,
2014 | Page 2 |

2013 External Audit



- **No Non-Conformances**
- **1 Opportunity for Improvement**
 - Update SFMP to account for departure of BCTS.
- **3 Operational Strengths**
 - Contractor demonstrated good communication of critical site factors from Company Pre-work to the crew.
 - Contractor developed a paperless system for conducting inspections, tracking training, reporting incident, production/progress reports, etc.
 - SFM Coordinator progressing in a timely manner to update the SFMP to account for the departure of BCTS.

2014 Internal Audit



- **1 Minor Non-Conformance**
 - Incident Tracking System and related action plans not maintained
- **2 Opportunities for Improvement**
 - Consider more orderly transition in staffing to reduce work process lapses/delays and ensuring system actions are completed.
 - Record completeness and storage. Site plans checkboxes and bridge assurance documents.
- **1 Best Management Practice**
 - Silviculture group working around partially harvested blocks in regards to free growing declarations.

2014 External Audit



- **1 Minor Non-Conformance**
 - Gaps identified in Operational Controls; Camp Inspection Form, Fuel Tank Checklist for large tank
- **4 Opportunities for Improvement**
 - Concerns with some recent deactivation
 - Fuel management at Monro Camp; catchment area around generator shed, small fuel spill at fuel pumps.
 - Outdated reference on Camp SWP and link to inspection form did not work.
 - Could not be verified if temporary contractor camps require inspection form.
- **2 Operational Strengths**
 - Silviculture departments use of “Rust Risk Free-growing Tool”
 - Good understory protection observed in KDL block and good overstory deciduous protection on Duz Cho block.

**APPENDIX II
Annual Report Results**

2012-2013 Annual Report



CANFOR CORPORATION



- 48 SFMP Indicators
 - 45 Targets Met
 - 3 Targets Not Met
 - 0 Pending

CANFOR CORPORATION

March 21,
2014 | Page 2 |

#4 Productive Forest Representation



Indicator Statement: Total hectares logged in rare and un-common ecosystems.

Target: 0 ha; **Variance:** 0%

Rare Ecosystem	Amount harvested by year in hectares		
	2010	2011	2012
SBSvK03	0	0	0
SBSWk1105	0	0	0
ESSFmv 3106	0	0.6	4.7
ESSFmv 2106	0	0	0
ESSFmv 4105	0	0	0
BWBSdk1109	0	0	0
BWBSdk1107	0	0	0

- This is the first year to report on this indicator in this fashion.
- Reporting on past harvesting.
- Going forward, harvesting of these sites will be avoided.

#8 Riparian Management Area Effectiveness



- **Indicator Statement:** The percentage of forest operations consistent with riparian management area requirements as identified in operational plans and/or site plans.
- **Target:** 100%; **Variance:** 0%
- 203 of 204 Forest Operations were completed in accordance with riparian management requirements (99.5%)
- A road was built within the RMA of a W3 wetland (ITS-MK-2012-0664). No damage occurred to the wetland.

#25 Harvest Volumes



- **Indicator Statement:** Actual harvest volume compared to the apportionment across the DFA over each 5-year cut control period.
- **Target:** 100%; **Variance:** +/-10%
- Canfor ended its 5 year cut control period at the end of 2012. Over this period Canfor only harvested **42.4%** of its allowable cut.
- The trend is going the right direction, harvest levels are going up.

Volume Harvested						5 year Apportionment	Percent of 5 year cut in DFA
Year 1	Year 2	Year 3	Year 4	Year 5	Total		
2008	2009	2010	2011	2012			
105,011	96,746	628,467	635,773	929,248	2,295,245	5,414,520	42.4%



Public Advisory Group (PAG) Evaluation Form

PAG Meeting Date: _____ PAG Member _____ Licensee Team _____ Guest _____

The purpose of this form is to provide an opportunity for PAG members to evaluate the effectiveness of the public participation process with the goal of facilitating continual improvement.

Please evaluate the following:	Very poor (1)	Poor (2)	Average (3)	Good (4)	Very good (5)
A. Meeting and PAG Process					
1. I have a good understanding of the purpose of the PAG and my role as part of that group.					
2. Information provided in advance of meetings allows me to effectively contribute at meeting.					
3. The meeting agenda is reviewed prior to the meeting and followed					
4. The meeting minutes capture important aspects of the meeting including actions, progress updates, and any decisions.					
5. Communication with PAG members between meetings is adequate.					
6. Licensees' share new information with PAG members regarding impacts to the environment, sustainability, forestry, etc.					
7. The PAG Terms of reference are followed.					
8. Were most PAG members involved in meeting?					
9. Was there a positive atmosphere for the meeting?					
10. Was information presented clearly at the meeting?					
11. What is your overall satisfaction with the PAG process?					
12. Ex-officio, licensee, or technical team members were organized and prepared for meeting.					
B. PAG Meeting Facilitation:					
13. PAG meeting facilitator was organized and prepared.					
14. PAG meeting facilitator strived for consensus decision making.					
15. Facilitator actively listened to concerns and viewpoints expressed during the meeting.					
16. PAG meeting facilitator addressed process issues.					
17. PAG meeting facilitator remained neutral on content issues					
18. PAG meeting facilitator kept the meeting focused and moving.					
C. Meeting Logistics:					
19. Was the meeting location convenient?					
20. Was the timing of the meeting convenient?					
21. Was the meal provided for the meeting good?					

(Over)



Mackenzie SFMP



Public Advisory Group (PAG) Evaluation Form

Your Suggestions – Please list ways to improve on subsequent PAG meetings:

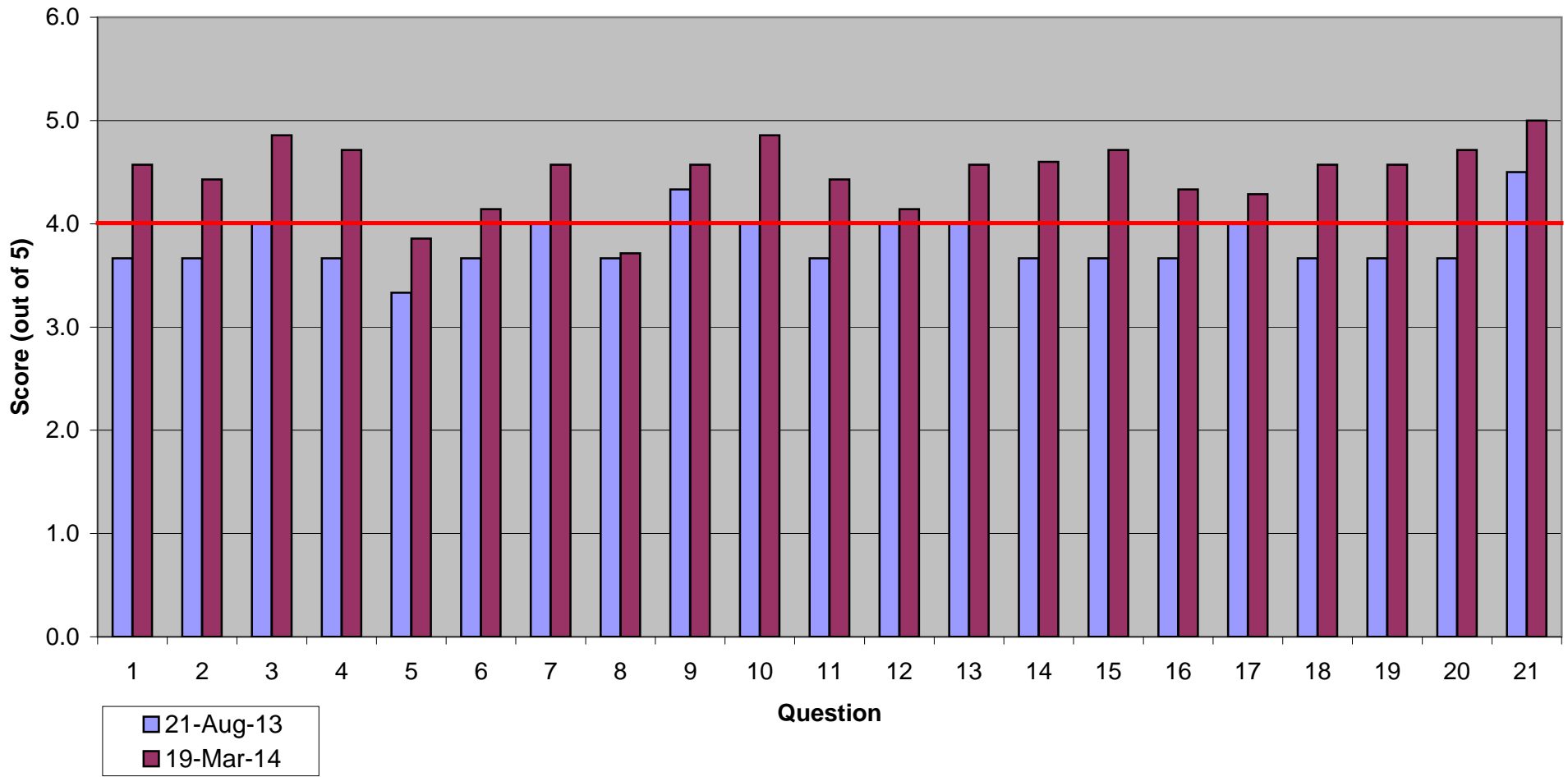
1.

2.

3.

General Comments – Please provide any comments or suggestions that you feel would improve the PAG process, the SFM Plan or Annual Report or subsequent meetings or suggestions for speakers:

**Mackenzie SFMP
PAG Satisfaction Survey Results 2013-2014**





Mackenzie SFMP



PAG member satisfaction survey comments

August 21, 2013

- Canfor need to pay attention to animal habitat and movements.
- Canfor need to make use of whole tree. Not just the important part. By that I mean maybe chip and spread on the land base.

March 19, 2014

- We need more PAG members
- Room was a little cool



Mackenzie SFMP



Letters of Invitation

During the 2013-14 Fiscal Year there were no:

- Letters of Invitation
- Advertisements and Articles

Mackenzie SFMP Public Advisory Group

(as of March 31, 2014)

Sector:	Representative	Alternate
Academia		
Agriculture/Ranching		
Contractors – Forestry		
Environment/ Conservation	Vi Lambie	Ryan Bichon
First Nations		
General Public	Tom Briggs (passed away in September 2013)	
Germansen Landing		
Labour – CEP		
Labour – PPWC		
Local Government	Stephanie Killam	Mark Fercho
McLeod Lake Indian Band	Alec Chingee	Justin Keutzer
Mining/Oil & Gas	Dave Forshaw	
Noostel Keyoh	Jim Besherse	Sadie Jarvis
Public Health & Safety		
Recreation – Commercial		
Recreation – Non-commercial		
Recreation – Non-commercial (motorized)		
Saulteau First Nations	Michael Freer	Chief Harley Davis
Small Business – Germansen Landing	Janet Besherse	Don Jarvis
Small Business – Mackenzie	Bruce Bennett	
Small Community		
Trapping	Lawrence Napier	
West Moberly First Nations	George Desjarlais	
Woodlot	Ron Crosby	

Contact Information

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Correspondence only

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Pat Crook	pat@district.mackenzie.bc.ca	
PPWC (Local 18)	ppwc18@persona.ca	PO Box 398 Osilinka St. Mackenzie, BC V0J 2C0
Rob Weaver	weaver00@telus.net	Box 1143, Mackenzie, BC, V0J 2C0
Todd Walter	twalter@bpei.ca	



Mackenzie SFMP



August 12, 2013

Bruce Bennett
Box 955
Mackenzie, BC V0J 2C0

Dear Bruce;

The next meeting of the Mackenzie PAG is Wednesday, August 21, 2013. This meeting will be combined with a Field Tour on the Mackenzie DFA.

Departure Time: 9:00 AM

Return Time: 4:30 PM

Location: Meet at the Recreation Centre, Mackenzie.

Action Requested: Please contact the facilitator, Dwight Scott Wolfe, (phone: 250-614-3122 or MacPAG@tesera.com) as soon as possible, if you plan on attending this Field Tour.

Wear suitable clothing and boots. Lunch and transportation will be provided.

A draft agenda and the draft summary of the March 27th meeting are attached.

Sincerely,

A handwritten signature in black ink that reads "Dwight Scott Wolfe".

Dwight Scott Wolfe, RPF, Cert. ConRes.
Operations Manager, Tesera Systems Inc.
250.614.3122 tel, 866-698-8789 toll free, 250. 564.0393 fax, macpag@tesera.com



Mackenzie SFMP



February 28, 2014

Bruce Bennett
Box 955
Mackenzie, BC V0J 2C0

Dear Bruce;

The next meeting of the Mackenzie PAG is Wednesday, March 19, 2014.

Time: 10:00 AM – 2:00 PM

Location: Conference Room (2nd floor), Recreation Centre, Mackenzie.

Action Requested: Please contact the facilitator, Alan Wiensczyk, (phone: 250-614-4354 or alan@tccsolutions.ca) as soon as possible, if you plan on attending this meeting.

At this meeting we will be reviewing the 2013 fall and 2014 winter FMS audits and the 2012-13 Annual report results and discussing the results of the coarse woody debris analysis, as well as updates to the Sustainable Forest Management Plan. Lunch will be provided.

A draft agenda and the draft summary of the August 21st meeting are attached.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Wiensczyk".

Alan Wiensczyk, RPF
Trout Creek Collaborative Solutions
250.614.4354 tel, alan@tccsolutions.ca



Mackenzie SFMP



April 3, 2014

Bruce Bennett
Box 955
Mackenzie, BC V0J 2C0

Dear Bruce;

Enclosed is the meeting summary from the March 19, 2014 Mackenzie PAG meeting for your information.

I have also included a document which describes some proposed revisions to the CSA standard, for your review. Discussion of these potential revisions will be an agenda item at a future PAG meeting but in the mean time if you have any comments or questions please feel free to contact Jason Neumeyer.

(Jason.Neumeyer@canfor.com or (250) - 997-2531).

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Wiensczyk".

Alan Wiensczyk, RPF
Trout Creek Collaborative Solutions
250.614.4354 tel, alan@tccsolutions.ca

**Mackenzie PAG First Nations Contact List
March 31, 2014**

Chief Roland Willson
West Moberly First Nation
PO Box 90
Moberly Lake, BC
V0C 1X0

Chief Dennis Izony
Tsay Keh Dene Band
1877 Queensway St.
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V2L 1L9

Chief Rena Benson
Gitxsan Nation (Nii Kyap)
PO Box 128
Kitwanga, BC
V2J 2A0

Chief Dolly Abraham
Takla Lake First Nation
General Delivery
Takla Landing, BC
V0J 1T0

Chief Russell Lilly
Halfway River First Nation
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V0C 2N0

Chief Fred Sam
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Chief Richard Mclean
Tahltan First Nation
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V0L 2W0

Chief Donny Van Somer
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497 3rd Ave
Prince George, BC
V2L 3C1

Chief Derek Orr
McLeod Lake First Nation
General Delivery
McLeod Lake, BC
V0J 2G0



Mackenzie SFMP



Sample Letter

August 12, 2013

To: First Nations Distribution List

Dear Chief;

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Operations Manager, Tesera Systems Inc.
250.614.3122 tel, 866-698-8789 toll free, 250. 564.0393 fax, macpag@tesera.com



Mackenzie SFMP



Sample Letter

February 28, 2014

To: First Nations Distribution List

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At this meeting we will be reviewing the 2013 fall and 2014 winter FMS audits and the 2012-13 Annual report results and discussing the results of the coarse woody debris analysis, as well as updates to the Sustainable Forest Management Plan. Lunch will be provided.

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Sincerely,

A handwritten signature in black ink, appearing to read "Alan Wiensczyk".

Alan Wiensczyk, RPF
Trout Creek Collaborative Solutions
250.614.4354 tel, alan@tccsolutions.ca



Continuous Improvement Matrix

May 9, 2006

The purpose of this matrix is to capture issues presented by PAG members that can contribute to the continuous improvement of sustainable forest management but are either outside the scope of the PAG process or cannot be addressed by Canfor (Mackenzie) and BCTS (Prince George Forest District) at the present time. These issues are to be reviewed at PAG meetings for further discussion and prioritization.

No.	Perf. Matrix Ref.	Description of Issue	Suggested Strategies	Suggested Dates
1.	2-1.1	Develop baseline data for coarse woody debris.		June 2007
2.	3.1	Recognize advances in carbon accounting and incorporate that information once it becomes available.		On-going – June 2010
3.	1.2	Examine possibility for measures associated with shrubs, snags, and large live trees.		June 2008
4.	3	Consider opportunity for adding an indicator on forest product carbon pools.		
5.	3	Consider a new measure with carbon associated with slash burning.		
6.	1-3.1	Consider a measure for management strategies from the Northern Caribou Recovery Action Plan as it is finalized.		
7.	1.2	Develop a measure to deal with pesticide use.		
8.	9-2	Consider a measure for the management of visual quality areas recommended within the Mackenzie LRMP.		
9.	9-1.2	Consider a measure for Canfor and BCTS to sponsor and maintain new recreation sites and rest areas.		
10.	9-3 & 1-4	BCTS and Canfor to solicit public for input on additional resource features.		
11.	9-5	Develop a measure around road maintenance.		

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12.	9-5	Develop a smoke management strategy in consultation with the local communities.		
13.	9-5	Develop a measure on dust control for road safety.		
14.	9-5	Develop a measure to protect domestic water intake and/or supply.		
15.	<u>5-1 & 9-1</u>	<u>An opportunity to incorporate marketed and non-marketed, non-timber values into one measure</u>	<u>Revisit Measures 5-1.1 and 9-1.1 and look at incorporating marketed and non-marketed, non-timber values into one Measure</u>	<u>September 2008</u>

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Mackenzie

Sustainable Forest Management Plan



Mackenzie SFMP



2012 – 2013 Annual Report

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1.0 Introduction

This Annual Report of the Mackenzie Sustainable Forest Management Plan covers the reporting period of April 1, 2012 to March 31, 2013. This is the first annual report that is solely reporting the efforts of Canadian Forest Products Ltd. operating under Forest License A15384. In late 2012, BCTS opted out of this plan after a 6 year partnership between the 2 parties. There are a few subtle changes to the plan for this year, no indicator removal or additions but minor tweaks to existing indicators and how they will be reported on. It is also noted that mention of BCTS is removed from the plan. Some of these changes were made to allow Canfor to have similar indicators across many plans and allow the corporate level to easily compare annual reports across the many DFAs the company manages. Other changes were merely housekeeping in nature and to better focus indicator statements to align with provincial regulations. These minor changes to the plan will not change the operational practices of Canfor.

The CSA Standard provides SFM specifications that include public participation, performance, and system requirements that must be met to achieve certification. These specifications were the framework for the development of the Mackenzie SFMP. Canfor has existing management systems that contribute to the overall SFM strategy. These may include existing management systems such as ISO 14001 Forest Management Systems, standard work procedures, and internal policies.

One of the public participation strategies suggested in the CSA SFM Standard is the formation of a local group of interested and affected members of the public to provide input on an ongoing basis. This strategy provides the base for the formation of a Public Advisory Group (PAG) whose purpose is to achieve CSA standard's public participation requirements. A PAG was initially developed to assist with the development of the SFMP, this group is maintained to date and meets regularly to discuss changes to the plan when necessary as well as to discuss licensee performance and review audit results etc. A wide range of public sector interest groups from within the Mackenzie Forest District were invited to participate in the SFM process through the PAG. After completing the Terms of Reference in January 2006, the PAG established the SFMP Criteria and Elements Performance Matrix with the SFMP being completed in June of 2006. It is important to note, the Mackenzie SFMP is a working document and is subject to continual improvement. Over time, the document will incorporate new knowledge, experience and research in order to recognize society's environmental, economic and social values. For example, PAG involvement during 2010-11 was critical in updating the SFMP from the CSA Z809-02 to the CSA Z809-08 standard. Starting in 2012 we began field tours on the DFA to connect the plan to operations and have received great feedback from the PAG on the importance of making this connection.

This Annual Report summarizes Canfor's performance in meeting the indicator targets outlined in the SFMP over the Mackenzie Defined Forest Area (DFA). The DFA is the Crown Forest land base within the Mackenzie Forest District and the operating areas of Canfor, excluding woodlots, Parks, Protected Areas and private land. The intent of this Annual Report is to have sustainable forest management viewed by the public as an open, evolving process that is taking steps to meet the challenge of managing the forests of the Mackenzie DFA for the benefit of present and future generations.

The following Table summarizes the results for the current reporting period. For clarification of the intent of the indicators, objectives or the management practices involved, the reader should refer to the Mackenzie Sustainable Forest Management Plan Document.

1.1 List of Acronyms

Below is a list of common acronyms used throughout this annual report. For those wishing a more comprehensive list should consult the Mackenzie Sustainable Forest Management Plan.

AAC – Annual Allowable Cut
BCTS – BC Timber Sales
BEC – Biogeoclimatic Ecosystem Classification
BEO – Biodiversity Emphasis Option
BWBS – Black and White Boreal Spruce
CFLB – Crown Forested Land Base
CSA – Canadian Standards Association
CWD – Coarse Woody Debris
DFA – Defined Forest Area

ESSF – Engelmann Spruce Sub-alpine Fir
 FMG – Forest Management Group
 FRPA – Forest and Range Practices Act
 FSR – Forest Service Road
 GIS – Geographic Information System
 LOWG – Landscape Objective Working Group
 LRMP – Land and Resource Management Plan
 LU – Landscape Unit
 MoFR – Ministry of Forest and Range
 NCI – North Central Interior
 NDT – Natural Disturbance Type
 NDU – Natural Disturbance Unit
 Non-Harvestable Land Base
 OGMA – Old Growth Management Area
 PAG – Public Advisory Group
 PFI – Peak Flow Index
 RMA – Riparian Management Area
 RMZ – Resource Management Zone (landscape-level planning)
 RMZ – Riparian Management Zone (riparian management)
 RRZ – Riparian Reserve Zone
 SAR – Species at Risk
 SBS – Sub-Boreal Spruce
 SFM – Sustainable Forest Management
 SFMP – Sustainable Forest Management Plan
 SWB – Spruce Willow Birch
 THLB – Timber Harvesting Land Base
 TOR – Terms of Reference
 TSA – Timber Supply Area
 VIA – Visual Impact Assessment
 VQO – Visual Quality Objective

1.2 Executive Summary

Of the **48** indicators listed in Table 1, **45** indicators were met within the prescribed variances, and **3** indicators were not met within the prescribed variances.

Table 1: Summary of results for the 2012-13 Reporting Year.

Indicator Number	Indicator Description	Target Met	Pending	Target Not Met
1	Old forest	√		
2	Interior forest	√		
3	Biodiversity reserve effectiveness	√		
4	Productive forest representation			√
5	Patch size	√		
6	Coarse Woody Debris	√		
7	Wildlife Trees	√		
8	Riparian Management area effectiveness			√
9	Sedimentation	√		
10	Stream Crossings	√		
11	Peak Flow Index	√		
12	Road re-vegetation	√		
13	Road environmental risk assessments	√		
14	Species within the DFA	√		
15	Sites of Biological Significance	√		
16	Soil Conservation	√		
17	Terrain Management	√		
18	Reportable Spills	√		
19	Site Conversion	√		
20	Permanent Access Structures	√		
21	Communication of planned Deactivation Projects	√		
22	Regeneration Delay	√		

Indicator Number	Indicator Description	Target Met	Pending	Target Not Met
23	Free Growing	√		
24	Prioritizing harvest of damaged stands	√		
25	Harvest Volumes			√
26	First-order Wood Products	√		
27	Local Investment	√		
28	Contract Opportunities for First Nations	√		
29	Satisfaction (PAG)	√		
30	Input into Forest Planning	√		
31	Public and Stakeholder Concerns	√		
32	Access to SFM Information	√		
33	SFM Educational Opportunities	√		
34	Heritage Conservation	√		
35	First Nations Input into Forest Planning	√		
36	First Nations Concerns	√		
37	Non Timber Benefits	√		
38	Safety Policies	√		
39	Accidents	√		
40	Signage	√		
41	Forest Area by Species Composition	√		
42	Proportion of Genetically Modified Trees in Reforestation Efforts	√		
43	Dispersed Retention Levels	√		
44	Investment in Training and Skills Development	√		
45	Level of Direct and Indirect Employment	√		
46	People Reached through Educational Outreach	√		
47	Protection of Identified Sacred and Culturally Important Sites	√		
48	Understanding the Nature of Aboriginal Rights and Title	√		
Totals		45		3

1.3 SFM Performance Reporting

This annual report will describe the success in meeting the indicator targets over the DFA. The report will be available to the public and will allow for full disclosure of forest management activities, successes, and failures. Canfor has reported performance within its operating areas. Canfor is committed to work together to fulfill the Mackenzie SFMP commitments including data collection and monitoring, participation in public processes, producing public reports, and continuous improvement.

2.0 SFM Indicators, Targets and Variances

Indicator 1 Old forest

Indicator Statement	Target and Variance
Percent of blocks that are within LU/BEC Groups that meet prescribed old-growth targets.	Target: 100% Variance: 0%

This indicator was chosen to monitor the amount of old forest within each Landscape Unit (LU) group. It is assumed that maintenance of all seral stages across the landscape will contribute to sustainability because doing so is more likely to provide habitat for multiple species as opposed to creating landscapes of uniform seral stage. Emphasis is placed on old forest because many species use older forests and the structural elements found therein (e.g. large snags, coarse woody debris, and multilayer canopies). These structural elements are difficult to recreate in younger forests. The targets for old forest are taken from the approved Mackenzie TSA Biodiversity Order.

Old Forest:

Landscape Unit	BEC Group	Number of blocks	Target % of Old Growth	Actual % of Old Growth	Number of Blocks that meet Old Growth Targets	Result
Philip	2	1	9	39	1	
	4	3	11	31	3	
Blackwater	2	1	9	54	1	
	4	36	11	29	36	
	5	12	0	16	12	
Gaffney*	2	3			3	
	4	13			13	
Eklund*	5	1			1	
Total Blocks		70		Total Blocks that meet target	70	100%

Source: June 2013 Analysis Results – See Appendix 1 for analysis tables.

Indicator Discussion: In the 2012/13 reporting year there were 70 blocks harvested in 4 LUs. *Gaffney and Eklund LU's contain spatially defined OGMA's, therefore there are no targets for old growth as it is spatially defined and protected. These blocks automatically meet the objective. There were 53 blocks in LUs without OGMA's and they met target as well.

Indicator 2 Interior Forest

Indicator Statement	Target and Variance
Percent of blocks that are within LU/BEC Groups that meet prescribed Interior Old targets.	Target: 100% Variance: 0%

Interior forest conditions refer to a situation where climatic and biotic characteristics are not significantly affected by adjacent and different environmental conditions (e.g., other seral stages, other forest or non-forest types, etc.). This indicator is important because provision of habitat for old-forest dependent species (see Indicator #1) can only occur if old forests are not significantly affected by adjacent environmental conditions. Historically, natural disturbance events such as fire, insects, and wind led to diverse landscapes characterized by forests having these interior old forest conditions. Thoughtful planning of harvesting patterns can minimize "fragmentation" of the forested landscape and help create interior old forest conditions. Furthermore, the intent of this indicator is to have interior old forest conditions represented within all ecosystem types to further enhance ecosystem resilience. The targets for interior old are taken from the approved Mackenzie TSA Biodiversity Order.

Interior Old

Landscape Unit	BEC Group	Number of blocks	Target % of Old Interior	Actual % of Old Interior	Number of Blocks that meet Old Interior Targets	Result
Philip	2	1	10	141	1	
	4	3	10	319	3	
Blackwater	2	1	10	304	1	
	4	36	10	101	36	
	5	12	0	63	12	
Gaffney*	2	3			3	
	4	13			13	
Eklund*	5	1			1	
Total Blocks		70		Total Blocks that meet target	70	100%

Source: May 2013 Analysis Results – See Appendix 1 for analysis tables.

Indicator Discussion: In the 2012/13 reporting year there were 70 blocks harvested in 4 LUs. *Gaffney and Eklund LU's contain spatially defined OGMA's, therefore there are no targets for old interior as it is spatially defined and protected. These blocks automatically meet the objective. There were 53 blocks in LUs without OGMA's and they met target as well.

Indicator 3 Biodiversity Reserve Effectiveness

Indicator Statement	Target and Variance
Percentage of blocks and roads harvested that do not comply with Orders which legally establish protected areas, ecological reserves, or OGMA's.	Target: 0% Variance: 0%

Landscape level biodiversity reserves/ Protected Areas are areas protected by legislation, regulation, or land-use policy to control the level of human occupancy or activities (Canadian Standards Association, 2003). These include legally established Old Growth Management Areas (OGMA's), parks, ecological reserves, and new protected areas. As forestry activities may occur near these areas the chance exists for unauthorized harvesting or road construction to happen within these sites. The OGMA's in Mackenzie do allow for certain, small amounts of disturbance where necessary. Please see SFM plan for more information on this.

Biodiversity Reserves

Signatory	Number of Blocks and roads harvested			Blocks and roads harvested that are within protected areas, ecological reserves, or OGMA's	%in DFA
	Blocks	Roads	Total		
Canfor	70	121	191	0	0%

Source: GIS query.

Indicator Discussion: If OGMA's are harvested, this will be summarized here, but not reported as a violation of this indicator.

Indicator 4 Productive Forest Representation

Indicator Statement	Target and Variance
Total hectares logged in rare and un-common ecosystems.	Target: 0 ha Variance: 0%

Maintaining representation of a full range of ecosystem types is a widely accepted strategy to conserve biodiversity in protected areas and is suggested for landscapes managed for forestry. Most species, especially those for which knowledge is sparse or absent, are best sustained by ensuring that some portion of each distinct ecosystem type is represented in a relatively unmanaged state. Unmanaged stands act as a precautionary buffer against errors in efforts intended to sustain species in the managed forest.

This is the first year to report on this indicator in this fashion. Reported are the past 3 years of harvesting in rare and uncommon ecosystems according to an analysis of all ecology units harvested. The table below shows all of the ecosystems which are considered to "rare" or "un-common" as well as the amount in hectares harvested over the past three years.

Rare and Un-common Ecosystems

Rare Ecosystem	Amount harvested by year in hectares		
	2010	2011	2012
SBSvk\03	0	0	0
SBSWk1\05	0	0	0
ESSFmv3\06	0	0.6	4.7
ESSFmv2\06	0	0	0
ESSFmv4\05	0	0	0
BWBSdk1\09	0	0	0
BWBSdk1\07	0	0	0

Source: GIS analysis of all Site Plans harvested.

Indicator Discussion: As mentioned above this is a new way to report out on this indicator and is reporting on past harvesting. Going forward, harvesting of these sites will be avoided.

Indicator 5 Patch Size

Indicator Statement	Target and Variance
Percentage of blocks harvested that meet the prescribed patch size target ranges or are trending towards the target range.	Target: 100% Variance: -30%

Patches often consist of even aged forests because most are the result of either a natural disturbance such as fire, wind or pest outbreaks, or from harvesting timber in a cutblock. Patches may be created through single disturbance events or through a series of events (i.e. a combination of natural disturbance and harvesting).

Mature forests and younger forest patches represent a land base created from a history of disturbances, natural and otherwise. As such, forest stands and patches are often composed of a variety of species, stocking levels and ages. Currently, forest management practices have reduced the occurrence of many natural disturbance events, such as wildfire. In the absence of natural disturbance, timber harvesting is employed as a disturbance mechanism and thus influences the distribution and size ranges of forest patches in the same fashion as historical natural disturbance events. Harvesting activities serve to mimic natural disturbance events characteristic within the Mackenzie DFA. Past social constraints associated with harvesting and resulting patch size have lead to fragmentation of the landscape beyond the natural ranges of variability, which has developed over centuries from larger scale natural disturbance. In order to remain within the natural range of variability of the landscape and move toward sustainable management of the forest resource, it is important to develop and maintain patch size targets based on historical natural patterns. This indicator will monitor the consistency of harvesting patterns compared to the landscape unit group and the natural patterns of the landscape.

Patch Size

Signatory	Number of Blocks Harvested	Blocks harvested that meet or trend towards prescribed patch size target ranges	Percent
Canfor	70	70	100.0%

Source: 2013 LOWG Analysis Results – See Appendix 1 for analysis tables.

Indicator Discussion: Blocks that are harvested for pest or disease (salvage) are considered to have met patch, as harvesting for forest health reasons takes precedence over patch size targets. More precise data was provided by adjacent licensees (BCTS, Conifex, MK Fibre, Three Feathers Consortium) through the newly formed Landscape Objectives Working Group (LOWG). The analysis is more robust than in previous years and the LOWG will work towards jointly managing Landscape Biodiversity.

Indicator 6 Coarse Woody Debris

Indicator Statement	Target and Variance
The percent of blocks harvested that exceed coarse woody debris requirements.	Target: 100% Variance: 0%

Coarse woody debris (CWD) as a habitat element provides: 1) nutrients for soil development, 2) structure in streams to maintain channel stability, 3) food and shelter for animals and invertebrates, and 4) growing sites for plants and fungi,. Past forestry practices have encouraged the removal of CWD from sites for a number of economic and/or safety reasons, presumably to the detriment of biological diversity. We use this indicator following harvesting to quantify CWD retained in blocks, wildlife tree patches, riparian areas, and in areas of un-salvaged timber. Within the NHLB we assume that natural processes will result in the maintenance of appropriate levels of CWD.

Post-harvest CWD levels will be measured as a standard component of either the silviculture survey or residue and waste survey. The interim target for CWD was taken from the FRPA *Forest Planning and Practices Regulation, Sec. 68* default requirements (BC. Reg 14/2004). Although the PAG members felt that this number was inadequate to protect this element of biodiversity, they recognized that insufficient information exists to determine either the amount of CWD left behind after harvesting or the amount of CWD that occurs in natural pre-harvest stands. Even so, we expect significantly more CWD than the target is retained after harvest and have committed to developing a more comprehensive CWD strategy pending availability of more data supporting a new CWD regulation.

Coarse Woody Debris

Signatory	Number of Blocks harvested	Number of blocks harvested that exceed CWD requirements	%in DFA
Canfor	70	70	100%

Source: Final harvest inspections, Incident Tracking Systems.

Indicator Discussion: This indicator applies to blocks only. There is a CWD measurement survey taking place in 2013 which will show Canfor how much CWD their current practices are achieving. This may be used to alter this indicator in the future.

Indicator 7 Wildlife Trees

Indicator Statement	Target and Variance
Percentage of cutblocks that meet or exceed wildlife tree patch requirements.	Target: 100% Variance: 0%

Stand level retention, including wildlife tree patches, is managed by each signatory in the DFA 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 non-harvestable 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 on the land base. Retention level in each block is documented in the associated Site Plan, recorded in the signatories' respective database systems and reported out in RESULTS on an annual basis.

Wildlife Trees

Signatory	Total Number of Cutblocks Harvested	Number of Cutblocks Harvested exceeding WTP requirements	Overall %
Canfor	70	70	100%

Source: Site Plans

Indicator Discussion: WTP targets come from Canfor's approved Forest Stewardship Plan and are specific to ecotype and Landscape Unit. Canfor had one incident in block 1409 (ITS-MK-2013-0845) where the ribboning of an internal reserve did not match what was on the map. Subsequently, a portion of the reserve was harvested. The site plan was amended to show the partially harvested reserve, block still exceeds the required amount of WTP.

Indicator 8 Riparian Management Area Effectiveness

Indicator Statement	Target and Variance
The percentage of forest operations consistent with riparian management area requirements as identified in operational plans and/or site plans.	Target: 100% Variance: 0%

Riparian features found in the field are assessed during the block lay-out stage to determine its riparian class and associated RRZ/RMZ/RMA. Appropriate buffers are then applied, considering other factors such as operability and windfirmness. Prescribed measures, if any to protect the integrity of the RMA are then written into the Site Plan. The target is a legal requirement. The target value of 100% has been established to reflect this and to ensure that all riparian management practices, specifically RRZ designation and management, continue to remain consistent with the pre-harvest operational plans.

Riparian Management

Signatory	Number of Forest Operations with Riparian Management Strategies identified in Operational Plans				Forest Operations Completed in Accordance with riparian management requirements	%in DFA
	Roads	Harvest	Silviculture	Total		
Canfor	121	70	13	204	203	99.5%

Source: Site Plans, Incident Tacking Systems.

Indicator Discussion: A road was built within the RMA of a W3 wetland (ITS-MK-2012-0664). No damage occurred to the wetland.

Indicator 9 Sedimentation

Indicator Statement	Target and Variance
The percentage of identified unnatural sediment occurrences where mitigating actions were taken.	Target: 100% Variance: -5%

Sedimentation occurrences are detected by forestry personnel during stream crossing inspections, road inspections, silviculture activities, and other general activities. In addition, Canfor supervisors routinely fly their operating areas annually following spring freshet to look for any such occurrences. While in some situations the sites may have stabilized so that further sedimentation does not occur, in other cases mitigating actions may have to be conducted. This may involve re-contouring slopes, installing siltation fences, re-directing ditch lines, grass seeding, or deactivating roads.

Sedimentation

Signatory	Number of identified unnatural sediment occurrences	Number of identified unnatural sediment occurrences with mitigating actions taken	% in DFA
Canfor	2	2	100%

Source: ITS

Indicator Discussion: An issue was noted which resulted in some sedimentation in 2 streams in 3498. A Biologist was hired to come up with a mitigation plan, the plan was implemented in August 2013.

Indicator 10 Stream Crossings

Indicator Statement	Target and Variance
Percentage of stream crossings appropriately designed and properly installed and/or removed.	Target: 100% Variance: -5%

Forestry roads can have a large impact on water quality and quantity when they intersect with streams, particularly by increasing sedimentation into water channels. Sediment is a natural part of streams and lakes as water must pass over soil in order to enter a water body, but stream crossings can dramatically increase sedimentation above normal levels. Increased sedimentation can damage spawning beds, increase turbidity, and effect downstream water users. When stream crossings are installed and removed properly, additional sedimentation may be minimized to be within the natural range of variation. Erosion control plans and procedures are used to ensure installations and removals are done properly. To calculate the success of this

indicator it is important to ensure that a process is in place to monitor the quality of stream crossings, their installation, removal, and to mitigate any issues as soon as possible.

Stream Crossings

Signatory	Number of Stream Crossings			Number of Stream Crossings			% Total
	Installed	Removed	Total	Appropriately designed and properly installed	Properly removed	Total	
Canfor	19	22	41	17	22	39	95%

Source: Incident Tracking System, Supervisor Communication.

Indicator Discussion: An issue was noted which resulted in some sedimentation in 2 streams in 3498, this was a result of the bridges being improperly installed during the winter months on high snow pack. (ITS-MK-2013-0876, ITS-MK-2013-0877)

Indicator 11 Peak Flow Index

Indicator Statement	Target and Variance
Percent of watersheds containing approved or proposed development with Peak Flow Index calculations completed.	<u>Target:</u> 100% <u>Variance:</u> 0%

The peak flow index is an indicator that indicates the potential effect of harvested areas on water flow in a particular watershed. The H60 is the elevation for which 60% of the watershed area is above. The ECA or "Equivalent Clearcut Area" is calculated from the area affected by logging and the hydrologic recovery of that area due to forest re-growth. 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. 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. 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 snowpack melts in the spring.

With PFI calculations now complete, the watersheds will next be evaluated to establish the watershed sensitivity and thereby the PFI risk (low to high). With the PFI risk ratings established, harvesting plans will have to consider the impact harvesting will have on the watershed in which it occurs. The goal, in watersheds with a high PFI risk rating, is to either postpone harvesting, or refer to a qualified registered professional for a detailed review.

Peak Flow Index

Licensee	Number of watersheds with harvest activities in the DFA	Number of those watersheds with Peak Flow Index calculations	Total % DFA
Canfor	13	13	100%

Source: GIS analysis – See Appendix 1 for a table with the current Peak Flow Index status of all watersheds Canfor was active in during the harvest period.

Indicator Discussion:

Indicator 12 Road Re-vegetation

Indicator Statement	Target and Variance
Percentage of road construction or deactivation projects where prescribed re-vegetation occurs within 12 months of disturbance.	<u>Target:</u> 100% <u>Variance:</u> -10%

This indicator was chosen as a way to assess our ability to minimize or at least reduce the anthropogenic effect of forest roads on adjacent ecosystems. In keeping with the common assumption of coarse-and medium-resolution biodiversity, our underlying assumption with this indicator was – re-vegetating roads will reduce the potential anthropogenic effects that roads have on adjacent ecosystems by minimizing potential for silt runoff or slumps, the amount of exposed soil, the potential for invasive plants to become established, and returning at least a portion of forage and other vegetation to conditions closer to those existing prior to management. Typically Canfor vegetates and mulches stream crossings which show a potential for erosion, as well as any other sections of road deemed necessary by Forestry Supervisors.

Road Re-vegetation

Signatory	Total Number of Projects Where Re-vegetation is Prescribed	Number of Prescribed Re-vegetation Projects Completed within 12 months of disturbance	% in DFA
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Canfor	12	12	100%
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Source: Licensee tracking systems, Supervisor communication.

Indicator Discussion:

Indicator 13 Road Environmental Risk Assessment

Indicator Statement	Target and Variance
Percentage of planned roads that have an environmental risk assessment completed.	Target: 100% Variance: -10%

Environmental risk assessments provide an indicator of “due diligence” in avoiding accidental environmental damage that has potential to occur from forest development in conditions of relatively unstable soil. Through the implementation of risk assessments, we expect to maintain soil erosion within the range that would normally occur from natural disturbance events under unmanaged conditions. Our assumption was – the more we can resemble patterns of soil erosion existing under unmanaged conditions, the more likely it will be that we do not introduce undue anthropogenic effects, from road construction, on adjacent ecosystems. The completion of environmental risk assessments on roads is completed by field staff during road layout. The assessments highlight areas of special concern that may require professional geotechnical or design work.

Road Environmental Risk Assessment

Signatory	Total Number of roads constructed	Number of constructed roads with environmental risk assessments completed	% in DFA
Canfor	121	121	100%

Source: Genus

Indicator Discussion: All layout is signed off by the person conducting this work as well as their supervisor in the layout package Certification Statement.

Indicator 14 Species within the DFA

Indicator Statement	Target and Variance
Percentage of blocks and roads harvested that adhere to management strategies for Species at Risk, Ungulate winter ranges, and other local species of importance.	Target: 100% Variance: -10%

Fundamental to the correct identification of species and habitats is the incorporation of appropriate management strategies where forest activities have the potential to impact species and habitats. Identification of those animals, invertebrates, bird species, vascular plants, and plant communities that have been declared to be at risk is crucial if they are to be conserved. Appropriate personnel are key staff and consultants that are directly involved in operational forest management activities. By implementing training to identify species within the DFA the potential for disturbing these species and their habitat decreases. Maintaining all populations of native flora and fauna in the DFA is vital for sustainable forest management, as all organisms are components of the larger forest ecosystem.

There are various sources to draw upon when developing the comprehensive list of species that are legally protected or species of importance within the DFA. The list of species in Appendix C includes species from the following sources:

1. Species at Risk Act
2. Legally established Ungulate Winter Ranges
3. Local species of importance.

Incorporation of local species of importance recognizes potential species that are not legally protected. Local species of importance can be proposed by First Nations, PAG members, the licensees, or by members of the public.

Species within the DFA

Signatory	Number of Forest Operations that coincide with Species at Risk, Ungulate Winter Ranges, or other local species of importance as identified in Operational Plans	Number of Forest Operations with Species at Risk, Ungulate Winter Ranges, or other local	% in DFA
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	Roads	Harvesting	Silviculture	Total	species of importance as identified in Operational Plans that adhere to specific management strategies.	
Canfor	0	0	0	0	0	100%

Source: Site Plans

Indicator Discussion: During the reporting period Canfor did not have any blocks with management strategies pertaining to Species at Risk, Ungulate Winter Ranges or species of concern.

Indicator 15 Sites of Biological Significance

Indicator Statement	Target and Variance
Percentage of blocks and roads harvested that adhere to management strategies for sites of biological significance.	Target: 100% Variance: 110%

Sites of biological significance include areas that are critical for wildlife habitat, sensitive sites, and unusual or rare forest conditions or communities. Specific management strategies may be required to ensure that these sites are maintained within the DFA. This indicator will ensure that specific management (fine filter) strategies are developed to conserve and manage sites of biological significance. Many types of sites of biological significance are sufficiently known to allow the development of special management areas, or prescribe activities that will appropriately manage these areas. The management strategies will be based on information already in place (e.g., National Recovery Teams of Environment Canada, IWMS Management Strategy), legislation (provincial and national parks), Land and Resource Management Plans (LRMPs), and recent scientific literature. Management strategies will be implemented in operational plans such as site plans to ensure the protection of these sites. Training of appropriate personnel in the identification of these sites of biological importance is critical to the management and protection of these sites. Appropriate personnel include key signatory staff and consultants that are directly involved in operational forest management activities. Having appropriate personnel trained to identify sites of biological significance will reduce the risks of forestry activities damaging these sites.

This indicator evaluates the success of implementing specific management strategies for sites of biological significance as prescribed in operational, tactical and/or site plans. Operational plans such as site plans describe the actions needed to achieve these strategies on a site specific basis. Once harvesting and other forest operations are complete, an evaluation is needed to determine how well these strategies were implemented. Developing strategies and including them in operational, tactical and/or site plans are of little use if the actions on the ground are not consistent with them. Tracking this consistency will ensure problems in implementation are identified and corrected in a timely manner.

Sites of Biological Significance

Signatory	Number of Forest Operations with Sites of Biological Significance Management Strategies Identified in Operational Plans				Forest Operations Completed in Accordance with Identified Strategies	% in DFA
	Roads	Harvesting	Silviculture	Total		
Canfor	0	0	0	0	0	100%

Source: Site Plans

Indicator Discussion: During the reporting period Canfor did not have any blocks or roads that had management strategies pertaining to sites of biological significance.

Indicator 16 Soil Conservation

Indicator Statement	Target and Variance
Percentage of forest operations consistent with soil conservation standards as identified in operational plans and/or site plans.	Target: 100% Variance: 0%

Conserving soil function and nutrition is crucial for sustainable forest management. To achieve this, forest operations have limits on the amount of soil disturbance they can create. These limits are described in legislation in the Forest Planning and Practices Regulation, section 35. Soil disturbance is defined in this 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 soil conservation standards in Site Plans (where they are more commonly known as

"soil disturbance limits"). The Site Plan prescribes strategies for each site to achieve activities and still remain within acceptable soil disturbance limits.

Soil information is collected as a component of site plan preparation, and soil conservation standards are established based on the soil hazards for that block. To be within those limits there are several soil conservation strategies currently used. Forest operations may be seasonally timed to minimize soil disturbance. For example, fine-textured soils such as clays and silts are often harvested when frozen to reduce excessive compaction. EMS prework forms require equipment operators to be aware of soil conservation indicators outlined in the site plans. Once an activity is complete the final inspection form assesses the consistency with 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 may be used where very high soil hazards exist.

Soil Conservation

Signatory	Number of Forest Operations			Forest Operations Completed in Accordance with Soil Conservation Standards	% in DFA
	Harvesting	Silviculture	Total		
Canfor	70	13	83	83	100%

Source: Site Plans, ITS, Harvest Inspections.

Indicator Discussion: There were no instances where operations were not consistent with targets for soil conservation set out in site plans.

Indicator 17 Terrain Management

Indicator Statement	Target and Variance
The percentage of forest operations consistent with terrain management requirements as identified in operational plans and/or site plans.	Target: 100% Variance: 0%

Some areas subject to forest operations occur on slopes that warrant special terrain management requirements in operational plans (usually the site plan). These unique actions are prescribed to minimize the likelihood of landslides or mass wasting. Terrain Stability Assessments (TSA) are completed on areas with proposed harvesting or road development that has been identified as either unstable or potentially unstable. The recommendations of the TSA are then integrated into the site plan or road layout/design and implemented during forest operations.

Terrain Management

Signatory	Number of Forest Operations with Terrain Management Requirements Identified in Operational Plans				Forest Operations Completed in Accordance with Requirements	% in DFA*
	Roads	Harvesting	Silviculture	Total		
Canfor	0	0	0	0	0	100%

Source: Site Plans

Indicator Discussion: During the reporting period there were no operations harvested which had special requirements for terrain management.

Indicator 18 Reportable Spills

Indicator Statement	Target and Variance
The number of FMS reportable spills.	Target: 0 Variance: < 5

Canfor uses the Emergency Response and Preparedness Plan (EPRP) to prevent, manage and report spills. Canfor's Fuel Management Guidelines also apply to managing and preventing spills. Reportable spills are entered into ITS where they are tracked.

Reportable Spills

Signatory	Number of EMS Reportable Spills						
	Petroleum Products	Pesticides	Antifreeze	Battery Acid	Grease	Paints and Solvents	Total
Number of spills	1	0	0	0	0	0	1

Amount (L)	50					50 Litres
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Source: ITS

Indicator Discussion: During the reporting period there was 1 spill which was approximately 50L of diesel fuel. See ITS-MK-2012-0600 for more details.

Indicator 19 Site conversion

Indicator Statement	Target and Variance
The percent of gross land base in the DFA converted to non-forested land use through forest management activities.	Target: <5% Variance: 0%

In addition to maintaining the resources necessary for sustaining the resiliency of forest ecosystems, a stable land base within which productive capability is assessed is also required. In order to assess the maintenance of the productive capability of the land base, this indicator specifically tracks the amount of productive land base loss due to various non-forest uses. Removal of the productive land base occurs as a result of permanent access structures, including roads, landings and gravel pits, as well as converting forested areas to non-forest land use, such as range, seismic lines and other mineral exploration.

Conversion of the landbase to non-forest land also has implications for carbon sequestration. A permanent reduction in the forest means that the removal of carbon from the atmosphere and carbon storage will be correspondingly reduced. The data that is required for monitoring is the number of hectares of productive forest area lost due to conversion to a non-forest use.

Site Conversion

Signatory	Total CFLB	Area Converted to Non-forest Land	Percent of THLB Area
Canfor	1,304,608	16,349	1.25%

Source: GIS analysis

Indicator Discussion: This is the first year calculating this in this fashion, previously it was done using the THLB, not CFLB. The CFLB is much larger, but doesn't change year after year as does the THLB. For that reason a much smaller percentage is reported. A new target will be established with the PAG for 2013-14 reporting year.

Indicator 20 Permanent Access Structures

Indicator Statement	Target and Variance
The percentage of gross cutblock area occupied by total permanent access structures.	Target: <5% Variance: +1%

This indicator indicates the amount of area developed as permanent access structures (PAS) within cutblocks, in relation to the gross area of the blocks logged during that period. Limits are described in legislation in the Forest Planning and Practices Regulation, section 36. Permanent access structures include roads, bridges, landings, gravel pits, or other similar structures that provide access for timber harvesting. Area that is converted to non-forest, as a result of permanent access structures and other development is removed from the productive forest land base and no longer contributes to the forest ecosystem. Roads and stream crossings may also increase risk 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.

Permanent Access Structures

Signatory	Total Gross Cutblock Area	Total Cutblock Area in Permanent Access Structures	Percent
Canfor	4961.1	134.7	2.7%

Source: Site Plans

Indicator Discussion: This is a calculation using all of the blocks that had active harvesting during the reporting period.

Indicator 21 Communication of planned Deactivation Projects

Indicator Statement	Target and Variance
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Percentage of off-block road deactivation projects that are communicated with applicable First Nations and Stakeholders.	Target: 100% Variance: -10%
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The forest is utilized by a variety of users. Access to the forest resource is important to First Nations, stakeholders, and the general public. Deactivation of off-block access roads can limit or remove access to the forest for other users. Where the signatories need to deactivate off-block roads, communication of their intention is required. Our assumption with this indicator is simply that – by increasing communication regarding signatory deactivation plans among stakeholders, we can increase the efficiency of access to resources. For the purpose of this indicator, stakeholders include trappers, guides, private land owners, and woodlots.

Communication of Planned Deactivation Projects

Signatory	Number of deactivation projects communicated to First Nations and Stakeholders	Total number of deactivation projects completed	Percent
Canfor	0	0	100.0%

Source: Signatory communication records

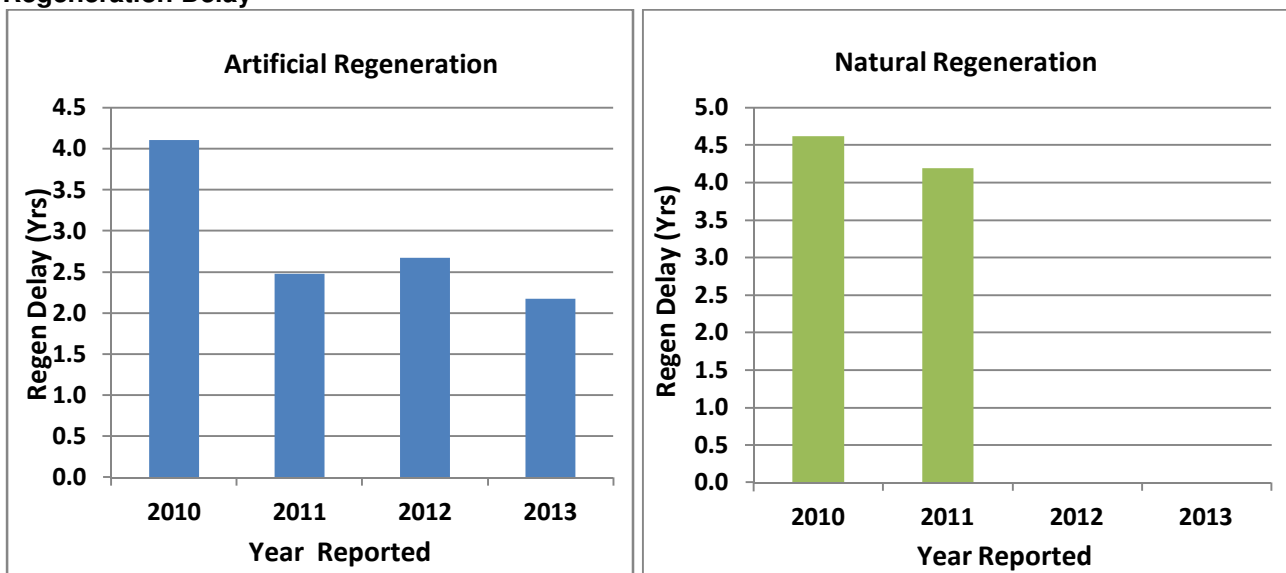
Indicator Discussion: There were no major de-activation projects completed by Canfor during the reporting period.

Indicator 22 Regeneration Delay

Indicator Statement	Target and Variance
The regeneration delay, by area, for stands established annually.	Artificial Regen: <4yrs Natural Regen: <7yrs Variance: +/- 5%

Regeneration delay is defined in this SFM plan as the time allowed in a prescription between the start of harvesting in the area and the earliest date by which the prescription requires a minimum number of acceptable, well-spaced trees per hectare to be growing in that area. There is a maximum permissible time allowed and comes from standards developed and/or approved by government. The regeneration delay period is usually within four years where planting is prescribed and seven years where the stand is expected to reforest naturally. Operationally, it is desirable to reforest as soon as possible post-harvest and the majority of blocks artificially regenerated (e.g. planted) meet regeneration delay within 2 years. Ensuring that all harvested stands meet the prescribed regeneration delay date within the specified time frame is an indication that the harvested area has maintained the ability to recover from a disturbance, thereby maintaining its resiliency and productive capacity. It also helps to ensure that a productive stand of trees is beginning to grow for use in future rotations. The current status of this indicator was derived from a review of signatories' records for the reporting period.

Regeneration Delay



Source: Canfor Resources database.

Indicator Discussion: This is the first year reporting average across standard units by year reported. Included previous years as well to show trends where they exist.

Indicator 23 Free Growing

Indicator Statement	Target and Variance
The % of block area that meets free growing requirements as identified in site plans.	Target: 100% Variance: -5%

A free growing stand is defined in this SFM plan as a stand of healthy trees of a commercially valuable species, the growth of which is not impeded by competition from plants, shrubs or other trees. The free growing status is somewhat dependent on the regeneration delay date of a forest stand and could be considered the next reporting phase. A free growing assessment is conducted on stands based on a time frame indicated in operational plans. The late free growing dates are established based on the biogeoclimatic classification of the site and the tree species prescribed for planting after harvest.

In order to fulfill mandates outlined in legislation, standards are set for establishing a crop of trees that will encourage maximum productivity of the forest resource (BC MOF 1995b). The free growing survey assesses the fulfillment of a Licensee's obligations to the Crown for reforestation and helps to ensure that the productive capacity of the forest land base to grow trees is maintained. Continued ecosystem productivity is ensured through the principle of free growing. This indicator illustrates the percentage of block area that meets free growing obligations across the DFA.

Free Growing

Signatory	Number of hectares Required to Meet Free Growing During Period	Number of hectares declared Free Growing	% in DFA
Canfor	2434.2	2434.2	100.0%

Source: Resources.

Indicator Discussion: During the reporting period there was 105 Standards Units due for free growing, of these they all were declared before the date, this totaled 2434.2 ha.

Indicator 24 Prioritizing harvest of damaged stands

Indicator Statement	Target and Variance
Percentage of area (ha) harvested that are damaged or considered a high risk to stand damaging agents.	Target: 100%. Variance: -20%.

Damaging agents are considered to be biotic and abiotic factors (fire, wind, insects etc.) that reduce the net value of commercial timber. To reduce losses to timber value it is necessary to ensure that if commercially viable timber is affected by damaging agents, that the timber is recovered before its value deteriorates. At the time of this SFMP's preparation, the most serious stand damaging agent in the Mackenzie DFA is the Mountain Pine Bark Beetle, which has killed millions of mature, commercially viable lodgepole pine. Prioritizing infested stands for treatment can contribute to sustainable forest management in several ways. Removing infested trees can slow the spread of beetles to adjacent un-infested stands and allow Licensees to utilize trees before they deteriorate. Also, once harvesting is complete the area can be replanted, turning an area that would have released carbon through the decomposition of dead trees into the carbon sink of a young plantation.

Treating areas with stand damaging agents will provide other societal benefits. Burned and diseased killed stands may be aesthetically unpleasing, and their harvesting and reforestation will create a more pleasing landscape. Windthrown stands restrict recreational use and can foster the growth of insect pests such as the spruce bark beetle. Thus, prioritizing areas with stand damaging agents for treatment will help to maintain a more stable forest economy and achieve social benefits through enhanced aesthetics and recreational opportunities.

Prioritizing Harvest of Damaged stands

Signatory	Number of hectares harvested in the stands considered a high risk to stand damaging agents	total number of hectares harvested during the reporting period	% in DFA
Canfor	38611	4416	87.4%

Source: Site plans, cruise compilations.

Indicator Discussion: Calculated using net area to reforest (NAR). 70 blocks harvested 9 of those had less than 40% net pine at the cruise, therefore were not deemed to be salvage.

Indicator 25 Harvest volumes

Indicator Statement	Target and Variance
Actual harvest volume compared to the apportionment across the DFA over each 5-year cut control period.	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. It is expected that certain resource values and uses will be incompatible; however, a natural resource is considered sustainable when there is a balance between the various components of sustainability. During Allowable Annual Cut (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 AAC is generally determined every five years by the Chief Forester of British Columbia, using a number of forecasts to assess the many resource values that need to be managed. On behalf of the Crown, the Chief Forester makes an independent determination of the rate of harvest that is considered sustainable for a particular Timber Supply Area (TSA).

The harvest level for a TSA must be met within thresholds that are established by the Crown. By following the AAC determination, the rate of harvest is consistent with what is considered by the province to be sustainable ecologically, economically and socially within the DFA. As stated above, the Chief Forester makes a determination of the rate of harvest for a particular TSA. The licensee then by law must achieve the AAC within the specified thresholds. Each truckload of wood is assessed and accounted for at a scale site if the cutting permit is billed as "scale-based" and if the cutting permit is "cruise-based" the timber is billed according to the volume in the timber cruise. The MFLNRO uses this information to apply a stumpage rate to the wood, and monitors the volume of wood harvested and compares it to the AAC thresholds.

The volume of timber actually harvested within the DFA will be determined annually by a review of MFLNRO timber scale billing summaries for the period of January 1st to December 31st each year, on an annual basis. Canfor will report the volumes harvested for the current cut control period they are in.

Harvest Volumes

Signatory	Volume Harvested						5 year Apportionment	Percent of 5 year cut in DFA
	Year 1	Year 2	Year 3	Year 4	Year 5	Total		
	2008	2009	2010	2011	2012			
Canfor	105,011	96,746	528,467	635,773	929,248	2,295,245	5,414,520	42.4%

Source: Cut control letters, Harvest Billing System

Indicator Discussion: Canfor ended its 5 year cut control period at the end of 2012. Over this period Canfor only harvested 42.4% of its allowable cut. Positives to note are that the trend is going the right direction, harvest levels are going up. 2013 is the beginning of a new cut-control period and Canfor expects that at the end of that period the entire cut will be harvested.

Indicator 26 First-Order Wood Products

Indicator Statement	Target and Variance
The number of first-order wood products produced from trees harvested from the DFA.	Target: 5 Variance: -2

This indicator helps to show how forest management activities can contribute to a diversified local economy based on the range of products produced at the local level. Forest management's contribution to multiple benefits to society is evident through this indicator, as well as an indication of the level of diversification in the local economy. First order wood products are often used to supply value-added manufacturers with raw materials for production, such as pre-fabricated house components. These provisions help to maintain the stability and sustainability of socio-economic factors within the DFA. By ensuring a large portion of the volume of timber harvested in the DFA is processed into a variety of products at local facilities, the local economy will remain stable, diverse, and resilient.

First-Order Wood Products

Signatory	Sawlogs	Pulp Logs	House logs	Lumber	Custom cut lumber	Trim Blocks	Pulp chips	OSB strands	Hog	Wood shavings	Plywood	Veneer	Pole Logs	Railway tie logs	Sawdust	Instruments	Finger joint	Total
Canfor	1	1	0	1	0	1	1	0	1	1	0	0	0	0	1	0	0	8

Source: Canfor: Site Superintendent communication/contractor communications.

Indicator Discussion: Primary and by-products sold to other local manufacturing facilities were counted

Indicator 27 Local Investment

Indicator Statement	Target and Variance
The percent of money spent on forest operations and management on the DFA provided from local suppliers.	Target: 30% Variance: -5%

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 forestry companies to contribute to and invest in the local economy there must be assurances that there will be a consistent flow of work. In the same way that larger licensees depend on a secure flow of resources to justify investment in an area, small businesses depend on a sustained flow of opportunities to develop and invest in the local community.

Local is defined in this SFMP as the communities of Mackenzie, McLeod Lake, Germansen Landing, Manson Creek, Tsay Keh Dene, and Fort Ware. The total dollar value of goods and services purchased within the local communities will be calculated relative to the total dollar value of all goods and services used. This calculation will be used to derive the percentage of money spent on forest operations and management of the DFA from local suppliers. Woodlands employee salaries are considered goods purchased where the employee lives within the local area and therefore contribute to community stability.

Forest Operations and Management consider all money spent within the signatory's woodlands departments, excluding stumpage. Harvesting and road building costs, where applicable, will be included in the total.

Local Investment

Signatory	Money spent in local area on Forest operations and management	Total money spent on forest operations and management	% in DFA
Canfor	\$15,184,673	\$48,520,718.06	31.3

Source: Signatories accounting records

Indicator Discussion: Local spending includes logging, road building and maintenance, silviculture activities, woodlands related purchases at local vendors, staff salaries, etc.

Indicator 28 Contract Opportunities to First Nations

Indicator Statement	Target and Variance
The number of contract opportunities with First nations within the DFA.	Target: >5 Variance: -2

This indicator is intended to monitor the impacts of forest industry and government activities on the ability of First Nations to access forestry related economic opportunities. At present, this indicator is not intended to assess how successful First Nations are at taking advantage of the opportunities. Canfor has explored forestry related opportunities with First Nations in the past. Capacity amongst the First Nations to take advantage of opportunities will likely have to be addressed in order for available opportunities to be acted upon. This indicator tracks the existence of opportunities available.

Contract Opportunities to First Nations

Signatory	Contract Opportunities	Total for DFA
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	Employment	Road Building & Deactivation	Other Volume Purchased	Logging	Silviculture Forestry	Other Contracts	Management Services	
Canfor	0	0	0	3	5		0	8

Source: Signatory contract records.

Indicator Discussion:

Indicator 29 Satisfaction (PAG)

Indicator Statement	Target and Variance
The average overall percent of the PAG's satisfaction with PAG meeting process.	Target: 100% Variance: -20%

The PAG is one of the key elements of public involvement in the SFM process. The Mackenzie PAG provides 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 Canfor has a positive and meaningful working relationship with the PAG. This indicator will use an average of the PAG meeting evaluation forms to determine the level of satisfaction of the PAG with the public participation process.

Following all PAG meetings to date, PAG participants completed meeting evaluations. One question is in the PAG meeting evaluation form to address this indicator which asked participants "What is your overall satisfaction with the PAG process?" This indicator is specific to responses to question A11 during the reporting period.

PAG Satisfaction

Mackenzie DFA SFM Plan Public Advisory Group Meeting Evaluation Question			
Meeting Date	Score out of 5	Percent	Variance (from 100%)
6/19/2012	4.6	91.4%	8.6%
10/24/2012	4.5	90.0%	10.0%
3/27/2013	4.5	90.0%	10.0%
Overall Score =		90.5%	9.5%

Source: PAG satisfaction surveys

Indicator Discussion:

Indicator 30 Input into Forest Planning

Indicator Statement	Target and Variance
The number of opportunities for the public and/or stakeholders to provide meaningful input into forest planning.	Target: 6 Variance: -2

Forestry activities can impact a wide section of the public and individual stakeholders within the DFA. This indicator was designed to monitor the signatory's success at providing effective opportunities to residents and stakeholders to express concerns and be proactively involved in the planning process. This involvement may include the identification of areas of interest, definition of the nature of their interest in the land base, and any specific forestry activity that may impact their specific interests. This process ensures that when forestry activities are planned, information is exchanged in an effective and timely manner, so as to resolve potential conflicts before they occur. This process will help to identify the public values, interests and uses of the forest that will be considered within the signatories planning framework.

Stakeholders include the following forest sectors; trappers, guide outfitters, water license holders, range tenure holders, woodlot owners, private land owners, other licensees, and specific government agencies. Opportunities for input into forest planning will be offered to stakeholders where their tenured area coincides with the signatories planned activities.

Input into Forest Planning

Opportunity	The Number of Opportunities For Public And Stakeholders
	Canfor
FSP ads	
FSP letters to stakeholders	
LRMP meetings	
PMP original ads	
PMP letters to stakeholders	1
PMP signage	
Other ads (deactivation plans)	
Field tours	2
Newsletters	
Open houses	
PAG Meetings	2
Documented meetings	9
Documented phone calls/emails	
Information Sharing	4
TOTAL	18

Source: Signatory database/tracking systems.

Indicator Discussion: Canfor had many correspondences with members of the public including trappers, guides, general public as well as First Nations throughout the reporting period.

Indicator 31 Public and Stakeholder Concerns

Indicator Statement	Target and Variance
The number of operational concerns raised by the public and/or stakeholders that are considered and incorporated into operational and/or tactical plans.	<u>Target:</u> 100% <u>Variance:</u> -10%

All signatories solicit feedback for their public forest management plans in the DFA. As mentioned in previous indicators, public involvement is an important aspect of SFM as it promotes inclusiveness in how Crown forests are managed. Considering a diverse range of opinions and concerns will result in operational forest management decisions that consider views other than those of the forest industry. A forest industry that respects public and stakeholder input will maintain the support of the public, creating a more economically stable and open forest economy. Operational concerns from the public may be provided in many ways, including written letters, e-mails, or faxes received by Canfor. There may also be written comments made during an in-person or telephone meeting between a staff member and the person providing comment. This indicator will compare the number of operational concerns that have been acted on relative to the total number of operational concerns raised.

Public and Stakeholder Concerns

Signatory	Number of concerns brought forward that have been considered and incorporated into operational plans	Number of operational concerns brought forward	Percent
Canfor	2	2	100%

Source: COPI

Indicator Discussion: Both concerns were from trappers. One concern was around the harvest timing of a particular block and the other was regarding a buffer on a stream.

Indicator 32 Access to SFM information

Indicator Statement	Target and Variance
The number of opportunities provided annually for access to SFM related documents.	<u>Target:</u> 3 <u>Variance:</u> 0

With this indicator we intend to monitor our effort to ensure effective and comprehensive distribution of the SFMP, annual reports, and audit results for the Mackenzie DFA. In order to gain trust and confidence in the SFMP process, it must be an open and transparent process. By ensuring access to the Plan, annual reports, and audit results, the results of our efforts in achieving sustainable forestry and continuous improvement can be clearly seen and monitored by the public, stakeholders, and First Nations. In this manner, the public, stakeholders and First Nations can hold the signatories accountable for achieving the desired results and have confidence that forest resources are being managed sustainably.

Access to SFM Information

Opportunity	The Number of Distribution/Access Opportunities
Newsletters	
Open houses / Trade Shows	1
SFM & PAG Meetings	3
Website	1
Distribution of SFM information	
TOTAL	5

Source: Signatory database and tracking systems, planning forester documentation.

Indicator Discussion:

Indicator 33 SFM Educational Opportunities

Indicator Statement	Target and Variance
The number of SFM educational opportunities and interactions provided.	Target: 2 Variance: 0

This indicator was designed to monitor the signatories' success at providing training and educational opportunities in sustainable forest management. SFM relies on residents and stakeholders making informed decisions on forest management. To achieve this, it is incumbent on the signatories to ensure the public are sufficiently informed about SFM to make the choices we request of them. The indicator is intended to ensure that the signatories provide the required opportunities for residents and stakeholders to learn about SFM. It is anticipated that educational opportunities will come in the form of open houses, public presentations, PAG meetings, the Mackenzie Trade Fair, and field tours of the signatory's operations.

SFM Educational Opportunities

Opportunity	The Number of SFM Educational Opportunities
Field tours	2
Newsletters	
Open houses	
Presentations	
PAG Meetings	2
Trade Shows, etc.	1
TOTAL	5

Source: Planning forester documentation.

Indicator Discussion:

Indicator 34 Heritage Conservation

Indicator Statement	Target and Variance
Percentage of forest operations consistent with the Heritage Conservation Act.	Target: 100% Variance: 0%

The protection of cultural heritage values assures they will be identified, assessed and their record available to future generations. A cultural heritage value is a unique or significant place or feature of social, cultural or spiritual importance. It may be an archaeological site, recreation site or trail, cultural heritage site or trail, historic site or a protected area. Cultural heritage values often incorporate First Nation's heritage and spiritual sites, but they can also involve features protected and valued by non-Aboriginal people. Maintenance of cultural heritage values is an important aspect to sustainable forest management because it contributes to respecting the social and cultural needs of people who traditionally and currently use the DFA for a variety of reasons.

The indicator is designed to ensure that operational plans with identified strategies to conserve cultural heritage values have those strategies implemented on the ground. Tracking the level of implementation will allow Canfor to evaluate how successful this implementation is and improve procedures if required.

Heritage Conservation

Signatory	Total Number of Forest Operations that have associated sites protected under the Heritage Conservation Act (pre 1846)				Number of Forest Operations Completed in Accordance with the Heritage Conservation Act	Percent
	Roads	Harvesting	Silviculture	Total		
Canfor	0	0	0	0	0	100.0%

Source: Site plans.

Indicator Discussion: There were no cultural or heritage areas noted in any of the blocks harvested during the reporting period.

Indicator 35 First Nations Input into Forest Planning

Indicator Statement	Target and Variance
The number of opportunities for First Nations to provide meaningful input into our planning processes where active operations are within their respective traditional territories.	<u>Target:</u> ≥ 2 per First Nation <u>Variance:</u> 0

This indicator was designed to list and report out on all documented opportunities provided to First Nations people to be involved in forest management planning processes. Incorporation of First Nations people and their unique perspective into the forest planning process is an important aspect of SFM. This indicator will contribute to respecting the social, cultural and spiritual needs of the people who traditionally and currently use the DFA for the maintenance of traditional aspects of their lifestyle. The Mackenzie SFM PAG is a process designed to identify public values and objectives within the DFA. Within the PAG process, First Nations has been identified as an important sector for representation.

First Nations Input into Forest Planning

Opportunity	Signatory	First Nation							
		Tsay Keh	Kwadac ha	Takla Lake	Nak'az dli	McLeod Lake	West Moberly	Saulte au	Half way River
Operational planning referrals	Canfor	2		2	2	2	2	1	2
Open house style meetings	Canfor								
AIA Referrals	Canfor					1			
Trade shows	Canfor	1	1	1	1	1	1	1	1
Formal operational meetings	Canfor								
Pest Management Prescriptions Meetings and referrals	Canfor	1	1	1	1	1			
FSP referrals / consultation	Canfor								
TOTAL		4	2	4	4	6	3	2	3

Source: Signatory communication records, COPI.

Indicator Discussion: Communication was in the form of information sharing for block planning, AIA referral as well as information sharing of the NIT.

Indicator 36 First Nations Concerns

Indicator Statement	Target and Variance
Percentage of operational concerns raised by First Nations that are considered and incorporated into operational and/or tactical plans.	<u>Target:</u> 100% <u>Variance:</u> -10%

Incorporating management strategies into the planning process in order to resolve issues raised by First Nations leadership is a key aspect to sustainable forest management. This indicator contributes to respecting the social, cultural heritage and spiritual needs of people who traditionally and currently use the DFA for the maintenance of traditional aspects of their lifestyle.

Forest planning can include information sharing for both operational and tactical plans. The FSP process is an example of operational plans referred to First Nations. AIAs, operating plans, cutblock and road referrals, and annual operating maps are examples of tactical plans that may be referred to First Nations. Active forest operations are considered to be current harvesting, road construction, and mainline deactivation projects, planned vegetation management projects, as well as forest planning of new cutblocks and roads.

First Nations Concerns

Signatory	Number of concerns brought forward that have been considered and incorporated into operational plans	Total number of operational concerns brought forward	Percent
Canfor	1	1	100%

Source: Signatory communication records and operational plans.

Indicator Discussion: 2 First Nations were opposed to herbicide use, Canfor reduced the amount of blocks it planned to treat, and only treated high risk blocks.

Indicator 37 Non-timber Benefits

Indicator Statement	Target and Variance
Conformance with strategies for non-timber benefits identified in plans.	<u>Target:</u> No non-conformances for site level plans <u>Variance:</u> 0

For the purpose of this plan non-timber benefits include; resource features, range features as well as visual quality. Resource features are elements that have a unique importance because specific ecological factors exist in combination at one place and don't often occur similarly elsewhere. Examples of resource features are caves, karst, recreation sites or crown land used for research to name a few. These features are generally considered to have value to society so we assume that through conservation of these features we are contributing to social value. Range features are often used by ranchers to allow livestock to feed and thus very important to the ranching industry. Conservation of these areas will help to assure their availability in the future. Examples of such features include naturally occurring grass lands, naturally occurring barriers which contain livestock to a specific area as well as any area that a rancher has grazing or hay cutting permits on, or identified areas that may be suitable for such permits in the future. Visual quality is managed in order to maintain areas of perceived beauty within the DFA.

The signatories currently plan and design their activities and/or cutblocks so as to manage or adequately protect non-timber benefits when they become known. Once a non-timber benefit becomes known, means of managing or protecting the feature are either iterated in the operational plan or tactical and/or site plans. These requirements are tracked and managed by Canfor as well as by the Compliance and Enforcement branch of the MFLNRO.

Signatory	Number of blocks and roads harvested with non-timber benefits identified in the site plan	Number of blocks and roads harvested with non-timber benefits whereby the associated results and strategies were not achieved	Variance
Canfor	0	0	0

Source: Site plans.

Indicator Discussion:

Indicator 38 Safety Policy

Indicator Statement	Target and Variance
Written safety policies in place and full implementation are documented.	Target: 1 Variance: 0

Each signatory has a written safety policy in place which is reviewed by the safety committee a minimum of once every year and revised as necessary and approved by management. If an incident occurs the cause of the incident is determined and recommendations are put forward. These recommendations may result in a change to a specific policy. Annual audits will be conducted and Action Plans developed for any item that requires attention detailing the person responsible for the item and the deadline for completion.

Safety Policy

Signatory	Written Safety Policies in Place and Implementation Documented? (Y/N)
Canfor	Y

Source: Canfor OH&S Manual and Occupational Health and Safety Statement.

Indicator Discussion:**Indicator 39 Accidents**

Indicator Statement	Target and Variance
Number of lost time accidents in woodlands operations.	Target: 0 Variance: 0

Health and safety of forest workers and members of the public is an important quality of life objective that is essential to SFM. Canfor considers employee and public safety as a primary focus of all forestry related operations. Evidence of this high priority can be seen in various company mission statements and individual safety policies. This indicator was developed to track and report out on the number of lost time workplace accidents that occur within Canfor's Forest Management Group (FMG). Operations conducted outside the woodlands division and field operations have been excluded from this indicator; however Canfor promotes safety in all aspects of forest management operations. Two types of workplace accidents are the most common within the forest industry including lost time accidents (LTA) or incidents where medical aid or treatment was necessary but no loss of work time was experienced by the employee. Through this indicator, only LTA will be tracked and monitored.

Accidents

Signatory	Number of Lost Time Accidents
Canfor	0

Source: Signatory safety records

Indicator Discussion:**Indicator 40 Signage**

Indicator Statement	Target and Variance
The percentage of operational activities in place that have the appropriate signage in place during the activity, and removed following the completion.	Target: 100% Variance: -20%

People value being informed of most activities that take place on public lands including those associated with industrial forestry. Signage establishes a standard for safety and otherwise helps inform public about the nature and extent of industrial activity. Conversely, if signage is not kept current, credibility of the signs declines resulting in a potential safety hazard. With this indicator we will monitor our commitment to making information about our activities current and available to those traveling the roads and trails of the Mackenzie DFA.

Signage

Signatory	Number of completed operational projects requiring signage where the signs were posted during the activity and removed following completion	Number of Completed operational Activities requiring signage	Percent
Canfor	70	70	100%

Source: Operational staff communication.

Indicator Discussion: This is managed almost exclusively by our logging contractors. Signs are posted for safety reasons during active operations, and the appropriate signs are removed when operations are complete.

Indicator 41 Forest Area by species composition

Indicator Statement	Target and Variance
Percent composition of forest type (treed conifer, treed broad leaf, treed mixed) >20 years old across DFA.	<u>Target:</u> Maintain baseline ranges and distribution into the future (measured every 5 years) <u>Variance:</u> +/-1%

Tree species composition, stand age, and stand structure are important variables that affect the biological diversity of a forest ecosystem - providing structure and habitat for other organisms. Ensuring a diversity of tree species within their natural range of variation, improves ecosystem resilience and productivity and positively influences forest health. Reporting on this indicator provides high level overview information on area covered by broad forest type, forest succession and management practices that might alter species composition.

The different stand types will be run using GIS analysis and VRI data. The baseline data was revised in 2013 after the DFA changed as a result of BCTS operating areas being removed from the DFA. Subsequent analysis will be done every 5 years in an effort to eliminate any bias from short term trends on the land-base, and to allow for the periodic updating of data sources. The indicator will be considered to have been met if the area for the 5 year reporting window maintains its area spread within 1 percent of baseline areas.

Analysis Year	Treed Conifer	Treed Broadleaf	Treed Mix
2013	90%	3%	7%

Source: GIS analysis of VRI data.

Indicator Discussion: As mentioned, the baseline is new this year, reflecting the removal of BCTS from the plan. There was little change in the values with the removal of BCTS from the plan.

Indicator 42 Proportion of genetically modified trees in reforestation efforts

Indicator Statement	Target and Variance
Regeneration will be consistent with provincial regulations and standards for seed and vegetative material use	<u>Target:</u> 100% conformance with the standards <u>Variance:</u> 0%

One of the primary management objectives for sustainability is to conserve the diversity and abundance of native species and their habitats. Silviculture practices that promote regeneration of native species, either through planting or other natural programs assists in meeting these objectives. The well-being and productivity of future forests is dependent upon the structure and dynamics of their genetic foundation.

Seed used in Crown land reforestation that is consistent with provincial regulations and standards ensure regenerated stands are genetically diverse, adapted, healthy and productive, now and in the future. Suitable seed and vegetative lots must also be of a high quality and available in sufficient quantities to meet the specific stocking and forest health needs of a given planting site.

Regeneration will be consistent with provincial regulation and standards for seed and vegetative material use. Target - 100% conformance with the standards (0 percent variance). The Chief Forester's Standards for seed use allows for up to 5 percent of the seedlings planted in a year to be outside the seed transfer guidelines. In addition, there is an avenue in the standards to apply and receive approval for an Alternative Seed Use Policy. This built in variance and flexibility with the standard is why there is no acceptable variance in the target of the SFMP indicator.

Signatory	Total Number of Seedlings Planted in Compliance with Legislative Requirements	Total Number of Seedlings Planted	Percent
Canfor	2,482,135	2,482,135	100.0%

Source: Internal databases.

Indicator Discussion:

Indicator 43 Dispersed retention levels

Indicator Statement	Target and Variance
Percent of blocks meeting dispersed retention levels as prescribed in the site plan/logging plans	<u>Target:</u> 100% <u>Variance:</u> 0%

Operationally, harvest plans often include retention of dispersed trees such as snags, large live trees, deciduous trees, stub trees and understory trees. Dispersed retention provides stand level complexity and long term recruitment of coarse woody debris. Harvest value and ecological value can be optimized by selecting the variety of tree types (e.g., species, size, live and dead, etc.) that have high ecological value and low economic value, and through the number of trees retained.

Signatory	Total Number of Blocks Meeting Dispersed Retention Levels Defined in Site Plan	Total Number of Blocks Harvested	Percent
Canfor	70	70	100.0%

Source: Internal databases, and Incident Tracking Systems.

Indicator Discussion:

Indicator 44 Investment in training and skills development

Indicator Statement	Target and Variance
Training in environmental and safety procedures in compliance with company training plans.	<u>Target:</u> 100% of company employees and contractors will have both environmental and safety training. <u>Variance:</u> -5%

Sustainable forest management provides training and awareness opportunities for forest workers as organizations seek continual improvement in their practices. Investments in training and skill development generally pay dividends to forest organizations by way of a safer and more environmentally conscious work environment. Assessing whether forest contractors have received both safety and environmental training is a direct way of measuring this investment. Additionally, training plans should be in place for employees of the forest organizations who work in the forest. Measuring whether the training occurred in accordance with these plans will confirm an organizations commitment to training and skills development.

Signatory	Total Number of Employees and Contractors Trained in EMS, FMS and Safety	Total Number of Employees and Contractors	Percent
Canfor	213	213	100.0%

Source: Eclipse, contractor records.

Indicator Discussion: Canfor supervisors train contractor foremen, principals and supervisors on our FMS, SFM and SWPs. It is then the responsibility of the contractor to train all other employees using the materials presented by us.

Indicator 45 Level of direct and indirect employment

Indicator Statement	Target and Variance
Maintain the level of direct and indirect employment.	<u>Target:</u> 265 direct 53 indirect

Forests represent not only a return on investment (measured, for example, in dollar value, person-days, donations, etc.) for the organization but also a source of income and non-financial benefits for DFA-related workers, local communities and governments.

Organizations that harvest at sustainable harvest levels in relation to the allocated supply levels determined by government authorities continue to provide direct and indirect employment opportunities. The harvest level is set using a rigorous process that considers social, economic and biological criteria.

Targets for this indicator are based on 2010 baseline data of actual direct employment. Direct employment includes all staff and contractors paid directly by Canfor. Indirect employment levels are generated using the employment multiplier from the 2000 Timber Supply Review. Indirect employment is difficult to calculate therefore the multiplier is used, and is based on the number of direct jobs. If full-time employment targets are being met it will be assumed that indirect employment targets are also met.

Signatory	Number of Direct Jobs		Indirect Jobs Met (y/n)	
	2011-12	2012-13	2011-12	2012-13
Canfor	311	313	Y	Y

Source: Human Resources documents, contractor communication.

Indicator Discussion: If the amount of direct jobs is met, it is assumed the amount of in-direct jobs will also be met. For this reporting period there was an increase in woodlands employment as volumes harvested increased, but there was a decrease in mill employment. The decrease in mill staff is a result of employees going on long-term-disability, retirements and modernization in the facility.

Indicator 46 People reached through educational outreach

Indicator Statement	Target and Variance
The number of stakeholders and members of the public who took part in an educational opportunity.	Target: 50 Variance: -10

The signatories are committed to working with directly affected stakeholders and members of the public on forest management issues and have a well-established history of participation in community meetings, including local planning processes. The sharing of knowledge and contributes to informed, balanced decisions and plans acceptable to the majority of public. When informed and engaged, members of the public can provide local knowledge and support that contributes to socially and environmentally responsible forest management. Canfor staff provided educational opportunities both at the request of their employer and of members of educational community in Mackenzie. The Participants have held open houses and participated in local trade fairs. Staff have also provided field tours and in class presentations for the local secondary school.

Signatory	Number of stakeholders who attended educational opportunities
Canfor	400

Source: Attendance records from events held.

Indicator Discussion: Tradefair; approx 400 public attendees; and PAG meetings.

Indicator 47 Protection of identified sacred and culturally important sites

Indicator Statement	Target and Variance
Percent of identified Aboriginal forest values, knowledge and uses accommodated in forestry planning processes.	Target: 100% Variance: 0

Efforts have been made to understand which First Nation traditional territories fall within the Plan area and company Defined Forest Areas. Information sharing agreements are made with willing First Nation communities to promote the use and protection of sensitive information.

Planned cutblocks are shared with Aboriginal communities. Open communication with First Nations that includes a sharing of information enables the participants to understand and incorporate traditional knowledge into forest management options is the means to achieve the objective of the indicator.

The objective will be achieved as the participants become aware of culturally important, sacred and spiritual sites leading to appropriate management of and protection. This will be achieved by specifying measures in operational plans. The proper execution of plans will provide desired results of First Nations culturally important values and resources. Post harvest evaluations and other inspections will assess plan conformance.

Signatory	Number of Aboriginal forest values, knowledge and uses brought forward that have been considered	Number of Aboriginal forest values, knowledge and uses brought forward	Percent
Canfor	0	0	100.0%

Source: Internal tracking databases.

Indicator Discussion:**Indicator 48 Understanding of the nature of Aboriginal Rights and Title**

Indicator Statement	Target and Variance
FMG employees will receive First Nations Awareness training as per the FMG Training Matrix.	<u>Target:</u> 100% <u>Variance:</u> 10%

Section 35 of the Constitution Act states “The existing aboriginal and treaty rights of Aboriginal Peoples of Canada are hereby recognized and affirmed”. Some examples of the rights that Section 35 has been found to protect include hunting, fishing, trapping, gathering, sacred and spiritual practices, and title. SFM requirements are not in any way intended to define, limit, interpret, or prejudice ongoing or future discussions and negotiations regarding these legal rights and do not stipulate how to deal with Aboriginal title and rights, and treaty rights.

The first step toward respecting Aboriginal title and rights, and treaty rights is compliance with the law. Section 7.3.3 of the CSA Z809-08 Standard reinforces legal requirements for many reasons, including demonstrating that Aboriginal title and rights, and treaty rights have been identified and respected. The reality in demonstrating respect for Aboriginal title and rights, and treaty rights can be challenging in Canada’s fluid legislative landscape and therefore it is important to identify these legal requirements as a starting point. It is important for companies to have an understanding of applicable Aboriginal title and rights, and treaty rights, as well as the Aboriginal interests that relate to the DFA.

Both the desire of licensees to comply with laws and open communication with local First Nations requires that company staff members have a good understanding of Aboriginal title and rights and treaty rights.

Signatory	Number of staff who have completed First Nations Awareness training	Total number of staff who require the training.	Percent
Canfor	7	7	100%

Source: Employee training databases.

Indicator Discussion: Of the 8 FMG staff in Mackenzie, only 7 require this training as per the FMG training Matrix, WIM staff are exempt.

Appendix 1

Mackenzie Old Growth and Old Interior Summary Table

Defined Forest Area

Assessment Date - June 2013

Targets based off of the Ministerial Order for Non-spatial Landscape Biodiversity Objectives in the Mackenzie Forest District.

Current reflects all known harvest blocks completed within the DFA as of March 31, 2013 (BCTS, Canfor, Conifex, MK Fibre)

Landscape Unit Group within the DFA	B.E.C Group	B.E.O	CFLB (ha)	Old Growth				Old Interior			
				Target Minimum %	Target Area (ha.)	Current Area (ha.)	Current %	Target Minimum % of Old	Target Area (ha.)	Current Area (ha.)	Current %
a	b	c	d	e	f	g	h	i	j	k	l
Blackwater (Includes Muscovite Lakes Park)	1	Low	367	0	0	158	43	10	0	27	N/A
Blackwater (Includes Muscovite Lakes Park)	2	Low	21,196	9	1,908	11,450	54	10	191	5,792	304
Blackwater (Includes Muscovite Lakes Park)	3	Low	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blackwater (Includes Muscovite Lakes Park)	4	Low	71,310	11	7,844	20,611	29	10	784	7,913	101
Blackwater (Includes Muscovite Lakes Park)	5	Low	51,993	0	0	8,351	16	10	0	1,201	N/A
Blackwater (Includes Muscovite Lakes Park)	7	Low	337	11	37	74	22	10	4	23	63
Connaghan Creek, Eklund, Jackfish, South Germansen-Upper Manson	1	High	5,488	0	0	4,129	75	25	0	2,097	N/A
Connaghan Creek, Eklund, Jackfish, South Germansen-Upper Manson	2	High	30,343	13	3,945	21,677	71	25	986	13,422	340
Connaghan Creek, Eklund, Jackfish, South Germansen-Upper Manson	4	High	4,598	16	736	2,907	63	25	184	903	123
Connaghan Creek, Eklund, Jackfish, South Germansen-Upper Manson	5	High	964	13	125	499	52	25	31	101	81
Connaghan Creek, Eklund, Jackfish, South Germansen-Upper Manson	7	High	12,626	16	2,020	10,847	86	25	505	6,185	306
Connaghan Creek, Eklund, Jackfish, South Germansen-Upper Manson	8	High	1,271	19	242	859	68	25	60	488	202
Gaffney, Manson River	1	Low	861	0	0	582	68	10	0	269	N/A
Gaffney, Manson River	2	Low	74,342	9	6,691	39,176	53	10	669	17,339	259
Gaffney, Manson River	4	Low	64,265	11	7,069	27,932	43	10	707	42,239	598
Gaffney, Manson River	5	Low	5,677	9	511	1,241	22	10	51	259	51
Philip, Philip Lake, Tudyah A	2	Low	60,475	9	5,443	23,608	39	10	544	7,659	141
Philip, Philip Lake, Tudyah A	4	Low	101,299	11	11,143	31,801	31	10	1,114	35,573	319
Philip, Philip Lake, Tudyah A	5	Low	4,814	9	433	187	4	10	43	4	1

July 2013 Patch size Analysis

Current State of depletions as of March 31, 2013

Future state projected to 2017 with all planned blocks from BCTS, Canfor, Conifex and MK Fibre

Caribou Management Strategy Resource Management Zones

Landscape Unit Group within the DFA	NDT	Current Total Area of patches (ha)	Future Total Area of patches (ha)	<40				40-250				250-5000				over maximum							
				Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Current Area (ha)	Current %	Future Area (ha)	Future %	
Aiken	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	509.7	399.9	30-40	188.3	37%	188.3	47%	30-40	321.4	63%	211.6	53%	20-40	0.0	0%	0.0	0%		0.0	0%	0.0	0%
	3	297.9	277.0	10-20	170.4	57%	170.4	61%	10-20	127.6	43%	106.7	39%	60-80	0.0	0%	0.0	0%		0.0	0%	0.0	0%
Buffalohead *	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	6099.6	2135.3	30-40	616.2	10%	431.1	20%	30-40	2171.0	36%	1095.6	51%	20-40	404.8	7%	608.7	29%		3,523.8	48%	0.0	0%
	3	14703.3	6958.6	10-20	1444.3	10%	1136.0	16%	10-20	5592.4	38%	4358.5	63%	60-80	3,434.4	23%	1464.1	21%		7,666.5	29%	0.0	0%
Connaghan Creek, Eklund, Jackfish, S. Germansen **	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	1254.6	3070.5	30-40	79.6	6%	182.1	6%	30-40	1175.0	94%	1458.6	48%	20-40	0.0	0%	1429.8	47%		0.0	0%	0.0	0%
	3	471.7	2612.9	10-20	247.7	53%	368.5	14%	10-20	224.0	47%	846.1	32%	60-80	0.0	0%	1398.4	54%		0.0	0%	0.0	0%
Gillis - Klawli	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	3119.0	19196.3	30-40	382.6	12%	612.7	3%	30-40	1720.6	55%	2671.2	14%	20-40	1,015.8	33%	9324.7	49%		0.0	0%	6,587.6	34%
	3	214.2	1200.0	10-20	107.2	50%	172.4	14%	10-20	87.9	41%	654.0	55%	60-80	19.0	9%	373.5	31%		0.0	0%	0.0	0%
Ingenika *	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	357.0	0.0	30-40	89.8	25%	0.0	0	30-40	267.2	75%	0.0	0	20-40	0.0	0%	0.0	0		0.0	0%	0.0	0%
	3	1497.1	197.2	10-20	128.2	9%	70.1	36%	10-20	1081.9	72%	127.2	64%	60-80	287.0	19%	0.0	0%		0.0	0%	0.0	0%
Kennedy **	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	880.5	783.8	30-40	26.5	3%	0.0	0%	30-40	0.0	0%	1.2	0%	20-40	782.6	89%	782.6	100%		0.0	8%	0.0	0%
	3	0.0	0.0	10-20	0.0	0	0.0	0	10-20	0.0	0	0.0	0	60-80	0.0	0	0.0	0		0.0	0%	0.0	0%
Mesilinka	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	3093.3	2380.4	30-40	451.3	15%	432.9	18%	30-40	1285.3	42%	1947.5	82%	20-40	1,356.7	44%	0.0	0%		0.0	0%	0.0	0%
	3	1213.6	1229.7	10-20	212.9	18%	206.4	17%	10-20	904.5	75%	1023.3	83%	60-80	96.3	8%	0.0	0%		0.0	0%	0.0	0%
Misinchinka TudyahB **	1	63.8	58.3		28.4	45%	22.6	39%		35.4	55%	35.7	61%		0.0	0%	0.0	0%		0.0	0%	0.0	0%
	2	3612.7	7033.6	30-40	701.9	19%	573.6	8%	30-40	1611.7	45%	1405.5	20%	20-40	1,299.1	36%	5054.4	72%		0.0	0%	0.0	0%
	3	3763.3	4615.9	10-20	264.3	7%	311.5	7%	10-20	350.7	9%	886.7	19%	60-80	3,148.3	84%	3417.7	74%		0.0	0%	0.0	0%
North Ingenika - Swannell *	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	600.2	478.6	30-40	115.1	19%	113.6	24%	30-40	120.1	20%	0.0	0%	20-40	365.0	61%	365.0	76%		0.0	0%	0.0	0%
	3	113.5	1.5	10-20	1.5	1%	1.5	100%	10-20	112.0	99%	0.0	0%	60-80	0.0	0%	0.0	0%		0.0	0%	0.0	0%
Thutade *	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	1328.6	1328.6	30-40	0.0	0%	0.0	0%	30-40	135.9	10%	135.9	10%	20-40	1,192.8	90%	1192.8	90%		0.0	0%	0.0	0%
	3	45.1	45.1	10-20	0.0	0%	0.0	0%	10-20	0.0	0%	0.0	0%	60-80	45.1	100%	45.1	100%		0.0	0%	0.0	0%
Tutizza	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	335.5	151.5	30-40	94.2	28%	58.1	38%	30-40	241.3	72%	93.4	62%	20-40	0.0	0%	0.0	0%		0.0	0%	0.0	0%
	3	69.1	0.0	10-20	23.8	34%	0.0	0	10-20	45.4	66%	0.0	0	60-80	0.0	0%	0.0	0		0.0	0%	0.0	0%
Twenty Mile **	1	0.0	0.0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0	0.0	0		0.0	0%	0.0	0%
	2	150.7	1425.2	30-40	0.0	0%	62.3	4%	30-40	150.7	100%	437.0	31%	20-40	0.0	0%	925.9	65%		0.0	0%	0.0	0%
	3	6.3	326.9	10-20	0.0	0%	0.0	0%	10-20	6.3	100%	81.7	25%	60-80	0.0	0%	245.2	75%		0.0	0%	0.0	0%

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July 2013 Patch size Analysis																						
Current State of depletions as of March 31, 2013																						
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Enhanced Management Strategy Resource Management Zones																						
Landscape Unit Group within the DFA	NDT	Current Total Area of patches (ha)	Future Total Area of patches (ha)	NDT 1, 2, and 3 =<40					NDT 1 and 2 = 40-80, NDT 3 = 40-250					NDT 1 and 2 = 80-250, NDT 3 = 250-5000					over maximum			
				Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Current Area (ha)	Current %	Future Area (ha)	Future %
Akie, Akie River	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	456.4	1,039.5	30-40	30.6	7%	172.9	17%	30-40	263.4	58%	216.3	21%	20-40	162.3	36%	500.5	48%	0.0	0%	149.7	14%
	3	2,237.4	3,103.6	10-20	237.2	11%	342.4	11%	10-20	1,626.5	73%	1,706.0	55%	60-80	373.7	17%	1055.2	34%	0.0	0%	0.0	0%
Blackwater	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	6,320.9	16,506.0	30-40	757.2	12%	1726.8	10%	30-40	1,517.1	24%	1,601.4	10%	20-40	1,930.7	31%	4033.6	24%	3694.9	33%	9,144.2	55%
	3	13,609.4	19,492.6	10-20	958.8	7%	1290.5	7%	10-20	3,606.6	27%	4,895.8	25%	60-80	9,044.1	66%	9608.6	49%	0.0	0%	3,697.8	19%
Buffalohead*	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	6,715.8	2,135.3	30-40	616.2	9%	431.1	20%	30-40	1,612.8	24%	579.2	27%	20-40	558.2	8%	516.4	24%	3523.8	58%	608.7	29%
	3	18,137.6	6,958.6	10-20	1,444.3	8%	1136.0	16%	10-20	5,592.4	31%	4,358.5	63%	60-80	3,434.4	19%	1464.1	21%	2115.8	42%	7,666.5	0%
Collins-Davis	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	4,818.1	5,787.3	30-40	313.2	7%	622.8	11%	30-40	1,315.6	27%	1,859.2	32%	20-40	1,085.4	23%	802.2	14%	1301.4	44%	2,503.1	43%
	3	3,504.5	4,186.3	10-20	503.6	14%	575.2	14%	10-20	1,696.1	48%	2,137.6	51%	60-80	1,304.8	37%	1473.5	35%	0.0	0%	0.0	0%
Chunamon	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	5,174.4	1,835.2	30-40	335.0	6%	362.0	20%	30-40	896.2	17%	420.6	23%	20-40	654.4	13%	661.7	36%	3288.7	64%	390.9	21%
	3	9,758.1	10,641.0	10-20	1,115.0	11%	909.3	9%	10-20	3,108.3	32%	3,334.2	31%	60-80	5,534.9	57%	6397.5	60%	0.0	0%	0.0	0%
Gaffney-Manson River	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	7,674.3	14,387.7	30-40	1,356.1	18%	1823.9	13%	30-40	2,568.6	33%	1,785.1	12%	20-40	2,235.2	29%	3010.2	21%	6580.9	20%	7,768.5	54%
	3	8,888.6	20,146.8	10-20	739.5	8%	724.3	4%	10-20	3,209.5	36%	4,752.1	24%	60-80	4,939.7	56%	14670.5	73%	1015.8	0%	662.6	0%
Germansen Mtn.	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	66.6	214.5	30-40	0.0	0%	0.0	0%	30-40	58.9	88%	105.1	49%	20-40	7.8	12%	109.5	51%	0.0	0%	0.0	0%
	3	3.0	3.0	10-20	0.0	0%	0.0	0%	10-20	3.0	100%	3.0	100%	60-80	0.0	0%	0.0	0%	0.0	0%	0.0	0%
Morfee	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	516.1	561.4	30-40	160.8	31%	157.4	28%	30-40	169.2	33%	133.5	24%	20-40	118.9	23%	104.1	19%	67.3	13%	166.4	30%
	3	1,310.9	1,241.6	10-20	128.8	10%	122.5	10%	10-20	609.9	47%	551.2	44%	60-80	572.2	44%	567.9	46%	0.0	0%	0.0	0%
Osilinka	1	0.0	0.0	30-40	0.0	0%	0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0	0%	0.0	0%	0.0	0%
	2	9,084.8	6,971.6	30-40	1,933.0	21%	1609.93	23%	30-40	2,129.6	23%	1,075.2	15%	20-40	1,221.0	13%	708.1159	10%	3801.2	42%	3,578.3	51%
	3	4,365.4	3,748.5	10-20	568.4	13%	366.998	10%	10-20	1,533.8	35%	1,226.0	33%	60-80	2,263.3	52%	2155.525	58%	0.0	0%	0.0	0%
Philip, Philip Lake, Tudyah A **	1	0.0	0.0	30-40	0.0	0%	0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0	0%	0.0	0%	0.0	0%
	2	8,771.2	9,821.0	30-40	1,135.6	13%	943.246	10%	30-40	1,900.1	22%	1,085.6	11%	20-40	2,272.9	26%	1531.931	16%	3462.6	39%	6,260.3	64%
	3	19,819.5	27,426.0	10-20	1,723.1	9%	1649.78	6%	10-20	6,427.3	32%	6,236.4	23%	60-80	11,669.1	59%	19539.8	71%	0.0	0%	0.0	0%

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July 2013 Patch size Analysis

Current State of depletions as of March 31, 2013

Future state projected to 2017 with all planned blocks from BCTS, Canfor, Conifex and MK Fibre

General and Special Management Strategy Resource Management Zones

Landscape Unit Group within the DFA	NDT	Current Total Area of patches (ha)	Future Total Area of patches (ha)	NDT 1, 2, and 3 =<40					NDT 1 and 2 = 40-80, NDT 3 = 40-250					NDT 1 and 2 = 80-250, NDT 3 = 250-1000					over maximum			
				Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Target Range %	Current Area (ha)	Current %	Future Area (ha)	Future %	Current Area (ha)	Current %	Future Area (ha)	Future %
				Clearwater	1	736.8	4,490.0	30-40	121.1	16%	422.6	9%	30-40	407.4	55%	430.6	10%	20-40	208.3	28%	1029.6	23%
	2	826.5	3,843.0	30-40	343.1	42%	236.3	6%	30-40	290.2	35%	471.3	12%	20-40	193.2	23%	1399.8	36%	0.0	0%	1735.6	45%
	3	0.0	0.0	10-20	0.0	0%	0.0	0%	10-20	0.0	0%	0.0	0%	60-80	0.0	0%	0.0	0%	0.0	0%	0.0	0%
Discovery-Duckling	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	410.0	441.9	30-40	0.0	0%	30.0	7%	30-40	152.5	37%	177.7	40%	20-40	257.5	63%	234.2	53%	0.0	0%	0.0	0%
	3	1072.6	1,182.7	10-20	92.3	9%	92.3	8%	10-20	439.0	41%	549.1	46%	60-80	541.4	50%	541.4	46%	0.0	0%	0.0	0%
Fox	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	2228.4	388.5	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	47.2	2%	47.2	12%	2181.3	98%	341.4	88%
	3	1108.4	503.3	10-20	4.8	0%	4.8	1%	10-20	52.3	5%	52.3	10%	60-80	446.3	40%	446.3	89%	605.1	55%	0.0	0%
Ingenika	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	357.0	0.0	30-40	89.8	25%	0.0	0%	30-40	240.6	67%	0.0	0%	20-40	26.6	7%	0.0	0%	0.0	0%	0.0	0%
	3	1497.1	197.2	10-20	128.2	9%	70.1	36%	10-20	1081.9	72%	127.2	64%	60-80	287.0	19%	0.0	0%	0.0	0%	0.0	0%
Lower Akie - Lower Peskia	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	3	772.1	1,123.2	10-20	23.5	3%	49.7	4%	10-20	308.6	40%	469.6	42%	60-80	440.1	57%	604.0	54%	0.0	0%	0.0	0%
Lower Ospika	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	881.7	1,480.2	30-40	80.5	9%	306.0	21%	30-40	15.6	2%	331.9	22%	20-40	358.1	41%	371.0	25%	427.6	48%	471.4	32%
	3	2023.2	3,088.4	10-20	217.3	11%	400.7	13%	10-20	965.9	48%	1045.5	34%	60-80	839.9	42%	1642.3	53%	0.0	0%	0.0	0%
Nabesche	1	253.4	584.9	30-40	94.7	37%	328.3	56%	30-40	51.1	20%	149.0	25%	20-40	107.6	42%	107.6	18%	0.0	0%	0.0	0%
	2	1127.5	776.7	30-40	477.9	42%	417.1	54%	30-40	476.4	42%	262.7	34%	20-40	173.1	15%	96.9	12%	0.0	0%	0.0	0%
	3	851.2	467.3	10-20	130.9	15%	40.8	9%	10-20	372.6	44%	78.9	17%	60-80	347.6	41%	347.6	74%	0.0	0%	0.0	0%
Nation	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	80.9	14.8	30-40	0.0	0%	14.8	100%	30-40	0.0	0%	0.0	0%	20-40	80.9	100%	0.0	0%	0.0	0%	0.0	0%
	3	493.2	1,531.0	10-20	48.4	10%	68.4	4%	10-20	276.6	56%	479.1	31%	60-80	168.2	34%	910.9	59%	0.0	0%	72.5	5%
Nina Creek	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	73.0	73.0	30-40	46.5	64%	46.5	64%	30-40	0.0	0%	26.5	36%	20-40	26.5	36%	0.0	0%	0.0	0%	0.0	0%
	3	90.5	90.5	10-20	8.2	9%	8.2	9%	10-20	82.3	91%	82.3	91%	60-80	0.0	0%	0.0	0%	0.0	0%	0.0	0%
North Ingenika - Swannell*	1	0.0	0.0	30-40	0.0	0%	46.5	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	600.2	478.6	30-40	115.1	19%	113.6	24%	30-40	70.5	12%	0.0	0%	20-40	49.6	8%	0.0	0%	365.0	61%	365.0	76%
	3	113.5	1.5	10-20	1.5	1%	1.5	100%	10-20	112.0	99%	0.0	0%	60-80	0.0	0%	0.0	0%	0.0	0%	0.0	0%
Obo River no blocks	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	3	0.0	0.0	10-20	0.0	0%	0.0	0%	10-20	0.0	0%	0.0	0%	60-80	0.0	0%	0.0	0%	0.0	0%	0.0	0%
Parsnip	1	277.0	607.4	30-40	132.2	48%	367.0	60%	30-40	62.3	22%	37.8	6%	20-40	82.5	30%	82.5	14%	0.0	0%	356.3	20%
	2	1282.8	2,612.3	30-40	507.7	40%	130.8	5%	30-40	551.3	43%	278.8	11%	20-40	104.3	8%	271.6	10%	119.4	9%	1517.8	74%
	3	3751.7	5,370.1	10-20	322.5	9%	544.1	10%	10-20	1457.4	39%	1508.3	28%	60-80	1971.8	53%	1172.4	22%	0.0	0%	0.0	40%
Pelly	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	1841.2	1,400.1	30-40	19.5	1%	19.8	1%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	1821.7	99%	1380.4	99%
	3	1081.3	200.4	10-20	2.9	0%	2.9	1%	10-20	80.0	7%	80.0	40%	60-80	998.4	92%	117.5	59%	0.0	0%	0.0	0%
Pesika	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	0.0	0.7	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.7	100%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	3	9.3	108.9	10-20	9.3	100%	41.9	38%	10-20	0.0	0%	67.1	62%	60-80	0.0	0%	0.0	0%	0.0	0%	0.0	0%
Schooler	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	947.1	404.2	30-40	102.6	11%	43.1	11%	30-40	152.2	16%	66.6	16%	20-40	397.7	42%	0.0	0%	294.5	31%	294.5	73%
	3	322.6	273.8	10-20	15.2	5%	8.5	3%	10-20	59.4	18%	17.4	6%	60-80	247.9	77%	247.9	91%	0.0	0%	0.0	0%
Selwyn	1	13.0	116.2	30-40	0.0	0%	23.1	20%	30-40	13.0	100%	93.1	80%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	558.2	1,360.2	30-40	82.7	15%	164.7	12%	30-40	148.7	27%	247.5	18%	20-40	207.7	37%	571.1	42%	119.2	21%	377.0	28%
	3	351.7	351.7	10-20	10.2	3%	10.2	3%	10-20	56.7	16%	56.7	16%	60-80	284.8	81%	284.8	81%	0.0	0%	0.0	0%
Thutade *	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	1328.6	1,328.6	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	135.9	10%	135.9	10%	1192.8	90%	1192.8	90%
	3	45.1	45.1	10-20	0.0	0%	0.0	0%	10-20	0.0	0%	0.0	0%	60-80	45.1	100%	45.1	100%	0.0	0%	0.0	0%
Upper Ospika no blocks	1	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	2	0.0	0.0	30-40	0.0	0%	0.0	0%	30-40	0.0	0%	0.0	0%	20-40	0.0	0%	0.0	0%	0.0	0%	0.0	0%
	3	0.0	0.0	10-20	0.0	0%	0.0	0%	10-20	0.0	0%	0.0	0%	60-80	0.0	0%	0.0	0%	0.0	0%	0.0	0%

2012-2013 ECA Analysis for active Watersheds.

Watershed	2012-13 Harvest ?	Watershed Area (ha)	Sensitivity Rating	Max PFI (%)	Current Harvest (ha)	Current Harvest Above H60 (ha)	Current Harvest Below H60 (ha)	Current ECA (ha)	Current PFI (%)	Future Harvest Area	Future Above H60	Future Below H60	Future ECA (ha)	Future PFI (%)
BLACKWATER CREEK	Yes	49,381	2	62.5	16,160	6,696	3,593	10,289	21	16,939	7,085	3,593	10,678	22
CARPWSD000003	Yes	4,350	1	74.5	504	164	224	388	9	662	348	224	572	13
CARPWSD000006	Yes	3,869	2	62.5	1,165	465	243	708	18	1,165	465	243	708	18
EKLUND CREEK	Yes	24,587	2	62.5	3,923	134	1,846	1,980	8	4,905	619	1,846	2,465	10
FINAWSD000046	Yes	4,960	1	74.5	2,522	2,217	229	2,446	49	2,737	2,253	229	2,482	50
FINAWSD000050	Yes	3,402	2	62.5	1,607	664	239	903	27	1,948	955	239	1,194	35
GAFFNEY CREEK	Yes	49,220	2	62.5	14,091	6,468	6,109	12,576	26	15,234	6,167	6,109	12,276	25
HOLDER CREEK	Yes	8,198	1	74.5	2,943	1,529	1,275	2,805	34	3,432	1,753	1,275	3,028	37
MUNRO LAKE	Yes	19,355	2	62.5	5,398	3,787	1,367	5,154	27	5,478	3,640	1,367	5,007	26
NATION RIVER	Yes	68,742	2	62.5	17,258	11,752	3,834	15,586	23	18,738	12,789	3,834	16,623	24
NATRWSD000006	Yes	6,206	2	62.5	4,368	1,215	452	1,667	27	4,450	1,304	452	1,757	28
PEACE WILLISTON	Yes	543,557	2	62.5	101,137	83,553	2,419	85,972	16	104,470	80,432	2,419	82,850	15
PHILIP CREEK	Yes	69,027	2	62.5	22,991	11,096	5,726	16,822	24	24,657	11,364	5,726	17,090	25

Compiled April 18, 2013



Canadian Forest Products Ltd. 2013 CSA Z809/ISO 14001 Surveillance Audit Public Summary Report

Between February and August 2013 an audit team from KPMG Performance Registrar Inc. (KPMG PRI) carried out a combined CSA Z809/ISO 14001 surveillance audit of Canadian Forest Products Ltd.'s (Canfor's) B.C. and Alberta woodlands operations. This Certification Summary Report provides an overview of the audit process and KPMG's findings.

Canfor's B.C. and Alberta Woodlands Operations

Canfor's ISO 14001 and CSA Z809 certifications apply to the following defined forest areas (NB: The DFAs listed are based on the gross area under management, and are prorated estimates in the case of some of the volume-based forest tenures):

Defined Forest Areas (Canfor operations only)	DFA Areas (hectares)	Allowable Annual Cut (m ³)
Radium ¹	392,400	221,005
Vavenby	192,539	489,138
Prince George ²	1,809,317	3,799,540
Houston (Morice) ³	610,788	1,071,111
Mackenzie	2,188,430	1,082,904
Quesnel	220,129	783,861
Ft. Nelson	7,045,416	1,163,716
Grande Prairie	<u>649,160</u>	<u>715,000</u>
Total	13,108,179	9,326,275



1. The above figures do not include operations in relation to 10,000 m³/year of Canfor's AAC in the Cranbrook Timber Supply Area which are certified to the ISO 14001 standard only.
2. Canfor manages 3 DFAs within the Prince George Timber Supply Area (TSA). These 3 DFAs include Canfor's operating areas under the Prince George Forest District/TFL 30, Fort St. James and Vanderhoof sustainable forest management (SFM) plans. Operations under these plans are managed or co-managed by Canfor Forest Management Group East and West Operations.
3. The above figures do not include operations in the Canfor chart area within the Lakes TSA (which covers approximately 29,000 hectares and has an AAC of 53,627 m³/year) that are certified to ISO 14001 only.



Audit Scope

The 2013 audit included site visits to all of the DFAs listed above to evaluate the forest management plans and practices carried out by the Company since the completion of the 2012 audit. It included a limited scope assessment against selected requirements of the CSA Z809 standard, including those related to:

- Public participation;
- Maintenance of the SFM plan;
- Rights & regulations;





- Monitoring of SFM performance, and;
- Implementation of a sample of the various management system components (e.g., rights & regulations, DFA specific performance requirements, operational controls, monitoring and inspections, corrective & preventive actions, internal audits, management review) that are required under the CSA Z809 standard.

The Audit

- Background** – The CSA Z809 and ISO 14001 standards require annual surveillance audits by an accredited Certification Body to assess the operation's continuing conformance with the requirements of these standards. In addition, full scope re-certification audits are required once every 3 years.
- Audit Team** – The audit was conducted by a 8 person audit team (all team members are B.C. Registered Professional Foresters and 1 is also an Alberta Registered Professional Forester), all of whom are certified sustainable forest management (SFM) and/or environmental management system (EMS) auditors.
- Document Review** – An off-site document review was completed prior to the field audit in order to assess EMS and SFM system documentation (e.g., SFM Plan and associated values, objectives, indicators and targets, documentation pertaining to the Public Advisory Group (PAG) process, etc.) and increase the efficiency of the field portion of the audit.
- Field Audit** – The on-site field audit included interviews with a sample of staff, contractors and PAG members and examination of forest management system (FMS) and SFM system records, monitoring information and public involvement information. The audit team conducted field assessments of a large number of field sites (74 roads, 71 harvesting blocks, 58 silviculture sites and 2 logging camps) to assess the Company's planning, harvesting, silviculture, camps and road construction, maintenance and deactivation practices.

Audit Objectives

The objectives of the 2013 ISO 14001/CSA Z809 audit were to:

- Assess the extent to which the Company's SFM system conforms to the requirements of the ISO 14001 and CSA Z809 standards.
- Evaluate Canfor's progress towards addressing the open findings from previous external audits.

Audit Conclusions

The audit found that the Company's SFM system:

- Was in conformance with the ISO 14001 and CSA Z809 requirements included within the scope of the audit, except where noted otherwise in this report;
- Continues to be effectively implemented, and;
- Is sufficient to systematically meet the commitments included in the Company's SFM Plans, provided that the system continues to be implemented and maintained as required.

As a result, a decision has been reached that Canfor's B.C. and Alberta woodlands continue to be registered to the ISO 14001 and CSA Z809 standards.

Canfor 2013 CSA Z809/ISO 14001 Surveillance Audit Findings

New major non-conformities	0
New minor non-conformities	4
Systemic opportunities for improvement	3
Open non-conformities from previous audits	2

Types of audit findings Major non-conformities:

Are pervasive or critical to the achievement of the SFM Objectives.

Minor non-conformities:

Are isolated incidents that are non-critical to the achievement of SFM Objectives.

All non-conformities require the development of a corrective action plan within 30 days of the audit, which must be fully implemented by the operation within 3 months.

Major non-conformities must be addressed immediately or certification cannot be achieved / maintained.

Opportunities for Improvement:

Are not non-conformities but are comments on specific areas of the SFM System where improvements can be made.

Good Practices

A number of good practices were noted during the 2013 audit. The following list highlights some of the examples noted:

- ISO 14001 element 4.4.3/CSA Z809 element 7.4.3: Review of the recent public advertisement related to significant amendment 16 for the Canfor Houston FSP found that it included a good summary of the nature of the amendment, as well as indicating that the Red Top area (which had been the subject of a previous court injunction) was not included in the amendment. (Houston).
- ISO 14001 element 4.4.6/CSA Z809 element 7.4.6: A high level of conformance with FMS requirements and applicable regulatory requirements was observed on the field sites that were visited during the audit. (All Divisions).
- ISO 14001 element 4.4.6/CSA Z809 element 7.4.6: The audit found that one logging contractor uses a movable “checkpoint” located on the access road to active logging sites that contains all of the key FMS and safety documentation (e.g., pre-work, site plan, EPRP, block sign-in sheet, etc.) applicable to the block. (Quesnel)
- CSA Z809 element 6.1: Review of the draft 2011/12 Houston SFM plan annual report as well as inspection of a sample of recently harvested blocks found that the operation had done a good job of ensuring that there is sufficient stand level retention to address biodiversity and wildlife habitat concerns (an average of 14.5% of blocks harvested in 2011/12 were retained in WTPs versus the SFM plan target of 7%). (Houston)
- ISO 14001 element 4.4.7/CSA Z809 element 7.4.7: The Kootenay Region from Radium to Elko experienced an extreme flood event commencing June 17 and peaking June 20/21, 2013. Radium was proactive in advance of flooding by implementing the Road Closure SWP by barricading roads leading to drainages in the flood zone. The Company also prepared a Natural Disaster Response notification to all staff regarding potential hazards resulting from flood damage and included control measures to minimize risk. (Radium)
- LiDAR technology has been incorporated into Canfor Chetwynd logging plan maps for a number of years, and logging contractors and workers indicated that the technology has resulted in significant improvements in harvesting on and adjacent to steep slopes. (Chetwynd)
- ISO 14001 element 4.3.3: The audit found that Canfor had made good efforts with respect to one First Nation’s concerns around operations, including avoiding herbicide use in the Critical Community Use Area, providing a buffer around the reserve and working towards developing an agreement for communication regarding planned operations. (FSJPP)
- ISO 14001 element 4.5.3/CSA Z809 element 7.5.2: The audit noted timely incident reporting, investigation and response by Canfor and one of the Company’s logging contractors in relation to recent harvesting/road-related stream sedimentation issues noted on one harvest block in the Prince George DFA. (Prince George)
- CSA Z809 element 7.3.3: Grande Prairie COPI records demonstrate persistent effort on behalf of woodlands staff to encourage Aboriginal members to engage in FMAC and in forest management plan consultation. (Grande Prairie)
- ISO 14001 element 4.5.1/CSA Z809 element 7.5.1: In response to a number of ongoing government investigations regarding alleged non-compliance with soil disturbance limits specified in site plans, Fort St. James operations staff continue to conduct soil disturbance and compaction assessments, engage a local forester who is an expert in such surveys and promptly rehabilitate affected areas where problems are noted. (Fort St. James)



The audit team conducted field assessments of a large number of field sites (74 roads, 71 harvesting blocks, 58 silviculture sites and 2 logging camps) to assess the Company’s planning, harvesting, silviculture, camps and road construction, maintenance and deactivation practices.

Follow-up on Findings from Previous Audits

At the time of this assessment there were a total of 8 open minor non-conformities from previous audits. The audit team reviewed the implementation of the action plans developed by Canfor to address these issues, and found that good progress had been made in relation to the majority of these findings. As a result, 5 out of the 8 minor non-conformities identified during previous audits have now been closed, 2 (weaknesses in the implementation of fuel management requirements and the indicator forecasts included in some SFM plans) remain open, and 1 (weaknesses in the provision of current status information relative to some SFM plan indicators) has been downgraded to an opportunity for improvement. The Company's continued progress towards addressing the remaining findings will be revisited during the 2014 audit.

New Areas of Nonconformity

A total of 4 new minor non-conformities were identified during the 2013 audit, as follows:

- CSA Z809-08 element 7.4.3 requires the organization to make publicly available an annual report on its performance in meeting and maintaining the SFM requirements. Public reporting of performance under SFM plans is also addressed in section 8 of the FMS Manual, which includes a requirement to ensure that annual reports are available to the public. However, at the time that the 2013 Quesnel site visit took place (i.e., late February 2013) a Quesnel SFM plan annual report for 2011 had yet to be finalized and made publicly available. (Quesnel)
- ISO 14001 element 4.4.6 and CSA Z809-08 element 7.4.6 require the organization to develop and implement operational controls to ensure that operations are carried out under specified conditions and SFM requirements are met. One such operation control is the Contract Worker SWP which requires contractors to (1) minimize site disturbance, and (2) minimize siltation and debris into water bodies. However, a field review of a harvest block at the Vavenby operation during the audit identified weaknesses in the implementation of these procedures resulting in: (1) an area of excessive site disturbance on a portion of the block, and (2) a failure to adequate clean accumulated soil and gravel on a bridge deck that resulted in sediment input into an S3 stream. (Vavenby)
- ISO 14001 element 4.5.1 and CSA Z809 element 7.5.1 require there be documented procedures to monitor key characteristics that can have an environmental impact. These requirements are addressed in FMS Manual section 12 and various related procedures and forms (e.g., Temporary Bridge Specifications, Pre-work, Certification and Inspections document). The form states that the contractor is to "complete, sign, and submit this installation checklist and as-built drawing to the Canfor supervisor...prior to hauling", at which point the supervisor inspects the bridge, completes the inspection checklist, and signs/seals the Crossing Assurance Statement portion of the document. However, while these forms were correctly completed for the several bridges reviewed, the audit identified one block where although the pre-work and contractor inspection portions were completed, neither the Canfor Inspection nor the Crossing Assurance Statement had been, even though the bridge had been hauled on and was about to be pulled. (Vanderhoof)
- CSA Z809-08 element 6.1 requires that forecasts be prepared for the expected responses of each indicator to applicable strategies, and that the methods and assumptions used for making each forecast be described. However, our review of the March 14, 2013 version of the Fort Nelson SFM plan found that it lacks



In order to ensure that the 2013 Canfor CSA Z809/ISO 14001 audit included an assessment of as broad a range of forest practices as possible, site visits to selected woodlands operations were conducted under both winter and summer (snow-free) conditions.

forecasting information for several key SFM indicators. In many instances, the plan simply states that: “forecasting does not apply to this indicator”.

Systemic Opportunities for Improvement

A total of 3 new systemic opportunities for improvement were identified during the 2012 audit, including:

- CSA Z809-08 element 7.4.3 requires the organization to make publicly available an annual report on its performance in meeting and maintaining the SFM requirements. Public reporting of performance under SFM plans is also addressed in section 8 of the FMS Manual, which includes a requirement to ensure that annual reports are available to the public. However: (1) review of the record for the 2012 FMS management review (completed on February 13, 2013) found that performance in relation to SFM plan targets was still listed as “pending” for a total of 5 SFM plans including Fort St. James, Vanderhoof, Houston, Vavenby and Radium, and (2) review of the Canfor SFM plan webpage in October 2013 found that electronic copies of the 2011/12 SFM plan annual reports for a number of DFAs (e.g., Vanderhoof, Radium, TFL 48, FSJPP, etc.) had still yet to be posted to the website. (Corporate)
- Canfor has developed a variety of operational controls that are designed to help ensure that operations meet the Company’s environmental objectives and are conducted in accordance with regulatory requirements. Inspection of a sample of field sites found that these controls were adequate and had been implemented as required in the large majority of instances. However, a few isolated weaknesses in the content and/or implementation of operational controls were noted during the audit (e.g., weaknesses in the management of CWD levels on some harvest blocks at the Houston operation, isolated weaknesses in the implementation of riparian management requirement at the Houston operation, management prescriptions included in some FSJPP site plans that were not carried over to the pre-work documents given to contractors, etc.). (Houston and Vavenby)
- ISO 14001 element 4.5.3 and CSA Z809-08 element 7.5.2 requires the organization to establish and maintain procedures to address non-conformities, including those identified through internal and external audits. This requirement is addressed through the Company’s ITS. The audit found that the Company’s procedures for addressing non-conformities had been implemented as required in the majority of instances. However, isolated weaknesses in the implementation of these procedures (e.g., weaknesses in the content and tracking of some action plan items developed to address external audit findings by the Houston operation, inadequate documentation of incident root cause analysis at the Chetwynd and Fort St. John operations). (Houston, Chetwynd and FSJPP)

Isolated Issues

A number of isolated (i.e., non-systemic) weaknesses in the implementation of FMS requirements were also identified during the 2013 audit. These have been reported to the woodlands operations where the issue(s) were noted, and the Company has developed divisional-level action plans to address these issues.



The audit noted timely incident reporting, investigation and response by Canfor and one of the Company’s logging contractors in relation to recent harvesting/road-related stream sedimentation issues noted on one harvest block in the Prince George DFA. .

Corrective Action Plans

- Corrective action plans designed to address the root cause(s) of the non-conformities identified during the 2013 audit have been developed by Canfor's woodlands operations and reviewed and approved by KPMG PRI. The 2014 surveillance audit will include a follow-up assessment of these issues to confirm that the corrective action plans developed to address them have been implemented as required.

Focus Areas for the Next Audit

The following issues/topics have been identified as focus areas for the next audit:

- Implementation of the action plans developed by the Company to address the open findings from the 2013 and previous ISO 14001/CSA Z809 audits.
- Forest management concerns expressed by local First Nations regarding the DFAs included in Canfor's multi-site CSA Z809 certification.
- The Company's ISO 14001 certificate expires on November 16, 2014. In order to ensure that there is no gap in certification, a full-scope ISO 14001 re-certification must be completed by early October 2014.
- The Fort Nelson operation has been curtailed for several years, and the 2 Company mills located in the area have recently been dismantled. However, the Fort Nelson DFA continues to be included within the scope of the Company's multi-site ISO 14001 and CSA Z809 certifications. The 2014 audit will include an assessment of whether the Company retains an adequate degree of influence over the achievement of SFM plan targets to justify the continued certification of this operation.

Date of the Next Audit

The next CSA Z809/ISO 14001 audit of Canfor's B.C. and Alberta woodlands operations will take place over several months, commencing in winter 2014.



A high level of conformance with FMS requirements and applicable regulatory requirements was observed on the field sites that were visited during the audit. (All Divisions).

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Mackenzie 2013 and 2014 Audit Summary



■ **2 Minor Non-Conformities**

- Fuel management,
- Fire suppression

■ **7 Opportunities for Improvement**

- 4 opportunities regarding fuel management and storage
- Silviculture data for reporting purposes
- Bridge assurance document use
- PAG ToR to be posted on website

■ **3 Best Practices**

- Use of the pgtsasfm website
- COPI documentation of communication efforts was good
- Contractor augmentation or logging map provides clear detail of FMS and H&S requirements.



- **No Non-Conformances**
- **1 Opportunity for Improvement**
 - Update SFMP to account for departure of BCTS.
- **3 Operational Strengths**
 - Contractor demonstrated good communication of critical site factors from Company Pre-work to the crew.
 - Contractor developed a paperless system for conducting inspections, tracking training, reporting incident, production/progress reports, etc.
 - SFM Coordinator progressing in a timely manner to update the SFMP to account for the departure of BCTS.



- **1 Minor Non-Conformance**

- Incident Tracking System and related action plans not maintained

- **2 Opportunities for Improvement**

- Consider more orderly transition in staffing to reduce work process lapses/delays and ensuring system actions are completed.
- Record completeness and storage. Site plans checkboxes and bridge assurance documents.

- **1 Best Management Practice**

- Silviculture group working around partially harvested blocks in regards to free growing declarations.



■ **1 Minor Non-Conformance**

- Gaps identified in Operational Controls; Camp Inspection Form, Fuel Tank Checklist for large tank

■ **4 Opportunities for Improvement**

- Concerns with some recent deactivation
- Fuel management at Monro Camp; catchment area around generator shed, small fuel spill at fuel pumps.
- Outdated reference on Camp SWP and link to inspection form did not work.
- Could not be verified if temporary contractor camps require inspection form.

■ **2 Operational Strengths**

- Silviculture departments use of “Rust Risk Free-growing Tool”
- Good understory protection observed in KDL block and good overstory deciduous protection on Duz Cho block.

2012-2013 Annual Report



- 48 SFMP Indicators
 - 45 Targets Met
 - 3 Targets Not Met
 - 0 Pending

#4 Productive Forest Representation



Indicator Statement: Total hectares logged in rare and un-common ecosystems.

Target: 0 ha; **Variance:** 0%

Rare Ecosystem	Amount harvested by year in hectares		
	2010	2011	2012
SBSvk\03	0	0	0
SBSWk1\05	0	0	0
ESSFmv3\06	0	0.6	4.7
ESSFmv2\06	0	0	0
ESSFmv4\05	0	0	0
BWBSdk1\09	0	0	0
BWBSdk1\07	0	0	0

- This is the first year to report on this indicator in this fashion.
- Reporting on past harvesting.
- Going forward, harvesting of these sites will be avoided.



- **Indicator Statement:** The percentage of forest operations consistent with riparian management area requirements as identified in operational plans and/or site plans.
- **Target:** 100%; **Variance:** 0%
- 203 of 204 Forest Operations were completed in accordance with riparian management requirements (99.5%)
- A road was built within the RMA of a W3 wetland (ITS-MK-2012-0664). No damage occurred to the wetland.



- **Indicator Statement:** Actual harvest volume compared to the apportionment across the DFA over each 5-year cut control period.
- **Target:** 100%; **Variance:** +/-10%
- Canfor ended its 5 year cut control period at the end of 2012. Over this period Canfor only harvested **42.4%** of its allowable cut.
- The trend is going the right direction, harvest levels are going up.

Volume Harvested						5 year Apportionment	Percent of 5 year cut in DFA
Year 1	Year 2	Year 3	Year 4	Year 5	Total		
2008	2009	2010	2011	2012			
105,011	96,746	528,467	635,773	929,248	2,295,245	5,414,520	42.4%